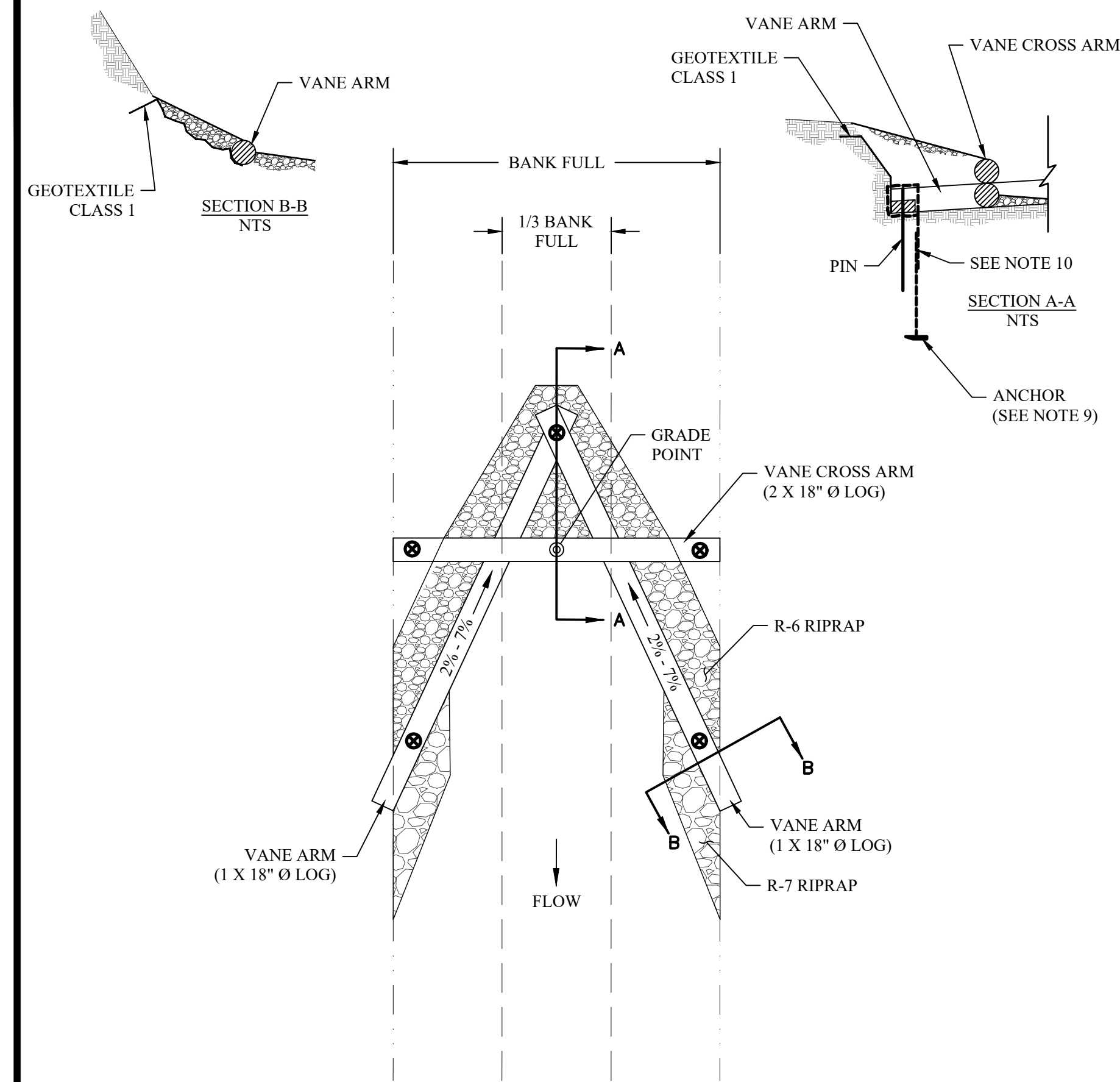


TYPICAL CHANNEL SECTION / PLANTING PLAN
NTS

GENERAL NOTES

- VEGETATIVE ESTABLISHMENT BLANKET SHALL BE FUTURA F4 NETLESS, OR APPROVED EQUAL, AND SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

