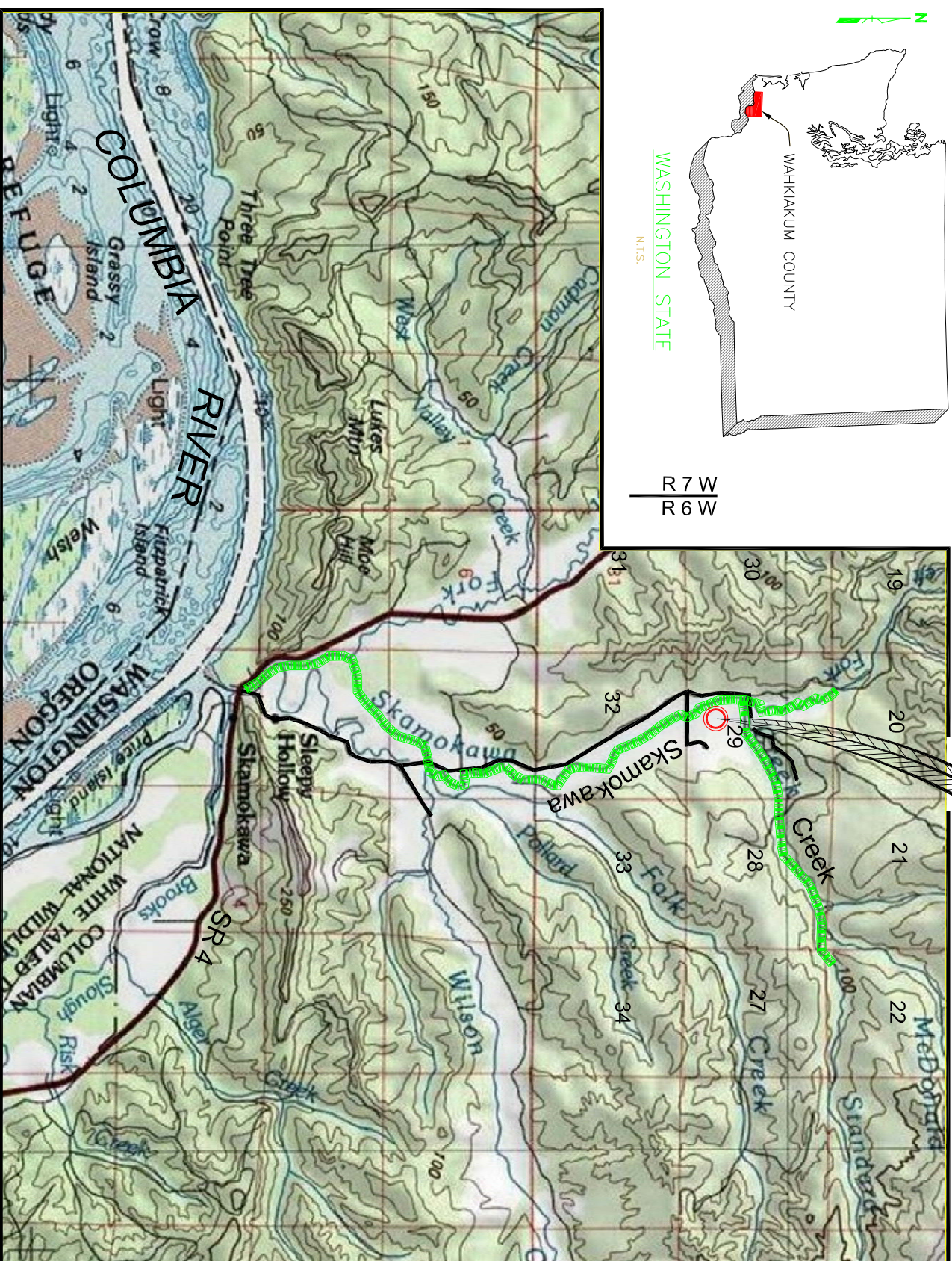
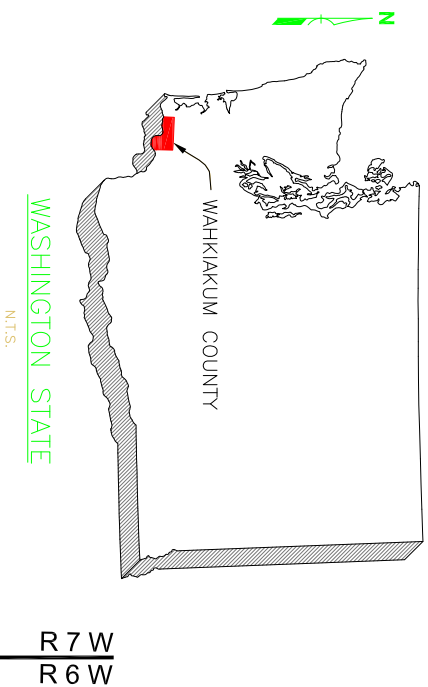


# SKAMOKAWA CHUM CHANNEL

## MCNALLY SITE

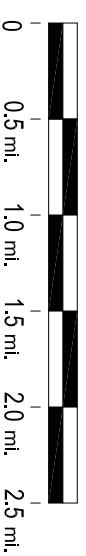
### PROJECT LOCATION



T 10N  
T 9N

### VICINITY MAP

SCALE : 1" = 1/2 Mile



### SURVEY DISCLAIMER

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SEC 29, T10N, R6W WM,  
WAHKIAKUM COUNTY

