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PROJECT PROCEDURES GUIDE

Sampling Frequencies for Materials Testing and Inspection



Project Procedures Guide (PPG)

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Central Bureau of Materials

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PREFACE

This Project Procedures Guide is intended for use as a resource in determining reasonable sampling frequencies and inspection procedures for materials used in highway construction. The sampling and testing schedules established herein should not be rigidly adhered to without regard to job conditions. Good judgment on the part of the project inspectors is always essential for proper control of the work. This guide seeks to establish materials sampling and testing uniformity throughout the State and indicates the **minimum** amount of sampling and testing that should be performed under normal job conditions. Factors such as consistency, methods, equipment, and weather may enter into a decision to vary from the frequencies mentioned herein.

Reliance should never be placed entirely on the numerical results of sampling and testing when determining the acceptability of the materials and construction work. Observation of the actual construction operations and processes is necessary to ensure that the materials incorporated and the construction procedures utilized are acceptable and in accordance with the contract, plans, and specifications.

Cooperation between everyone involved in the construction effort will help ensure our ultimate goal: the timely completion of a high-quality highway system to serve the people of Illinois.

Brian A. Pfeifer, P.E. Engineer of Materials Ĩ

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SECTION 100. - DEFINITIONS

100.01 DEFINITIONS

- 1. <u>Bureau</u> Central Bureau of Materials (**CBM**), Illinois **Department** of Transportation
- <u>CBM</u> A letter from the **Department** authorizing usage of a specifically identified batch/lot/heat, etc. for a specific contract or producer/supplier OR the abbreviation used for the Central Bureau of Materials in Springfield.
- 3. <u>Bureau Laboratory</u> The Department's central laboratory, maintained and operated by the Bureau. The Bureau Laboratory administers the Qualified Laboratory program for District and Private Laboratories.

4. Department

- The Department of Transportation of the State of Illinois with principal offices of business at Springfield, when the State is the awarding authority
- The County Board, when a County is the awarding authority
- The Council, the City Council, or the President and Board of Trustees, when a city, village, or town is the awarding authority
- The County or Municipality and the Illinois Department of Transportation when the Illinois Department of Transportation is the awarding agency and the County or Municipality is supervising construction

(Article 101.14, *Standard Specifications for Road and Bridge Construction*, 2016)

- 5. <u>District/Local Agency Laboratory</u> A Department laboratory that is operated by a District/Local Agency.
- 6. **District Inspector** District inspection personnel not assigned to the project.
- 7. Engineer
 - The Chief Engineer of the Department of Transportation of the State of Illinois; or authorized representative limited by the particular duties entrusted to that person, when the State is the awarding authority
 - The County Superintendent of Highways, when Cook County is the awarding authority, and the County Engineer, when any other county is the awarding authority
 - The County Superintendent of Highways, when the project is in Cook County, the County Engineer when the project is in any other county and the Illinois Department of Transportation when the Illinois Department of

Transportation is the awarding authority and the County is supervising construction

- The City Engineer or Engineer employed by the municipality, when a city, village, or town is the awarding agency
- The City Engineer or Engineer employed by the municipality, and the Illinois Department of Transportation when the Illinois Department of Transportation is the awarding agency and a city, village, or town is supervising construction

(Article 101.16, *Standard Specifications for Road and Bridge Construction*, 2016)

- Evidence of Materials Inspection The minimum proof that Method of Acceptance sampling and testing has been performed. Evidence of Materials Inspection categories are discussed in Section 200.10, EVIDENCE OF MATERIALS INSPECTION.
- Exception Any material that is incorporated into the contract work that is not in close conformity with the approved plans and specifications based on Method of Acceptance sampling and testing. Also, any significant item that received less than the State's usual testing or inspection is considered an Exception.
- Inspector The authorized representative of the Engineer assigned to make detailed inspection of any or all portions of the work or material. (Article 101.19, *Standard Specifications for Road and Bridge Construction*, 2016)
- 11. <u>Method of Acceptance</u> Means of determining whether material supplied is in compliance with specifications. **Method of Acceptance** sampling and testing categories are discussed in Section 200.05, METHOD OF ACCEPTANCE.
- <u>MISTIC</u> <u>Materials Integrated System for Test Information and Communication</u>. Department-wide database containing materials inspection and test information.
- 13. **<u>Plant Inspector</u>** Inspection personnel assigned to a production facility.
- 14. <u>Private Laboratory</u> Any construction materials testing or design laboratory not operated by the **Department**. 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. **Private Laboratories** are required to be qualified in accordance with the current departmental policy, "Quality Assurance Procedures for Construction" (in the appendix), and the current **Bureau** lab inspection policy.
- 15. <u>**Producer**</u> An individual or business entity providing materials and/or performance of prescribed work.
- 16. Project Inspector Inspection personnel assigned to the project.

- 17. 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 STD (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."
- 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.
- <u>Quality Control (QC)</u> 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.
- 20. <u>Quality Management Program (QMP)</u> Materials sampling and testing programs which include contractor **Quality Control** sampling and testing in conjunction with the **Department's Quality Assurance** and independent assurance sampling and testing.
- <u>Resident Engineer/Resident Technician (Resident) (RE)</u> The authorized representative of the Engineer in immediate charge of the engineering details of a construction project. (Article 101.34, *Standard Specifications for Road and Bridge Construction*, 2016)
- 22. <u>Supplier</u> A company that supplies materials or products that it does not manufacture or fabricate.
- 23. <u>Temporary Items</u> Materials, items, or equipment that perform a function during construction, but are not a permanent part of a "completed" project. They may be removed when no longer necessary (e.g., traffic control, fences), or they may have a single-use short life (e.g., straw bales).
- 24. <u>Trained Technicians</u> Department, Local Agency, contractor, or consultant personnel with demonstrated and documented capability to perform the applicable inspection and testing. Minimum training requirements for aggregate, Hot-Mix Asphalt (HMA), Portland cement concrete (PCC), and soils are described in Section 900, TRAINED TECHNICIANS.
- 25. <u>Visual Examination</u> Acceptance or rejection of material based on an assessment of its markings, physical dimensions, obvious defects or damage, and close conformity with contract specifications, but no RE memo or input into MISTIC is required
- NOTE: The above defined words are boldfaced throughout the text.

SECTION 200. – MATERIALS ACCEPTANCE OVERVIEW

200.01 MATERIALS ACCEPTANCE OVERVIEW

The following is a brief overview of the six key steps involved in the materials acceptance process. Additional detail is provided in subsequent sections of this manual.

- 1. INSPECTION OF MATERIALS Physical testing or visual inspection of the materials for compliance with the specifications.
- 2. EVIDENCE OF MATERIALS INSPECTION The minimum proof that **Method of Acceptance** sampling and testing has been performed.
- DOCUMENTATION OF INSPECTION Documentation that the materials received on the job site were accompanied by adequate Evidence of Materials Inspection as described in Step 2 above. This documentation should be included as part of the project files.
- 4. INPUT INTO MISTIC Input of assigned material quantities into **MISTIC** by District materials personnel.
- 5. PROJECT MATERIALS CERTIFICATION REVIEW The District Materials Office compares the quantities on the final payment estimate with the inspection reports on file with the **Department**.
- 6. PROJECT ACCEPTANCE Upon completion of the materials certification review, the District Construction or District Local Roads Office proceeds with all actions necessary to accept the project.

200.05 METHOD OF ACCEPTANCE

Method of Acceptance refers to the means of determining whether material supplied is in compliance with specifications. **Method of Acceptance** sampling and testing categories are listed below. The methods are listed in hierarchal order, i.e. TEST holds over QUAL which holds over CERT which holds over VIS. The abbreviation in parentheses denotes the **MISTIC** designations for each **Method of Acceptance**.

 TESTING PROGRAM (TEST) - Materials are sampled at the source or jobsite by Department personnel or contractual representatives of the Department and tested at the jobsite, or in a District Laboratory, the Bureau Laboratory, or a Private Laboratory, to verify specification compliance. This method of accepting material is used for items such as paint, curing compound, bearing pads, and plastic pipe. Jobsite sampling and testing is always a prerogative of the **Department**. Investigative samples may be taken to verify certain characteristics at the time of inspection.

The minimum <u>required</u> investigative samples are listed in Sampling Schedules 1 through 3.

Other materials accepted by testing include aggregate, concrete, and HMA and are produced under IDOT's Quality Management Programs (QMP). While the **QC/QA program** is utilized for production control of all three materials, HMA is also produced under the Pay for Performance (PFP) and **Quality Control** for Performance (QCP) QMP's. All three QMP's require the **QC** be performed by the **producer** and **QA** be performed by the **Department**. Material acceptance criteria are included in a specification, special provision, or **CBM** Policy Memorandum. The aggregate producers are included on a qualified producer list (available at the **Department's** web site, <u>IDOT Website</u>, under "Doing Business/Material Approvals/Aggregate– Qualified Products Lists").

CERTIFIED or QUALIFIED SOURCE (QUAL) - A source that conducts an internal sampling and testing program in conjunction with **Department** source and random destination sampling and testing. Once a **producer** is certified to manufacture or produce specific products, such materials may be accepted for incorporation into the contract without additional jobsite testing. This method of accepting material is used for items such as PG asphalt binder, emulsified asphalt, cement, precast concrete products and reinforcement bars/fabric. Refer to the applicable CBM Policy Memorandum for specific requirements. (The most current list of CBM Policy Memorandums may be found online at the **Department's** web site, <u>IDOT Website</u>, under "Doing Business/Material Approvals".)

Materials and sources may become qualified by other means prescribed by the **Department**. These processes may involve laboratory testing, the review of independent lab results, an annual source certification letter and other criteria but do not involve a formal certification program or a **CBM** policy memorandum. This method of accepting material is used for items such as concrete admixtures, concrete sealers, nonshrink grouts, chemical adhesives, and high-tension cable median barrier systems.

All certified or qualified sources and materials are generally placed on a qualified product list (available at the **Department's** web site, <u>IDOT Website</u>, under "Doing Business/Material Approvals").

The **Resident/Inspector** is required to perform a **Visual Examination** at the jobsite.

 MANUFACTURER'S CERTIFICATION (CERT) - When **Department** testing is not practical or small quantities are involved, a manufacturer's or producer's certification may be used to accept material. The certification must represent the materials or items being accepted. The certification must also indicate compliance with the applicable specification(s). This method of accepting materials is used for items such as epoxy, grass seed, and steel frames and grates. Whenever possible, the dimensions and appearance of the item should be visually examined to verify specification compliance. Supplier certifications are <u>not</u> acceptable.

 VISUAL ACCEPTANCE (VIS) - Acceptance or rejection of material based on an assessment of its markings, physical dimensions, obvious defects or damage, and close conformity with contract specifications. No lab or field tests are required. Visual acceptance is used when sampling is impractical, destructive tests are not practical, or no test method is available for use. Visual acceptance applies to most small quantities. This method of accepting material is used for items such as traffic signal components and survey markers.

200.10 EVIDENCE OF MATERIALS INSPECTION

Construction materials do not just "appear" on the jobsite. In most cases, the material has been pre-inspected or may have been produced under a **Department**-approved **Quality Control** program. **Evidence of Materials Inspection** is the minimum proof that **Method of Acceptance** sampling and testing has been performed. **Evidence of Materials Inspection** categories are listed below.

- <u>BBS 59</u> (BB59) This **Department** form is a report of acceptance of fabrication of structural steel. The Bureau of Bridges and Structures usually performs this type of inspection and testing.
- BILL OF LADING (BOL) A shipping ticket that accompanies a product to the job site and which identifies the product, source, and lot.
- **CBM** (**CBM**) Bureau of Materials approval letter specific to a batch/lot/heat, etc. for a specific contract or producer/supplier.
- CERTIFICATION (CERT) Manufacturer's written certification that indicates material complies with the specifications or contract. Supplier certifications are not acceptable.
- DAILY PLANT REPORTS (DPR) For HMA, reports generated that provide mixture test results and other production data. For non-QC/QA projects, Daily Plant Reports are the responsibility of the Inspector. For QC/QA projects, refer to the appropriate special provisions to determine responsibility for Daily Plant Reports. For example, for QC/QA for PCC, the Daily Plant Report is often only the form BMPR MI504 completed by the Producer, Contractor, etc. for aggregate gradations.
- ILL OK STAMP (ILOK) Material is stamped by an IDOT Inspector with an "ILL OK" stamp indicating prior inspection and acceptance. An inspection tag may be used as Evidence of Materials Inspection and approval. A Resident Engineer must make note of the stamp or collect the inspection tag to ensure proper documentation of material inspection.
- LA-15 (LA15) This Department form is a supplier's certification indicating material is from approved stock. The form is sometimes used as a Bill of Lading to indicate prior approval. The form should include supplier, proper contract/job designation, material description, manufacturer, specific approved material (test ID number, lots, or batches), and quantity. Additional information on LA-15's is provided in Attachment 1.