RIVER STATION	CHANNEL DEPTH (D)	FLOW DEPTH (d)	SIDE SLOPE (Z)	BOTTOM WIDTH (W)
1031	VARIABLES	1.00 FT	3	18 FT
1028	VARIABLES	1.00 FT	3	18 FT
1026	VARIABLES	1.00 FT	3	18 FT
1023	VARIABLES	1.00 FT	3	18 FT
1021	VARIABLES	1.00 FT	3	18 FT
1018	VARIABLES	1.00 FT	3	18 FT



TYPICAL LOG CROSS VANE
NTS

NOTES

- VANE ARMS SHALL BE 1 X 18" Ø NOMINAL LOGS. VANE ARMS SHALL BE CONSTRUCTED 20° TO 30° TO BANK.
- VANE CROSS ARM SHALL BE 2 X 18" Ø NOMINAL LOGS, STACKED VERTICALLY. VANE CROSS ARM SHALL BE SET LEVEL.
- LOGS SHALL BE UNTREATED HEMLOCK, PINE, SPRUCE, OR FIR. LOG INTEGRITY WILL BE ASSESSED BASED ON THAT NO PART OF THE LOG CAN BE SOFT ENOUGH TO BE BROKEN AWAY WITH THE USE OF HAND HELD PRY BAR. CORES OF THE LOGS CANNOT BE ABLE TO BE PENETRATED WITH THE SAME BAR.
- VANE CROSS ARMS SHALL BE PINNED 5' O.C. USING #5 REBAR WITH A MINIMUM YIELD STRENGTH OF 40 KSI. BAR SHALL BE FINISHED FLUSH WITH THE TOP OF THE LOG. EACH BAR SHALL HAVE A MINIMUM LENGTH OF 5 FT.
- JOINTS SHALL BE HALF LAP AND PINNED.
- REFER TO RIPRAP PLACEMENT DETAIL FOR MORE INFORMATION.
- FOR TERMINATION OF GEOTEXTILE, PROVIDE AN 18" LENGTH AT LEAST 12" BELOW GRADE. WHEN ADJACENT TO A LOG, ATTACH GEOTEXTILE TO LOG USING GALVANIZED NAILS 4' O.C.
- ANCHORS SHALL BE INSTALLED AT THE LOCATIONS SHOWN, AND SHALL BE COMPLETELY BURIED.
- ANCHORS SHALL BE DUCKBILL MODEL 88, OR APPROVED EQUAL, WITH DUCTILE IRON HEAD AND 1/4" STAINLESS STEEL CABLE. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- CONNECT VANE ARM AND VANE CROSS ARM TO ANCHOR USING 1/4" STAINLESS STEEL CABLE. CABLE SHOULD BE LOOPED AROUND THE LOG CROSS VANE AND THEN ATTACHED TO THE ANCHOR CABLE USING SWAGE SLEEVES, OR OTHER APPROVED METHOD. CONNECTION SHALL BE TENSIONED AND SHOULD PROVIDE 90% OF THE STAINLESS STEEL CABLE STRENGTH.

PLANTING SCHEDULE				
TREE AND SHRUB INSTALLATION PLANTED THROUGH VEGETATIVE ESTABLISHMENT BLANKET:				
SYMBOL	GENUS SPECIES	COMMON NAME	NUMBER	NOTES
N/A	PLATANUS OCCIDENTALIS	SYCAMORE	14	2' VERTICAL ABOVE OHWM @ 15' O.C.
N/A	QUERCUS PALUSTRIS	PIN OAK	25	4' VERTICAL ABOVE OHWM @ 15' O.C.
N/A	BETULA NIGRA	RIVER BIRCH	12	2' VERTICAL ABOVE OHWM @ 15' O.C.
ROOTED HERBACEOUS AND SHRUB PLUGS PLANTED THROUGH VEGETATIVE ESTABLISHMENT:				
N/A	CORNUS AMOMUM	SILKY DOGWOOD	100	1' VERTICAL ABOVE OHWM @ 4' O.C.
N/A	CAREX STRICTA	TUSSOCK SEDGE	400	@ OHWM @ 1" O.C.

