How to use these tables:

The following tables show the standard test methods included in each AASHTO re:source and CCRL proficiency sample. Each line item in the table includes a number that corresponds to an accreditation policy related to participation in the proficiency sample program for each standard test method. Each reference sample-specific policy is shown under each table.

A notation of a dash (-) means that the normal policies apply, and there are no additional sample-specific policies for that test method. A notation of n/a means that the rating is not used for accreditation purposes. The general policies related to proficiency testing are in the AASHTO Procedures Manual for the Accreditation of Construction Materials Testing Laboratories.

The following policies apply to all standard test methods and all samples:

- Laboratory accreditation is suspended when any combination of ratings of 0, 1, or -1 and no results occur on samples for a test property (line item on a proficiency sample report) on consecutive sample rounds.
- Laboratory accreditation is not suspended for low ratings or no data on single operator precision results.
- If the standard test method is included in more than one proficiency sample, laboratory participation will be evaluated separately for each proficiency sample (ex. low ratings/no results on AASHTO T30 on Hot-Mix Solvent samples and satisfactory ratings on AASHTO T30 on Hot-Mix Ignition samples will still result in a T30 suspension due to the low ratings on the Hot-Mix Solvent samples.) If there is an exception to this rule, it will be noted in the sample-specific policies (see VGA rule 1 for example).

The following pages describe the proficiency sample-specific policies.

Viscosity Graded Asphalt Cement (VGA)

AASHTO	ASTM	Test Name	Test Property	Policy
T49	D5	Penetration	Penetration of Original Sample at 25°C, 100g, 5s	3
			Penetration of Original Sample at 4°C, 200g, 60s	3, 5
T48	D92	Cleveland Flash	Corrected Flash Point	1
T288	D70	Specific Gravity	Specific Gravity at 25°C	1
T201	D2170	Kinematic Viscosity	Kinematic Viscosity of Original Asphalt at 135°C	4
T202	D2172	Viscosity by Vacuum Capillary	Viscosity of Original Asphalt at 60°C	-
T240	D2872	Rolling Thin-Film Oven	Change in Mass	1
T49	D5	Penetration	Penetration of RTFO Residue at 25°C, 100g, 5s	2, 3
			Penetration of RTFO Residue at 4°C, 200g, 60s	2, 3, 5
T201	D2170	Kinematic Viscosity	Kinematic Viscosity RTFO Residue Asphalt at 135°C	2, 4
T202	D2172	Viscosity by Vacuum Capillary	Viscosity of RTFO Residue at 60°C	2

1 Participation may be in either PGB or VGA for these tests. If no data is submitted, there will not be a suspension unless it is the only sample type that allows the laboratory to perform the test included in their accreditation.

2a For tests on material following RTFO, even though these tests may be an indicator of the effectiveness of the RTFO-conditioning, the accreditation for individual tests in which low ratings are received will be suspended rather than T240/D2872.

2b In reference to Rule 1, if the laboratory does not perform RTFO in the VGA sample, data for tests on material following RTFO are not required to be submitted. Low ratings will result in suspension.

3 These tests are required to be performed on VGA samples unless the laboratory only performs the test on recovered asphalt residue and performs the test on the EML/PME samples.

4 If "(cut-back asphalt only)" is listed on a laboratory's accreditation for T201/D2170, participation in the proficiency sample program is not required for this test.

5 Penetration of samples at 4°C, 200g, 60s will not be evaluated for accreditation purposes.

Performance Graded Asphalt Binder (PGB)

AASHTO	ASTM	Test Name	Test Property	Policy
T228	D70	Specific Gravity	Specific Gravity at 25°C	2
T48	D92	Cleveland Flash	Corrected Flash Point	2
T316	D4402	Rotational Viscosity (Brookfield)	Rotational Viscosity at 135°C	-
T315	D7175	Dynamic Shear Rheometer (DSR)	Complex Shear Modulus, G* (original)	4
			Phase Angle õ (Original)	
			G*/sin õ (Original)	
T301	D6084	Elastic Recovery	Average Percent Elongation Recovery	3
T111	D8078	Ash Content	Ash Content of Residue	-
T240	D2872	Rolling Thin-Film Oven	Change in Mass	2
T315	D7175	Dynamic Shear Rheometer (DSR)	Complex Shear Modulus, G* (RTFO)	4
			Phase Angle õ (RTFO)	
			G*/sin õ (RTFO)	
T350	D7405	Multiple Stress Creep and Recovery (MSCR)	Avg Percent Recovery at 0.1 kPa, R0.1	-
			Avg Percent Recovery at 3.2 kPa, R3.2	-
			Percent Difference in Recovery Between 0.1 and 3.2 kPa, Rdiff	5
			Non-Recoverable Creep Compliance at 0.1 kPa, Jnr0.1	-
			Non-Recoverable Creep Compliance at 3.2 kPa, Jnr3.2	-
			Percent Difference of Non-Recoverable Creep Compliance, Jny-diff	5

Performance Graded Asphalt Binder (PGB) (continued)

AASHTO	ASTM	Test name	Test Property	Policy
R28	D6521	Pressurized Aging Vessel	--	1
T315	D7175	Dynamic Shear Rheometer (DSR)	Complex Shear Modulus, G* (PAV)	4
			Phase Angle õ (PAV)	
			G*/sin õ (PAV)	
T313	D6648	Bending Beam Rheometer (BBR)	Estimated Stiffness (Trial 1)	-
			Estimated Stiffness (Trial 2)	
			Estimated Stiffness (Avg)	
			Estimated Slope, m-Value (Trial 1)	
			Estimated Slope, m-Value (Trial 2)	
			Estimated Slope, m-Value (Trial Avg)	

1 This is a standard practice only, but it is required to be performed when performing T313/D6648, T314/D6723, T315/D7175, or T315/D7175 (PAV-aged). Accreditation for this standard practice will only be suspended if no data is submitted for T313/D6648, T314/D6723, T315/D7175, or T315/D7175 (PAV-aged).

2 Participation may be in either PGB or VGA for these tests. If no data is submitted, there will not be a suspension unless it is the only sample type that allows the laboratory to perform the test included in their accreditation.

3 This will only be evaluated in the fall rounds. The fall rounds always include a modified binder.

4a T315/D7175 will be suspended if low ratings/no data occur when testing the original, PAV-aged, or RTFO-conditioned samples.

4b If a laboratory chooses to limit their accreditation to unaged binder, RTFO-aged binder, or PAV-aged binder, the accreditation listings and suspensions will be split using the following terms: T315/D7175 (Original), T315/D7175 (RTFO-aged), and T315/D7175 (PAV-aged). Performance will be evaluated separately for each component.

4c Laboratory accreditation is not suspended for low ratings or no data on Phase angle (δ) results.

4d This test is required to be performed on PGB samples unless the laboratory only performs the test on recovered asphalt residue and performs the test on HMS samples.

