

REVISIONS TO MATERIALS SAMPLING GUIDE January 1, 2012 Edition

Section 3, Asphaltic Concrete			
Page 3-2 – Material 6, Asphaltic Concrete Densities			
	Branch Lab		
			Removed – correlation
			Added – verification
	Central Lab		
			Removed – correlation
			Added – verification
Page 3-2 – Material 7 – Asphaltic Concrete Pavement			
	Field Personnel		
			Removed – following individuals; District 1, 2, 4, 5, 6, 7, 8 Ron Bohling, Lincoln, District 3 Rob Davis, Norfolk
			Added – Materials & Research Division
Section 4, Asphaltic Concrete Materials			
Page 4-1 – Material 1, Mineral Aggregates (Gravel, Sand, Sand-Gravel)			
	Central Lab		
			Removed – correlation
			Added – verification
Section 5, Cold Mix Bituminous Surfacing and Base			
Page 5-2 – Material 4, Bituminous Aggregates (Includes Mixed in Place Bituminous Surfacing)			
	Central Lab		
			Removed – correlation
			Added – verification
Section 9, Grading			
Page 9-1 – Material 1, Embankment (Cohesive and Granular); Type of Test, Moisture			
	Field Personnel		
			Removed – check tests
			Added – re-tests
Page 9-1 – Material 1, Embankment (Cohesive and Granular); Type of Test, Gradation (if specified)			

		Branch Lab	
			Removed – correlation
			Added – verification
		Central Lab	
			Removed – correlation
			Added – verification
Section 10, Subgrade (Cohesive Soils)			
	Page 10-1 – Material 1, Subgrade Compaction and Subgrade Reconstruction		
		Field Personnel	
			Removed – check tests
			Added – re-tests
	Page 10-2 – Material 2, Fly Ash		
		Field Personnel	
			Removed – Section 1 of
Section 11, Compaction – Stabilized Portion of Granular Subgrade			
	Page 11-1 – Material 1, Stabilized Portion of Granular Subgrade; Type of Test, Moisture Density		
		Field Personnel	
			Removed – check tests
			Added – re-tests
Section 12, Foundation Course (Crushed Concrete, Aggregate-D, and Bituminous)			
	Page 12-2 – Material 6, Foundation Course		
		Field Personnel	
			Removed – Check tests
			Added – Re-tests
Section 13, Granular Base, Granular Fill, Granular Backfill, Sand Blanket and MSE Walls			
	Page 13-5, Material 7, Stabilized Portion of Granular Base, Granular Fill, Granular Backfill and Sand Blanket; Type of Test, Moisture Density		
		Field Personnel	
			Removed – Check tests
			Added – Re-tests

Section 14, Portland Cement/Blended Cement/Pozzolans/Ground Granulated Blast Furnace Slag/Silica Fume			
Title			
	Removed – Ground Granulated Blast Furnace		
	Added – Cement		
Index			
	Removed – Ground Granulated Blast Furnace		
	Added – Cement		
	Page 14-1 – Material 1, Portland Cement		
	Branch Lab		
			Removed – One gallon sample from each concrete producing facility each calendar year. This sample is to be submitted to the Central Laboratory.
	Page 14-1 – Material 2, Blended Cement		
	Branch Lab		
			Removed – One gallon sample from each concrete producing facility each calendar year. This sample is to be submitted to the Central Laboratory.
	Page 14-2 – Material 3, Pozzolans (Fly Ash or Calcined Natural Pozzolan)		
	Branch Lab		
			Removed – One gallon sample from each concrete producing facility each calendar year. This sample is to be submitted to the Central Laboratory.
	Page 14-2 – Material 4, Ground Granulated Blast Furnace Slag (GGBFS)		
	Removed – Ground Granulated Blast Furnace		
	Removed - GGBFS		
	Added – Cement		
	Branch Lab		
			Removed – One gallon sample from each concrete producing facility each calendar year. This sample is to be submitted to the Central Laboratory.
Section 15, Portland Cement Concrete for Pavement, Base Course, Pavement Patching			
	Page 15-3, Material 8, PCC Pavement		
	Field Personnel		
			Removed – following individuals; District 1, 2, 4, 5, 6, 7, 8 Ron Bohling, Lincoln, District 3 Rob Davis, Norfolk
			Added – Materials & Research Division
Section 20, Bridge Materials			

