

10th Annual Concrete Conference

Concrete Specification and Roadway Standard Revisions

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Section 501 (Change 3)

501 Reinforced or Plain Cement Concrete Pavements

- 501.3(p)1 Late Season Pavements
 - Re-implemented the required application of linseed oil on all concrete pavements and shoulders placed after Sept. 1st
 - To be applied in accordance with Section 503.3



Section 503 (Change 3)

503 Protective Coating for Cement Concrete Pavement

- 503.3(b) Application
 - Eliminated the "Unless otherwise permitted" in the second paragraph
 - Application can now only occur under the air and concrete temperature conditions indicated [between 2C (35F) and 40C (100F)]



Section 504 (Change 3)

504 Pavement Relief Joint

- 504.2 Material -- 3rd, 4th & 8th Bullets
 - Eliminated Bituminous Paper and Wearing Course references and added Polyethylene Sheeting to coincide with RC-24M revisions
- 504.3(b) Subslab
 - Revised subsection name to Sleeper Slab



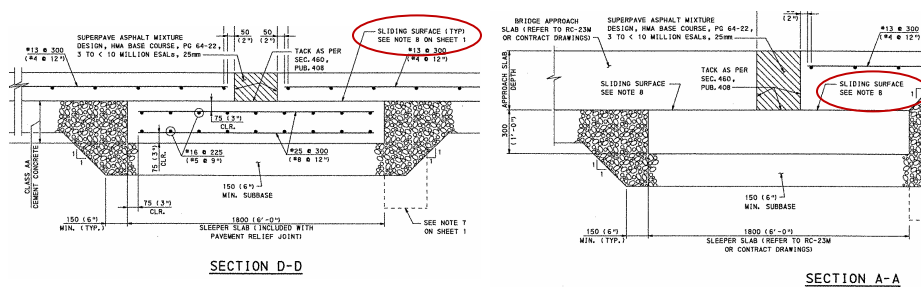
Section 504 (Change 3)

504 Pavement Relief Joint (Cont'd)

- 504.3(c) Base Course
 - Moved this subsection to 504.3(d) and deleted the Wearing Course Subsection 504.3(d)
 - Renamed Subsection 504.3(c) to Polyethylene Sheeting
 - To be constructed in accordance with Section 505.3



RC-24M Pavement Relief Joint Pub. 72 Change 2



8. TROWEL SMOOTH AND PLACE 2 LAYERS OF 0.1 mm (4 MIL.) POLYETHYLENE SHEETING AS BOND BREAKER.

- RC-24M, Sheets 1 & 3 (7/20/2007)



Section 505 (Change 3)

505 Bridge Approach Slabs

- 505.1 Description
 - Revised subsection to state work includes "associated sleeper slabs, including the subbase material and necessary excavation"
 - Further revised subsection to state: "Two layers of 0.10 mm (4.0 mil) polyethylene sheeting to be used as a bond breaker under the bridge approach slabs"



Section 505 (Change 3)

505 Bridge Approach Slabs (Cont'd)

- 505.2(a) Reinforced Cement Concrete Pavement
 - Changed subsection name and reference to Subbase – Section 350.2. Moved Reinforced Cement Concrete Pavement to Subsection 505.2(b)



Section 505 (Change 3)

505 Bridge Approach Slabs (Cont'd)

- 505.2(b) Neoprene Strip Seal Dam
 - Changed subsection name and reference to Reinforced Cement Concrete Pavement – Section 501.2.
 - Eliminated all references to Neoprene Strip Seal Dam



Section 505 (Change 3)

505 Bridge Approach Slabs (Cont'd)

- 505.2(c) Bituminous Paper – Section 727
 - Added this subsection and reference
- 505.2(d) Polyethylene Sheeting – Section 711.1(a)
 - Added this subsection and reference



Section 505 (Change 3)

505 Bridge Approach Slabs (Cont'd)

- 505.3 Construction
 - Eliminated all reference to Section 1026.3 and longitudinal joint requirement
 - Added the following subsections:
 - (a) Excavation
 - (b) Polyethylene Sheeting