### PROJECT LOCATION

LAT 46° 19' 2.22" N,  
LONG -123° 27' 1.44" W

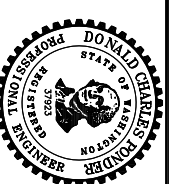
### SHEET INDEX

1. COVER SHEET
2. PROJECT SITE PLAN
3. PROPOSED CHANNEL PLAN
4. PROPOSED CHANNEL PROFILE
5. PROPOSED CHANNEL SECTIONS
6. COIR TOE PROTECTION DETAILS
7. LOG TOE PROTECTION DETAILS
8. EROSION CONTROL
9. DEWATERING DETAILS
10. SIDE CHANNEL PROTECTION DETAIL
11. REVEGETATION PLAN
12. REVEGETATION DETAILS
13. MONITORING WEIR



STATE OF WASHINGTON  
DEPARTMENT OF FISH & WILDLIFE  
HABITAT PROGRAM

SM	DATE	BY	REVISION DESCRIPTION



PROJECT NO.:  
DESIGNED BY: P. KLAVAS  
CHECKED BY: D. PONDER  
DRAWN BY: B. GOWEN  
FILE: \_\_\_\_\_

SCALE VERIFICATION  
0 1 INCH  
BAR MEASURES ONE  
INCH ON ORIGINAL  
DRAWINGS

**SKAMOKAWA CREEK**  
**CHUM SALMON SPawning CHANNEL**  
**McNALLY SITE**  
**COVER SHEET**

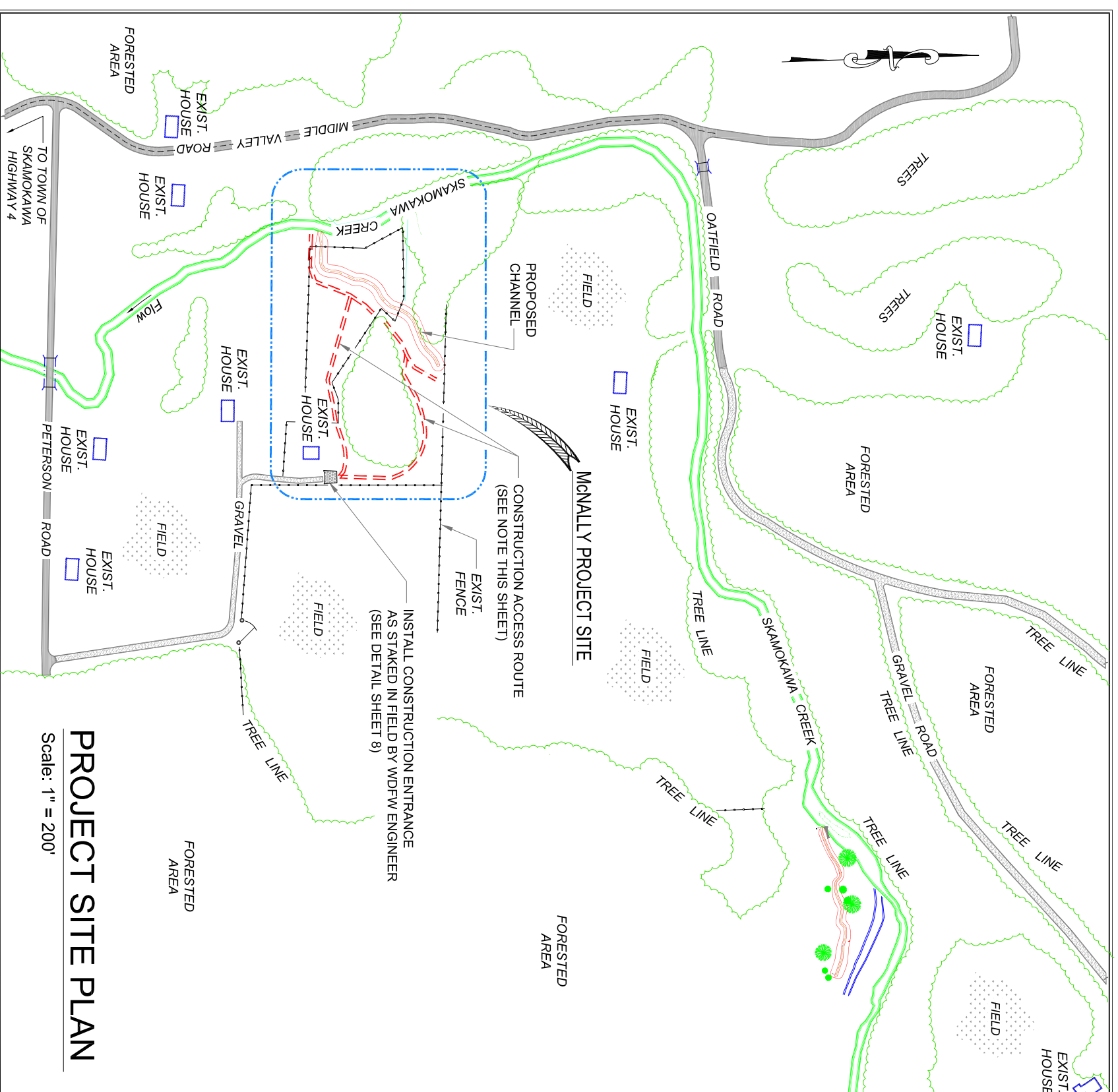
Date: 10 - 01 - 15  
Sheet: 1 of 13

**PROJECT SITE DIRECTIONS:**

DOWNSTREAM SITE: (McNALLY PROPERTY)  
 SR 4 TO TOWN OF SKAMOKAWA, WA. TURN NORTH ON  
 E. SKAMOKAWA VALLEY RD., 2.2 MI. TO PETERSON RD.  
 INTERSECTION. RIGHT ON PETERSON ROAD AND  
 FOLLOW TO END. TURN LEFT ON GRAVEL RD. AND  
 CONTINUE NORTH UNTIL ROAD TURNS LEFT. TURN  
