TO: REGIONAL ENGINEERS AND HIGHWAY BUREAU CHIEFS
AGGREGATE, HOT-MIX ASPHALT (HMA), AND
PORTLAND CEMENT CONCRETE (PCC) PRODUCERS

SUBJECT: MINIMUM PRIVATE LABORATORY REQUIREMENTS FOR
CONSTRUCTION MATERIALS TESTING OR MIX DESIGN

1.0 SCOPE

This policy governs the minimum qualifications for materials Private Quality Control (QC) and Quality Assurance (QA) Laboratories operated by Contractors, Producers and Consultants.

It applies to three categories of materials testing:

1. Aggregate (Agg)
2. Hot-mix asphalt (HMA)
3. Portland cement concrete (PCC)

Private Quality Control Laboratories shall be approved as one or more of the following laboratory types:

1. Agg QC
2. HMA/Agg QC
3. HMA Design/Agg QC
4. PCC/Agg QC
5. Jobsite PCC QC

Private Quality Assurance Laboratories shall be approved as one or more of the following laboratory types:

1. HMA/Agg QA
2. PCC/Agg QA

Qualified Private Laboratories are permitted to conduct Acceptance Program testing for localities such as counties, cities and municipalities. Note, however, that Qualified Private Laboratories are not permitted to perform QC (including mix design) and acceptance testing on the same project.
2.0 PURPOSE

1. To ensure that Private QC and QA Laboratories are equipped and maintained at a uniform and high level of quality.
2. To establish uniform procedures for evaluating and approving Private QC and QA Laboratories.
3. To maintain a uniform standard for inspecting test equipment and test procedures.

3.0 AUTHORITY AND REFERENCES

3.1 Authority. Federal regulations (23 CFR Part 637) require the Department to establish an Acceptance Program for qualifying construction testing laboratories.

3.2 References.

1. IDOT Standard Specifications for Road and Bridge Construction.
4. AASHTO, ASTM, and IDOT Test Procedures.
7. IDOT Bureau of Local Roads and Streets Manual

4.0 DEFINITIONS

AASHTO - American Association of State Highway and Transportation Officials.

AASHTO R 18 - The AASHTO Standard for "Establishing and Implementing a Quality System for Construction Materials Laboratories." The principles and/or requirements of AASHTO R 18 are used by the Bureau to administer the Qualified Laboratory program for District and Private Laboratories.

AASHTO RE:SOURCE - Administrator of the Accreditation, Laboratory Assessment, and Proficiency Sample Programs for AASHTO (formerly the American Materials Reference Laboratory or AMRL). Re:source is part of the Engineering and Technical Services Division of AASHTO.

ACCEPTANCE PROGRAM – All factors that comprise the Department’s determination of the quality of the product as specified in the contract requirements. These factors include verification (QA) sampling, testing, and inspection and may include results of QC sampling and testing.

ACCREDITED LAB - A laboratory that is currently accredited by the AASHTO Accreditation Program (AAP) or other accrediting body recognized by FHWA.


The principles and/or requirements of ASTM C 1077 are used by the Bureau to administer the Qualified Laboratory program for District and Private Laboratories.

**BUREAU** - Central Bureau of Materials (CBM), Illinois Department of Transportation.

**BUREAU LABORATORY** - The Department's central laboratory maintained and operated by the Bureau. The Bureau Laboratory administers the Qualified Laboratory program for District and Private Laboratories.

**CCRL** – Cement and Concrete Reference Laboratory.

**CONSULTANT** - A private firm which performs construction materials testing for the Department, Producer, or Contractor. Department prequalification and AASHTO accreditation requirements apply where Department construction testing is performed directly for the Department under a Department contract or subcontract.

**CONTRACTOR** - The individual, firm, partnership, joint venture, or corporation contracting with the Department for performance of prescribed work.

**DEPARTMENT** - Illinois Department of Transportation (IDOT), including its Districts and Central Bureau offices.

**DISTRICT** - District office, Illinois Department of Transportation.

**DISTRICT LABORATORY** - A Department laboratory that is operated by a District.

**FHWA** - Federal Highway Administration.

**FIELD TESTS** - Tests that may be performed outside of a laboratory. For example, a portland cement concrete (PCC) or hot-mix asphalt (HMA) test performed at the jobsite.

**INDEPENDENT ASSURANCE** – Activities that are an unbiased and independent evaluation of all the sampling and testing (or inspection) procedures used in the quality assurance program. [IA provides an independent verification of the reliability of the acceptance (or verification) data obtained by the agency and the data obtained by the contractor. The results of IA testing or inspection are not to be used as a basis of acceptance. IA provides information for quality system management.] Policies and procedures contained in this memorandum are also an aspect of independent assurance.

**LOCAL AGENCY** - Governmental agency such as a county, city, or municipality.

**NIST** - National Institute for Standards and Technology.

**PRIVATE LABORATORY** - Any construction materials testing or design laboratory not operated by the Department or a Local Agency. This includes Contractor, Producer, or Consultant laboratories performing Quality Control, Quality Assurance, acceptance, Independent Assurance, or any other required or contracted testing on a Department project.