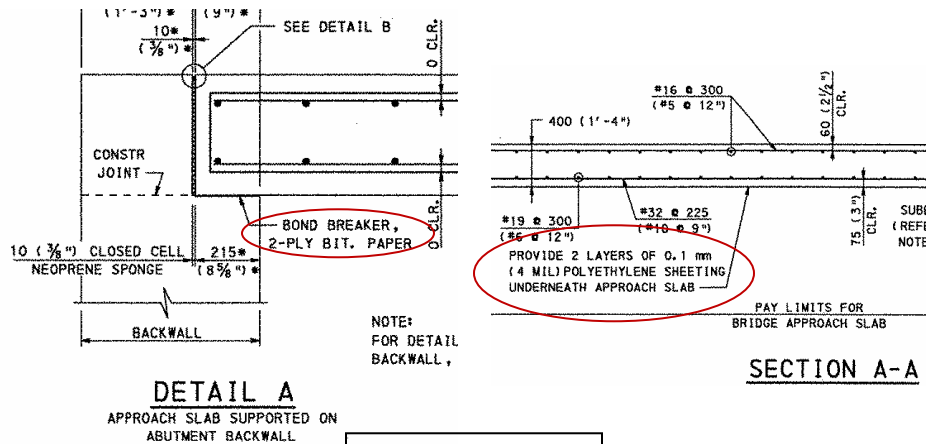
Section 505 (Change 3)

505 Bridge Approach Slabs (Cont'd)

- 505.4 Measurement and Payment
 - Revised subsection (a) to include excavation, subbase material, polyethylene sheeting, bituminous paper, cement concrete and reinforcement bars
 - Eliminated subsection (b) Neoprene Strip Seal Dam in its entirety



RC-23M Bridge Approach Slabs Pub. 72 Change 2



• RC-23M, Sheet 2
(7/20/2007)



Section 516 (Change 4)

516 Concrete Pavement Patching

- 516.2(a) Cement Concrete - Class AA
 - Removed information related to 28-day compressive strength requirements for Accelerated Concrete
 - Also removed language deleting Section 704 Table A since the requirements for Accelerated Concrete were added to Section 704 Table A



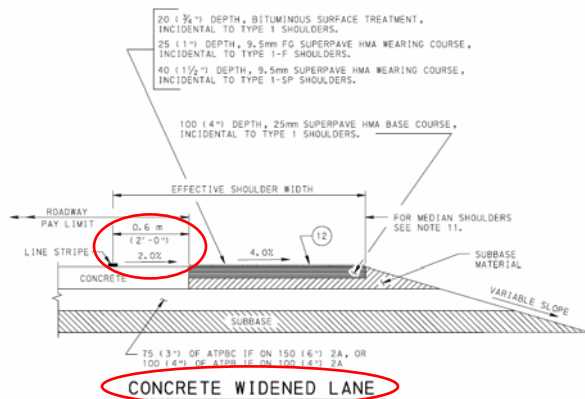
RCs for Widened Lane Pavements Pub. 72 Change 2

RCs Widened Lane Concrete Pavements

- RC-25M Shoulders
- RC-27M Plain Concrete Pavement
 - Added details to increase the standard lane width from 12' to 14' for concrete pavements when constructing bituminous shoulders
 - Moves the bituminous shoulder joint 2' away from the Travel Lane



RC-25M Shoulders Pub. 72 Change 2

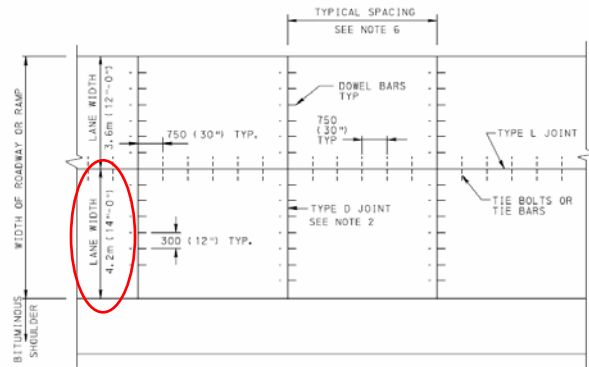


- RC-25M, Sheet 1 (8/29/2008)
- Other minor changes to Sheets 2, 3, and 4

TYPE 1 SHOULDER
TYPE 1-F SHOULDER
TYPE 1-S SHOULDER
TYPE 1-SP SHOULDER



RC-27M Plain Concrete Pavement Pub. 72 Change 2



• RC-27M, Sheet 2
(8/29/2008)

