

POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT



WASHINGTON STATE

N.T.S.

SITE DIRECTIONS:

On State Highway 101, Mile Post 335. The State Park is on both sides of the highway.

VICINITY MAP



Lat: 47.3886795 / Long: -123.1883293

PROJECT LOCATION



21111 N. U.S. HIGHWAY 101 SHELTON, WA. 98584
Section 26 Township 22N Range 4w
Mason County Tax Parcel Number 42226-32-00025
WRIA 16.0218

PROJECT DESCRIPTION:

The proposed project is to replace two culverts (WDFW ID #811371 & #940442) with a 14' (span) x 8' (rise) and a 14' (span) x 6' (rise) box culverts at or near the existing locations and reconstruct 860' of channel to mimic a natural channel. 300' of which will be new channel created to relocate the channel away from the adjacent property, where it flows under a house and outfalls over a 5' high bulkhead. Some culvert alignment change may be necessary to avoid utilities and to shorten the overall culvert lengths. The 4' vertical drop immediately upstream of the WSDOT culvert must be addressed to better allow for a more natural channel gradient and channel width through this stream reach down to mean tide of the Hood Canal.

PURPOSE: FISH PASSAGE BARRIER REMOVAL	REFERENCE NO:	
PROPOSAL: SEE NOTE THIS SHEET	APPLICANT: WDFW	
LOCATION: 21111 N. US HIGHWAY 101	COUNTY: MASON COUNTY	
DATUM: ASSUMED	NEAR: POTLATCH	
ADJ PROPERTY OWNERS: SEE SHEET 2	WATER BODY: TRIB. TO HOOD CANAL	
	DATE: JANUARY 2016	

POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT

~ADJACENT PROPERTY OWNERS~



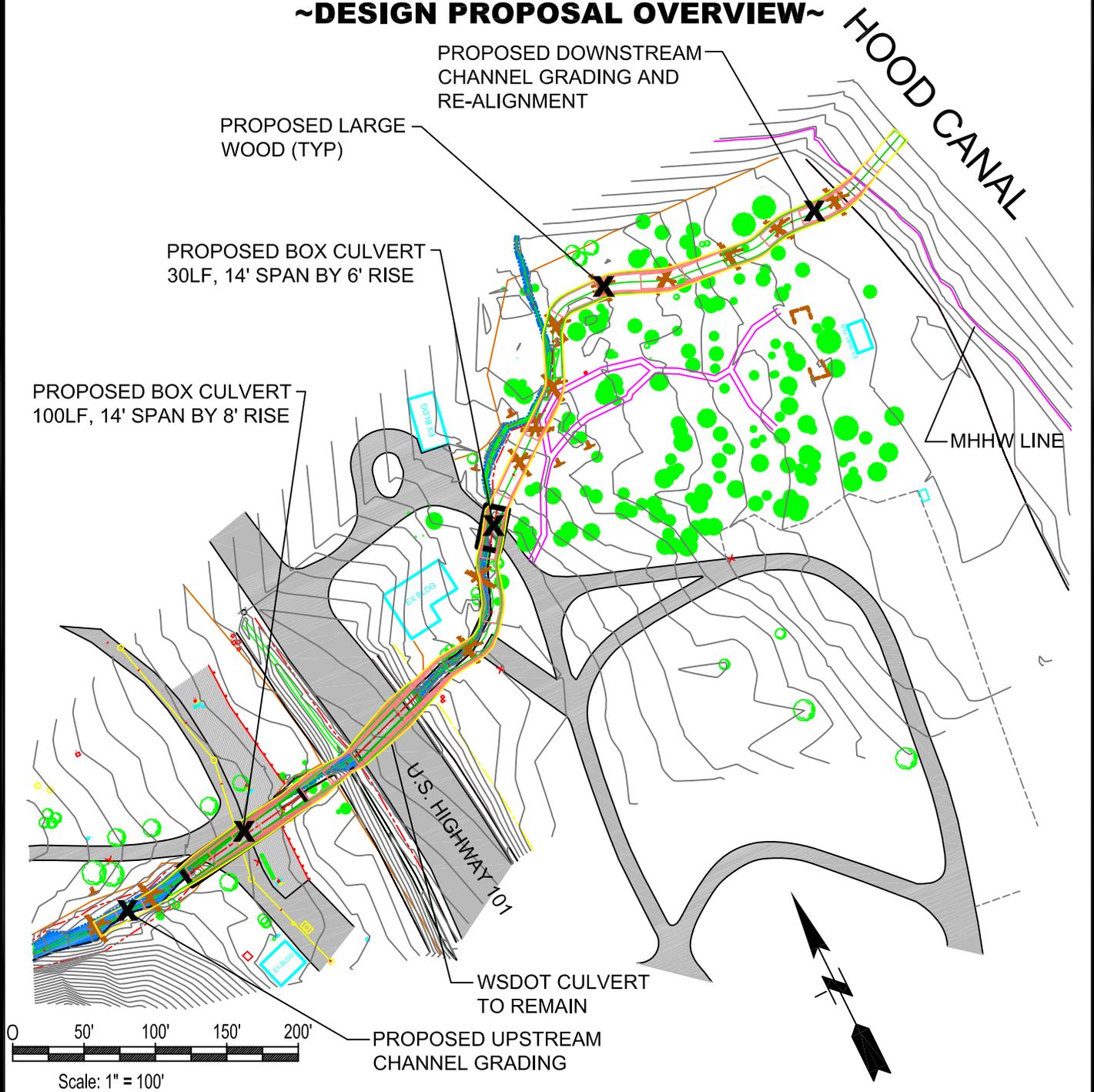
ADJACENT PROPERTY OWNERS LIST

- 1.) U.S.A. IN TRUST/SKOKOMISH TRIBE
21111 N. U.S. HIGHWAY 101
SHELTON, WA. 98584
- 2.) MANERVA BEACH HOMEOWNERS ASSOC.
21110 N. U.S. HIGHWAY 101
SHELTON, WA. 98584
- 3.) AL & MURIEL GORDON
21140 N. U.S. HIGHWAY 101
SHELTON, WA. 98584
- 4.) BRIAN FULWILER
21142 N. U.S. HIGHWAY 101
SHELTON, WA. 98584