**PRODUCER** - An individual or business entity providing materials and/or products for performance of prescribed work.
QUALIFIED LABORATORY - A laboratory that is inspected and approved by the Department. FHWA’s regulations (23 CFR 637.203) define these as Laboratories that are capable as defined by appropriate programs established by each state transportation department. As a minimum, the qualification program shall include provisions for checking test equipment, and the laboratory shall keep records of calibration checks.

QUALIFIED PERSONNEL - Personnel with demonstrated and documented capability to perform the applicable inspection and testing. The minimum requirement for aggregate, hot-mix asphalt or portland cement concrete testing is successful completion of the prescribed Department Quality Management Training Program classes. (Note: Additional personnel or experience requirements may apply to labs performing professional service work for the Department, e.g. Professional Engineer (P.E.) registrations, resumes, documented experience. When required, such notice will be provided in the prequalification process or solicitation notice.)

QUALITY ASSURANCE (QA) - All those planned and systematic actions necessary to provide adequate Department confidence that materials; manufactured, fabricated or constructed items; processes; products; designs; conducted test procedures; etc. will satisfy the requirements of the Specifications, Quality Control Plan, etc., as applicable.

QUALITY CONTROL (QC) - The sum total of activities performed by a Producer, Contractor, Consultant, Manufacturer, etc. to make sure materials; manufactured, fabricated or constructed items; processes; products; designs; conducted test procedures; etc. will satisfy the requirements of the Specifications, Quality Control Plan, etc., as applicable.

QUALITY ASSURANCE TESTING CONSULTANT – A Professional Engineering firm that is prequalified by the Department to perform field and/or laboratory tests for the Department. Required tests for Quality Assurance Testing Consultants are listed in Attachment A Table 2.

QUALITY ASSURANCE LABORATORY - Any laboratory used for Quality Assurance testing (Department tests) required by the Department. Required tests for Quality Assurance Laboratories are listed in Attachment A Table 2.

QUALITY CONTROL LABORATORY - Any laboratory used for Quality Control testing (Contractor or Producer tests) required by the Department. Required tests for Quality Control Laboratories are listed in Attachment A Table 1.

QUALITY CONTROL MANAGER - A Consultant or an employee of a Contractor, Producer, Manufacturer, etc. who is responsible for compliance with the QC requirements in a Department contract or policy.

STATE - The state of Illinois.

SPECIFICATIONS - Specifications for materials; manufactured, fabricated or constructed items; processes; products; designs; conducted test procedures, etc. which includes the Standard Specifications, supplemental specifications and recurring special provisions, highway standards, shop drawings, contract plans, project special provisions, AASHTO Specifications, ASTM Specifications, etc., as applicable.
STANDARD SPECIFICATIONS - The Department’s Standard Specifications for Road and Bridge Construction.

TECHNICAL MANAGER - The individual with responsibility for the overall operations, condition, and maintenance of the Private Laboratory. The Technical Manager shall be identified in writing. The Technical Manager is not required to be the QC Manager defined in the contract. However, the Technical Manager shall be familiar with the Quality Control testing requirements and the specified equipment.

5.0 PRIVATE LABORATORY REQUIREMENTS

5.1 Personnel Qualifications/Responsibilities.

5.1.1 All testing for Department contracts shall be performed by Qualified Personnel as specified in the contract. This includes any testing related to Quality Assurance, Quality Control and Independent Assurance.

5.1.2 The Department will maintain a computer database of Qualified Personnel who have successfully passed the appropriate Quality Management Training Program classes.

5.2 Facilities and Equipment.

5.2.1 The Department will approve all Private Laboratories used on Department projects.

5.2.2 Each Private Laboratory shall maintain the equipment and facilities necessary to perform the tests required for each laboratory type it is approved for. Lists of required Private Laboratory test capabilities for each Qualified Laboratory type are provided in Tables 1 and 2 located in Attachment A.

5.2.3 Each Private Laboratory shall have adequate floor space to efficiently conduct the required tests for each laboratory type it is approved for. Minimum floor space requirements are provided under “Model Quality Control Plans” in Appendices B and C of the Manual of Test Procedures for Materials.

5.2.4 Each Private Laboratory shall have HVAC equipment capable of maintaining a room temperature of 20 to 30° C (68-86° F). A Private Laboratory that performs only aggregate gradation and/or aggregate moisture testing is exempt from this requirement.

5.2.5 Each Private Laboratory shall maintain, at a minimum, the required equipment for each laboratory type it is approved for as outlined in the appropriate appendix to the Manual of Test Procedures for Materials. Appendix D.3 applies to aggregate equipment, Appendix C.3 applies to portland cement concrete equipment, and Appendix D.4 applies to hot-mix asphalt equipment.

