## SECTION 01140 – PROVISIONAL

## SOIL EROSION AND SEDIMENTATION CONTROL

***Provisional Specification Summary:***
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2.2 SILT FENCE. Polypropylene geotextile fabric, resistant to common soil chemicals, mildew, and insects; non-biodegradable; in longest lengths possible; meeting the following requirements:

2.2.01 Average Opening Size: 30 U.S. Std. Sieve 600 µm), maximum; ASTM D4751.

2.2.02 Permittivity: 0.05 sec $^{-1}$, minimum; ASTM D4491.

2.2.03 Ultraviolet Resistance: Retaining at least 70 percent of tensile strength; ASTM D4355 after 500 hours exposure.

2.2.04 Tensile Strength: 100 lb-f (445 N) minimum, in cross-machine direction; 124 lb-f (551 N) minimum in machine direction; ASTM D4632

2.2.05 Elongation: 15 to 30 percent; ASTM D4632.

2.2.06 Tear Strength: 55 lb-f (244 N) minimum; ASTM D4533

Posts shall be 2 by 2-inch (50 mm x 50 mm) cross section hardwood stakes, minimum 3-feet (1.0 m) long.

2.3 DEWATERING DISCHARGE FILTER BAG. UV-stabilized, non-woven geotextile bag to filter sediment from water prior to discharging. Geotextile fabric shall meet the following minimum average roll requirements:

2.3.01 Tensile Strength: 180 lb-f (200 N) minimum; ASTM D4632

2.3.02 Elongation: 50 percent minimum; ASTM D4632

2.3.03 Puncture Strength: 105 lb-f (667 N) minimum; ASTM D4833

2.3.04 Mullen Burst: 350 psi (2413 kPa) minimum; ASTM D3786-87

2.3.05 Trapezoidal Tear: 70 lb-f (310 N) minimum; ASTM D4533

2.3.06 Flow Rate: 80 gal/min/sf. (54 l/s/m$^2$) Minimum; ASTM D4491

2.3.07 Permittivity: 1.4 sec $^{-1}$ minimum; ASTM D4491

2.3.08 Apparent Opening Size: 100 U.S. Std. Sieve (150 µm) maximum; ASTM D4751

2.3.09 UV-Stability: 70% retained strength; ASTM D4355 after 500 hours.

2.4 TURBIDITY BARRIER. Geotextile fabric curtain suspended from flotation devices at the water surface and held in a vertical position by a ballast chain in the lower hem. Turbidity barrier curtain shall meet the following minimum requirements unless otherwise specified on the plans.

2.4.01 Consist of vinyl laminate on 1000 denier polyester fabric weighing 18 ounce per square yard (610 g/m$^2$) minimum.

2.4.02 Tensile strength of fabric shall be 220 lbs (100 kg) minimum.

2.4.03 Edges of fabric to be reinforced with minimum 5/8-inch (16 mm) diameter polypropylene rope.

2.4.04 Ballast chain minimum 5/16-inch (8 mm) galvanized steel.

2.4.05 Buoyancy blocks providing buoyancy of 18lbs/l.f (27 kg/m).

2.4.06 Length of curtain (water depth) 5-feet (1.5 m).

2.5 EROSION CONTROL BLANKETS. Machine produced blanket with a consistent thickness of evenly distributed straw or coconut fiber as specified. Unless otherwise specified on the Plans, the erosion control blanket shall have the following minimum properties:

2.5.01 Double net 100% straw blanket

2.5.02 Top and bottom photodegradable polypropylene netting, 1.64 lbs./ 1,000 sft. (0.8 kg/ m$^2$) approximate weight.

2.5.03 100% agricultural straw 0.5 lbs. / sy. (.27 kg/m$^2$)

2.5.06 Stitch spacing: 1.5 inches (40 mm) on centers

2.5.07 Pegs shall be 6-inch (150 mm) long, hardwood pegs.

2.6 INLET FILTER FABRIC. The filter fabric shall be constructed of 100% continuous polyester needle-punched non-woven engineering fabric and follow the guidelines in the American Society for Testing and Materials (ASTM) D1117-99; Standard Guide for Evaluating Nonwoven Fabrics. The filter fabric shall be fabricated to provide a direct fit with the drainage structure cover. The filter fabric shall have the following minimum physical properties.

2.6.01 Tensile Strength: 80 lb-f (.355 kN) minimum; ASTM D4632

2.6.02 Elongation: 50 percent minimum; ASTM D4632

2.6.03 Puncture Strength: 45 lb-f (200 kN) minimum; ASTM D4833

2.6.04 Mullen Burst: 350 psi (2413 kPa) minimum; ASTM D3786-87

2.6.05 Trapezoidal Tear: 70 lb-f (310 N) minimum; ASTM D4533

2.6.06 Flow Rate: 80 gal/min/sf. (54 $l/s/m^2$) Minimum; ASTM D4491

2.6.07 Permittivity: 1.4 $sec^{-1}$ minimum; ASTM D4491

2.6.08 Apparent Opening Size: 100 U.S. Std. Sieve (150 µm) maximum; ASTM D4751

2.6.09 UV-Stability: 70% retained strength; ASTM D4355 after 500 hours.

End of Provisional Section

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