

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

CHARLIE CRIST
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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: **5210700**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed new specification change for Concrete Barriers, Traffic Railing Barriers and Parapets – Repairs and Rejection.

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 #:

**CONCRETE BARRIERS, TRAFFIC RAILING BARRIERS AND PARAPETS –
REPAIRS AND REJECTION.**

(REV 6-12-08)

ARTICLE 521-7 (Page 589) is deleted and the following substituted:

521-7 Repairs and Rejection.

For permanent precast concrete barrier wall that has 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 the repaired barrier wall is 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. Concrete barrier wall is subject to rejection if it fails to conform to any of the Specification requirements after repair. For precast and cast-in-place concrete barrier wall that has been installed, the disposition of concrete cracks shall be in accordance with 400-21.

521-87 Method of Measurement.

The quantity to be paid for under this Section will be the plan quantity, in feet, completed and accepted. The quantity will be measured along the top of the barrier wall from the begin to end station, including transitional and end sections, with no deduction for expansion joints or open joints. Barrier wall on bridge structures and approach slabs to be removed shall be included in the cost of Removal of Existing Structures. Barrier wall to be removed along roadways are included in the cost of clearing and grubbing, or if a pay item is included, in the cost of Removal of Concrete Barrier Wall.

ARTICLE 521-8 (Page 589) is deleted and the following substituted:

521-98 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including all reinforcing steel, conduits, materials and incidentals necessary to complete the work.

Payment will be made under:

- | | |
|-------------------|--|
| Item No. 521- 1- | Concrete Barrier Wall - per foot. |
| Item No. 521- 5- | Concrete Traffic Railing Barrier (Bridge) – per foot. |
| Item No. 521- 6- | Concrete Parapet (Bridge) – per foot. |
| Item No. 521- 7- | Retaining Wall System – per foot. |
| Item No. 521- 8- | Retaining Wall System, Mounted with Sleeper Slab – per foot. |
| Item No. 521- 72- | Concrete Barrier Wall – per foot. |
| Item No. 521- 73- | Removal – per foot. |