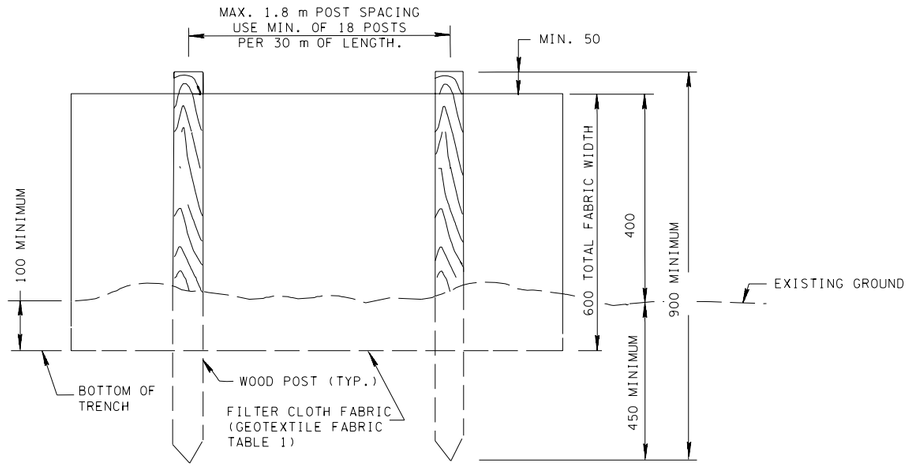
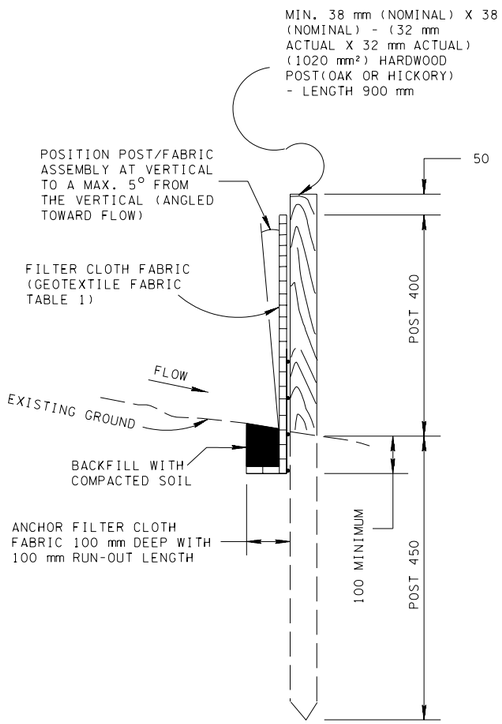
TEMPORARY FILTER BARRIER

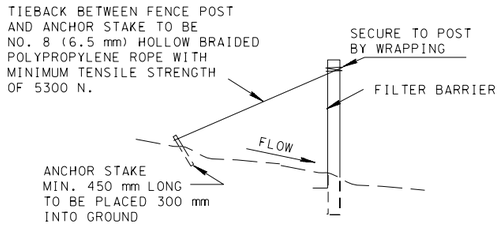
(ITEM NO. 209M08.01)



ELEVATION VIEW



SECTIONAL VIEW



FILTER BARRIER TIEBACK DETAIL

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS. COST TO BE INCLUDED IN THE ITEMS FOR TEMPORARY FILTER BARRIER)

TABLE 1
TEMPORARY SILT FENCE FABRIC SPECIFICATIONS

FABRIC PROPERTY AND TEST METHODS	REQUIRED PHYSICAL PROPERTIES (MEAN VALUES OF TEST DATA)
FABRIC TYPE	WOVEN SLIT FILM
APPARENT OPENING SIZE (ASTM D4751)	#30 TO #70 STANDARD SIEVE
PERCENT OPEN AREA (POA)	1 % TO 10 %
WATER FLUX (ASTM D4491)	≥ 10 L/SEC/m^2
TENSILE STRENGTH (ASTM D4632)	≥ 57 kg (WARP DIRECTION) X 57 kg (FILL DIRECTION)
ULTRAVIOLET STABILITY (AFTER 500 HRS PER ASTM D4355)	≥ 90%
ELONGATION (ASTM D4632)	≤ 20% (MAX)
BURST STRENGTH (ASTM D3786)	≥ 2068 kPa
PUNCTURE STRENGTH (ASTM D4833)	≥ 32 kg
TRAPEZOIDAL TEAR (ASTM D4533)	≥ 30 kg (WARP DIRECTION) X 30 kg (FILL DIRECTION)

TEMPORARY FILTER BARRIER GENERAL NOTES

(A) ALL LABOR AND MATERIALS SHOWN ON THE ELEVATION AND SECTIONAL VIEWS USED TO CONSTRUCT TEMPORARY FILTER BARRIERS ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM 209M08.01 TEMPORARY FILTER BARRIER PER METER.

