

State of Illinois  
Department of Transportation  
Bureau of Materials  
Springfield

POLICY MEMORANDUM

Revised April 14, 2022

32-12.1

This Policy Memorandum supersedes number 32-12.0 dated September 8, 2020

TO: REGIONAL ENGINEERS AND BUREAU CHIEFS IN THE OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION AND APPROVED/QUALIFIED AGGREGATE SOURCES

SUBJECT: FINE AND COARSE AGGREGATES USED AS SELECT FILL IN MSE WALLS ACCEPTANCE PROCEDURES FOR APPROVED/QUALIFIED AGGREGATE SOURCES

#### 1.0 PURPOSE

To establish procedures whereby fine and coarse aggregates used as **Select Fill** in MSE walls and furnished by an **Approved/Qualified Aggregate Source** will be accepted for use on **Department** projects.

#### 2.0 SCOPE

This procedure is available to all **Approved/Qualified Aggregate Sources**.

#### 3.0 AUTHORITY AND REFERENCES

1. IDOT Standard Specifications for Road and Bridge Construction
2. IDOT Manual of Test Procedures for Materials
3. AASHTO, ASTM, and IDOT Test Procedures
4. [Bureau of Materials](#) Policy Memorandum 30-12 for "Minimum Private Laboratory Requirements for Resistivity and Chemical Testing of Fine and Coarse Aggregates Used in MSE Walls"

#### 4.0 DEFINITIONS

**AASHTO** - American Association of State Highway and Transportation Officials.

**APPROVED/QUALIFIED AGGREGATE SOURCE** – A quarry that is approved to supply coarse and/or fine aggregates for **Select Fill** on **Department** projects.

**ASTM** - American Society for Testing Materials.

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

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

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

**INDEPENDENT ASSURANCE (IND) SAMPLE** - A sample used to provide an independent check on the reliability of a **Producer's** and/or a **Qualified Private Laboratory's** quality control program.

**AGGREGATE INSPECTOR** - District materials inspector who has successfully completed the Department's Aggregate Technician Course and is responsible for inspection at an aggregate Source. A Consultant, hired by the Department to perform the duties of an **Aggregate Inspector**, shall not be allowed to take any quality or Freeze-Thaw samples at an aggregate source.

**INVESTIGATION (INV) SAMPLE** - A destination sample used to verify the acceptability of **Select Fill** from a **Producer**.

**PRELIMINARY (PRE) SAMPLE** - A sample used to determine, in advance, if the **Select Fill** will be qualified prior to use on future **Department** projects.

**PRODUCER** - An individual or business entity providing materials and/or products for performance of prescribed work.

**QUALIFIED PRIVATE LABORATORY** - A resistivity and/or chemical construction materials testing laboratory not operated by the **Department** or a **Local Agency** that is inspected and approved by the **Department**.

**SELECT FILL** – Coarse or fine aggregate intended for use in constructing reinforced soil masses in mechanically stabilized earth (MSE) walls.

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

**SPLIT SAMPLE** - A sample in which half the material is tested by a **Qualified Private Laboratory**, and the other half is sent to the **Bureau** and may be tested for Quality Assurance.

**STANDARD SPECIFICATIONS** - The **Department's** Standard Specifications for Road and Bridge Construction.

**VERIFICATION (VER) SAMPLE** - A sample used for the purpose of verifying that the stock of **Select Fill** continues to be within specification limits.

## 5.0 FINE AND COARSE AGGREGATE FOR USE AS SELECT FILL IN MSE WALLS ACCEPTANCE PROCEDURES

5.1 In order to supply **Select Fill** on **Departmental** projects, the **Producer** shall be listed on the **Department's** ["Approved/Qualified Producer List of Aggregate Sources."](#)

5.2 In order for a private laboratory to conduct acceptance testing on **Select Fill**, it shall be approved as a **Qualified Private Laboratory** according to **Bureau** Policy Memorandum 30-12 ["Minimum Private Laboratory Requirements for Resistivity and Chemical Testing of Fine and Coarse Aggregates Used in MSE Walls."](#)

### 5.3 Preliminary Stockpile Qualification Procedure.

#### 5.3.1 Preliminary Sampling.

5.3.1.1 No more than 12 months prior to use, an **Aggregate Inspector** from the **Bureau** or **District** will request **Preliminary (PRE) Samples** of the **Select Fill** intended for incorporation into **Departmental** MSE wall projects.

5.3.1.2 **PRE Samples** shall be **Split Samples** according to Illinois [Modified AASHTO R 76 and R 90](#). The blending and splitting process shall be witnessed by the **Aggregate Inspector**. One portion of the **Split Sample** shall be shipped to the **Bureau**, and the other shall be secured by the **Aggregate Inspector** using security zip ties and be shipped by the **Producer** to a **Qualified Private Laboratory**. Costs associated with shipping **Split Samples** to the **Bureau** and a **Qualified Private Laboratory** shall be borne by the **Producer**.

5.3.1.3 The size of each portion of a **Split Sample** for fine aggregate shall be three (3) 40 lb (178 N) bags. The size of each portion of a **Split Sample** for coarse aggregate shall be five (5) 40 lb (178 N) bags.