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ADJ PROPERTY OWNERS: THIS SHEET	WATER BODY: TRIB. TO HOOD CANAL	
	DATE: JANUARY 2016	SHEET 2 of 14

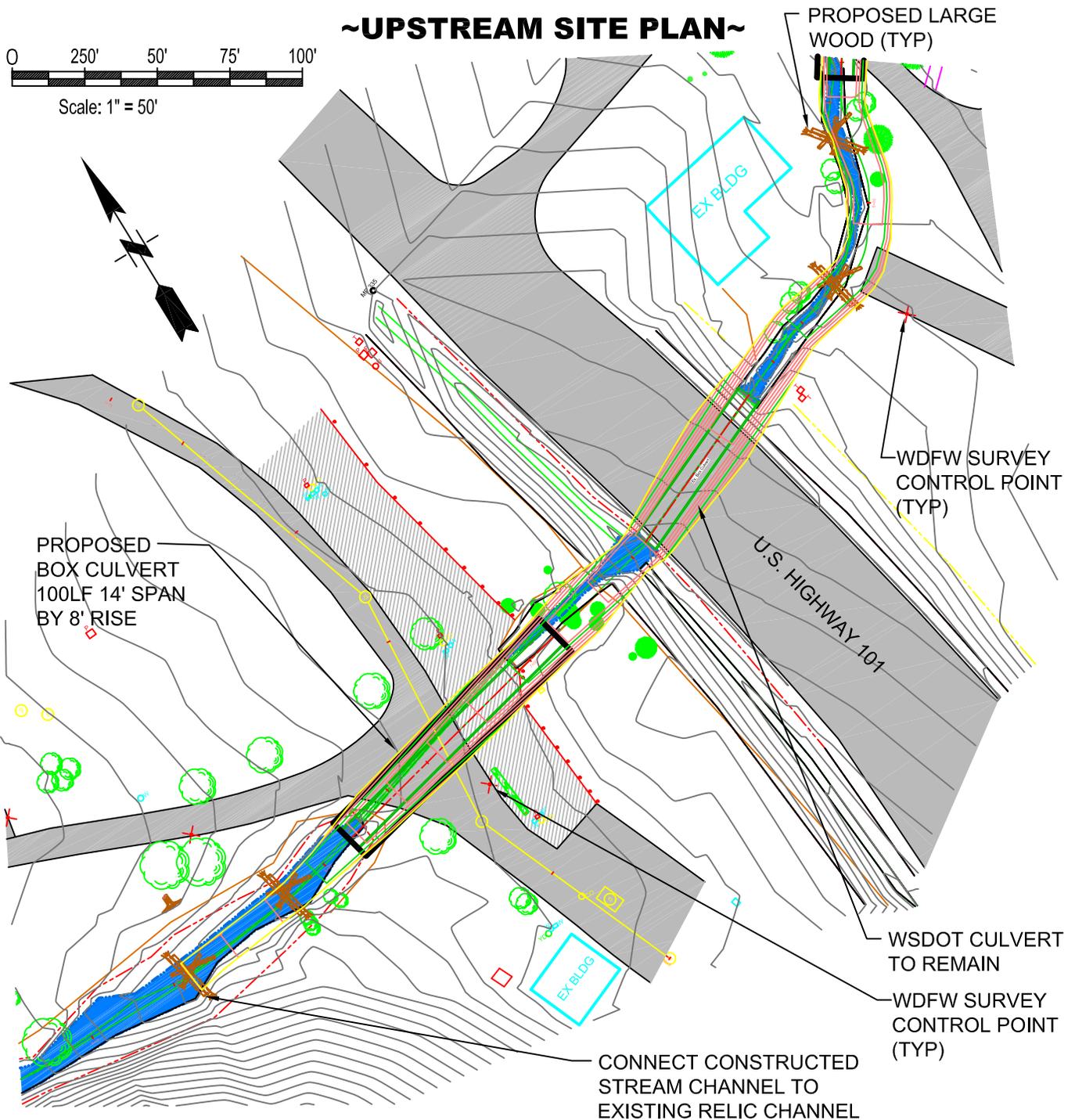
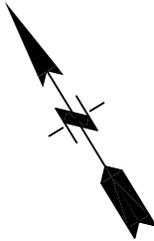
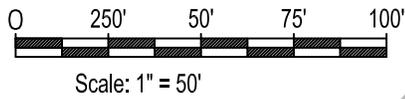
POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT ~DESIGN PROPOSAL OVERVIEW~



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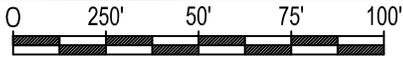
POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT

~UPSTREAM SITE PLAN~



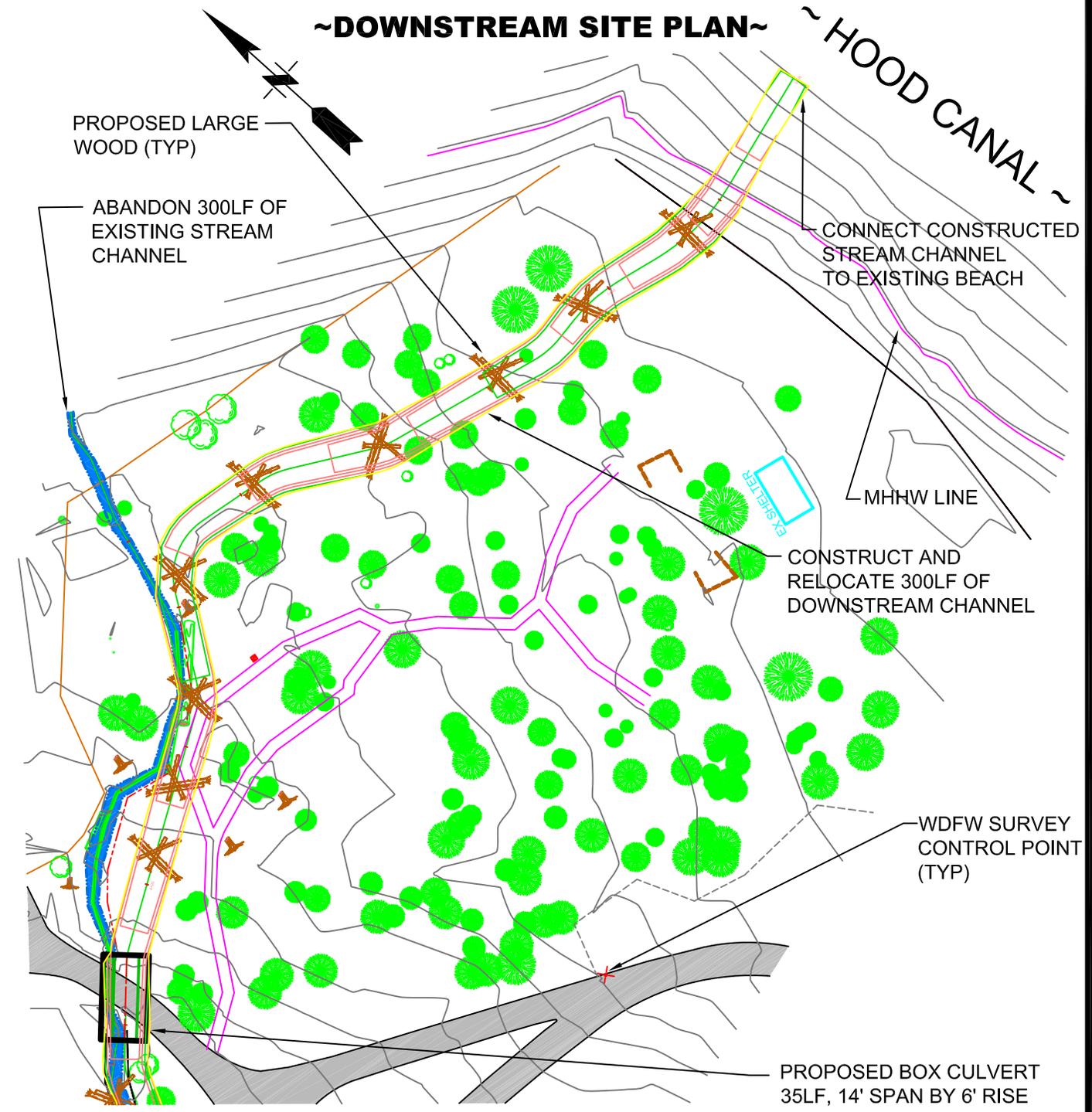
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Scale: 1" = 50'

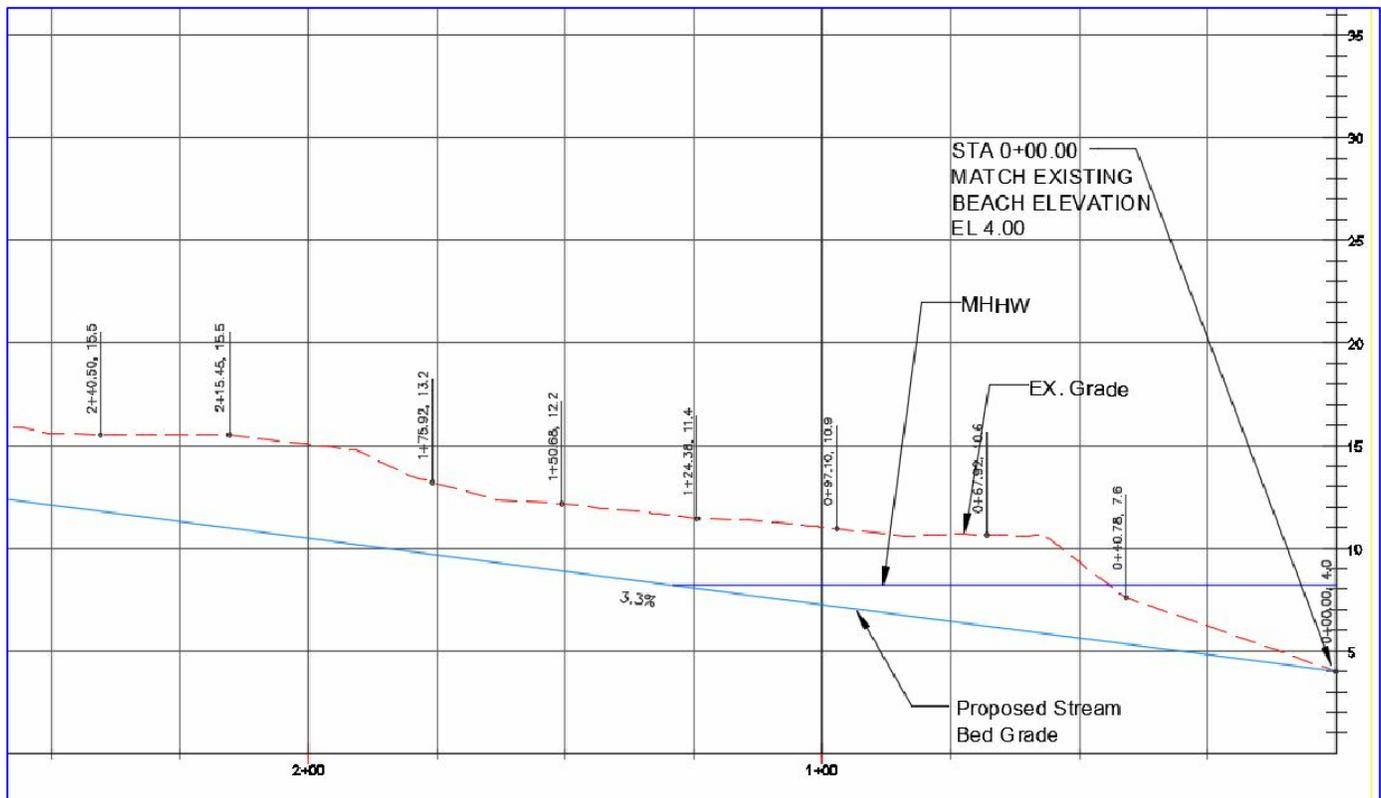
POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT ~DOWNSTREAM SITE PLAN~



