

ROAD COMMISSION FOR OAKLAND COUNTY

SPECIAL PROVISION  
FOR  
**TRAFFIC SIGNAL WORK**  
**CONSTRUCTION METHODS AND GENERAL PROVISIONS**

RCOC/TOC

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RCOC20SP818B

ORG:05-07-21

REV: 04-21-25

**a. Description**

This special provision is for electrical construction and/or relocation of traffic signal facilities to be used in addition to the applicable sections of the standard specifications.

The Road Commission for Oakland County (RCOC) document entitled "Standard Construction Details for Traffic Signal Contracts" dated March 2014 is incorporated by reference. Copies of this document are available from the RCOC Signal Systems Division at (248) 858-7250 or on-line at [www.rcocweb.org](http://www.rcocweb.org).

**b. Materials**

1. Furnish new material and equipment, unless specified otherwise, and comply with the contract documents.
2. Materials furnished by RCOC to the Contractor will be picked up by the Contractor at such site as designated by RCOC, with any associated costs included in pay items as indicated on the plans and will not be paid for separately.
3. Service Disconnect  
Disconnect switches (stainless steel) shall be NEMA heavy duty (HD), 4X, unless otherwise noted. The service disconnect is supplied by the contractor when a pay item is included in the project.

**c. Construction**

1. General  
All work on any RCOC facility is subject to their inspection.

The Contractor shall mark the month and year of installation on the back-side (which is inside the signal head) of each LED lens.

If requested by the Engineer, the Contractor shall provide a copy of the cabinet and controller shipper signed by an RCOC representative to the Project Engineer within 3 calendar days of being delivered to the RCOC.

All weather heads and LB's installed on this project shall be new and metal.

The Contractor shall notify the RCOC Signal Department, ten (10) working days' (excluding Saturday, Sunday, and Holidays) in advance of relocation of controllers, shutdown of traffic signals, traffic shifts, and work required in the cabinet/controller by the RCOC Signal Maintenance Department.

Always maintain existing communication lines for controllers.

Within five calendar days after completion of the conduit work or of any portion where a working cable is installed, the Contractor shall furnish to the RCOC (if requested by the Engineer) an as-built record of the length of the duct lines as constructed, clearly showing any departures from the original plans. The lengths shall be measured from the inside walls of manholes and the center of post foundations, cable poles, and handholes. Final payment shall be withheld until work is completed and accepted.

2. Signal cutovers

All traffic signal cut-overs, modifications of any signal configuration, traffic switches, and stage changes must occur on Monday through Thursday between 9:00 a.m. and 3:00 p.m. unless otherwise directed by the Engineer. Cut-overs are not permitted on Holidays.

3. Insulators and electrical protection devices

Where required by the local Utility Company or applicable electrical Code, install or have installed all necessary insulators or electrical protection devices and/or coordinate with the local Utility Company to install required protective devices on the Utility Company's facilities. The cost of any protective devices or insulators shall be included in the cost of performing this signal work and not paid for separately. The contractor is responsible for scheduling this work.

When insulators or electrical protection devices are not sufficient, the contractor shall provide a Qualified Person and Qualified Linemen to construct the proposed work. The cost shall be included in the other contract items and not paid for separately.

Delay of any Utility Company installation on any portion of this project may be considered the basis for a claim for an extension of time for completion as determined reasonable by the Engineer but will not be considered the basis for a claim for extra compensation or an adjustment in contract unit prices.

#### 4. Submittals

A. On each submittal page, list the pay item name, material, unique proposal line number, and MDOT item code that applies.

B. If there are multiple products, materials, sizes, etc. on one page, the pay item/material must be clearly identified.

C. Submittals / shop drawings are not considered a substitute for the materials certification procedures required in the contract documents.

D. The Signal Contractor is required at each submission to provide a transmittal cover letter which includes the following:

- (1) Each specific variation that the Shop Drawings may have from the requirements of the contract plans, specifications, and contract documents.
- (2) In addition, the drawings will contain a specific notation that explicitly and prominently calls out all deviations as indicated in the cover letter.
- (3) RCOC may or may not accept deviations or variations to the contract documents.
- (4) Each variation shall provide supporting documentation why the variation is equal to or greater than the requirements of the contract documents.  
For some variations, as-directed by the engineer, the Contractor must ensure that a Professional Engineer, licensed in the State of Michigan, seals all working drawings, documentation, and design calculations submitted. RCOC, at its sole discretion, may or may not accept variations.
- (5) When deviations do not exist, it shall be stated in the cover letter.
- (6) The supplier of the shop drawings shall also provide a transmittal cover letter of the same required content as described above.

