SP-230392
(New)

SPECIAL PROVISIONS
FOR
TRAFFIC SIGNALIZATION

Woodbury County
IM-029-6(319)139--0E-97

Effective Date
January 21, 2026

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

230392.01 DESCRIPTION.

A. Sections 2525 and 4189 of the Iowa DOT Standard Specifications, as modified by these special provisions, shall apply to this project. The installation of the traffic control signals and appurtenances shall be in conformance with the MUTCD, as adopted by the Iowa DOT per IAC 761, Chapter 130.

B. These Special Provisions cover the work described in the contract documents. It covers furnishing all labor, equipment and materials, and performing all required operations to complete the work as per contract documents and to provide a completely operational and working signal system. Unless otherwise modified by the Special Provisions, all work, including equipment, material and installation, shall be in accordance with the Standard Specifications. Where reference is made to the codes, the safety orders, the general orders, the standards, laws, and ordinances, it shall mean the version of the reference that is in effect on the bid advertising date.

C. The Contractor shall be responsible for ONE-CALL locates of the traffic cables installed under this project until acceptance of the project.

D. At the completion of the project, provide the city with as-built drawings of the traffic signal installation.

E. At the completion of the project, mark the vertical and horizontal location of all traffic signal conduits with paint and flags. Use GPS equipment to map the conduit, footing, and handhole locations. Provide a location deliverable in an electronic format that is compatible for import into the City's ArcGIS software program. Coordinate with the City prior to collecting information to assure method of data collection is compatible with City ArcGIS software program.

F. Measure the distance from the bottom of mast arm mounted signal heads and signs to the roadway surface beneath the signal or sign. Provide the measurements to the Engineer.

G. Submit to the Engineer a list of traffic signal items (catalog cuts acceptable) that are proposed for installation.

H. Notify the Engineer in writing of any discrepancy or ambiguity as to the intent or meaning of the contract documents or Special Provision before starting to work on that area. The Engineer will supply the Contractor in writing with the intent. The decision of the Engineer shall be final and conclusive.

I. **Submittals:** Submit applicable brochures, technical data, catalogs, cuts, diagrams, manufacturer's drawings and installation instructions, samples if required, and other descriptive data including the complete description, trade name, model number, type, size, and rating, as well as the additional requirements listed below. All the following must be submitted within 30 days after awarding of the contract for the project.

1. **Schedule of Unit Prices:** Submit a completed schedule of unit prices. Estimates of the work performed on the project will be made by the Jurisdiction and the unit costs will be used to prepare progress payments to the Contractor.

2. **Material and Equipment List:** Submit a completed list of materials and equipment to the Engineer for written approval before any equipment or materials are ordered.

3. **Contractor Certification:** Submit the name(s) and contact information of the International Municipal Signal Association (IMSA) Level II Certified Traffic Signal Technician(s) working on the project and a copy of their IMSA certificate.

4. **Shop Drawings:** Submit shop drawings for traffic signal poles and structures to be furnished on the project. Submit catalog cuts and manufacturer’s specifications for all items in the equipment list.

J. **Scheduling and Conflicts:** Coordinate traffic signal installation to minimize impact to traffic. This may require installation of new facilities during non-peak traffic flows, possibly at night.

230392.02 MATERIALS.

A. **Video Fused Radar Detection System.**
The contractor shall furnish and install the video fused radar hybrid detection system shall be the model NT-DET by NoTraffic meeting the City of Sergeant Bluff standard equipment. The configuration will consist of three cameras, Skybracket camera mounting assemblies, shelf mount processor and all associated equipment required to set up and operate in a field environment. A manufacturer’s representative shall be on-site during set up of the system.

B. **Traffic Monitoring System.**
The contractor shall furnish and install equipment for cellular connection to the traffic signal and all accessories and hardware necessary for a complete and operational system.

C. **Traffic Signal Controller and Cabinet.**
The contractor shall furnish and install a Swarco McCain FLeX Controller, ATC 350i Cabinet manufactured by Swarco McCain Traffic, 32-channel CMU, switchpacks**,** and auxiliary equipment for installation in the project plans. The controller shall be the latest model FLeX Series controller unit manufactured by Swarco McCain. A license of Transparity to the City of Sergeant Bluff’s ATMS shall be included. The controller assembly must be fully compliant with the ATC 6.25 standard. The controller assembly must also fully support NTCIP 1201 and 1202 standards. The cabinet shall be fastened to a concrete base by way of a 12 inch aluminum riser.

D. **Battery Back-Up/UPS System.**

The contractor shall furnish and install a Clary true on-line, full double conversion UPC/UPS. The UPS shall be manufactured by Clary. This unit shall use digital signal processing technology to continuously create and control pure sine wave output power. The UPC/UPS shall isolate the connected equipment (both hot and neutral circuits) against spikes, sags and line noise by converting the utility AC to DC and digitally regenerating clean AC power at a nominal 120 volts, 60 Hertz. The UPC/UPS shall have a secondary ARM processor to handle auxiliary functions, like communications. When on utility, the charging system shall not interfere with the inverter supplying clean regenerated power to all loads. The UPS shall be located inside the traffic signal cabinet, no additional side-mounted cabinet shall be needed.

E. LED Blank-Out Signs.

1. Materials.

- **a. Display:** Capable of displaying symbol or word messages outlined in the contract documents; Conforms to applicable MUTCD standards; LED's designed to maintain symbol integrity if an LED fails; solid state power supply; photocell and dimming circuitry to control sign brightness and visibility.
- **b. Housing:** NEMA 3R to 4X rated/P66; 5052-H32 marine-grade aluminum, 0.125 inch thick; Finish-black powder coat; Includes sun visor; non-glare, high-impact, acrylic window; screened weep holes; ventilation louvers on back of housing with washable filter included; hinged door easily opens, fully sealed flanged design similar to traffic cabinets, lockable for secure access.
- **c. LEDs:** Mounted on modular circuit boards; Operating wavelengths, Red-630 nm and amber-591 nm, high intensity, AlInGaPll, White-x=0.31, y=0.31, high intensity, InGaN; Expected lifetime of 100,000 hours.

2. Operation.

- **a.** Automatic dimming adjusts to ambient light level.
- **b.** Performs at temperatures ranging from -30°F to 165°F and humidity from 0 to 95% (non-condensing).
- **c.** Viewing angle: Red and white LED's: 23 degrees; amber LED's: 30 degrees
- **d.** Power consumption – Variable depending on message 35 W to 120 W; 120V – 60hz