

2019 BC, MB, NB, NL, NS, SK MINI-CORRELATIONS **– AGGREGATES INCLUDING SUPERPAVE AGGREGATES**

Please read the following Mini-correlation instructions carefully BEFORE you start testing!

- Testing shall be according to the “2018 BC,MB,NB,NL,NS,SK Soil Test Instructions” that are available on the CCIL website under “Proficiency Testing”. These are the same instructions that were used for the initial testing except for ASTM C136 Sieve Analysis of Aggregates, AASHTO T304 Uncompacted Void Content of Fine Aggregate Compaction, ASTM D698 Characteristics of Soils Using Standard Effort, ASTM D4791 Percent Flat and Elongated Particles in Coarse Aggregate and ASTM 5821 Percentage of Fractured Particles in Coarse Aggregate as detailed below.
- Please Report the Results by the date indicated in the letter from CCIL notifying you that an additional testing program (mini-correlation) is required.
- All test results MUST be reported through your CCIL lab portal at <https://portal.ccil.com/>. After signing into the portal, all mini-correlation reporting forms appropriate to your lab will be accessible under the tab for Reporting forms. You will be able to enter your test results into the forms and submit to CCIL through the portal.
- **New:** Please record the mini-correlation sample identification information found on the sample labels in the “Comments” section of the reporting forms.

SAMPLES FOR MINI-CORRELATION TESTING

- Samples for the mini-correlation are shipped to the laboratory at the time the laboratory is notified a mini-correlation is required.
- The mini-correlation samples are pre-prepared to meet the requirements of the appropriate test method and are to be tested as received except that the mini-correlation sample for ASTM D698 Compaction Characteristics of Soils Using Standard Effort requires sieving to obtain material for the test that passes the 4.75mm sieve.
- Generally, only one sample will be shipped for each test requiring a mini-correlation. Tests for a mini-correlation are not carried out in pairs.

MINI-CORRELATION INSTRUCTIONS – AGGREGATES

ASTM C136: SIEVE ANALYSIS OF AGGREGATES,

If the problem with your original test results was with the fine aggregate sieves, your lab will receive a sample of fine aggregate only. If the problem with your original test results was with the coarse and fine aggregate sieves, your lab will receive a combined coarse aggregate and fine aggregate sample.

If you receive only one fine aggregate **2015** mini-correlation sample, when reporting the fine aggregate %passing, use the %passing the 4.75mm sieve = **45.98%** (coarse aggregate/%fine

aggregate split) to calculate the combined grading of the fine aggregate. Report the %passing of the fine aggregate combined grading in the reporting form.

If you receive only one fine aggregate **2016** mini-correlation sample, when reporting the fine aggregate %passing, use the % passing the 4.75mm sieve = **50.98%** (coarse aggregate/%fine aggregate split) to calculate the combined grading of the fine aggregate. Report the %passing of the fine aggregate combined grading in the reporting form.

If you receive only one fine aggregate **2017** mini-correlation sample, when reporting the fine aggregate %passing, use the % passing the 4.75mm sieve = **50.17%** (coarse aggregate/%fine aggregate split) to calculate the combined grading of the fine aggregate. Report the %passing of the fine aggregate combined grading in the reporting form.

If you receive only one fine aggregate **2018** mini-correlation sample, when reporting the fine aggregate %passing, use the % passing the 4.75mm sieve = **42.69%** (coarse aggregate/%fine aggregate split) to calculate the combined grading of the fine aggregate. Report the %passing of the fine aggregate combined grading in the reporting form.

If you receive only one fine aggregate **2019** mini-correlation sample, when reporting the fine aggregate %passing, use the % passing the 4.75mm sieve = **39.06%** (coarse aggregate/%fine aggregate split) to calculate the combined grading of the fine aggregate. Report the %passing of the fine aggregate combined grading in the reporting form.

Example: Using %passing the 4.75mm sieve = 46.65%:

Sieve (mm)	Fine Aggregate %Passing	(Average %Passing 4.75mm) /100	Combined Gradation %Passing
4.75	100%	0.4665	46.65
2.36	77.7	0.4665	36.2
1.18	58.2	0.4665	27.2
.600	39.1	0.4665	18.2
.300	23.2	0.4665	10.8
.150	14.9	0.4665	6.9
.075	10.75	0.4665	5.01

If you receive a combined coarse and fine aggregate sample, test the entire sample as specified in the original CCIL instructions.

Report percent passing each sieve, with the exception of 4.75 mm sieve, to the nearest 0.1% on a cumulative basis. Report the percent passing 4.75 mm sieve to 0.01%. Report the percent passing the 75

In the event of a conflict between the rounding of the test results specified in these instructions and the Format for reporting test results required by the Type C reporting form in the lab portal, these instructions take precedence.

AASHTO T304: UNCOMPACTED VOID CONTENT OF FINE AGGREGATE:

DO NOT use the specific gravity values determined by your lab.

If your lab received a **2014** CCIL mini-correlation sample, compute the uncompact void content using the specific gravity value of **2.631**.

If your lab received a **2015** CCIL mini-correlation sample, compute the uncompact void content using the specific gravity value of **2.652**.

If your lab received a **2016** CCIL mini-correlation sample, compute the uncompact void content using the specific gravity value of **2.709**.

If your lab received a **2017** CCIL mini-correlation sample, compute the uncompact void content using the specific gravity value of **2.684**.

If your lab received a **2018** CCIL mini-correlation sample, compute the uncompact void content using the specific gravity value of **2.628**.

If your lab received a **2019** CCIL mini-correlation sample, compute the uncompact void content using the specific gravity value of **2.692**.

Report the uncompact voids to the nearest 0.1%.

ASTM D4791: PERCENT FLAT AND ELONGATED PARTICLES IN COARSE AGGREGATE

The mini-correlation sample is comprised of a single test sample, representing all of the size fractions combined. Do not separate into sized fractions.

Perform the test using 5:1 ratio. Test the entire mini-correlation sample for flat and elongated particles. Test as a single fraction and report a Percent Flat and Elongated particles on that basis. Compute the percent flat and elongated particles of the entire sample:

$$\text{Percent Flat \& Elongated particles} = (A/B) \times 100.$$

where: A = mass of flat & Elongated Particles. B = mass of test sample

Report the result to the nearest 0.1%.

ASTM D5821 PERCENTAGE OF FRACTURED PARTICLES IN COARSE AGGREGATE:

The mini-correlation sample is comprised of a single test sample representing all of the size fractions combined. Do not separate into sized fractions. Test the entire mini-correlation sample for fractured particles. Test as a single fraction and report a Percent Fractured Particles on that basis. Compute the **percent fractured particles** of the entire sample:

$$\text{Percent Fractured particles} = (A/B) \times 100.$$

where: A = mass of fractured particles.

B = mass of test sample.

Report the result to the nearest 0.1%.