	Page 20-2, Material 11, Bolts, Nut, and Washers; Item A, Anchor	
	Sub Item b, Low Carbon (Common)	
		Removed – on Form TL5166
	Sub Item c, Swedge	
		Removed – on Form TL5166
	Page 20-4, Material 26. Reinforcement Bars, Item C, Structural Wire Mesh	
		Added – Item C, Structural Wire Mesh
	Sample Required	
		Added – Yes – One sample 36 inches square from each 75,000 square feet of fabric used unless shipped from tested and approved stock.
	Approved Products List	
		Added – No
	Manufacturer Certified Tests Required	
		Added – Yes
	Manufacturer Certification of Compliance Required	
		Added – Yes
	Location of Additional Information	
		Added – Section 27, Note 9
	Section 21, Lighting Signal Material	
	Page 21-1, Material Bolts, Nuts, and Washers	
	Item B, Anchor Bolts for High Mast Towers and Overhead Sign Supports, Sample Required	
		Added – one
		Removed – s
		Added – one
		Removed – s
	Page 21-1, Electrical Items	
	Item C, Conduit, Sample Required	
		Added – (Underwriters' Laboratory) or ETAL (Intertek testing services)
		Added – or ETL
	Section 23, Traffic Control	
	Index	
	Barricade Warning Sign, Drum, and Tubular Post Reflective Material	
		Removed – Signs and

			Added – Drum and Tubular Post
	Page 23-1, Barricade Warning Sign, Drum, and Tubular Post Reflective Material		
			Removed – Signs and
			Added – Drum and Tubular Post
	Page 23-1, Barricade Warning Sign, Drum, and Tubular Post Reflective Material		
	Sample Required		
			Added – Reflective Material shall be tested in the field
			Removed – If the results are unavailable, submit a sample of the reflective sheeting to the Central Laboratory.
Section 28, Quality Assurance Program for Construction Materials			
	Appendix A, Quality Assurance Program for Construction, Table A1, Test Methods for Qualification of Sampling and Testing Personnel		
	Page A-2, Subsection A5. Documentation. A5.1		
			Added – electronic
			Added – in SiteManager
			Removed – The Central Laboratory will provide District Offices with records of the qualification certificates for individuals performing testing on projects in their area of responsibility.
			Removed – both
			Added – , LPA, and consultant
			Added – The entity coordinating the certification training will retain copies of the written examinations through the life of the qualification as well as maintaining necessary testing and certification protocol requirements and manuals.
			Removed – A5.2 Documentation to be maintained by the Materials and Research Central Laboratory includes:
			Removed – A5.2.1 Sampling and Testing Personnel Qualification Record – A record for each individual listing all tests the individual has been qualified to perform.
			Removed – A5.2.2 Qualification Worksheet – A form listing the key elements of the test method as used by the evaluator conducting the observation to record results.
			Removed – A5.2.3 Copies of written examinations.
			Removed – A5.3 Retention of documents will be for the life of the qualification.
			Removed – A5.4 The qualification certificate issued to an individual will show each test procedure for which the individual was qualified or a title, such as "Field Tester I", which can be identified as encompassing a series of test procedures, and the date the qualification will expire.
	Page A-7, Concrete, Certification: NDOR PCC Plant Inspector		