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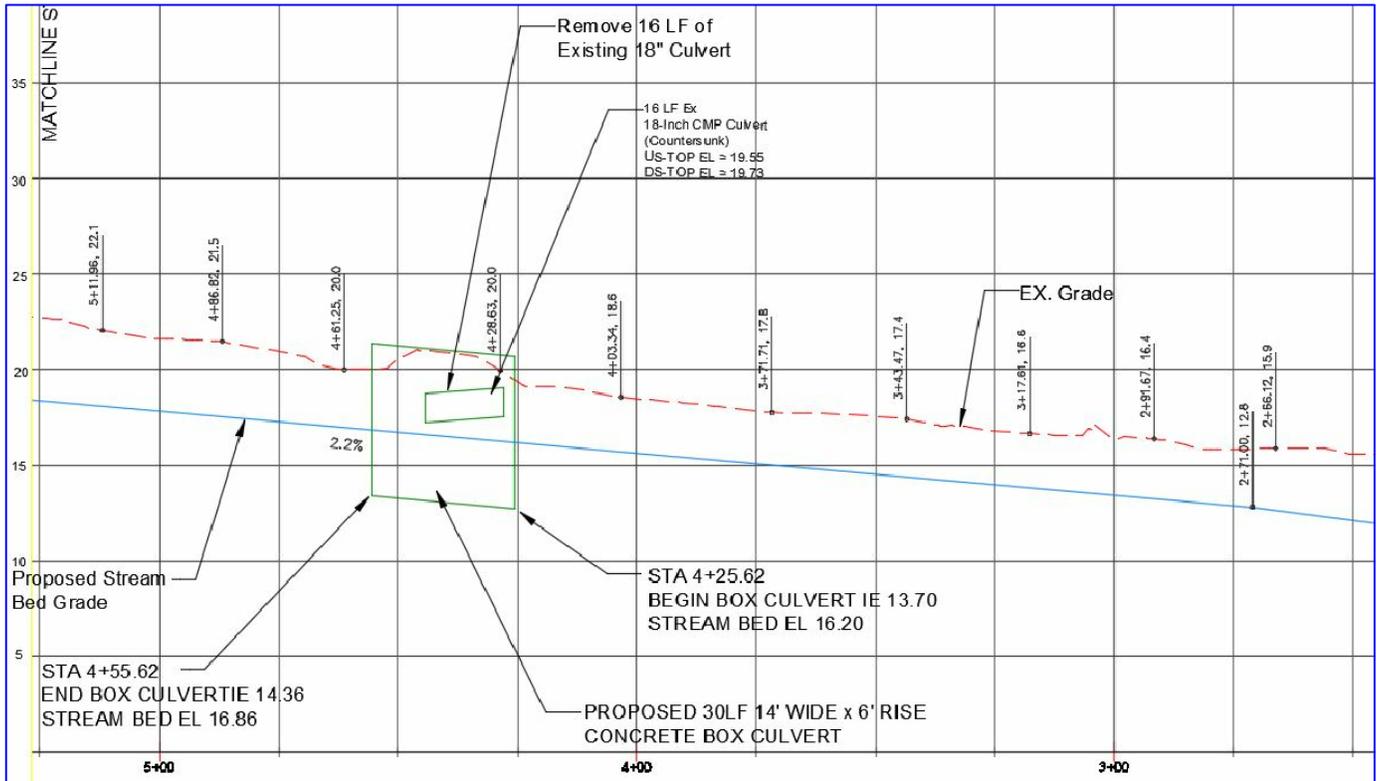
POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT ~DOWNSTREAM CHANNEL PROFILE~



