

## ORIGINATION FORM

### THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR

(The person who receives or originates the issue and needs to forward the issue for action.)

**Specification:** 449

**Subject:** Precast Concrete Drainage Products

**Origination date:** 08/26/2008

**Originator:** Linda Seigle

**Office/Phone:** Drainage 850-414-4322

**Problem statement:** Fiber reinforced Concrete pipe is no longer produced in the U.S.

**Proposed solution:** Delete FRCP from Specifications Sections 449-3 and 449-5. *This is a clean-up to reflect market changes. FDOT does not anticipate another supplier of fiber reinforced pipe anytime in the near future.*

**Information source:** Hardie Pipe

**Recommended Usage Note:**

**Estimated fiscal impact, if implemented:** None. There are other types of pipe available.



# Florida Department of Transportation

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## **M E M O R A N D U M**

**DATE:** October 21, 2008

**TO:** Specification Review Distribution List

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

**SUBJECT:** Proposed Specification: **4490300, Precast Concrete Drainage Products – Construction Requirements**

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

This change was proposed by Linda Siegle of the State Drainage Office to delete reference to fiber reinforced concrete pipe, which is no longer produced in the U.S.

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 November 21, 2008 may not be considered. Your input is encouraged.

RP/dr  
Attachment

**PRECAST CONCRETE DRAINAGE PRODUCTS – CONSTRUCTION REQUIREMENTS.**

**(REV 10-06-08)**

ARTICLE 449-3 (Page 441) is deleted and the following substituted:

**449-3 Construction Requirements.**

Unless otherwise stipulated within the Contract Documents, meet the following requirements for concrete mix, product design, fabrication, transportation, and installation:

- Three-Sided Precast Culverts.....Section 407
- Precast Concrete Box Culvert.....Section 410
- Pipe Culverts and Storm Sewers.....Section 430
- French Drains.....Section 443
- Inlets, Manholes, and Junction BoxesSection 425 and ASTM C 478
- Underdrains..... Section 440 and ASTM C 444
- Steel Reinforced Round Concrete Pipe.....ASTM C 76
- Reinforced Elliptical Concrete Pipe.....ASTM C 507
- Non-reinforced Concrete Pipe .....ASTM C 985
- Fiber Reinforced Concrete Pipe.....ASTM C 1450

Meet the special requirements for the applicable pipes as described in 449-4 through 449-6.

ARTICLE 449-5 (Page 443) is deleted.

**449-5 Fiber Reinforced Concrete Pipe.**

~~449-5.1 Special Requirements for Fiber Reinforced Concrete Pipe: Use fiber reinforced concrete pipe meeting the requirements of ASTM C 1450. Use only pipes that are properly marked.~~

Use pipe meeting the applicable material requirements set forth in 449-2. In addition, fiber reinforced concrete pipe must be designated Class S, Class I, Class II, Class III or Class IV. The corresponding strength requirements are given in the following table:

Minimum Long Term Service D Load	
Pipe Class	Lb/ft/ft
S	600
I	800
II	1,000
III	1,350
IV	2,000

~~Ensure the relationship between short term crush loads required to achieve 100-year long term design loads and the relationship between the saturated and dry crush loads are provided. The minimum dry crush load can not be less than a factor of 2 times the long term service load. The short term crush load will be determined as required in Section 10.2 of~~

4490300

All Jobs

~~ASTM C 1450 except the specimen will be tested by the appropriate section of ASTM C 497,  
External Load Crushing Strength by the Three-Edge Bearing Test Method.~~