

**AMENDMENTS TO OPSS 1010 (APR 04) –  
MATERIAL SPECIFICATION FOR AGGREGATES – BASE, SUBBASE, SELECT  
SUBGRADE, AND BACKFILL MATERIAL**

**OPSS 1010.04.01** The first paragraph is superseded by the following

**OPSS 1010.04.01** Submission of Test Data

The Contractor shall have test results available for the aggregates to be used in the work. **The QC testing records shall be made available to City’s Contract Administrator at least five (5) working days before the delivery of the material.** Test results shall be submitted by either the stockpile/pit-run method or control chart method. All test data forms shall be legible.

**OPSS 1010.05** is amended by the addition of the following:

**OPSS 1010.05.03.06** 19mm Crusher Run Limestone

19mm Crusher Run Limestone shall meet the physical requirements for Granular ‘A’ as shown in Table 1. 19mm Crusher Run Limestone shall be produced by crushing limestone and shall meet the following gradation:

<b>MTO Sieve Designation</b>	<b>Percentage Passing by Mass</b>
19 mm	100
16 mm	75-100
13.2 mm	65-90
9.5 mm	--
4.75 mm	35-55
1.18 mm	15-45
300 µm	5-22
150 µm	--
75 µm	0-8

**OPSS 1010.05.03.07** 50mm Crusher Run Limestone

50mm Crusher Run Limestone shall meet the physical requirements shown in Table 1. 50mm Crusher Run Limestone shall be produced by crushing limestone and shall meet the gradation depicted in Table 2.

**OPSS 1010.08.04** The fourth paragraph is superseded by the following

The Contractor shall cease using the non-complying materials and at the discretion of the Contract Administrator, remove the unacceptable materials, including the unacceptable materials that has already been placed and compacted.

**Table 1** is amended by the addition of the 50mm Crusher Run Limestone Physical Property Requirements, as follows:

**Table 1  
Physical Property Requirements**

Laboratory Test	MTO Test Number	Granular O	Granular A	Granular S	Granular B Type I and Type II	Granular M	50mm Crusher Run Limestone	Select Subgrade Material
Coarse Aggregate Petrographic Requirement	LS-609	(Note 2)	(Note 1) (Note 2)	(Note 2)	(Note 1) (Note 2)	(Note 1) (Note 2)	(Note 2)	(Note 2)
Freeze-Thaw Loss, % maximum	LS-614	15	N/A	N/A	N/A	N/A	N/A	N/A
Fine Aggregate Petrographic Requirement	LS-616 LS-709	(Note 3)						
Micro-Deval Abrasion Coarse Aggregate loss, % maximum	LS-618	21	25	25	30 (Note 4)	25	25	30 (Note 4)
Micro-Deval Abrasion Fine Aggregate loss, % maximum	LS-619	25	30	30	35	30	30	N/A
Plasticity Index	LS-704	0	0	0	0	0	0	0
Percent Crushed, minimum	LS-607	100	50	50	N/A	50	50	N/A
2 or more crushed faces, % minimum	LS-617	85	N/A	N/A	N/A	N/A	N/A	N/A
Asphalt Coated Particles, % maximum	LS-621	N/A	30	30	(Note 5)	30	30	N/A
Notes:								
<ol style="list-style-type: none"> <li>Granular A, B Type I, or M may contain up to 15% by mass of crushed glass and ceramic material combined.</li> <li>Granular A, B Type I, M, and S shall not contain more than 1% by mass of deleterious material. Granular O, Granular B Type II, SSM and 50mm Crusher Run Limestone shall not contain more than 0.1% by mass of wood. Petrographic classification of rock type need not be reported. This requirement is only to be reported when such material is present.</li> <li>Test required for materials north of the French and Mattawa Rivers only. For materials with greater than 5.0% passing the 75µm sieve, the amount of mica passing the 150µm sieve and retained on the 75µm sieve, shall not exceed 10% of the material in that sieve fraction unless either testing according to LS-709 determines permeability values to be greater than <math>1.0 \times 10^{-4}</math> cm/s or field experience show satisfactory performance. Prior data demonstrating compliance with this requirement will be acceptable provided such testing has been done within the past five years and that field performance of these materials has been satisfactory.</li> <li>The coarse aggregate Micro-Deval abrasion loss test requirements will be waived if the material has more than 80% passing the 4.75 mm sieve.</li> <li>Granular B Type I may contain up to 30% asphalt coated particles. Granular B Type II shall not contain RAP or asphalt coated products</li> </ol>								

**Table 2** is amended by the addition of the 50mm Crusher Run Limestone Gradation Requirements – Percent Passing, as follows:

**Table 2  
Gradation Requirements – Percent Passing**

MTO Test Number	Sieve	Granular						50 mm Crusher Run Limestone	Select Subgrade Material
		O	A	S	B (Note 1)		M		
					TYPE I (Note 2)	TYPE II			
LS-602	150 mm	N/A	N/A	N/A	100	N/A	N/A	N/A	100
	160 mm	N/A	N/A	N/A	N/A	100	N/A	N/A	N/A
	37.5 mm	100	N/A	N/A	N/A	N/A	N/A	70-100	N/A
	26.5 mm	95-100	100	100	50-100	50-100	N/A	N/A	50-100
	19 mm	80-95	85-100 (87-100*)	90-100	N/A	N/A	100	50-80	N/A
	13.2 mm	60-80	65-90 (75-95*)	75-100	N/A	N/A	75-95	N/A	N/A
	9.5 mm	50-70	50-73 (60-83*)	60-85	N/A	N/A	55-80	20-60	N/A
	4.75 mm	20-45	35-55 (40-60*)	40-60	20-100	20-55	35-55	N/A	20-100
	1.18 mm	0-15	15-40	20-40	10-100	10-40	15-40	15-40	10-100
	300 µm	N/A	5-22	11-25	2-65	5-22	5-22	N/A	5-95
	150 µm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.0-65.0
	75 µm	0-5.0	2.0-8.0 (2.0-10.0**)	9.0-15.0 (9.0-17.0**)	0-8.0 (0-10.0**)	0-10.0	2.0-8.0 (2.0-10.0**)	3.0-8.0	0-25.0

Notes:

1. Where Granular B is used for granular backfill for pipe subdrains, 100% of the material shall pass the 37.5mm sieve.
2. Where RAP is included in Granular B Type I, 100% of the RAP shall pass the 75mm sieve. Conditions in Note 1 supersede this requirement.

\* Where the aggregate is obtained from an air-cooled blast furnace slag source.

\*\* Where the aggregate is obtained from a quarry or an air-cooled blast furnace slag or nickel slag source.