



Florida Department of Transportation

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SECRETARY

MEMORANDUM

DATE: September 4, 2015

TO: Specification Review Distribution List

FROM: Daniel Scheer, P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **4500201 Precast Prestressed Concrete Construction.**

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

The changes are proposed by Ghulam Mujtaba of the State Materials Office to specify that the allowable sweep tolerances for beams and piles will be a function of their lengths. The current specification requires the maximum allowable sweep for I beams to be of 1/8 inch per 10 foot length and not to exceed 1.5 inches. The production of the longer size I beams in Florida will affect their allowable sweep tolerances.

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 online at <http://www2.dot.state.fl.us/ProgramManagement/Development/IndustryReview.aspx> . Comments received after **October 2, 2015**, may not be considered. Your input is encouraged.

DS/ot
Attachment

PRECAST PRESTRESSED CONCRETE CONSTRUCTION.
(REV 7-15-15)

SUBARTICLE 450-2.1 is deleted and the following substituted:

450-2.1 General: Develop a Producer Quality Control Program as specified in Section 105.

Meet the requirements of the accepted Quality Control Program, Contract Documents, and Precast/Prestressed Concrete Institute (PCI) Manual for Quality Control for plants and production of structural precast concrete products. The requirements of the Contract Documents will govern, when there is a discrepancy between the PCI Manual and the Contract Documents.

Accept responsibility for performing daily Quality Control (QC) inspections of all phases of work ensuring all materials and workmanship incorporated into the product meet the requirements of the Contract Documents. Also, maintain a daily activity report detailing the results of the daily Quality Control Program activities. Ensure these daily reports and minutes of the weekly meetings with the Engineer and the plant's production personnel are maintained at the plant. During the weekly meetings, discuss the results of the QC inspections.

Inspect the product for conformance with the product dimension tolerances shown in Appendix B of PCI Manual MNL-116 (Manual for Quality Control for Plants and Production of Structural Precast Concrete Products), except as modified herein. Apply the tolerances with respect to the theoretical positions and dimensions shown in the Plans. Apply the same tolerances for U-Beams as those specified for I-girders, excluding sweep tolerance, when inspecting the product for conformance with dimension tolerances. For Florida U-Beam diaphragms, the tolerance for the thickness of the intermediate and end diaphragms is plus 1 inch and minus 1/2 inch, and the location of intermediate diaphragms, relative to design plan positions, is plus or minus 3 inches. The tolerance of the thickness of end diaphragms shall be plus 3 inches and minus 1/2 inch.

Limit sweep to 1/2 inch for U-Beams and Inverted-T Beams. ~~The maximum allowable sweep for I Beams is 1/8 inch per 10 foot length, but not to exceed 1.5 inch. The maximum allowable sweep for piling is 1/8 inch per 10 feet, but not to exceed 1.0 inch.~~

—————The tolerance for beam strand sheathing is plus or minus 2 inches.

Ensure the tolerance on all miscellaneous shaping including, but not limited to, chamfers, miters, bevels, keys, tapers, radii, holes, inserts, and block outs is within plus or minus 1/8 inch of the control dimension of the shape.

The tolerances represent the total allowable tolerance that will be accepted in the finished product. Do not apply tolerances shown for the overall dimensions of a member to violate the tolerances shown for positions of reinforcing and prestressing steel. Apply the tolerances during and after the fabrication of prestressed products. Do not reduce the concrete cover for reinforcing steel, prestressing steel or any other metallic objects specified in the Plans more than 1/4 inch. Do not reduce the concrete cover for reinforcing steel, prestressing steel or any other metallic objects when the cover specified in the Plans is minimum cover.

Ensure the QC inspector is present during concrete placements and performs inspection during all fabrication of precast prestressed concrete products, including the inspection of the operations before, during and after the placement of concrete.

Ensure the Plant QC Manager, or the QC inspectors under his/her direction, examine all precast prestressed concrete products within five working days of detensioning to ensure their dimensions conform to the specified tolerances and to determine if there are any deficiencies. This process control shall be listed on the Producer Quality Control Plan (QC Plan).