PLANTING NOTES

- ALL PLANTING INSTALLATIONS SHALL BE COORDINATED WITH AND SUPERVISED BY THE LUZERNE CONSERVATION DISTRICT WATERSHED SPECIALIST.
- REFER TO THE PERMANENT VEGETATIVE RESTORATION DETAIL FOR TOPSOIL AND SEEDING REQUIREMENTS.
- TREES SHALL BE 2" CALIPER 5' HIGH MINIMUM WITH BARK PROTECTION FROM ANIMAL DAMAGES.
- SHRUBS SHALL BE TUBLINGS OR PLUGS WITH 2" HIGH MINIMUM AND PROTECTION FROM ANIMAL DAMAGE.

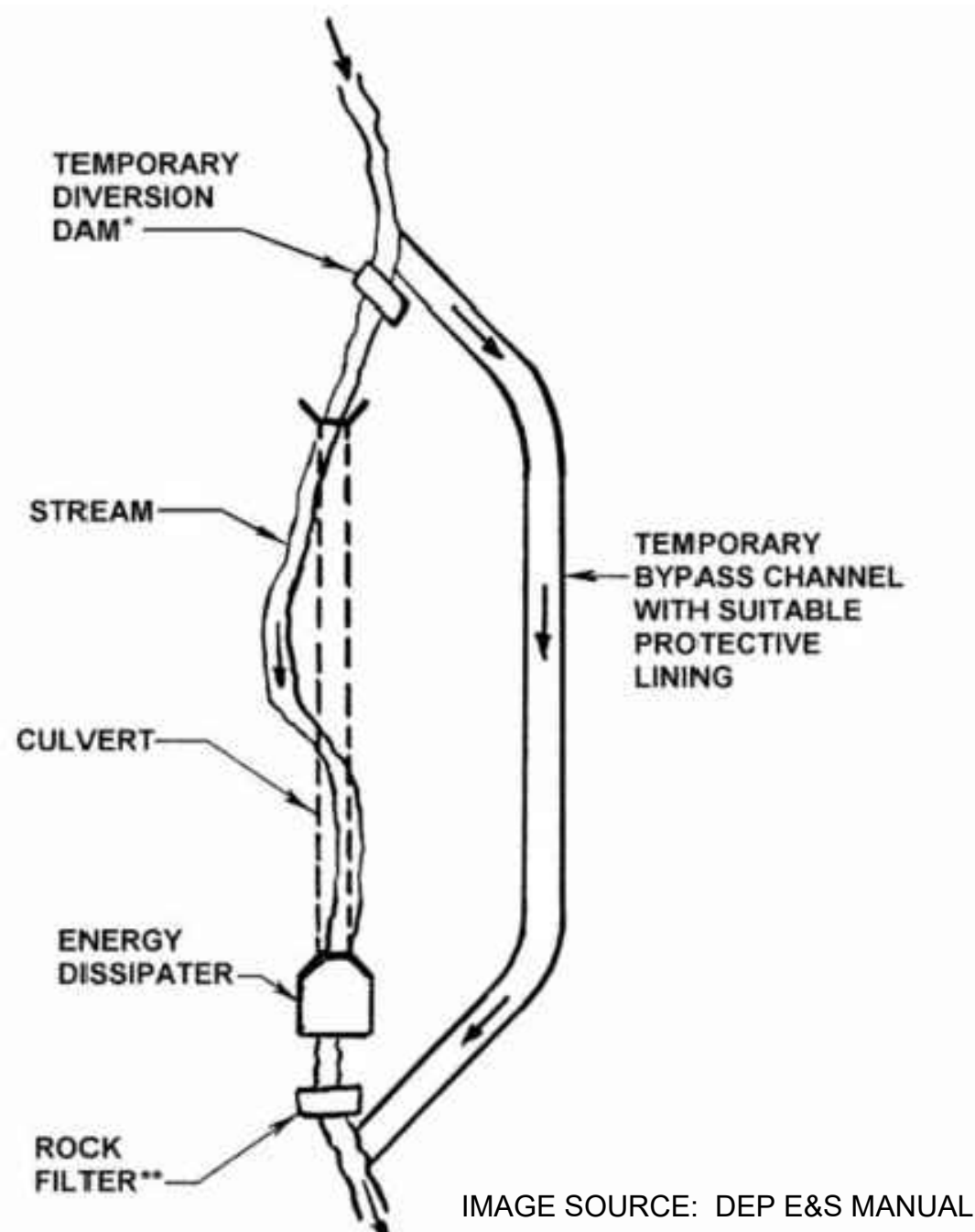


IMAGE SOURCE: DEP E&S MANUAL

NOTES