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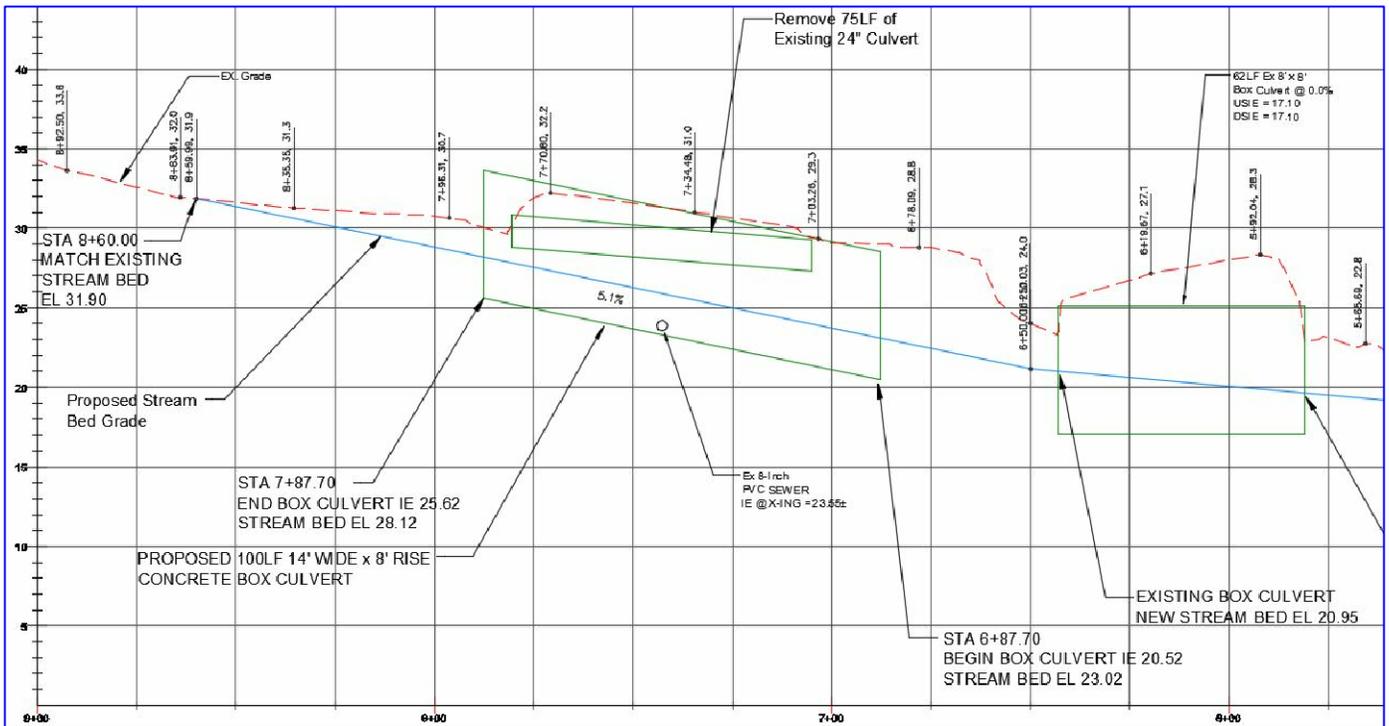
POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT ~LOWER BOX CULVERT PROFILE~



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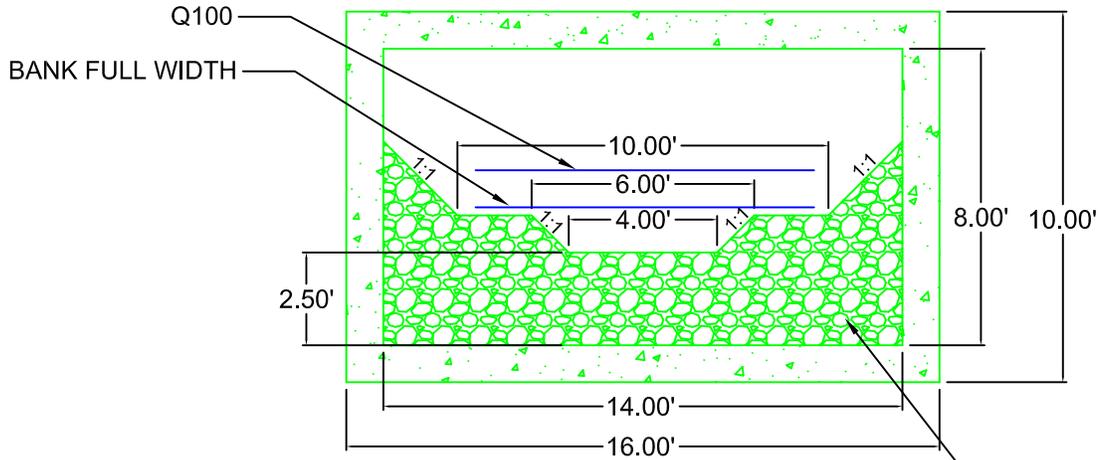
POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT ~UPPER BOX CULVERT PROFILE~



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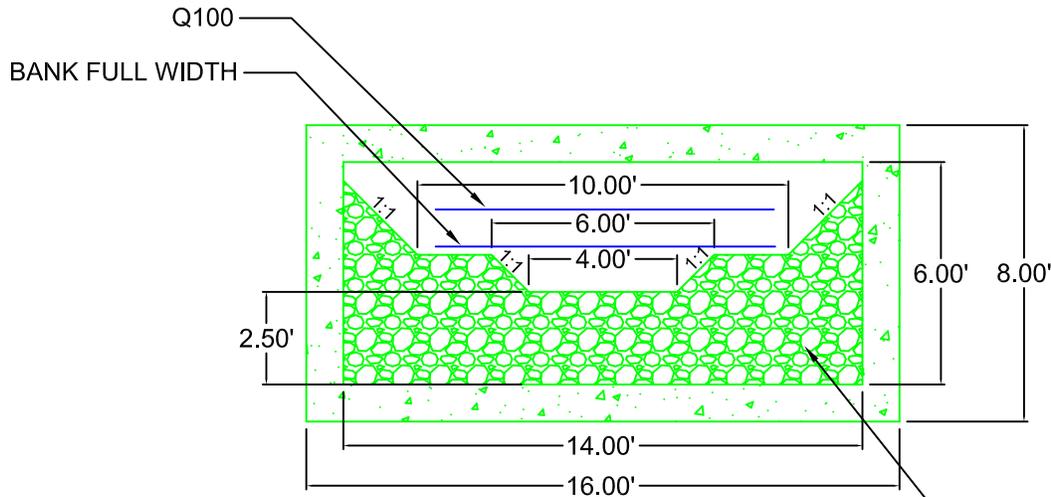
POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT



BOX CULVERT DETAIL

Not to Scale STA 6+87.70 to 7+87.70

STREAMBED MATERIAL
SEE SHEET 10 OF 14 FOR
STREAMBED MIX SPEC.



