



Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JARED W. PERDUE, P.E.
SECRETARY

August 4, 2023

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
3500 Financial Plaza, Suite 400
Tallahassee, Florida 32312

Re: State Specifications Office
Section: 350
Proposed Specification: **3501303 Cement Concrete Pavement.**

Dear Mr. Nguyen:

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

The changes are proposed by Richard Hewitt to allow saw cutting time flexibility to avoid raveling and shrinkage cracking. The proposal also includes a slight lowering of strength to open to traffic to reduce construction time.

Please review and transmit your comments, if any, within two weeks (10 business days). Comments should be sent via email daniel.strickland@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at (850) 414-4130.

Sincerely,

Daniel Strickland, P.E.
State Specifications Engineer

DS/dh

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

CEMENT CONCRETE PAVEMENT.**(REV 7-26-23)**

SUBARTICLE 350-13.3.3 is deleted and the following substituted:

350-13.3.3 Transverse Contraction Joints: Construct transverse contraction joints at the interval in accordance with the Standard Plans, Index 350-001.

Ensure that the sawing equipment does not damage the pavement and saw the transverse contraction joints as soon as the pavement has hardened to the degree that tearing and raveling are not excessive and before uncontrolled shrinkage cracking begins.

Accomplish the joint sawing in two steps. Make the initial cut 1/8 inch wide by a depth at least 1/3 of the pavement thickness and as soon as possible but in no case longer than ~~12~~24 hours after placing the concrete. Upon approval of the Engineer, the Contractor may extend initial saw cutting time to avoid raveling at joint due to sawing too soon or reduce initial saw cutting time to avoid slab cracking due to sawing too late. Make a second saw cut, to provide the joint dimensions indicated in the Plans, just prior to final grinding and sealing the joint.

Repair any uncontrolled cracks at no expense to the Department by removing and replacing the pavement across the full width of all affected lanes or shoulders and to the nearest transverse joint in each direction.

ARTICLE 350-18 is deleted and the following substituted:

350-18 Opening Pavement to Traffic.

Construct an earth berm along longitudinal free edges of the pavement within 36 hours, when newly placed concrete pavement is constructed on a granular base of an erodible material. Build the berm to the full height of the pavement and at least 18 inches wide. Sufficiently compact the berm to prevent underwash of the pavement. Maintain the berm until the final shoulders are complete.

Keep the pavement closed to traffic, including construction operations until one of the following has been met:

1. Fourteen calendar days after placement of the concrete.
2. Test cylinders, made in accordance with ASTM C31 and tested in accordance with ASTM C39, indicate a compressive strength of at least ~~2,200~~2,000 psi (cure these test cylinders in a manner identical to the corresponding section of pavement).
3. Provide a strength-maturity relationship curve as outlined by FM 3-C1074 for opening to traffic determined during design mix verification. Use the maturity method specified in this Section to:
 - a. Determine if the concrete has achieved ~~2,200~~2,000 psi and can be opened to traffic.
 - b. Verify the strength of the last slab of each day's placement.

Fabricate three test cylinders for strength and maturity curve correlation testing. The compressive strength cylinders and maturity curve correlation testing will be performed at the first day of production or at the discretion of the Engineer.

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Ensure that the sawing equipment does not damage the pavement and saw the transverse contraction joints as soon as the pavement has hardened to the degree that tearing and raveling are not excessive and before uncontrolled shrinkage cracking begins.

Accomplish the joint sawing in two steps. Make the initial cut 1/8 inch wide by a depth at least 1/3 of the pavement thickness and as soon as possible but in no case longer than 24 hours after placing the concrete. Upon approval of the Engineer, the Contractor may extend initial saw cutting time to avoid raveling at joint due to sawing too soon or reduce initial saw cutting time to avoid slab cracking due to sawing too late. Make a second saw cut, to provide the joint dimensions indicated in the Plans, just prior to final grinding and sealing the joint.

Repair any uncontrolled cracks at no expense to the Department by removing and replacing the pavement across the full width of all affected lanes or shoulders and to the nearest transverse joint in each direction.

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350-18 Opening Pavement to Traffic.

Construct an earth berm along longitudinal free edges of the pavement within 36 hours, when newly placed concrete pavement is constructed on a granular base of an erodible material. Build the berm to the full height of the pavement and at least 18 inches wide. Sufficiently compact the berm to prevent underwash of the pavement. Maintain the berm until the final shoulders are complete.

Keep the pavement closed to traffic, including construction operations until one of the following has been met:

1. Fourteen calendar days after placement of the concrete.
2. Test cylinders, made in accordance with ASTM C31 and tested in accordance with ASTM C39, indicate a compressive strength of at least 2,000 psi (cure these test cylinders in a manner identical to the corresponding section of pavement).
3. Provide a strength-maturity relationship curve as outlined by FM 3-C1074 for opening to traffic determined during design mix verification. Use the maturity method specified in this Section to:
 - a. Determine if the concrete has achieved 2,000 psi and can be opened to traffic.
 - b. Verify the strength of the last slab of each day's placement.

Fabricate three test cylinders for strength and maturity curve correlation testing. The compressive strength cylinders and maturity curve correlation testing will be performed at the first day of production or at the discretion of the Engineer.