- MARK (MARK) A commercial label, tag, or other marking which indicates product specification compliance and/or an approved source/manufacturer. A Resident Engineer must make note of the label, tag, or other marking to ensure proper documentation of material inspection.
- QUALIFIED PRODUCT/PRODUCER LIST (LIST) The material appears on a list of **Department**-approved products or approved sources found at the **Department's** web site, <u>IDOT Website</u>, under "Doing Business/Material Approvals". Contact the inspecting district's Materials Office for information on aggregates.
- TEST (TEST) Approved test result available via the **MISTIC** system or from locally performed lab or field tests (e.g., soil density).
- TICKET (TICK) A ticket from an approved source indicating **Department** material or aggregate gradation, job designation, purchaser, and weight (if applicable).
- VISUAL ACCEPTANCE (VIS) A RE memo denoting visual inspection is required in the project file, and input into **MISTIC** is required. A Resident Engineer must make note of the visual acceptance to ensure proper documentation of material inspection.
- VISUAL EXAMINATION (VISE) Same as VIS, but no input into MISTIC is required. A Resident Engineer must make note of the visual examination to ensure proper documentation of material inspection.

SECTION 300. – RESPONSIBILITIES OF RESIDENT

300.01 DUTIES

The **Resident** is responsible for ensuring all materials are inspected and approved. It is understood that the **Resident** may not perform all these duties personally. The **Resident** should ensure that the inspection, sampling, and testing are done in accordance with the instructions in this Guide and in the pertinent specifications and policies listed in Attachment 2. The **Resident** will communicate with the District Materials Office when work is in progress to ensure that all testing is accomplished. The **Resident** may be asked to assist with taking random jobsite samples.

300.05 EVIDENCE OF MATERIALS INSPECTION

The **Resident** should be certain that only materials which have been properly inspected and approved are used in the work, as documented in Article 106.03, *Standard Specifications for Road and Bridge Construction*, 2016.

- If material arrives on the job without proper Evidence of Materials Inspection, the Resident should contact the District Office immediately for information. If a Resident decides to accept material not in conformance with the pertinent contract requirements based on acceptance samples and tests, the conditions under which the material was incorporated into the project must be documented as an Exception. Exception documentation must be forwarded to the District Materials Engineer and a copy retained in the Resident's file.
- 2. The **Resident** should not include any item of material on a progress payment estimate for which there is no proper **Evidence of Materials Inspection** or approval.
- 3. Force Account Work and Agreed Price Pay Items Inspection documentation requirements for materials incorporated into force account and agreed price pay items are the same as for standard contract pay items, except as follows:

If no specification is implied, there is no requirement to prepare a materials inspection report. Visual inspections of non-critical items are adequate for small quantities as defined in Section 600, SMALL QUANTITIES.

4. The **Resident/Inspector** has the right and the responsibility to question, sample, and/or reject any material arriving on the project.

SECTION 400. – RESPONSIBILITIES OF CONTRACTOR

400.01 GENERAL

It is the Contractor's responsibility to provide materials that meet specification requirements and to produce work strictly in accordance with the plans and specifications. (Articles 104.01, 106.01, 106.02, *Standard Specification for Road and Bridge Construction*, 2016) In an effort as large and complex as the highway program, it requires the closest cooperation and communication between the Contractor, the **Resident**, and the supplier to assure proper inspection coverage.

400.05 CONTRACTOR'S RESPONSIBILITIES

- As far in advance as possible, furnish the District Office and the **Resident** information of the sources of materials that will be used on the project. (Articles 106.01, 106.05, *Standard Specification for Road and Bridge Construction*, 2016)
- Order materials as early as possible, notifying the District Office or the **Bureau** so that proper arrangements may be made for inspection. (Articles 105.12, 106.01, 106.03, 106.04, 106.05, *Standard Specification for Road and Bridge Construction*, 2016)
- Notify the supplier that State inspection is required and warn the supplier not to ship without inspection. (Articles 105.12, 106.01, 106.04, *Standard Specification for Road and Bridge Construction*, 2016)
- For products with source inspection, the Contractor should plan the work so that the **Engineer** has sufficient advance notice to perform the sampling and testing requirements. (Articles 106.01, 106.03, 106.04, 106.05, *Standard Specification for Road and Bridge Construction*, 2016)
- Provide proper Evidence of Materials Inspection for all materials as they are brought to the jobsite.
- Additional responsibilities may be required of the Contractor depending upon the governing contract documents outlined in Attachment 2.

SECTION 500. – REPORTING RESULTS OF SAMPLING AND TESTING

500.01 REPORTING

Materials inspection and test information is stored in and communicated through the **MISTIC** system. The following definitions and explanations are given to standardize and clarify the use of terminology related to **MISTIC** data input and types of inspection. The letters enclosed in parentheses are used to enter test identification information in **MISTIC**.

- 1. <u>ACCEPTANCE (ACC)</u>. Inspection and approval of material for use on a specific project and/or unassigned stock for future use on specific projects. Acceptance is normally based on a quantity of material (i.e., batch or lot). The quantity represented by the acceptance samples will be entered in **MISTIC**.
- <u>INDEPENDENT ASSURANCE (IND)</u>. Department comparison test that provides a separate check on the reliability of Method of Acceptance sampling and testing. Under non-QMP work, these are the check tests; under the Department's QC/QA programs, these are the Department's Quality Assurance tests from samples taken by and split with the Contractor or Producer. IND testing requirements are addressed in Section 900, TRAINED TECHNICIANS.
- <u>INVESTIGATIVE (INV)</u>. A test performed to verify acceptability of sourceinspected material. INV tests are verification/check tests. INV tests include the **Department's** check on consultant-performed **Quality Assurance** tests, tests that determine the serviceability/performance of in-place materials, and tests that investigate the reason materials have failed to perform as expected.
- 4. <u>PRELIMINARY (PRE)</u>. Samples taken by the **producer** or **Inspector** and tested in advance of the use of a material.
- <u>PROCESS CONTROL (PRO)</u>. For all **QMP** projects, these are the producer's/contractor's tests for the purpose of controlling production of material. For non-**QMP** projects, these are the **Department's** tests for controlling production.
- 6. <u>RESAMPLE (RES)</u>. An additional or follow-up sample from the same lot or location representing as closely as possible the same material previously sampled and/or tested (1) when the original sample is lost, contaminated, or damaged, or (2) when the test procedure or equipment is suspect, or (3) to investigate a failing test. A resample is identified as the same class (e.g., PRO, ACC) as the previous sample with a crossreference to the original sample in the test remarks.

- <u>MANUFACTURER'S CERTIFICATION (CRT)</u>. Method of Acceptance based on a written statement by the manufacturer or producer of the material that the material meets the required specifications. A Visual Examination of the materials and its accompanying paperwork is required. MISTIC generates a test identification with this type of inspection. Supplier certifications are <u>not</u> acceptable.
- 8. <u>VISUAL ACCEPTANCE (VIS)</u>. Acceptance or rejection of material based on an assessment of its markings, physical dimensions, obvious defects or damage, and close conformity with contract specifications. No lab or field tests are required. Visual acceptance is used when sampling is impractical, destructive tests are not practical, or no test method is available for use. Visual acceptance applies to most small quantities. A RE memo denoting visual acceptance is required in the project file, and input into **MISTIC** is required. **MISTIC** generates a test identification with this type of inspection. NOTE: A Resident Engineer must make note of the visual acceptance to ensure proper documentation of material inspection.

500.05 RESIDENT'S FILE

Hard copies of the proper **Evidence of Materials Inspection** are required for all materials used in the project. These should be collected, reviewed and filed as the materials arrive on the jobsite.

Inspection information is required in hard copy reports for contract documentation and should be included in the **Resident's** file for operational and/or documentation purposes. Attachment 4 and Sampling Schedules 1-4 outline the required reports.

The District Materials Office should be contacted if a **Resident** needs a special report or other materials inspection/test data available in **MISTIC**.

The **Resident** must maintain copies of failing **District Laboratory** or **Bureau Laboratory** test reports and subsequent follow-up test reports. The **Resident/Inspector** is required to document the action taken regarding the failing tests.

The **Resident/Inspector** should prepare materials test reports as outlined in Attachment 4 and Sampling Schedules 1 - 4 and visual inspections on a weekly basis. The originals must be sent to the District Materials Office for timely entry into the **MISTIC** system.

500.10 TEMPORARY ITEMS

With the exception of reflective **Temporary Items** such as pavement markings, **Temporary Items** no longer require documentation to be sent and entered in **MISTIC**. This reduced reporting requirement should not be construed as a condition for reduced inspection. <u>At a minimum</u>, **Temporary Items** require <u>Visual Examination and notation in the Resident's quantity book</u>. If it is not apparent from a Visual Examination that the proper material has been provided, the **Resident** should arrange for the appropriate testing. I

All reflective **Temporary Items** will be sampled, inspected, tested, and documented the same as permanent reflective materials.

The acceptability of a **Temporary Item** is not a one-time event. The **Resident** should monitor the condition and performance of each **Temporary Item** while it is in use.

SECTION 600. – SMALL QUANTITIES

600.01 PROCEDURES

Field sampling, testing, or source inspection of small quantities may be waived by the **Resident** on the basis of one of the two following methods:

- 1. Approval on the basis of visual inspection provided the **producer** or manufacturer has recently furnished similar material found to be satisfactory under the State's normal sampling and testing procedures.
- 2. Approval on the basis of certification by the **producer** or manufacturer stating that the material meets the specification requirements. Supplier certifications are <u>not</u> acceptable.

Under either of the above methods, the **Resident** approving the material must provide a memo (R.E. visual) detailing the acceptance method used. The **producer** and the quantity of material covered by the approval shall be indicated.

Attachment 3 suggests approximate quantities of material per contract that may be approved. <u>The District Materials Engineer must approve quantities in excess of those listed in Attachment 3.</u>

600.05 RESTRICTIONS

These procedures are not permitted to be used for structurally critical items or features that could directly affect the safety of the traveling public. For examples of items for which small quantities are not allowed, see Attachment 3.

Under no conditions are materials to be used from an unknown producer.

600.10 PROJECT CERTIFICATION

These guidelines may be used for project certification provided the restrictions in Section 600.05, RESTRICTIONS, are met.

SECTION 700. – APPLICATION TO LOCAL AGENCY PROJECTS

700.01 SCOPE

The requirements of this Project Procedures Guide apply to Local Agency highway improvement projects as they do to all projects constructed on the State system. Specific exceptions to this Project Procedures Guide are discussed in the current Local Roads and Streets manual(s) or by circular letter.

700.05 SAMPLING

Acceptance samples will be the joint responsibility of the Local Agency and the **Department** through the County Engineer, City Engineer, or the duly appointed representative of the Local Agency. In general, the Local Agency shall perform the **Method of Acceptance** sampling and testing required for the project. By agreement, the **Department** may provide these services at plants and locations where an **Inspector** is present.

700.10 DISTRIBUTION OF REPORTS

Whenever possible, materials inspection and test information from Local Agency projects and all projects constructed on the State system is stored and communicated through the **MISTIC** system and is available upon request. The Local Agency is required to submit the original test/inspection reports and copies of the manufacturers' certifications on a weekly basis (or as agreed to by the District Materials Office) to the District Materials Office for input into MISTIC. Normally, the Local Agency or their appointed **Resident** will also have the same or comparable hard copy forms (if applicable) as described in Section 500.05, RESIDENT'S FILE. The Local Agency or the **Resident** will also receive a copy of the Approved Material Inspection Report (MIR-C08) and/or the Local Agency Material Inspection Report (MIR-C01). When samples are taken by the Local Agency and submitted to the **Department's** laboratories for testing, the Local Agency will be notified of failing test results and resultant subsequent resamples and a hard copy report will be sent to the Local Agency or **Resident**. In the event the Local Agency needs a special report or other material inspection/test information available in **MISTIC**, the District Materials Office should be contacted.

SECTION 800. - CERTIFICATION OF MATERIALS

800.01 PROJECT MATERIALS CERTIFICATION

When a Federal-aid (State or Local highway system) or State-funded project is finalized, the Regional Engineer is required to certify to the Engineer of Materials that <u>all materials incorporated into the contract work were in close conformity</u> with the approved plans and specifications. The project certification will be submitted with any **Exceptions** documented. Steps 1 - 6 of Section 200.01, MATERIALS ACCEPTANCE OVERVIEW, are required for these projects.

When a Local Agency Motor Fuel Tax (MFT) Construction project is finalized, the District Bureaus of Materials or Local Roads and Streets are required to certify that <u>all materials incorporated into the contract work were in close conformity</u> with the approved plans and specifications. The project certification will be submitted with any **Exceptions** documented. Steps 1 - 6 of Section 200.01, MATERIALS ACCEPTANCE OVERVIEW, are required for these projects.

No materials certification is required for Local Agency MFT Maintenance or special maintenance projects. Steps 1 - 3 of Section 200.01, MATERIALS ACCEPTANCE OVERVIEW, are required for these projects.

800.05 ROLE OF BUREAU OF MATERIALS

In order to provide the Regional Engineer with assistance, and to emphasize the **Bureau's** responsibility to ensure that the materials function is being properly performed, the Engineer of Materials will: (1) provide guidelines for project material certification reviews that are consistent with the **Department's** current policies, (2) examine a random selection of projects and test program areas to ensure compliance with established policies, and (3) assist the Districts in addressing problem areas and in training State and Local Agency personnel to perform the project materials certification function.