- REFER TO TEMPORARY DIVERSION DAM DETAIL FOR MORE INFORMATION.
- REFER TO ROCK FILTER DETAIL FOR MORE INFORMATION.
- FOR LOW GRADIENT CHANNELS, THE ROCK FILTER MAY BE REPLACED BY AN IMPERVIOUS COFFERDAM TO PREVENT BACKFLOW INTO THE WORK AREA.
- UPON COMPLETION OF WORK, AFTER FLOW HAS BEEN RETURNED TO THE MAIN CHANNEL, THE BYPASS CHANNEL SHALL BE REMOVED AND THE AREA RESTORED TO PRE-CONSTRUCTION CONDITIONS.

TEMPORARY BYPASS CHANNEL
NTS

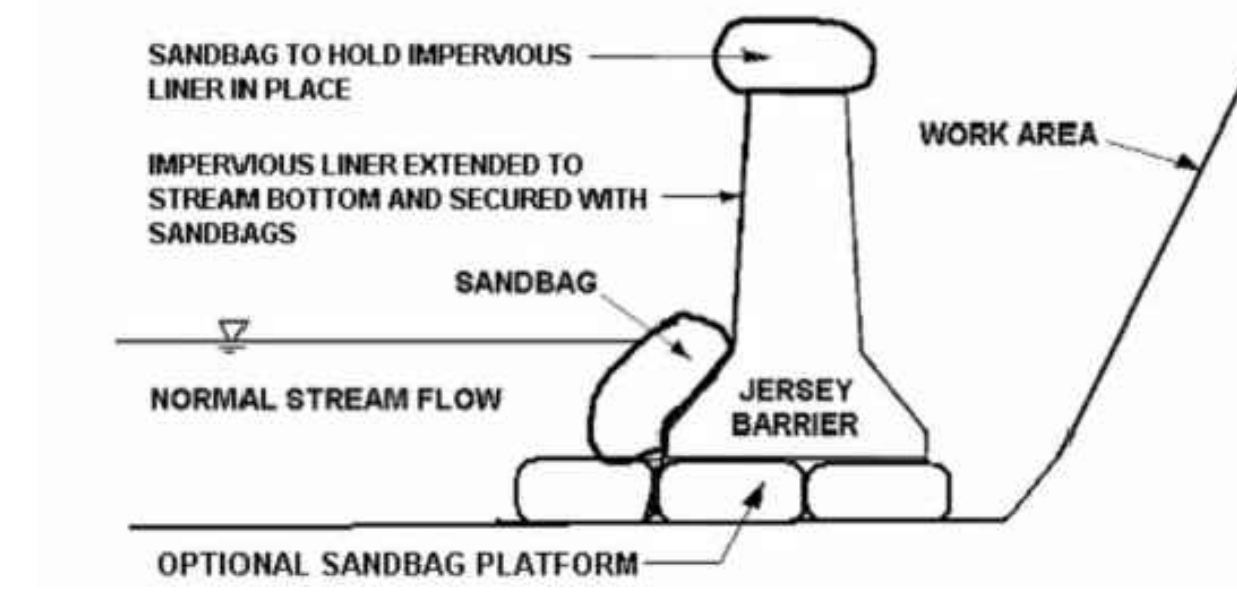
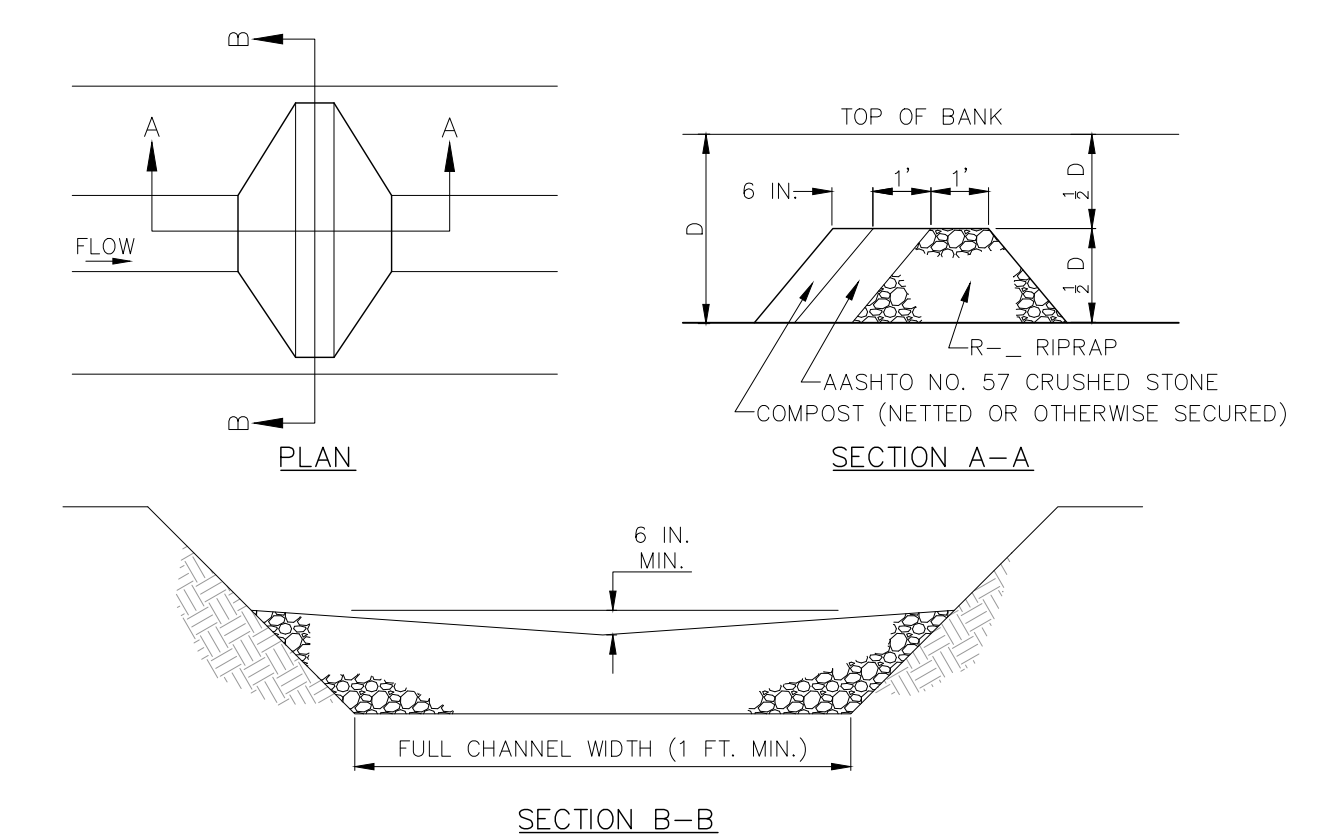


