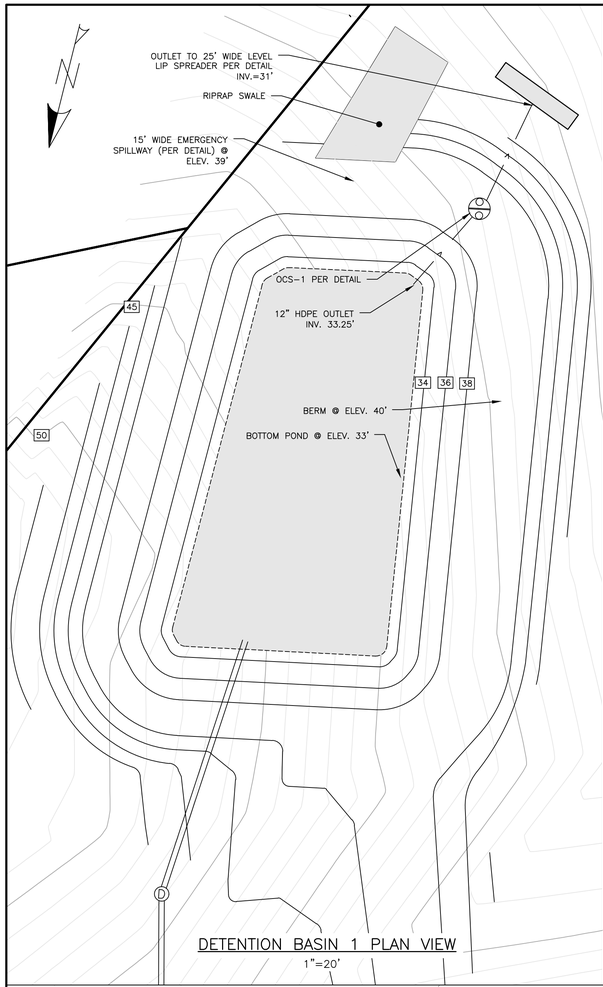
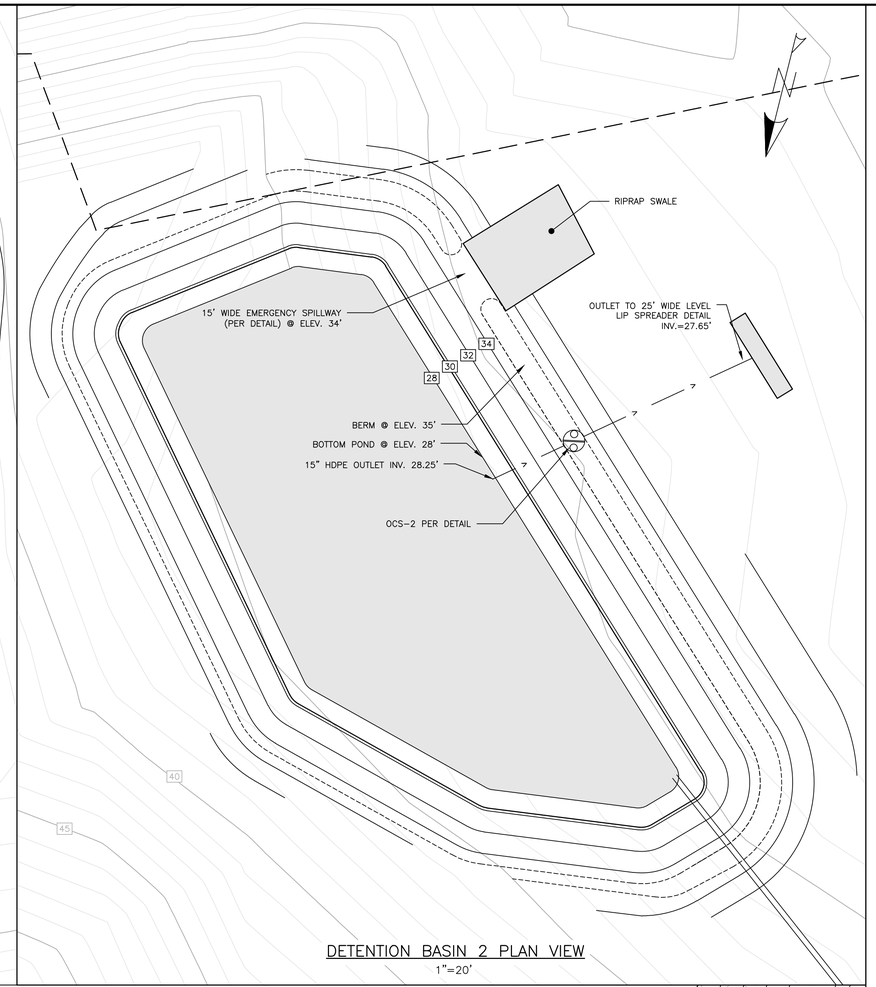