BOX CULVERT DETAIL

Not to Scale STA 4+25.62 to 4+55.60

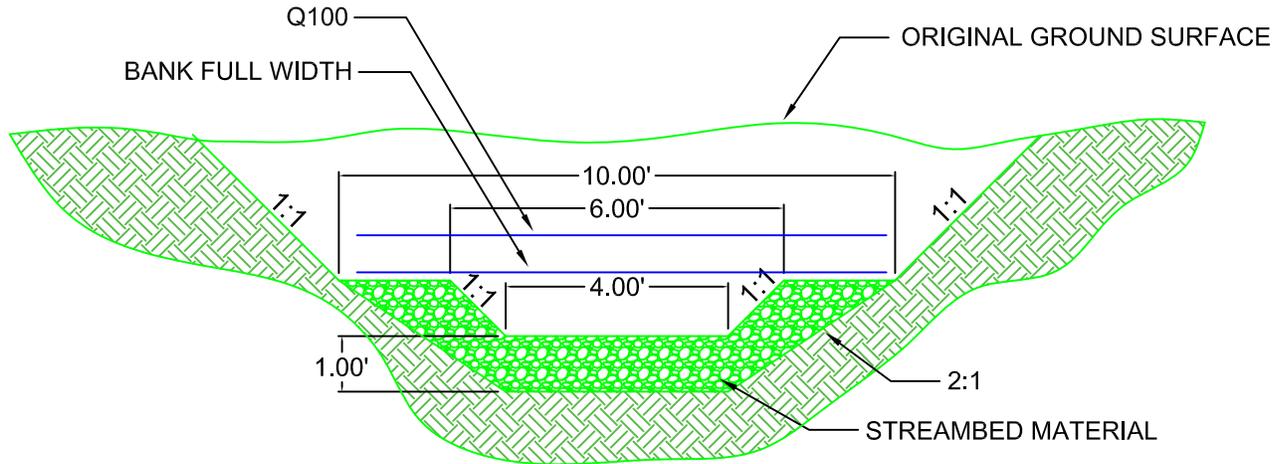
STREAMBED MATERIAL
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**POTLATCH STATE PARK
UN-NAMED TRIBUTARY TO HOOD CANAL
CULVERT REPLACEMENT AND CHANNEL REALIGNMENT**

~NEW STREAMBED CHANNEL SECTION~



NEW STREAMBED CHANNEL SECTION

Not to Scale

STA 0+00.00 to 8+60.00

*STREAMBED MATERIAL GRADATION
PER W.S.D.O.T. STD SPECIFICATION
FOR ROAD, BRIDGE AND MUNICIPAL
CONSTRUCTION SECTION 9.03

1 PART 4" COBBLES
1 PART STREAMBED SEDIMENT

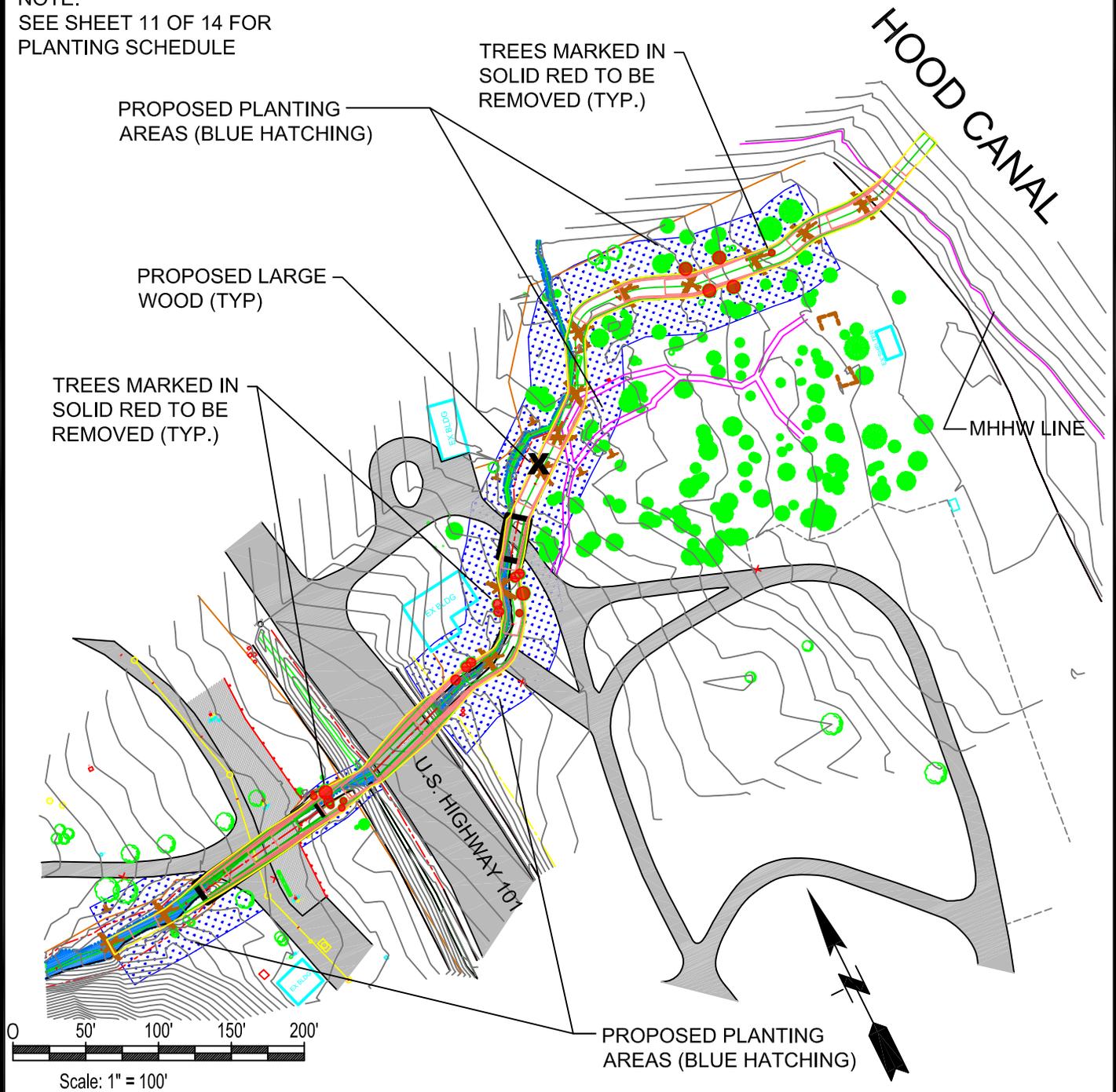
2 1/2" to 4" - 30%
1" to 2 1/2" - 30%
1/8" to 1" - 30%
< 1/8" - 10%

