

3460202 STRUCTURAL PORTLAND CEMENT CONCRETE
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comments: (Internal 6-03-20)

What is the background behind the optimized gradation language in 346-2.4.1? When would the Contractor elect to do this?

Response:

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Comments: (Internal 6-03-20)

Is there a detailed matrix of what is being changed?

Response:

Ananth Prasad
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Comments: (Internal 06-09-20)

What is the intent/need for Table 346-6 in 346-4.2.11?

Response:

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Comments: (Industry 6-11-20)

The specification for small quantities 346-9.7 is not in proposed changes. Is the intent to Verify all concrete placed?

Response:

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Comments: (Industry 6-11-20)

Please change all instances of fc' to f'c to be consistent with the AASHTO format`

Response:

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Comments: (Industry 6-11-20)

In Table 346-7, the text in the description for FM 5-501 appears that it may be a different font from the rest of the descriptions in the table.

Response:

Brian Price
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Comments: (Industry 6-17-20)

346-2.3 Supplementary Cementitious Materials: The following verbiage in parentheses needs to be added back in this section. 346-2.3 Pozzolans and Slag: Fly ash or slag materials are required in all classes of concrete except for the following when used in slightly aggressive environments: Class II 3400, Class I 3000, (and concrete requiring a coloring agent used in slightly aggressive environments. When a concrete requiring a coloring agent is used in a moderately or extremely aggressive environment, slag must be used.) Use fly ash or slag materials as a cement replacement, on an equal weight replacement basis with the following limitations District One and Seven have multiple round-a-bouts that require the use of colored concrete in the truck aprons. Subarticle 346-2.4.1 is deleted and the following substituted Not sure why this sub-article needs to be deleted, the sub-article is not in the July 2020 specification, it needs to be added Table 346-3 I (Pavement) and Note 3 Should we have slump range of 0 to 3 inches if ASTM C143 has the below statement? ASTM C143 Note 2 states Concrete having slumps less than ½ inch may not be adequately plastic for this test to have significance. Caution should be exercised in interpreting such results. 346-3.4.1 Minimum Cementitious Materials Content: Since 9.2 Volume II Table 1 dated May 15, 2020 has a Maximum Allowable 28-day Compressive Strength requirement for the producers, I do not think there should be a minimum Cementitious content requirement in the specification.

Response:

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Comments: (Industry 6-17-20)

346-2.4.1 Optimized Aggregate Gradation: Is there any definition that what aggregate falls into intermediate-size aggregate? Is #89 aggregate a intermediate aggregate? 346-3.1 General: As new specification has "maximum allowable strength" for each class and a higher class concrete most probably exceed maximum allowable strength of the specified class concrete, a clarification is needed to exempt that maximum allowable strength is not included in the requirement of the specified class concrete. Table 346-3 Note (6): Maximum allowable strength and 0.35 w/cm limits counteracts each other. In reality, we need to lower w/cm to meet durability requirement (29 kOhm-cm) so that actual strength mostly exceeds the maximum allowable strength for CL IV class in particular for fly ash mixes. If there is a durability requirement for that type of concrete, why there is w/cm limit that is a kind of redundant and that limits flexibility of concrete mix designs. Table 346-4: This is confusing as FDOT just removed minimum cementitious materials content and included maximum allowable strength. Here are concerns: - Why don't we just put previously existent minimum materials content, which at least have different levels of limits depending on concrete class. This new limitation doesn't consider concrete class. Therefore, low class mixes such as CL I may not meet and not be used for extremely or moderately aggressive environmental classification. This is very serious issue to us! - Note mention that the Engineer may allow a lower total amount of cementitious materials content in concrete Class I, II and III. The Engineer's approval is very cumbersome to get it in a timely manner. All burdens related to this topic will come to concrete producers as contractors want to get away from any issues. - FDOT specifications and modifications need to stay "Be consistent". This makes all to be confused what FDOT wants to do. 346-3.4.3 Surface Resistivity Test: Please clarify what a highly reactive pozzolan is or at least what materials fall into a highly reactive pozzolan. The surface resistivity requirement is set to secure certain period of service life such as 75 or 100 yrs. The service life model is mostly related to rebar corrosion. Can we simply use corrosion inhibitor to meet the same purpose and is there any FDOT's stand about "Corrosion inhibitor" vs. "Surface resistivity" Table 346-8, Note (1): Is this Type II cement? Please clarify.

Response:

Anonymous

Comments: (Industry 6-26-20)

346-2.3.3 Ternary Concrete Mixes: Tables 346-2 and 346-4 break across 2 pages, but it's just the notes. Omitting the header information would remove clutter and make the table easier to read. Also, there's a blank line between notes 3 and 4 in table 346-2, and the formatting is different for the word "Notes" in table 346-4 (centered instead of left-aligned). 346-3.3 Master Proportion Table: The subsection heading is "Master Proportion Table," but the table is not labeled as the "Master Proportion Table." It's labeled as "Structural Concrete Class, Compressive Strength, Water to Cementitious Materials Ratio and Slump." 346-3.4.1 Minimum Cementitious Materials Content: Ensure that the produced concrete meet the minimum amount of cementitious materials content in Table 346-4. "Meets" should be pluralized. 346-4.23.3 Mass Concrete: Below Table 346-6: "Do not place concrete until the proposed MCCP has been approved ..." has been is passive voice, replace with "... MCCP is approved ..." 346-10 Investigation of Low Strength Concrete and Structural Adequacy. 2. At the Engineer's discretion, obtain drilled core samples ... to determine the in-place strength of the LOT of concrete in question ... The Engineer will determine whether to allow coring of the in-place concrete or require an engineering analysis based on the compressive strength of the test cylinders. There is no criteria included other than the statement "... based on the compressive strength of the test cylinders." This encourages inconsistent rulings. Suggest adding compressive strength criteria to base this judgment upon.

Response:

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Comments: (Industry 6-29-20)

Hello, I have an inquiry in regards to the use of Mass Concrete and table 346-2. Is the use of mass concrete mix designs permitted in non- 'mass concrete' situations and placements? If so, than why do general use concrete mixes limit fly ash to 30% when mass concrete fly ash can have as much as 50%, according to table 346-2. Those are my only inquiries. Thank you.

Response: