

PART 1 - GENERAL

<u>1.1 MEASUREMENT PROCEDURES</u>	.1	This item will not be measured for payment as it will be included in the lump sum price.
<u>1.2 PAYMENT PROCEDURES</u>	.1	Testing of topsoil: Departmental Representative will pay for cost of tests.
<u>1.3 REFERENCES</u>	.1	Agriculture and Agri-Food Canada .1 The Canadian System of Soil Classification, Third Edition, 1998.
	.2	Canadian Council of Ministers of the Environment .1 PN1340-2005, Guidelines for Compost Quality.
	.3	Canadian Nursery Landscape Association (CNLA) .1 Canadian Standards for Nursery Stock, 8th Edition, 2006.
<u>1.4 DEFINITIONS</u>	.1	Compost: .1 Mixture of soil and decomposing organic matter used as fertilizer, mulch, or soil conditioner. .2 Compost is processed organic matter containing 40% or more organic matter as determined by Walkley-Black or Loss On Ignition (LOI) test. .3 Product must be sufficiently decomposed (i.e. stable) so that any further decomposition does not adversely affect plant growth (C:N ratio below 25 50), and contain no toxic or growth inhibiting contaminants. .4 Composed bio-solids to: CCME Guidelines for Compost Quality, Category A B.
<u>1.5 SUBMITTALS</u>	.1	Provide submittals in accordance with Section 01 33 00.

- .2 Quality control submittals :
 - .1 Soil testing: submit certified test reports showing compliance with specified performance characteristics and physical properties as described in PART 2 - SOURCE QUALITY CONTROL.
 - .2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.6 QUALITY ASSURANCE

- .1 Pre-installation meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.

1.7 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse and recycling.
- .2 Divert unused soil amendments from landfill to official hazardous material collections site approved by Departmental Representative.
- .3 Do not dispose of unused soil amendments into sewer systems, into lakes, streams, onto ground or in locations where it will pose a health or environmental hazard.

PART 2 - PRODUCTS

2.1 TOPSOIL

- .1 Topsoil for seeded areas: mixture of particulates, micro organisms and organic matter which provides suitable medium for supporting intended plant growth.
 - .1 Soil texture based on The Canadian System of Soil Classification, to consist of 20 to 70% sand, minimum 7% clay, and contain 2 to 10% organic matter by weight.
 - .2 Contain no toxic elements or growth inhibiting materials.
 - .3 Finished surface free from:
 - .1 Debris and stones over 25 mm diameter.
 - .2 Course vegetative material, 10 mm diameter and 50 mm length, occupying more than 2% of soil volume.
 - .4 Consistence: friable when moist.

.5 Ph value: 5.0 to 6.0.

2.2 SOIL AMENDMENTS

- .1 Peatmoss:
 - .1 Derived from partially decomposed species of Sphagnum Mosses.
 - .2 Elastic and homogeneous, brown in colour.
 - .3 Free of wood and deleterious material which could prohibit growth.
 - .4 Shredded particle minimum size: 5 mm.
- .2 Sand: washed coarse silica sand, medium to coarse textured.
- .3 Organic matter: compost Category A, B in accordance with CCME PN1340, unprocessed organic matter, such as rotted manure, hay, straw, bark residue or sawdust, meeting the organic matter, stability and contaminant requirements.
- .4 Limestone:
 - .1 Ground agricultural limestone.
 - .2 Gradation requirements: percentage passing by weight, 90% passing 1.0 mm sieve, 50% passing 0.125 mm sieve.
- .5 Fertilizer: industry accepted standard medium containing nitrogen, phosphorous, potassium and other micro-nutrients suitable to specific plant species or application or defined by soil test.

2.3 SOURCE QUALITY CONTROL

- .1 Advise Departmental Representative of sources of topsoil and manufactured topsoil to be utilized with sufficient lead time for testing.
- .2 Contractor is responsible for amendments to supply topsoil as specified.
- .3 Soil testing by recognized testing facility for PH, P and K, and organic matter.
- .4 Testing of topsoil will be carried out by testing laboratory designated by Departmental Representative.
 - .1 Soil sampling, testing and analysis to be in accordance with Provincial standards.

PART 3 - EXECUTION

3.1 PREPARATION OF EXISTING GRADE

- .1 Verify that grades are correct.
- .1 If discrepancies occur, notify Departmental Representative and do not commence work until instructed by Departmental Representative.
- .2 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage.
- .3 Remove debris, roots, branches, stones in excess of 25 mm diameter and other deleterious materials.
 - .1 Power rake the surface for preparation of hydro-seeding.
 - .2 Remove soil contaminated with calcium chloride, toxic materials and petroleum products.
 - .3 Remove debris which protrudes more than 50 mm above surface.
 - .4 Dispose of removed material off site.
- .4 Cultivate entire area which is to receive topsoil to minimum depth of 100 mm.
 - .1 Cross cultivate those areas where equipment used for hauling and spreading has compacted soil.

3.2 PLACING AND SPREADING OF TOPSOIL

- .1 Place topsoil after Departmental Representative has accepted subgrade.
- .2 Spread topsoil in uniform layers.
- .3 Spread topsoil as indicated to 100 mm minimum depth after settlement.
- .4 Spread topsoil to match the surrounding grades and slopes after settlement.
- .5 Manually spread topsoil/planting soil around trees, shrubs and obstacles.

3.3 FINISH GRADING

- .1 Grade to eliminate rough spots and low areas and ensure positive drainage.
 - .1 Prepare loose friable bed by means of cultivation

and subsequent raking.

- .2 Consolidate topsoil to required bulk density using equipment approved by Departmental Representative.
 - .1 Leave surfaces smooth, uniform and firm against deep footprinting.

3.4 ACCEPTANCE

- .1 Departmental Representative will inspect and test topsoil in place and determine acceptance of material, depth of topsoil and finish grading.

3.5 SURPLUS MATERIAL

- .1 Dispose of materials except topsoil not required where directed by Departmental Representative off site.

3.6 CLEANING

- .1 Proceed in accordance with Section 01 74 11.
- .2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.