PLAN
INTERSTATE AND OTHER LIMITED ACCESS
FREEWAYS, ARTERIALS AND RAMPS
WITH WIDENED CONCRETE PAVING



Section 692 (Change 3)

692 Shoulder Relief Joint

- 692.2 Material
 - Eliminated all bullets referring to Wearing Course
- 692.3(b) Wearing Course
 - Eliminated subsection to coincide with Change 2 to RC-23M and RC-24M



Section 704 (Change 3)

704 Cement Concrete

- 704.1(c)2 Cement Factor
 - Added Mechanically Modified Pozzolan-Cement combination use
 - When a Mechanically Modified Pozzolan-Cement combination is used, the cement reduction is a maximum of 50%



Section 704 (Change 4)

704 Cement Concrete

- 704.1(b) Table A Cement Concrete Criteria
 - Added 28-Day compressive strength requirements for accelerated concrete to Table A



Section 704 Table A (Change 4)

Class of Concrete	Use	Cement Factor ⁽³⁾⁽⁸⁾ (lbs/cu. yd.)		Maximum Water Cement Ratio ⁶ (lbs/lbs)	Minimum Mix ⁽²⁾ Design Compressive Strength (psi)			Proportions Coarse ⁽¹⁾ Aggregate Solid Volume (cu. ft./cu. yd.)	28-Day Structural Design Compressive Strength (psi)
		Min.	Max.		Days				
					3	7	28		
AAA	Bridge Deck	634.5 ⁽⁴⁾	752	0.43	—	3,600	4,500	—	4,000
AA	Slip Form Paving ⁽⁷⁾	587.5	752	0.47	—	3,000	3,750	11.00-13.10	3,500
AA	Paving	587.5	752	0.47	—	3,000	3,750	9.93-13.10	3,500
AA	Accelerated Patching ⁽⁸⁾	587.5	752	0.47	----	----	3,750	9.93-13.10	3,500
AA	Structures and Misc.	587.5	752	0.47	—	3,000	3,750	9.93-13.10	3,500
A		564	752	0.50	—	2,750	3,300	10.18-13.43	3,000
C		394.8	658	0.66	—	1,500	2,000	11.45-15.10	2,000
HES		752	846	0.40	3,000	—	3,750	9.10-12.00	3,500



Section 709 (Change 4)

709 Reinforcement Steel

- 709.1(c)1 Coating, (c)2.b Fabrication
 - Changed the thickness requirement for Coated Steel Reinforcing Bars from "10 ± 2 mils" to a "specified" minimum & maximum
 - Changed the repair coating thickness from 7-12 mils to ASTM 775 requirements
 - The new specification more closely follows the National Standard for coating thickness



Section 709 (Change 4)

709 Reinforcement Steel (Cont'd)

- 709.1(f) Stainless Steel Reinforcement Bars
 - Added subsection to allow use of solid stainless steel reinforcing bars



Section 709 (Change 4)

709 Reinforcement Steel (Cont'd)

- 709.5 Certification
 - Added the 2nd and 3rd bullets referencing Forms CS-4171C (for epoxy coaters of reinforcement steel) and CS-4171F (for fabricators of epoxy coated reinforcement steel), as well as maintenance and submission requirements of each Form



S.O.L. 424-08-02

S.O.L. 424-08-02 Form CS-4171 and Certification of Epoxy Coated Reinforcement

- To implement two supplemental certification forms
 - One form for the coating facility (CS-4171C)
 - One form for the fabricator (CS-4171F)
 - All constituent suppliers will be identified
 - Will be made available for download from the PENNDOT website following the "Forms and Publications" link, will also be available in the preface of Bulletin 15
 - Both forms include instructions for users



THANK YOU

