

## LABORATORY INSPECTION INFORMATION REQUEST

This information will assist in the processing of laboratory inspections. The inspection is a two-man day comprehensive review that includes review of the quality system, verification of test equipment, and observation of test procedures performed. Please complete and return to:

Commander

U.S. Army Engineer Research and Development Center

ATTN: Ms. Brittany N. Hopkins, CEERD-GM-C

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### GENERAL LABORATORY INFORMATION

Date of Request: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Laboratory Name: \_\_\_\_\_

Laboratory Location: \_\_\_\_\_

Telephone Number: (\_\_\_\_) \_\_\_\_\_ FAX Number: (\_\_\_\_) \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Name and Title of Point of Contact: \_\_\_\_\_

**AREA OF INSPECTION DESIRED:** Please check the appropriate areas for which this inspection is requested and complete the questionnaire below.

**Aggregates** \_\_\_\_ **Bituminous** \_\_\_\_ **Concrete** \_\_\_\_ **Masonry** \_\_\_\_ **Rock** \_\_\_\_ **Soil** \_\_\_\_

### LABORATORY QUALITY ASSURANCE QUESTIONNAIRE (ASTM C 1077-15, C 1093-15, D 3666-13, D 3740-12, E 329-14)

Quality System	Yes	No	Accreditation Programs (if Yes, list date)	Yes	No
Quality Manual			AASHTO Accreditation Program – (AMRL)		
Proficiency Sample Programs: Aggregate			AMRL Accreditation Date -		
Bituminous			AASHTO Accreditation Program – (CCRL)		
Concrete			CCRL Accreditation Date -		
Masonry					
Soil			<b>Inspections (if Yes, list date)</b>		
<b>Certified Technicians (if Yes, list number)</b>			US Army Corps of Engineers		
American Concrete Institute (ACI)			AASHTO Materials Reference Laboratory (AMRL)		
National Institute for Certification in Engineering Technologies (NICET)			Cement and Concrete Reference Laboratory (CCRL)		

### U.S. Army Corps of Engineers Information

District Contact: \_\_\_\_\_ Telephone: (\_\_\_\_) \_\_\_\_\_

**NOTE:** The U.S. Army Corps of Engineers Materials Testing Center (MTC) does not certify nor does it provide any accreditation to laboratories. The MTC conducts inspections to validate the capability of a laboratory to perform specific tests as required by contract with the U.S. Army Corps of Engineers.

**Revised: 13 July 2016**

### Aggregate Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure	No.	Check	AMRL/CCR
	<b>REQUIRED TESTS PER ASTM C 1077-15</b>			<b>Inspection</b>
ASTM C 117-13	Material Finer than 75 :µm (No. 200) Sieve	A1		
ASTM C 127-15	Specific Gravity & Absorption in Coarse Aggregate	A2		
ASTM C 128-15	Specific Gravity & Absorption in Fine Aggregate	A3		
ASTM C 136-14	Sieve Analysis of Aggregates	A4		
	<b>OPTIONAL TESTS PER ASTM C1077-15</b>			
ASTM C 29-09	Unit Weight and Voids in Aggregate	A5		
ASTM C 40-11	Organic Impurities	A6		
ASTM C 70-13	Surface Moisture in Fine Aggregate	A7		
ASTM C 87-10	Effects of Organic Impurities on Mortar Strength	A8		
ASTM C 88-13	Sulfate Soundness	A9		
ASTM C 123-14	Lightweight Particles	A10		
ASTM C 131-14	Los Angeles Abrasion Resistance on Small-Size Coarse Aggregate	A11		
ASTM C 142-10	Clay Lumps	A12		
ASTM C 227-10	Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar)	A13		
ASTM C 289-07	Alkali-Silica Reactivity of Aggregates (Chemical Method)	A14		
ASTM C 295-12	Petrographic Examination	A15		
ASTM C 441-11	Effectiveness of Mineral Admixtures or GBFS on Preventing	A16		
ASTM C 535-12	Los Angeles Abrasion Resistance on Large Size Coarse Aggregate	A11		
ASTM C 566-13	Total Moisture Content	A17		
ASTM C 586-11	Alkali Reactivity of Carbonate Rocks (Rock Cylinder Method)	A18		
ASTM C 641-09	Staining Materials in Lightweight Aggregates	A19		
ASTM C 702-11	Reducing Samples to Testing Size	A20		
ASTM C 1105-08	Length Change Due to Alkali-Carbonate Reaction	A21		
ASTM C 1138-12	Abrasion Resistance of Concrete (Underwater Method)	A22		
ASTM C 1260-14	Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)	A23		
ASTM C 1293-08 (15)	Length Change Alkali-Silica Reaction	A24		
ASTM D 75-15	Sampling	A25		
ASTM D 546-10	Sieve Analysis of Mineral Filler	A26		
ASTM D 2419-14	Sand Equivalent Value	A27		
ASTM D 3744-11	Aggregate Durability Index	A28		
ASTM D 4791-10	Flat or Elongated Particles	A29		
ASTM D 5821-13	Percentage of Fractured Particles in Coarse Aggregate	A30		
CRD-C 104-80	Fineness Modulus	A4		
CRD-C 119-91	Flat and Elongated Particles	A29		
CRD-C 130-89	Scratch Hardness	A31		
CRD-C 171-94	Percentage of Crushed Particles in Aggregate	A32		

