

ORIGINATION FORM

THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR

Specification: 400-21, 450-12.1, 521, 534, 548

Subject: 400-21, Classification of Cracks in Concrete Structures to be Sealed
450-12.1, Noncomplying Prestressed Products – General
521, Concrete Barriers, Traffic Railing Barriers and Parapets
534, Sound Barriers
548, Retaining Wall Systems

Origination date: 3/4/08

Originator: Steven Plotkin

Office/Phone: 904-360-5501

Problem statement: **400-21**, The current specification was the result of a major rewrite in 2006 and as such was a first generation specification. As a result, many problems with the spec. have been identified by Department staff in the offices of Maintenance, Design, Materials and Construction which have been deemed valid by a Task Team of Department Engineers.

450-12.1, As a result of revisions, the 400-21 spec now applies to all concrete structures and not just cast-in-place structures as before. Therefore, 450-12.1 now needs a statement that tells Contractors to use 400-21 for disposition of cracks for prestressed concrete components after installation.

521, As a result of revisions, the 400-21 spec now applies to all concrete structures and not just cast-in-place structures as before. Therefore, 521 now needs a statement that tells Contractors to use 400-21 for disposition of cracks in precast concrete barriers etc. after installation as well as a statement that tells Contractors to use 450 for disposition of concrete defects prior to installation.

534, As a result of revisions, the 400-21 spec now applies to all concrete structures and not just cast-in-place structures as before. Therefore, 534 now needs a statement that tells Contractors to use 400-21 for disposition of cracks in precast concrete sound barriers after installation as well as a statement that tells Contractors to use 450 for disposition of concrete defects prior to installation.

548, As a result of revisions, the 400-21 spec now applies to all concrete structures and not just cast-in-place structures as before. Therefore, 548 now needs a statement that tells Contractors to use 400-21 for disposition of cracks in precast concrete retaining wall systems after installation as well as a statement that tells Contractors to use 450 for disposition of concrete defects prior to installation.

Proposed solution: The CPAM Chapter 10.3 has been modified to provide guidance to the CEI on implementing the specification change. There will not be any impact on the cost or to the project schedule since the intent of the specification has not been changed.

Information source: The following Department Engineers provided information on this issue: Rafiq Darji, Jonathan Van Hook, Jeffrey Pouliotte, Rod Powers, Ivan Lasa, Ghulam Mujtaba and David Sadler.

Recommended

Usage Note: These revisions shall apply to the standard specifications and shall be included in all projects

Estimated fiscal impact, if implemented:

These revisions have no fiscal impact since they are all related to providing improved guidance and reduced confusion for Contractors with regard to the Department's expectations related to repairing concrete defects. The intent of the revised specifications has not been changed.

Implementation of these changes, if and when approved, will begin with the January 2009 letting.

For Specifications Office Use Only

Begin date: June 12, 2008

File Number: 4501201

Scheduled completion date: September 9, 2008

Implementation team member: Don Roberts

Implementation date: January 2009



Florida Department of Transportation

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STEPHANIE KOPELOUSOS
SECRETARY

MEMORANDUM

DATE: June 23, 2008
TO: Specification Review Distribution List
FROM: Rudy Powell, Jr., P.E., State Specifications Engineer
SUBJECT: Proposed Specifications Change: **5480400**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed new specification change for Repairs and Rejection of Precast Components.

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 23, 2008 may not be considered. Your input is encouraged.

RP/dr

Attachment

COMMENTS:

Submitted by:

Phone #:

REPAIRS AND REJECTION OF PRECAST COMPONENTS.

(REV 6-12-08)

ARTICLE 548-4 (of the Supplemental Specifications) is deleted and the following substituted:

548-4 Repairs and Rejection of Precast Components.

For precast concrete wall components that have not been installed, evaluate cracks, spalls and other deficiencies in accordance with 450-12. Repair deficiencies in accordance with 450-13 or the plant's approved repair methods that are included as part of the QCP. Ensure that the original performance and durability of repaired wall components are maintained. Use materials for concrete repair that will meet or exceed the strength requirement for the class of concrete used. Materials meeting the requirements of Section 930 may be substituted for non shrink grout when required by 450-13.

For precast concrete wall components that have been installed, the disposition of concrete cracks shall be in accordance with 400-21.

The Department will reject all precast concrete wall components not meeting the quality standard of this Section and referenced Specifications. In addition, any of the following defects will be sufficient cause for rejection by the Department:

1. Defects that indicate unsatisfactory molding.
2. Defects indicating honeycombed or open texture concrete.
3. Defects in the physical characteristics such as:

Signs of aggregate segregation;

Broken or cracked corners;

Soil reinforcement attachment devices improperly installed/damaged;

Lifting inserts not useable;

Exposed reinforcing steel;

Insufficient cover over reinforcing steel;

Cracks at the alignment pipe or pin;

Insufficient concrete compressive strength;

Precast Component thickness in excess of $\pm 3/16$ inch from that shown in

the Contract Documents; or

Stained front face, due to excess form oil or other reasons.

If the face of the precast component is stained or discolored to the point of rejection, the stain or discoloration may be removed or a Department approved stain or a Class 5 finish may be applied to attain a uniform appearance for the entire structure, to the satisfaction of the Engineer.