

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 01 33 00 – Submittal Procedures.
- .2 Section 01 74 11 – Cleaning.

1.2 SCHEDULING

- .1 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.
- .2 Scheduling:
 - .1 Schedule hydraulic seeding to coincide with preparation of soil surface.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for seed, mulch, tackifier, fertilizer, liquid soil amendments and micronutrients.
- .3 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .4 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.

1.4 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Landscape Contractor: to be a Member in Good Standing of Landscape Nova Scotia.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements:
 - .1 Labelled bags of fertilizer identifying mass in kg, mix components and percentages, date of bagging, supplier's name and lot number.
 - .2 Inoculant containers to be tagged with expiry date.
- .3 Storage and Handling Requirements:
 - .1 Store fertilizer in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Replace defective or damaged materials with new.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Waste Management: separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.7 WARRANTY

- .1 For seeding, 12 months warranty period is extended to 1 full growing season.
- .2 End-of-warranty inspection will be conducted by Owner.

Part 2 Products

2.1 MATERIALS

- .1 Seed: "Canada pedigreed grade" in accordance with Government of Canada Seeds Act and Regulations.
 - .1 Grass mixture: "Certified", "Canada No. 1 Lawn Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
 - .1 Mixture composition:
 - .1 40 % Kentucky Blue Grass.
 - .2 40 % Creeping Red Fescue.
 - .3 20% Annual Rye Grass.
 - .2 Mulch: specially manufactured for use in hydraulic seeding equipment, non-toxic, water activated, green colouring, free of germination and growth inhibiting factors with following properties:
 - .1 Type I mulch:
 - .1 Made from wood cellulose fibre.
 - .2 Organic matter content: 95% plus or minus 0.5%.
 - .3 Value of pH: 6.0.
 - .4 Potential water absorption: 900%.
 - .3 Tackifier: water dilutable, liquid dispersion.
 - .4 Water: free of impurities that would inhibit germination and growth.
 - .5 Fertilizer:
 - .1 To Canada "Fertilizers Act" and Regulations.
 - .2 Complete synthetic, slow release with 35% of nitrogen content in water-insoluble form.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrate previously installed under other Sections or Contracts are acceptable for hydraulic seeding.
 - .1 Visually inspect substrate in presence of Departmental Representative.

- .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
- .3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 INSTALLERS

- .1 Use installers with a membership in Good Standing with Landscape Nova Scotia.

3.3 PROTECTION OF EXISTING CONDITIONS

- .1 Protect structures, signs, guide rails, fences, plant material, utilities and other surfaces not intended for spray.
- .2 Immediately remove any material sprayed where not intended.

3.4 PREPARATION OF SURFACES

- .1 Do not perform work under adverse field conditions such as wind speeds over 10 km/h, frozen ground or ground covered with snow, ice or standing water.
- .2 Fine grade areas to be seeded free of humps and hollows.
 - .1 Ensure areas are free of deleterious and refuse materials.
- .3 Cultivated areas identified as requiring cultivation to depth of 25 mm.
- .4 Ensure areas to be seeded are moist to depth of 150 mm before seeding.
- .5 Obtain Departmental Representative's approval of grade and topsoil depth before starting to seed.

3.5 FERTILIZING PROGRAM

- .1 Fertilize prior to fine grading, during establishment and warranty period in accordance with manufacturer's recommendations.

3.6 PREPARATION OF SLURRY

- .1 Measure quantities of materials by weight or weight-calibrated volume measurement satisfactory to Departmental Representative.
- .2 Charge required water into seeder. Add material into hydraulic seeder under agitation. Pulverize mulch and charge slowly into seeder.
- .3 After materials are in seeder and well mixed, charge tackifier into seeder and mix thoroughly to complete slurry.

3.7 SLURRY APPLICATION

- .1 Hydraulic seeding equipment:
 - .1 Slurry tank.
 - .2 Agitation system for slurry to be capable of operating during charging of tank and during seeding, consisting of recirculation of slurry and/or mechanical agitation method.
 - .3 Capable of seeding by 50 m hand operated hoses and appropriate nozzles.

- .4 Tank volume to be certified by certifying authority and identified by authorities "Volume Certification Plate".
- .2 Slurry mixture shall be applied to surface in accordance with manufacturer's instructions and as approved by Departmental Representative.
- .3 Apply slurry uniformly, at optimum angle of application for adherence to surfaces and germination of seed.
 - .1 Using correct nozzle for application.
 - .2 Using hoses for surfaces difficult to reach and to control application.
- .4 Blend application 300 mm into adjacent grass areas or sodded areas or previous applications to form uniform surfaces.
- .5 Re-apply where application is not uniform.
- .6 Remove slurry from items and areas not designated to be sprayed.

3.8 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Keep pavement and area adjacent to site clean and free from mud, dirt, and debris at all times.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
 - .1 Clean and reinstate areas affected by Work.

3.9 PROTECTION

- .1 Protect seeded areas from trespass until plants are established.
- .2 Remove protection devices as directed by Departmental Representative.

3.10 MAINTENANCE DURING ESTABLISHMENT PERIOD

- .1 Perform following operations from time of seed application until acceptance by Owner.
- .2 Grass Mixture:
 - .1 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
 - .2 Mow grass to 50 mm whenever it reaches height of 70 mm. Remove clippings which will smother grass.
 - .3 Fertilize seeded areas after 10 weeks after germination provided plants have mature true leafs in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles.
 - .4 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.
 - .5 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.

3.11 ACCEPTANCE

- .1 Seeded areas will be accepted by Departmental Representative provided that:
 - .1 Plants are uniformly established and seeded areas are free of rutted, eroded, bare or dead spots.
 - .2 Areas have been mown at least twice.
 - .3 Areas have been fertilized.
- .2 Areas seeded in fall will achieve final acceptance in following spring, one month after start of growing season provided acceptance conditions are fulfilled.

3.12 MAINTENANCE DURING WARRANTY PERIOD

- .1 Perform following operations from time of acceptance until end of warranty period:
 - .1 Repair and reseed dead or bare spots to satisfaction of Departmental Representative.
 - .2 Mow areas seeded and remove clippings that will smother grassed areas as directed by Owner.
 - .3 Fertilize seeded areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles.

END OF SECTION