

FILTER NOTES:

1. UNDERDRAIN PIPES SHALL BE SCH. 40 PVC. ENDS OF UNDERDRAIN PIPING SHALL BE PLUGGED WITH PIPE FITTINGS. PIPE JOINTS SHALL BE FULLY GLUED.
2. SOIL FILTER OUTLET PIPE SHALL HAVE 6" DIA. BALL VALVE, WITH 22 - 43 GPM FLOW RATE CAPACITY.
3. COMPACT EMBANKMENT MATERIAL TO 93% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
4. FILTER BED & SIDE SLOPES SHALL BE SEEDED USING "NEW ENGLAND CONSERVATION/WILDLIFE MIX" FROM NEW ENGLAND WETLAND PLANTS, INC. OF AMHERST, MA. OR APPROVED EQUAL (APPLICATION RATE 25#/ACRE).
5. MDT 703.22 UNDERDRAIN BACKFILL MATERIAL, TYPE B SPECIFICATIONS.

SIEVE	BY WEIGHT
1	90 - 100
1/2	75 - 100
#4	50 - 100
#20	15 - 80
#50	0 - 15
#200	0 - 5

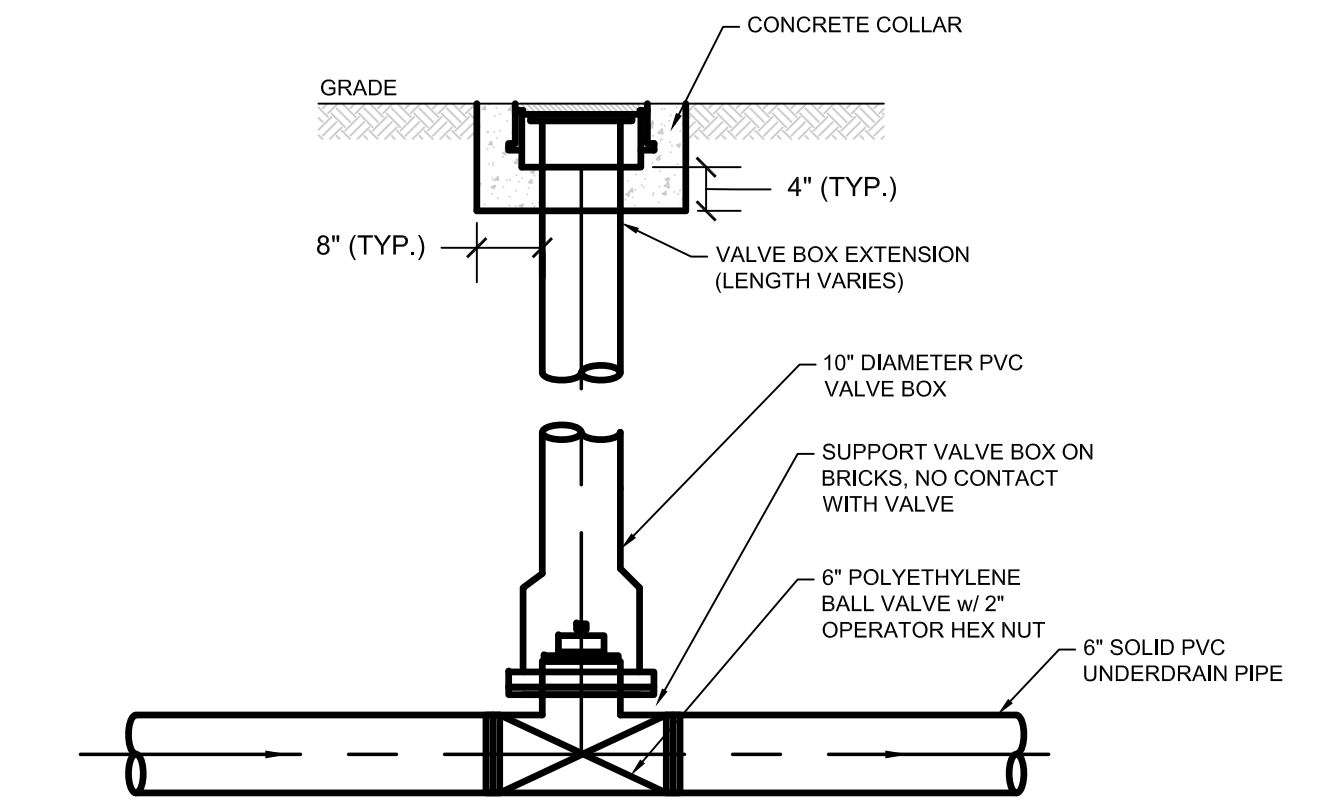
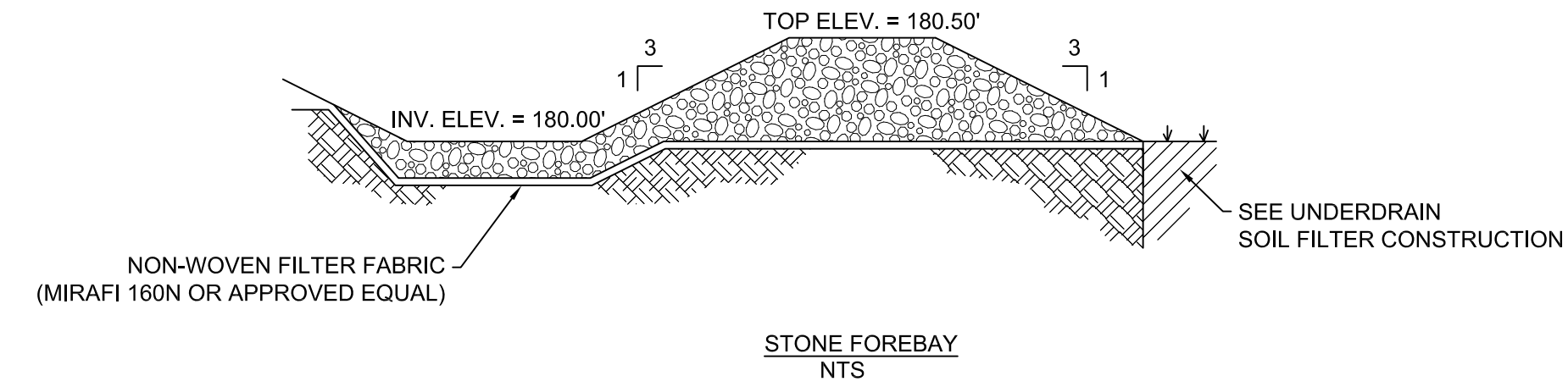
6. FILTER MEDIA MATERIALS:

