

ROAD COMMISSION FOR OAKLAND COUNTY

SPECIAL PROVISION  
FOR  
**TRAFFIC SIGNAL BACKPLATES**

RCOC/TOC

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RCOC20SP820B

ORG:05-07-21

REV: 03-01-25

**a. Description**

This work consists of completing one or more of the following work types at location(s) shown on the plans according to the plans and sections 204, 818, 820, and 921 of the Standard Specifications for Construction except as herein provided.

1. Furnishing and installing a traffic signal backplate.
2. Removing and disposing of an existing traffic signal backplate.

As applicable, this work includes removal or installation of hardware, connectors, fittings, mounting hardware, and all material necessary to complete the work.

**b. Materials**

Material must meet section 921 of the Standard Specifications for Construction.

1. Provide backplates with a 3M 4081 ASTM Type XI reflective fluorescent yellow tape border. Ensure that a one-inch border is used with yellow signal heads and visors.
2. Do not cut the backplate for installation.
3. The backplates must be one-piece construction unless otherwise directed by the engineer.
4. Provide a one-piece backplate for three or four section traffic signal heads as indicated on the plans or as directed by the Engineer. Ensure that five section (doghouse) signal head combinations are provided with no more than three vacuum formed pieces.
5. Provide backplates that are designed to precisely fit the manufacturer's signal heads and supplied with necessary hardware to attach the backplate to the signal.
6. Provide backplates that are vacuum formed from 0.125-inch-thick black acrylonitrile butadiene styrene (ABS) plastic with a hair cell finish on the front side (facing approaching traffic) to reduce glare.

Use 0.156-inch-thick ABS plastic for 5 section and HAWK.

7. Provide backplates that are constructed with a minimum 5/8-inch flange on all sides to provide structural rigidity. Ensure the backplates are provided with a three-inch corner radius.
8. Ensure that all backplates extend five inches around the perimeter of the traffic signal combinations after installation.
9. Proposed backplates must accommodate case signs on traffic signal heads.

#### 10. Warranty and Guarantee

Provide materials with a manufacturer's warranty/guarantee, transferable to the Road Commission for Oakland County, that the supplied materials will be free from all defects in materials and workmanship for one (1) year from the date of final project acceptance. If requested by the Engineer, supply manufacturer's warranty and guarantee documents from the manufacturer and a copy of the invoice showing date of shipment.

The contractor shall repair and replace any backplates that the reflective fluorescent yellow tape border has been removed from the backplate prior to final project acceptance.

11. Backplates shall be attached with stainless steel bolts, washers, and lock nuts; or self-tapping screws and washers, or as directed by the Engineer. The washer should be 1 inch by 0.5 inch or as directed by the Engineer.

#### 12. Acceptance

Provide General Certification per the *MDOT's Materials Quality Assurance Procedures Manual* to the Engineer that the materials meet the requirements specified herein.

### **c. Construction.**

Complete this work in accordance with sections 818 and 820 of the Standard Specifications for Construction, as shown on the plans, and as directed by the Engineer. Remove, store, and dispose of material in accordance with section 204 of the Standard Specifications for Construction.

#### 1. Special Tools

No special tools shall be required. If special tools are required for any other application in the repair, assembly, or installation of this equipment, forty (40) complete sets of such tools shall be furnished.

#### 2. Submittals / Working Drawings

If requested by the Engineer, submit a detailed dimensional drawing of all equipment, material specification list which shows the materials to be used, equipment to be furnished, and assembly/installation method.

3. Samples

If required, a complete sample backplate must be delivered within seven (7) working days after the request is submitted.

Special consideration shall be given to workmanship, materials and superior features demonstrated by the sample.

**d. Measurement and Payment.**

The completed work, as described, will be measured and paid for at the contract unit price using the following pay item(s).

<b>Pay Item</b>	<b>Pay Unit</b>
Backplate, TS, RCOC.....	Each

**Backplate, TS, RCOC (Ea)** includes installing the backplate on existing or new signal head(s) at location(s) shown on the plans where installation is specified. Furnish and install a traffic signal backplate, as indicated on the plans or as directed by the Engineer. The pay item includes all components and associated hardware to complete the work.

Backplate, TS, Rem will not be paid for separately and is included in other items of work. The removal includes removing the existing backplate, hardware, and other appurtenances, required for a complete removal. Dispose of removed materials.