800.10 PROJECT CERTIFICATION REVIEW

When a Federal-aid (State or Local highway system) or State-funded project is finalized, a review of the project records will be conducted, and the Regional Engineer will submit a project materials certification memo to the Engineer of Materials.

Project records must be reviewed to verify compliance with the applicable specifications to support the project materials certification.

Materials that were incorporated into the project having tests indicating noncompliance with the applicable specifications will be listed as an **Exception**, and appropriate explanations will be provided.

In the case of HMA and PCC mixtures, **Exceptions** will not be determined solely on the basis of acceptance tests. **Exceptions** will be identified under the following conditions:

- 1. Project test records or project files indicate one of the conditions for initial approval was not met (see Attachment 3), or
- 2. Project test records suggest that a significant portion of the mixture was not in substantial conformance with the specifications. This will require a review of all test data utilizing the HMA and PCC Reports. If a significant number or percentage of tests does not meet the specification requirements, the material should be listed as an **Exception** and an explanation provided for its use on the project.

Copies of both mixture reports will become a permanent part of the project hard copy file, as well as copies of all supporting documents covering **Exceptions**.

For State and locally administered highway improvement projects, the District Construction Engineer or District Local Roads Engineer, respectively, will also receive a copy of the project certification documents including all **Exception** documentation so that (1) the project can be closed out in a timely manner and/or (2) appropriate action can be initiated on **Exceptions** discovered during the examination of the project materials test/inspection records.

The Regional Engineer will provide the Office of Finance and Administration's Project Control Section with a copy of all Federal-aid project materials "Letters of Certification", including attachments that identify **Exceptions**.

The Office of Finance and Administration's Project Control Section shall submit a copy of the Regional Engineer's "Letter of Certification", including attachments which identify **Exceptions**, to the Illinois Federal Highway Administration office on all projects administered under the Federal-aid Interstate program. The Regional Engineer's "Letter of Certification" will be considered the "Letter of Certification" by the State Engineer.

800.15 CERTIFICATION LETTER EXAMPLE

The following memo is the recommended format for the "Letter of Certification" to be sent to the Engineer of Materials. If there are no **Exceptions**, the remark "NO EXCEPTIONS" will be typed on the bottom of the project materials certification. For projects with **Exceptions**, please include the Item Number, Item Name, Unit of Measurement, and Quantity, along with the explanation for the **Exception**.

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To:	Engineer of Materials
From:	Regional Engineer
Subject:	Materials Certification by Regional Engineer
Date:	

Contract: Route: Section: County: Project: Job Number: Location:

This is to certify:

The results of the tests on acceptance samples indicate the materials incorporated in the construction work, and the construction operations controlled by sampling and testing were in close conformity with the approved plans and specifications.

Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).

Sincerely,

Regional Engineer

By:

Materials Engineer

cc: Bureau of Budget & Fiscal Management Attn: Project Control Section

NO EXCEPTIONS

CERTIFICATION LETTER EXAMPLE

SECTION 900. – TRAINED TECHNICIANS

900.01 PURPOSE

Federal regulation 23 CFR 637 requires that contractor, consultant, Local Agency, and **Department** personnel performing materials acceptance sampling and testing on Federal-aid projects on the National Highway System be qualified. It is the **Department's** policy to follow these federal regulations for all State projects and for all Local Agency highway improvement projects. Exceptions to the training requirements for Local Agency highway improvement projects are discussed in the current Local Roads and Streets manual(s) or by circular letter. The **Department** offers **Quality Management Program** courses and specific task training programs to meet the educational requirements for qualified personnel.

900.05 REPORTING

The **Bureau** is responsible for maintaining records of contractor, consultant, Local Agency, and **Department** personnel who have successfully completed the **Quality Management Program** courses, as well as those who maintain active certification for applicable courses through recertification. Online queries and reports are available to the Districts to assist them in tracking qualified personnel. The **Department** also maintains records of **people** who have successfully completed the specific task training programs.

Personnel who successfully complete the required specific task training program(s) and have been entered into departmental databases are considered qualified.

Any changes to the status of the **Trained Technician** (name, address, employer, etc.) must be reported to the Bureau of Materials.

900.10 INDEPENDENT ASSURANCE TESTING

The purpose of independent assurance testing is to provide a basis for evaluating the adequacy of procedures and equipment used for the materials acceptance sampling and testing program. The requirements for qualified persons, outlined in this section, and for **Qualified Laboratories**, outlined in Section 1000, QUALIFIED LABORATORIES, help ensure that **Trained Technicians** are properly trained in the correct manner of sampling and testing and that testing equipment is properly calibrated and maintained.

It is necessary to periodically demonstrate that a qualified person remains capable of proficiently performing sampling and testing on project-produced material in all areas for which they are considered qualified. **Department Trained Technicians** who routinely perform testing under the **Quality Management Programs** in essence undergo independent assurance testing with every split sample they share with the contractor. **Department Trained Technicians** who do not perform work on **QMP** projects will need to be periodically monitored by the District Materials Engineer or his/her staff to ensure they remain capable of proficiently performing sampling and testing on project-produced material in all areas for which they are considered qualified. Phase III (Construction) consultants who perform work for the **Department** on non-**QMP** projects will need to be monitored by the District Materials Engineer or his/her staff on a <u>monthly</u> basis to ensure proficiency in sampling and testing on project-produced material in all areas for which the Phase III (Construction) consultants are considered qualified.

The Engineer of Materials will remove a **Trained Technician** from the departmental database if a review by the District Materials Engineer determines it is appropriate to remove him or her from active status in any testing area.

The District Materials Engineer shall notify the Engineer of Materials, in writing, regarding **Trained Technicians** to be removed from the departmental databases.

900.15 TESTING AREAS

The material testing program areas are as follows:

Aggregate Gradation Hot-Mix Asphalt (HMA) Cast-in-Place Concrete Precast and Precast, Prestressed Concrete Soils Density

Current training requirements are summarized in Tables 1 through 5. More detail about training required for specific tasks may be found in the governing specifications, special provisions, **CBM** Policy Memoranda, or the <u>Manual of Test</u> <u>Procedures for Materials</u>.

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Table 1: AGGREGATE GRADATION TRAINING REQUIREMENTS

PERSONNEL	TASK	REQUIRED TRAINING ^{1/}
Producer	Aggregate Gradation Control System (AGCS) Program Management	Aggregate Technician ^{2/3/}
Department	Quality Assurance Oversight	Aggregate Technician ^{2/3/}
All	Aggregate Sampling	Aggregate Technician ^{2/3/} or Mixture Aggregate Technician ^{3/}
All	Splitting and Gradation Testing	Aggregate Technician ^{2/} or Mixture Aggregate Technician or Gradation Technician (Department ½-day class)

- 1/ Refer to the governing specification, special provision, or contract document for details concerning requirements and limitations of **Trained Technicians** under **QC/QA QMP programs**.
- 2/ Recertification training course completion will be required every 5 years. Refer to the <u>Lake Land College IDOT Quality Management Training</u> <u>Program recertification webpage</u> for recertification policies.
- 3/ The AGCS Technician (CET 032) course is no longer offered; however, prior completion of the course meets current requirements.

- This program documents that a person is qualified to take samples and perform aggregate gradation tests and apply the concepts of the **Department's** Aggregate Gradation Control System where applicable.
- Lake Land College administers the **Department's QMP** training classes. Refer to the <u>Lake Land College Quality Management Training Program</u>
 <u>webpage</u> for more information.

Table 2: HOT-MIX ASPHALT TRAINING REQUIREMENTS

PERSONNEL	TASK	REQUIRED TRAINING ^{1/}
Producer	Quality Control Management	Hot-Mix Asphalt Level II ^{2/}
Department	Quality Assurance Oversight	Hot-Mix Asphalt Level II ^{2/}
All	Aggregate Sampling and Gradation Testing	Hot-Mix Asphalt Level I ^{2/} or Aggregate Technician ^{2/} or Mixture Aggregate Technician
All	Aggregate Gradation Testing	Gradation Technician (Department ½-day class)
All	HMA Sampling and Testing	Hot-Mix Asphalt Level I ^{2/}
All	HMA Mix Design	Hot-Mix Asphalt Level III ^{2/}
All	HMA Field Density	ALL: ½-day class taught by Lake Land College or Bureau of Materials.
		DEPARTMENT/LOCAL AGENCY: Department and Local Agency employees must also have Specific Task Training Program S-34, "Radiation Safety and Density by the Nuclear Method". The Radiation Protection Officer or District Radiation Safety Officer will monitor the operator until the individual can demonstrate the competent use of the nuclear gauge.
		CONTRACTOR/CONSULTANT: Radiation safety class as approved by the Illinois Emergency Management Agency (IEMA), Division of Nuclear Safety.

1/ Refer to the governing specification, special provision, or contract document for details concerning requirements and limitations of **Trained Technicians** under **QC/QA QMP programs**.

2/ Recertification training course completion will be required every 5 years. Refer to the <u>Lake Land College IDOT Quality Management Training</u> <u>Program webpage</u> for recertification policies.

- This program documents that a person is qualified to perform HMA tests.
- Lake Land College administers the **Department's QMP** training classes. Refer to the <u>Lake Land College Quality Management Training Program</u>
 <u>webpage</u> for more information.

Table 3: CAST-IN-PLACE CONCRETE TRAINING REQUIREMENTS

PERSONNEL	TASK	REQUIRED TRAINING ^{3/}
Producer/Contractor	Quality Control (proportioning at plant) ^{1/}	PCC Level II ^{4/}
Producer/Contractor	PCC Mix Design ^{1/}	PCC Level III ^{4/}
Contractor	Quality Control Management ^{1/}	PCC Level II ^{4/}
Department/Local Agency	Quality Assurance Oversight ^{1/}	PCC Level II ^{4/}
All	Aggregate Sampling and Gradation Testing ^{1/2/}	Aggregate Technician ^{4/} or Mixture Aggregate Technician
All	Aggregate Gradation Testing ^{1/2/}	Gradation Technician (Department ½-day class)
All	Mix Sampling and Testing ¹	PCC Level I ^{4/} or PCC Tester (Department ½-day class)
All	Cylinder Testing Only	PCC Level I ^{4/} or ACI Concrete Strength Testing Technician Certification
Department/Local Agency	Mix Sampling and Testing ^{2/}	PCC Level I ^{4/} or PCC Tester (Department ½-day class)

1/ Applies to **QMP** projects.

2/ Applies to non-QMP projects.

3/ Refer to the governing specification, special provision, or contract document for details concerning requirements and limitations of **Trained Technicians** under **QC/QA QMP programs**.

4/ Recertification training course completion will be required every 5 years. Refer to the <u>Lake Land College IDOT Quality Management Training</u> <u>Program webpage</u> for recertification policies.

- This program documents that a person is qualified to perform concrete tests.
- Lake Land College administers the **Department's QMP** training classes. Refer to the <u>Lake Land College Quality Management Training Program</u> webpage for more information.

Table 4: PRECAST AND PRECAST, PRESTRESSED CONCRETE TRAINING REQUIREMENTS

PERSONNEL	TASK	REQUIRED TRAINING COURSE ^{1/}	
PRECAST CONCRETE			
Producer	Quality Control Management	ACI Grade I ^{2/} or PCC Level I	
Department/Local Agency	Quality Assurance Oversight	ACI Grade I ^{2/} or PCC Level I	
All	Mix Sampling and Testing	ACI Grade I ^{2/} or PCC Level I	
PRECAST, PRESTRESSE	D CONCRETE	·	
Producer	Quality Control Management	Mixture Aggregate Technician or Aggregate Technician; AND Precast/Prestressed Concrete Institute Level I and Level II	
Department/Local Agency	Quality Assurance Oversight	Mixture Aggregate Technician or Aggregate Technician; AND Precast/Prestressed Concrete Institute Level I and Level II	
All	Aggregate Sampling and Gradation Testing	Mixture Aggregate Technician or Aggregate Technician	
All	Mix Sampling and Testing	ACI Grade I ^{2/} or PCC Level I	
All	Cylinder Testing	PCC Level I or ACI Concrete Strength Testing Technician Certification	
All	Strand Tensioning	Precast/Prestressed Concrete Institute Level I and Level II	

1/ Refer to the governing specification, special provision, or contract document for details concerning requirements and limitations of **Trained Technicians** under **QC/QA QMP programs**.

2/ ACI Grade I = American Concrete Institute (ACI) Certification Program for Concrete Field Testing Technician – Grade I.

- This program documents that a person is qualified to perform concrete tests.
- Lake Land College administers the **Department's QMP** training classes. Refer to the <u>Lake Land College Quality Management Training Program</u> webpage for more information.

PERSONNEL	TASK	REQUIRED TRAINING COURSE
All	Volumetric Density	Specific Task Training Program S-33, "Soils Field Testing and Inspection Course".
All	Nuclear Density	ALL: Specific Task Training Program S-33*, "Soils Field Testing and Inspection Course".
		 DEPARTMENT/LOCAL AGENCY: Department and Local Agency employees must have Specific Task Training Program S-34*, "Radiation Safety and Density by the Nuclear Method". The Radiation Protection Officer or District Radiation Safety Officer will monitor the operator until the individual can demonstrate the competent use of the nuclear gauge. *Note: S-33 is a pre-requisite for S-34. CONTRACTOR/CONSULTANT: Radiation safety class as approved by the Illinois Emergency Management Agency (IEMA), Division of Nuclear Safety.