- 6.1. FILTER TOPSOIL LAYER: A 6-INCH LAYER OF LOAMY TOPSOIL SUCH AS USDA SANDY LOAM TOPSOIL WITH 5-8% HUMIFIED ORGANIC MATTER. SCREENED TOPSOIL FROM THE SITE MAY BE APPROPRIATE BUT SHALL BE TESTED FOR ORGANIC CONTENT. ORGANIC MATTER (SUCH AS SUPERHUMUS OR EQUIVALENT) MAY BE ADDED IF NECESSARY, PROVIDED THAT THE RESULTING TEXTURE IS SUITABLE. SEE EROSION CONTROL DETAILS FOR EROSION CONTROL BLANKET INSTALLATION REQUIREMENTS.
- 6.2. FILTER SAND LAYER: A 12-INCH LAYER OF LOAMY COARSE SAND PER MAINE DEP STORMWATER BEST MANAGEMENT PRACTICES TABLE 7.1.3.

SIEVE	BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
#200 (CLAY SIZE)	<2.0

FILTER CONSTRUCTION INSPECTION AND TESTING NOTES:

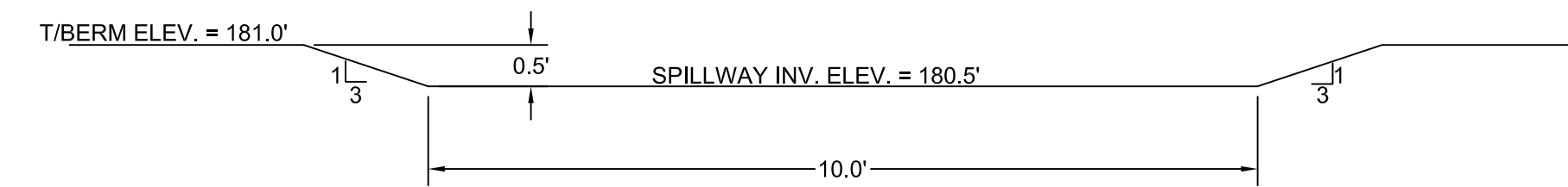
1. INSPECTION OF THE FILTER BASIN SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE MAINE DEP.
2. AT A MINIMUM INSPECTIONS WILL OCCUR:
 - 2.1. AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED;
 - 2.2. AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER SAND LAYER;
 - 2.3. AFTER FILTER SAND LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER TOPSOIL LAYER;
 - 2.4. AFTER THE FILTER TOPSOIL LAYER HAS BEEN INSTALLED AND SEEDED; AND
 - 2.5. AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
3. THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR EACH COMPONENT OF THE FILTER MEDIA, IDENTIFYING THE SOURCE.
4. ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN WILL BE APPROVED BY THE DESIGN ENGINEER, AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING MAINE DEP SPECIFICATIONS.
5. THE CONTRACTOR SHALL SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE USED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
6. THE CONTRACTOR SHALL PERFORM, OR HAVE PERFORMED, A SIEVE ANALYSIS CONFORMING TO ASTM C138 ON EACH TYPE OF THE SAMPLE MATERIAL. ALL MATERIALS SHALL HAVE A CLAY CONTENT OF LESS THAN 2% AS DETERMINED BY HYDROMETER GRAIN SIZE ANALYSIS.
7. THE CONTRACTOR SHALL PERFORM, OR HAVE PERFORMED, A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MATERIALS CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90 - 92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.



NOTES:

