
SODDING

1.0 GENERAL

1.1 REFERENCE STANDARDS

- 1.1.1 Canadian Nursery Landscape Association
 - 1. Canadian Standards for Nursery Stock
- 1.1.2 Canadian Landscape Standard, First Edition
 - 1. Section 4: Grading and Drainage
 - 2. Section 6: Growing Medium
- 1.1.3 Canadian National Master Construction Specifications (NMS)

1.2 WORK INCLUDED

- 1.2.1 The section covers the supply, approval, handling, storage and installation of sod.

1.3 SUBMITTALS

- 1.3.1 Submit product data for each type of product indicated.
- 1.3.2 Submit planting schedule indicating anticipated planting dates for each type of planting.
- 1.3.3 Submit maintenance instructions indicating recommended procedures to be established by Owner for maintenance of lawns following the required maintenance period.

1.4 SUBSTITUTIONS

- 1.4.1 Substitutions will require approval from Engineer.
- 1.4.2 Submit proof that the sod specified is unobtainable prior to making substitutions.
- 1.4.3 Substitutions shall be of nearest to specified sod.
- 1.4.4 Substitution will not increase Contract Price bid.

1.5 QUALITY ASSURANCE

- 1.5.1 Contractor: experienced and knowledgeable in landscape work of contract.
- 1.5.2 Site Supervisor: competent, experienced and knowledgeable to direct and supervise all staff and work of contract. Supervisor shall possess a Landscape Journeyman Gardener certification or other similar qualification acceptable to Engineer/Consultant.
- 1.5.3 Staffing: experienced, competent and trained landscape personnel who will perform all tasks and services in a knowledgeable and professional manner. Workers shall act safely and professionally at all times while working on site. Contractor shall not assign any worker that the Engineer deems incompetent, careless, insubordinate, or otherwise objectionable to work on site.

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- 1.5.4 Contractor shall be responsible for ensuring that contract specifications are being adhered to. Failure of the Engineer to immediately reject unsatisfactory workmanship or to notify the Contractor of their deviation from the specification shall not relieve the Contractor of their responsibility to repair and/or replace unsatisfactory work.
- 1.5.5 Contractor shall obtain approvals as required by contract for suppliers, sub-contractors, and materials.
- 1.5.6 Contractor shall advise Engineer, in writing, of any conditions or defects encountered on site before or during construction upon which the work of this section depends and which may adversely affect its performance.
- 1.5.7 Do not commence work until adverse conditions or defects have been evaluated by the Engineer and corrective measures taken.
- 1.5.8 Commencement of work shall imply acceptance of existing conditions and no claims for damages or extras resulting from such conditions or defects will be accepted later, except where such conditions could not have been known prior to commencing work.

2.0 PRODUCTS

2.1 SOD

- 2.1.1 The grass sod shall be a certified No. 1 cultivated turf grass sod grown from Canada No. 1 seed. It shall be grown and sold in accordance with the classification of the Southern Alberta Turf Grass Association.

APPROVED SOD TYPES

- 2.1.2 Approved Sod Types
 - 1. Irrigated – Type A
 - a) Shall be a 100% Kentucky Bluegrass Blend, each variety shall be no more than 40% of the total blend.
 - 2. Non-Irrigated – Type B
 - a) Shall be a 100% Fescue Blend, each variety shall be no more than 40% of the total blend.
- 2.1.3 Substitutions
 - 1. Contractor shall provide documentation from supplier demonstrating that proposed substitution product achieves the same performance bench marks as the blends mixes above.
 - 2. Performance Bench Marks:
 - a) Drought Tolerant
 - b) Shade Tolerant
 - c) Salt Tolerant
 - d) $\geq 50\%$ Reduction in Water Requirements
- 2.1.4 Approval of Sod
 - 1. The Contractor shall make the sod available at the source of supply for inspection by the Engineer.
 - 2. The sod shall have a strong fibrous root system and shall be free from stones and burned or bare spots.

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2.1.5 Handling and Storage

1. The sod shall be cut by approved methods in accordance with recommendations of the Nursery Sod Growers Association of Alberta. The pieces shall be approximately 0.50 square meters in area. The soil shall be a minimum of 12.5 mm and a maximum of 25 mm in depth.
2. The sod shall be rolled or folded prior to lifting in such a manner as to prevent tearing or breaking.
3. Sod shall be protected during transportation to prevent drying out and shall arrive at the site in a fresh and healthy condition.
4. Dried out, damaged, deteriorated and unhealthy sod is not acceptable. Broken or irregular pieces of sod are not acceptable. Promptly remove all unacceptable sod from site.
5. Sod shall be installed immediately after arrival. If there is any delay in installation, sod
6. Deliver sod to site within 24 hours of being harvested. Install all sod within 36 hours of being harvested.

3.0 EXECUTION

3.1 SITE PREPARATION

- 3.1.1 Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
- 3.1.2 Remove weeds and debris.
- 3.1.3 The subgrade shall be compacted to 80% of Standard Proctor Density for sodded areas unless otherwise specified and be approved by the Engineer prior to placing the topsoil.
- 3.1.4 The topsoil mix shall be a minimum of 135 mm deep and fertilized within 48 hours of laying sod. The topsoil mix shall be compacted to 80% of Maximum Standard Proctor Density for sodded areas unless otherwise specified.
- 3.1.5 Keep topsoil 25 mm below finished grade.
- 3.1.6 Scarify and/or aerate soil surface to allow for proper subsurface drainage.
- 3.1.7 The surface of all areas to be sodded shall be wet immediately prior to sodding.