 RIGHT AT FIRST DRIVEWAY. PROJECT ACCESS ROUTE  
 BEYOND DRIVEWAY TO BE STAKED IN FIELD BY WDFW  
 PRIOR TO CONTRACTOR ACCESS.

**CONSTRUCTION ACCESS ROUTE NOTES:**

1. ACCESS ROUTE LIMITS OF DISTURBANCE TO BE A MAXIMUM WIDTH OF 20 FT.
2. EXACT ROUTE TO BE STAKED IN FIELD BY WDFW PROJECT ENGINEER PRIOR TO CONSTRUCTION ACTIVITIES.
3. ALL MATERIALS USED IN THE CONSTRUCTION OR IMPROVEMENT OF THE CONSTRUCTION ACCESS ROUTE SHALL BE REMOVED BY THE CONTRACTOR AND PLACED IN AN APPROVED LOCATION UPON PROJECT COMPLETION.
4. ALL DISTURBED AREAS OF THE CONSTRUCTION ACCESS ROUTE SHALL BE RESTORED TO PRE-EXISTING CONDITIONS AND PLANTED WITH APPROVED PASTURE GRASS OR NATIVE PLANT MATERIAL PER DIRECTION OF WDFW BIOLOGIST.



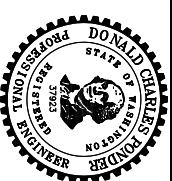
**PROJECT SITE PLAN**

Scale: 1" = 200'

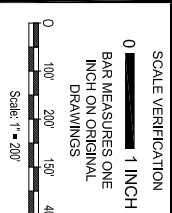


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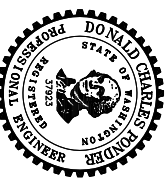
**SKAMOKAWA CREEK**  
**CHUM SALMON SPAWNING CHANNEL**  
**McNALLY SITE**  
**PROJECT SITE PLAN**

Date: 10 - 01 - 15  
 Sheet: 2 of 13

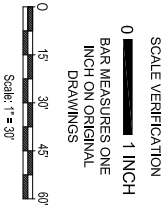


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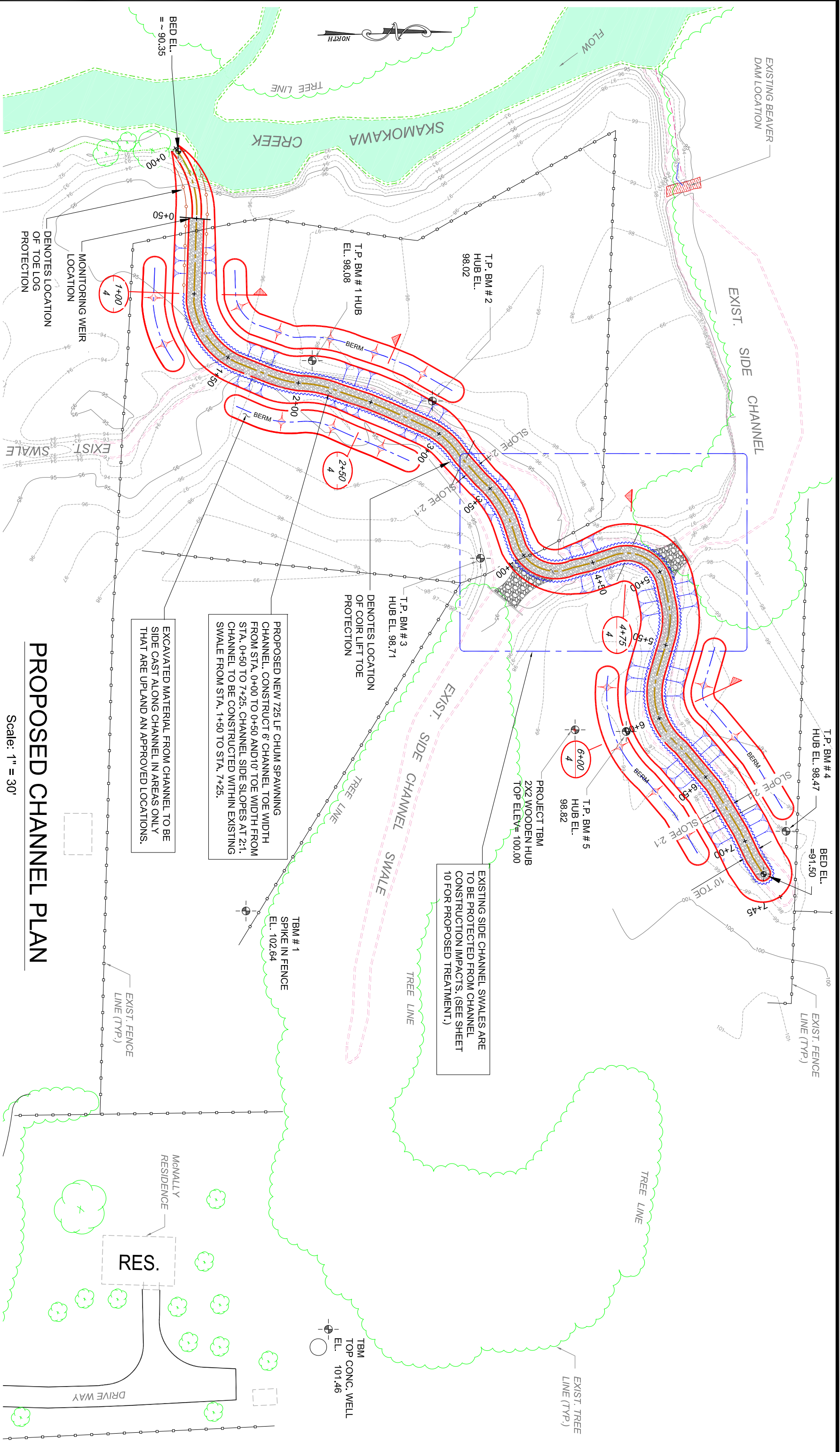


