



Florida Department of Transportation

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KEVIN J. THIBAUT, 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: **635**
Proposed Specification: **6350202 Pull, Splice, and Junction Boxes.**

Dear Mr. Nguyen:

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

The changes are proposed by Derek Vollmer of the State Traffic Engineering 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

PULL, SPLICE, AND JUNCTION BOXES.

(REV ~~5-10-19~~5-30-19)

SUBARTICLE 635-2.2.2 is deleted and the following substituted:

635-2.2.2 Marking: Ensure the following information is permanently cast or engraved into the top surface of all pull and splice box covers. If used, identification plates must be UV stable, mechanically fastened, and bonded with adhesive material suitable for outdoor applications:

1. Unless otherwise shown in the Plans, mark application as follows:

FDOT TRAFFIC SIGNAL for signalized intersections
FDOT FIBER OPTIC CABLE for fiber optic cable
FDOT LIGHTING for highway lighting
FDOT TRAFFIC MONITORING for traffic monitoring
FDOT ELECTRICAL for other electrical applications

2. Manufacturer's name or logo
3. FDOT APL approval number
4. TIER rating

Ensure the date of manufacture (month/day/year, or date code) is permanently located on the top or bottom of the cover. Ensure the interior of the box body has a permanent marking that includes the manufacturer part/model number and date of manufacture near the top of box in a location that is visible after installation when the cover is removed.

SUBARTICLE 635-2.2.4 is deleted and the following substituted:

635-2.2.4 Fabrication: Provide box covers constructed of concrete, polymer concrete or other materials meeting the requirements of this Section.

Provide box covers with lifting slots and a flush-seating lockdown mechanism. Use penta-head or other non-standard, security type lockdown lag bolts. Ensure lockdown bolts and lifting slots are Type 316, 304, or 302 passivated stainless steel or brass. Ensure lockdown bolt assembly is designed to prevent seizing and can be removed without damaging the cover or box body. Ensure the lockdown bolt threaded insert/nut assembly is field replaceable.

SUBARTICLE 635-2.2.5 is deleted and the following substituted:

635-2.2.5 Testing Requirements: Ensure pull and splice boxes meet the American National Standards Institute/Society of Cable Telecommunications Engineers (ANSI/SCTE) 77 2013~~7~~ Specification for Underground Enclosure Integrity for TIER 15 loading with the following additional clarifications and requirements:

1. Apply all environmental tests to the box and its cover.
2. All flexural testing must be conducted in accordance with an appropriate ASTM standard and clearly stated in the report.

3. Perform repetitions of Cycle 1 in Table X2.1 of ASTM G154 for a minimum duration of 1000 hours for the simulated sunlight exposure test.

4. Use deflection-measuring devices positioned to measure vertical and lateral deflection (wherever maximum deflection occurs) for the vertical sidewall load test.

5. Conduct the lateral sidewall pressure, vertical sidewall load and cover vertical load tests without any removable or permanent wall to wall supporting beams located in the interior or top of the box opening.

When testing pull and splice boxes of various sizes (width x length x depth), the cover impact test, internal equipment protection test, coefficient of friction test, and all environmental tests, can be completed using a single representative box/cover (instead of samples from all box/cover sizes) as long as the test report indicates the following:

1. Materials of construction, compositions, and manufacturing processes are identical for all box and cover sizes submitted for listing on the APL.

2. Size (width x length x depth) of the representative box/cover.

PULL, SPLICE, AND JUNCTION BOXES.
(REV 5-30-19)

SUBARTICLE 635-2.2.2 is deleted and the following substituted:

635-2.2.2 Marking: Ensure the following information is permanently cast or engraved into the top surface of all pull and splice box covers. If used, identification plates must be UV stable, mechanically fastened, and bonded with adhesive material suitable for outdoor applications:

1. Unless otherwise shown in the Plans, mark application as follows:

FDOT TRAFFIC SIGNAL for signalized intersections
FDOT FIBER OPTIC CABLE for fiber optic cable
FDOT LIGHTING for highway lighting
FDOT TRAFFIC MONITORING for traffic monitoring
FDOT ELECTRICAL for other electrical applications

2. Manufacturer's name or logo
3. FDOT APL approval number
4. TIER rating

Ensure the date of manufacture (month/day/year, or date code) is permanently located on the top or bottom of the cover. Ensure the interior of the box body has a permanent marking that includes the manufacturer part/model number and date of manufacture near the top of box in a location that is visible after installation when the cover is removed.

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635-2.2.4 Fabrication: Provide box covers constructed of concrete, polymer concrete or other materials meeting the requirements of this Section.

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SUBARTICLE 635-2.2.5 is deleted and the following substituted:

635-2.2.5 Testing Requirements: Ensure pull and splice boxes meet the American National Standards Institute/Society of Cable Telecommunications Engineers (ANSI/SCTE) 77 2017 Specification for Underground Enclosure Integrity for TIER 15 loading with the following additional clarifications and requirements:

1. Apply all environmental tests to the box and its cover.
2. All flexural testing must be conducted in accordance with an appropriate ASTM standard and clearly stated in the report.

3. Perform repetitions of Cycle 1 in Table X2.1 of ASTM G154 for a minimum duration of 1000 hours for the simulated sunlight exposure test.

4. Use deflection-measuring devices positioned to measure vertical and lateral deflection (wherever maximum deflection occurs) for the vertical sidewall load test.

5. Conduct the lateral sidewall pressure, vertical sidewall load and cover vertical load tests without any removable or permanent wall to wall supporting beams located in the interior or top of the box opening.

When testing pull and splice boxes of various sizes (width x length x depth), the cover impact test, internal equipment protection test, coefficient of friction test, and all environmental tests, can be completed using a single representative box/cover (instead of samples from all box/cover sizes) as long as the test report indicates the following:

1. Materials of construction, compositions, and manufacturing processes are identical for all box and cover sizes submitted for listing on the APL.

2. Size (width x length x depth) of the representative box/cover.