Table 5: SOILS DENSITY TRAINING REQUIREMENTS

General Notes:

• This program documents that a person is qualified to perform density tests by either a) the sand-cone method or, b) the nuclear method on granular and earth embankment, lime-modified soil, lime-stabilized soil, granular subbase, cement aggregate mixture, pozzolanic-stabilized mixture, aggregate base course, and soil-cement.

SECTION 1000. – QUALIFIED LABORATORIES

1000.01 PURPOSE

Federal regulation 23 CFR 637 requires that **Department** laboratories and **Private Laboratories** which perform materials acceptance sampling and testing on projectproduced materials must be **Qualified Laboratories**. It is the **Department's** policy to follow these federal regulations for all State projects and all Local Agency highway improvement projects. Exceptions to the qualified laboratory requirements for Local Agency highway improvement projects are discussed in the current Local Roads and Streets manual(s), in circular letters, and in <u>CBM Policy Memorandums</u> <u>6-08</u> and <u>21-08</u>.

1000.05 REQUIREMENTS

The **Bureau** inspects **District Laboratories** and branch laboratories on a routine basis for soils, aggregate, HMA, and PCC. The **Bureau** and the Districts inspect all **Private Laboratories** that perform **Quality Control** testing in aggregate, HMA, and PCC. **Private Laboratories** that perform **Quality Assurance** and independent assurance sampling and testing under the **Department's** materials control program must be accredited under the AASHTO Accreditation Program. These requirements are outlined in the departmental policy "Quality Assurance Procedures for Construction" (MAT-15), <u>CBM Policy Memorandums 6-08</u> and <u>21-08</u>, and the consultant prequalification instructions.

1000.10 REPORTING

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**. The Districts are responsible for updating the database with approval status of local agency laboratories.

Consultants qualified for **QA** testing will be listed on the <u>IDOT Website</u> under "Doing Business/Procurements/Engineering, Architectural & Professional Services - Prequalification".

IDOT MATERIALS STAMPS, TAGS, AND LA-15

To provide **Evidence of Materials Inspection** for inspected material delivered to construction projects, the **Department** has developed stamps, tags, and forms to assist in identifying sampled, tested, and/or inspected materials.

A **Department** materials **Inspector** uses one or more of these stamps or tags to provide **Evidence of Materials Inspector** for the **Resident**. Each materials **Inspector** is provided with a unique ILL OK number. When an item is stamped or tagged "ILL OK" and the material id designated for a specific contract, the materials **Inspector** will later report the inspection in **MISTIC**. The stamp is a 1.25-inch diameter circle with .25-inch letters/numbers (see example on the next page). A list of each stamp numbers and the associated **Department** materials **Inspector** can be found on the <u>IDOT Website</u>, Material Approvals–Metals & Miscellaneous, References, Material Specific Information, Illinois OK Stamps.

The **Department** also utilizes consultant **Inspectors** for some materials inspection. Currently, the use of an ILL OK stamp is limited to several employees of one consultant performing inspection on precast, prestressed products. The stamp is a 2.5-inch diameter circle with .25-inch letters/numbers. The company name or initials is on the top, the stamp number is in the middle and "ILL OK" is on the bottom. The unique ILL OK stamp design for this consultant and a list of each stamp number and the associated **Inspector** name can be found on the <u>IDOT Website</u>, under Doing Business/Material Approvals – Metals & Miscellaneous, References, Material Specific Information, Illinois OK Stamps.

The Suppliers Certification of Shipment of Approved Material (Form LA-15) for approved suppliers is intended for use with materials which are tested and approved at the source by specific lots, batches, or quantities and stored for later delivery to a jobsite (e.g. paint, thermoplastic, glass beads, pavement marking tape, cable, etc.).

The **Department** gives the supplier blank LA-15 forms and keeps track of the Ticket Numbers on the forms given to the supplier. Then, with each shipment of approved materials, the supplier sends a completed LA-15 form, <u>certifying that the specific material has been inspected by the **Department** and is approved. The completed LA-15 form includes the source and destination of the material and the Test Identification, Lot, or Batch numbers.</u>

The **Resident** receives the LA-15 with the material shipment at the jobsite. The **Resident** may use the original LA-15 as **Evidence of Materials Inspection**. The **Resident** may be asked to assist in taking random jobsite samples.

The **Department** office that provided the LA-15 booklets to the supplier will be noted on each completed LA-15 form. The responsible District Materials Office will also receive a copy of the LA-15 and will enter the materials inspection assignment(s) in **MISTIC**. Subsequent **MISTIC** inspection reports (MIR-C08 or MIR-C01) should list the materials contained on the **Resident's** copy of the LA-15. These **MISTIC** reports, while not generally used as evidence of inspection themselves, validate the evidence of inspection and indicate that the materials inspection has been entered in MISTIC.

The following are examples of stamps, tags, and a completed LA-15 form.



This stamp indicates the product was approved at the source



This stamp shows the product has been sampled. It does NOT indicate the product is approved



District <u>93</u>

Project	Procedures	Guide

ATTACHMENT 1



This is not an actual LA-15. It is for illustrative purposes only.

Supplier's Certification of Shipment of Approved Materials

20

5

Ticket No.

952222

953333

Shipment From										
Suppli	ier	R. A. Smith								
Locati	ion	Springfield, IL	-				-			
Shipment To Contractor John Doe Contract No. 22222 Job No. C922222										
Sectio	Section Municipality									
Count	у	Sanga	mon		State P.O. No.					
(If Applicable)										
N	laterial Nam	ne/Code	Producer/Location	Previous Supplier/Loc.	Lot/ Batch	Test ID	Quantity	Unit		
	White Pa	aint	Dunn Paint		195	951111	37	gals.		

Supplier certifies that the above material(s) has been loaded from stock material which has been tested, approved and released for shipment by the Illinois Department of Transportation.

Sherwin Co.

John Smith	05-17-19
 Signature of Supplier Representative	Date

295

22395

The Illinois Department of Transportation (IDOT) regularly performs tests on the production and/or stock materials at the producer and/or supplier as a check on its quality control. The results of the tests and/or inspections may be obtained from the Illinois Department of Transportation.

White -Resident's copyCanary -MaterialsPink -Supplier

Yellow Paint

Glass Beads

Dunn Paint

Dunn Paint

District No.:	96

Central Office:

LA -15 (Rev. 2/95) IL 494-0804

gals.

lbs.

SOURCES OF INFORMATION FOR INSPECTORS

CONTRACT DOCUMENTS (In governing order)

Special Provisions Approved Plans Recurring Special Provisions Supplemental Specifications Standard Specifications

MANUALS¹

Construction Manual Manual for Materials Inspection Manual of Test Procedures for Materials Manual for Fabrication of Precast Prestressed Products Manuals for Aggregate, Mixture Aggregate, HMA Levels I-III, HMA Nuclear Density, PCC Tester, and PCC Levels I-III courses ² Subgrade Stability Manual

1 – Unless otherwise noted, the manuals are available on the <u>IDOT Website</u>, under Resources.

2 – Available for download at the Lake Land College web site, QC/QA Training Manuals.

POLICY MEMORANDUMS - BUREAU OF MATERIALS

The most current list of **CBM** Policy Memorandums may be found on the **Department's** web site, <u>IDOT Website</u>, under "Doing Business/Material Approvals".

ADDITIONAL DOCUMENTS

<u>Special Provision for Hot-Mix Asphalt – Hot-Mix Asphalt (BDE)</u> <u>Special Provision for Hot-Mix Asphalt – Longitudinal Joint Sealant (BDE)</u> Special Provision for Quality Control of Concrete Mixtures at the Plant (Check Sheet 30) Special Provision for Quality Control/Quality Assurance of Concrete Mixtures (Check Sheet 31)

NOTE - This list of sources of information should be considered a dynamic list. Sources of information may be added to or deleted from this list at any time.

FIELD ACCEPTANCE

Construction materials do not just "appear" on the jobsite. In many cases, the material has been pre-inspected or may have been produced under a **Department**-approved **Quality Control** program. **Evidence of Materials Inspection** is the minimum proof that **Method of Acceptance** sampling and testing has been performed. This attachment identifies the type of evidence that is required. Additional information on **Evidence of Materials Inspection**. It is not always possible to update all documents concurrently. In case of a conflict, the <u>Manual for Materials Inspection</u> shall take precedence. If the **Evidence of Materials Inspection** is not clear, contact the Bureau of Materials for assistance.

This attachment does not describe the detailed **Method of Acceptance** sampling and testing requirements. Detailed information regarding materials inspection programs such as certified products, **Quality Management Programs**, and warehouse inspections may be found in the <u>Manual for Materials Inspection</u>.

Column 1 - Product

The table is arranged in alphabetical order by type of material or construction. An attempt was made to include major items. If an item is not listed, contact the District Materials Engineer or the **Bureau**.

Column 2- Material Series

The number in this column represents the first three digits of the **MISTIC** Material Code for the product. If the product spans several sequential Material Series, only the first is listed. This number may be used as a cross-reference to find more information about a product from the <u>Manual for Materials Inspection</u>.

Column 3 - Evidence of Materials Inspection

This column lists the <u>minimum</u> information that the **Project Inspector** needs to accept the material. Definitions of the most common methods are listed below. It is important to understand that other methods may also be appropriate. For example,

- A product TEST may be appropriate at any time as determined by the **Resident/Inspector**.
- In addition to the notation in this column, a Visual Examination <u>always</u> applies. A piece of paper or Inspector's stamp does not guarantee that all product defects were caught in the QC and QA process or that it was not damaged in transit. Visual Examination should be noted in writing by the Resident Engineer.
- A passing test result that has been reported in the **MISTIC** system is always acceptable **Evidence of Materials Inspection**.

EVIDENCE	COMMENT
BBS 59 (BB59)	Report of acceptance of fabrication of structural steel. The Bureau of Bridges and Structures usually performs this type of inspection and testing.
BILL OF LADING (BOL)	A shipping ticket that accompanies a product to the job site and which identifies the product, source, and lot.
CBM (CBM)	Bureau of Materials approval letter specific to a batch/lot/heat, etc. for a specific contract or producer/supplier.
CERTIFICATION (CERT)	Manufacturer's written certification that indicates material complies with the specifications or contract. Supplier certifications are not acceptable.
DAILY PLANT REPORTS (DPR)	For HMA, reports generated that provide mixture test results and other production data. For non- QMP projects, Daily Plant Reports are the responsibility of the Inspector . For QMP projects, refer to the appropriate special provisions to determine responsibility for Daily Plant Reports. For example, for QC/QA for PCC, the Daily Plant Report is often only the form BMPR MI504 completed by the Producer , Contractor, etc. for aggregate gradations.
ILL OK STAMP (ILOK)	Material is stamped by an IDOT Inspector with an "ILL OK" stamp indicating prior inspection and acceptance. An inspection tag may be used as Evidence of Materials Inspection and approval. A Resident Engineer must make note of the stamp or collect the inspection tag to ensure proper documentation of material inspection.
LA-15 (LA15)	This Department form is a supplier's certification indicating material is from approved stock. The form is sometimes used as a Bill of Lading to indicate prior approval. The form should include supplier, proper contract/job designation, material description, manufacturer, specific approved material (test ID number, lots, or batches), and quantity. Additional information on LA 15's is provided in Attachment 1.
QUALIFIED PRODUCT/ PRODUCER LIST (LIST)	The material appears on a current list of Department -approved products or approved sources found at the Department's web site, <u>IDOT Website</u> , under "Doing Business/Material Approvals." Contact the inspecting district's Materials Office for information on aggregates.
MARK (MARK)	A commercial label, tag, or other marking which indicates product specification compliance and/or an approved source/manufacturer. A Resident Engineer must make note of the label, tag, or other marking to ensure proper documentation of material inspection.
TEST (TEST)	Approved test result available via the MISTIC system or from locally performed lab or field tests (e.g., soil density).

EVIDENCE	COMMENT
TICKET (TICK)	A ticket from an approved source indicating Department material or aggregate quality and gradation, job designation, purchaser, and weight (if applicable).
VISUAL ACCEPTANCE (VIS)	A RE memo denoting visual inspection is required in the project file, and input into MISTIC is required. A Resident Engineer must make note of the visual acceptance to ensure proper documentation of material inspection.
VISUAL EXAMINATION (VISE)	Same as VIS, but no RE memo or input into MISTIC is required. A Resident Engineer must make note of the visual examination to ensure proper documentation of material inspection.

MIXTURES and AGGREGATE

In addition to field tests, approval for aggregate and mixtures is based on other final acceptance criteria. The following items identify the initial method of approving such materials.

AGGREGATE:

- 1. Approved Aggregate Producer (**CBM** List)
- 2. Approved quality and gradation (ticket) per current CBM policy memorandum
- 3. Verify quality and gradation (INV) if appropriate.