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FILE:



SKAMOKAWA CREEK  
CHUM SALMON SPAWNING CHANNEL  
McNALLY SITE  
PROPOSED CHANNEL PLAN

Date: 10-01-15  
Sheet: 3 of 13



PROPOSED CHANNEL PLAN

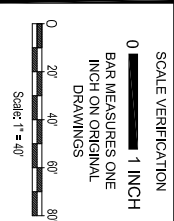
Scale: 1" = 30'



SVM	DATE:	BY:	REVISION DESCRIPTION



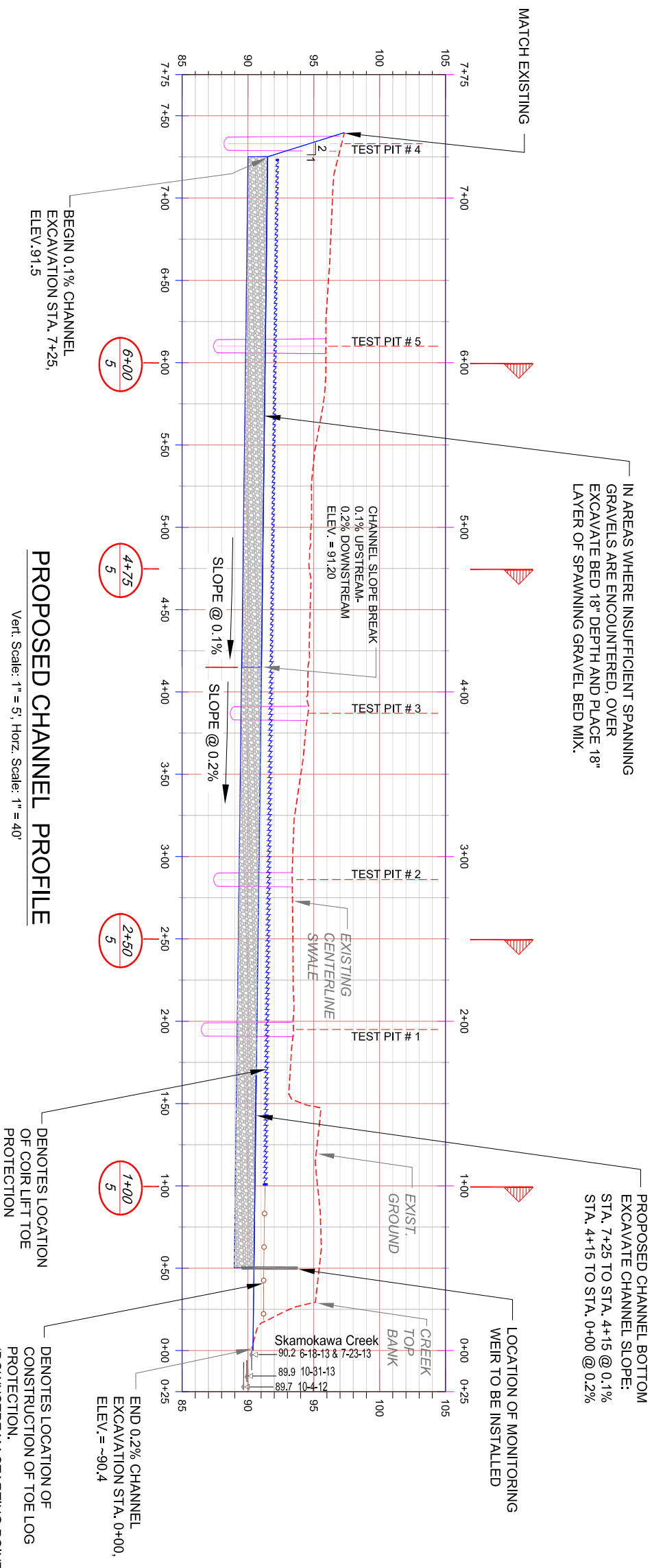
PROJECT NO.:  
DESIGNED BY: P. KLAVAS  
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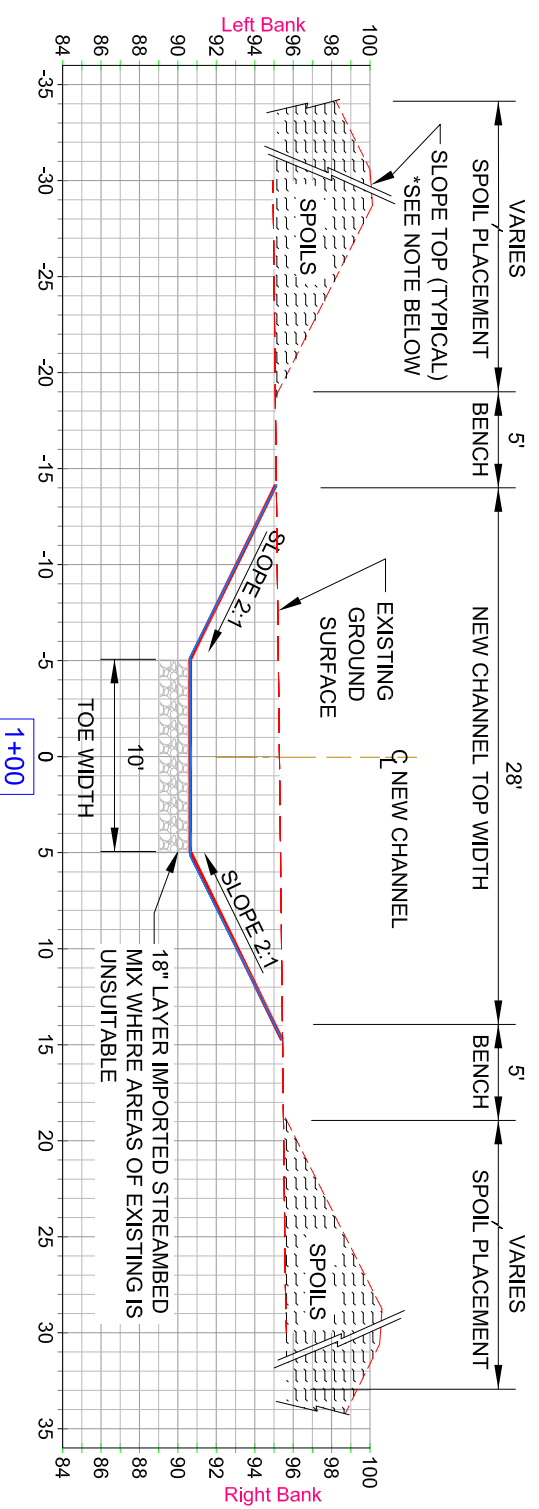
**SKAMOKAWA CREEK**  
**CHUM SALMON SPAWNING CHANNEL**  
**McNALLY SITE**  
**PROPOSED PROFILE**

**\*ENGINEERED STREAMBED MIX SPECIFICATION:**  
70% STREAMBED SEDIMENT WSDOT 9-03.11(1)  
