

4500401 PRECAST PRESTRESSED CONCRETE CONSTRUCTION – MATERIALS AND  
ACCEPTANCE TESTING  
RESPONSE TO COMMENTS FROM INDUSTRY REVIEW

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Comments:

Was the deleted text either moved to 346 or already there? If so, no comment. If not, where would this option be?

Response: In accordance with the ASTM C 31/C 31M -06 and the modified version of 346 (7-07), the use of 4 x 8 or 6 x 12 test cylinders are allowed for compressive strength tests. There is no need for comparison tests during mix design verification. Therefore, the note has been deleted to be consistent with modified version of 346 specifications.

Action: No action is required. The proposed modification may be processed as submitted.

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Daniel F. Haldi  
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Comments:

The language in 450-4.1 would be acceptable except the language in 346, specifically -5 Table 5 last footnote is incorrect. In order for 450 to be valid, need to change 346 first, or apply a Materials Bulletin.

Response: The 346 (7-07) version of the specification, has modified the note in Table 5 and has deleted the note related to 450 specification. The modified version of 346 specification and ASTM C 31-76 allows the of 4 x 8 or 6 x 12 test cylinders for compressive strength tests.

Action: No action is required. The proposed modification may be processed as submitted.

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Florida Prestressed Concrete Association  
Sent by: Joseph Lord

Comments:

Reference FDOT Specifications for Road & Bridge Construction, 2007, page

314 of Section 346-5, Table 5, titled "Sampling and Testing Methods";

\*\* For LOTs selected for verification testing use the same size cylinder molds as the Department uses for Verification tests. For the compressive strength testing of precast concrete the use of 4 inch x 8 inch cylinders are allowed, provided they meet the requirements of 450-4.1

Will this note be removed or modified?

Will the use of 4 x 8 test cylinders still be allowed? Again referencing Table 5 as outlined above the test method for Making and Curing Test Specimens in the Field is ASTM C 31. Unless this test method has been modified it states that for acceptance testing for specified compressive strength, test cylinders shall be 6 by 12 in. or when specified 4 x 8 in.

The only other reference to 4 x 8 in test cylinders is in section 346-3, item (d) for submitting cylindrical test specimens for permeability testing.

The precast / prestressed concrete industry worked very hard with FDOT to allow the use of 4 x 8 test cylinders with the primary emphasis on repetitive motion injuries that resulted from the use of the much heavier 6 x 12 cylinders. In addition it was found that 6 x 12 cylinders were placing excessive loads on test machines.

We do not want the FDOT to mandate the use of 6 x 12 in. test cylinders in lieu of the 4 x 8 in. even if it is inadvertently through a spec. change

Response: As described in the origination form, the proposed modification will allow the use of 4 x 8 test cylinders without comparison tests. This will be a cost benefit to the industry. In accordance with the ASTM C 31/C 31M -06 and the modified version of 346 (7-07), the use of 4 x 8 or 6 x 12 test cylinders are allowed for compressive strength tests. There is no need for comparison tests during mix design verification. The 346 (7-07) version of the specification, has modified the note in Table 5 and has deleted the note related to 450 specification. The modified version of 346 specification and ASTM C 31-76 allows the use of 4 x 8 or 6 x 12 test cylinders for compressive strength tests. Therefore, the note has been deleted to be consistent with modified version of 346 specifications.

Action: No action is required. The proposed modification may be processed as submitted.

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Comments:

I previously sent you comments regarding

Industry Review of FDOT Proposed Specification Revisions: 4500401 Precast Prestressed Concrete Construction - Materials and Acceptance Testing - Concrete

And additional comment that our industry would like to make, Hollow core precast I believe is list as “incidental” and in the test cylinders of 6x12 would be somewhat problematic to use, in the past I have been told some of my members have use 3x6 and FDOT was able to correlate those result with what a 6x12 would be.

Thank you for the opportunity to have input into this process

Response: Upon approval of the proposed change, the use of 4 x 8 in test cylinders will be allowed. This change is in accordance with national standards. ASTM C 31 does not allow the use of 3 x 6 test cylinders for compressive strength testing of concrete.

Action: No action is required. The proposed modification may be processed as submitted.

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