6.0 QUALITY SYSTEM CRITERIA

6.1 AASHTO R 18 and ASTM C 1077. Each Private Quality Assurance Laboratory shall maintain AASHTO accreditation for the required tests outlined in Attachment A Table 2 for each laboratory type it is approved for. The implemented quality system shall be
according to AASHTO R 18 for HMA/Agg labs, and AASHTO R 18 and ASTM C 1077 for PCC/Agg labs.

6.2 **Technical Manager.** Each **Private Laboratory** shall have a **Technical Manager** (however titled) who has overall responsibility for the technical operations of the **Private Laboratory**. The **Technical Manager** shall be responsible for equipment maintenance, calibration, standardization, verification and checks; maintaining records; and ensuring that current test procedures are utilized. If the **Private Laboratory** is prequalified in a Professional **Consultant** service category, a licensed Illinois Professional Engineer shall have direct supervision of the laboratory.

6.3 **Equipment Calibration, Standardization, Verification and Checks (C/S/V/C).** The **Private Quality Control Laboratory** shall calibrate, standardize, verify or check all testing equipment associated with tests performed for each laboratory type it is approved for according to Attachment A Table 3. The table also provides descriptive notes and links to forms that may be used to document lab equipment C/S/V/Cs. Heavy use or specific test requirements may require more frequent intervals than those given in Attachment A Table 3. **Department** verification of **Private Quality Control Laboratory** equipment shall not be construed as part of, or substitute for, equipment calibration, standardization, verification or check requirements, except for **Department** verification of the gyratory compactor using the DAV-2 and **Department** verification of the gyratory molds using the bore gauge.

The **Private Quality Assurance Laboratory** shall meet the requirements listed above for the **Private Quality Control Laboratory** for each laboratory type it is approved for. In addition, the **Private Quality Assurance Laboratory** shall calibrate, standardize, verify or check all equipment associated with the tests for which the **Private Quality Assurance Laboratory** is accredited according to AASHTO R 18 and ASTM C 1077, as applicable.

6.4 **Department Proficiency Testing.** **Private Laboratory** qualifications may include round-robin proficiency testing conducted by the **Department**. Results of proficiency testing may be considered in the overall evaluation of the **Private Laboratory** to conduct specific tests.

6.5 **Records.**

6.5.1 **Test Records.** Each **Private Laboratory** shall maintain test records which contain sufficient information to permit verification of any test report.

6.5.2 **Laboratory Quality Records.** Each **Private Laboratory** shall maintain documentation of internal quality controls. At a minimum, the records shall include:

1. Documentation of assignment of personnel responsible for internal quality controls.
2. Documentation of equipment calibration, standardization, verification and checks.
3. All documentation shall be maintained and available for **Department** inspection for a period of three years.
6.5.2.1 **Equipment Calibration, Standardization, Verification and Check Records.** Calibration, standardization, verification and check records shall include the minimum information listed below. AASHTO R 18 and ASTM C 1077 provide additional guidance for recording calibration, standardization, verification and check records for testing equipment.

1. Description.
2. Model & Serial Number.
3. Name of person calibrating, standardizing, verifying or checking.
4. Equipment used for calibration, standardization, verification or checks (e.g., standard weights, proving rings, thermometers).
5. Date calibrated, standardized, verified, or checked & next due date.
6. Reference procedure used.
7. Results of calibration, standardization, verification or checks.

6.5.3 **Proficiency Sample Records.** Each Private Laboratory shall retain results of participation in any proficiency sample program, including the documentation of steps taken to determine the cause of poor results and corrective action taken.

6.6 **Publications.** Each Private Laboratory shall maintain current copies or electronic access to the required test procedures for each laboratory type it is approved for. Each Private Laboratory shall maintain a current copy or electronic access to the Manual of Test Procedures for Materials.

7.0 **LABORATORY INSPECTIONS**

7.1 **General.** The Department will approve Private Quality Control and Quality Assurance Laboratories by inspection and other requirements, as applicable.

7.1.1 **Aggregate and Jobsite PCC Private QC Laboratories.** Initial inspections and re-inspections will be performed by the District.

7.1.2 **All Other Private Laboratories.** Initial inspections are performed by the Bureau. Re-inspections are performed by the District.

7.1.3 Documentation review of a Private Laboratory’s equipment calibration, standardization, verification and check records by the Bureau and resolution of any nonconformities is required prior to the initial Bureau inspection according to Subsection 7.4.4 for Private Laboratories seeking to become a Quality Control Laboratory or Quality Assurance Testing Consultant.

7.1.4 Initiation of the prequalification process with the Bureau of Design and Environment is required prior to initial District pre-inspection according to Subsection 7.4.3 and initial Bureau inspection according to Subsection 7.4.4 for Private Laboratories seeking to become a Quality Assurance Testing Consultant.