30% 4" COBBLE WSDOT 9-03.11(2)  
ALL MIXES REFERENCED PER WSDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2012 SECTION 9-03.11 BLEND MATERIALS ON SITE TO ACHIEVE WELL GRADED MIX.  
IF RECYCLED OR RE-PURPOSED MATERIALS ARE TO BE USED FOR STREAMBED MATERIAL, THEY MUST MEET THE ABOVE PROPOSED GRADATION PER VISUAL INSPECTION BY ENGINEER.

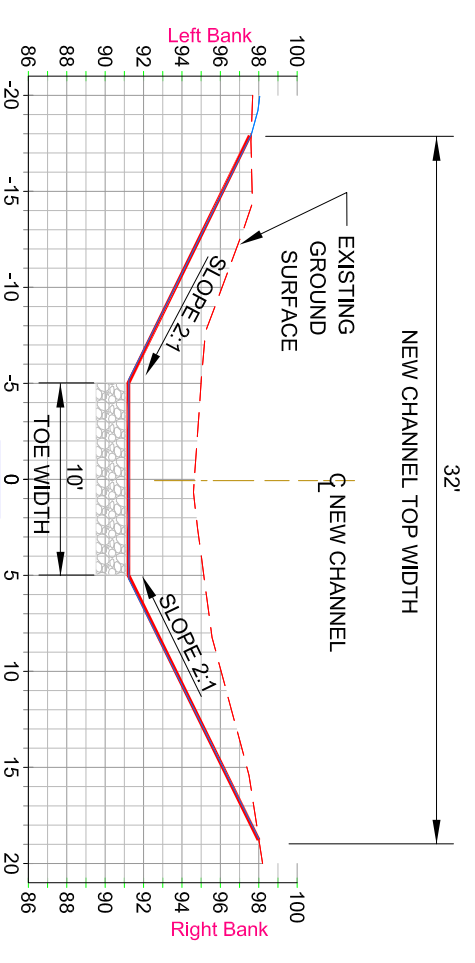
STREAMBED GRAVEL MIX	
STREAMBED SEDIMENT 70% WSDOT 9-03.11(1)	STREAMBED COBBLES 30% WSDOT 9-03.11(2)
SIEVE SIZE	% PASSING
2 1/2"	99-100
2"	65-95
1"	50-85
No. 4	26-44
No. 40	16 MAX.
No. 200	5.0-9.0



