

PART I - GENERAL

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| <u>1.1 Related Work</u> | .1 | Rough Grading | : | Section 02211 |
| | .2 | Seeding | : | Section 02933 |
| | .3 | Sodding | : | Section 02938 |
| | .4 | Planting | : | Section 02950 |
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<u>1.2 Scope of Work</u> |
.1 |
This section covers stripping of topsoil to full depth, hauling, stockpiling and replacing topsoil as well as importing topsoil as required for each item of the contract. | | |
| | .2 | Coordinate work in this section with work in all other sections. | | |

PART II - PRODUCTS

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| <u>2.1 Materials</u> | .1 | <p>Topsoil texture to consist of 20% to 70% sand and will have a minimum of 5% organic matter for clay loams and 2% organic matter for sandy loams to a maximum of 20% by volume.</p> <p>Topsoil will be free of subsoil, roots, grass, weeds, toxic materials, stones in excess of 25 mm, and foreign objects.</p> <p>Topsoil will have an acidity range (pH) of 6.0 to 7.5.</p> <p>Soil nutrients shall be present in the following ratios:
 Nitrogen (N): 20 - 40 micrograms of available N/gram of topsoil
 Phosphorous (P): 10-20 micrograms of phosphate/gram of topsoil
 Potassium (K): 80-120 micrograms of potash/gram of topsoil
 Calcium, magnesium, and micro-nutrients including iron, zinc, boron, sulphur, copper, and molybdenum present in balanced ratios to support germination and establishment of intended vegetation.</p> <p>The contractor shall submit independent soil tests to Community Services prior to acceptance of topsoil. Should the native topsoil not meet these requirements, imported topsoil will be used or the native topsoil will be amended, prior to planting, to meet the above specifications and in accordance with the</p> | | |
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soils analysis.

- .2 Native Topsoil : Available from the excavated and stockpiled topsoil from grading operations. Topsoil is subject to inspection and testing by the contractor. **Do not commence work until topsoil is accepted by the Community Services Department.**
- .3 Imported Topsoil : Should the native topsoil not meet the requirements of this specification or should additional topsoil be required, imported topsoil shall be used. Imported topsoil is subject to inspection and testing by the contractor. **Do not commence work until topsoil is accepted by the Community Services Department.**

2.2 Testing and Quality Standard

- .1 The contractor shall submit independent soil tests to Community Services prior to acceptance of topsoil. Such tests shall be arranged and paid for by the contractor and certified by the soils consultant.
- .2 Test samples shall be an amalgamation of at least three samples randomly taken from the source. Samples shall be carefully mixed, recorded, labelled and otherwise documented prior to delivery to the testing laboratory.
- .3 Carefully communicate the intended use of the topsoil to the testing laboratory.
- .4 Submit two copies of the test results to the Community Services Department. Test results shall include, but not be limited to, NpK, Mg, soluble salt content, organic matter content, pH, soil texture and atrazine.
- .5 In the event test results indicate that the topsoil does not meet the specification in Item 2.1.1 and/or is not suitable for its intended purpose, the Contractor shall take the necessary remedial action as recommended in the topsoil report.

PART III - EXECUTION

3.1 Preparation

- .1 Grade subgrade, eliminating uneven areas and low spots, ensuring positive drainage. Remove debris, roots, branches,

stones in excess of 25 mm diameter, and other deleterious materials. Remove subsoil that has been contaminated with oil, gasoline or calcium chloride. Dispose of removed materials off site.

- .2 Cultivate entire area which is to receive topsoil to depth of 75 mm. Repeat cultivation in those areas where equipment used for hauling and spreading has compacted subgrade.

3.2 Spreading of Topsoil

- .1 Spread topsoil only after the Community Services representative has inspected and approved rough grade. Topsoil that has been spread prior to the rough grade approval by the Community Services representative may be subject to removal and reinstallation after a proper inspection has been conducted. All associated costs with the removal and reinstallation will be borne by the contractor.
- .2 Spread topsoil with adequate moisture in uniform layers over backfill.
- .3 Apply 150 mm minimum layer of topsoil (measured after compaction) to all park surfaces intended for sodding, seeding, planting, or naturalizing.
- .4 Manually spread topsoil around trees and obstacles where necessary to prevent damage.

3.3 Finish Grading

- .1 Fine grade and loosen topsoil. Eliminate rough spots and low areas to ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.
- .2 Roll to consolidate topsoil for areas to be grassed leaving surface smooth, uniform, clean from sticks and stones over 25mm in diameter, firm against deep foot printing, and with a fine loose texture.
- .3 Finished grades/topsoil shall be approved by Community Services prior to fertilizing and sodding/seeding. Approval of the finished grade by the City will require the submission of a grading certificate, stamped by a certified engineer, verifying that all finished grades are as per the approved working drawings. Sodding/seeding that has been installed prior to the finished

grade approval by the Community Services representative may be subject to removal and reinstallation after a proper inspection has been conducted. All associated costs with the removal and reinstallation will be borne by the contractor.

3.4 Maintenance

1. Maintain all grades until final acceptance of completed parks works.
2. Maintenance shall include all filling and regrading to retain grades at required elevations.

END OF SECTION 02212