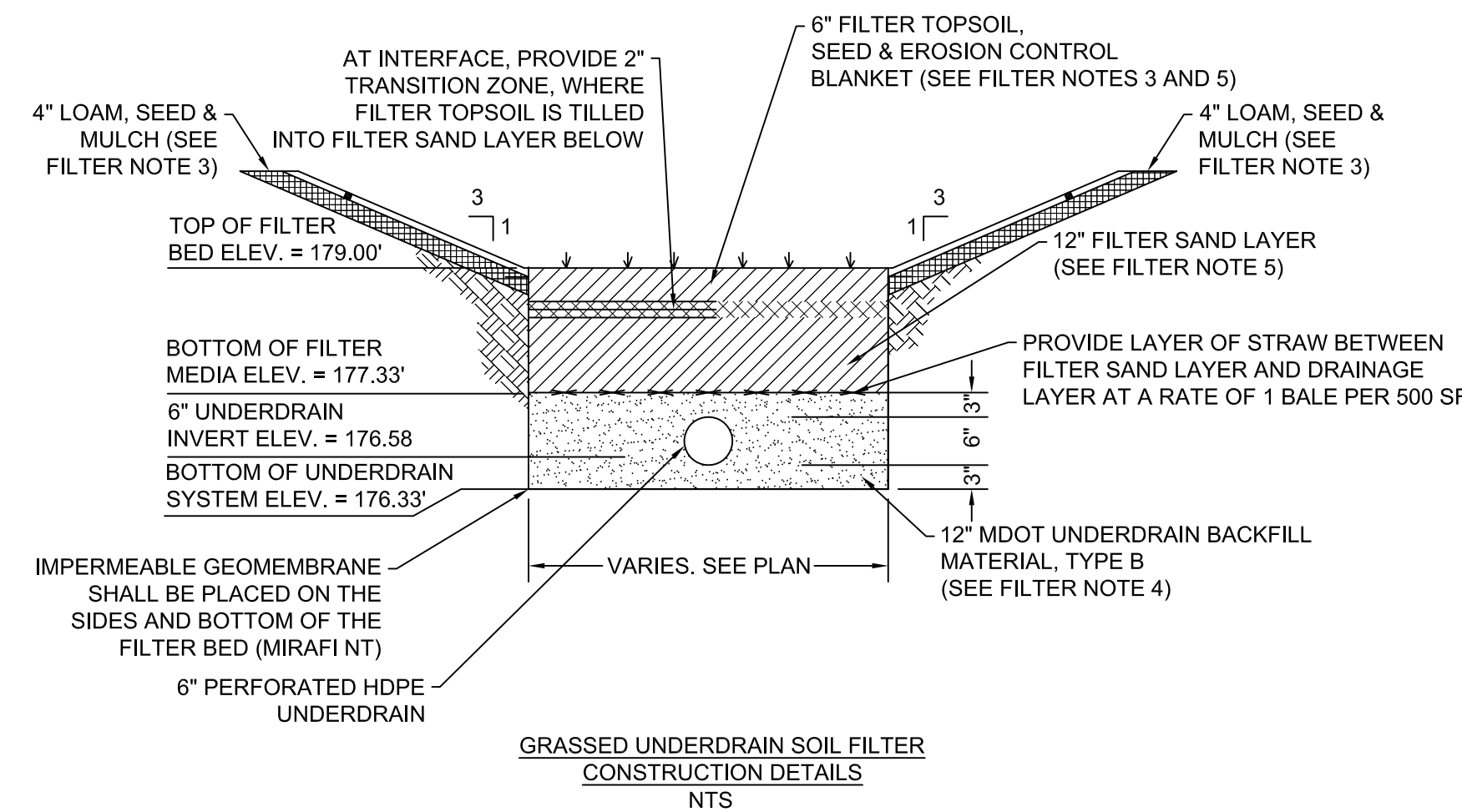
1. INSTALL THE BALL VALVE DURING THE INITIAL PIPE INSTALLATION IN THE FULLY-OPEN POSITION
2. FOLLOWING INITIAL RAIN EVENT THAT PRODUCE OBSERVED OUTFLOW, CLOSE VALVE TO ALLOW AN OUTFLOW OF BETWEEN 22-43 GPM FOR A DEWATERING TIME OF 24-48 HOURS
3. TURN VALVE 1/2 TO 3/4 CLOSED TO ACHIEVE THE REQUIRED MAXIMUM FLOW RATE