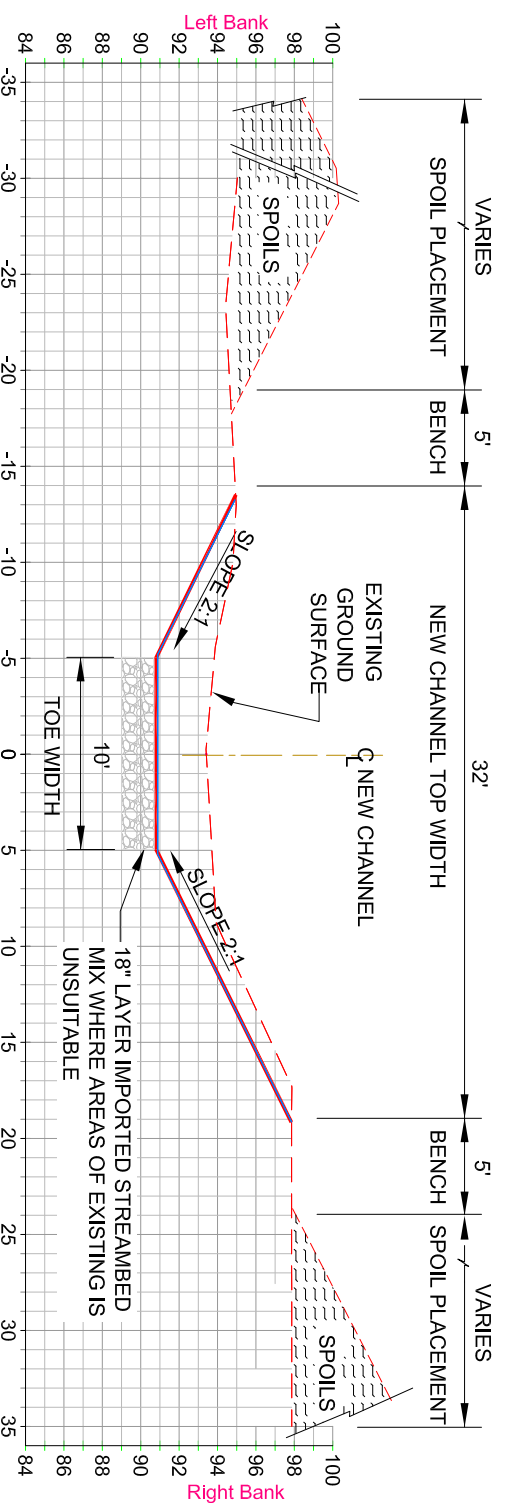
NOTES:  
DENOTES LOCATION OF COIL LIFT TOE PROTECTION  
DENOTES LOCATION OF CONSTRUCTION OF TOE LOG PROTECTION,  
(DOWNSTREAM STARTING POINT OF TOE LOG TREATMENT TO BE STAKED IN FIELD BY WDFW ENGINEER AT TIME OF CONSTRUCTION)



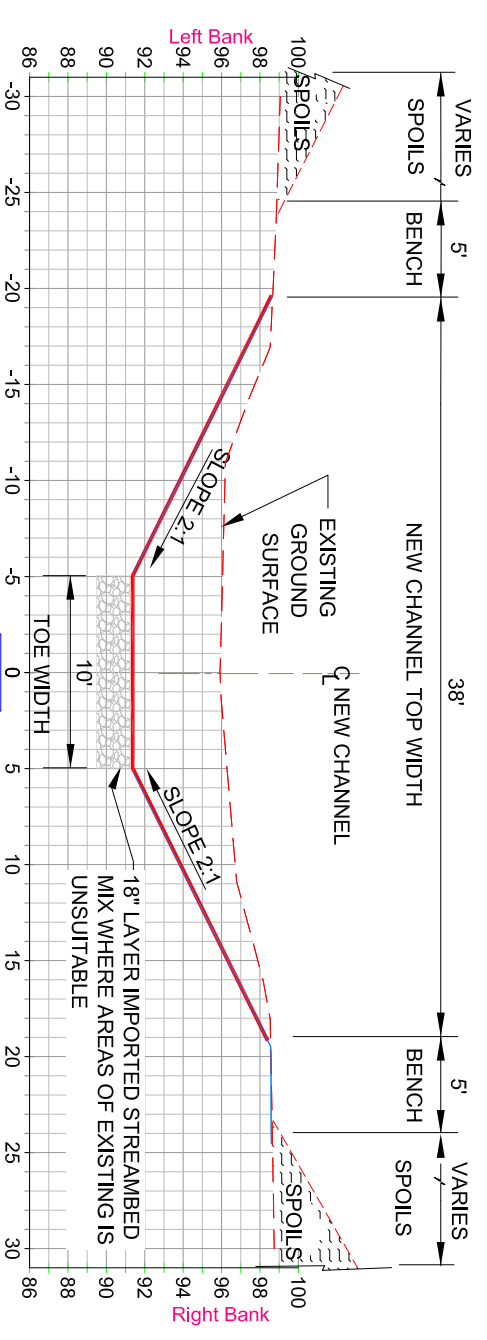
Scale: 1" = 5', Horiz. & Vert.