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POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT ~PLANTING AREAS AND TREE REMOVAL~

NOTE:
SEE SHEET 11 OF 14 FOR
PLANTING SCHEDULE



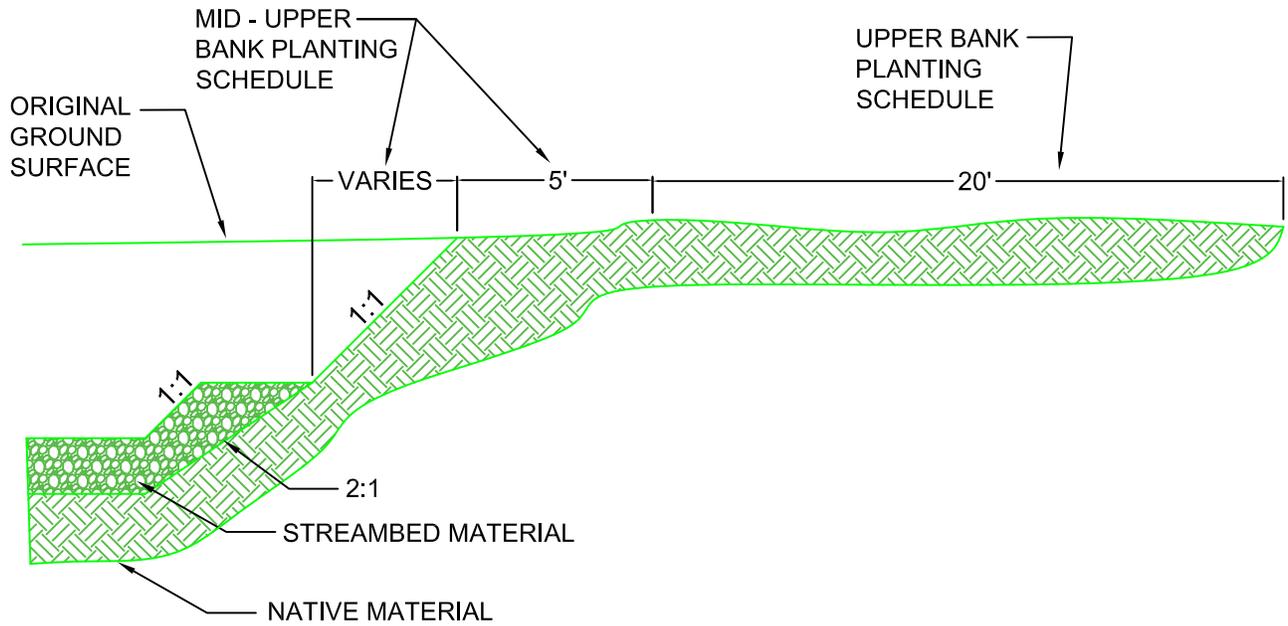
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Washington
Department of
FISH and WILDLIFE

SHEET 11 of 14

POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT ~PLANTING LOCATIONS AND SCHEDULE~



PLANTING LOCATIONS AND SCHEDULES

Not to Scale

MID - UPPER BANK PLANTING SCHEDULE

SALMON BERRY
PACIFIC NINE BARK
VINE MAPLE
RED ALDER

UPPER BANK PLANTING SCHEDULE

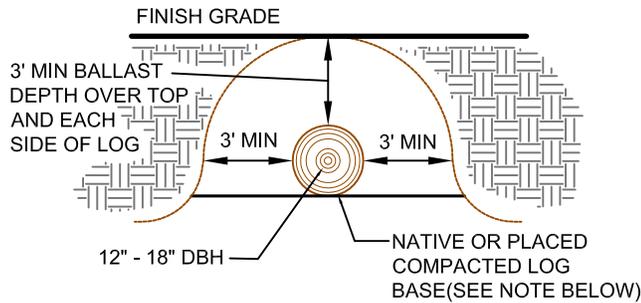
DOUGLAS FIR
WESTERN RED CEDAR
THIMBLE BERRY
NOOTKA ROSE