HOT-MIX ASPHALT:

- 1. Approved plant and lab (**CBM**)
- 2. Approved/verified mixture design
- 3. Approved materials Aggregate (above), Asphalt Binder (CBM list)
- 4. Compliance with mixture and compaction specifications (QC/QA QMP specifications or Sampling Schedule 4, as applicable).

PORTLAND CEMENT CONCRETE:

- 1. Approved plant and lab (**CBM** and District)
- 2. Approved/verified mixture design
- 3. Approved materials Aggregates (above), Cement and Finely Divided Materials (CBM lists), Admixtures (CBM list)
- 4. Compliance with QC/QA QMP or non-QC/QA QMP specifications and Sampling Schedule 3, as applicable.

CONCRETE AGGREGATE MIXTURE (CAM II):

- 1. Approved plant and lab (**CBM** and District)
- 2. Approved/verified mixture design
- 3. Approved materials Aggregates (above), Cement and Finely Divided Materials (CBM lists), Admixtures (CBM list)
- 4. Compliance with **QMP** or non-**QMP** specifications and Sampling Schedule 2, as applicable.

LIME MODIFIED SOIL, LIME STABILIZED BASE AND SUBBASE, AND SOIL-CEMENT:

- 1. Approved/verified mixture design
- 2. Approved materials Aggregates (above), Cement and Finely Divided Materials (**CBM** lists)
- 3. Compliance with specifications and Sampling Schedule 1 or 2, as applicable.

Column 4 - Jobsite Sample

This column identifies sampling responsibilities of **Project Inspectors**. For mixture components, sampling is generally handled at the plant by **Plant Inspectors**. Additional sampling requirements for other non-jobsite samples are detailed in the <u>Manual for</u> <u>Materials Inspection</u>. Non-jobsite samples, other than mixture component samples, are generally sampled by **District Inspectors** or **CBM** personnel.

An "NR" in this field indicates that a jobsite sample is not required. However, if the method of acceptance for a material is TEST and there is no evidence that the material has been sampled and tested, or if the material is suspect, the **Project Inspector** should obtain a sample and submit for testing. Other entries in this column direct the **Project Inspector** to sampling policy documents.

Column 5 - Responsible Lab – The **Bureau Laboratory** responsible for receiving samples and establishing the testing policy for a product. If the entry is "DI," any testing is performed by **District Inspectors**.

AC – Analytical Chemistry	CM – Cement	PC – Precast
AG – Aggregate	CN – Concrete	SL – Soils
BC – Bituminous Chemistry	MT – Metals	DI – District
BM – Bituminous Mixture		

Column 6 - Sample Size

When a field sample is required, the sample size is indicated in this column. (Contact the responsible lab for mix design sample sizes.) The following table summarizes the size of aggregate samples for gradation testing.

Fine Aggregate	
FA1 – FA 24	25 lb.

Coarse Aggregate

110 lb.
55 lb.
35 lb.
25 lb.
35 lb.
25 lb.

LIMIT AGGREGATE SAMPLES TO 40 lb. PER BAG FOR SAFETY PURPOSES

For select fill, 80 lb. of fine aggregate and 120 lb. of coarse aggregate are required to perform the internal friction angle, pH, resistivity, chlorides, sulfates, and organic content tests.

Column 7 – Container

Samples submitted to the **Bureau Laboratory** must be clearly labeled with the name of the material on the body of the container.

Following are recommended container types:

- 1. Screw top metal container.
- 2. Plastic bag in double canvas sacks.
- Canvas sacks secured with zip ties when specified. Do not use burlap or "sugar sacks" for fine aggregate.
- 4. Plastic/Polyethylene container/bucket with secured lid.

- 5. Friction top metal container.
- 6. Telescoping (cardboard) carton.
- 7. Fiber Carton 4" x 5" x 5", or large enough to fit core.
- 8. Well packed.
- 9. Securely fastened plastic bag in either a cardboard carton or a friction top metal container.
- 10. Plastic bag inside canvas sack.
- 11. Plastic/Polypropylene bag.
- 12. Original manufacturer's package (unopened).
- 13. Epoxy-lined friction top metal container.
- 14. Concrete cylinder mold (tightly sealed).
- 15. Test panel 18" x 18" x 3.5" (Steel 3/16 in. minimum thickness bottom and sides; Wood 3/4 in. minimum thickness bottom/1.5 in. minimum thickness sides). NOTE: Shotcrete samples shall be labeled with the following information:
 - Date shotcrete was placed;
 - Name of material used from the QPL, <u>Packaged High Performance</u> <u>Shotcrete</u>;
 - Name and phone number of the RE;
 - Contract number;
 - Measured air content of shotcrete; and
 - Any other job specific location of placement (for example, East Pier)
- 16. Heavy duty cardboard box sealed with security tape when specified.

Column 8 - Small Quantity per Contract

Small quantity is the recommended amount of a material per contract that can be accepted or certified without standard testing and documentation. Under no conditions are materials to be used from an unknown source. Alternative materials inspection requirements for small quantities are discussed in Section 600, SMALL QUANTITIES.

Quantities in excess of these amounts must be approved by the District Materials Engineer. For PCC and HMA, the small quantity criteria are for non-**QMP** work. **QMP** specifications provide specific small quantity criteria for PCC and HMA.

Produ	ct	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Adhes	ives							
\triangleright	Bonding epoxy	427	CERT or MARK	NR	CN	-	5 or 12	N/A
\triangleright	Chemical Adhesive (Dowel & Tie Bar)	427	LIST	NR	MT	-	-	N/A
\triangleright	Glass Capsules for Anchor Bolts	427	LIST	NR	MT	-	-	N/A
Aggre	gate							
	For Mixtures & Granular Use	001	LIST + TICK	See Sampling Schedules	DI	See Field Acceptance – Column 6	3 or 4	500 TON
	Lightweight, for P.C. Concrete	025	CERT	See Sampling Schedules	DI	See Field Acceptance – Column 6	3	N/A
\triangleright	Riprap, Concrete	001	LIST + TICK	NR	AG	-	3 or 4	20 TON
	Riprap, Stone	001	LIST + TICK	NR	AG	-	3 or 4	20 TON
Bridge	Bearing Pads							
	Elastomeric (Whole pad)	703	LIST + CERT	*Sample when notified by CBM	MT	1 Pad	-	N/A
\triangleright	Fabric	703	LA15 or TEST	When directed	MT	12" x 12"	-	N/A
	Pot & Disk Bearing (HLMR)	703	CERT + CBM	NR	MT	-	-	N/A
D:1	inous Materials							
	PG Asphalt Binder	101	(LIST or TEST) + BOL	See CBM Policy Memo	BC	1 QT	5	N/A
۶	Road Oil & Cutback Asphalt	103	(LIST or TEST) + BOL	NR	BC	1 QT	1 or 5	N/A
>	Emulsified Asphalt	107	(LIST or TEST) + BOL	NR	BC	1 GAL uncut emulsion	4	N/A

Iot Mix Asphalt 195 DPR + TICK + TEST See Std. DI Per Manual Test 3 Special Provision Iock/Brick Clay or Shale Building Brick Clay or Shale Paving Brick Clay or Shale Paving Brick Clay or Shale Building Brick Concrete Masony Units for Building Brick Concrete Masony Units for Buildings/ Cath Basin/ Manhole/ Inlet/ Valva Vault Concrete Paver Clay or Shale Building S/ Cath Basin/ Manhole/ Inlet/ Valva Vault Concrete Basony Units for Buildings (Cath Basin/ Manhole/ Inlet/ Valva Vault Concrete Daver Clay Concrete Block Revetment Mat Clay Concrete Block Walls Segmental Concrete Block Walls Segmental Concrete Block Walls Structural Steel Structural Steel CERT or LA15 NR MT See MMI N/A MT See MMI N/A MA Maines Structural Steel CERT or LA15 NR MT See MMI N/A MA MA<th>Produ</th><th>uct</th><th>Material Series</th><th>Evidence of Materials Inspection</th><th>Jobsite Sample</th><th>Responsible Lab</th><th>Sample Size</th><th>Container</th><th>Small Quant Per Contrac</th>	Produ	uct	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant Per Contrac
Specs. Proc. for Mat'ls Provision Iock/Brick > Clay or Shale Building Brick 704 TEST NR CN 10 EA 8 100 > Clay or Shale Paving Brick 704 TEST NR CN 10 EA 8 100 > Concrete Building Brick 251 LIST NR CN 6 EA - N/A > Concrete Masony Units for Buildings/ Catch Basin/ Manhole/ Inlet/ Valve Vault 251 LIST NR CN 6 EA - N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Precast Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Precast Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Perceast Articulated Block 251 LIST NR CN 6 EA - N/A * Segmental Concrete Block Walls 255 LIST NR MT See MMI - N/A *	Hot M	ix Asphalt							
> Clay or Shale Building Brick 704 TEST NR CN 10 EA 8 100 > Clay or Shale Paving Brick 704 TEST NR CN 10 EA 8 100 > Clay or Shale Paving Brick 251 LIST NR CN 6 EA - N/A > Concrete Masony Units for Buildings/ Catch Basin/ Manhole/ Inlet/ Valve Vault 251 LIST NR CN 6 EA - N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Precast Afticulated Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A * Railing - Structural Steel 541 CBM NR MT See MMI - N/A * Post, Anchoring Device 541 CERT or LA15 NR MT - N/A * Cement <th></th> <th>Hot Mix Asphalt</th> <th>195</th> <th>DPR + TICK + TEST</th> <th></th> <th>DI</th> <th></th> <th>3</th> <th></th>		Hot Mix Asphalt	195	DPR + TICK + TEST		DI		3	
> Clay or Shale Paving Brick 704 TEST NR CN 10 EA 8 100 > Concrete Building Brick 251 LIST NR CN 6 EA - N/A > Concrete Masonry Units for Buildings/ Catch Basin/ Manhole/ Inlet/ Valve Vauit 251 LIST NR CN 6 EA 8 N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Precast Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Precast Articulated Block 251 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A * Railing - Structural Steel 541 CBM NR MT See MMI - N/A * Post, Anchoring Device 541 CERT or LA15 NR MT - N/A * Calcium Aluminate	Block/	/Brick							
> Concrete Building Brick 251 LIST NR CN 6 EA - N/A > Concrete Masonry Units for Buildings/ Catch Basin/ Manhole/ Inlet/ Valve Vaut 251 LIST NR CN 6 EA 8 N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Precast Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Precast Articulated Block 251 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A ridge Rail - Segmental Steel 541 CBM NR MT See MMI - N/A - Aluminum, Steel, Stainless 541 CERT or LA15 NR MT See MMI - N/A - Post, Anchoring Device 541 CERT or LA15 NR MT - N/A - Calcium Aluminate<	\succ	Clay or Shale Building Brick	704	TEST	NR	CN	10 EA	8	100
> Concrete Masony Units for Buildings/ Catch Basin/ Manhole/ Inlet/ Valve Vault 251 LIST NR CN 6 EA 8 N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Precast Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Precast Articulated Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A ridge Rail - Structural Steel 541 CBM NR MT See MMI - N/A - Aluminum, Steel, Stainless 541 CERT or LA15 NR MT See MMI - N/A > Post, Anchoring Device 541 CERT or LA15 NR MT - N/A ementitious Materials - Calcium Aluminate 379 TEST See Sampling Schedules 6 LB	\triangleright	Clay or Shale Paving Brick	704	TEST	NR	CN	10 EA	8	100
Buildings/ Catch Basin/ Manhole/ Inlet/ Valve Vault IIST NR CN 6 EA - N/A > Concrete Paver 251 LIST NR CN 6 EA - N/A > Precast Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Precast Articulated Block 251 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A ridge Rail - - N/A - - N/A > Railing - - Structural Steel 541 CBM NR MT See MMI - N/A - Aluminum, Steel, Stainless 541 CERT or LA15 NR MT - N/A Post, Anchoring Device 541 CERT or LA15 NR MT - N/A Post, Anchoring Device 379 TEST See CM 6 LB 5 or 11 N/A - - Postiand or Blended 376 (LIST or TEST)	≻	Concrete Building Brick	251	LIST	NR	CN	6 EA	-	N/A
> Precast Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Precast Articulated Block 251 LIST NR CN 6 EA - N/A > Precast Articulated Block 251 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A ridge Rail Segmental Steel 541 CBM NR MT See MMI - N/A - Structural Steel 541 CBM NR MT See MMI - N/A - Aluminum, Steel, Stainless 541 CERT or LA15 NR MT - N/A > Post, Anchoring Device 541 CERT or LA15 NR MT - - N/A - Cement - Calcium Aluminate 379 TEST See Schedules Schedules Schedules - Portland or Blended 376 (LIST or TEST) + BOL	>	Buildings/ Catch Basin/ Manhole/	251	LIST	NR	CN	6 EA	8	N/A
> Precast Articulated Block Revetment Mat 251 LIST NR CN 6 EA - N/A > Segmental Concrete Block Walls (Retaining Wall) 255 LIST NR CN 6 EA - N/A ridge Rail 255 LIST NR CN 6 EA - N/A > Railing - Structural Steel 541 CBM NR MT See MMI - N/A - Aluminum, Steel, Stainless 541 CERT or LA15 NR MT See MMI - N/A Post, Anchoring Device 541 CERT or LA15 NR MT - N/A - Calcium Aluminate 379 TEST See Sampling Schedules CM 6 LB 5 or 11 N/A - Portland or Blended 376 (LIST or TEST) + BOL Yes, per CBM Policy Memo CM 6 LB 5 or 11 N/A	≻	Concrete Paver	251	LIST	NR	CN	6 EA	-	N/A
Revetment Mat Segmental Concrete Block Walls 255 LIST NR CN 6 EA - N/A ridge Rail - - N/A - N/A - N/A - Railing - - Structural Steel 541 CBM NR MT See MMI - N/A - Aluminum, Steel, Stainless 541 CERT or LA15 NR MT See MMI - N/A Post, Anchoring Device 541 CERT or LA15 NR MT - N/A ementitious Materials - Cement - - N/A - Portland or Blended 376 (LIST or TEST) + BOL Yes, per CBM Policy Memo 6 LB 5 or 11 N/A	≻	Precast Block Revetment Mat	251	LIST	NR	CN	6 EA	-	N/A
(Retaining Wall) ridge Rail > Railing - Structural Steel 541 CBM NR MT See MMI - N/A - Aluminum, Steel, Stainless 541 CERT or LA15 NR MT See MMI - N/A > Post, Anchoring Device 541 CERT or LA15 NR MT - N/A ementitious Materials > Cement - Calcium Aluminate 379 TEST See CM for LB 5 or 11 N/A - Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM for CBM Policy Memo 6 LB 5 or 11 N/A			251	LIST	NR	CN	6 EA	-	N/A
 Railing Structural Steel Structural Steel Aluminum, Steel, Stainless CERT or LA15 NR MT See MMI N/A Post, Anchoring Device CERT or LA15 NR MT See MMI N/A Post, Anchoring Device CERT or LA15 NR MT See MMI N/A Post, Anchoring Device Static CERT or LA15 NR MT Cernont Calcium Aluminate 379 TEST See CM CBB Sor 11 N/A Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM CBM Policy Memo GBM Policy Memo 			255	LIST	NR	CN	6 EA	-	N/A
 Structural Steel 541 CBM NR NR MT See MMI - N/A Aluminum, Steel, Stainless 541 CERT or LA15 NR MT See MMI - N/A Post, Anchoring Device 541 CERT or LA15 NR MT - N/A Cement Calcium Aluminate 379 TEST See CM 6 LB 5 or 11 N/A Portland or Blended 376 (LIST or TEST) + BOL Yes, per CBM Policy Memo 	Bridge	e Rail							
 Aluminum, Steel, Stainless 541 CERT or LA15 NR MT See MMI - N/A Post, Anchoring Device 541 CERT or LA15 NR MT N/A cementitious Materials Cement Calcium Aluminate 379 TEST See CM 6 LB 5 or 11 N/A Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM 6 LB 5 or 11 N/A 	\triangleright	Railing							
 Post, Anchoring Device 541 CERT or LA15 NR MT - N/A ementitious Materials Cement Cement Calcium Aluminate 379 TEST See CM 6 LB 5 or 11 N/A Schedules Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM 6 LB 5 or 11 N/A CBM Policy Memo 		- Structural Steel	541	CBM	NR	MT	See MMI	-	N/A
ementitious Materials ➤ Cement - Calcium Aluminate 379 TEST See CM 6 LB 5 or 11 N/A Sampling Schedules - Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM 6 LB 5 or 11 N/A CBM Policy Memo		- Aluminum, Steel, Stainless	541	CERT or LA15	NR	MT	See MMI	-	N/A
 Cement Calcium Aluminate 379 TEST See CM 6 LB 5 or 11 N/A Portland or Blended 376 (LIST or TEST) + BOL Yes, per CBM Policy Memo CM 6 LB 5 or 11 N/A 	۶	Post, Anchoring Device	541	CERT or LA15	NR	MT	-	-	N/A
 Calcium Aluminate 379 TEST See CM 6 LB 5 or 11 N/A Sampling Schedules Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM 6 LB 5 or 11 N/A Memo 	emei	ntitious Materials							
Sampling Schedules - Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM 6 LB 5 or 11 N/A CBM Policy Memo	\triangleright	Cement							
- Portland or Blended 376 (LIST or TEST) + BOL Yes, per CM 6 LB 5 or 11 N/A CBM Policy Memo		- Calcium Aluminate	379	TEST	Sampling	СМ	6 LB	5 or 11	N/A
- Rapid Hardening 379 LIST NR CN 3-5 as sold bags 4 or 12 N/A		- Portland or Blended	376	(LIST or TEST) + BOL	Yes, per CBM Policy	СМ	6 LB	5 or 11	N/A
		- Rapid Hardening	379	LIST	NR	CN	3-5 as sold bags	4 or 12	N/A