Scale: 1" = 5', Horiz. & Vert.



Scale: 1" = 5', Horiz. & Vert.



Scale: 1" = 5', Horiz. & Vert.

\*NOTE:  
SLOPE TOP OF SPOIL BERMS  
AT 2% AWAY FROM CHANNEL.

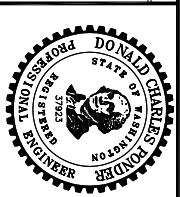
### PROPOSED CHANNEL SECTIONS

Vert. & Horiz. Scale: 1" = 5'

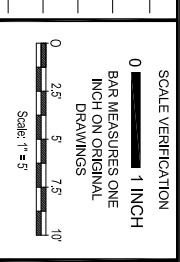


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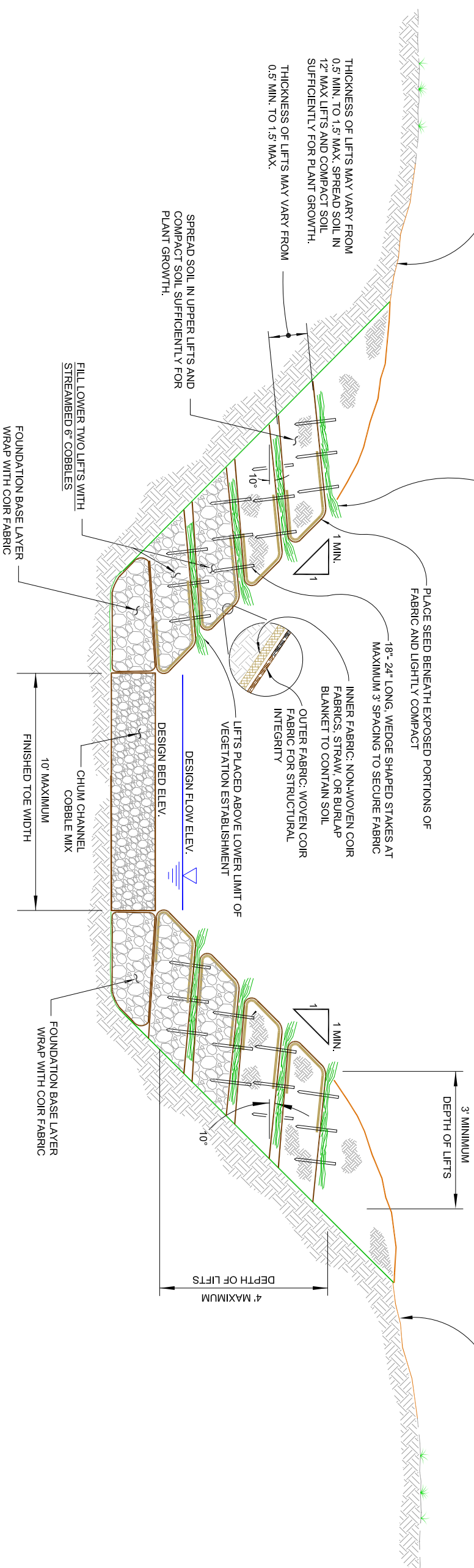
SKAMOKAWA CREEK  
CHUM SALMON SPAWNING CHANNEL  
MCNALLY SITE  
PROPOSED CHANNEL SECTIONS

Date: 10 - 01 - 15  
Sheet: 5 of 13

APPLY EROSION CONTROL FABRIC AND REVEGETATE WITH NATIVE SPECIES IN AREAS DISTURBED BY CONSTRUCTION

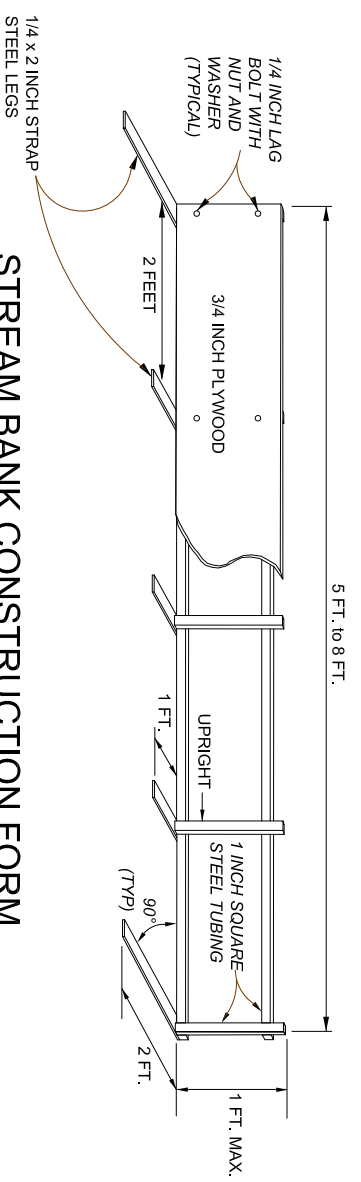
LIVE CUTTINGS: MINIMUM LENGTH 3' WITH 1/2" MINIMUM DIAMETER. BRANCHES SHOULD BE PLACED WITH BUTTS ENDS TOUCHING THE BANK, ROUGHLY PERPENDICULAR TO THE STREAM FLOW. TIPS SHOULD EXTEND SLIGHTLY BEYOND FINISHED BANKLINE. CUTTINGS SHOULD BE PLACED 2"-6" APART. PLACE SEVERAL INCHES OF SOIL AROUND ROOTING ZONE OF CUTTINGS. WATER THOROUGHLY AND LIGHTLY COMPACT TO ENSURE GOOD SOIL CONTACT WITH THE CUTTINGS.