			Added – AADHTO T 11, Materials Finer than 75 Microns (No. 220 Sieve) in Mineral Aggregates by Washing												
	Appendix D, Acceptable Tolerance Limits for Independent Assurance														
	Page D-3, Acceptable Tolerance Limits for Independent Assurance Split or Proficiency Samples														
			Material, Asphalt Concrete (Superpave) Coarse Aggregate, Test Method												
			Removed – *												
			Material, Asphalt Concrete (Superpave) Fine Aggregate, Test Method												
			Removed – *												
			Material, Asphalt Concrete (Superpave) Combined Aggregate, Test Method												
			Removed – *												
			Material, Asphalt Concrete (Superpave) Combined Aggregate, Split Sample Tolerance												
			Removed –												
			<table border="1"> <tr> <td>**0 – 3.0</td> <td>± 2.0%</td> </tr> <tr> <td>3.1 – 10.0</td> <td>± 3.0%</td> </tr> <tr> <td>10.1 – 20.0</td> <td>± 5.0%</td> </tr> <tr> <td>20.1 – 30.0</td> <td>± 6.0%</td> </tr> <tr> <td>30.1 – 40.0</td> <td>± 7.0%</td> </tr> <tr> <td>40.1 – 50.0</td> <td>± 9.0%</td> </tr> </table>	**0 – 3.0	± 2.0%	3.1 – 10.0	± 3.0%	10.1 – 20.0	± 5.0%	20.1 – 30.0	± 6.0%	30.1 – 40.0	± 7.0%	40.1 – 50.0	± 9.0%
**0 – 3.0	± 2.0%														
3.1 – 10.0	± 3.0%														
10.1 – 20.0	± 5.0%														
20.1 – 30.0	± 6.0%														
30.1 – 40.0	± 7.0%														
40.1 – 50.0	± 9.0%														
			Added –												
			<table border="1"> <tr> <td>3/4 in (19 mm)</td> <td rowspan="5">5% Tolerance</td> </tr> <tr> <td>1/2 in (12.5 mm)</td> </tr> <tr> <td>3/8 in (9.5 mm)</td> </tr> <tr> <td>No. 4 (12.5 mm)</td> </tr> <tr> <td>No. 8 (2.36 mm)</td> </tr> </table>	3/4 in (19 mm)	5% Tolerance	1/2 in (12.5 mm)	3/8 in (9.5 mm)	No. 4 (12.5 mm)	No. 8 (2.36 mm)						
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1/2 in (12.5 mm)															
3/8 in (9.5 mm)															
No. 4 (12.5 mm)															
No. 8 (2.36 mm)															
			Material, Asphalt Concrete (Superpave) Complete Aggregate, Test Procedure												
			Removed – ** Percent in size fraction between two consecutive aggregate sieves.												
			Removed – Voids in Mineral Aggregate												
			Material, Asphalt Concrete (Superpave) Complete Aggregate, Standard												
			Removed – Calculated												
			Material, Asphalt Concrete (Superpave) Complete Aggregate, Split Sample Tolerance												
			Removed –1.00 to +1.25% from Min												
	Appendix F, Nebraska Department of Roads Annual Report to FHWA on System Wide Approach to Independent Assurance Testing, National Highway System														
	Page F-1, Annual FHWA IA Report														
			Removed – 2010												

	FHWA Letter of Approval for the Quality Assurance Program for Construction	
	Page G-1, FHWA Letter of Approval for the Quality Assurance Program for Construction	
		Added – Appendix G
Section 29, Policies		
	Policy 1, Required Certification	
		Removed – PCI Quality Control Personnel Certification Level 1 and 2
	Policy 1, Recommended Certification	
		Added – PCI Quality Control Personnel Certification Level 1 and 2
	Policy 1, General	
	Page 29-2, #3A, Concrete Testing	
		Removed – correlation
		Added – verification
	Policy 1, Precast/Prestress Inspection Records and Reports,	
	Page 29-3, #2B11, Material and Test Section	
		Removed – Neoprene Bearing Pads
		Added – Structural Wire Mesh
	Page 29-3, #3, Materials and Research inspectors	
		Added – inspectors
		Removed – be sent reports on a regular basis and shall include
		Added – record the following
	Page 29-3, #3A, Compressive Strength	
		Removed – and Stress/Strain Data
		Added – SiteManager Report
	Page 29-3, #3B, Stress/Strain Data	
		Added – Stress/Stain Data
	Page 29-3, #3C, Shipping Report	
		Added – Item #C; Shipping reports was formerly item #3B
	Page 29-3, #3C, Shipping Report, Sub Item 5	
		Added – or Girder
	Policy 1, Elongation Instructions,	
	Page 29-4, #3	
		Added – The NDOR inspector verifies the elongation calculations were performed by use of the following DR forms
		Added – A. DR 349 Single Strand Elongation for Piles and Inverted Tee's