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Cementitious Materials, continued							
Finely Divided Minerals- Fly Ash, Ground Granulated Blast- Furnace Slag, Microsilica, High- Reactivity Metakaolin	378	LIST or TEST	Yes, per CBM Policy Memo	СМ	6 LB	5 or 11	N/A
Chemicals / Admixtures							
HMA – Anti-Strip Additive for Bituminous Mixtures	434	DPR	NR	BM	1 PT	1	N/A
HMA – Asphalt Truck Release Agent		LIST	NR	BM	1 QT	4	N/A
Calcium Chloride (Dry, Liquid)							
- Dust Palliative	804	TEST	NR	AC	1 QT	4	1 TON or 500 GAL
 PCC – Calcium Chloride Accelerator 		CERT	NR	CN	1 QT	4 or 13	N/A
CLSM – Air Entraining Admixture	421	LIST	NR	CN	1 QT	4 or 13	N/A
PCC – Corrosion Inhibitor	437	LIST	NR	CN	1 QT	4 or 13	N/A
PCC – Latex Emulsion	437	CERT	NR	CN	1 QT	-	N/A
PCC - Air- Entraining Admixture	421	LIST	NR	CN	1 QT	4 or 13	N/A
PCC – Type A – G Admixture	437	LIST	NR	CN	1 QT	4 or 13	N/A
PCC – Rheology Modifying Admixture	438	LIST	NR	CN	1 QT	4 or 13	N/A
PCC – Viscosity Modifying Admixture	438	LIST	NR	CN	1 QT	4 or 13	N/A
PCC – Membrane Curing Compound	430	LA15 or ILOK or TEST	NR	CN	1 QT/LOT	4 or 13	N/A
PCC – Membrane Curing Compound/ Linseed Oil Emulsion	430	LA15 or ILOK or TEST	NR	CN	1 QT/LOT	13	N/A
Concrete Sealer	427	LIST	NR	CN	1 QT	1 or 4	N/A
 Protective Coat (Linseed Oil/ Petroleum Spirits) 	426	LA15 or ILOK or TEST or CBM	NR	AC	1 QT	1 or 13	55 GAL
Rock Salt, Sodium Chloride	804	TEST	NR	AC	10 LB	4 or 13	N/A

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Chemicals / Admixtures, continued							
Water, for concrete, mortar, or curing	425	TEST	If not potable	AC	1 QT	4	N/A
> Weed Killer	803	MARK or VIS	NR	AC	-	-	N/A
Concrete							
 Polymer Concrete 	216	LIST	NR	CN	1.5 FT ³	12	N/A
Portland Cement Concrete- Other than QC/QA	216	DPR + TICK (TICK not req'd for volumetric mixer) + TEST	See Sampling Schedules	CN	Per Manual Test Proc. for Mat'ls	-	100 CY
Portland Cement Concrete - QC/QA	216	DPR + TICK (TICK not req'd for volumetric mixer) + TEST	Special Provision	CN	Per Manual Test Proc. for Mat'ls	-	Special Provision
CAM II – Cement Aggregate Mixture	218	DPR + TICK (TICK not req'd for volumetric mixer) + TEST	See Sampling Schedules	CN	Per Manual Test Proc. for Mat'ls	14	600 SY
CLSM - Controlled Low-Strength Material	216	DPR + TICK (TICK not req'd for volumetric mixer) + TEST	See Sampling Schedules	CN	Per Manual Test Proc. for Mat'ls	-	50 CY
Non-Shrink Grout	216	LIST	NR	CN	3-5 bags	-	N/A
Thin Polymer Overlay System for Bridge Decks	216	LIST	NR	CN	-	-	N/A
PCC – Curing Blanket- Burlap, Burlap/Poly, Waterproof Paper, White Poly, Cotton Mat	702	VISE	NR	CN	-	11	N/A
Concrete, Precast							
Architectural Products	250	LIST	NR	-	-	-	N/A
Bridge Beams	253	LIST + ILOK	NR	PC	-	-	N/A
Bridge Slabs	255	LIST + ILOK	NR	PC	-	-	N/A
Bridge- Three Sided Structure	484	LIST + ILOK	NR	PC	-	-	N/A
Drainage Products	252	LIST+ MARK	NR	PC	-	-	N/A
Noise Abatement Wall	255	TEST	NR	PC	-	-	N/A
MSE Retaining Wall	255	LIST	NR	PC	-	-	N/A
Modular Retaining Wall	255	LIST	NR	PC	-	-	N/A

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Concrete, Precast, continued							
Traffic Barrier	255	LIST	NR	PC	-	-	N/A
 R.O.W, Drainage, Section, & Permanent Survey Markers 	260	LIST	NR	PC	-	-	N/A
Headwall	257	LIST	NR	PC	-	-	N/A
 Bumper Blocks (Wheel Stops for Cars) 	255	LIST	NR	PC	-	-	N/A
 Picnic Table, Trach Receptacle, Planter 	259	LIST	NR	PC	-	-	N/A
Splash Blocks	285	LIST	NR	PC	-	-	N/A
Concrete, Precast and Prestressed (Except Piling)							
Prestressed Products	275	ILOK	NR	PC	-	-	N/A
Concrete Repair							
 Mortar, Polymer Modified Portland Cement 	216	LIST	NR	CN	One 50 LB bag	-	N/A
 Rapid Hardening Cementitious Material 	221, 379	LIST	NR	CN	3-5 as sold packages	4 or 12	N/A
Electrical							
Cable, unit duct	305	MARK	NR	MT		-	N/A
Conduit							
- Aluminum, plastic	311, 312	LA15 or (CERT + MARK)	NR	MT		-	N/A
- Flexible Steel, Steel	208, 313	LA15 or (CERT + MARK)	NR	MT		-	N/A
Detector Loop	316	LA15 or (CERT + MARK)	NR	MT		-	N/A
Fiber Optic Cable	315	LA15 or (CERT + MARK)	NR	MT		-	N/A
Ground Rod	316	CERT or LA15	NR	MT		-	N/A
Wire, span or tether	306	LA15 or TEST	NR	MT	2 @ 4 FT	-	N/A

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Fencing							
Fabric, Post, Wire	575	CERT or LA15	NR	MT		8	300 LF
Glare Guard, Slats	586	VIS	NR	MT			N/A
Guard Rail							
Cable for Road Guard	552	LA15 or ILOK or TEST	NR	MT	2 @ 4 FT	-	100 LF
Fasteners	676	(MARK + CERT) or TEST	NR	-	-	-	N/A
Steel Plate & Accessories	551	LIST + CERT	NR	MT	-	-	N/A
Steel Post	553	CERT or LA15	NR	MT	-	-	N/A
 Traffic Barrier Terminal End Section 	556	NCHRP 350 = (LIST + CERT) or LA15; Pdts. Not covered by NCHRP 350 = CERT or LA15	NR	МТ	-	-	N/A
Wood Post, Plank	553	CERT or MARK or LA15	NR	MT	-	-	N/A
High Tension Cable Median Barrier	556	LIST + CERT	NR	MT	-	-	N/A
Joint Fillers and Sealers							
Mastic for Precast Concrete Pipe	617	CERT or LA 15	NR	BC	1 QT	5	N/A
Hot-Poured Sealer	619	LA15 or ILOK or TEST or CBM	NR	BC	1 mfg. sealed box per lot	12	200 LB
Cold-Poured Sealer	619	LA15 or ILOK or TEST	NR	BC	1 GAL per batch	5	200 LB
Polysulfide Sealer	619	CERT or LA15	NR	BC	-	-	N/A
Asphalt Fillers							
- PAF	620	LA15 or ILOK or TEST	NR	BC	1 QT	5	200 LB
 Fiber- Modified (Pavement Preserve.) 	620	CERT	NR	BC	-	-	N/A
 Preformed- Bituminous, cork, foam, fiber, plastic 	616	LA15 or TEST	NR	BC	2 SF	9 or 12	300 LF
 Preformed Elastomeric Compression 	619	LA15 or TEST or CBM	NR	MT	1 @ 6 FT	12	100 LF
Preformed Neoprene, EPDM	621	LA15 or TEST	NR	MT	1 LF-Neoprene; 2 LF-EPDM	-	100 LF

