

.01 GENERAL

Unless amended herein, granular material physical properties, and testing procedures to evaluate granular material quality shall conform to the requirements of OPSS 1001.

.02 GRANULAR 'A' BASE COURSE AND GRANULAR 'B' SUBBASE

.02.01 Physical Properties

Granular 'A'

Physical properties shall conform to OPSS.MUNI 1010.05.02, and Table 1, with the additional requirement that the granular material shall be composed of 100% crushed particles.

100 % Reclaimed Concrete Material (RCM) and up to 30% by mass Reclaimed Asphalt Pavement (RAP) shall be accepted in Granular 'A' base course materials.

Granular 'B' – Type II

Physical properties shall conform to OPSS.MUNI 1010.05.03.03 and Table 1.

.02.02 Gradation Properties

Gradation properties for Granular 'A' and 'B' shall conform to OPSS.MUNI 1010, Table 2.

Granular 'B' for sub base shall meet the gradation requirement for Type II.

.03 GRANULAR PIPE BEDDING

.03.01 Physical Properties

Physical properties shall conform to Table 600-1.

Slag (blast furnace and steel slag) shall not be used for pipe bedding of watermains or water services.

.03.02 Gradation Properties

Gradation properties shall conform to the requirements of Granular material in OPSS.MUNI 1010, Table 2.

Granular D shall conform to the gradation requirements in Table 600-2.

.04 GRANULAR TRENCH BACKFILL

.04.01 Excavated Native Materials

Trenches may be backfilled with select, approved excavated native materials, or as specified in the Contract Documents. Where granular trench backfill material is required refer to Form 600.04.02 and 600.04.03.

.04.02 Physical Properties

Physical properties shall conform to Table 600-1.

Crushed bedrock, is acceptable for granular trench backfill.

Use of slag is not permitted for backfill of sewers, private drains, watermains or water services.

.04.03 Gradation Properties

Gradation properties for Granular 'A' and Granular 'B' Type II shall conform to OPSS.MUNI 1010, Table 2.

TABLE 600-1

PHYSICAL TESTS	GRANULAR TRENCH BACKFILL	GRANULAR PIPE BEDDING	MTO LAB TEST NUMBER
Los Angeles Abrasion, Loss in Maximum Allowable Percent	N/A	N/A	LS 603
Petrographic Number, Maximum Allowable	250	250	LS 609
Plasticity Index	0	0	LS 704
Percentage of Crushed Particles, by mass Minimum	N/A	N/A	LS 607
Maximum Allowable Percentage of Asphalt Coated Particles in Coarse Aggregate	30	30	LS 621

TABLE 600-2
GRADATION REQUIREMENTS FOR GRANULAR D

SIEVE SIZE	PERCENTAGE PASSING BY MASS
106 mm	-
53 mm	-
26.5 mm	-
22.4 mm	-
16 mm	-
13.2 mm	-
9.5 mm	100
4.75 mm	50-100
1.18 mm	20-55
300 μm	10-30
150 μm	-
75 μm	0-12
53 μm	-

.05 BLAST FURNACE SLAG

The use of blast furnace slag shall be in accordance with Table 600-3.

APPROVED USES OF BLAST FURNACE SLAG TABLE 600-3		APPLICATIONS			
		APPLIED TO LAND SURFACE	APPLIED BELOW LAND SURFACE	PLACED IN WATER	ENCAPSULATED USES
GRANULAR BASE (Granular A) Under Asphalt/Concrete Pavement	Urban Road Cross- Section		APPROVED		
	Rural Road Cross- Section with Ditches		NOT APPROVED		
GRANULAR SUBBASE (Granular B) Under Asphalt/Concrete Pavement	Urban Road Cross- Section		APPROVED		
	Rural Road Cross- Section with Ditches		NOT APPROVED		
SUBGRADE STABILIZATION			USE SUBJECT TO RISK ASSESSMENT OF DRAINAGE FEATURES		
GRANULAR SHOULDER MATERIAL Rural Road Section with Ditches		NOT APPROVED	NOT APPROVED		
LIGHT-WEIGHT EMBANKMENT/BERM FILL		USE SUBJECT TO RISK ASSESSMENT OF DRAINAGE FEATURES	USE SUBJECT TO RISK ASSESSMENT OF DRAINAGE FEATURES		
WATERMAIN TRENCH BACKFILL			NOT APPROVED		
SEWER TRENCH BACKFILL			NOT APPROVED		
PIPE BEDDING/COVER MATERIAL			NOT APPROVED		
CLEAR STONE BEDDING AROUND PERFORATED SUBDRAIN PIPE			NOT APPROVED		
HOT MIX ASPHALT AGGREGATE		NOT APPROVED			NOT APPROVED IN ASPHALT
GABION AGGREGATE FOR RETAINING WALLS		NOT APPROVED			
LIGHT WEIGHT CONCRETE AGGREGATE					APPROVED IN CONCRETE