The review of a submittal will not be considered to be approval of a variation in which the project requirements are affected unless specifically so noted in the review comments as returned with the submittal.

The review of a signal submittal may be returned with a Road Commission for Oakland County cover letter and each page may be numbered with the shop drawing number and page number. A stamp will not be included.

E. The Contractor shall also prepare and submit shop drawings in accordance with the Special Provision entitled "Submittals" included elsewhere in the Contract documents.

## 5. Traffic Loops / Wireless Detection / Wireless Vehicle Sensor Nodes

A. RCOC will lay out all traffic loops and/or wireless detection nodes prior to installation.

B. No detector loop shall be installed unless the roadway surface temperature is 40 degrees Fahrenheit or above.

C. Traffic loops must be placed in the leveling course of asphalt, milled surface under proposed asphalt, or as-directed by the engineer. Place the sealant below the surface of the asphalt to prevent bleeding into the next layer of asphalt. Allow the sealant to fully cure according to manufacturer's recommendations before placing a layer of asphalt over the loops. Sawing slurry shall be completely cleaned and removed prior to opening to traffic and placing next lift of asphalt.

### D. Install traffic loops

- After the proposed curb, concrete flatwork, sawing, and all other proposed construction is completed in order to prevent damage to the proposed traffic loops.
- After the completion of all traffic signal underground work, no sooner than 3 weeks prior to the start of signal overhead work, and within 3 weeks after the traffic signal cutover.

The RCOC Maintenance Department may be performing maintenance and asphalt milling/overlays in the construction zone which may damage proposed traffic loops. Coordination shall be required with RCOC Maintenance and the RCOC Signal Field Operations Engineer.

## 6. Utility coordination

Schedule, coordinate, install, and pay for work provided by the local utility company(s), as indicated on the plans or as directed by the Engineer. The Engineer will not authorize payment for delay caused by the Contractor's failure to properly schedule and coordinate any utility work.

## 7. 107.12 – Contractor's Responsibility for Utility Property and Services

Backfill for utility location per section 107.12 (Contractor's Responsibility for Utility Property and Services) of the Standard Specifications for Construction:

Use Granular Material Class III in accordance with section 902 of the Standard Specifications for Construction for backfill. If compaction of each layer to at least 95% of the maximum unit weight cannot be achieved, use Aggregate, 6A or 34R as directed by the Engineer.

When pavement coring is required by the Engineer, core hole backfill shall require multiple materials as-directed by the Engineer including self-compacting aggregate (6A or 34R), two-part epoxy non-shrink grout, asphalt to match existing pavement, concrete to match existing pavement, and existing pavement core material (if structurally sound).

Use material removed during exploratory investigation for backfill only if approved by the Engineer.

8. Agency Coordination

Secure all necessary permits covering the operations, including permits from the Public Authorities having jurisdiction over the streets, or other Public Properties in which the work is located, and the improvements therein. Obtain the amount of any charges for payment, including fees or inspection charges required by such authorities, and include the cost of these fees in the bid prices.

The local traffic authority may impose restrictions regarding particular times of certain days of the week wherein the Contractor cannot perform work and may, in fact, be required to clear the area of work obstacles or construction equipment. The Contractor must take note of this and there will be no extra payment to perform the work with possible restrictions imposed. The Engineer will not authorize extra payment if the Contractor chooses to perform work during overtime status.

9. Anchor bolt testing

This work consists of the contractor's responsibility to test the strain pole and mast arm anchor bolts. The contractor shall also test the mast arm A449 clamp bolts, rods, studs, nuts, washers, and lock washers.

Provide anchor bolts, nuts, and washers in accordance with subsections 105.10, 820, and 908.14 (or MDOT 20SP-908A current edition if included in proposal) of the Standard Specifications for Construction and all contract documents.