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Joint Fillers and Sealers, continued							
PCC - Silicone	619	CERT or MARK (if it contains spec. info.) or LA15	NR	AC	-	-	N/A
Water Seal, PVC	618	LA15 or TEST	NR	MT	1 LF per batch	-	100 LF
Landscaping							
 Agricultural Lime (Dept of Ag. Program) 	002	LIST + TICK	NR	AG	9 LB	2 or 10	N/A
Excelsior Blanket	562	CERT or LA15	NR	MT		9 or 11	200 SY
➢ Fertilizer	561	CERT (bulk) or MARK (bags)	NR	MT	-	-	20 LB
Mulch - Straw	562	VIS	NR	MT	-	-	N/A
Mulch- Paper, Wood cellulose	562	MARK or CERT	NR	MT	-	-	N/A
Compost	563	CERT	NR	MT	-	-	N/A
Peat Moss	563	CERT or ILOK or LA15	NR	MT	-	-	N/A
Seed, Sod	563, 567	CERT or ILOK or LA15	NR	MT	-	-	N/A
Trees, Shrubs, Plants	565	DOA CERT	NR	MT	-	-	N/A
Lighting and Signals							
Controllers & Cabinets	330	VIS compared to approved submittals + CERT	NR	-	-	-	N/A
Lamps, Luminaires & Ballast	330	VIS compared to approved submittals + CERT	NR	-		-	N/A
Traffic Signal Components	335	VIS compared to approved submittals + CERT	NR	MT	-	-	N/A
Break-away Supports	335	VIS compared to approved submittals + CERT	NR	MT	-	-	N/A
➢ Poles							
- Steel, Aluminum	331	CERT or ILOK	NR	MT	-	-	N/A
- Wood	331	MARK	NR	MT	-	-	N/A

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Lighting and Signals, continued							
Mast Arm Assemblies	330	CERT	NR	-	-	-	N/A
Composite Handholes & Gulfbox	261	CERT	NR	PC	-	-	N/A
Lumber / Timber							
Treated or Untreated Lumber	351	CERT or MARK or LA15	NR	MT	-	-	N/A
Metal Products, Miscellaneous							
Aluminum Drains	785	LA15 or CERT	NR	MT	-	-	N/A
Copper Water Pipe	779	MARK + CERT or LA15	NR	MT	-	-	N/A
Name Plate	782	LA15 or VIS	NR	MT	-	-	N/A
Rodent Shield	785	VIS	NR	MT	-	-	N/A
Survey Markers	783	LA15 or VIS	NR	MT	-	-	N/A
Miscellaneous							
Manhole Step, Plastic	495	CERT or LA15	NR	MT	-	-	N/A
Geotextile Fabric - French Drain, Ground Stabilization, Pipe Underdrain, Rip Rap, Silt Filter Fence, & Weed Barrier	498	CERT or LA15	NR	MT	-	8	400 SY
Concrete Revetment Mat Fabric	562	LIST	NR	MT	-	-	N/A
Paint							
Bridge Paint & Primer	414	TEST (approved lot) or CBM	NR	AC	1 PT	13 or 4	20 GAL
Pavement Marking Paint	404	TEST or LA15 or CBM	NR	AC	1 PT	13	20 GAL
Pavement Marking							
> Glass Beads	604	TEST or LA15 or ILOK or CBM	NR	AC	1 QT	5	100 LB
Raised Pavement Marker	708	LIST	NR	AC	-	8	N/A
Temporary Pavement Tape	705	TEST or LA15 or ILOK or CBM	NR	AC	10 LF	8	N/A
Thermo Letters & Symbols	705	CERT or LA15	NR	AC	-	-	N/A

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Pavement Marking, continued							
Thermoplastic - granular/block	706	TEST or LA15 or ILOK or CBM	NR	AC	1 GAL from 3 different bags	5	100 LB
Thermoplastic Tape	705	TEST or LA15 or ILOK or CBM	NR	AC	1 SF	8	150 LF
Piling							
Metal Shell, Steel H, Steel Sheet or Steel Soldier	367	CERT or LA15 or ILOK	NR	MT	-	-	N/A
Precast Concrete	366	LIST + ILOK	NR	PC	-	-	N/A
Precast, Prestressed Concrete	366	ILOK	NR	PC	-	-	N/A
≻ Timber	370	CERT or MARK or LA15	NR	MT	-	-	N/A
Pipe, Culvert and Drain							
Cast or Ductile Iron Pipe	511	CERT or LA15	NR	MT	-	-	100 LF
Metal Corrugated & Components	452	CERT or ILOK or LA15	NR	MT	-	-	100 LF
Pipe - Plastic, PVC, HDPE - water/sewer	491	ILOK or LA15 or TEST	NR	MT	Per MMI	-	100 LF
Pipe Fittings - PE, PVC	493	VIS	NR	MT	-	-	N/A
Pipe Liner- PE, PVC	496	ILOK or LA15 or TEST	NR	MT	4 LF	-	100 LF
Pipe Underdrain	493	ILOK or LA15 or TEST	NR	MT	Per MMI	-	100 LF
Plastic Deck Drain	499	CERT	NR	MT	-	-	100 LF
Precast Concrete Pipe or Box Culvert	475	LIST + MARK	NR	PC	-	-	100 LF
Underdrain Mat, Wall Drain	496	LA15 or TEST	NR	MT	3 LF full width	-	100 LF
Signing							
Completed Sign Panels & standard- Aluminum Sheeting	601	LA15 or TEST or CBM	NR	AC	12" x 12"	8	N/A
 Completed Sign Panels & standard Reflective Sheeting 	602	LA15 or TEST or CBM	NR	AC	13" x 13"	8	N/A
Post, Break-away	607	CERT or LA15	NR	MT		-	
➤•Post, Metal & Hardware	606	CERT or LA15	NR	MT	-	-	
≻·Post, Tubular (round, rectangle)	609	LA15 or ILOK or TEST	NR	MT	1 LF	-	

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Signing, continued							
Post, Steel Delineator	606	CERT or LA15	NR	MT	-	-	
Post, Wood	610	CERT or MARK or LA15	NR	MT	-	-	N/A
Reflector, Delineator, Terminal	612	LIST	NR	AC	3 EA per lot	8	N/A
Reflector, Prism	613	LIST or CERT or LA15	NR	AC	3 EA per lot	-	N/A
Sign Structure, Overhead	613	BB59 + CERT	NR	MT		-	N/A
Structural Fasteners	655	CBM or LA15 or ILOK or TEST	NR	MT	5 per lot	4 or 11	N/A
Soil / Modification / Stabilization							
≻ Topsoil	563	TEST	YES	SL	3 LB	3 or 11	N/A
For IBR - Fine-Grained Soil	563	TEST	NR	DI/SL	75 LB	3	N/A
For IBR - Coarse-Grained Soil	563	TEST	NR	DI/SL	100 LB	3	N/A
For Moisture Density - Fine- Grained Soil	563	TEST	YES	DI/SL	30 LB	3	N/A
 For Moisture Density - Coarse- Grained Soil 	563	TEST	YES	DI/SL	100 LB	3	N/A
Cement (Portland or Blended)	376	(LIST or TEST) + BOL	See Sampling Schedule	DI/SL	6 LB	5 or 11	1 TON
➢ Fly Ash	378	LIST or TEST	See Sampling Schedule	СМ	6 LB	5 or 11	1 TON
≻ Lime	003	CERT + TEST	See Sampling Schedule	DI/SL	6 LB; 1 QT (slurry)	4 or 5	1 TON, 600 GAL (slurry)
Modified Soil with Lime, Portland Cement, Portland Blast, Furnace Slag Cement, or Fly Ash	750	TEST	See Sampling Schedule	SL	Per Manual Test Proc. for Mat'ls	3 or 4	600 SY
Lime Stabilized Subbase or Base Course	750	TEST	See Sampling Schedule	SL	Per Manual Test Proc. for Mat'ls	3 or 4	600 SY
Soil-Cement Base Course	750	TEST	See Sampling Schedule	SL	Per Manual Test Proc. for Mat'ls	3 or 4	600 SY

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Steel and Casting							
Cast Frames & Grates/Lids	200	CERT or LA15	NR	MT	-	-	5 EA
Cast Manhole Steps	210	CERT or LA15	NR	MT	-	-	N/A
Deck Drains	686	CERT or LA15	NR	MT	-	-	N/A
Gabions, Slope Mattress	680	CERT or LA15	NR	MT	-	-	N/A
Pipe Casing	680	CERT or LA15	NR	MT	-	-	N/A
Steel Frames & Grates	684	CERT or LA15	NR	MT	-	-	N/A
Steel, Miscellaneous							
Anchor Bolts	676	CBM or LA15 or ILOK or TEST	NR	МТ	3 pieces of each full size or 3 FT plus threads from each heat	-	N/A
Steel, Reinforcing							
Dowel Bars - black or epoxy coated	626	LIST + CERT	Yes, per CBM Policy Memo	МТ	2 @ 6 FT EA for each size, grade and source	-	N/A
Dowel Bar Assembly (Only)	627	CERT or LA15	NR	MT	-	-	N/A
Pavement Fabric & Wire Mesh	628	LIST + CERT	Yes, per CBM Policy Memo	MT	See MMI	-	N/A
Prestressing Strand	631	СВМ	NR	MT	2 @ 4 LF for each reel	-	N/A
Reinforcing Bar – black or epoxy coated	629	LIST + CERT + MARK	Yes, per CBM Policy Memo	МТ	2 @ 6 LF	-	N/A
Rebar Splicers – black or epoxy coated	632	LIST + CERT	Yes, if Contract Quantity of All Splicers > 100	МТ	3 assemblies each size and source - min. 18" of rebar on each side	-	N/A

Product	Material Series	Evidence of Materials Inspection	Jobsite Sample	Responsible Lab	Sample Size	Container	Small Quant. Per Contract
Steel, Structural							
Fasteners	655	CBM or LA15 or ILOK or TEST	NR	MT	5 pieces per lot	4 or 11	N/A
Structural Steel	650	BB59 + CERT	NR	MT	-	-	N/A
Stud Shear Connectors	658	(MARK + CERT) or LA15	NR	MT	5 pieces per lot	11	N/A
Temporary Items							
See Sections 100, 500 Except		VISE					
Reflective Materials		See Paint, Pavement Marking and Signing requirements					
Waterproofing Materials							
Asphalt Emulsion (Art. 1060.08	381	(LIST or TEST) + BOL	NR	BC	1 GAL	4	55 GAL
Membrane System (Sec. 1061) - Coal-Tar Pitch Emulsion & Primer	382, 386	LA15 or TEST	NR	BC	1 QT EA	5	56 GAL
 Membrane System (Sec. 1061) - Fabric, Glass 	385	LA15 or TEST	NR	BC	1 @ 5 FT	8	N/A
 Reflective Crack Control (Sec.1062) - Reinforcing Fabric 	498	CERT or LA15	NR	MT		-	N/A
 Fiberglass Repair System (Sec. 1063) - Fiberglass Fabric 	385	LA15 or TEST	NR	BC	1 @ 5 FT	8	N/A
 Fiberglass Repair System (Sec. 1063) - Bit. Adhesive 	385	LA15 or TEST	NR	BC	1 mfg. sealed box	12	N/A

GUIDELINES FOR USE OF MISTIC "TYPE TEST" FOR MAJOR MATERIAL CATEGORIES

The following chart lists the report form and "Type Test" for major material categories. This chart will assist field personnel in properly identifying the sample on the **MISTIC** Sample Identification and/or field test reports. The chart is not intended to identify points of acceptance or tests appropriate for the listed materials. Refer to the applicable specification to determine test requirements. A "Type Test" column has been provided for both IDOT's traditional non-**QMP** testing program and the **Quality Management Programs (QMP)**.

				Ν		
MATERIAL				NON-QMP	QMP PF	ROGRAM
CATEGORY	TEST	LOCATION	FORM ¹	DEPARTMENT	PRODUCER	DEPARTMENT
Aggregates	Quality	Source	BMPR LM6 Template	PRO, PRE		
	Gradation		MI-504 ²	PRO, PRE	PRO	IND, INV
	Random A Quality at PCC	Mix Plant	BMPR LM6 Template	INV		
	Gradation		MI-504 ²	INV	PRO	IND, INV
	Gradation	Jobsite	MI-504 ²	INV		
	Gradation, etc.	Mix Design	BMPR LM6 Template	PRE	PRE	PRE
Hot-Mix Asphalt (HMA) Mixtures	Gradation – Hot Bins/Combined Belt or Cold Feeds	Mix Plant/Lab	N/A ²	N/A	PRO	IND, INV
WIXtures	Gradation – Solvent Extraction/Ignition Oven	Mix Plant/Lab	N/A ²	N/A	PRO	IND, INV
	Air Voids	Mix Plant/Lab	N/A ²	N/A	PRO	IND, INV
	Asphalt Content –Solvent Extraction, Nuclear, Ignition Oven	Mix Plant/Lab	N/A ²	N/A	PRO	IND, INV
	Field VMA	Mix Plant/Lab	N/A ²	N/A	PRO	IND, INV
	Density – Nuclear/Core	Jobsite/Laboratory	BMPR MI303N	N/A	PRO	IND, INV
	PG Asphalt Binder – QA Sample	Mix Plant/BC Lab	BMPR LM6 Template	N/A	PRO	INV
PCC Mixture	Air, Slump, and Quantity	Jobsite	BMPR MI654	ACC	PRO	IND, INV
	Strengths - Beams or Cylinders	Jobsite/Laboratory	BMPR MI655	PRO	PRO	IND, INV
Soils	Density	Jobsite	BMPR MI701N	PRO		
	Immediate Bearing Value (using DCP or SCP)	Jobsite	BMPR SL30 or BMPR SL31	N/A		
Topsoil	Laboratory	Laboratory	BMPR LM6 Template	ACC		
Certified Producers	Random Check/Verification	Laboratory	BMPR LM6 Template	INV		
Misc. Products	Random Check/Verification	Laboratory	BMPR LM6 Template	INV		

1 See the IDOT website, <u>Bureau of Materials forms</u>, for standard forms or contact your IDOT district materials office.