		Added – B. DR 350 Multistrand Elongation for Girders
		Added – C. DR 351 Draped Single Strand Elongation Form for Girders
		Added – D. DR353 Draped Strand Angle Schematic
	Policy 1, Elongation Worksheet	
	Page 29-5, Elongation Worksheet	
		Removed – Elongation Worksheet
	Policy 1, Elongation and Load Corrections	
	Page 29-6, Elongation and Load Corrections	
		Removed – Elongation and Load Corrections
	Policy 2, Policy for Precast/Prestressed Concrete Plant Inspection Fabricator Inspector	
	Page 29-10, Elongation Worksheet	
		Removed – Elongation Worksheet
	Page 29-11, Elongation and Load Corrections	
		Removed – Elongation and Load Corrections
	Policy 4, Acceptance Policy for Cement and Blended Cements	
	Page 29-13, Approved Products List, 1A	
		Removed – Ground Granulated Blast Furnace (GGBFS)
		Added – slag cement
	Page 29-13, Approved Products List, 2A1b	
		Removed – Ground Granulated Blast Furnace (GGBFS)
		Added – slag cement
	Page 29-17, Annual Sampling Field Verification	
		Removed – per project, per year
		Added – for every 750 tons of blended cement used in the project
	Page 29-17, NDOR QA Manager or Project Personnel	
		Removed – Obtain sample based on the list provided by the Concrete Engineer.
	Policy 6, Acceptance Policy for Slag Cement for Use in Concrete	
		Removed – Ground Granulated Blast Furnace (GGBFS)
		Added – Slag Cement
	Page 29-21, General	
		Removed – ground granulated blast furnace (GGBFS)
		Added – slag cement
		Removed – ground granulated blast furnace
		Added – cement
	Page 29-21, Certified Mill Analysis	

		Removed – GGBFS
		Added – Slag cement
		Removed – ground granulated blast furnace
		Added – cement
	Page 29-21, Approved Products List	
		Removed – ground granulated blast furnace
		Added – cement
	Page 29-21, 1	
		Removed – GGBFS
		Added – slag cement
	Page 29-21, 2	
		Removed – ground granulated blast furnace
		Added –cement
		Removed – GGBFS
		Added – Slag Cement
		Removed – ground granulated blast furnace
		Added –cement
	Page 29-23, 3	
		Removed – ground granulated blast furnace
		Added – cement
		Removed – GGBFS
		Added – Slag Cement
		Removed – ground granulated blast furnace
		Added – cement
	Page 29-23, 4	
		Removed – GGBFS
		Added – slag cement
	Page 29-23, 4	
		Removed – ground granulated blast furnace
		Added – cement
	Page 29-23, Mill Sampling Procedure	
		Removed – GGBFS
		Added – slag cement
		Removed – ground granulated blast furnace
		Added – cement

	Page 29-24, Certificates of Compliance, #5
	Removed – ground granulated blast furnace
	Added – cement
	Page 29-24, Certificates of Compliance, #6
	Removed – ground granulated blast furnace
	Added – cement
	Page 29-24, Certificatification
	Removed – GGBFS
	Added – slag cement
	Policy 7, Policy for Certification of Ready Mix Plants
	Page 29-24, Plant Inspection
	Removed – Registered Nebraska Professional
	Added – A NRMCA approved
	Removed – Consultant or Producer
	Added – the
	Removed – from QC Manual section 3 found at WWW.NRMCA.ORG including option A (fleet inspection)
	Added – according to NRMCA specifications
	Page 29-24, ASTM C 94
	Added – be
	Removed – page 9 – Section 3
	Added – by a professional engineer
	Removed – for portable batch plants
	Page 29-24, Note
	Added – and Portable
	Added – item a. ASTM C 94 is required upon a portable plants relocation.
	Removed – Portable plants require certification a minimum of once a year
	Removed – a. Contact PCC Engineer for a possible waiver if:
	Removed – i. Portable plants remain at the same location longer than one year.
	Page 29-25, ASTM C 94 Requirements
	Removed – Portable
	Added – Central Mixer
	Page 29-25, Item #1
	Added – and new stationary
	Page 29-25, Item #10
	Added – of the tests

			Policy 8, Pipe Material Policy
			Page 29-27, Policy
			Removed – C
			Added – c
			Removed – on page A-7
			Policy 9, Policy Concerning Concrete Pipe Plant Certification Including Testing, Inspection, and Approval of Reinforced Concrete Culvert and Sewer Pipe and Concrete Flared-End Sections
			Page 29-39, General
			Removed – NCPA
			Added – NPCA
			Page 29-40, NDOR Assurance Testing and Reporting
			Removed – NCPA
			Added – NPCA
			Page 29-40, Disqualification of a Concrete Pipe Manufacturer
			Removed – NCPA
			Added – NPCA