Florida Department of Transportation

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KEVIN J. THIBAULT, P.E.
SECRETARY

July 9, 2019

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
3500 Financial Plaza, Suite 400
Tallahassee, Florida 32312

Re: State Specifications Office
Section: **665**
Proposed Specification: **6650100 Pedestrian Detection System.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

The changes are proposed by Matthew DeWitt of the State Traffic Engineering and Research Lab (TERL) to modify the language.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to stefanie.maxwell@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4140.

Sincerely,

Signature on file

Stefanie D. Maxwell, P.E.
Manager, Program Management Office

SM/dt
Attachment
cc: Florida Transportation Builders' Assoc.
State Construction Engineer

PEDESTRIAN DETECTION SYSTEM.
(REV 5-15-19)

ARTICLE 665-1 is deleted and the following substituted:

665-1 Description.

Install a pedestrian detection system. Use pedestrian detection systems and components listed on the Department's Approved Product List (APL). Pedestrian detection systems are classified into three categories: Standard Pedestrian Pushbutton Detectors, Accessible (Audible/Tactile) Pedestrian Pushbutton Detectors, and ~~Thermal~~ Passive Detectors. The components of the pedestrian detection system include pushbuttons, pedestrian actuation signs, electronics, wiring, and mounting hardware.

SUBARTICLE 665-2.1.2 is deleted and the following substituted:

665-2 Materials.

665-2.1.2 Pushbutton: The pushbutton must include a normally open, mechanical phenolic enclosed, positive-acting, spring-loaded, audible (i.e., click) snap-action switch with single pole, single throw contacts, or a Piezo driven solid state switch rated for a minimum of 50 V. The Piezo driven solid state switch, when activated, must give an audible (i.e., two-tone chirp) ~~and visual~~ indication of actuation. A visual indication of actuation is optional. The visual indication must remain illuminated until the pedestrian's WALKING PERSON (symbolizing WALK) signal indication is displayed. Switch connections inside the housing must allow wiring and installation without binding. The switch must have a design life of one million operations (minimum) at rated load.

SUBARTICLE 665-2.3 is deleted and the following substituted:

665-2.3 ~~Thermal~~ Passive Detectors ~~(TPD)~~: The ~~TPD~~passive detector must consist of all electronic control equipment, wiring, and mounting hardware.

665-2.3.1 General: A ~~TPD~~passive detector system uses one or more sensors and analytics hardware and software to detect pedestrian movement presence, and provides a detection output.

665-2.3.2 Configuration and Management: Ensure that the ~~TPD~~passive detector is provided with software that allows local and remote configuration and monitoring. Ensure that the system can display detection zones and detection activations overlaid on live ~~thermal~~ passive detector inputs. Ensure that the ~~TPD~~passive detector allows a user to edit previously defined configuration parameters, including size, placement, and sensitivity of detection zones.

Ensure that the ~~TPD~~passive detector retains its programming in nonvolatile memory. Ensure that the detection system configuration data can be saved to a computer and restored from a saved file. Ensure that all communication addresses are user programmable.

665-2.3.3: Solid State Detection Outputs: Ensure outputs meet the requirements of NEMA TS2-2003, 6.5.2.26.

665-2.3.4: Electrical Requirements: Ensure the system operates using a nominal input voltage of 120V of alternating current (V_{AC}). Ensure that the system will operate with an input voltage ranging from 89 to 135 V_{AC}. If a system device requires operating voltages other than 120 V_{AC}, supply a voltage converter.

SUBARTICLE 665-2.6 is deleted and the following substituted:

665-2.6 Environmental: Ensure equipment performs all required functions during and after being subjected to the environmental testing procedures described in NEMA TS2-2016, Sections 2.2.7, 2.2.8, and 2.2.9.

PEDESTRIAN DETECTION SYSTEM.
(REV 5-15-19)

ARTICLE 665-1 is deleted and the following substituted:

665-1 Description.

Install a pedestrian detection system. Use pedestrian detection systems and components listed on the Department's Approved Product List (APL). Pedestrian detection systems are classified into three categories: Standard Pedestrian Pushbutton Detectors, Accessible (Audible/Tactile) Pedestrian Pushbutton Detectors, and Passive Detectors. The components of the pedestrian detection system include pushbuttons, pedestrian actuation signs, electronics, wiring, and mounting hardware.

SUBARTICLE 665-2.1.2 is deleted and the following substituted:

665-2 Materials.

665-2.1.2 Pushbutton: The pushbutton must include a normally open, mechanical phenolic enclosed, positive-acting, spring-loaded, audible (i.e., click) snap-action switch with single pole, single throw contacts, or a Piezo driven solid state switch rated for a minimum of 50 V. The Piezo driven solid state switch, when activated, must give an audible (i.e., two-tone chirp) indication of actuation. A visual indication of actuation is optional. The visual indication must remain illuminated until the pedestrian's WALKING PERSON (symbolizing WALK) signal indication is displayed. Switch connections inside the housing must allow wiring and installation without binding. The switch must have a design life of one million operations (minimum) at rated load.

SUBARTICLE 665-2.3 is deleted and the following substituted:

665-2.3 Passive Detectors: The passive detector must consist of all electronic control equipment, wiring, and mounting hardware.

665-2.3.1 General: A passive detector system uses one or more sensors and analytics hardware and software to detect pedestrian movement presence, and provides a detection output.

665-2.3.2 Configuration and Management: Ensure that the passive detector is provided with software that allows local and remote configuration and monitoring. Ensure that the system can display detection zones and detection activations overlaid on live passive detector inputs. Ensure that the passive detector allows a user to edit previously defined configuration parameters, including size, placement, and sensitivity of detection zones.

Ensure that the passive detector retains its programming in nonvolatile memory. Ensure that the detection system configuration data can be saved to a computer and restored from a saved file. Ensure that all communication addresses are user programmable.

665-2.3.3: Solid State Detection Outputs: Ensure outputs meet the requirements of NEMA TS2-2003, 6.5.2.26.

665-2.3.4: Electrical Requirements: Ensure the system operates using a nominal input voltage of 120V of alternating current (V_{AC}). Ensure that the system will operate with an input voltage ranging from 89 to 135 V_{AC}. If a system device requires operating voltages other than 120 V_{AC}, supply a voltage converter.

SUBARTICLE 665-2.6 is deleted and the following substituted:

665-2.6 Environmental: Ensure equipment performs all required functions during and after being subjected to the environmental testing procedures described in NEMA TS2-2016, Sections 2.2.7, 2.2.8, and 2.2.9.