

Eric R. Griffin
Traffic Data Collection Manager

Traffic Data Collection

Specifications, Installations and Maintenance





SPECIFICATIONS AND DESIGN STANDARD PLANS

- 695 Traffic Monitoring Site Equipment and Materials

- Removing statement that traffic counters must be on APL.
- Internal managed website that will list all evaluated and approved traffic counters and products

ORIGINATION FORM

Proposed Revisions to the Specifications

(Please provide all information - incomplete forms will be returned)

Date: 09/24/2019 Office: Trans. Data & Analytics Off.
 Originator: Steven Bentz Specification Section: 695: Traffic Monitoring Site Equ
 Telephone: 850.414.4738 Article/Subarticle:
 email: steven.bentz@dot.state.fl.us

**Will the proposed revision require changes to:

Publication	Yes	No	Office Staff Contacted and date contacted
Standard Plans Index	<input type="radio"/>	<input checked="" type="radio"/>	Rick/Cheryl, 09/25/19
Traffic Engineering Manual	<input type="radio"/>	<input checked="" type="radio"/>	Javier Ponce,
FDOT Design Manual	<input type="radio"/>	<input checked="" type="radio"/>	Bobby Bull,
Construction Project Administration Manual	<input checked="" type="radio"/>	<input type="radio"/>	Dan Hurtado, 09/24/19
Basis of Estimate/Pay Items	<input checked="" type="radio"/>	<input type="radio"/>	Mellisa Hollis, 09/25/19
Structures Design Guidelines	<input type="radio"/>	<input checked="" type="radio"/>	Scott Arnold,
Approved Product List	<input checked="" type="radio"/>	<input type="radio"/>	Karen Byram, 09/24/19
Materials Manual	<input type="radio"/>	<input checked="" type="radio"/>	Susan Musselman, 09/24/19

**This section must be completed prior to processing proposed revisions.

Will this revision necessitate any of the following:

Design Bulletin Construction Bulletin Estimates Bulletin Materials Bulletin

Are all references to external publications current? Yes No

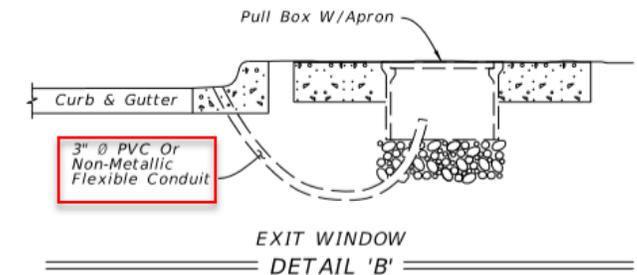
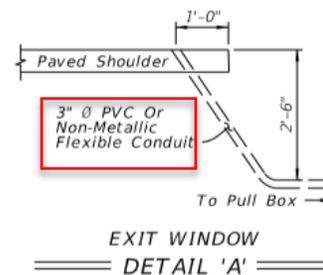
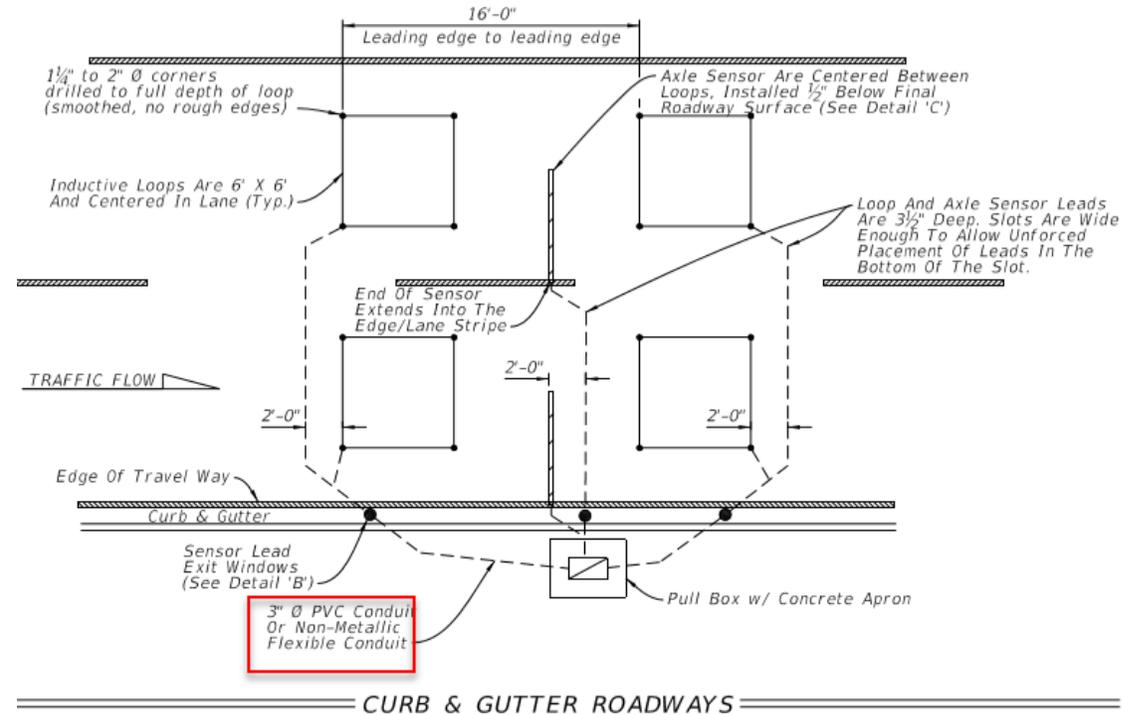
If not, what references need to be updated? (Please include changes in the redline document.)



