

**Part 1            General**

**1.1               RELATED REQUIREMENTS**

- .1       Not used.

**1.2               STANDARDS**

- .1       BNQ-0605-030 standard Landscaping: Sodding and seeding.

**1.3               DOCUMENTS/SAMPLES TO SUBMIT FOR APPROVAL/INFORMATION**

- .1       Submit required documents and samples according to section 01 33 00 - Submittal procedures.
- .2       Data sheet
  - .1       Submit the required data sheets and the manufacturer's instructions and documentation for seeds, mulch, tackifier, fertilizer, liquid soil amendments and micronutrients.
- .3       Submit the following information in writing.
  - .1       Volume capacity of the hydraulic seeder in litres.
  - .2       The amount of product to be used per tank, calculated based on seeder volume.

**1.4               WARRANTY**

- .1       For seeding, the 12-month warranty period is extended to one (1) complete growing season.
- .2       The Departmental Representative will inspect the vegetation at the end of the warranty period.

**Part 2           Product**

**2.1               MATERIAL**

- .1       Seeds: Canada pedigreed seed, in accordance with the Canadian *Seeds Act* and *Seeds Regulations*.
  - .1       Grass mix: Canada Certified No. 1 and 2 Lawn Grass Mixtures, in accordance with the Canadian *Seeds Act* and *Seeds Regulations*.
    - .1       Herbio Stable grass mix composition:
      - .1       25% 'Fults' Punicella distans,
      - .2       15% Tall fescue, Typton (with endophytes),
      - .3       15% Strong creeping red fescue, Salsa
      - .4       15% Chewing fescue, Wilma (with endophytes),

- .5 15% Canada bluegrass, Ruebens,
- .6 10% Perennial ryegrass, Vail-Player (with endophytes),
- .7 3% White clover,
- .8 2% Red clover.
- .2 Topsoil:

Cultivated soil: arable land with acceptable amounts of clay and sand. Should contain 4-5% organic matter for light sandy loam and 2-3% organic matter for clayey earth. The soil must be free of subsoil, roots, vegetation, toxic substances, pebbles, rocks, and all other foreign objects, and must have a pH value of 5.5 to 7.5. The topsoil must not contain grass or weeds.
- .2 Mulch: specially manufactured for use in hydraulic seeding equipment, non-toxic, water-activated, with added green colouring, free of germination and growth inhibitors, with the following properties:
  - .1 Type I mulch
    - .1 Composed of wood cellulose fibre.
    - .2 Organic matter content: 95%, plus or minus 0.5%.
    - .3 pH value: 6.0.
    - .4 Water absorption capacity: 900%.
- .2 Tackifier: water-soluble plant carbohydrate.
- .3 Water: free of any impurities that might inhibit grass germination or growth.
- .4 Fertilizer
  - .2 In accordance with the Canadian *Fertilizers Act* and *Fertilizers Regulations*.
  - .3 Slow-release synthetic compound fertilizers, 35% nitrogen content in water-insoluble form.
- .5 Inoculants: inoculant containers must be labelled with their expiry date.

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Verification of conditions: Before work begins, verify that surface/substrate installed during other sections or contracts is in an acceptable condition for hydraulic seeding in accordance with the manufacturer's instructions.
  - .1 Complete a visual inspection of the surface/substrate in the presence of the Departmental Representative.
  - .2 Inform the Departmental Representative of any unacceptable conditions immediately upon discovery.

### **3.2 INSTALLERS**

- .1 Use installers who are members in good standing of the Horticultural Trades Association.

### **3.3 INSTALLING AND SPREADING THE TOPSOIL AND HUMUS**

- .1 Install the topsoil once the Departmental Representative has approved the infrastructure.
- .2 Spread the topsoil in uniform layers no more than 150 mm thick.
- .3 Keep soil compaction in mind during installation to ensure that projected levels are reached.
- .4 Manually perform finishing earthwork on soil-covered areas. Respect the indicated profiles and elevations.
- .5 Level the topsoil to eliminate bumps and dips and ensure surface water flows easily. If the soil is too soft or too loose, lightly compact it with a land roller and then rake it.
- .6 Use a 50 kg, 900 mm wide land roller to firm up the surface of the topsoil layer.
- .7 Surfaces should be left smooth, uniform, and resistant to footprints. The texture should be fine and loose.