7.2 **AASHTO Accredited Private Quality Assurance Laboratories.**

7.2.1 Current AASHTO accreditation as well as providing Departmental access to the results of participation in the AASHTO Proficiency Sample Program is a prerequisite for beginning the prequalification process for a Private Laboratory to become a Quality Assurance Testing Consultant. Other prerequisites may be found in the prequalification instructions.
and forms. AASHTO re:source shall provide accreditation assessment for HMA/Agg QA Laboratories. CCRL shall provide accreditation assessment for PCC/Agg QA Laboratories. Instructions for providing the Department access to a Private Laboratory’s Proficiency Sample Program results can be found in Attachment B.

7.2.2 AASHTO accreditation does not waive the right of the Department to conduct inspections and/or re-inspections.

7.3 Initial Private Laboratory Inspection Scope.

1. Facilities - Physical and environmental conditions.
2. Equipment - Test apparatus for specification compliance.
3. Documentation - Calibration, standardization, verification and check records.
5. Observation - The Private Laboratory may be required to demonstrate required tests. Some test procedures, such as Field Tests, may be evaluated through discussion with laboratory personnel.
6. Report - The Private Laboratory will be provided with a report listing those tests for which it is approved. The report will note deficiencies.

7.4 Initial Private Laboratory Inspection Procedure.

7.4.1 The Private Laboratory shall submit a written request for an inspection to the District. The request shall indicate the following:

1. The location of the Private Laboratory.
2. The type of Private Laboratory, i.e., Agg QC, PCC/Agg QC, HMA /Agg QA, etc.
3. The name of the Technical Manager who will be present for the inspection.
4. The date the Private Laboratory will be ready for inspection.

7.4.2 The District will notify the Bureau of the inspection request and coordinate with the Private Laboratory to submit equipment calibration, standardization, verification, and check records to the Bureau. Once all record nonconformities are resolved, Bureau personnel will establish a tentative date to perform the inspection (see also Subsection 7.1.3).

7.4.3 The District will perform a pre-inspection approximately seven calendar days before the Bureau inspection. The District will verify that the Private Laboratory is ready for inspection and notify the Bureau.

7.4.4 Bureau personnel will perform the inspection and prepare a preliminary report. Standard inspection forms and a preliminary report, developed and maintained by the Bureau Laboratory, will be used.

7.4.5 Bureau personnel will assign identification numbers to all test equipment. Unless a District has an established numbering system, the following sequences will be used:

Sieves  
e.g., IL07 -1418-01

where: IL = State
Sieves are engraved on the inside of the bottom lip directly beneath the label. If a laboratory does not have a producer/supplier number, all sieves will be engraved with one number that follows the numbering system for HMA or PCC lab equipment, as appropriate.

HMA Equipment

e.g., IL07B1 - 123

where: IL = State
07 = inspection year
B = hot mix asphalt (bituminous)
1 = district number
123 = sequential numbers

PCC Equipment

e.g., IL07C1 - 123

where: IL = State
07 = inspection year
C = concrete
1 = district number
123 = sequential numbers

Note: The numbering system prior to 2007 was IL07-123 for HMA and IL07CND1-123 for PCC. The change was made to make the numbering system more uniform.

7.4.6 Bureau personnel will perform a close-out with the Technical Manager and the District representative. The Technical Manager and the District will be given a copy of the preliminary report.

7.4.7 If a review of the preliminary report indicates there are no deficiencies, the Bureau will provide written notification to the Private Laboratory indicating the Private Laboratory is now an approved Quality Control or Quality Assurance Laboratory. The notification will include an equipment list. A copy of the notification will be provided to the District.

7.4.8 If the preliminary report indicates there are deficiencies, the Bureau will provide written notification to the Private Laboratory, indicating the deficiencies and that corrective action is required. A copy of the written notification will be provided to the District.

7.4.9 After correction of all cited deficiencies, the Private Laboratory shall notify the District. The District will inspect the Private Laboratory to verify the deficiencies have been corrected and will notify the Bureau in writing.

7.4.10 The Bureau will provide written notification to the Private Laboratory, indicating the Private Laboratory is now an approved Quality Control or Quality Assurance Laboratory. The notification will include an equipment list. A copy of the written notification will be provided to the District.
7.4.11 Uncorrected deficiencies will not be waived. Equivalent equipment specifications may be approved only with the written approval of the Bureau's Engineer of Concrete, Soils, and Metals.

7.5 Initial Private Aggregate Quality Control Laboratory Inspection. For aggregate and Jobsite PCC Private Quality Control Laboratories, the procedures outlined in 7.4 shall be followed, except District personnel will perform the inspection instead of personnel from the Bureau.

7.6 Re-Approval of Approved Private Laboratories.

7.6.1 The re-inspection of Private Laboratories shall be conducted at intervals deemed appropriate by the District. The interval between inspections shall not exceed two calendar years. The District's evaluation may include the following:

1. Physical inspection of the laboratory facility and equipment.
2. Review of the Private Laboratory's internal quality plan and documentation in accordance with this policy and those parts of AASHTO R 18 and ASTM C 1077 incorporated by this policy.
3. Observations of tests performed by Qualified Personnel.
4. Results of split sample testing between the Private Laboratory and the District.
5. Results of proficiency sample testing programs conducted by the Department.
6. Overall past performance and experience.