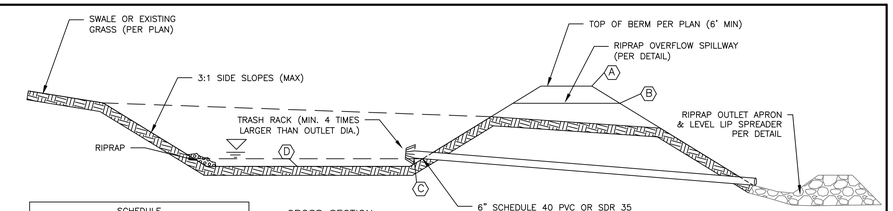
DETENTION BASIN 1 PLAN VIEW

1"=20'



DETENTION BASIN 2 PLAN VIEW

1"=20'



CROSS SECTION

SCHEDULE		
ITEM	POND 1	POND 2
(A) TOP OF BERM	40'	35'
(B) SPILLWAY INVERT*	39'	34'
(C) OUTLET INVERT	33.25'	28.25'
(D) BOTTOM OF BASIN	33'	28'

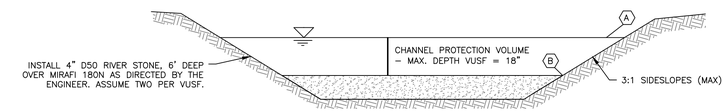
*SEE SHEET C-56 FOR DETAIL

DESIGN NOTES:

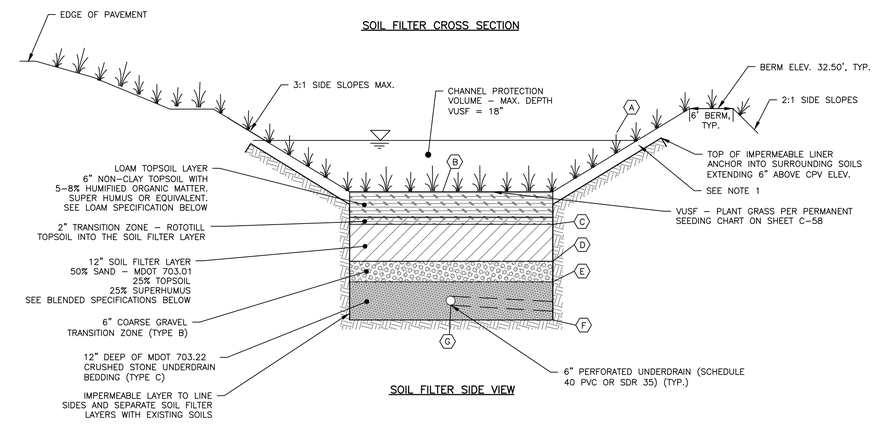
1. THE BASIN SURFACE SHALL BE STABILIZED WITH ONE OF THE FOLLOWING SEED MIX: REDTOP, INDIAN GRASS, SWITCHGRASS, OR DEERTONGUE.
2. BERM FILL SHALL COMPACTED TO ATLEAST 90% OF MAX DENSITY.

DETENTION BASIN DETAIL

NOT TO SCALE



SOIL FILTER CROSS SECTION



SOIL FILTER SIDE VIEW

NOTES:

1. WRAP ALL SIDES BETWEEN THE SOIL FILTER MATERIALS, IMPERMEABLE LINER AND EXISTING SOILS WITH MIRAFI 180N OR EQUIVALENT.
2. THE SIDESLOPES SHALL BE STABILIZED WITH A MIN. OF 4" LOAM, EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX.
3. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.
4. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.
5. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.
6. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

SCHEDULE	
ITEM	ELEVATION
(A) TOP OF CPV	28.85'
(B) TOP OF LOAM TOPSOIL LAYER	27.35'
(C) TOP OF SOIL FILTER	26.85'
(D) TOP OF GRAVEL	25.85'
(E) TOP OF STONE	25.35'
(F) BOTTOM OF STONE	23.85'
(G) UNDERDRAIN INVERT	VARIES

6" LOAM TOPSOIL LAYER SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75 – 95
#10	60 – 90
#40	35 – 85
#200	20 – 70

1. CLAY FRACTION <10% PASSING THE #200 SIEVE. <10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT – MDEP TO WILL SAVAGE DATED 9/20/13
2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.