Anchor bolts shall be marked (color coded ends and non-removable casting (heat) stamp) to provide traceability during testing and installation. Include pictures (or other proposed method) with the testing results of the materials at the contractor's yard and lab for traceability in the field. The testing results (bolts, nuts, and washers) shall include all product markings, color coding, lot number, heat number, and manufacturer documented directly on the test results. The contractor may propose alternates for traceability prior to sampling and testing.

The Contractor shall provide testing (bolts, nuts, and washers), per subsection 908.14 (or MDOT 20SP-908A current edition if included in proposal) of the Standard Specifications for Construction and all contract documents, for the anchor bolts from an RCOC approved independent lab. MDOT does not test for Local Agency projects.

The RCOC approved independent labs can be found:

RCOC Notice to Bidders, Anchor Bolt Testing - Approved RCOC Independent Labs

<https://www.rcocweb.org/561/Frequently-Used-Special-Provisions>

Provide Test Data Certification to the engineer according to the *MDOT Materials Source Guide*.

Anchor bolt testing is not paid for separately and is included in other items of work.

#### 10. Density

At the sole discretion of the Engineer, density/compaction as specified in traffic signal related subsections 820.03. A. 3. and 820.03 B. of the Standard Specifications for Construction, as determined by the Engineer, will be accepted by one of the following two methods, in lieu of percent density/compaction specified elsewhere in the contract.

##### A. Visual Inspection

Documented by the Engineer, based upon number of roller/plate compactor passes and roller/plate compactor pattern acceptable to the Engineer. Another compaction equipment may be approved by the engineer.

##### B. Proof Roll

Complete a proof roll using equipment approved by the Engineer. The Engineer must witness and document the proof roll and will determine the proper course of action to maintain compaction until pavement is placed and correct any observed rutting or displacement.

#### 11. Protection of work

The contractor must protect all signal related items until final satisfactory final inspection. This includes protecting signal foundations, strain poles, mast arms, pedestals, pushbuttons, concrete foundations, etc. Contractor must repair damage to highway and signal facilities caused by work not protected properly from naturally occurring events and roads open to traffic at no additional cost to the Department. Payment for a pay item does not represent acceptance of an item or satisfactory final inspection.

#### 12. Delivery Claims for Extensions of Time

Delivery delay claims by the Contractor for Extensions of Time will not be considered unless two or more letters from different local traffic signal suppliers (Metro Detroit area) are supplied to the engineer within 14 calendar days of contract award.

Any delay (material shortages, pandemics, shipment delays, supply chain delays, delayed deliveries as a result of an industry-wide shortage, wars, etc.) will not be considered unless the contractor/supplier letter is accompanied by an FHWA letter and Michigan Department of Transportation (MDOT) letter declaring a nationwide shortage of a specific material.

Delivery claims may be considered for a claim for an extension of time for completion as determined reasonable by the Engineer, but shall not be considered the basis for a claim for extra compensation or an adjustment in contract unit prices.

### 13. Materials Certification Procedures – Signal Materials

Unless specified elsewhere in the contract documents, provide at a minimum:

- General Certification documentation according to the *MDOT Materials Source Guide*
- In addition to the *MDOT Materials Source Guide* requirements, provide the RCOC name of material designation on each certification. If requested by the contractor, the RCOC Engineer will provide the material designations on the project.

### 14. Material Source List

- Provide RCOC name of material designation. If requested by the contractor, the RCOC Engineer will provide the material designations on the project.

### 15. Prior to ordering proposed materials, the contractor shall field measure and field verify all existing conditions.

For retrofit and salvage type work, existing material sizes, material types/brands/manufacturers must be measured and determined by the contractor prior to ordering materials.

### 16. TS, \_\_, Rem

The unit price for relevant removal pay items include the cost of removing and disposing of traffic signals, pedestrian signals, cables, and other materials.

### 17. Special Tools

No special tools shall be required for any proposed material, repair application, assembly, or installation/maintenance of any material/equipment.

### 18. Compatibility

The equipment and materials supplied shall be compatible and interchangeable with the equipment commonly in use in the Road Commission for Oakland County's system.

**d. Measurement and Payment.**

The above items of work will not be paid for separately and are considered included in the contract unit price for other items of work.