7.6.2 The District may not waive any requirements for Private Laboratories or test equipment for required tests.

7.6.3 The District shall issue a letter of re-approval to the Private Laboratory, or provide a written and itemized deficiency list. The Private Laboratory shall notify the District when deficiencies are corrected and ready for re-inspection.

7.6.4 At any time, if the District identifies deficiencies in the facility, equipment, or test procedures that could affect the results of any QC or QA tests, the District will require the Private Laboratory to take immediate action to correct the deficiency.

8.0 EXEMPTIONS – AASHTO ACCREDITATION PROGRAM

If a Private Laboratory maintains current accreditation through the AASHTO Accreditation Program (AAP) for the appropriate test procedures, the District may waive the re-inspection requirements of this policy. To enact the waiver, the Private Laboratory shall provide copies of inspection reports and proficiency sample results to the District. This waiver does not apply to the initial inspection requirements, including the required equipment list.

9.0 LABORATORY DATABASE

The Bureau is responsible for maintaining a database that monitors the approval status of Department and Private Laboratories. Online queries and reports are available to the Districts to assist them in tracking Qualified Laboratories. Districts shall be responsible for updating the database with approval status of Local Agency
Laboratories and Aggregate Only Private Laboratories. The database will include the following information:

1. Laboratory Codes (Department, Producer, etc.)
2. Responsible District
3. Type Laboratory (Agg QC, HMA/Agg QC, HMA Design/Agg QC, PCC/Agg QC, Jobsite PCC QC, HMA/Agg QA, or PCC/Agg QA)
4. Demographics (Address, etc.)
5. Date Inspected
6. Approval Status

10.0 CLOSING NOTICE

Archived versions of this policy memorandum may be examined by contacting the Bureau.

The current Bureau Chief of Materials has approved this policy memorandum. Signed documents are on file with the Bureau.
<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>PRIVATE QC LAB TYPE</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois Modified AASHTO (IL Mod.)</td>
<td>AGG</td>
<td>HMA QC</td>
</tr>
<tr>
<td>IL Mod. R 90</td>
<td>✓ ✓ ✓ ✓</td>
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</tr>
<tr>
<td>IL Mod. T 11</td>
<td>✓ ✓ ✓ ✓</td>
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<tr>
<td>IL Mod. T 19</td>
<td>✓¹</td>
<td></td>
</tr>
<tr>
<td>IL Mod. T 27</td>
<td>✓ ✓ ✓ ✓</td>
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<tr>
<td>IL Mod. T 84</td>
<td>✓²</td>
<td></td>
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<td>IL Mod. T 85</td>
<td>✓²</td>
<td></td>
</tr>
<tr>
<td>IL Mod. R 76</td>
<td>✓ ✓ ✓ ✓</td>
<td></td>
</tr>
<tr>
<td>IL Mod. T 255</td>
<td>✓ ✓ ✓ ✓</td>
<td></td>
</tr>
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</table>

Note 1: Required for laboratories that test Air Cooled Blast Furnace Slag.

Note 2: Required for laboratories that run the Department’s Slag Producers’ Self-Testing Program
### TABLE 1 (CONT’D)

**PRIVATE QUALITY CONTROL LABORATORY TESTS**

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>PRIVATE QC LAB TYPE</th>
<th>TITLE</th>
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<tbody>
<tr>
<td><strong>HOT-MIX ASPHALT TESTS</strong></td>
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<tr>
<td>Illinois Modified AASHTO (IL Mod.)</td>
<td>Illinois Modified ASTM (IL Mod.)</td>
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<tr>
<td>IL Mod. T 30</td>
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<tr>
<td>IL Mod. T 164</td>
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<td>IL Mod. T 166</td>
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<td>IL Mod. T 283</td>
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<td>IL Mod. T 287</td>
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<td>IL Mod. T 308</td>
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<td>✓</td>
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<td>IL Mod. T 312</td>
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<td>✓</td>
</tr>
<tr>
<td>-</td>
<td>IL Mod. D 2950</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Note 3:** Method A or B shall be used for quantitative extraction. Method A or E shall be used to recover binder for qualitative analysis. If a QC HMA Mix Design laboratory does not have the ability to perform AASHTO T 164 (IL), outsourcing the test to a qualified QC or QA laboratory will be permitted.

