



*Florida Department of Transportation*

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KEVIN J. THIBAUT  
SECRETARY

June 6, 2019

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

Re: State Specifications Office  
Section: **410**  
Proposed Specification: **4100303 Precast Concrete Box Culvert.**

Dear Mr. Nguyen:

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

The changes are proposed by Jose Armenteros of the State Materials Office (SMO) 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](mailto: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 Maxwell, P.E.  
Manager, Program Management Office

SM/dt

Attachment

cc: Florida Transportation Builders' Assoc.  
State Construction Engineer

**PRECAST CONCRETE BOX CULVERT.**  
**(REV 4-15-19)**

SUBARTICLE 410-3.3 is deleted and the following substituted:

**410-3.3 Special Requirements for Dry-Cast Concrete:** Dry-cast concrete is defined as a very low slump concrete that requires continuous and intense vibration to compact the concrete, enabling immediate removal of the side forms without detrimental effects to the concrete when used in a dry-cast manufacturing process.

The target slump, ~~and~~ air content ranges, ~~of Section 346—Table 2~~ and the plastic property tolerances of Section 346 ~~—Table 6~~ are not applicable to dry-cast concrete.

Perform absorption tests on specimens from each LOT of dry-cast production in accordance with the test methods in ASTM C497. The absorption of each specimen must not exceed 9.0 percent of the dry mass for Test Method A procedure or 8.5 percent for Test Method B procedure. All specimens must be free of visible cracks and must represent the full thickness of the product. Test specimens after 28 days of standard curing, or prior to the date of shipping if the precast box sections are to be shipped before the completion of the 28 day curing period.

Core three specimens for Test Method B in accordance with ASTM C42 and meet the sampling location and size requirements of ASTM C497. Prepare or core a minimum of one specimen for Test Method A in accordance with the test cylinder requirements of ASTM C497. When the initial absorption specimen from a concrete box section fails to conform to this Specification, the absorption test may be made on another specimen from the same box section and the results of the retest may be substituted for the original test results for acceptance of the LOT. The manufacturer may test each box section within a LOT and cull the box sections not meeting absorption requirements marking them as deficient with waterproof paint or other approved means. Deficient box sections must not be shipped to the project site. Reduce the frequency of absorption tests to one test every five LOTs when the results of five consecutive LOTs meet the specified limit.

**PRECAST CONCRETE BOX CULVERT.**  
**(REV 4-15-19)**

SUBARTICLE 410-3.3 is deleted and the following substituted:

**410-3.3 Special Requirements for Dry-Cast Concrete:** Dry-cast concrete is defined as a very low slump concrete that requires continuous and intense vibration to compact the concrete, enabling immediate removal of the side forms without detrimental effects to the concrete when used in a dry-cast manufacturing process.

The target slump, air content ranges, and the plastic property tolerances of Section 346 are not applicable to dry-cast concrete.

Perform absorption tests on specimens from each LOT of dry-cast production in accordance with the test methods in ASTM C497. The absorption of each specimen must not exceed 9.0 percent of the dry mass for Test Method A procedure or 8.5 percent for Test Method B procedure. All specimens must be free of visible cracks and must represent the full thickness of the product. Test specimens after 28 days of standard curing, or prior to the date of shipping if the precast box sections are to be shipped before the completion of the 28 day curing period.

Core three specimens for Test Method B in accordance with ASTM C42 and meet the sampling location and size requirements of ASTM C497. Prepare or core a minimum of one specimen for Test Method A in accordance with the test cylinder requirements of ASTM C497. When the initial absorption specimen from a concrete box section fails to conform to this Specification, the absorption test may be made on another specimen from the same box section and the results of the retest may be substituted for the original test results for acceptance of the LOT. The manufacturer may test each box section within a LOT and cull the box sections not meeting absorption requirements marking them as deficient with waterproof paint or other approved means. Deficient box sections must not be shipped to the project site. Reduce the frequency of absorption tests to one test every five LOTs when the results of five consecutive LOTs meet the specified limit.