Florida Department of Transportation

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STEPHANIE KOPELOUSOS
SECRETARY

July 7, 2010

Monica Gourdine
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section 350
Proposed Specification: **3500100 Cement Concrete Pavement**

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

These changes were proposed by Michael Bergin of the State Materials Office to update the spec to current material applications and terminology.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to ST986RP or rudy.powell@dot.state.fl.us.

If you have any questions relating to this specification change, please call Rudy Powell, State Specifications Engineer at 414-4280.

Sincerely,

Signature on File

Rudy Powell, Jr., P.E.
State Specifications Engineer

RP/
Attachment
cc: Gregory Jones, Chief Civil Litigation
Florida Transportation Builders' Assoc.
State Construction Engineer

CEMENT CONCRETE PAVEMENT.
(REV ~~4-21-1062~~*6-8-10*)

ARTICLE 350-1 (Pages 343 – 344) is deleted and the following substituted:

350-1 Description.

Construct Portland cement concrete pavement in one course, on a prepared subgrade. Use either the fixed-form or the slip-form method of construction. When reinforced cement concrete pavement is specified or required, use concrete reinforced with steel bars or steel fabric, in accordance with details shown in the plans. The Engineer may require a demonstration of equipment and paving operations.

If any uncontrolled cracks appear during the life of the Contract, remove and replace the cracked *concrete* at no expense to the Department. Investigate and implement immediate effective solutions to eliminate further cracks, in consultation with, and subject to the approval of the Engineer.

Furnish the following information in the Quality Control Plan (QCP) as required in Section 105:

1. A detailed sequence and schedule of concrete placement operations including, but not limited to, width of pavement to be placed, proposed equipment, production rates, working hours, concrete hauling, and placement, curing, sawing, and sealing methods. Identify backup equipment and the procedures that will be followed in the case of a breakdown of equipment.
2. A method to ensure the proper placement of reinforcing steel, tie bars and dowel bars.
3. A traffic control plan that includes provisions for the placement and maintenance of barriers required to protect the pavement from traffic, for a minimum of 14 days after concrete placement.
4. Defined provisions for adequate lighting for all work done at night, including finishing, curing, and sawing joints.
5. A method for ensuring pavement thickness is met and a consolidation procedure is identified.
6. If forms are to be utilized define the material, dimensions, type, connections, and staking of the forms.
7. Define the procedure for the protection of the fresh concrete pavement from inclement weather.

SUBARTICLE 350-3.3 (Page 345) is deleted and the following substituted:

350-3.3 Vibratory Units: Consolidate the concrete for the full width of the strip being placed with either surface pan type or internal type vibrators. Use a vibration method with sufficient intensity and duration to ensure complete consolidation of the concrete without causing segregation of the materials.

For the surface vibrators, use a frequency of not less than 3,500 impulses per minute. For internal type vibrators, use a frequency of not less than 5,000 impulses per minute for tube vibrators and not less than 7,000 impulses per minute for spud

vibrators. When using spud-type internal vibrators adjacent to forms, either hand-operated or attached to spreaders or finishing machines, use a frequency of not less than 3,500 impulses per minute. Measure *and record* the frequency of internal vibrators in plastic- concrete *and submit data to the Engineer* ~~*and provide this report to the Engineer*~~. Mount spud vibrators such that the free tip trails, and space spud vibrators at a maximum interval of 30 inches.

Provide an amplitude of vibration with spud vibrators that is sufficient for the vibration to be perceptible on the surface of the concrete along the entire width of the strip being placed. ~~Furnish~~ *Measure and record* ~~a device for measuring and indicating~~ the actual frequency of vibrations *and submit data* ~~*and provide a report*~~ *to the Engineer.* ~~*identifying this information.*~~ Control all vibration by the forward movement of the spreader or finishing machine so that vibration automatically ceases when stopping the forward movement of the spreader.

SUBARTICLE 350-5.4 (Page 347) is deleted and the following substituted:

350-5.4 Cleaning ~~and Oiling~~ Forms: Thoroughly clean ~~and oil~~ the forms after each use and before placing concrete against them. ~~*Provide a form*~~ *Apply a release agent* ~~*meeting EPA requirements and use*~~ *in accordance with the manufacturer's recommendations*.

ARTICLE 350-6 (Page 347) is deleted and the following substituted:

350-6 Protection from Weather.

~~Inclement weather may include, but is not limited to, periods when the air temperature may fall below 35ºF, periods when the air temperature may rise above 85ºF, high winds, heavy rains and other conditions that might affect the final durability of the pavement.~~ *Meet the requirements of 400-7.1 when placing concrete.* When rain appears imminent, stop all paving operations, and cover the surface of the unhardened concrete with the protective covering.~~*Meet the requirements of 400-7.1 when placing concrete.*~~

SUBARTICLE 350-7.2 (Page 347) is deleted and the following substituted:

350-7.2 Fabric: Place ~~fabric~~ *welded wire* reinforcement at right angles to the centerline of the pavement and accurately to the position and location shown in the plans. Lap adjacent sheets of ~~fabric~~ *welded wire reinforcement* not less than 6 inches. Make the laps only in the longitudinal members.

SUBARTICLE 350-9.1 (Pages 348 and 349) is deleted and the following substituted:

350-9.1 General Requirements: Immediately after placing the concrete, strike-off, consolidate, and finish it to produce a finished pavement in accordance with

the cross-section, width, and surface finish required by the Contract Documents. Perform the sequence of operations as follows: strike-off; vibratory consolidation; screeding; floating; removal of laitance; straightedging; and final surface finish. Except as specified, perform strike-off, consolidation, screeding, and floating by the machine method.

Use equipment that is fully and accurately adjustable to produce a pavement meeting project requirements. Use equipment that is capable of operating in a consistent and smooth manner under all conditions of use.

~~Provide a concrete surface true to grade and crown, and free of irregularities. If the Engineer permits adding water to assist the finishing operations, apply water as a fog spray by means of approved spray equipment.~~

As soon as possible after screeding while the concrete is plastic, correct all flaws such as cavities, blemishes, marks, or scratches that will not be removed by planing. ~~Apply moisture to the concrete surface only if required and only in the immediate vicinity of the irregularity. The quantity of moisture applied should not exceed what is needed to facilitate correction of the irregularity.~~*~~Do not add water to the concrete surface to assist in finishing operations unless specifically authorized by the Engineer. If the Engineer permits the addition of water, apply only a fog mist above the concrete surface by means of approved power driven spray equipment~~*.

Provide a concrete surface true to grade, cross slope and superelevation, and free of irregularities. If the Engineer permits adding water to assist the finishing operations, apply water as a fog spray by means of approved spray equipment.

SUBARTICLE 350-18 (Pages 357 - 358) is deleted and the following substituted:

350-18 Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section, including any preparation of the subgrade not included in the work to be paid for under another Contract item; all transverse and longitudinal joint construction, including tie-bars and dowel bars; the furnishing of test specimens; repair of core holes; and all incidentals necessary to complete the work.

Payment will be made under:

Item No. 350- 1-	Plain Cement Concrete Pavement - per square yard.
Item No. 350- 2-	Reinforced Cement Concrete Pavement - per square yard.
Item No. 350- 72-	Cleaning and Resealing Joints - per foot.
Item No. 350- 78-	Cleaning and Sealing Random Cracks - per foot.
~~Item No. 370- 1-~~	~~Bridge Approach Expansion Joint - per foot.~~

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