

PART 1 - GENERAL

1.1 SUMMARY

- .1 This section specifies requirements for the planting of shrubs and groundcovers, complete with all related components and accessories and the warranty and maintenance of all plant material for a period of one year from date of acceptance.

1.2 RELATED WORK

- .1 Section 01 33 00 - Submittal Procedures
- .2 Section 01 74 21 - Construction/Demolition Waste Management and Disposal
- .3 Section 01 77 00 - Closeout Procedures
- .4 Section 01 78 00 – Closeout Submittals
- .5 Section 32 91 21 - Soil Placement and Grading

1.3 REFERENCE STANDARDS

- .1 Do shrubs and ground covers work in accordance with the Metric Guide Specification for Nursery Stock of the Canadian Nursery Trades Association, latest edition.

1.4 SOURCE QUALITY CONTROL

- .1 Obtain approval from Departmental Representative of plant material source prior to planting.
- .2 Acceptance of plant material does not prevent rejection after planting operations as a result Of damage during planting operations, or failure of growth.
- .3 Imported plant material must be accompanied with necessary permits and import licenses. Conform to Federal and Provincial regulations.

1.5 SCHEDULING

- .1 Obtain approval from Departmental Representative of schedule 7 days in advance of shipment of plant material.
 - .2 Schedule to include:
 - .1 Quantity and type of plant material.
 - .2 Shipping dates.
 - .3 Arrival dates on site.
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- .4 Planting dates.

1.6 SAMPLES

- .1 Mulch.

1.7 DELIVERY, STORAGE & PROTECTION

- .1 Protect plant material from frost, excessive heat, wind and sun during delivery.
- .2 Immediately store and protect plant material which will not be installed within 1 h after arrival at site in storage location approved by Departmental Representative.
- .3 Protect plant material from damage during transportation:
- .1 When delivery distance is less than 30 km and vehicle travels at speeds under 80 km/h, tie tarpaulins around plants or over vehicle box.
- .2 When delivery distance exceeds 30 km or vehicle travels at speeds over 80 km/h, use enclosed vehicle.
- .4 Protect stored plant material from frost, wind and sun.
- .5 For pots and containers, maintain moisture level in containers. Heel-in fibre pots

1.8 WARRANTY

- .1 The Contractor hereby warrants that plant material will remain free of defects in accordance with GC24 for 2 years following date of Acceptance.
- .2 End-of-warranty inspection will be conducted by Departmental Representative.
- .3 Departmental Representative reserves the right to extend Contractor's warranty responsibilities for an additional year if, at end of initial warranty period, leaf development and growth is not sufficient to ensure future survival.

1.9 REPLACEMENTS

1. During warranty period, remove from site any plant material that has died or failed to grow satisfactorily as determined by Departmental Representative.
2. Replace plant material at the beginning of the next planting season if balled and burlapped or wire basket material. Container grown plants of equal size can be replaced during suitable growing conditions.
3. Extend warranty period.
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1.10 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Collect and separate for disposal packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
- .3 Place materials defined as hazardous or toxic in designated containers.
- .4 Dispose of unused fertilizer material at official hazardous material collections site approved by Municipality.
- .5 Handle and dispose of hazardous materials in accordance with Municipal regulations.
- .6 Do not dispose of unused fertilizer material into sewer system, into streams, lakes, onto ground or in any other location where they will pose health or environmental hazard.
- .7 Ensure emptied containers are sealed and stored safely.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- .1 Type of root preparation, sizing, grading and quality: comply with Metric Guide Specification for Nursery Stock, Latest Edition of Canadian Nursery Trades Association.
 - .2 Source of plant material: grown in Zone 5b in accordance with Agriculture Canada Plant Hardiness Zone Map.
 - .3 Free of disease, insects, defects or injuries and structurally sound with strong fibrous root system.
 - .4 Root pruned regularly, but not later than one growing season prior to arrival on site.
 - .5 Collected Stock: Not acceptable unless approved by Departmental Representative.
 - .6 Substitutions to plant material indicated on the planting plan is not permitted unless written permission has been obtained as to size, type, variety, and quantity. Substitutions must be of similar species as originally specified.
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2.2 WATER

- .1 Free of impurities that would inhibit plant growth.

2.3 MULCH

- .1 Shredded bark: varying in size from 1 to 3 inches, at least 2 years old, from coniferous trees.

2.4 FERTILIZER

- .1 Complete slow release commercial type ratio as determined by soil test. Organic product acceptable substitute, provided it will supply the nutrient requirements determined by soil sample test. Fertilizer not to contain a herbicide.