**Note 4:** Determined by which piece of equipment is more appropriate for the lab to determine asphalt content.
### TABLE 1 (CONT'D)

#### PRIVATE QUALITY CONTROL LABORATORY TESTS

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>PRIVATE QC LAB TYPE</th>
<th>TITLE</th>
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<tbody>
<tr>
<td></td>
<td>Illinois Modified AASHTO (IL Mod.)</td>
<td>Illinois Modified ASTM (IL Mod.)</td>
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<tr>
<td>IL Mod. R 39</td>
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<td>Required if developing mix designs.</td>
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<tr>
<td>IL Mod. R 60</td>
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<td>✓</td>
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<tr>
<td>IL Mod. R 100</td>
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<td>✓</td>
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<tr>
<td>IL Mod. T 22</td>
<td>-</td>
<td>✓ or IL Mod. T 177</td>
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<td>IL Mod. T 119</td>
<td>-</td>
<td>✓</td>
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<td>IL Mod. T 121</td>
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<td>IL Mod. T 152</td>
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<td>IL Mod. T 177</td>
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<td>✓ or IL Mod. T 22</td>
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<tr>
<td>IL Mod. T 196</td>
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<td>✓</td>
</tr>
<tr>
<td>IL Mod. T 231</td>
<td>-</td>
<td>✓ or IL Mod. C 1231</td>
</tr>
</tbody>
</table>

- IL Mod. C 1064
- IL Mod. C 1231

**Note 5:** For an exception to the strength testing requirement of performing compressive or flexural testing (Example: Labs at Concrete Producer Plants), refer to the Department’s “Required Sampling and Testing Equipment for Concrete” document and check with District for approval of exception.
<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>IDOT QA</th>
<th>AAP On-Site Assessment</th>
<th>AAP Proficiency Sample Program</th>
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<tr>
<td>Illinois Modified AASHTO/ASTM</td>
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<tr>
<td>Mod. R 90 R 90</td>
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<td>Sampling of Aggregates</td>
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<tr>
<td>Mod. T 11 T 11</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Materials Finer Than 75-μm (No. 200)Sieve in Mineral Aggregates by Washing</td>
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<tr>
<td>Mod. T 19 T 19</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Bulk Density (“Unit Weight”) and Voids in Aggregate</td>
</tr>
<tr>
<td>Mod. T 27 T 27</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Sieve Analysis of Fine and Coarse Aggregates</td>
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<tr>
<td>Mod. T 84 T 84</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Specific Gravity and Absorption of Fine Aggregate</td>
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<tr>
<td>Mod. T 85 T 85</td>
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<td>✓</td>
<td>✓</td>
<td>Specific Gravity and Absorption of Coarse Aggregate</td>
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<tr>
<td>Mod. R 76 R76</td>
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<td>✓</td>
<td></td>
<td>Reducing Samples of Aggregate to Testing Size</td>
</tr>
<tr>
<td>Mod. T 255 T 255</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Total Evaporable Moisture Content of Aggregate by Drying</td>
</tr>
</tbody>
</table>

Note 1: Compliance with IDOT test methods will be required for IDOT QA lab inspections. However, AASHTO re:source or CCRL lab inspections shall require compliance with the corresponding AASHTO or ASTM test methods.

Note 2: QA labs have the option to be HMA/Agg, PCC/Agg or HMA/PCC/Agg approved.

Note 3: Required for laboratories that run the Department’s Slag Producers’ Self-Testing Program.
<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>REQUIRED FOR PREQUALIFICATION</th>
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<td>Private QA Lab Type: HMA/Agg</td>
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<tr>
<td>Illinois Modified AASHTO/ ASTM</td>
<td>IDOT QA</td>
<td>AAP On-Site Assessment</td>
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<td>Mod. T 30</td>
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<td>Mod. T 164</td>
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<td>Mod. T 166</td>
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<td>T 166</td>
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<tr>
<td>Mod. T 209</td>
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<td>Mod. T 283</td>
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<td>T 283</td>
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<tr>
<td>Mod. T 287</td>
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<td>T 287</td>
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<tr>
<td>Mod. T 308</td>
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<tr>
<td>T 308</td>
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<td>T 312</td>
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<td>IL Mod. D 2950</td>
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</table>

Note 1: Compliance with IDOT test methods will be required for IDOT QA lab inspections. However, AASHTO re:source or CCRL lab inspections shall require compliance with the corresponding AASHTO or ASTM test methods.

Note 2: QA labs have the option to be HMA/Agg, PCC/Agg or HMA/PCC/Agg approved.

Note 4: Requirement determined on case-by-case basis by District in which lab is located.
TABLE 2 (CONT'D)
REQUIRED TESTS – QUALITY ASSURANCE TESTING CONSULTANTS \(^{1,2}\)

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>REQUIRED FOR PREQUALIFICATION</th>
<th>TITLE</th>
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<tbody>
<tr>
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<tr>
<td>Illinois Modified AASHTO/ AASHTO/Illinois Test Procedure (ITP)</td>
<td>Illinois Modified ASTM/ASTM</td>
<td>Private QA Lab Type: PCC/Agg</td>
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<tr>
<td>Mod. R 60</td>
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<td>Mod. R 100</td>
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<td>Mod. T 22</td>
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<tr>
<td>Mod. T 119</td>
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<td>✓</td>
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<tr>
<td>Mod. T 121</td>
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</tr>
<tr>
<td>Mod. T 152</td>
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<td>✓</td>
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<tr>
<td>Mod. T 177</td>
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<td>✓</td>
</tr>
<tr>
<td>Mod. T 196</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Mod. T 231</td>
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<td>✓</td>
</tr>
<tr>
<td>Mod. C 1064</td>
<td></td>
<td>✓</td>
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<td>Mod. C 1231</td>
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<tr>
<td>ITP 301</td>
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<tr>
<td>ITP 302</td>
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<tr>
<td>ITP 303</td>
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</table>

Note 1: Compliance with IDOT test methods will be required for IDOT QA lab inspections. However, AASHTO re:source or CCRL lab inspections shall require compliance with the corresponding AASHTO or ASTM test methods.