SPECIFICATIONS AND DESIGN STANDARD PLANS

- 17900 Standard Design Plan replaced with 695-001.

➤ Replaced 1.5" to 3.0" PVC conduit





APPROVED PRODUCT LIST (APL)

- Consolidating all 740 series products to 695 Specifications
- Division II/III – Mfr/Techs
 - 660 Vehicle Detection System
 - 995 Traffic Control Signal and Device

Product Material Sample Packing Slip

(Must be enclosed with sample)

Please fill out completely. Question on sample size or packing should be directed to the testing laboratory receiving sample (see below). Inquiries may also be directed to Product Evaluation at 850-414-4776 or 850-414-4118. MSDS must be included for each product.

Sample package(s) should be sent to:

STATE MATERIALS LABORATORY
5007N.E.39thAVENUE
GAINESVILLE, FL 32609

Re-Qualification

New Product

Company Name:

Address:

Telephone:

Contact Person:

Product Name:

Specification or QPL No. (if applicable):

Laboratory Attention: (check one)

Chemistry 352-955-6620
 Physical 352-955-6672
 Corrosion 352-955-6690
 Bituminous Materials 352-955-2905





SITE INSPECTIONS

TRAFFIC MONITORING INSPECTION SHEET (FDOT) Loops

		Inductance	Insulation	Resistance	Spliced
Lane 1	Loop 1	144	>200m	0.8	Yes
	Loop 2	142	>200m	0.8	Yes
Lane 2	Loop 3	154	>200m	0.8	Yes
	Loop 4	149	>200m	0.8	Yes
Lane 3	Loop 5	154	>200m	1.0	Yes
	Loop 6	154	>200m	0.9	Yes
Lane 4	Loop 7	156	>200m	1.0	Yes
	Loop 8	156	>200m	1.0	Yes
Lane 5	Loop 9	162	>200m	1.0	Yes
	Loop 10	166	>200m	1.0	Yes
Lane 6	Loop 11				
	Loop 12				
Lane 7	Loop 13				
	Loop 14				
Lane 8	Loop 15				
	Loop 16				

Key Loops

- Inductance** (LCR Meter) when checking on a 4 turn loop we need to see at least 100uH. (New or existing)
- Insulation** (Megger) when checking you should see a reading of 200 MΩ or higher. (existing 20 MΩ or higher)
- Resistance** (Multi-Meter) when checking a reading above 3.0Ω it is considered bad.

TRAFFIC MONITORING INSPECTION SHEET (FDOT) Piezos

		Voltage	Dissipation	Resistance	Capacitance	Temp sensor	Spliced
Lane 1	Piezo 1	600mv	0.0100	>20m	6.25nf		
	Piezo 2						
	Piezo 3						
	Piezo 4						
Lane 2	Piezo 1	350mv	0.0090	>20m	6.16nf		
	Piezo 2						
	Piezo 3						
	Piezo 4						
Lane 3	Piezo 1	500mv	0.0097	>20m	7.11nf		
	Piezo 2						
	Piezo 3						
	Piezo 4						
Lane 4	Piezo 1	BAD QUALITY	0.0087	>20m	7.54nf		
	Piezo 2						
	Piezo 3						
	Piezo 4						
Lane 5	Piezo 1	250mv	0.0068	>20m	7.20nf		
	Piezo 2						
	Piezo 3						
	Piezo 4						





EQUIPMENT INSTALLATIONS



- Fail to twist the wire within homeruns
- Only 3/16 inch to 1/4 inch saw cuts
- Twisted pair of wires would need a least 5/8" saw cut to allow unforced placement of twisted wire within the channel



6





EQUIPMENT INSTALLATIONS



The wire was recut to meet the >100uh specifications, but they failed to twist the wire within the homeruns and only twisted the wire from the pull box to inside the cabinet. Two example pictures that were provided shows only 3/16 inches to 1/4 inch saw cuts were provided which is only big enough to fit an un-twisted pair of loop wires, a twisted pair would need at least 5/8 inch saw cut to allow unforced placement of twisted wire within the channel. They moved L1A left in the lane by 4 inches which is now 10 inches away from the manhole lid and should be 12 inches or more, but only 3 inches from the middle white line and may cause additional data issues later. The loop should have been moved forward to avoid the manhole as it was done in the past. Pull box issue was not addressed and is still a tripping hazard.



7





Questions?