

GENERAL NOTES

QUANTITY CALCULATIONS BY: <u>PCS</u> DATE: <u>3/73</u>	FHWA REGION <u>5</u>	STATE <u>OHIO</u>	PROJECT
CHKD: <u>BTC</u> DATE: <u>3/73</u>			

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LAK-640-098
LAK-283-383
LAK-91-549

625 RELOCATION AND ADDITIONS TO EXISTING CONTROLLER, INSTALLATION ONLY

The Contractor shall perform the following in connection with this item of work:

1. Furnish and install one completely wired M cabinet as manufactured by Automatic Signal Company, a division of Laboratories for Electronics, Inc., Norwalk, Connecticut or one completely wired Type EL-602 cabinet as manufactured by Eagle Signal Company, a division of Gulf and Western Ind. Inc., Davenport, Iowa or an approved equal.
2. Furnish and install in the above cabinet a pre-emption device with a synchronous motor driven timer. It shall be capable of providing phasing of from 30 to 130 seconds as shown on the signal operation drawing on Sheet 20. The pre-emption phase shall be preceded by a 4 second yellow interval upon actuation of the phase. A synchronizing device shall also be provided to maintain artery offset progression.
3. Furnish and install a temporary controller. The controller shall be capable of providing two phase operation for signal phases A and C as shown on the above referenced sheet.
4. Remove and relocate the existing 1826MN controller from the pole mounted to the foundation mounted controller cabinet. Make the necessary field wiring connections to provide a signal controller complete and operable in accordance with the signal operation shown in the plans. The Contractor will be responsible for any damage to the controller from the time of removal to relocation. The time from removal to operation of the planned installation shall be no longer than seven days.

Payment for Item 625 "Relocation and Additions to Existing Controller, Installation Only" shall be made at the contract unit price for each controller and shall include all labor, materials and equipment necessary for the complete item of work.

625 DIAL UNIT FOR EXISTING CONTROLLER

The Contractor shall furnish and install two pre-timed plug connected dial units in each controller to be modified. This item of work shall include all necessary material, wiring, equipment and labor to render the existing Eagle Controllers, Model EF-20, capable of providing the basic signal sequences in accordance with the signal operation drawings. The modified controller shall be equipped with one seventy, one eighty, and one ninety second cycle gear.

Payment for Item 625, "Dial Unit for Existing Controller" will be made at the contract price for each controller modified, complete including all connections and testing.

625 SIGNAL CONTROLLER, BY TYPE, INSTALLATION ONLY

Existing control equipment removed from the location shown in the plans shall be installed at the location shown in the plans by the Contractor. The Contractor shall furnish all labor and equipment required to transport the removed equipment.

The Contractor shall pole mount the controller with cabinet and make the necessary field wiring connections to provide a signal controller complete and operable including all necessary material, wiring, equipment and labor to render the existing Eagle Controllers, Model EF-20, capable of providing the basic signal sequences in accordance with the signal operation drawings.

The Contractor will be responsible for any damages to the controller and equipment from the time of removal from previous location.

The Contractor shall furnish and install two pre-timed plug connected dial units in each controller. The modified controller shall be equipped with one seventy, one eighty and one ninety second cycle gear.

Payment for Item 625, "Signal Controller, By Type, Installation Only" will be made at the contract unit price for each controller installed, including all connections and testing.

PRETIMED, TWO PHASE SIGNAL CONTROLLER, W/ CABINET

The Contractor shall furnish and install pretimed, two phase controllers in the specified locations. The controllers shall be capable of providing the basic signal sequence in accordance with the signal operation drawings.

Pretimed signal controllers shall be of the expandable, interconnected type, designed to permit the addition or removal of plug connected dial units without additional wiring or modification of the unit. The controllers shall be provided with three dials. One seventy, one eighty and one ninety second cycle gear shall be provided.