Note 2: QA labs have the option to be HMA/Agg, PCC/Agg or HMA/PCC/Agg approved.

Note 3: The AAP on-site assessment is not required for Illinois type portable beam breakers but is required for all other types of beam breakers. Additional information regarding use of portable PCC labs and their approval is provided in Department Policy MAT-15, “Quality Assurance Procedures for Construction”.

Note 4: Test equipment shall be presented during an inspection if the consultant lab has the ability to perform the test.

Note 5: Test shall be performed if consultant lab has the ability to perform the test.
<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>REQUIREMENT</th>
<th>MAX. INTERVAL (MONTHS)</th>
<th>FORM AND/OR PROCEDURE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>General Purpose Balance and Scale</td>
<td>Commercial Service or Verification using Standardized NIST Traceable Masses</td>
<td>12</td>
<td>BMPR QCD01</td>
</tr>
<tr>
<td>Standard Masses</td>
<td>Standardize</td>
<td>60</td>
<td>Outside Calibration</td>
</tr>
<tr>
<td>Caliper</td>
<td>Standardize</td>
<td>12</td>
<td>BMPR QCD02</td>
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<tr>
<td>Micrometer</td>
<td>Standardize</td>
<td>12</td>
<td>BMPR QCD03</td>
</tr>
<tr>
<td>Oven</td>
<td>Standardize Thermometric Device</td>
<td>12</td>
<td>BMPR QCD04</td>
</tr>
<tr>
<td>Working Thermometer</td>
<td>Standardize with Calibrated NIST Traceable Reference Thermometer</td>
<td>12</td>
<td>BMPR QCD05</td>
</tr>
<tr>
<td>Reference Thermometer</td>
<td>Calibrate</td>
<td>60</td>
<td>Outside Calibration</td>
</tr>
<tr>
<td>Timer</td>
<td>Check Accuracy</td>
<td>12</td>
<td>BMPR QCD06</td>
</tr>
<tr>
<td>Caliper Checker or Gauge Blocks</td>
<td>Calibrate</td>
<td>60</td>
<td>Outside Calibration</td>
</tr>
<tr>
<td><strong>AGGREGATE</strong></td>
<td></td>
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<tr>
<td>Mechanical Shaker</td>
<td>Check Sieving Thoroughness</td>
<td>12</td>
<td>BMPR QCD07</td>
</tr>
<tr>
<td>Agg. Unit Weight Measure</td>
<td>Standardize</td>
<td>12</td>
<td>BMPR QCD08</td>
</tr>
<tr>
<td>Conical Mold and Tamper</td>
<td>Check Critical Dimensions</td>
<td>24</td>
<td>BMPR QCD09</td>
</tr>
<tr>
<td>Coarse Sieves (Openings ≥ 4.75 mm)</td>
<td>Check Overall Physical Condition and Dimensions of Openings</td>
<td>12</td>
<td>BMPR QCD10 Calipers BMPR QCD11 Go/No-Go Gauges</td>
</tr>
<tr>
<td>Fine Sieves (Openings &lt; 4.75 mm)</td>
<td>Check Overall Physical Condition</td>
<td>12</td>
<td>BMPR QCD12</td>
</tr>
<tr>
<td>EQUIPMENT</td>
<td>REQUIREMENT</td>
<td>MAX. INTERVAL (MONTHS)</td>
<td>FORM AND/OR PROCEDURE</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------</td>
<td>------------------------</td>
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<tr>
<td>HOT MIX ASPHALT</td>
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<tr>
<td>Gyratory Compactor</td>
<td>Verify Angle(^2), Pressure, and Height</td>
<td>Once a Month During Use</td>
<td>Manufacturer’s Instructions(^2)</td>
</tr>
<tr>
<td></td>
<td>Verify Angle using a DAV-2</td>
<td>12</td>
<td>MTP Appendix B.19</td>
</tr>
<tr>
<td>Molds, Base Plates, and Ram Face</td>
<td>Check Critical Dimensions</td>
<td>12</td>
<td>BMPR QCD13</td>
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<tr>
<td>Tensile Strength Machine</td>
<td>Verification</td>
<td>12</td>
<td>ASTM E4</td>
</tr>
<tr>
<td>Ignition Furnace Balance</td>
<td>Commercial Service or Verification using Standardized NIST Traceable Masses</td>
<td>12</td>
<td>BMPR QCD01</td>
</tr>
<tr>
<td>Manometer and Vacuum Pump</td>
<td>Standardize and Check Pressure</td>
<td>12</td>
<td>BMPR QCD14</td>
</tr>
<tr>
<td>TSR Breaking Head</td>
<td>Check Critical Dimensions</td>
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<td>BMPR QCD15</td>
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<tr>
<td>Pycnometer</td>
<td>Standardize Volume</td>
<td>12</td>
<td>BMPR QCD16</td>
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<tr>
<td>Water Baths</td>
<td>Standardize</td>
<td>12</td>
<td>BMPR QCD17</td>
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<tr>
<td>Bore Gauge</td>
<td>Standardize</td>
<td>Each Use</td>
<td>IL Mod AASHTO T312</td>
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<tr>
<td>Master Ring</td>
<td>Calibrate</td>
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<td>Outside Calibration</td>
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<td>Hamburg Wheel Tracking Machine:</td>
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<td>Water Temperature</td>
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<td>Speed</td>
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<td>Wheel Weight</td>
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<td>LVDT'S</td>
<td>Verification</td>
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<tr>
<td>I-FIT</td>
<td>Verify with Validator (Servo-hydraulic Machines only)</td>
<td>Once a Month During Use</td>
<td>See I-FIT Validator Lab Worksheet</td>
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### PORTLAND CEMENT CONCRETE

