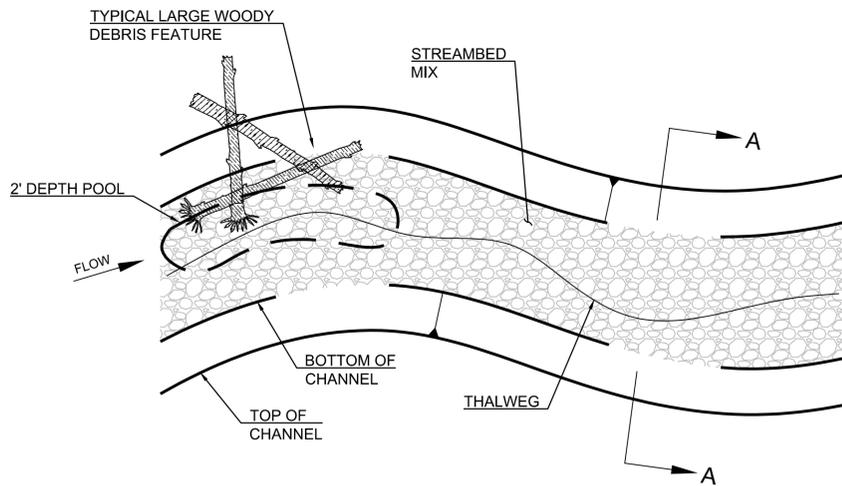


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 User: Doug Ehlbracht
 CAD Plot Date/Time: 3/2/2020 8:59:19 AM
 Layout Tab: D02



CHANNEL PLAN

GENERAL NOTES:

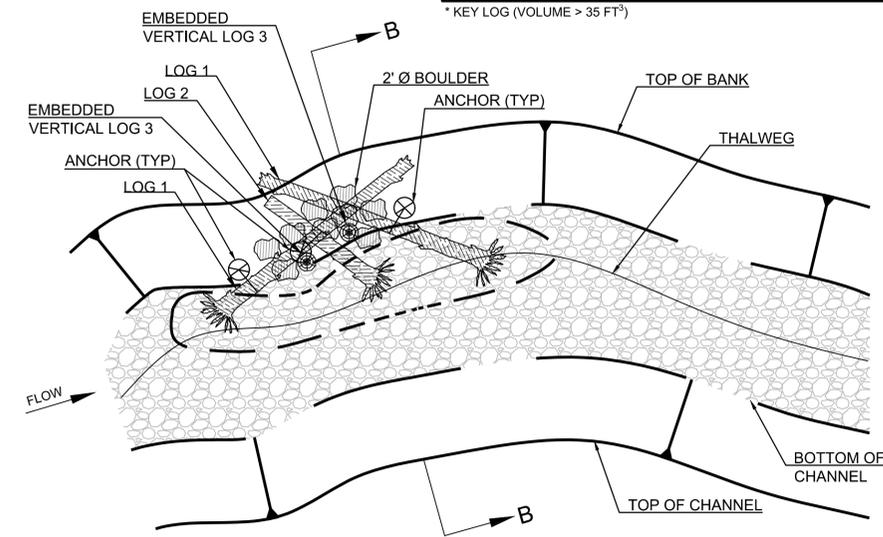
1. LARGE WOODY DEBRIS FEATURES AND THALWEG LOCATIONS ARE TO BE PLACED AS SHOWN ON PLANS. MINOR CHANGES TO THE WOOD FEATURES CAN BE MADE IN THE FIELD BY THE ENGINEER.
2. STREAMBED MIX: ONE PART 12" COBBLES, 1 PART 8" COBBLES, AND ONE PART STREAMBED SEDIMENT. TWO-MAN STREAMBED BOULDERS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
3. STREAMBED SEDIMENT IS TO PROVIDE STABILITY TO THE STREAMBED MIX AND BE PLACED IN AREA OF VOIDS TO CREATE A UNIFORM, NON-POROUS BED.
4. SEE PLANT MITIGATION PLANS ON DWG P01 FOR FINAL STABILIZATION REQUIREMENTS.

