ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR

Specification: SECTION 400

Subject: 400 Concrete Structures

Origination date: September 20, 2011

Originator: Andre Pavlov
Office/Phone: 850-414-4293

Problem statement:
Weep holes in box culverts are not always required by design; however the FDOT Specifications currently requires weep hole in all box culverts.
.
Proposed solution:
Revise the Specifications to require weep holes in box culverts only when shown in the plans and clarify weep hole grating and backfill requirements.

Information source: Structures Design Office, District Structures Design Engineers

Recommended Usage Note:

Estimated fiscal impact, if implemented: None

Implementation of these changes, if and when approved, will begin with July 2012 lettings.

For State Specifications Office Use Only

Begin date:
File Number:
Scheduled completion date:
Implementation date:
Implementation team member:
Usage Note:
Notes:

Florida Department of Transportation

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ANANTH PRASAD, P.E.
SECRETARY

M E M O R A N D U M

DATE: October 12, 2011

TO: Specification Review Distribution List

FROM: Rudy Powell, Jr., P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **4000200 Concrete Structures.**

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

     This change was proposed by Andre Pavlov of the State Structures Design Office to revise the specifications to require weep holes in box culverts only when shown in the plans and to clarify weep hole grating and backfill requirements.

     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 to my attention via e-mail at SP965RP or rudy.powell@dot.state.fl.us. Comments received after **November 9, 2011** may not be considered. Your input is encouraged.

RP/cah
Attachment

CONCRETE STRUCTURES.
(REV 9-22-11)

ARTICLE 400-2 (Page 373) is deleted and the following substituted:

400-2 Materials.
Meet the following requirements:
Concrete .... Sections 346 and 347
Penetrant Sealer ....Section 413
High Molecular Weight Methacrylate (HMWM)**
.... Section 413
Reinforcing Steel ....Section 415
Water...Section 923
Curing Materials* ....Section 925
Epoxy Bonding Compounds**........... Sections 926 and 937
Joint Materials**..Section 932
Bearing Pads ....Section 932
Non-Shrink Grout** ....Section 934
Class 5 Applied Finish Coatings**.....................Section 975
Galvanizing Compound** ....Section 562
Dowel Bar Assembly** ....Section 931
Filter Fabric...Section 985
*The Engineer will allow clean sand and sawdust for certain curing, when and as specified.
**Use products listed on the Department's Qualified Products List (QPL).

ARTICLE 400-6 (Page 385) is deleted and the following substituted:

400-6 *Underdrain and* Weep Holes.
Provide weep holes in all abutments~~,~~ *and* retaining walls.~~,~~ *Provide a continuous underdrain for box culverts in accordance with Design Standard Index No. 289. When shown in the Plans, provide weep holes for* ~~and~~ culverts *symmetrically on each side.*~~over 5 feet in height.~~ Provide weep holes that are at least 3 inches in diameter and not more than 10 feet apart, but do not place any weep holes under the area to be occupied by the base or pavement. Place the outlet ends of the weep holes just above the ground line in front of abutments and retaining walls. In culverts, place weep holes approximately 6 inches above the *interior*~~top of the~~ floor slab. Cover the ~~inside ends~~*exterior openings* of all weep holes with *galvanized* wire mesh and a~~t~~ *minimum of* ~~least~~ 2 *cubic* f~~ee~~t~~³~~ of clean, broken stone or gravel *wrapped in Type D 3 filter fabric*, ~~so placed as~~ to allow free drainage but ~~at the same time~~ prevent the fill from washing *through.*~~out. From approximately 6 inches below the bottom of the inside ends of the weep holes, carry a column of clean, broken stone or gravel at least 1 ft² up against the back of the wall to the surface of the original ground.~~