### Bituminous Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3666-13)	No.	Check	AMRL Inspection
ASTM D 5-13	Penetration	B1		
ASTM D 36-14	Softening Point	B2		
ASTM D 70-09	Density of Semi-Solid Bituminous Mat's (Pycnometer Method)	B3		
ASTM D 139-12	Float Test	B4		
ASTM D 140-16	Sampling Bituminous Materials	B5		
ASTM D 242-09 (14)	Mineral Filler for Bituminous Paving Mixtures	B6		
ASTM D 243-14	Penetration Residue	B7		
ASTM D 244-09	Emulsified Asphalts	B8		
ASTM D 402-14	Distillation of Cut-Back Asphalts	B9		
ASTM D 979-15	Sampling Bituminous Paving Mixtures	B10		
ASTM D 1074-09	Compressive Strength	B11		
ASTM D 1075-11	Effect of Water on Compressive Strength	B12		
ASTM D 1188-07 (15)	Bulk Specific Gravity & Density Using Coated Samples	B13		
ASTM D 1461-11	Moisture or Volatile Distillates in Bituminous Paving Mixtures	B14		
ASTM D 1560-15	Resistance to Deformation & Cohesion by Hveem	B15		
ASTM D 1561-13	Preparation by CA Kneading Compactor	B16		
ASTM D 1754-09 (14)	Effect of Heat & Air by Thin Film Oven	B17		
ASTM D 1856-09 (15)	Recovery of Asphalt by Abson	B18		
ASTM D 2041-11	Theoretical Maximum Specific Gravity & Density (Rice)	B19		
ASTM D 2042-15	Solubility by Trichloroethylene	B20		
ASTM D 2170-10	Kinematic Viscosity	B21		
ASTM D 2171-10	Viscosity by Vacuum Capillary Viscometer	B22		
ASTM D 2172-11	Quantitative Extraction	B23		
ASTM D 2726-14	Bulk Specific Gravity and Density	B24		
ASTM D 2872-12	Effect of Heat & Air on Moving Film by Rolling Thin Film Oven	B25		
ASTM D 2950-14	Density of Bituminous Concrete in Place by Nuclear Methods	B26		
ASTM D 3142-11	Density of Liquid Asphalts by Hydrometer	B27		
ASTM D 3203-11	Percent Air Voids	B28		
ASTM D 3289-08	Density by Nickel Crucible	B29		
ASTM D 3665-12	Random Sampling of Construction Materials	B30		
ASTM D 4125-10	Asphalt Content by Nuclear Method	B31		
ASTM D 4867-09 (14)	Effect of Moisture	B32		
ASTM D 5404-12	Asphalt Recovery by Rotary Evaporator	B33		
ASTM D 5444-15	Mechanical Size Analysis of Extracted Aggregate	B34		
ASTM D 6307-10	Asphalt Content of Hot-Mix Asphalt by Ignition Method	B35		
ASTM D 6926-10	Preparation of Bituminous Specimens using Marshall	B36		
ASTM D 6927-15	Marshall Stability and Flow of Bituminous Mixtures	B37		
CRD-C 650-95	Density and Percent Voids	B38		