PART 3 - EXECUTION

3.1 PRE-PLANTING OPERATIONS

- .1 All locations to be marked on site by Contractor and approved by Departmental Representative prior to commencement of work.
- .2 Ensure plant material acceptable to Departmental Representative.
- .3 Remove damaged roots and branches from plant material.

3.2 EXCAVATION & PREPARATION OF PLANTING BEDS

- .1 Ensure that establishment of sub-grade for planting beds is as specified on the drawings and has been approved by Departmental Representative.
- .2 Preparation of planting beds is specified in Section 32 91 21 – Soil Placement and Grading.
- .3 For individual planting holes:
 - .1 Stake out location and obtain approval from Departmental Representative.
 - .2 Excavate to depth and width as indicated.
 - .3 Remove subsoil, rocks, roots, debris and toxic material from excavated material that will be used as planting soil. Dispose of excess material.
 - .4 Scarify sides of planting hole.
 - .5 Remove water which enters excavations prior to planting. Notify Departmental Representative if water source is ground water.

3.3 PLANTING

- .1 For container stock remove entire container or wrapping without damaging root ball.
- .2 Plant vertically in locations as indicated. Orient plant material to give best appearance in relation to structure, roads and walks.
- .3 Backfill soil in 150 mm lifts. Tamp each lift to eliminate air pockets. When two thirds of depth of planting pit has been backfilled, fill remaining space with water. After water has penetrated soil, backfill to finish grade.
- .4 Form watering saucer as indicated.
- .5 Water plant material thoroughly after planting operations are complete.
- .6 After soil settlement has occurred, fill with soil to finish grade.
- .7 Dispose of burlap, wire and container material as specified in Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.4 MULCHING

- .1 Ensure soil settlement has been corrected and weeds removed prior to mulching.
- .2 Water plant material thoroughly prior to placement of mulch.
- .3 Spread mulch to depth indicated.

3.5 MAINTENANCE DURING ESTABLISHMENT PERIOD

- .1 Once plant material is fully installed and inspected by the Departmental Representative, the Establishment Period will begin and continue until the date of Acceptance, at which time the project shall be considered substantially complete and the warranty period will begin.
 - .2 Perform following maintenance operations during the Establishment Period until date of Acceptance as determined by Departmental Representative.
 - .3 Water to maintain soil moisture for optimum establishment, growth and health of plant material without causing erosion.
 - .4 Remove weeds monthly. Planting areas to be maintained 100% weed free.
 - .5 Replace or respread damaged, missing or disturbed mulch.
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- .6 Apply pesticides in accordance with Federal, Provincial and Municipal regulations as and when required to control insects, fungus and disease. Obtain product approval from Departmental Representative prior to application.
- .7 Apply fertilizer in early spring at manufacturer=s suggested rate and as required by plant material.
- .8 Remove dead or broken branches from plant material.
- .9 Remove and replace dead plants, and plants not in healthy growing condition. Make replacements in same manner as specified for original plantings.

3.6 ACCEPTANCE

- .1 Plant material will be accepted by Departmental Representative 90 days after planting operation is completed provided plant material exhibits healthy growing condition and is free from disease, insects and fungal organisms and planting areas are 100% weed free.
- .2 Plant material installed less than 90 days prior to frost will be accepted in following spring, 30 days after start of growing season provided acceptance conditions are fulfilled.

3.7 MAINTENANCE DURING WARRANTY PERIOD

- .1 Warranty Period to commence on date of Acceptance and continue for one year following date of Acceptance.
 - .2 From time of acceptance by Departmental Representative to end of warranty period, perform following maintenance operations.
 - .3 Water to maintain soil moisture conditions for optimum growth and health of plant material without causing erosion. Contractor shall ensure that plant material receives sufficient water during hot, dry periods.
 - .4 Reform damaged watering saucers.
 - .5 Remove weeds monthly. Planting areas to be maintained 100% weed free.
 - .6 Replace or respread damaged, missing or disturbed mulch.
 - .7 Apply fertilizer in early spring at manufacturer=s suggested rate and as required by plant material.
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- .8 Remove and replace dead plants and plants not in healthy growing condition. Make replacements in the same manner as specified for original plantings.
- .9 Submit monthly written reports to Departmental Representative identifying:
 - .1 Maintenance work carried out.
 - .2 Development and condition of plant material.
 - .3 Preventative or corrective measures required which are outside Contractor's responsibility.
- .11 Notify Departmental Representative when warranty period is completed to arrange inspection and transfer of maintenance responsibility to Departmental Representative.

3.8 CLEAN-UP

- .1 Immediately, remove materials which have spilled onto adjacent surfaces during work of this contract.