5 Laboratory accreditation is not suspended for low ratings or no data on Percent Difference in Recovery between 0.1 and 3.2 kPa (Rdiff) and Percent Difference of Non-recoverable Creep Compliance (Jnr-diff) results. “Rdiff” and “Jnr-diff” are calculated from test data that may not lie within a reasonable deviation about the consensus values for the Average Percent Recovery and Non-Recoverable Creep Compliance at 0.1 and 3.2 kPa, respectively.

Unmodified Emulsified Asphalt (EML)[1]

AASHTO	ASTM	Test name	Test Property	Policy
T59	D7496	Saybolt Viscosity (25°C)	Saybolt Furol Viscosity	2
T59	D7496	Saybolt Viscosity (50°C)	Saybolt Furol Viscosity	2
T382	D7226	Paddle Viscometer	Apparent Viscosity	-
T59	D6997	Residue by Distillation	Percent Residue	-
T59	D6997	Residue by Distillation	Percent Oil Distillate (Suppressed)	-
T49	D5	Penetration of Bituminous Materials	Penetration @ 25°C (Distillation)	4
T44	D2042	Solubility of Bituminous Materials in Trichloroethylene	Percent Solubility of Residue (Distillation)	3, 4
T59	D6934	Residue by Evaporation	Percent Residue Average of Beakers	-
T49	D5	Penetration of Bituminous Materials	Penetration @ 25°C (Evaporation)	4
T44	D2042	Solubility of Bituminous Materials in Trichloroethylene	Percent Solubility of Residue (Evaporation)	3, 4
T111	D8078	Ash Content of Asphalt and Emulsified Asphalt Residues	Ash Content of the Residue	4, 5
-	D8467	Determination of Emulsified Asphalt by Quick Boil	Percent Residue	6

1 Laboratories accredited for applicable emulsified asphalt tests are required to participate in both EML and PME to maintain accreditation.

2 Saybolt Viscosity (T59/D7496) only needs to be performed if the sample round requires testing at the specified temperature that is included in the laboratory accreditation. For example, if the lab is only accredited for testing at 25°C, the laboratory is only required to perform the test on the emulsion proficiency sample if the sample is required to be tested at 25°C.

3 Laboratory accreditation is not suspended for low ratings or no data on T44/D2042 results.

4a Even though this test may be an indicator of the effectiveness of the distillation or evaporation technique, the individual tests in which low ratings are received will be suspended rather than the distillation or evaporation practices.

4b If the laboratory is not accredited for the distillation or evaporation, the results of the test on residue will not be evaluated that follow that process.

4c If the laboratory performs this test on the VGA or HMS sample, results are not required to be submitted on this sample.

5a Accreditation policies will be enforced for T111/D8078 beginning with EML samples 79/80.
5b Participation may be in either EML/PME or PGB for these tests. If no data is submitted, there will not be a suspension unless it is the only sample type that allows the laboratory to perform the test included in their accreditation.

6 The AASHTO Accreditation program is not currently offering accreditation services for D8467, therefore, ratings on percent residue by quick boil will not be evaluated for accreditation purposes.

Polymer-Modified Emulsified Asphalt (PME)[1]

AASHTO	ASTM	Test name	Test Property	Policy
T59	D7496	Saybolt Viscosity (25°C)	Saybolt Furol Viscosity	2
T59	D7496	Saybolt Viscosity (50°C)	Saybolt Furol Viscosity	2
T382	D7226	Paddle Viscometer	Apparent Viscosity	-
T59	D6997	Residue by Distillation	Percent Residue	-
T59	D6997	Residue by Distillation	Percent Oil Distillate (Suppressed)	-
T49	D5	Penetration of Bituminous Materials	Penetration @ 25°C (Distillation)	3
T301	D6084	Elastic Recovery	Average Percent Elongation Recovery (Distillation)	3
T111	D8078	Ash Content of Asphalt and Emulsified Asphalt Residues	Ash Content of the Residue (Distillation)	3
-	D7403	Residue by Low-Temperature Vacuum Distillation	Percent Residue	4
-	D7403	Residue by Low-Temperature Vacuum Distillation	Percent Oil Distillate (Suppressed)	4
T49	D5	Penetration of Bituminous Materials	Penetration @ 25°C (Vacuum Distillation)	4
T301	D6084	Elastic Recovery	Average Percent Elongation Recovery (Vacuum Distillation)	4
T111	D8078	Ash Content of Asphalt and Emulsified Asphalt Residues	Ash Content of the Residue (Vacuum Distillation)	4
T59	D6934	Residue by Evaporation	Percent Residue Average of Beakers	-
T49	D5	Penetration of Bituminous Materials	Penetration @ 25°C (Evaporation)	3
T301	D6084	Elastic Recovery	Average Percent Elongation Recovery (Evaporation)	3
T111	D8078	Ash Content of Asphalt and Emulsified Asphalt Residues	Ash Content of the Residue (Evaporation)	3

Polymer-Modified Emulsified Asphalt (PME) (continued)

AASHTO	ASTM	Test name	Test Property	Policy
-	D7497	Residue by Low Temperature Evaporation	None	4
T49	D5	Penetration of Bituminous Materials	Penetration @ 25°C (Low-Temp Evaporation)	4
T301	D6084	Elastic Recovery	Average Percent Elongation Recovery (Low-Temp Evaporation)	4
T111	D8078	Ash Content of Asphalt and Emulsified Asphalt Residues	Ash Content of the Residue (Low-Temp Evaporation)	4

1 Laboratories accredited for applicable emulsified asphalt tests are required to participate in both EML and PME to maintain accreditation.

2 Saybolt Viscosity (T59/D7496) only needs to be performed if the sample round requires testing at the specified temperature that is included in the laboratory accreditation. For example, if the lab is only accredited for testing at 25°C, the laboratory is only required to perform the test on the emulsion proficiency sample if the sample is required to be tested at 25°C.

3a Even though this test may be an indicator of the effectiveness of the distillation or evaporation technique, the individual tests in which low ratings are received will be suspended rather than the distillation or evaporation practices.
3b If the laboratory is not accredited for T59/D6997 or T59/D6934, the results of the test on residue will not be evaluated that follow that process.
3c If the laboratory performs this test on the PGB, VGA, or HMS sample, results are not required to be submitted on this sample.

4 The AASHTO Accreditation program is not yet offering accreditation services for D7403 or D7497 therefore, ratings for these practices or their associated tests will not be evaluated for accreditation purposes. Laboratories are encouraged to submit test data if they are performing these practices and associated tests. Participation will be required when the AASHTO Accreditation program begins offering accreditation services for D7403 or D7497.

