

ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR

 Modify Specification 410

Section/File number

☐ New Section _____
Section number

Subject: Corrosion Protection of Lifting and Handling Devices for Precast and Precast/Prestressed Products

Origination date: 5-26-10

Originator: Gevin McDaniel
Office/Phone: Structures Design/ (850) 414-4284
Email address/ gevin.mcdaniel@dot.state.fl.us
Userid: st986gm

Problem statement: Section 410-6.1 is modified to remove the language regarding the embedded metal lifting devices which is replaced with a reference to Section 450-9. See background data below.

Information source: Charles Boyd, Ghulam Mujtaba, Tom Andres, Steve Nolan, Guy Padgett

Background data: Reports from the field indicate that some producers are not filling permanently exposed lifting device block-outs which, in turn, fill up with water producing rust that spills down the face and eventually causes cracking due to the expansion of the corroding metal inserts. The issue of corrosion protection of lifting devices for precast products had been addressed in a few Specification Sections separately (Section 407, 410 and 455), but were only applicable to those particular products. In lieu of continuing with the sprawling of requirements for protection of lifting devices, the decision was made to locate the language in a central location applicable to all precast and precast/prestressed products. Section 400 currently references Section 450 as follows: *400-1 ... “For precast concrete structures meet the requirements of Section 450 for storage, shipping and erection.”* From this, we surmised the intent was to reference Section 450 for items similar in nature between precast concrete structures and precast prestressed concrete structures to avoid potential conflict from future

revisions. Inserts and Lifting Devices are indeed similar between the two. To make this change, revisions, deletions and references have been proposed for Sections 400, 407, 410, 450 and 455.

Recommended

Usage Note:

Use for projects with precast or precast/prestressed products.

**Estimated fiscal
impact, if
implemented:**

None

Implementation of these changes, if and when approved, will begin with the January 2011 letting.



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE KOPELOUSOS
SECRETARY

M E M O R A N D U M

DATE: June 23, 2010

TO: Specification Review Distribution List

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

SUBJECT: Proposed Specification: 4100601 Precast Concrete Box Culvert.

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

This change was proposed by Gevin McDaniel because the issue of corrosion protection of lifting devices for precast products had been addressed in a few Specification Sections separately (Section 407, 410 and 455), but were only applicable to those particular products. In lieu of continuing with the sprawling of requirements for protection of lifting devices, the decision was made to locate the language in a central location.

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 ST986RP or rudy.powell@dot.state.fl.us. Comments received after **July 21, 2010** may not be considered. Your input is encouraged.

RP/cah
Attachment

PRECAST CONCRETE BOX CULVERT.**(REV 6-8-10)**

SUBARTICLE 410-6.1 (Page 419) is deleted and the following substituted:

410-6.1 Casting: Cast precast elements in unyielding beds and forms. Ensure bearing surfaces in casting forms are level and straight, and vertical surfaces are plumb prior to casting. Ensure surfaces within the forms against which concrete will be cast, are clean and free from rust and hardened residual concrete. Provide full concrete cover clearance to all form wires and other miscellaneous pieces of metal, except as permitted by Section 415. Bend all tie wires away from the form surface to provide maximum concrete cover. ~~Embedded metal lifting devices may be positioned 1/2 inch below the concrete surface, provided blockouts are backfilled with an epoxy mortar within a distance of 1 1/2 inch of the perimeter of the metal device located within the concrete cover.~~ *Provide inserts and lifting devices in accordance with 450-9.2.1.*