

TRAFFIC CONTROL DILEMMA ZONE DETECTION SYSTEM, INTERSECTION

**From Berlin STP 2935(1)
Berlin NH STP 2938(1)
Berlin NH STP 2947(1)

- xx. DESCRIPTION. This work shall consist of furnishing and installing a dilemma zone detection system for an existing traffic control signal system(s) at the location(s) indicated in the Plans and as directed by the Engineer.

The work under this Section shall be performed in accordance with these provisions, the Plans, and Section 678 of the Standard Specifications.

- xx. MATERIALS. All materials shall be as indicated on the Plans or an approved equivalent.

- xx. GENERAL REQUIREMENTS. All associated electrical work performed and all materials installed shall be subject to inspection and approval of the State or Municipal Electrical Inspector, whichever is applicable. As a minimum, all work must meet the requirements of the National Electrical Code (NEC) and the National Electrical Safety Code (NESC).

- xx. SUBMITTALS.

(a) Fabrication Drawings. The Contractor shall submit Fabrication Drawings in accordance with Sections 105 and 678.

(b) Documentation Requirements. Three (3) advance copies of equipment manuals furnished by the manufacturer shall be submitted to the Engineer for review a minimum of ten days prior to the scheduled start of the first 24-hour operation test period. The Engineer will verify the manufacturer's equipment manual as part of the test and integration process. The equipment manual incorporating the Engineer's corrections and comments shall be integrated by the Contractor into the operations and maintenance manual. The manual shall, as a minimum, include the following:

- (1) Complete and accurate schematic diagrams.
- (2) Complete installation and operation procedures.
- (3) Complete performance specifications (functions, electrical, mechanical, and environmental) of the unit.
- (4) Complete accurate troubleshooting, diagnostic, and maintenance procedures.

- xx. CONSTRUCTION REQUIREMENTS. Dilemma zone detection equipment shall be installed on existing strain poles, or in the existing controller cabinet, as required. Dilemma zone detection equipment shall be located or positioned as indicated on the Plans, unless otherwise directed by the Engineer.

Prior to beginning any work, the Contractor and the Engineer will perform a joint inspection of the condition of existing equipment and components. Any equipment that is found to be defective or damaged prior to beginning work shall be maintained in at least as good condition until replaced under the Contract.

- xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Traffic Control Dilemma Zone Detection System, Intersection) at the location specified to be measured for payment will be the number of each dilemma detection zone system installed in the complete and accepted work.

- xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Traffic Control Dilemma Zone Detection System, Intersection) at the location specified will be paid for at the Contract unit price per each. Payment will be full compensation for furnishing, handling, and placing the equipment and materials specified in the Contract Documents; removing and disposing of or abandoning any existing equipment and/or materials that are replaced or no longer needed as a result of installation of new equipment and/or materials; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made as follows:

- (a) Upon installation of a functioning system as indicated by a successful continuous 24-hour operation test period, 20 percent of the Contract unit price will be paid.
- (b) Thirty percent of the Contract unit price will be paid upon receipt by the Engineer of notice from all responsible Agency parties that all paperwork related to the system installation has been completed to the satisfaction of the Agency.
- (c) Thirty percent of the Contract unit price will be paid after successful completion of the 30-day test control period.
- (d) The final 20 percent of the Contract unit price will be paid upon acceptance of the project.

At the discretion of the Engineer, the Contractor may be required to replace existing traffic signal system components not anticipated to require replacement, including poles and/or cabinets/controllers that are lost or damaged due to an accident. If required, such work will be considered Extra Work under Subsection 109.06 and additional payment will be allowed.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
900.620 Special Provision (Traffic Control Dilemma Zone Detection System, Intersection) (Main Route @ Side Road)	Each