Slurry and Micro Systems (SMS)

ISSA	ASTM	Test Name	Test Property	Policy
TB-113		Determining Mix Time	Time to "Break"	--
			Time to Clear Water Set	
TB-139	D3910 and D6372	Set and Cure Development	Torque Value at 30 min	--
			Torque Value at 60 min	
			Torque Value at 90 min	
			Torque Value at 120 min	
			Torque Value at 180 min	
TB-100	D3910 and D6372	Wet Track Abrasion	Loss Corrected to C-100 Mixer	--
TB-109		Measurement of Excess Asphalt by Loaded Wheel Tester and Sand Adhesion	Cycle Number where "Audible Tackiness" is Determined	--
			Mass of Adhered Sand	
TB-147	D6372	Measurement of Vertical and Lateral Displacement by Loaded Wheel Tester	Percent Vertical Displacement as Percent of Original Thickness	1
			Percent Lateral Displacement as Percent Increase of Width	

1 Ratings on Percent Vertical Displacement will not be evaluated for accreditation purposes.

Hot Mix Asphalt Solvent Extraction (HMS)

AASHTO	ASTM	Test Name	Test Property	Policy
T164	D2172/D8159	AC Content by Extraction/Automated Extraction	Sample Mass (Suppressed)	1
			Percent Asphalt	
T30	D5444	Gradation of Extracted Aggregate	Mass Removed by Washing Over #200 Sieve (Suppressed)	2
			Percent Passing ½" Sieve	
			Percent Passing 3/8" Sieve	
			Percent Passing No. 4 Sieve	
			Percent Passing No. 8 Sieve	
			Percent Passing No. 16 Sieve	
			Percent Passing No. 30 Sieve	
			Percent Passing No. 50 Sieve	
			Percent Passing No. 100 Sieve	
			Percent Passing No. 200 Sieve	
R59	D1856	Abson Recovery	--	-
T49	D5	Penetration	Penetration of Residue at 25°C, 100g, 5s	3
T315	D2175	Dynamic Shear Rheometer (DSR)	G* / sin ð tested as original binder	3
	D5404	Rotovapor Recovery	--	-
T49	D5	Penetration	Penetration of Residue at 25°C, 100g, 5s	3
T315	D2175	Dynamic Shear Rheometer (DSR)	G* / sin ð tested as original binder	3

1 Laboratories will have the option of testing T164/D2172 or D8159. Accreditation for both T164/D2172 and D8159 will be evaluated based on the proficiency sample results of either test. A laboratory accredited for only T164/D2172 or D8159 must submit results for that test.

2a Low ratings/no results must occur on the same sieve size in order to be considered consecutive.
2b Low ratings/no results must occur on samples extracted by the same test (T308/D6307 or T164/D2172) in order to be considered consecutive.

2c Once negative action has occurred on one test value satisfactory results are needed on all test values.

3 Data for tests on residue are only required to be submitted if a laboratory is accredited for a method of recovery (R59/D1856 or D5404) and one of the tests on residue.

Hot Mix Asphalt Ignition Oven (HMI)

AASHTO	ASTM	Test Name	Test Property	Policy
T308	D6307	AC Content by Ignition Oven	Initial Mass (Suppressed)	-
			Correction Factor (Suppressed)	
			Corrected Asphalt Binder Content	
T30	D5444	Gradation of Extracted Aggregate	Mass Removed by Washing Over #200 Sieve (Suppressed)	1
			Percent Passing ½" Sieve	
			Percent Passing 3/8" Sieve	
			Percent Passing No. 4 Sieve	
			Percent Passing No. 8 Sieve	
			Percent Passing No. 16 Sieve	
			Percent Passing No. 30 Sieve	
			Percent Passing No. 50 Sieve	
			Percent Passing No. 100 Sieve	
			Percent Passing No. 200 Sieve	

1a Low ratings/no results must occur on the same sieve size in order to be considered consecutive.
1b Low ratings/no results must occur on samples extracted by the same test (T308/D6307 or T164/D2172) in order to be considered consecutive.
1c The mass removed by washing over the 75-µm (No. 200) sieve will not be evaluated by the accreditation program.
1d Once negative action has occurred on one test value, satisfactory results are needed on all test values.

Hot Mix Asphalt Marshall Design (MAR)

AASHTO	ASTM	Test Name	Test Property	Policy
T209	D2041	Maximum Specific Gravity	Specific Gravity	-
T166	D2726	Bulk Specific Gravity	Average Bulk Specific Gravity	1, 2
T331	D6752	Bulk Specific Gravity – Core Lok	Bulk Specific Gravity (Vacuum Sealing Method)	1, 2
T269	D3203	Air Voids	Percent Air Voids	1, 5
-	D3549	Marshall Compaction – 75 Blows	Overall Average Specimen Height	3
T245	D6927	Stability and Flow	Average Marshall Stability	4
			Average Marshall Flow	4

1 No action to be taken if laboratory does not submit data for this test and the laboratory is accredited for the (cores) variation of the bulk specific gravity tests.

2a If a laboratory is accredited for T166/D2726 and T331/D6752, the laboratory must perform both tests in order to maintain accreditation for both tests.
2b If low scores result in a suspension of T166/D2726, accreditation for T275/D1188 will be suspended as well.

3a R68/D6926 does not require a measurement of the specimen height. Ratings for D3549 are only evaluated if a laboratory is accredited for a standard that requires a measurement of the specimen height.
3b Low ratings on height measurement will result in a suspension of R68/D6926 and D3549 since they can be an indication of an error in the compaction process and/or the measurement itself.
3c A laboratory that prepares samples for T283/D4867 using T312/D6925 is not required to enroll in the HVM or MAR programs only for D3549.

4 Once negative action has occurred on one test value (stability or flow), satisfactory results are needed on all test values (stability and flow).

5 A laboratory that only compacts samples using T312/D6925 is not required to enroll in the HVM or MAR programs only for T269/D3203.

Hot Mix Asphalt Gyratory Design (HMG)

AASHTO	ASTM	Test Name	Test Property	Policy
T100 (Mineral Filler)		Specific Gravity of Mineral Filler	Specific Gravity	4
T209	D2041	Maximum Specific Gravity	Specific Gravity	2
T166	T2726	Bulk Specific Gravity	Dry Mass (Informational)	5
			Specific Gravity	1, 2, 3
T331	D6752	Bulk Specific Gravity Vacuum Sealing	Specific Gravity	1, 2, 3
T312	D6925	Gyratory Compactor	Height – 8 Gyrations	6
			Height – 100 Gyrations	6
			Percent Maximum Specific Gravity – 8 Gyrations	6
			Percent Maximum Specific Gravity – 100 Gyrations	6

1 No action to be taken if laboratory does not submit data for this test and the laboratory is accredited for the (cores) variation of the bulk specific gravity tests.

2 The HMG sample does not include T269/D3203 directly; however, if accreditation for any of the prerequisite test methods for T269/D3203 is revoked or withdrawn, T269/D3203 will be revoked or withdrawn.

