



**SPECIAL PROVISIONS
FOR
TRAFFIC SIGNAL INSTALLATION**

**Scott County
IM-NHS-074-1(206)5--03-82**

**Effective Date
October 16, 2018**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

150438.01 DESCRIPTION.

This work shall consist of furnishing and installing the materials for construction of the traffic signal installation.

150438.02 MATERIALS.

A. Controller.

1. Comply with the latest edition of NEMA TS1 or TS2 standards.
2. Consist of an Eagle EPAC3-108-M52 Series controller for compatibility and familiarity with the City of Bettendorf's traffic signal system and personnel.
3. Solid state modular design with digital timing and capable of accommodating at least eight phases.
4. Fully prompted, front panel keyboard with menu driven programmability.
5. Local time base scheduler including automatic accommodation for daylight savings time.
6. Local coordination control.
7. Local preemption control with at least four programmable internal preemption sequences.
8. Current software and documentation.

9. Data retained in a memory medium that does not require battery backup.
10. Installed to manufacture specifications.

B. Cabinet.

1. Unpainted aluminum cabinet consistent with NEMA standards.
2. Aluminum cabinet riser with same dimensions as cabinet and height of 12 to 18 inch.
3. Police door with auto/flash switch and on/off power switch for signal heads only. Controller to remain in full operation regardless of switch positions.
4. Maintenance panel on inside of the main door containing the following test switches:
 - a) Controller power switch.
 - b) Detector test switches.
 - c) Stop time switch.
 - d) Signal flash switch.
5. Heavy-duty clear plastic envelope attached to inside wall of cabinet or cabinet door, for cabinet wiring diagrams, 12 inches by 18 inches minimum.
6. GFI electrical outlet and lamp in accessible location near the front of the cabinet. GFI outlet fused separately from main AC circuit breaker. Fluorescent or LED cabinet lamp connected and fused with GFI outlet.
7. Back panel positions to accommodate phasing.
8. Power protection devices including AC power circuit breakers, radio interference suppressors, and lightning and surge protectors.
 - a) AC field service single pole, nonadjustable, magnetic breaker rated for 117 VAC operation, NEC approved.
 - b) Radio interference suppressors (RIS) as required to minimize interference in all broadcast transmission and aircraft frequency bands.
 - c) Lightning arrestor/surge protector capable of withstanding repeated 30,000 ampere surges (minimum of 25).
9. Neatly train wiring throughout the cabinet and riser. Bundle and attach wiring to interior panels using nonconductive clamps or tie-wraps.

C. Battery Backup.

1. Consist of an AlphaCell series 195 GXL Battery for compatibility and familiarity with the City of Bettendorf's traffic signal system and personnel.
2. Installed with compatible heater mat and charge management system.

D. Ethernet Switch.

Consist of a GarrettCom Magnum 6KQ Series for compatibility and familiarity with the City of Bettendorf's traffic signal system and personnel.

E. Auxiliary Equipment.

Conflict monitor/malfunction management unit, flasher, load switches, terminals and facilities, emergency vehicle preemption system, video detection camera systems, and miscellaneous equipment and materials shall be compatible with specified controller and conform to NEMA standards.

F. Submittals.

Submit the proposed materials to the Engineer for approval prior to purchasing or installing the traffic signals.

150438.03 CONSTRUCTION.

The materials and construction methods shall comply with this Special Provision and the requirements specified by the supplier selected by the Contractor.

150438.04 METHOD OF MEASUREMENT.

This work will not be paid for separately, but shall be included in the contract unit price Lump Sum for Traffic Signal Installation.

150438.04 BASIS OF PAYMENT.

The price shall be payment in full for all labor, equipment, and materials required to furnish, install, and test the operation described above.