Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 01 33 00 – Submittal procedures

1.2 REFERENCE STANDARDS

.1 ASTM International

.1 ASTM D4491-99a (2009), Standard Test Methods for Water Permeability of Geotextiles by Permittivity.

.2 ASTM D4595-09, Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method.

.3 ASTM D4716-08, Standard Test Method for Determining the (In-Plane) Flow Rate Per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.

.4 ASTM D4751-04, Standard Test Method for Determining Apparent Opening Size of a Geotextile.

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-4.2 No. 11.2-2004, Textile Test Methods - Bursting Strength - Ball Burst Test (Extension of September 1989).

.2 CAN/CGSB-148.1, Methods of Testing Geotextiles and Complete Geomembranes.

.1 No.2-M85, Methods of Testing Geosynthetics - Mass per Unit Area.

.2 No.3-M85, Methods of Testing Geosynthetics - Thickness of Geotextiles.

.3 No.6.1-93, Methods of Testing Geotextiles and Geomembranes - Bursting Strength of Geotextiles under No Compressive Load.

.4 No.7.3-92, Methods of Testing Geotextiles and Geomembranes - Grab Tensile Test for Geotextiles.

.5 No. 10-94, Methods of Testing Geosynthetics - Geotextiles - Filtration Opening Size.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Provide manufacturer's instructions, printed product literature and data sheets for geotextiles and include product characteristics, performance criteria, physical size, finish and limitations.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Storage and Handling Requirements:

.1 Store materials off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

.2 Store and protect geotextiles from direct sunlight and UV rays.

.3 Replace defective or damaged materials with new.

Part 2 Products

2.1 MATERIAL

.1 Geotextile: non-woven synthetic fibre fabric, supplied in rolls.

.1 Width: 3.5 meters

.2 Length: 25 meters

.3 Composed of: polypropylene minimum 85% by mass of with inhibitors added to base plastic to resist deterioration by ultra-violet and heat exposure.

.2 Geotextile – Type 1, used for the shoreline protection:

Physical properties:

.1 Thickness: to CAN/CGSB-148.1, No.3-M85, minimum 6.5 mm.

.2 Tensile strength and elongation to CSA/CGSB-148.1, no. 7.3-92.

.1 Tensile strength: minimum 3300 N-wet state.

.2 Elongation at break: minimum 65%.

.3 Ball burst strength: to CAN/CGSB-4.2, No.11.2, minimum 10 000 KPa.

.3 Geotextile – Type 2: used for the approach.

Physical properties:

.1 Thickness: to CSA/CGSB – 148.1, no. 3-M85, minimum 2.3 mm.

.2 Tensile strength and elongation to CSA/CGSB – 148.1, no. 7.3-92.

.1 Tensile strength: minimum 1200 N wet state.

.2 Elongation break: minimum 45%.

.3 Ball burst strength: to CSA/CGSB – 4.2, no. 11.2: minimum 3150 KPa.

.4 Hydraulic properties:

.1 Filtration opening size (FOS): to CAN/CGSB-148.1 No.10-94.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for geotextile material installation in accordance with manufacturer's written instructions.

.1 Visually inspect substrate in presence of Departmental Representative.

.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

3.2 INSTALLATION

.1 Place geotextile material by unrolling onto graded surface in orientation, manner and locations indicated.

.2 Place geotextile material smooth and free of tension stress, folds, wrinkles and creases.

.3 Place geotextile material on sloping surfaces in one continuous length from toe of slope to upper extent of geotextile.

.4 Overlap each successive strip of geotextile 600 mm over previously laid strip.

.5 Protect installed geotextile material from displacement, damage or deterioration before, during and after placement of material layers.

.6 Replace damaged or deteriorated geotextile to approval of Departmental Representative.

3.3 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.

.1 Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

END OF SECTION