3a If a laboratory is accredited for T166/D2726 and T331/D6752, the laboratory must perform both tests in order to maintain accreditation for both tests.
3b If low scores result in a suspension of T166/D2726, accreditation for T275/D1188 will be suspended as well.

4 This method will be listed in the aggregate scope if a laboratory is accredited for R35. If a laboratory is also accredited for T100 in the soils scope, the laboratory must perform T100 testing on the Soil Classification and Compaction samples also.

5 Laboratory accreditation is not suspended for low ratings or no data on dry mass results.

6 Once negative action has occurred on one test value (height or percent maximum specific gravity), satisfactory results are needed on all test values (height and percent maximum specific gravity).

Asphalt Mixture Hveem Design – California Kneading Compactor (HCA)

AASHTO	ASTM	Test Name	Test Property	Policy
T209	D2041	Maximum Specific Gravity	Specific Gravity	-
T247	D1561	CA Kneading Compactor	Specimen Height	-
T246	D1560	Resistance to Deformation (Hveem)	Stabilometer Value (Uncorrected)	1
			Stabilometer Value (Corrected)	1
T166	D2726	Bulk Specific Gravity		2, 3
T331	D6752	Bulk Specific Gravity Vacuum Sealing	Specific Gravity	2, 3
T269	D3203	Air Voids	Percent Air Voids	4

1 Low ratings/no results on corrected or uncorrected will result in a suspension.

2 No action to be taken if laboratory does not submit data for this test and the laboratory is accredited for the (cores) variation of the bulk specific gravity tests.

3a If a laboratory is accredited for T166/D2726 and T331/D6752, the laboratory must perform both tests in order to maintain accreditation for both tests.
3b If low scores result in a suspension of T166/D2726, accreditation for T275/D1188 will also be suspended.

4 A laboratory that only compacts samples using T312/D6925 is not required to enroll in the Hveem or MAR programs only for T269/D3203.

Asphalt Mixture Hveem Design – Gyratory Shear Compactor (HTX)

AASHTO	ASTM	Test Name	Test Property	Policy
T209	D2041	Maximum Specific Gravity	Specific Gravity	-
TEX-206-F		Texas Gyratory Shear Compactor	Specimen Height	-
TEX-208-F		Resistance to Deformation (Texas)	Stabilometer Value	-
T166	D2726	Bulk Specific Gravity	Specific Gravity	1, 2
T331	D6752	Bulk Specific Gravity Vacuum Sealing	Specific Gravity	1, 2
T269	D3203	Air Voids	Percent Air Voids	3

1 No action to be taken if laboratory does not submit data for this test and the laboratory is accredited for the (cores) variation of the bulk specific gravity tests.

2a If a laboratory is accredited for T166/D2726 and T331/D6752, the laboratory must perform both tests in order to maintain accreditation for both tests.
2b If low scores result in a suspension of T166/D2726, accreditation for T275/D1188 will also be suspended.

3 A laboratory that only compacts samples using T312/D6925 is not required to enroll in the Hveem or MAR programs only for T269/D3203.

Asphalt Mixture Hveem Design – 4-in Superpave Gyratory Compaction (HCO)

AASHTO	ASTM	Test Name	Test Property	Policy
T209	D2041	Maximum Specific Gravity	Specific Gravity	-
CP-L5115		Gyratory Compaction (4-in Specimens, Colorado)	Specimen Height	-
CP-L5106		Resistance to Deformation (Colorado)	Stabilometer Value	-
T166	D2726	Bulk Specific Gravity	Specific Gravity	1, 2
T331	D6752	Bulk Specific Gravity Vacuum Sealing	Specific Gravity	1, 2
T269	D3203	Air Voids	Percent Air Voids	3

1 No action to be taken if laboratory does not submit data for this test and the laboratory is accredited for the (cores) variation of the bulk specific gravity tests.

2a If a laboratory is accredited for T166/D2726 and T331/D6752, the laboratory must perform both tests in order to maintain accreditation for both tests.
2b If low scores result in a suspension of T166/D2726, accreditation for T275/D1188 will also be suspended.

3 A laboratory that only compacts samples using T312/D6925 is not required to enroll in the Hveem or MAR programs only for T269/D3203.

Hamburg Wheel Track (HWT)

AASHTO	ASTM	Test Name		Policy
T312	D6925	Gyratory Compactor	Avg Gyrations to Achieve Specimen Height	1
T166	D2726	Bulk Specific Gravity	Avg Dry Mass of Specimen	1
			Avg Bulk Specific Gravity	1
T269	D3203	Air Voids	Avg Percent Air Voids	1
T324	---	Hamburg Wheel Track	Rut Depth at 5000 Passes	1, 2, 3
			Rut Depth at 10000 Passes	1, 2, 3
			Rut Depth at 15000 Passes	1, 2, 3
			Rut Depth at 20000 Passes	1, 2, 3
			Stripping Inflection Point (SIP)	1, 2
			Rut Depth at SIP	1, 2
			Number of Passes to Failure	1, 2

1 Low ratings and/or non-participation will not result in a suspension of accreditation until HWT samples 3/4.

2 Once negative action has occurred on one test value, satisfactory results are needed on all test values to be reinstated.

3 Not all HWT samples will reach the required number of passes before failure. If negative action occurs and the laboratory chooses to test a blind sample, that sample shall be one that includes ratings for the parameter on which the laboratory received low ratings.

California Bearing Ratio (CBR)

AASHTO	ASTM	Test Name	Test Property	Policy
T265	D2216	Moisture Content of Soils	Moisture Content as Received (Suppressed)	1
			Moisture Content Immediately Before Compaction	1
			Moisture Content Immediately Before Compaction	1
T193	D1883	California Bearing Ratio (CBR)	Dry Unit Weight	3
			Swell – Percentage of Initial Specimen Height (Suppressed)	2
			CBR at 0.1 in. Penetration (Corrected)	3
			CBR at 0.2 in. Penetration (Corrected)	3

1a Ratings on moisture content will not be evaluated for accreditation purposes.
1b A laboratory does not need to be enrolled in the CBR sample to maintain accreditation for T265/D2216.

2 Ratings on swell will not be evaluated for accreditation purposes.

3 Once negative action has occurred on one test value (Dry Unit Weight or CBR Values), satisfactory results are needed on all test values (Dry Unit Weight and CBR Values).

R-Value (RVL)

AASHTO	ASTM	Test Name		Policy
T265	D2216	Moisture Content of Soils	Moisture Content As Received	1
T190	D2844	R-Value	R-Value at 300 psi Exudation Pressure	-

1a Ratings on moisture content will not be evaluated for accreditation purposes.
1b A laboratory does not need to be enrolled in the RVL sample to maintain accreditation for T265/D2216.

