Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JARED W. PERDUE, P.E.
SECRETARY

August 14, 2025

Daniel Holt, PE, PTOE
Director, Project Delivery
Director, Technical Services
FHWA
400 West Washington Street, Suite 4200
Orlando, FL 32801

Re: State Specifications Office
Section: 695
Proposed Specification: **6950302 Traffic Monitoring Site Equipment**

Dear Mr. Holt:

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

The changes are proposed by Victor Johnson to include minimum voltage readings for non-weight axle sensors installed in contracts.

Please review and transmit your comments, if any, within two weeks (10 business days). Comments should be sent via email daniel.strickland@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at (850) 414-4130.

Sincerely,

Signature on File

Daniel Strickland, P.E.
State Specifications Engineer

DS/jb
Attachment
cc: Florida Transportation Builders' Assoc.
State Construction Engineer

TRAFFIC MONITORING SITE EQUIPMENT
(REV 6-24-25)

SUBARTICLE 695-3.2 is deleted and the following substituted:

695-3.2 Axle Sensor:

Section, Contract Documents, and Standard Plans, Index 695-001. Ensure axle sensors are installed in the roadway and secured using an adhesive bonding agent as listed on the APL.

Allow newly applied friction course to cure for a minimum of 30 days prior to the installation of in-road sensors.

Install axle sensors in the right-hand wheel-path midway between the leading and trailing loops as detailed in Standard Plans, Index 695-001. Install axles sensors in the left-hand wheel-path when no paved shoulder exists and sensor lead exit windows are installed at the right-hand edge of the roadway surface or in a lane which is to the left of and adjacent to an open lane of traffic.

Install the axle sensor such that the cable end is closest to the pull box to which the sensor lead cable will be routed. Install the end of the sensor mid-way into the edge line stripe or lane line stripe. Ensure that the axle sensor being installed has lead-in cables of sufficient length to reach the cabinet without splicing. Do not splice axle sensor lead-in cables.

Route the sensor leads to the pull box then to the TMS cabinet. Mark the sensor leads at the pull box and at termination in the cabinet. Submit lane numbering information as specified in Standard Plans, Index 695-001.

Cut the slot the length of the sensor plus an additional 3 to 4 inches. Ensure the depth and width of the slot is installed as recommended by the sensor manufacturer, typically 0.75 inch wide by 1.5 to 2 inches deep.

Use clips or jigs provided by the manufacturer to suspend the sensor at a uniform depth in the slot. Mix and apply the adhesive bonding agent ensuring the slot is completely full with no voids beneath the sensor.

695-3.2.1~~2~~ Test Requirements: Perform the manufacturer's recommended on-site pre-installation test to determine the sensor's condition using an Inductive Capacitance Resistance meter. Replace any sensors that fail the pre-installation test.

Record all test results by lane on the warranty form provided by the manufacturer and leave a copy in the cabinet.

Repeat the test at the termination point in the cabinet after installation. Use an oscilloscope to view and record typical waveforms and signal intensity measurements for the axles of passenger cars and large trucks. Remove and replace any sensor that fails the test at no additional charge to the Department.

Perform an operational test to meet final acceptance requirements. The operational test requires the equipment to operate without deficiencies for a minimum of 14 days prior to final acceptance and must provide a minimum of 200 mv reading for a FHWA Class II vehicle. The sensor shall be operating without deficiencies at the time of final acceptance. Remove and replace any sensor that fails the operation test at no additional charge to the Department. Final inspection will be completed by FDOT TDA staff for final acceptance.

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