## Concrete Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure	No.	Check	CCRL
	<b>REQUIRED TESTS PER ASTM C 1077-15</b>			<b>Inspection</b>
ASTM C 31-15	Making and Curing Test Specimens in the Field	C1		
ASTM C 39-15	Compressive Strength of Cylindrical Specimens	C2		
ASTM C 138-14	Unit Weight and Air Content by Gravimetric	C3		
ASTM C 143-12	Slump	C4		
ASTM C 172-14	Sampling	C5		
ASTM C 173-14	Air Content by Volumetric ***required if C231 not performed***	C6		
ASTM C 231-14	Air Content by Pressure ***required if C173 not performed***	C7		
ASTM C 1064-12	Temperature of Concrete	C8		
	<b>OPTIONAL TESTS PER ASTM C 1077-15</b>			
ASTM C 42-13	Drilled Cores and Sawed Beams	C9		
ASTM C 78-15	Flexural Strength by Third Point Loading	C10		
ASTM C 157-08 (14)	Length Change of Concrete and Mortars	C11		
ASTM C 174-13	Concrete Thickness by Drilled Cores	C12		
ASTM C 192-15	Making and Curing Test Specimens in Laboratory	C13		
ASTM C 215-14	Fundamental Frequencies of Concrete	C14		
ASTM C 232-14	Bleeding of Concrete	C15		
ASTM C 293-10	Flexural Strength by Center Point Loading	C16		
ASTM C 341-13	Length Change of Drilled or Sawed Concrete	C17		
ASTM C 403-08	Time of Setting by Penetration Resistance	C18		
ASTM C 418-12	Abrasion Resistance by Sand Blasting	C19		
ASTM C 457-12	Air-Void System by Microscopic Determination	C20		
ASTM C 469-14	Static Modulus of Elasticity and Poisson's Ratio	C21		
ASTM C 470-15	Molds for Forming Concrete Test Cylinders Vertically	C22		
ASTM C 490-11	Apparatus for Length Change of Cement Paste, Mortar, & Concrete	C23		
ASTM C 495-12	Compressive Strength of Lightweight Insulating Concrete	C24		
ASTM C 496-11	Splitting Tensile Strength	C25		
ASTM C 511-13	Moist Cabinets, Moist Rooms, Water Storage Tanks	C26		
ASTM C 512-10	Creep of Concrete in Compression	C27		
ASTM C 567-14	Unit Mass of Structural Lightweight Concrete	C28		
ASTM C 597-09	Pulse Velocity Through Concrete	C29		
ASTM C 617-15	Capping Cylindrical Specimens	C30		
ASTM C 642-13	Density, Absorption, and Voids	C31		
ASTM C 666-15	Freezing & Thawing Concrete Specimens	C32		
ASTM C 672-12	Scaling Resistance by Deicing Chemicals	C33		
ASTM C 779-12	Abrasion Resistance of Horizontal Surfaces	C34		
ASTM C 803-03 (10)	Penetration Resistance of Hardened Concrete	C35		
ASTM C 805-13	Rebound Number of Hardened Concrete	C36		
ASTM C 823-12	Examination and Sampling Hardened Concrete in Construction	C37		

### Concrete Inspection Checklist Continued

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	OPTIONAL TESTS PER ASTM C 1077-15	No.	Check	CCRL
ASTM C 856-14	Petrographic Examination of Hardened Concrete	C38		Inspection
ASTM C 873-10	Compressive Strength of Cast in Place Cylinders	C39		
ASTM C 876-09	Half-Cell Potentials of Uncoated Reinforcing Steel	C40		
ASTM C 900-15	Concrete Pullout Strength	C41		
ASTM C 918-13	Early Age Compression Test	C42		
ASTM C 944-12	Abrasion Resistance by Rotating-Cutter Method	C43		
ASTM C 1040- 08 (13)	Density of Concrete by Nuclear Method	C44		
ASTM C 1074-11	Estimating Concrete Strength by Maturity Method	C45		
ASTM C 1084-10	Portland Cement Content of Hardened Concrete	C46		
ASTM C 1152-04 (12)	Acid-Soluble Chloride in Concrete	C47		
ASTM C 1202-12	Electrical Indication of Concrete to Resist Chloride Ion	C48		
ASTM C 1218-15	Water-Soluble Chloride in Concrete	C49		
ASTM C 1231-14	Unbonded Caps	C50		
CRD-C 114-97	Soundness by Freezing and Thawing of Concrete	C51		