Soil Classification and Compaction (SOL)

AASHTO	ASTM	Test Name	Test Property	Policy
T88	D422	Particle Size Analysis/Hydrometer	Total Material Passing the No. 10 Sieve	1
			Total Material Passing the No. 40 Sieve	1
			Total Material Passing the No. 200 Sieve	1
			Total material smaller than 0.02 mm	1
			Total material smaller than 0.02 mm	1
			Total material smaller than 0.001 mm	1, 2
	D7928	Hydrometer	Particle Diameter (D) at 4 minutes of Sedimentation	1
			Particle Diameter (D) at 30 minutes of Sedimentation	1
			Particle Diameter (D) at 60 minutes of Sedimentation	1
			Particle Diameter (D) at 240 minutes of Sedimentation	1
			Particle Diameter (D) at 1440 minutes of Sedimentation	1
			Total Percent Finer (Nm) at 4 minutes of Sedimentation	1
			Total Percent Finer (Nm) at 30 minutes of Sedimentation	1
			Total Percent Finer (Nm) at 60 minutes of Sedimentation	1
			Total Percent Finer (Nm) at 240 minutes of Sedimentation	1
			Total Percent Finer (Nm) at 1440 minutes of Sedimentation	1

Soil Classification and Compaction (SOL) (continued)

AASHTO	ASTM	Test Name	Test Property	Policy
T89	D4318	Liquid Limit	Liquid Limit	3
T90	D4318	Plastic Limit	Plastic Limit	3
	D4943	Shrinkage Factors of Soils by Wax Method	Shrinkage Limit	-
T100	D854	Specific Gravity	Specific Gravity, Passing No. 10	4
T267	D2974	Organic Content in Soils by Loss on Ignition	Organic Content Method A	-
T99	D698	Standard Proctor	Optimum Moisture Content	5
			Maximum Dry Density	5
T180	D1557	Modified Proctor	Optimum Moisture Content	5
			Maximum Dry Density	5
T288		Minimum Soil Resistivity	Soil Resistivity	-
	G187	Soil Resistivity Using the Two-Electrode Soil Box	Soil Resistivity	-
T289		pH of Soils for Use in Corrosion Testing	pH value	-
	D4972	Determining pH of Soils	pH Value	-
T290		Determining Water-Soluble Sulfate Ion Content in Soil	Sulfate Ion Content (Method B)	-
T291		Determining Water-Soluble Sulfate Ion Content in Soil	Chloride Ion Content	-

1a Low ratings/no results must occur on the same test value in order to be considered consecutive. Once negative action has occurred on one test value, satisfactory results are needed on all test values.

1b A laboratory that is accredited for both methods of hydrometer testing shall submit test data for both T88/D422 and D7928. A suspension for either T88/D422 or D7928 does not affect the other hydrometer method.

2 Ratings or no data on Total Material Smaller Than 0.001 mm will not be evaluated for accreditation purposes.

3 Low ratings/no results on the liquid limit procedure or plastic limit procedure of D4318 will result in a suspension for all D4318. Once negative action has occurred on one test value, satisfactory results are needed on both procedures to be reinstated for D4318.

4 Participation is required for soils testing only. If a laboratory is accredited for T100 (Mineral Filler) in the aggregate scope, the laboratory must perform T100 testing on the Asphalt Mixture Gyratory Design (HMG) samples also.

5a Laboratories will have the option of testing standard (T99/D698) or modified (T180/D1557) Proctors. Accreditation for both T99/D698 and T180/D1557 will be evaluated based on the proficiency sample results of either the standard or modified compaction test. A laboratory accredited for only T99/D698 or T180/D1557 must submit results for that effort.

5b Satisfactory ratings are required for the entire test method for reinstatement to occur.

Aggregate Gradation and Gravity (AGG)

AASHTO	ASTM	Test Name	Policy
T11	C117	Minus No. 200 Wash	-
T27	C136	Sieve Analysis	1
T84	C128	Specific Gravity (Fine)	-
T85	C127	Specific Gravity (Coarse)	-
T176	D2419	Sand Equivalent	-
T304	C1252	Uncompacted Void Content	2

1a Low ratings/no results must occur on the same sieve size in order to be considered consecutive. Once negative action has occurred on one test value (sieve size), satisfactory results are needed on all test values (sieve sizes).

1b A suspension for these tests will occur if consecutive low ratings/no results are received on coarse or fine aggregate. The ratings are to be evaluated separately and will cause the entire test to be suspended rather than just the portion that was included in the offending sample results. However, accreditation may reflect "Coarse Aggregate" or "Fine Aggregate" if the laboratory is not a participant due to the type of work they are performing normally.

2 Only the average result will be used for accreditation purposes.

Aggregate Degradation (AGD)

AASHTO	ASTM	Test Name	Policy
T96	C131/C535	LA Abrasion	1
T103	-	Soundness by Freezing/Thawing	2
T104	C88	Soundness of Aggregate	3
T327	D6928	Micro Deval (Fine Aggregate)	-
-	D7428	Micro Deval (Coarse Aggregate)	-

1 Low ratings/no results for LA Abrasion will lead to suspensions for both T96/C131 and C535.

2 Only testing of coarse aggregate will be performed using T103.

3 A laboratory may submit results for testing using either Sodium or Magnesium Sulfate.

Alkali Silica Reactivity

AASHTO	ASTM	Test Name	Policy
T303	C1260	Alkali Silica Reactivity	1

1 Only the 14-day reading will be evaluated for accreditation purposes.

Concrete

AASHTO	ASTM	Test Name	Policy
T22	C39	Compressive Strength of Cylinders	1
T97	C78	Flexural Strength of Beams	3
T119	C143	Slump	-
T121	C138	Unit Weight	-
T152	C231	Air Content - Pressure Method	-
T196	C173	Air Content – Volumetric Method	-
T309	C1064	Temperature	2

1a Participation is required for all laboratories accredited for T22/C39. If someone else molds their cylinders, the laboratory can have them mold their proficiency samples too.
1b Ratings on density will not be evaluated for accreditation purposes.

2 Ratings or no data on T309/C1064 will not be evaluated for accreditation purposes.

3 Beginning with concrete samples 199/200, laboratories that are accredited for T97 or C78 will be required to receive satisfactory ratings for testing concrete beams.

Masonry Cement

AASHTO	ASTM	Test Name	Test Property	Policy
T129	C187	Normal Consistency	Normal Consistency: Water	1, 2
T154	C266	Time of Setting - Gillmore Needle	Gillmore Initial Time of Set	1, 2
			Gillmore Final Time of Set	1, 2
T107	C151	Autoclave Expansion	Percent Expansion	1, 2
T137	C185	Air Content of Mortar	Percent Air	1, 2
			Mortar Mix Water	1, 2
			Mortar Flow (Suppressed)	1, 2
T106	C109	Compressive Strength	Average 7-Day	1, 2, 3
			Average 28-Day	1, 2, 3
T192	C430	Fineness - No. 325 Sieve	No. 325 Sieve, Percent Retained	1, 2
T133	C188	Density	Density	1, 2
	C1506	Water Retention	Mixing Water	4
			Initial Flow (Suppressed)	4
			Final Flow	4
			Water Retention	4

1 If a laboratory chooses to enroll in multiple sample programs (ex. Portland Cement, Blended Cement, Masonry Cement), the laboratory is required to receive satisfactory results for all accredited tests in all sample programs in which the laboratory is enrolled. Please refer to Annex 1 and 2 for a comparison of the tests in each program.