The controllers shall be Eagle Model EF23A contained in completely wired pole mounted cabinets (see "Controller Cabinet" note) as manufactured by Eagle Signal, a systems division of Gulf & Western Industries, Inc., Davenport, Iowa or Marbelite Model M-30 interconnected traffic controllers contained in completely wired pole mounted cabinets as manufactured by The Marbelite Co., Inc., Brooklyn, N.Y. or functional equivalent.

Payment for Item 625, "Pretimed, Two Phase Signal Controller, W/ Cabinet" will be made at the contract price for each controller complete and in place, including prewired cabinet, all connections and testing.

625 SEMI-ACTUATED, TWO PHASE, SOLID STATE SIGNAL CONTROLLER, MODULAR, W/ CABINET

The Contractor shall furnish and install a solid state, semi-actuated, two phase controller. The controller shall consist of completely interchangeable phase modules. It shall be capable of providing the basic signal sequence in accordance with the signal operation drawings.

The controller shall be one Crouse-Hinds, two phase, solid state, semi-actuated Model SST-12 controller contained in one completely wired pole mounted cabinet (see "Controller Cabinet" note) as manufactured by Crouse-Hinds Company, Syracuse, N.Y. or one Automatic MF-10 series controller contained in one completely wired pole mounted cabinet as manufactured by Automatic Signal Company, a division of Laboratories for Electronics, Inc., Norwalk, Connecticut, or approved equal.

Payment for Item 625, "Semi-Actuated, Two Phase, Solid State Signal Controller, Modular, W/ Cabinet" will be made at the contract price for each controller complete and in place, including prewired cabinet, all connections and testing.

625 FULLY ACTUATED, TWO PHASE, SOLID STATE SIGNAL CONTROLLER, MODULAR, W/ CABINET

The Contractor shall furnish and install a fully actuated two phase traffic signal controller. The controller shall consist of completely interchangeable phase modules. It shall be capable of providing the basic signal sequence in accordance with signal operation drawings.

The controller shall be one Crouse-Hinds SFT1-10 traffic signal controller contained in one completely wired pole mounted cabinet (see "Controller Cabinet" note) as manufactured by Crouse-Hinds Company, Syracuse, N.Y. or one Automatic MF-10 series traffic signal controller contained in one completely wired pole mounted cabinet as manufactured by Automatic Signal Company, a division of Laboratories for Electronics, Inc., Norwalk, Connecticut, or an approved equal.

Payment for Item 625 "Fully Actuated, Two Phase, Solid State Signal Controller, Modular W/ Cabinet" will be made at the contract price, for each controller complete and in place, including prewired cabinet, all connections and testing.

CONTROLLER CABINETS

The controller cabinet shall be a cast aluminum, weather tight, lockable cabinet manufactured by the controller supplier with necessary mounting hardware and conduit with fittings for mounting as shown in the plans. The cabinet shall be pre-wired at the factory. The cabinet shall be equipped with screened vents and fan with thermostatic control. The cabinet shall contain a separate jack mounted flasher with noise suppressor and manual switch for changing from flasher to stop and go operation. The cabinet shall also contain a lightning arrestor, adequate terminal blocks, solid state load switching (for solid state equipment), radio interference filter, power switch and fused for 120/240 V. 60 cycle power. The cabinet shall be installed with necessary equipment to insure that conflicting green indications cannot occur.

The large cabinet door shall be fitted with a smaller door which shall contain a main on-off switch and an automatic flash switch. The lock on the large cabinet door shall be keyed to the City's master. The lock on the small door shall be keyed to the City's police master. Two keys shall be furnished with each lock. All equipment required for a satisfactory operation shall be furnished completely installed.

Two coats of federal yellow paint shall be applied to the traffic signal controller cabinet. Cabinets shall be painted after installation. Twenty-four hours shall elapse before the second coat of paint is applied to any equipment. Payment for painting shall be included in the contract unit bid price. The Contractor shall exercise due caution to protect vehicles during application of paint and shall erect and remove "Fresh Paint" signs on equipment as required.