2 An approved spreadsheet program/form may also be used.

3 The reporting format is specified by the data input requirements for MISTIC input. A spreadsheet program is generally used.

SAMPLING SCHEDULES

The following Sampling Schedules list the <u>minimum</u> sampling and testing frequencies for non-QMP project-produced materials. (Refer to the current applicable standard, specifications, special provisions and stand-alone documents therein for sampling and testing frequency requirements for QC/QA, PFP, and QCP project-produced materials.) Good judgment on the part of the **Inspector** is essential for proper control of the work. Onsite job conditions such as consistency, methods, equipment, and weather may result in a decision to increase the frequencies listed in these Sampling Schedules.

Likewise, reliance should never be placed entirely on the numerical results of sampling and testing when determining the acceptability of the materials and construction work. Observation of the actual construction operations and processes is necessary to ensure that the materials incorporated and the construction procedures utilized are acceptable and in accordance with the contract, plans, and specifications.

The Sampling Schedules do not list frequencies for independent assurance testing. Independent assurance testing, or IND testing, is a way of ensuring that the **Inspector** remains capable of performing the tests properly. IND testing requirements are addressed in Section 900, **TRAINED TECHNICIANS**.

SAMPLING SCHEDULE 1: EMBANKMENTS, SUBGRADES, AND GRANULAR COURSES

MATERIAL	SPECIFICATION REFERENCE	PROPERTY/QUALITY	FREQUENCY	MISTIC TEST	FORM
Earth, Stone, or Gravel Embankments					
	Article 205.06*	Standard Moisture Density Control Curve	Compaction curve data is required for each major change in embankment material. This data may be furnished in advance by District Laboratory .		No standard form
	Article 205.06*	Density	1 test per 20,000 cu yd. for a continuous operation, by Project Inspector . In confined areas, 1 test per 3 ft. of lift and not less than 1 test per fill area, by Project Inspector .	PRO	BMPR MI701N
Subgrades					
Subgrade	Article 301.04*	Density	1 test per 1500 ft. of entire length of subgrade through both cut and fill areas, by Project Inspector	PRO	BMPR MI701N
	Article 301.04*	Immediate Bearing Value Using Dynamic or Static Cone Penetrometer	As determined by the District Geotechnical Engineer	PRO	BMPR SL30 or SL31
Modified Soil with Lime, Portland	Article 302.09*	Density	1 test per 1500 ft. of treated area, by Project Inspector	PRO	BMPR MI701N
Cement, Portland Blast-Furnace Slag Cement, or Fly Ash	Article 302.11*	Immediate Bearing Value Using Dynamic or Static Cone Penetrometer	As determined by the District Geotechnical Engineer	PRO	BMPR SL30 or SL31

SAMPLING SCHEDULE 1: EMBANKMENTS, SUBGRADES, AND GRANULAR COURSES, Continued

MATERIAL	SPECIFICATION REFERENCE	PROPERTY/QUALITY	FREQUENCY	MISTIC TEST	FORM
Subgrades, continued Lime	Section 1012	Various	Minimum of 1 sample on 1 st day, and then 1 sample per 750 tons [or 400,000 gal lime slurry] thereafter, by District Inspector	INV	BMPR LM6 Template
Portland Cement and Portland Blast- Furnace Slag Cement	Section 1001	Various	When requested by CBM	INV	BMPR LM6 Template
Fly Ash	Section 1010	Various	When requested by CBM	INV	BMPR LM6 Template
Granular Courses Base Course and Granular Embank- ment, Type A	Article 351.05*	Density	1 test per 1000 ft. of pavement, by Project Inspector	PRO	BMPR MI701N
Subbase Granular Material, Type A	Article 311.05*				
Aggregate Surface Course, Type A	Article 402.05*				
Select Fill Used for Retaining Wall Applications Utilizing Soil Reinforcement	Article 1003.07* Article 1004.06*	Various	1 sample before construction begins, and then 1 sample for every 40,000 tons by District Inspector	INV	BMPR LM6 Template
	Article 522.09* Article 522.10*	Density	1 test per 20,000 cu yd. for a continuous operation, by Project Inspector . In confined	PRO	BMPR MI701N
	Article 522.11* Article 522.12*		areas, 1 test per 3 ft. of lift and not less than 1 test per fill area, by Project Inspector .		

* Test information contained in the Manual of Test Procedures for Materials.

SAMPLING SCHEDULE 2: NON-BITUMINOUS STABILIZED SUBBASE AND STABILIZED BASE COURSE

MATERIAL	SPECIFICATION REFERENCE	PROPERTY/QUALITY	FREQUENCY	MISTIC TEST	FORM
General					
Fine Aggregate	Section 1003*	Gradation	1 test per week of production, by	INV	MI 504
Coarse Aggregate	Section 1004*		Plant/District Inspector		
Portland Cement	Section 1001	Various	When requested by CBM	INV	BMPR LM6 Template
Lime	Section 1012	Various	Minimum of 1 sample on 1 st day, and then 1 sample per 500 tons, by District Inspector	INV	BMPR LM6 Template
Fly Ash (for CAM II)	Article 1010.02	Various	When requested by CBM	INV	BMPR LM6 Template
Stabilized Base and Subbase Courses					
Cement Aggregate Mixture II	Article 312.09*	Air	1 test per 1000 ft., by Project Inspector	ACC	BMPR MI654
	Article 312.09*	Slump	1 test per 1000 ft. formed; 1 test per day slip formed, by Project Inspector	ACC	BMPR MI654

SAMPLING SCHEDULE 2: NON-BITUMINOUS STABILIZED SUBBASE AND STABILIZED BASE COURSE, Continued

MATERIAL	SPECIFICATION REFERENCE	PROPERTY/QUALITY	FREQUENCY	MISTIC TEST	FORM
Stabilized Base and Subbase Courses, Continued					
Lime Stabilized Soil Base Course	Article 350.01* or Special Provision*	Density	1 test per 1500 ft. of pavement, by Project Inspector	PRO	BMPR MI701N
	Article 310.11*	Immediate Bearing Value Using Dynamic Cone Penetrometer	As determined by the District Geotechnical Engineer	PRO	BMPR SL30
Lime Stabilized Soil Subbase Course	Article 310.09* or Special Provision*	Density	1 test per 1500 ft. of pavement, by Project Inspector	PRO	BMPR MI701N
	Article 310.11*	Immediate Bearing Value Using Dynamic Cone Penetrometer	As determined by the District Geotechnical Engineer	PRO	BMPR SL30
Soil-Cement	Article 352.11*	Density	1 test per 1000 ft. of pavement, by Project Inspector	PRO	BMPR MI701N

* Test information contained in the Manual of Test Procedures for Materials.

QC/QA, PFP, and QCP:

Please note that the sampling and testing frequency table above does not apply to **QC/QA**, PFP or QCP projects. Please refer to the current applicable, standard specification, special provision and stand-alone documents therein for sampling and testing frequency requirements.

SAMPLING SCHEDULE 3: NON-QMP CONCRETE

MATERIAL	SPECIFICATION REFERENCE	PROPERTY / QUALITY	FREQUENCY	MISTIC TEST	FORM
Pavement, Shoulders, Base Course, and Widening					
Fine Aggregate Coarse Aggregate	Article 1003.02* Article 1004.02*	Gradation	1 test per week of production, by Plant/District Inspector	INV	MI 504
Portland or Blended Cement and Finely Divided Minerals	Sections 1001, 1010	Various	When requested by CBM	INV	BMPR LM6 Template
Concrete	Article 1020.04*	Slump	1 test per 500 ft. formed; or 1 test per day slip formed, by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Air 2-lane pavement and base course	1 test per 250 ft.; 1 test per 125 ft. if truck mixed, by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Air Widening and shoulders	1 test per 100 cu yd., by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Strength	4 beams (30 in.) first day; 2 per day thereafter, by Project Inspector *1	PRO	BMPR MI655
Bridges, Culverts, Retaining Walls, Building Walls and Footings, and Patching					
Fine Aggregate Coarse Aggregate	Article 1003.02* Article 1004.02*	Gradation	1 test per week per plant, by Plant/District Inspector *2	INV	MI 504
Portland or Blended Cement and Finely Divided Minerals	Sections 1001, 1010	Various	When requested by CBM	INV	BMPR LM6 Template

SAMPLING SCHEDULE 3: NON-QMP CONCRETE, Continued

MATERIAL	SPECIFICATION REFERENCE	PROPERTY / QUALITY	FREQUENCY	MISTIC TEST	FORM
Bridges, Culverts, Retaining Walls, Building Walls and Footings, and Patching, cont'd.					
Calcium Aluminate Cement	Special Prov. (BDE)	Various	1 test per project, by District Inspector	ACC	BMPR LM6 Template
Concrete	Article 1020.04*	Air Superstructure, Bridge Deck Overlays *3	1 test per load, by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Air All other	1 test per 50 cu yd., by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Slump Superstructure	1 test per 50 cu yd., by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Slump Bridge Deck Overlays *3	1 test per 50 cu yd., by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Slump All other	1 test per 100 cu yd. formed, or 1 test per day slip formed, by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Strength	2 beams (30 in.) per pour, by Project Inspector *4	PRO	BMPR MI655
Miscellaneous and Incidental Concrete Items					
Fine Aggregate Coarse Aggregate	Article 1003.02* Article 1004.02*	Gradation	1 test per week per plant, by Plant/District Inspector	INV	MI 504
Portland or Blended Cement and Finely Divided Minerals	Sections 1001, 1010	Various	When requested by CBM	INV	BMPR LM6 Template

SAMPLING SCHEDULE 3: NON-QMP CONCRETE, Continued

MATERIAL	SPECIFICATION REFERENCE	PROPERTY / QUALITY	FREQUENCY	MISTIC TEST	FORM
Miscellaneous and Incidental Concrete Items, continued					
Concrete	Article 1020.04*	Air	1 test per 100 cu yd., by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Slump	1 test per 100 cu yd. formed, or 1 test per day slip formed, by Project Inspector	ACC	BMPR MI654
	Article 1020.04*	Strength	2 beams (30 in.) per 100 cu yd. per plant, by Project Inspector *4	PRO	BMPR MI655
Grout, Controlled Low- Strength Material	Article 1019.07*	Air	Occasionally, by Project Inspector	ACC	BMPR MI654
	Article 1019.07*	Flow	Occasionally, by Project Inspector	ACC	BMPR MI654
	Article 1019.07*	Strength (28-day)	Occasionally, by Project Inspector	PRO	BMPR MI655
	Article 1019.07*	DCP (3-day)	Occasionally, by Project Inspector	PRO	BMPR SL30
High Performance Shotcrete (wet mix)	Special Provision	Air	1 test per 50 cu yd., by Project Inspector	PRO	No standard form
	Special Provision	Strength	1 test panel per day, by Project Inspector	PRO	No standard form

- * Test information contained in the <u>Manual of Test Procedures for Materials</u>.
- *1 For compressive strength, either three 4 x 8 in. or two 6 x 12 in. cylinders are allowed in lieu of each 30-in. beam. Cylinders shall be 6 x 12 in. when the nominal size of the coarse aggregate exceeds 1 in. Testing is normally performed at four time intervals the first day and at two time intervals thereafter. Slump and air tests are required when a strength specimen is made.
- *2 For bridge deck, 1 test per day per plant.
- *3 Bridge Deck overlays include microsilica, high-reactivity metakaolin, latex, and plasticized dense overlays.
- *4 For compressive strength, either three 4 x 8 in. or two 6 x 12 in. cylinders are allowed in lieu of each 30-in. beam. Testing is normally performed at two-time intervals. Slump and air tests are required when a strength specimen is made.

QC/QA, PFP, and QCP:

Please note that the sampling and testing frequency table above does not apply to **QC/QA**, PFP, or QCP projects. Please refer to the current applicable Special Provision and stand-alone documents therein for sampling and testing frequency requirements.

APPENDIX A

Revision Log

The Project Procedures Guide (PPG) is updated every one to three years by the PPG Committee or **CBM** and district staff to reflect current policies and practices. Updates are made to electronic files as needed and hard copies are uncontrolled. Archive versions are available to examine in the Bureau of Materials.

Date Revised	Revision Description	Authorized By
December 1, 2024	Updated to implement recertification requirements for specific Quality Management Training Program courses. For Evidence of Materials Inspection , defined the Manual for Materials Inspection as the document that shall take precedence if the Project Procedures Guide and the Manual for Materials Inspection are in conflict.	Brian Pfeifer