

MODIFIED SPECIAL PROVISION APPROVAL REQUEST
(REV 3-8-16)

Date: 08/20/2020 **District:** 5 **Type:** Project Specific
Letting Month: 10/2020 **FPID Number:** 441133-1-52-01
Requested by: Jeremy H. Dilmore, P.E. **Office/Phone:** 386-943-5000

Specification being modified:
685 Traffic Control System Auxiliaries

Affected Pay Items: 685-518

Expected Cost Impact to this project: The units are expected to cost approximately \$1400

Project Description: I-95 Resurfacing from South of Dunn Ave to South of Airport Rd.

Background Data:

The project includes installation of wrong way driving deterrents on 2 SR 9 (I-95) off-ramps in Volusia County. Project will install new signing, striping, and wrong way vehicle detection systems. This MSP provides the specifications for the Remote Power Management Unit.

Name and PE Number of PE signing and sealing the Modified Special Provision:

PE Name: Jeremy H. Dilmore **PE Number:** 67510

I hereby certify that this Specification was prepared under my responsible charge, and that it has been reviewed in accordance with procedures adopted and implemented by the Florida Department of Transportation.

The official record of this package has been digitally signed and sealed by Jeremy Harvey Dilmore, P.E. on the date indicated here as required by 61G15-23.004 F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Firm Name: Florida Department of Transportation
Firm Address: 719 South Woodland Blvd
City, State, Zip Code: DeLand, Florida 32720
Certificate of Authorization:
Pages: 1 – 3

TRAFFIC CONTROL SYSTEM AUXILIARIES (REV 07-02-20)

ARTICLE 685-2 is expanded by the following:

685-2.3 Remote Power Management Unit (RPMU): Use a RPMU as shown in the Plans. The RPMU must be designed for installation in a roadside Traffic Cabinet to provide remote control of electrical receptacles.

685-2.3.1 Configuration and Management: Provide a RPMU that supports local and remote configuration and management, including access to all user-programmable features as well as alarm monitoring, event logging, and diagnostic utilities.

Configuration and management functions must be password protected.

The RPMU must include an event scheduler that can store a minimum of 60 events.

The RPMU must include LED indicators for relay inputs and outlet status.

Upon loss of communications the RPMU must maintain each receptacle and relay in its currently stored state of operation.

Upon restoration of electrical power after an outage the RPMU automatically restores each receptacle and relay to its previously stored state of operation and all configurable parameters are retained.

The unit must support SNMP v2c, including trap notifications of receptacle state changes.

685-2.3.2 Communication Interfaces: Provide an Ethernet port (RJ45) for local control using a laptop PC and remote control via a network connection.

685-2.3.3 Electrical: Provide a minimum of 4 NEMA 5-15R receptacles, nominal 120 V_{AC}. Provide a minimum current capacity of 12 amperes (amps).

685-2.3.4 Mechanical: All parts must be made of corrosion-resistant materials such as plastic, stainless steel, anodized aluminum, brass, or gold-plated metal. All fasteners exposed to the elements must be Type 304 or 316 passivated stainless steel.

685-2.3.5 Environmental: Operate properly during and after being subjected to the environmental testing procedures described in NEMA TS 2 2016, Sections 2.2.7, 2.2.8, and 2.2.9.

ARTICLE 685-3 is expanded by the following:

Install the RPMU in accordance with the manufacturer's recommendations. Include a RPMU operation and maintenance manual in the cabinet where the RPMU is installed that includes cabinet wiring schematics, electrical interconnection drawings, parts layout and parts lists.

ARTICLE 685-6 is deleted and the following substituted:

685-6 Method of Measurement.

The Contract unit price for each UPS or RPMU, furnished and installed, will include furnishing, placement, and testing of all equipment and materials as specified in the Contract Documents, and all tools, labor, operational software packages and firmware, supplies, support, personnel training, shop drawings, documentation (including the field acceptance test plan), and incidentals necessary for a complete and accepted installation.

ARTICLE 685-7 is deleted and the following substituted:

685-7 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

- Item No. 685- 1- Uninterruptible Power Supply - each
- Item No. 685- 2- Remote Power Management Unit - each