6" SOIL FILTER UNDERDRAIN BALL VALVE NTS

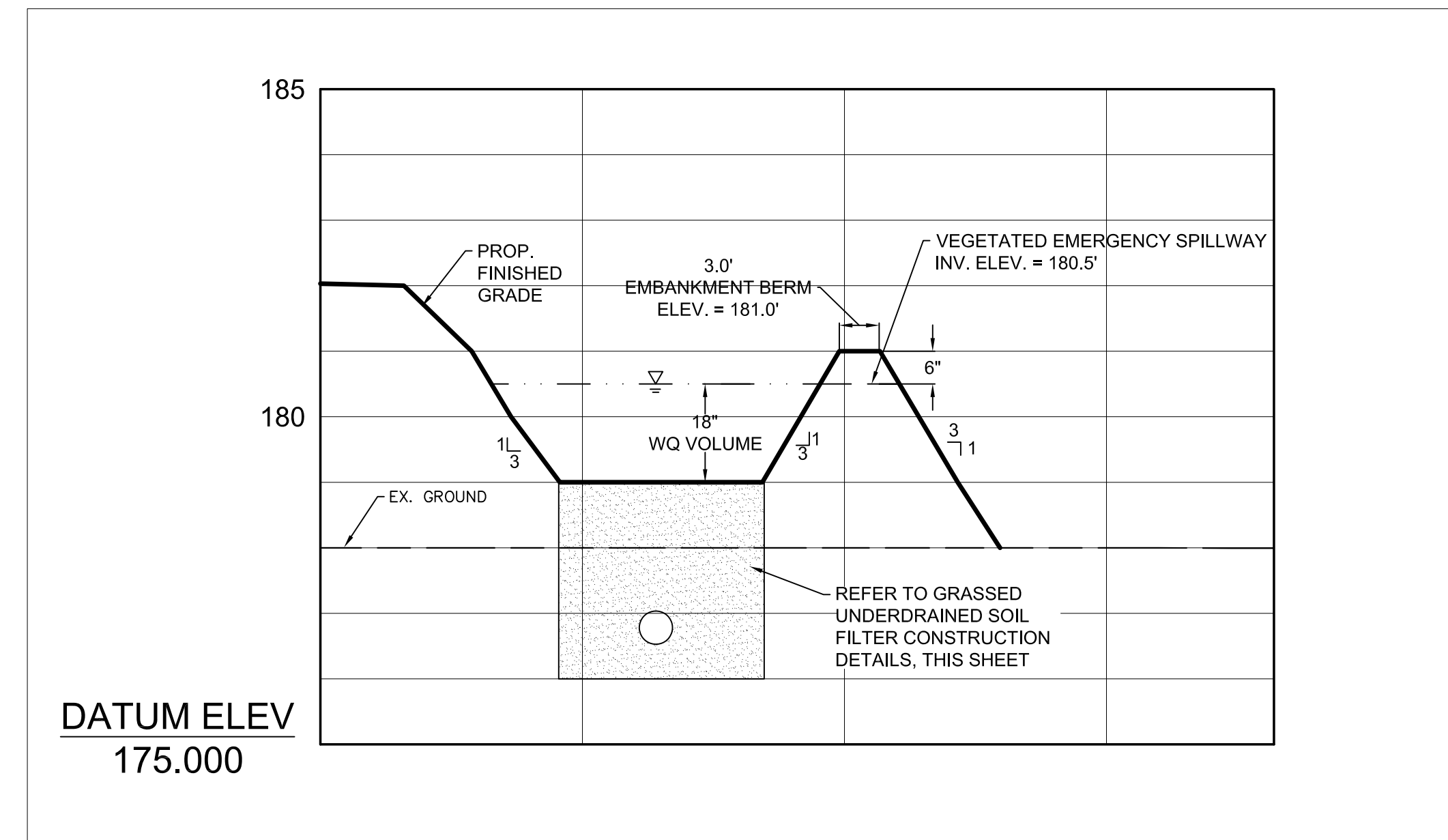


QPEAK, 25-YEAR = 5.55 CFS
 VPEAK, 25-YEAR = 1.64 FPS
 WEIR LENGTH = 10'
 WEIR HEIGHT = 0.5'
 FLOW DEPTH, 25-YEAR = 0.31'

UNDERDRAINED SOIL FILTER EMERGENCY SPILLWAY NTS



NOTE:
 FILTER CROSS SECTION IS SHOWN FOR GRAPHICAL PURPOSES ONLY - NOT TRUE SCALE.



ISSUED FOR REVIEW
NOT FOR CONSTRUCTION 05/29/18

REV.	DESCRIPTION	DATE	BY	CK	APP
B	MEDEP PERMIT SET COMMENT REVISIONS	05/29/18	TJG	KRV	

OWNER ENGINEER:	APPROVAL STAMP:	PE Stamp
DRAWING PREPARED BY:	ACCEPTED BY OE:	

USA ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of Iberdrola, USA					
REV.	DATE	BY	DESCRIPTION	APP.	DATE

STORMWATER TREATMENT PLAN	
SH 1 OF 3	
FICKETT ROAD/1077 POWNAL, ME	
DR: TJG	SCALE: N/A
CK: KRV	FILE: 1077-003-003SH001.DWG
APP:	NO.
1077-003-003	
REV. B	

ANSI D CADD Drawing, DO NOT REVISE MANUALLY.