

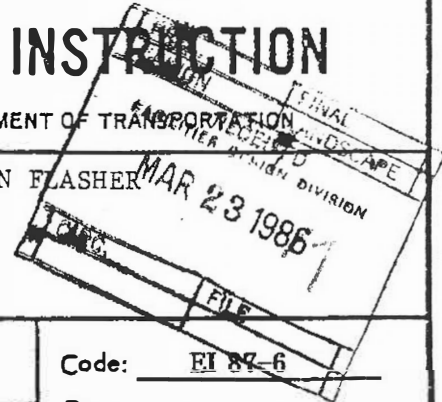
**SUPERSEDED BY EB 21-057  
EFFECTIVE 11/24/21**

# ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

SUBJECT: INTERSECTION FLASHER

Subject Code: 7.27-3-680



Distribution:

30 Main Office      32 Regions      34 Special

Code:      EI 87-6     

Date:      2-26-87     

APPROVED:

M. TEGZA, Civil Engineer V, Final Plan Review Bureau

Supersedes:

     EI 81-51     

Attached is a revised specification for Intersection Flashers. This replaces item number 15680.806201 with the new item number 15680.806202.

The major changes in the new specification are:

- (A) Removal of any reference to the departments Solid State Specifications which are no longer published.
- (B) The addition of sheet aluminum cabinets since cast aluminum cabinets have become difficult to obtain.

This specification is a main office insert and will be inserted into proposals by the Final Plan Review Bureau beginning with the letting of June 25, 1987.

ITEM 15680.806202 INTERSECTION FLASHER (SOLID STATE) WITH CABINET

DESCRIPTION

Under this item, the Contractor shall furnish and install a solid state flasher relay and a pole mounted cabinet at the location shown on the plans or as directed by the Engineer.

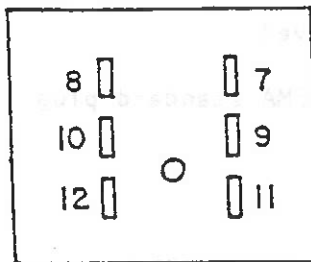
MATERIALS

A. Solid State Flasher Relay

This solid state switch shall be used for alternately opening and closing connections between the applied power and the lamps required for flashing operation. The solid state flasher relay shall be a NYS Model 204 and shall conform to the Department of Transportation Specifications on Microcomputer Traffic Signal Control Equipment currently in effect.

B. Harness

A harness shall be provided for all electrical connections into and out of the solid state flasher relay. The harness shall be composed of five single conductors (7 strand, #14 gauge wire) with spade connections at one end and a six prong receptacle plug at the other end which shall intermate with the connector on the solid state flasher relay. The receptacle shall be wired as follows:



PIN NO	CIRCUIT	WIRE
7	Load Ct. #1	Red
8	Load Ct. #2	Orange
9	Chassis Gnd.	Green
10	AC-	White
11	AC+	Black
12	Not Connected	

The receptacle shall be mounted in the cabinet in a permanent fashion to allow easy insertion and removal of the flasher relay. A means to support and maintain the flasher relay shall be provided.

C. Cabinet

A. The cabinet shall be constructed of cast or sheet aluminum, and have minimum interior dimensions of 22"X 14"X 10" HWD. The cabinet shall be constructed of material of sufficient thickness or reinforcement to withstand normal wear and tear. If constructed of sheet aluminum, all seams shall be of continuously welded construction, or alternate weatherproof construction if approved by the procuring agency. The cabinet shall have the following features.

1. Doors- The main door of all cabinets shall include substantially the full area of the front of the cabinet and shall be furnished as a single full door. Door hinge pins shall be made of stainless steel.

2. Mounting Hardware- Shall be furnished with plates suitable for welding to steel poles.

3. Dust and Weatherproofing- All doors shall be securely gasketed in an approved manner to prevent the entrance of dust and moisture.

4. Ventilation- Shall be furnished with suitable top and bottom vents properly designed to provide natural ventilation of the cabinet interior and to prevent the entrance of rain, snow and insects.

5. Exterior Finish- Shall be painted with a high quality dark green enamel over a suitable primer coat. As an option, the cabinet may be supplied with a bare metal finish if it is constructed from Grade 5052-H32 sheet aluminum.

6. Locks- The lock for the main door shall be of the self-locking heavy duty (5) five pin tumbler cylinder rim type. It shall be keyed to the master key of the appropriate Region and to grand master key designated 1-10D.

6.1 Two keys shall be furnished for each lock.

7. The main ground bus shall be bonded to a ground rod or electrode by the use of a ground clamp and a #10 AWG or larger stranded bare copper wire.

8. Equipment- Included in the cabinet shall be:

Main Circuit Breaker-15 amp.- UL approved

Convenience outlet ( 3 wire, 15 amp. NEMA standard plug receptacle)

Ground bus

Power line surge protector

Terminal Block

Electrical equipment supplied and its method of installation in the cabinet shall conform to all appropriate National Electrical Code and Underwriter Laboratory Standards, and meet local electrical utility company requirements.

#### D. BASIS OF ACCEPTANCE

Acceptance will be based on the manufacturer's certification of compliance with these specification requirements. Acceptance of the Model 204 Flasher Relay will be made only for units listed on the Qualified Products List published by the Department's Traffic and Safety Division.

CONSTRUCTION DETAILS- All wiring shall be neat and firm and shall be color coded or have numbered leads and terminals. Applicable requirements of subsection 680-3 of the Standard Specifications shall apply.

#### METHOD OF MEASUREMENT

Measurement for payment will be the number of units furnished and installed in accordance with the Contract Documents or as directed by the Engineer.

#### BASIS OF PAYMENT

The unit price bid shall include the cost of the relay, cabinet, and wiring harnesses and shall include the furnishing of all labor, materials, tools, equipment, and incidentals as required to complete the work. No direct payment will be made for the installation of the power supply meter base when shown on the plans, but the cost of this work shall be included in the price bid for this item.

Payment for this item will be made in the following manner:

Sixty-five percent of the bid price for each flasher will be paid when the components to be paid for under this item are installed.

Twenty-five percent of the bid price will be paid when the flasher is operational.

The remaining ten percent will be paid when all the traffic signals in the contract are functioning to the satisfaction of the Engineer.