TO:

SUPERSEDED BY EB 21-057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

ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

SUBJECT: STROBING SIGNAL INDICATION

Subject Code: 7.27-1-680

Distribution: 30 Main Office 32 Regions 34 Special

Code: 91-08

Date: 4-23-91

Supersedes:

APPROVED:

J. R. Lambert

J. R. LAMBERT, Deputy Chief Engineer (Fac. Des. Div.)

Attached is a shelf note for a new item 680.8105 "Traffic Signal Section - Strobing Signal Indication" to be added to the January 2, 1990 Standard Specifications.

The strobing traffic signal indication is a standard red traffic signal indication with a white bar strobe oriented horizontally across the red lens. The strobe is automatically energized simultaneously with the red indication. Its function is to call attention to the red indication when there is a reasonable likelihood that motorists will not notice or expect the red indication.

These signal indications have been used in fire and railroad preemption operations where the signal normally displays flashing yellow or continual steady green indications except during the preemption operation when it displays steady red. The strobe alerts motorists to the fact that the signal is displaying a steady red indication rather than the indication they have grown accustomed to. Strobing signal indications have also been used at signals on limited access facilities or other highways where the motorist would not normally expect a traffic signal.

The overall effectiveness of this device in warning motorists of an unexpected traffic signal indication will be compromised if it is seen too frequently by motorists. No accident studies have been done to evaluate the effectiveness of these indications in reducing accidents. For these reasons, designers are cautioned to only specify this item when the Regional Traffic Engineer determines or agrees that its use is warranted. Indications that flash red in normal operation should not be equipped with the strobe.

Designers should show this item on the plans.

This item may be used on all projects let on or after August 1, 1991. If there are any questions, contact Chuck Riedel at 457-3537.

STROBING SIGNAL INDICATIONS

Make the following changes to the Standard Specifications of January 2, 1990.

Page 6-116

Under §680-2.01 Traffic Signal Equipment; after "Fiberoptic Dual Indication Arrow - 724-04"; add the following: "Strobing Signal Indication 724-04/F".

Page 6-126

Under §680-3 CONSTRUCTION DETAILS, add "680-3.35 Strobing Signal Section. Strobing Signal Sections shall be installed according to the requirements of §680-3.21 Signal Heads."

Under §680-4.01 Each Unit; after "Traffic Signal Section", add the following: "Strobing Signal Indication".

Page 6-130

Under §680-5 BASIS OF PAYMENT, add:

Item No.	Item	Pay Unit
"680.8105	Traffic Signal Section - Strobing Signal Indication	Each"

Page 7-187

Under §724-04 TRAFFIC SIGNAL HEADS, add the following:

"***F. STROBING SIGNAL INDICATION.***

In addition to applicable items in Part A the following additional requirements apply to Stobing Signal Indications.

GENERAL. The unit shall consist of a standard red signal indication with the addition of a white bar strobe presented horizontally across the red face. The strobe shall flash at a rate of approximately once per second. The indication shall be single faced and the strobe bulb, control circuitry, and all necessary appurtenances shall be enclosed in and be an integral part of a standard 12" aluminum signal housing. The bar strobe shall attract the attention of motorists and be visible, under any lighting conditions varying from total darkness to bright sunlight or where high intensity background lighting is present, at a distance of at least one half mile under normal atmospheric conditions.

When the bar strobe is not energized, the indication shall operate and appear as a standard red indication.

ERN/DMR-41

2/3

MATERIALS.

Optical System: This item shall consist of:

1. Weatherproof housing, door, gaskets, and visor.
2. Alzak Parabolic reflector or equivalent.
3. One bar strobe bulb with a minimum 5,000 hours duty life enclosed in a dustproof, shockproof and watertight enclosure.
4. 12" Polycarbonate red lens.
5. Power supply.
6. Electrical system including wiring and control circuitry.

Optical Requirements: The strobe bulb shall be a minimum of 9 1/2" in length to effectively span the width of the lens.

CONSTRUCTION. The unit shall consist of a standard aluminum 12 inch red vehicle signal section with a bar strobe light interposed in front of the red lens.

All power supplies and control circuitry for the strobe shall be mounted to the visor assembly and contained within a watertight enclosure(s) which shall not interfere with mounting additional signal sections to form a multiple section signal head.

The strobe bulb shall be enclosed in a dustproof, shockproof and watertight housing securely mounted in front of the red lens. The strobe housing shall contain only the strobe bulb, terminal stripes and necessary connecting wires, and shall not interfere with the general visibility of the red lens, nor the ability to change the red lens in the normal manner.

All screws, washers, nuts and bolts shall be corrosion resistant.

All components hall be readily accessible. The only tool required for maintenance or replacement of all components shall be a standard screwdriver.

Electrical: Electrical connection shall be provided by a barrier type terminal strip for connecting field wires. The power supply shall be of a capacitive discharge type sufficient to fire the bar strobe bulb at a rate of approximately once per second. The power supply shall be encased in a temperature stable epoxy so as to preclude intrusion of moisture. A door switch shall be provided so that when the housing door is opened the switch shall disconnect ACT power to the strobe power supply and circuitry and shall also completely discharge the high voltage DC capacitive charge within 10 seconds.

The high voltage power supply shall be flushed using a slo-blo fuse. The current rating of the fuse shall be no more than 50% above the maximum current expected at 135 VAC. The fuse shall be located in the housing and located before the door switch.

The barrier type terminal strip shall be equipped with male quick connect spade terminals. Insulated female spade receiver terminals shall be required for the connection of the strobe circuitry to the terminal strip.

Labeling: A CAUTION or WARNING label should be affixed to the visor assembly near the housing door opening, notifying maintenance or repair personnel of the presence of a high voltage capacitive charge within the visor assembly and that the quick disconnect should be disconnected and a check for AC or DC voltage across the strobe bulb should be performed before servicing the strobe bulb or circuitry."