LARGE WOODY DEBRIS CONTROL TABLE		
LWD FEATURE STATION	LOGS*	VOLUME (FT ³)
19+36.57	1,1,2,3,3	251.2
20+60.11	1,1,2,3,3	251.2

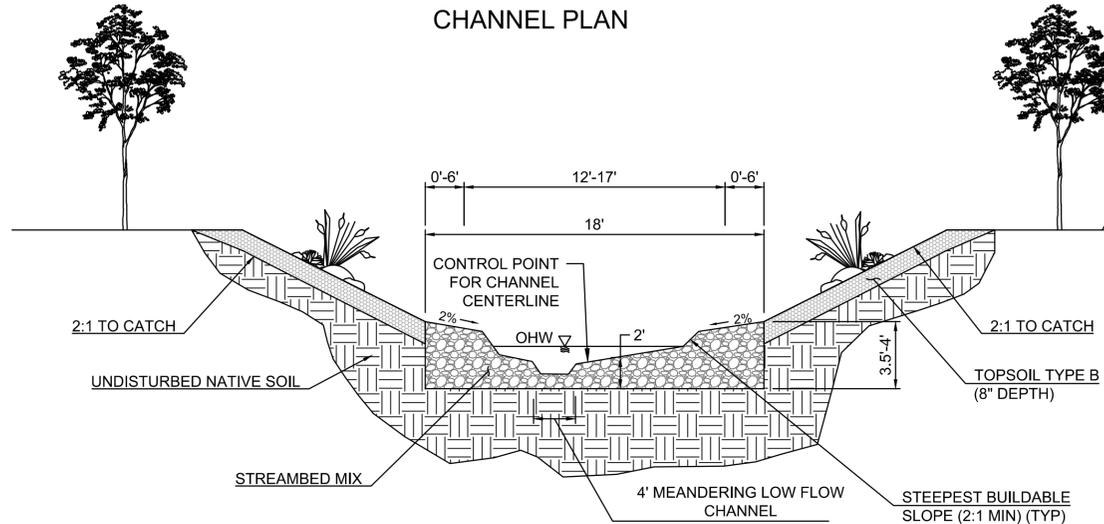
* SEE LOG SCHEDULE TO THE RIGHT

LOG SCHEDULE					
LOG #	LOG LENGTH (FT)	LOG DIAMETER (FT)	ROOTWAD LENGTH (FT)	ROOTWAD DIAMETER (FT)	VOLUME (FT ³)
1*	25	2	2	3	87.0
2*	20	1.5	2	3	52.6
3	10	1.25	-	-	12.3

* KEY LOG (VOLUME > 35 FT³)



TYPICAL LARGE WOODY DEBRIS PLAN



CHANNEL SECTION A-A

RE-LANDSCAPE DISTURBED AREAS PER PLANT MITIGATION PLAN, DWG P01

SECURE LOOSE ENDS OF WIRE ROPE WITH (2) CLIPS

DOUBLE WRAP OF 1/2" DIAM. WIRE ROPE THREADED THROUGH LAST LINK OF CHAIN

CHAIN PER MANUFACTURER

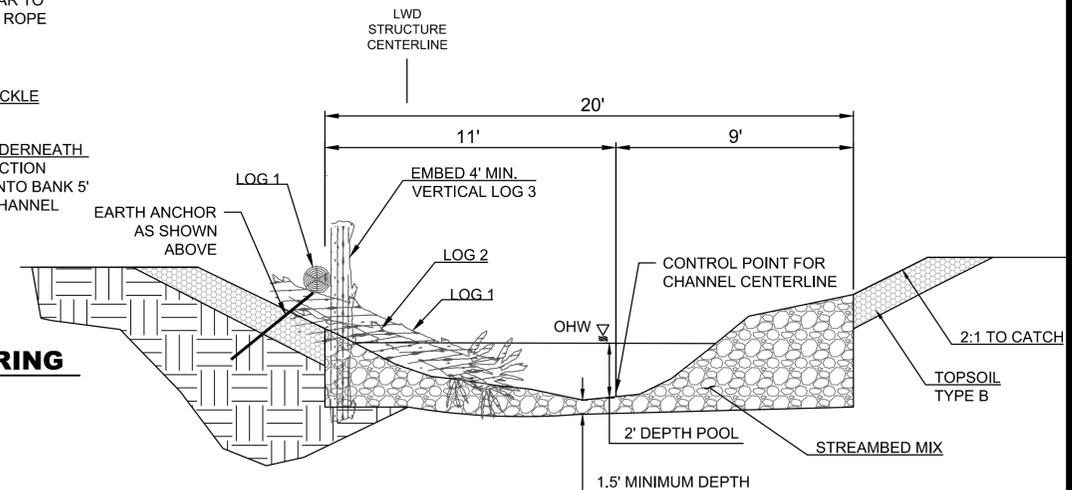
MANTA RAY MR-2 EARTH ANCHOR OR EQUIVALENT

