ORIGINATION FORM
Proposed Revisions to the Specifications

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

Date: 5/8/2020

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Office: Traffic Engineering and Ope

Specification Section: 659

Article/Subarticle: 659-2.1, 659-2.5 and 659-2.5.9

****Will the proposed revision require changes to:**

Publication	Yes	No	Office Staff Contacted and date contacted
Standard Plans Index	○	◉	Rick/Cheryl 5/5/20
Traffic Engineering Manual	○	◉	Javier Ponce 5/5/20
FDOT Design Manual	○	◉	Bobby Bull 5/520
Construction Project Administration Manual	○	◉	Scott Arnold 5/5/20
Basis of Estimate/Pay Items	○	◉	Missy Hollis 5/5/20
Structures Design Guidelines	○	◉	Ben Goldsberry 5/5/20
Approved Product List	○	◉	Karen Byram 5/5/20
Materials Manual	○	◉	Susan Musselman 5/5/20

**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.)

Why does the existing language need to be changed?

Includes new loading requirements that have not been met by manufacturers.

Summary of the changes:

Removed loading requirements to allow manufacturers more time to comply.

Are these changes applicable to all Department jobs? **Yes** ◉ **No** ○

If not, what are the restrictions?

Contact the State Specifications Office for assistance in completing this form.

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M E M O R A N D U M

DATE: May 28, 2020

TO: Specification Review Distribution List

FROM: Daniel Strickland, P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **6590201 Mast Arm, Span Wire and Pole Mounting Assemblies.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Derek Vollmer by the Traffic Engineering and Operations Office to include new loading requirements that have not been met by manufacturers.
Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at http://fdotewp1.dot.state.fl.us/programmanagement/development/industryreview.aspx . Comments received after **June 25, 2020**, may not be considered. Your input is encouraged.

DS/rf

Attachment

MAST ARM, SPAN WIRE, AND POLE MOUNTING ASSEMBLIES
(REV 5-8-20)

SUBARTICLE 659-2.1 is deleted and the following substituted:

659-2 Materials.

659-2.1 General: Use mounting assemblies listed on the Department's Approved Product List (APL). Meet the requirements of Section 603.

Fastening hardware such as bolts, nuts, washers, set screws, studs, u-bolts, cable and cable swags, must be provided by the mounting assembly manufacturer, must be SAE Type 316 or 304 stainless steel. Hardware (studs, bolts and u-bolts) must be a minimum of 5/16 inch diameter unless otherwise specified in this Section. SAE Grade 8 bolts and nuts are also acceptable. Metallic mounting assemblies must meet ASTM B117 for corrosion resistance.

Connections that provide an entrance to the interior of a traffic device must be weather-resistant.

All assemblies must be constructed to support the weight of any combination of signal indications with all accessories such as back plates and visors.

Connections between signal, disconnect and disconnect hanging hardware must be of the tri-stud design unless otherwise specified in this Section. Tri-stud washers must be a minimum 0.090 inches thick unless otherwise specified in this Section.

Connections must be designed to mate with a standard traffic signal's two inch I.D. opening and must be capable of providing positive positioning and alignment of the traffic device. Connection type may be a 72 tooth serrated edge or other connection type as long as all other specifications are met. For 72 tooth serrated edge connections, the teeth must be clean, sharp, and at least 1/8 inch wide and 3/64 inch deep. All connection types must be weather resistant ~~and incorporate a secondary fail-safe design that would prevent the attached traffic device from turning upon failure/slippage of the serrated edge or other connection type~~.

All mounting assemblies must be capable of providing adjustment in multiple directions for proper alignment of the attached traffic device and to prevent rotation around the vertical axis or misalignment after installation.

Use studs that are either cast directly into the aluminum during the casting process or tapped and locked with a locking material. In each case, a pull-out force must be provided. Messenger wire clamps must be extruded aluminum six inches long or cast U-bolt type.

Torque specifications must be included for all fastening hardware with the assembly installation instructions.

SUBARTICLE 659-2.5 is deleted and the following substituted:

659-2.5 Span Wire Mounting Assemblies: Span wire mounting assemblies must include a span wire clamp, a hanging device such as a drop pipe, adjustable hanger, or adjustable pivotal hanger with extension bar, messenger clamp, disconnect hanger, and multi-brackets. ~~All adjustable hangers must be designed to withstand 7400 pounds in tension and a 740 pound load applied perpendicular to the hanger at the base of the hanger system.~~

SUBARTICLE 659-2.5.9 is deleted and the following substituted:

659-2.5.9 Disconnect Hanger: ~~Disconnect hangers must be designed to withstand 7400 pounds in tension and a 7400 pound load applied perpendicular to the hanger at the base of the hanger system.~~ The disconnect hanger must be supplied with the following as a minimum:

1. Wired screw type/compression terminal block and wiring rated at 600 V_{AC} Root Mean Square (rms) with 12 or 18 circuits. The terminal block must be easily accessible for connection of the field wiring. Attach the terminal block to the disconnect with Type 316 or 304 stainless steel or brass fastening hardware.

2. Weather resistant grommets in each signal cable entrance of the disconnect hanger to prevent insect and animal access and to protect the signal cable from chafing.

3. A two inch opening in the top of the disconnect hanger with an integral serrated area (or 1-1/2 inch NPT threaded top section) to interface with the hanger method employed above it.

4. A securable door that allows access to all areas of the interior. The door securing device must be Type 316 or 304 stainless steel and captive. Hinge or groove pins for the door must be Type 316, 304, 303, or 302 stainless steel.