2 If a laboratory is accredited for tests that are all included in one sample program (ex. Portland Cement or Blended Cement), the laboratory only needs to maintain enrollment in that sample program.

3 For compressive strength (T106/C109), specification C91 dictates that compressive strength must be tested for the 7- and 28-day periods. Satisfactory ratings are required for the 7- and 28-day compressive strength tests in order to maintain accreditation for T106/C109.

4 This is only available on the CCRL Masonry Cement samples for accreditation under the Cement scope. If a laboratory is accredited for a cement test that is only offered in one sample program, the laboratory is required to maintain enrollment in that program and is required to perform all tests in that sample program that are also included in the laboratory's accreditation.

Portland Cement

Physical Testing

AASHTO	ASTM	Test Name	Test Property	Policy
T129	C187	Normal Consistency	Normal Consistency: Water	1, 2
T131	C191	Time of Setting - Vicat Needle	Vicat Initial Time of Set	1, 2
			Vicat Final Time of Set	1, 2
T154	C266	Time of Setting - Gillmore Needle	Gillmore Initial Time of Set	1, 2
			Gillmore Final Time of Set	1, 2
T186	C451	Early Stiffening	False Set	1, 2
T133	C188	Density	Density	-
T107	C151	Autoclave Expansion	Percent Expansion	1,2
T137	C185	Air Content of Mortar	Percent Air	1, 2
			Mortar Mix Water	1, 2
			Mortar Flow (Suppressed)	1, 2
T106	C109	Compressive Strength	Average 3-Day	1, 2, 3
			Average 7-Day	1, 2, 3
			Average 28-Day	1, 2, 3
			Flow for Mortar (Suppressed)	1, 2, 3
T153	C204	Fineness – Blaine Apparatus	Air Permeability	1, 2
T192	C430	Fineness – No. 325 Sieve	No. 325 Sieve	1, 2
	C1038	Expansion of Cement Mortar Bars	Average Expansion	1, 2, 4
	C1702	Heat of Hydration (Calorimetry)	3-Day	1, 2, 5
			7-Day	1, 2, 5

Portland Cement (continued)

Chemical Testing

AASHTO	ASTM	Test Name	Policy
T105	C114	Silicon Dioxide (SiO_2)	1, 2
		Aluminum Oxide (Al_2O_3)	1, 2
		Ferric Oxide (Fe_2O_3)	1, 2
		Calcium Oxide (CaO)	1, 2
		Free Calcium Oxide [Free Lime] (C_x)	1, 2, 4
		Magnesium Oxide (MgO)	1, 2
		Sulfur Trioxide (SO_3)	1, 2
		Loss on Ignition (LOI)	1, 2
		Sodium Oxide (Na_2O)	1, 2
		Potassium Oxide (K_2O)	1, 2
		Strontium Oxide (SrO)	6
		Titanium Dioxide (TiO_2)	1, 2
		Phosphorous Pentoxide (P_2O_5)	1, 2
		Zinc Oxide (ZnO)	1, 2
		Manganic Oxide (Mn_2O_3)	1, 2
		Chloride (Cl)	1, 2
		Insoluble Residue (IR)	1, 2
		Carbon Dioxide (CO_2)	1, 2, 4, 5
		Limestone Content	6
		Chromium Oxide (Cr_2O_3)	6
		Tricalcium Silicate (C_3S)	6
		Dicalcium Silicate (C_2S)	6
		Tricalcium Aluminate (C_3A)	6
		Tetracalcium Aluminoferrite (C_4AF)	6

1 If a laboratory chooses to enroll in multiple sample programs (ex. Portland Cement, Blended Cement, Masonry Cement), the laboratory is required to receive satisfactory results for all accredited tests in all sample programs in which the laboratory is enrolled. Please refer to Annex 1 and 2 for a comparison of the tests in each program.

2 If a laboratory is accredited for tests that are all included in one sample program (ex. Portland Cement or Blended Cement), the laboratory only needs to maintain enrollment in that sample program.

3 Specification C150 dictates that compressive strength must be tested for the 3- and 7-day periods. Satisfactory results are required for the 3- and 7-day compressive strength tests in order to maintain accreditation for T106/C109.

4 This is only available on the CCRL Portland Cement samples.

5 Data submission for Carbon Dioxide is required even if limestone has not been added to the Portland cement samples.

6 These tests are not currently offered in the AASHTO Accreditation Program.

Portland Limestone Cement

Physical Testing

AASHTO	ASTM	Test Name	Test Property	Policy
T129	C187	Normal Consistency	Normal Consistency: Water	1, 2
T131	C191	Time of Setting - Vicat Needle	Vicat Initial Time of Set	1, 2
			Vicat Final Time of Set	1, 2
T186	C451	Early Stiffening	False Set	1, 2
T133	C188	Density	Density	-
T107	C151	Autoclave Expansion	Percent Expansion	1,2
T137	C185	Air Content of Mortar	Percent Air	1, 2
			Mortar Mix Water	1, 2
			Mortar Flow (Suppressed)	1, 2
T106	C109	Compressive Strength	Average 3-Day	1, 2, 3
			Average 7-Day	1, 2, 3
			Average 28-Day	1, 2, 3
			Flow for Mortar (Suppressed)	1, 2, 3
T153	C204	Fineness – Blaine Apparatus	Air Permeability	1, 2
T192	C430	Fineness – No. 325 Sieve	No. 325 Sieve	1, 2
	C1038	Expansion of Cement Mortar Bars	Average Expansion	1, 2, 4
	C1702	Heat of Hydration (Calorimetry)	3-Day	1, 2, 5
			7-Day	1, 2, 5

Portland Limestone Cement (continued)

Chemical Testing

AASHTO	ASTM	Test Name	Policy
T105	C114	Silicon Dioxide (SiO_2)	1, 2
		Aluminum Oxide (Al_2O_3)	1, 2
		Ferric Oxide (Fe_2O_3)	1, 2
		Calcium Oxide (CaO)	1, 2
		Free Calcium Oxide [Free Lime] (C_x)	1, 2, 4
		Magnesium Oxide (MgO)	1, 2
		Sulfur Trioxide (SO_3)	1, 2
		Loss on Ignition (LOI)	1, 2
		Sodium Oxide (Na_2O)	1, 2
		Potassium Oxide (K_2O)	1, 2
		Strontium Oxide (SrO)	6
		Titanium Dioxide (TiO_2)	1, 2
		Phosphorous Pentoxide (P_2O_5)	1, 2
		Zinc Oxide (ZnO)	1, 2
		Manganic Oxide (Mn_2O_3)	1, 2
		Chloride (Cl)	1, 2
		Carbon Dioxide (CO_2)	1, 2, 4, 5
		Limestone Content	6
		Chromium Oxide (Cr_2O_3)	6

1 If a laboratory chooses to enroll in multiple sample programs (ex. Portland Cement, Blended Cement, Masonry Cement), the laboratory is required to receive satisfactory results for all accredited tests in all sample programs in which the laboratory is enrolled. Please refer to Annex 1 and 2 for a comparison of the tests in each program.