#### 5.3.2 Initial Testing Criteria.

5.3.2.1 A **Qualified Private Laboratory** shall, and the **Bureau** may, conduct initial sample measurements according to Articles 1003.07 or 1004.06 of the **Standard Specifications**, and the applicable Illinois Modified Test Procedures. Costs associated with testing **Split Samples** conducted by a **Qualified Private Laboratory** shall be borne by the **Producer**.

5.3.2.2 Upon completion of testing, a **Qualified Private Laboratory** shall sign and submit a report of the testing results to the **Producer**. The **Producer** shall subsequently forward a copy of the report to the **Bureau** (Chief Geologist).

#### 5.3.3 Initial Assessment Criteria.

5.3.3.1 Conformance requirements detailed in Articles 1003.07 or 1004.06 of the **Standard Specifications**, and the applicable Illinois Modified Test Procedures shall apply to all test results on **Select Fill** conducted by the **Bureau** as well as a **Qualified Private Laboratory**.

- 5.3.3.2 The **Bureau** will determine the assessment of conformity with the **Specifications** based on all available test data. When the test results of the **Bureau** and a **Qualified Private Laboratory** conflict, the test results on the **Select Fill** obtained by the **Bureau** supersede those of a **Qualified Private Laboratory**.
- 5.3.3.3 Failure to meet the **Specification** requirements will result in denial of qualification of the **Select Fill** material for potential incorporation into **Departmental** MSE wall projects. However, at the discretion of the **Bureau**, the **Select Fill** may be re-tested and re-assessed according to Section 5.3.4.
- 5.3.4 Initial Re-Testing, and Re-Assessment Criteria.
- 5.3.4.1 At the discretion of the **Bureau**, the remaining initially sampled **Select Fill** may be re-tested by the **Bureau**, a **Qualified Private Laboratory** or both according to Section 5.3.2.
- 5.3.4.2 Re-assessment of test results will be according to Section 5.3.3.
- 5.3.5 Subsequent Initial Re-Sampling, Re-Testing, and Re-Assessment Criteria. Samples that do not meet the requirements of Section 5.3.4 will result in denial of qualification of the **Select Fill** material for potential incorporation into **Departmental** MSE wall projects, and should not be subsequently re-sampled, re-tested, and re-assessed unless otherwise authorized by the **Bureau**.
- 5.4 **Stockpile Verification Requirements**
- 5.4.1 Verification Sampling.
- 5.4.1.1 A maximum of twelve months after preliminary qualification of **Select Fill** stock, and every subsequent 12 month period thereafter, an **Aggregate Inspector** from the **Bureau** or **District** will request **Verification (VER) Samples**.
- 5.4.1.2 Sampling criteria outlined in Sections 5.3.1.2 and 5.3.1.3 shall apply.
- 5.4.2 Verification Testing Criteria.
- 5.4.2.1 Testing criteria outlined in Section 5.3.2 shall apply.
- 5.4.3 Verification Assessment Criteria.
- 5.4.3.1 Assessment criteria outlined in Sections 5.3.3.1 and 5.3.3.2 shall apply.
- 5.4.3.2 Failure to meet the **Specification** requirements will result in immediate re-testing and re-assessment according to Section 5.4.4.
- 5.4.4 Verification Re-Testing, and Re-Assessment Criteria.
- 5.4.4.1 The remaining **Select Fill** material sampled according to Section 5.4.1 will be re-tested by the **Bureau**, a **Qualified Private Laboratory** or both according to Section 5.3.2.

- 5.4.4.2 Re-assessment of test results will be according to Sections 5.3.3.1 and 5.3.3.2.
- 5.4.4.3 Failure to meet the **Specification** requirements upon re-test will result in disqualification of **Select Fill** material for potential incorporation into **Departmental** MSE wall projects. However, at the discretion of the **Bureau**, the **Select Fill** may be subsequently re-sampled, re-tested, re-assessed according to Section 5.4.5.
- 5.4.5 Subsequent Verification Re-Sampling, Re-Testing, and Re-Assessment Criteria.
  - 5.4.5.1 At the discretion of the **Bureau**, the **Select Fill** may be subsequently re-sampled according to Section 5.4.1, re-tested according to Section 5.4.2, and re-assessed according to Sections 5.3.3.1 and 5.3.3.2.
  - 5.4.5.2 Failure to meet the criteria outlined in Section 5.4.5.1 will result in disqualification of **Select Fill** material for potential incorporation into **Departmental** MSE wall projects.
- 5.5 **Independent Assurance (IND) and Investigation (INV) Sampling, Testing and Assessment Criteria.**
  - 5.5.1 **IND or INV Samples** may be taken at any time prior to or during the period of stock qualification.
  - 5.5.2 **IND Sampling** will be according to Sections 5.3.1.2 and 5.3.1.3, or as otherwise determined by the **Bureau**.
  - 5.5.3 **INV Sampling** will be as determined by the **Bureau** or **District**.
  - 5.5.4 **IND or INV Sample** testing and assessment will be according to Sections 5.4.2 and 5.4.3.
  - 5.5.5 **IND or INV re-Sampling**, re-testing, and re-assessment will be according to Section 5.4.4.
- 6.0 **CLOSING NOTICE**

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

The current **Bureau** Chief of Materials has approved this policy memorandum. Signed documents are on file with the **Bureau**.