NOTCH LOG 1" FOR DEEP AND PERPENDICULAR TO THE LOG FOR WIRE ROPE TO RESIDE

5/8" SCREW PIN SHACKLE

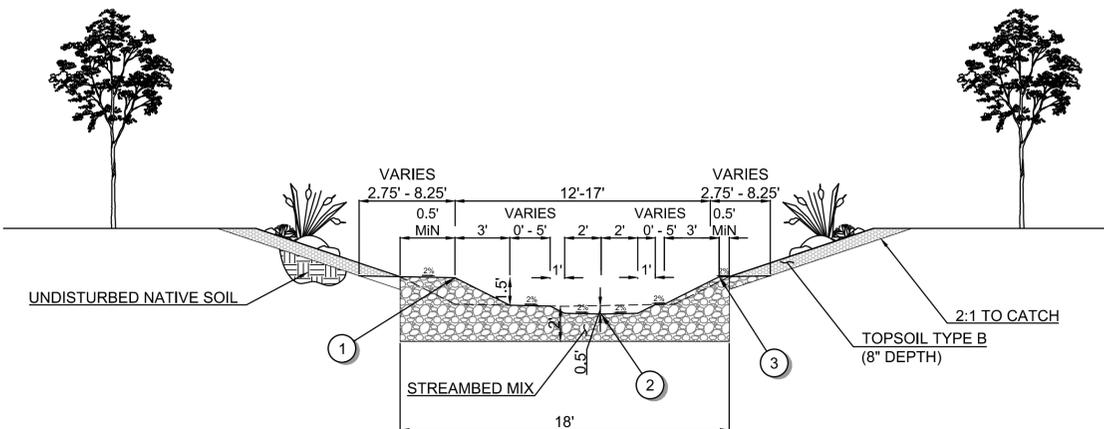
DRIVE ANCHOR UNDERNEATH LOG AND IN A DIRECTION DOWNWARD AND INTO BANK 5' MIN AWAY FROM CHANNEL

4 LARGE WOODY DEBRIS ANCHORING



TYPICAL LARGE WOODY DEBRIS SECTION B-B

2 TYPICAL LARGE WOODY DEBRIS FEATURE
NOT TO SCALE



3 BANK LOCATION AND STREAMBED MIX SECTIONS
NOT TO SCALE

STREAMBED MIX FINISHED SURFACE SECTIONS				
STREAM CL STATION (A)	PT #1 (CL TO LEFT TERRACE)	PT #2 (DIST CL TO THALWEG)	PT #3 (DIST CL TO RIGHT TERRACE)	BANK FULL WIDTH
18+85	MATCH EXISTING STREAM	MATCH EXISTING THALWEG	MATCH EXISTING STREAM	MATCH EXISTING STREAM
19+00	8' LT	1' LT	7' RT	15'
19+25	11' LT	4' RT	6' RT	17'
19+50	10' LT	3' RT	7' RT	17'
CULVERT SECTION	CULVERT SECTION	CULVERT SECTION	CULVERT SECTION	17'
20+00	11' LT	2' RT	5' RT	16'
20+25	7' LT	1' LT	8' RT	15'
20+50	10' LT	4' RT	3' RT	13'
20+75	9' LT	5' RT	5' RT	14'
21+00	5' LT	1' LT	7' RT	12'
21+10	MATCH EXISTING STREAM	MATCH EXISTING THALWEG	MATCH EXISTING STREAM	MATCH EXISTING STREAM

CONSTRUCTION PLAN

PBS Engineering and Environmental Inc.
 1180 NW Maple St.
 Issaquah, WA 98027
 425.656.6173
 pbsusa.com



MIDDLE FORK NEWAUKUM RIVER) CULVERT REPLACEMENT
 DETAILS
 MIDDLE FORK RD MP 7.07
 CMP 1802



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