(B) FILTER BARRIERS ARE USED TO INTERCEPT SMALL AMOUNTS OF SEDIMENT AND REDUCE VELOCITY FROM SHEET FLOW IN COMMERCIAL AND RESIDENTAL AREAS ONLY.

(C) THE MAXIMUM DRAINAGE AREA SIZE FOR A CONTINUOUS BARRIER SHALL BE 0.10 ha PER 30 m OF BARRIER LENGTH. MAXIMUM SLOPE LENGTH BEHIND FENCE ON UPSLOPE SIDE SHALL BE 30 m (AS MEASURED ALONG THE GROUND SURFACE).

(D) WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE JOINED ACCORDING TO THE DETAILS ON STANDARD DRAWING ECM-STR-3E.

(E) MAINTENANCE SHALL BE PERFORMED AS NEEDED; CAPTURED SOIL MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE FILTER BARRIER AND/OR OTHER EVIDENCE OF FILTER CLOGGING IS OBSERVED.

(F) THE FILTER FABRIC SHALL BE STAPLED TO THE WOODEN STAKES. HEAVY DUTY WIRE STAPLES WITH 13 mm LEG AND 25 mm WIDTH SHALL BE USED AND EVENLY SPACED WITH THREE PER POST FOR FILTER BARRIERS. FILTER MATERIAL SHALL NOT BE STAPLED TO TREES.

(G) FILTER BARRIERS SHOULD BE PLACED ALONG OR NEAR THE GROUND CONTOUR. THE BOTTOM OF BARRIER AT GROUNDLINE SHOULD BE ON A ZERO PERCENT (0%) GRADE, PLUS OR MINUS FIVE TENTHS OF ONE PERCENT (±0.5%).

(H) A PREASSEMBLED FILTER BARRIER MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED FILTER BARRIER.

(I) STATIC SLICING IS THE PREFERRED METHOD OF FILTER BARRIER INSTALLATION. STATIC SLICING INVOLVES THE INSERTION OF A NARROW CUTTING BLADE, PLACED AT THE SPECIFIED ANCHOR DEPTH FOR THE GIVEN FABRIC AS SHOWN ON THE APPLICABLE DETAIL, AND SIMULTANEOUSLY PULLING THE FENCE FABRIC INTO THE TRENCH AS THE TRENCH IS BEING EXCAVATED. ALTERNATE TRENCH-BASED METHODS ARE ALSO ACCEPTABLE. FOR TRENCH-BASED INSTALLATIONS, FILTER BARRIER SHALL BE INSTALLED PER THE FOLLOWING STEPS AND IN THE FOLLOWING ORDER:

- EXCAVATE TRENCH A MAXIMUM OF 100 mm WIDE AND AT THE SPECIFIED DEPTH AS SHOWN ON THE APPLICABLE DETAIL. THE TRENCH SHALL BE HAND-CLEANED FOLLOWING EXCAVATION TO REMOVE BULKY DEBRIS SUCH AS ROCKS, STICKS, AND SOIL CLODS FROM THE TRENCH.
- INSTALL FABRIC IN TRENCH.
- BACKFILL TRENCH (OVER-FILL) WITH SOIL PLACED AROUND FABRIC.
- COMPACT SOIL BACKFILL WITH MECHANICAL EQUIPMENT. DO NOT DAMAGE THE FABRIC DURING COMPACTION (DAMAGED FABRIC SHALL BE REPLACED).
- DRIVE AND SET SUPPORT POSTS PER SPACING REQUIREMENTS GIVEN ON THE APPLICABLE FENCE DETAIL. FOR PRE-ASSEMBLED FILTER BARRIER, DRIVE SUPPORT POSTS INTO GROUND FIRST, FOLLOWED BY FABRIC PLACEMENT IN TRENCH.
- ATTACH FABRIC TO THE POSTS USING WIRE TIES OR STAPLES. SPACING AND DENSITY OF TIES OR STAPLES SHALL BE INSTALLED AS GIVEN ON THE APPLICABLE DETAIL.

EROSION CONTROL PLAN LEGEND: * FB * FB * FB * TEMPORARY FILTER BARRIER

TENNESSEE METRIC D.O.T.

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY FILTER BARRIER

12-18-02 ECM-STR-3A