SOIL FILTER BED –SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0 – 5
MINIMAL CLAY CONTENT, NO MORE THAN 3 – 5% PASSING #200 SIEVE	

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	0 – 75
#4	0 – 25
#10	0 – 5

12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85 – 100
#20	70 – 100
#60	15 – 40
#200	8 – 15

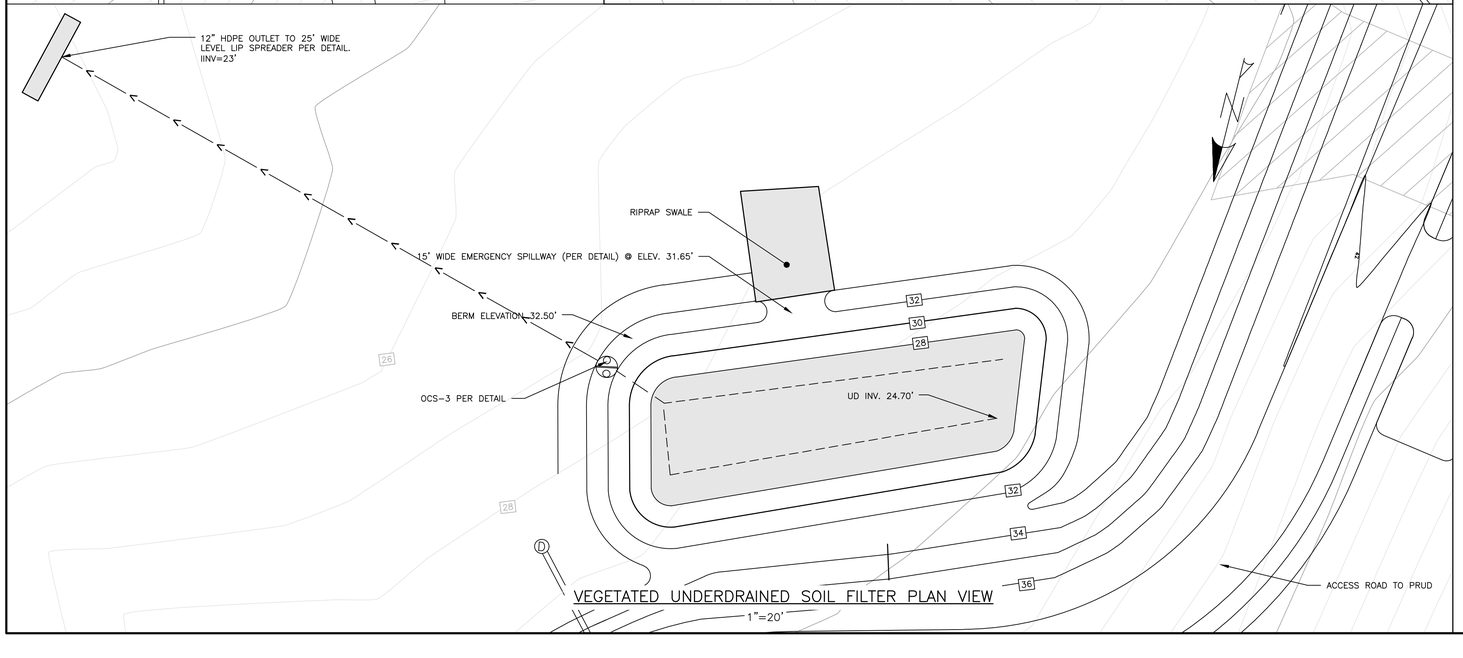
1. CLAY FRACTION <2% PASSING THE #200 SIEVE.
2. SUPERHUMUS OR EQUIV.

SOIL FILTER BED – TRANSITION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90 – 100
1/2"	75 – 100
#4	50 – 100
#20	15 – 80
#50	0 – 5
#200	0 – 5

CONSTRUCTION OBSERVATION:

CONSTRUCTION OBSERVATION SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY ACORN ENGINEERING. THE CONTRACTOR OR OWNERS REPRESENTATIVE SHALL NOTIFY ACORN ENGINEERING A MINIMUM 48 HOURS OR 2 BUSINESS DAY WHICH EVER IS GREATER PRIOR TO ANY OF THE PHASES OF CONSTRUCTION LISTED BELOW SO THAT THE FOLLOWING SITE VISITS MAY BE SCHEDULED.

1. ONE SITE VISIT AFTER PRELIMINARY CONSTRUCTION OF THE VUSF GRADES;
2. ONE SITE VISIT DURING THE INSTALLATION OR THE IMPERVIOUS LINER.
3. ONE SITE VISIT AFTER THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
4. ONE SITE VISIT DURING THE CONSTRUCTION OF THE SOIL FILTER LAYER.
5. ONE SITE VISIT DURING THE CONSTRUCTION OF THE TOPSOIL LAYER.
6. ONE SITE VISIT DURING THE FLOODING OF THE VUSF, IF REQUIRED.



VEGETATED UNDERDRAINED SOIL FILTER PLAN VIEW

1"=20'

VEGETATED UNDERDRAINED SOIL FILTER DETAIL

NOT TO SCALE

PRELIMINARY
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	8/22/17

DRAWING NAME: STORMWATER POND BMP DETAILS

PROJECT NAME: STROUDWATER PRESERVE

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.

158 DANFORTH STREET PORTLAND, MAINE 04102 (207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE WITHOUT PERMISSION OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 8-25-17 PROFESSIONAL ENGINEER

DRAWING NO.

C-57