TREES TO BE REMOVED

TYPE	SIZE	QUANTITY
FIR	12"	2
FIR	24"	3
FIR	36"	5
MAPLE	36"	8
CEDAR	24"	2

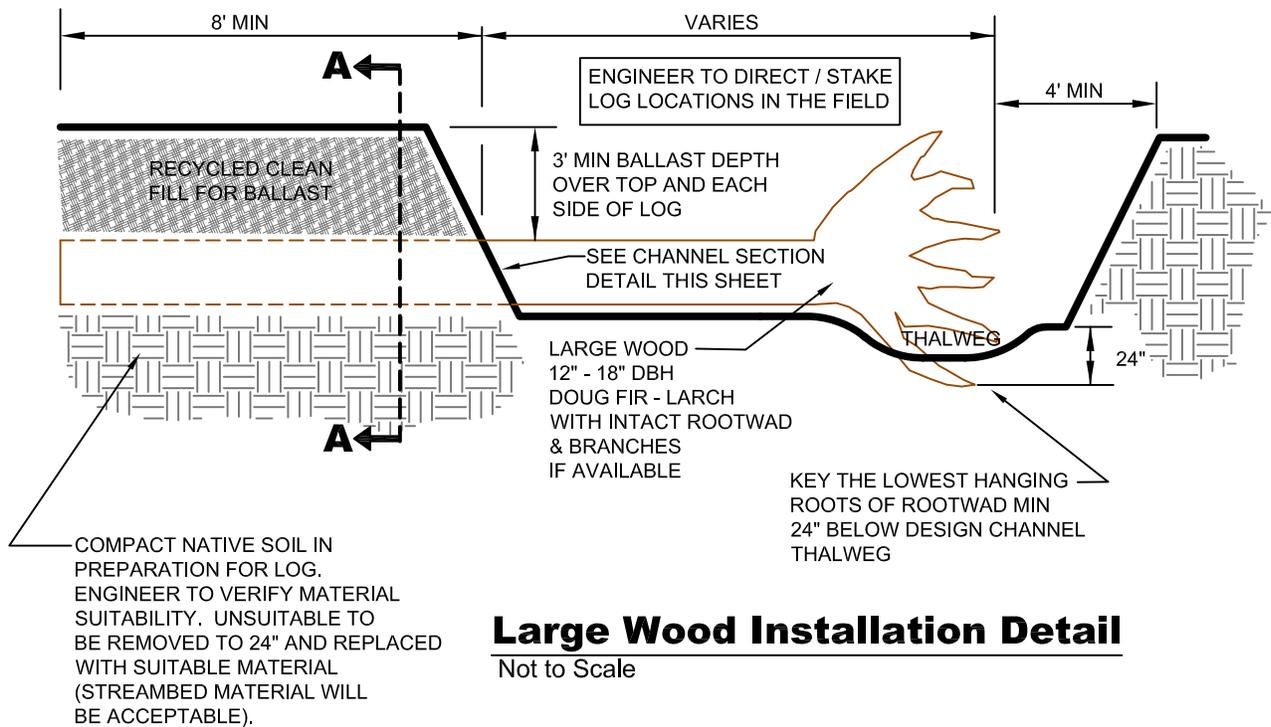
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POTLATCH STATE PARK UN-NAMED TRIBUTARY TO HOOD CANAL CULVERT REPLACEMENT AND CHANNEL REALIGNMENT



1. LOGS SHALL BE DOUGLAS FIR OR WESTERN LARCH. IF UNAVAILABLE, ENGINEER APPROVED CONIFER SPECIES MAY BE ACCEPTABLE UPON REVIEW.
2. ENGINEER TO CERTIFY LOGS PRIOR TO DELIVERY TO SITE.

Section A-A



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**POTLATCH STATE PARK
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CULVERT REPLACEMENT AND CHANNEL REALIGNMENT
~MATERIAL QUANTITIES / DISTURBED AREAS~**

SITE	ROAD FILL IN OHW CY	ROAD FILL OUTSIDE OHW CY	FILL OUT OF ROAD IN OHW CY	FILL OUT OF ROAD OUTSIDE OHW CY	ROAD CUT IN OHW CY	ROAD CUT OUTSIDE OHW CY	CUT OUT OF ROAD IN OHW CY	CUT OUT OF ROAD OUTSIDE OHW CY
CHANNEL GRADING STA 0+00 THRU STA 4+25.62			87 C.Y.				189 C.Y.	544 C.Y.
WDFW SITE ID # 940442 STA 4+25.62 THRU STA 4+55.62	37 C.Y.	260 C.Y.			80 C.Y.	347 C.Y.	80 C.Y.	
CHANNEL GRADING STA 4+55.62 THRU STA 5+81.00			26 C.Y.				56 C.Y.	160 C.Y.
EXISTING WSDOT CULVERT STA 5+81.00 THRU STA 6+43.00					37 C.Y.			
CHANNEL GRADING STA 6+43.00 THRU STA 6+87.70			9 C.Y.				20 C.Y.	57 C.Y.
WDFW SITE ID # 811371 STA 6+87.70 THRU STA 7+87.70	123 C.Y.	867 C.Y.			267 C.Y.	1501 C.Y.		
CHANNEL GRADING STA 7+87.70 THRU STA 8+60.00			15 C.Y.				32 C.Y.	92 C.Y.

***SPECIFIC MATERIAL QUANTITIES**

LOGS PER PLACEMENT 4

LOG PLACEMENTS 13

TOTAL NUMBER OF LOGS 52

STREAMBED MIX: 373 CY

TOTAL DISTURBED AREA = 41,730 SQ FT = 0.96 AC

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