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>REQUIREMENT</th>
<th>MAX. INTERVAL (MONTHS)</th>
<th>FORM AND/OR PROCEDURE</th>
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<tr>
<td>PCC Unit Weight Measure</td>
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<td>BMPR QCD34</td>
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<td>Air Meter Bowl</td>
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<td>Air Meter (Pressure Type)</td>
<td>Standardize</td>
<td>12 (Type A)</td>
<td>BMPR QCD36</td>
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<td>Standardize</td>
<td>3 (Type B)</td>
<td>BMPR QCD37</td>
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<tr>
<td>Air Meter (Volumetric Type)</td>
<td>Standardize</td>
<td>12</td>
<td>BMPR QCD38</td>
</tr>
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<td>Compression &amp; Flexural Testing Machine</td>
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<td>12</td>
<td>ASTM E4</td>
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<tr>
<td>Capping Material</td>
<td>Check Strength</td>
<td>3 or New Shipment</td>
<td>BMPR QCD39</td>
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<tr>
<td>Slump Cone</td>
<td>Check Critical Dimensions</td>
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<td>BMPR QCD40</td>
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<td>Beam Molds</td>
<td>Check Critical Dimensions</td>
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<td>BMPR QCD41</td>
</tr>
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<td>Plastic Cylinder Mold 4 x 8</td>
<td>Check Dimensions</td>
<td>Each Shipment</td>
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<td>Plastic Cylinder Mold 6 x 12</td>
<td>Check Dimensions</td>
<td>Each Shipment</td>
<td>BMPR QCD43</td>
</tr>
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<td>Retaining Rings and Neoprene Pads</td>
<td>Check Critical Dimensions and</td>
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<td>BMPR QCD44</td>
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<td>Neoprene Pad Usage</td>
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<td>Metal Stem Thermometer</td>
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<td>Traceable Reference Thermometer</td>
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<td>Moist Room/Storage Tank Recording Thermometer</td>
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<td>12</td>
<td>BMPR QCD46</td>
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<tr>
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<td>Traceable Reference Thermometer</td>
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Note 1: See AASHTO R 18 for equipment calibration, standardization, verification and check terminology definitions.

Note 2: See Manual of Test Procedures Appendix B.19 for permissible verification procedures.
Instructions for Providing Departmental Access
to Results of Participation in the AASHTO Proficiency Sample Program
for Quality Assurance Testing Consultants

Consultants seeking to become prequalified as a Quality Assurance Testing Consultant shall be accredited by AASHTO. Participation in the AASHTO Proficiency Sample Program is one of the requirements for accreditation. Consultants who are accredited by AASHTO shall also allow the Department access to their Proficiency Sample Ratings as part of the prequalification process.

To allow the Department access to these data from AASHTO re:source provided proficiency samples, Consultants should go to the AASHTO re:source website (http://www.aashtoresource.org) and follow the instructions given below:

1. Log into your account and navigate to your home page.
2. Using the green vertical menu on the left side of the page, click “My Specifiers”
3. Click “Search for Specifiers” at the top of the page.
4. Using the drop-down menu, select “Illinois” as the State, or type in “Illinois Dept. of Transportation”. A list of results should populate including the ILDOT option. It is important to type in the specifier name EXACTLY as shown or it won’t find the Illinois Department of Transportation.
5. Click the green “Request” button. Confirm that you want to send a request.
6. The samples to be made available to the Department (with unlimited time periods) for evaluation shall be taken from Attachment A Table 2 and need only correspond to the QA Lab Type(s) a Consultant is seeking prequalification for.

To allow the Department access to these data from CCRL provided proficiency samples, Consultants should contact CCRL directly for assistance.