2 If a laboratory is accredited for tests that are all included in one sample program (ex. Portland Cement or Blended Cement), the laboratory only needs to maintain enrollment in that sample program.

3 Specification C150 dictates that compressive strength must be tested for the 3- and 7-day periods. Satisfactory results are required for the 3- and 7-day compressive strength tests in order to maintain accreditation for T106/C109.

4 This is only available on the CCRL Portland Cement samples.

5 Data submission for Carbon Dioxide is required even if limestone has not been added to the Portland cement samples.

6 These tests are not currently offered in the AASHTO Accreditation Program.

Blended Cement

Physical Testing

AASHTO	ASTM	Test Name	Test Property	Policy
T129	C187	Normal Consistency	Normal Consistency: Water	1, 2
T131	C191	Time of Setting – Vicat Needle	Vicat Initial Time of Set	1, 2
			Vicat Final Time of Set	1, 2
T107	C151	Autoclave Expansion	Percent Expansion	1, 2
T137	C185	Air Content of Mortar	Percent Air	1, 2
			Mortar Mix Water	1, 2
			Mortar Flow (Suppressed)	1, 2
T133	C188	Density	Density	1, 2
T106	C109	Compressive Strength	Average 3-Day	1, 2, 3
			Average 7-Day	1, 2, 3
			Average 28-Day	1, 2, 3
			Compressive Strength Mix Water	1, 2, 3
			Flow for Mortar (Suppressed)	1, 2, 3
T153	C204	Fineness – Blaine Apparatus	Air Permeability	1, 2
T192	C430	Fineness – No. 325 Sieve	No. 325 Sieve	1, 2
	C1702	Heat of Hydration (Calorimetry)	3-Day	1, 2
			7-Day	1, 2

Blended Cement (continued)

Chemical Testing

AASHTO	ASTM	Test Name	Policy
T105	C114	Silicon Dioxide (SiO_2)	1, 2
		Aluminum Oxide (Al_2O_3)	1, 2
		Ferric Oxide (Fe_2O_3)	1, 2
		Calcium Oxide (CaO)	1, 2
		Magnesium Oxide (MgO)	1, 2
		Sulfur Trioxide (SO_3)	1, 2
		Loss on Ignition (LOI)	1, 2
		Sodium Oxide (Na_2O)	1, 2
		Potassium Oxide (K_2O)	1, 2
		Phosphorous Pentoxide (P_2O_5)	1, 2
		Zinc Oxide (ZnO)	1, 2
		Manganic Oxide (Mn_2O_3)	1, 2
		Chloride (Cl)	1, 2
		Insoluble Residue (IR)	1, 2
		Titanium Dioxide (TiO_2)	1, 2
		Chromium Oxide (Cr_2O_3)	5

1 If a laboratory chooses to enroll in multiple sample programs (ex. Portland Cement, Blended Cement, Masonry Cement), the laboratory is required to receive satisfactory results for all accredited tests in all sample programs in which the laboratory is enrolled. Please refer to Annex 1 and 2 for a comparison of the tests in each program.

2 If a laboratory is accredited for tests that are all included in one sample program (ex. Portland Cement or Blended Cement), the laboratory only needs to maintain enrollment in that sample program.

3a Specification C595 dictates that compressive strength must be tested for the 3-, 7-, and 28-day periods. Satisfactory results are required for the 3-, 7-, and 28-day compressive strength tests in order to maintain accreditation for T106/C109.
3b Mix Water is evaluated for accreditation purposes.

4 All elements of C186 are evaluated for accreditation purposes.

5 These tests are not currently offered in the AASHTO Accreditation Program.

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Pozzolan

Physical Testing

AASHTO	ASTM	Test Name	Test Property	Policy
T133	C188	Density	Density	1
T192	C430	Fineness – No. 325 Sieve	Retained No. 325 Sieve	1
T160	C157	Increase of Dry Shrinkage	Drying Shrinkage	1
T107	C151	Autoclave Expansion	Soundness by Autoclave Expansion	1
T129	C187	Normal Consistency	Water, % by Weight	1
T137	C185	Air Content of Mortar	Vinsol Resin (Suppressed)	1, 3
T106	C109	Compressive Strength	7-Day Strength Activity Index	1, 2
			28-Day Strength Activity Index	1, 2
			Water Requirement: Percent of Control	1, 2
	C441	Effectiveness of Mineral Admixtures in Controlling Alkali Silica-Reactions	Reduction of Mortar Expansion (Suppressed)	1, 3

1 Pozzolan physical testing results will be evaluated independently of cement results even if the standard is also used in cement testing.

2 For compressive strength (T106/C109), specification C311 allows for 7 or 28-day specimens to be tested depending on amount of material and the requirements of the producer or user. In this case, the laboratory is being asked to supply results for 28-day compressive strength testing by CCRL. Satisfactory ratings are required for the 7 and 28-day compressive strength tests in order to maintain accreditation for T106/C109.

3 Even though ratings for T137/C185 and C441 are suppressed, participation is required if a laboratory maintains accreditation for these standards. The accreditation will be suspended if results are not submitted.

Pozzolan

Chemical Testing

AASHTO	ASTM	Test Name	Policy
T105	C114	Moisture Content	2
		Silicon Dioxide (SiO2)	1
		Aluminum Oxide (Al_2O_3) w/minor oxides	1
		Aluminum Oxide (Al2O3) wo/minor oxides	1
		Ferric Oxide (Fe_2O_3)	1
		Calcium Oxide (CaO) w/minor oxides	1
		Calcium Oxide (CaO) wo/minor oxides	1
		Magnesium Oxide (MgO)	1
		Sulfur Trioxide (SO_3)	1
		Loss on Ignition (LOI)	3
		Sodium Oxide (Na_2O)	1
		Potassium Oxide (K_2O)	1
		Available Na_2O	2
		Available K_2O	2
		Total Available Alkalies	2

1 If a laboratory chooses to enroll in multiple Chemical sample programs (ex. Portland Cement, Blended Cement, Pozzolan), the laboratory is required to receive satisfactory results for all accredited tests in all sample programs in which the laboratory is enrolled. Please refer to Annex 2 for a comparison of the tests in each program.