3.2 FERTILIZING

- 3.2.1 Apply fertilizer prior to sodding, after final grade is approved by Owner.
- 3.2.2 Apply 12-51-0 or other similar granular starter fertilizer evenly at 3 kg/100 m² using a calibrated mechanical distributor.
- 3.2.3 Lightly rake and incorporate fertilizer into topsoil.

3.3 INSTALLATION

- 3.3.1 Do not lay sod if dormant.
- 3.3.2 Do not perform work during hot and dry conditions, or when ground is frozen, muddy or covered in snow or during times of unfavorable climatic conditions.

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- 3.3.3 Lay sod smooth and even; butt sod pieces close and tight with no open joints visible. Stagger end joints 30 cm minimum between adjacent rows to avoid continuous seams. Do not stretch or overlap sod pieces.
- 3.3.4 Sod shall be laid closely knit together in such a manner that no open joints are visible, or pieces are overlapping.
- 3.3.5 Sod shall be laid smooth and flush with adjoining grass areas and hard landscape elements such as paving and curbing unless otherwise specified on the drawings.
- 3.3.6 Saturate sod with fine water spray within two hours of planting, until sod and soil in contact with bottom of sod are thoroughly wet.
- 3.3.7 When the sod and soil has sufficiently dried to prevent damage, the sod area shall be rolled with a roller to ensure a good bond between the sod and soil, also remove any minor depressions and irregularities.
- 3.3.8 All sodded areas shall be posted by the Contractor to warn that the area is freshly sodded. The signs supplied by the Contractor shall be approved by the Engineer.
- 3.3.9 During first week, water daily or more frequently as necessary to maintain constantly adequate moisture in soil to a minimum depth of 100 mm (4") below sod.

3.4 LAYING SOD ON SLOPES

- 3.4.1 On sloped areas 5:1 and steeper, lay sod perpendicular to slope and secure with wooden pegs. Place 4 to 6 wooden pegs/m², to prevent shifting of sod. Drive pegs flush with sod surface. Initiate sod installation from bottom of slope.
- 3.4.2 Prior to placing sod on steep slopes where erosion may occur, place geotextile fabric netting over graded topsoil for reinforcement. Install and securely anchor sod in place over fabric with metal staples in accordance with manufacturer's instructions.

3.5 CLEANUP AND PROTECTION

- 3.5.1 Promptly remove soil and debris created by lawn work from paved areas; clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas. Clear soil and rubble from catch basins, manholes, valves and other hard surface features.
- 3.5.2 Collect all litter and other debris from site during work of contract.
- 3.5.3 Remove and dispose of excess materials, soil, litter, debris, and grass clippings at approved disposal site. Contractor shall be responsible for all disposal costs.
- 3.5.4 Erect barricades and warning signs as required to protect newly planted areas from traffic; maintain barricades throughout maintenance period and remove after lawn is established.
- 3.5.5 Damaged sod resulting from inadequate protection shall be repaired with topsoil, fertilizer and new sod at Contractor's expense. All damages shall be repaired prior to final acceptance.

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3.6 MAINTENANCE OF SODDED AREAS

- 3.6.1 Maintenance of turf areas shall be provided by the Contractor and shall include all measures necessary to establish and maintain grass in a healthy and vigorous growing condition.
- 3.6.2 Management of the sodded areas will occur in the second growing season to control the establishment and growth of undesirable vegetation such as Canada thistle.
 - 1. Non-Irrigated Type A
 - a) Weed Control
 - i. May use Selective Herbicides or Mechanical Vegetation Control (Mowing).
 - ii. Vegetation to be 90% free of weeds.
 - b) Watering:
 - iii. Contractor is responsible to increase watering as required during hot / dry periods.
 - iv. Sod must not be allowed to dry and must be kept moist at all times.
 - 2. Irrigated Type B
 - a) Weed Control
 - v. Mechanical Vegetation Control (Mowing) only.
 - vi. Vegetation to be 90% free of weeds.
 - b) Watering
 - vii. Contractor is responsible to increase watering as required during hot / dry periods.
 - viii. Sod must not be allowed to dry and must be kept moist at all times.

4.0 MEASUREMENT AND PAYMENT

- 4.1 Payments will be based on unit price bid. Payment shall include the supply and installation of all materials shown on the drawings, and all materials incidental to the completion of the work, and shall include all costs for the maintenance and warranty of the system.
- 4.2 Progress claims submitted by the contractor shall be based on the unit prices submitted or the percentage of work completed in the tender form for the work completed at date of claim and approved by the engineer and owner prior to payment.
- 4.3 No payment shall be made for materials delivered and stored onsite that have not been properly installed and tested.
- 4.4 The unit prices for supply shall include supplying, delivering, loading, unloading and all allowances for handling, storage, breakage and waste. Payment will be made only for material actually installed and tested in the work.

END OF SECTION