What is the capacity of the compression testing machine(s)? \_\_\_\_\_

How many ranges are associated with the test machine(s)? \_\_\_\_\_

# Masonry Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

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### Rock Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL or CCRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3740-12)	No.	Check	AMRL/CCRL Inspection
ASTM D 2845-08	Pulse Velocity and Ultrasonic Elastic Constants	R1		
ASTM D 2936-08	Direct Tensile Strength of Intact Rock Core	R2		
ASTM D 3967-08	Tensile Strength, Splitting (Brazilian) Method	R3		
ASTM D 4435-13	Rock Bolt Anchor Pull Test	R4		
ASTM D 4543-08	Preparing Rock Core Specimens and Determining Tolerances	R5		
ASTM D 4644-08	Slake Durability of Shales and Weak Rocks	R6		
ASTM D 5312-12 (13)	Durability of Rock to Freezing and Thawing	R7		
ASTM D 5313-12 (13)	Durability of Rock to Wetting and Drying	R8		
ASTM D 5607-08	Laboratory direct Shear Tests on Rock Under Constant Normal	R9		
ASTM D 5731-08	Point Load Index	R10		
ASTM D 5878-08	Rock-Mass Classification for Engineering Purposes	R11		
ASTM D 7012-14	Compressive Strength & Elastic Moduli of Rock Core Specimens	R12		
CRD-C 144-92	Resistance of Rock to Freezing and Thawing	R7		
CRD-C 148-69	Expansive Breakdown on Soaking in Ethylene Glycol	R13		
CRD-C 169-97	Resistance of Rock to Wetting and Drying	R8		

## Soils Inspection Checklist

Please mark the test methods to be validated during this inspection to include the laboratory's full capabilities. Mark the last column if a test method has been previously inspected by AMRL within the past two years.

If a test method is not listed, add your required test method at the bottom of the checklist:

Test Method	Test Procedure (ASTM D 3740-12)	No.	Check	AMRL
				Inspection
ASTM D 558-11	Moisture-Density of Soil-Cement	S1		
ASTM D 559-15	Wetting & Drying Soil-Cement	S2		
ASTM D 560-15	Freezing & Thawing Soil-Cement	S3		
ASTM D 698-12	Compaction Characteristics by Standard Effort	S4		
ASTM D 854-14	Specific Gravity of Soils	S5		
ASTM D 1140-14	Material Finer than 75 :m (No. 200) Sieve	S6		
ASTM D 1556-15	Density & Unit Weight by Sand Cone	S7		
ASTM D 1557-12	Compaction Characteristics by Modified Effort	S8		
ASTM D 1883-14	CA Bearing Ratio (CBR)	S9		
ASTM D 2166-13	Unconfined Compressive Strength	S10		
ASTM D 2167-15	Density & Unit Weight by Rubber Balloon	S11		
ASTM D 2168-10	Calibration of Laboratory Mechanical-Rammer Soil Compactors	S12		
ASTM D 2216-10	Water Content	S13		
ASTM D 2435-11	One-Dimensional Consolidation Properties	S14		
ASTM D 2487-11	Classification of Soils	S15		
ASTM D 2488-09	Description & Identification of Soils (Visual-Manual Procedure)	S16		
ASTM D 2850-15	Unconsolidated, Undrained Strength in Triaxial Compression	S17		
ASTM D 2937-10	Density by Drive Cylinder Method	S18		
ASTM D 2974-14	Moisture, Ash, & Organic Matter of Peat & Other Organic Soils	S19		
ASTM D 3080-11	Direct Shear Test in Consolidated Drained Conditions	S20		
ASTM D 4220-14	Preserving & Transporting Samples	S21		
ASTM D 4253-14	Maximum Index Density by Vibratory Table	S22		
ASTM D 4254-14	Minimum Index Density	S23		
ASTM D 4318-10	Liquid & Plastic Limits & Plasticity Index	S24		
ASTM D 4546-14	One-Dimensional Swell or Settlement Potential	S25		
ASTM D 4643-08	Determination of Water Content of Soil by Microwave Oven	S26		
ASTM D 4767-11	Consolidated-Undrained Triaxial Compression	S27		
ASTM D 5084-10	Hydraulic Conductivity using a Flexible Wall Permeameter	S28		
ASTM D 6913-03 (09)	Particle-Size Distribution of Soils Using Sieve Analysis	S29		
ASTM D 6938-15	Density and Water Content by Shallow Depth Nuclear Method	S30		