2 Ratings or no data on these values will not be evaluated for accreditation purposes.

3 If a laboratory is accredited for C114 (Loss on Ignition) under the Pozzolan scope, the laboratory must enroll in the Pozzolan Chemical PSP program and is required to submit results for other analytes for which they are accredited under the Cementitious Chemical scope.

Masonry Mortar

AASHTO	ASTM	Test Name		Policy
T137	C185	Air Content of Mortar	Percent Air	1
			Mix Water for Air Content	1
			Flow for Air Content (Suppressed)	1
T106	C109	Compressive Strength	Average 7-Day	1, 2
			Average 28-Day	1, 2
			Compressive Strength Mix Water	1, 2
			Flow for Compressive Strength (Suppressed)	1, 2
	C1506	Water Retention	Water Retention Mix Water	1
			Initial Flow (Suppressed)	1
			Final Flow	1
			Water Retention	1

1 Ratings in the Masonry Mortar program are evaluated for accreditation of these tests under the Masonry scope.

2a Specification C270 does not dictates the cure period for strength specimens. Satisfactory results are required for either the 7- or 28-day compressive strength tests in order to maintain accreditation for T106/C109.

Concrete Masonry Units

AASHTO	ASTM	Test Name	Policy
	C140	Measuring	1, 2
		Absorption	1
		Compressive Strength	1

1 Low scores in Measuring, Absorption, and/or Compressive Strength will result in a suspension of C140; however, a laboratory that tests a blind CMU sample to resolve a C140 suspension need only test the item (Measuring, Absorption, and/or Compressive Strength) which led to the suspension.

2 Measuring is evaluated by face shell thickness, web thickness, net area, density, and equivalent thickness. Low ratings/no results must occur on the same test value in order to be considered consecutive. Once negative action has occurred on one test value satisfactory results are needed on all test values.

Steel Reinforcing Bar

AASHTO	ASTM	Test Name	Policy
T244	A370	Weight per Unit Length	n/a
		Measurement of deformations	n/a
		Average Height	n/a
		Gap	n/a
		Tensile Strength	1, 2
		Yield Strength	1, 2
		Elongation	1, 2

1 Only testing for tensile strength, elongation, and yield strength will be used for accreditation purposes.

2 Low ratings / no results in the CCRL proficiency sample will result in suspensions for all types of rebar tested (M31/A615, A706, A970).

Annex 1: CCRL Cement Physical Testing Proficiency Sample Program Comparison

Cement Tests			Proficiency Sample Programs			
AASHTO	ASTM	Test name	Portland Cement	Blended Cement	Masonry Cement	Portland Limestone Cement
T129	C187	Normal Consistency	X	X	X	X
T131	C191	Time of Set – Vicat Needle	X	X		X
T154	C266	Time of Set – Gilmore Needle	X		X	
T186	C451	Early Stiffening	X			X
T107	C151	Autoclave Expansion	X	X	X	X
T137	C185	Air Content of Mortar	X	X	X	X
T133	C188	Density		X	X	X
T106	C109	Compressive Strength	X	X	X	X
T153	C204	Fineness – Blaine Apparatus	X	X		X
T192	C430	Fineness - No. 325 Sieve	X	X	X	X
	C1038	Expansion of Cement Mortar Bars	X			X
	C1702	Heat of Hydration (Calorimetry)	X	X		X
	C1506	Water Retention			X	

Annex 2: CCRL Cement Chemical Testing Proficiency Sample Program Comparison

Cement Tests			Proficiency Sample Programs			
AASHTO	ASTM	Test name	Portland Cement	Blended Cement	Pozzolan	Portland Limestone Cement
T105 C114		Moisture Content			X	
		Silicon Dioxide (SiO_2)	X	X	X	X
		Aluminum Oxide (Al_2O_3)	X	X	X	X
		Ferric Oxide (Fe_2O_3)	X	X	X	X
		Calcium Oxide (CaO)	X	X	X	X
		Free Calcium Oxide [Free Lime] (C_x)	X			X
		Magnesium Oxide (MgO)	X	X	X	X
		Sulfur Trioxide (SO_3)	X	X	X	X
		Loss on Ignition (LOI)	X	X	X	X
		Sodium Oxide (Na_2O)	X	X	X	X
		Potassium Oxide (K_2O)	X	X	X	X
		Strontium Oxide (SrO)	X			X
		Titanium Dioxide (TiO_2)	X	X		X
		Phosphorous Pentoxide (P_2O_5)	X	X		X
		Zinc Oxide (ZnO)	X	X		X
		Manganic Oxide (Mn_2O_3)	X	X		X
		Chloride (Cl)	X	X		X
		Insoluble Residue (IR)	X	X		
		Carbon Dioxide (CO_2)	X			X
		Limestone Content	X			X
		Chromium Oxide (Cr_2O_3)	X	X		X
		Tricalcium Silicate (C_3S)	X			
		Dicalcium Silicate (C_2S)	X			
		Tricalcium Aluminate (C_3A)	X			
		Tetracalcium Aluminoferrite (C_4AF)	X			
		Available Na_2O			X	
		Available K_2O			X	
		Total Available Alkalies			X	

Revision Updates

Revision Date	Revision Summary
1/10/2020	Original Publication
6/16/2020	• Editorial Changes • Added rule 3b under the MAR sample and 5b under the HVM sample • Added rule 5 under the VGA sample • Added rule 1c under the HMI sample • Added rule 2 under the Steel Reinforcing Bar sample • Included T269/D3203 in rule 1 of the MAR sample and rule 3 of the HVM sample
10/9/2020	• Editorial Changes • Added rule 5b under EML sample • Added rule 4 under MAR sample • Added rule 2 under SOL sample
4/1/2021	• Revisions to rules regarding CCRL Cementitious programs • Comparison tables added for cement and Pozzolan programs • Update to CBR Rule 1 • Soil methods T288/G187, T289, D4972, T290, and T291 added to SOL table
5/21/2021	• Removed C186 from Portland and Blended physical testing programs • Added T97/C78 to concrete program • Removed rules under Pozzolan that required participation for ratings that are always suppressed. If ratings are issued, satisfactory ratings are required.
8/6/2021	• Added rule 5 to MAR and 6 to HVM
9/17/2021	• Replaced AGF and AGC samples with AGG and AGD • Added T186/C451 to Portland Physical Program. It is not a new addition to the program; it was previously not included in this document.
10/29/2021	• Added T133/C188 to the Portland Cement program. • Added Rule 3 to the Pozzolan program.
2/11/2022	• Added T267/D2974 to SOL sample.
11/22/2022	• Major editorial changes • Split HVM into separate samples depending on compaction • Add PML
4/19/2023	• Removed T201 and T202 from HMS sample

5/4/2023	• Edits to tests included in PME and associated rules
6/26/2023	• Updated Rule 1 under HMS • Edits to PME and EML rules
6/24/2024	• Added HWT table • Added PL Cement table
8/16/2024	• Added T111 (equivalent to D8078)
	• Added Rule 1 under SMS