### **3.4 SURFACE PREPARATION**

- .1 Do not perform work in unfavourable conditions, such as when the wind speed is above 10 km/h or when the ground is frozen or covered with snow, ice or standing water.
- .2 Break up surfaces identified for tilling to a depth of 25 mm.
- .3 The Departmental Representative must approve the surfaces before seeding can begin.

### **3.5 FERTILIZATION PROGRAM**

- .1 Fertilize the soil prior to final levelling work; spread the fertilizer uniformly, according to the manufacturer's instructions.

### **3.6 SEEDING MIX PREPARATION**

- .1 Measure quantities by weight or by volume with a container graded for the weight of the product, to the satisfaction of the Departmental Representative. Provide the necessary equipment to measure quantities.
- .2 Pour the required amount of water into the hydraulic seeder. Turn on the agitator before adding the seeding material. Spray the mulch and pour it slowly into the seed drill.
- .3 Once the products that have been poured into the seed drill are mixed well, add the tackifier and mix well.

### **3.7 SEEDING MIX APPLICATION**

- .1 Seeding should be monitored by a certified landscape planting supervisor.
- .2 Use only hydraulic seeding equipment that includes the following equipment and criteria.
  - .1 Seed mix tank.
  - .2 Agitation system that mechanically mixes and/or recirculates the mix and can operate during tank loading and seeding.
  - .3 50 m hand-operated hoses, equipped with appropriate nozzles.
  - .4 Tank volume certified by the appropriate authorities, indicated by a certification label provided by the authorities.
- .3 Spread a seeding mix made up of the following parts. The quantities are for one (1) hectare.
  - .1 Seeds: According to the application rate listed in the Material section.
  - .2 Tackifier: 900 L or according to the manufacturer's instructions.
  - .3 Water: Quantity recommended by the manufacturer
  - .4 Fertilizer: 125 kg, at a ratio of 1:3:1
  - .5 Mulch: Type I, 3,000 kg
- .4 Spread the seeding mix uniformly. Apply mix at the best angle to ensure the seeds stick to the surface and germinate.
  - .1 Use the most-appropriate nozzle for application.
  - .2 Use hand-operated hoses to control application and seed difficult-to-reach areas.
- .5 Re-apply seeding mix in areas where the application is not uniform.
- .6 Remove the seeding mix from surfaces that should not be seeded.

### **3.8 CLEANING**

- .1 Progress cleaning: clean in accordance with section 01 74 11 — Cleaning.
  - .1 Leave areas clean at the end of every work day.
  - .2 Keep pavement and nearby surfaces clean and free of mud, soil and debris at all times.
- .2 Final cleaning: remove surplus material, waste, tools and equipment from the work site in accordance with section 01 74 11— Cleaning.
  - .1 Clean areas affected by work and return them to their original state.

### **3.9 PROTECTION**

- .1 Prohibit all traffic on the seeded areas until plants are established.
- .2 Remove protection devices as directed by the Departmental Representative.

**3.10 MAINTENANCE DURING THE ESTABLISHMENT PERIOD**

- .1 Maintenance work should be performed under supervision of a certified landscape maintenance supervisor.
- .2 Complete the following maintenance tasks, starting from the date of seed application until accepted by the Departmental Representative.
- .3 Grass mixture
  - .1 Repair and reapply seed mixture to dead or bare areas to establish plants before work is accepted.
  - .2 Mow grass to a height of 50 mm once it reaches 70 mm. Remove clippings, which may smother the lawn [according to the Departmental Representative's instructions].
  - .3 10 weeks after germination, assuming that the vegetation has true leaves, fertilize the seeded areas according to the fertilization program after mowing. Spread half of the required fertilizer in one direction, and the other half perpendicularly. Water well to help the fertilizer penetrate the soil.
  - .4 Water the seeded areas to maintain optimal moisture levels required to ensure germination and continued grass growth. Control watering so that the soil is not washed away.

**3.11 ACCEPTANCE**

- .1 Seeded areas will be accepted by the Departmental Representative provided that the following conditions are met.
  - .1 The plants are uniformly established. Seeded areas have no eroded, bare or dead spots or ruts.
  - .2 Surfaces have been mowed at least twice (2 times).
  - .3 Surfaces have been fertilized.
- .2 Areas seeded in autumn will be definitively accepted the following spring, one (1) month after the beginning of the growth period, if the required conditions for acceptance are met.

**END OF SECTION**