IMAGE SOURCE: DEP E&S MANUAL

TEMPORARY DIVERSION DAM
NTS



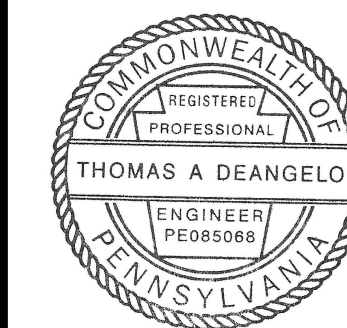
ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE (R-)
01	REFER TO PLAN	4	4

NOTES:
SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.
IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

STANDARD CONSTRUCTION DETAIL #4-14
ROCK FILTER
NOT TO SCALE

DEANGELO CONSULTING - LLC
234 MAPLE STREET
TRUCKSVILLE, PA 18708
PHONE: 570-371-9457
DEANGELO-CONSULTING.COM
COPYRIGHT 2023

REVISIONS	
DATE	DESCRIPTION
12/12/2023	DEP AND LCD COMMENTS
1/5/2024	DEP AND LCD COMMENTS
6/14/2024	LOG CROSS VANE



CONSTRUCTION DETAILS
PERMIT WAIVER PLAN
FOR THE
DAM REMOVAL
AT
THE LANDS AT HILLSIDE FARMS
65 HILLSIDE ROAD
SHAVERTOWN, PA 18708

DATE:	03/14/2023
SCALE:	AS NOTED
PROJ. #:	2022012
SHEET:	5 OF 12

CD-1