APPLY EROSION CONTROL FABRIC AND REVEGETATE WITH NATIVE SPECIES IN AREAS DISTURBED BY CONSTRUCTION



### COIR FABRIC ENCAPSULATED SOIL LIFTS

NOT TO SCALE



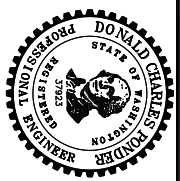
### STREAM BANK CONSTRUCTION FORM

ISOMETRIC VIEW FROM REAR

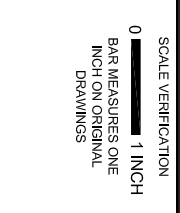


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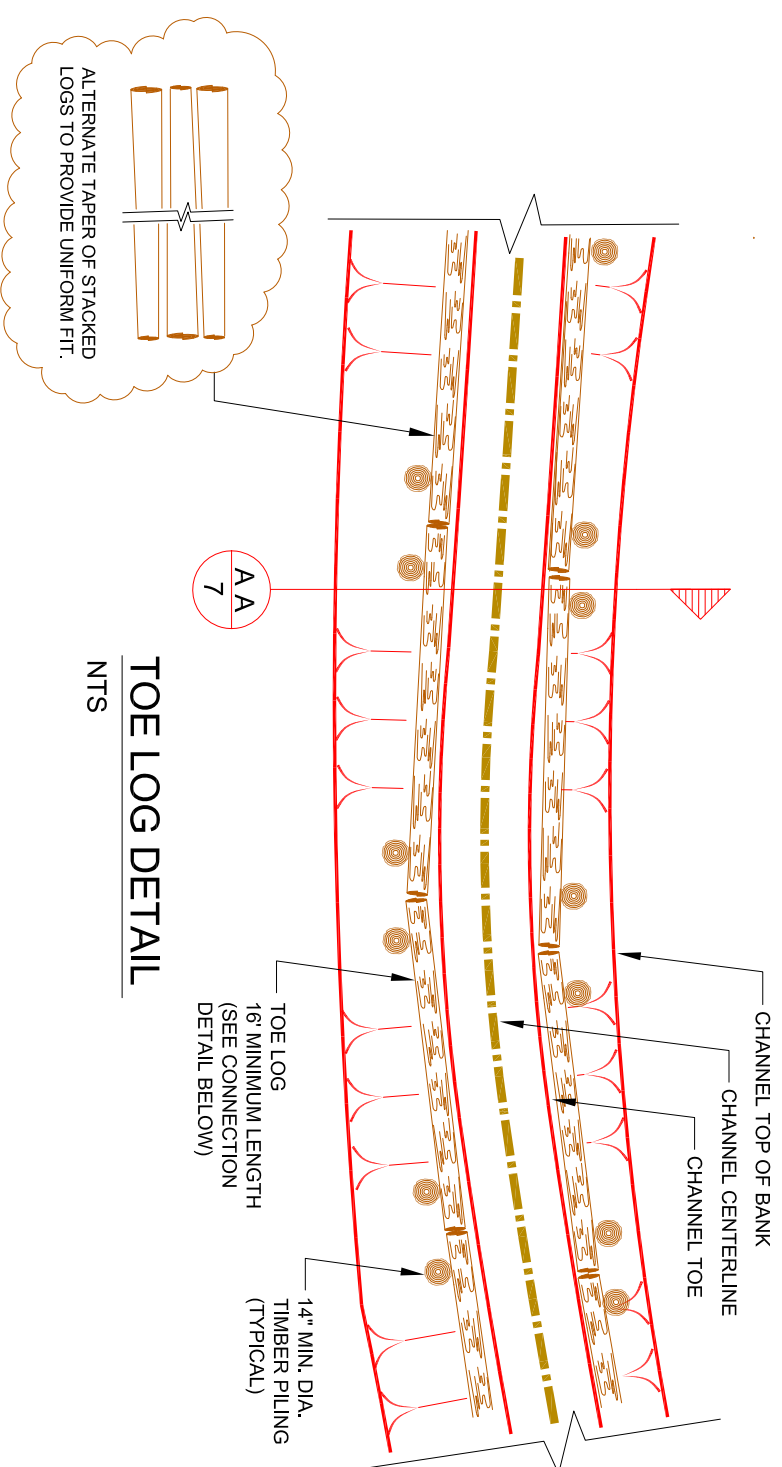


**SKAMOKAWA CREEK**  
**CHUM SALMON SPAWNING CHANNEL**  
**McNALLY SITE**  
**COIR TOE PROTECTION DETAILS**

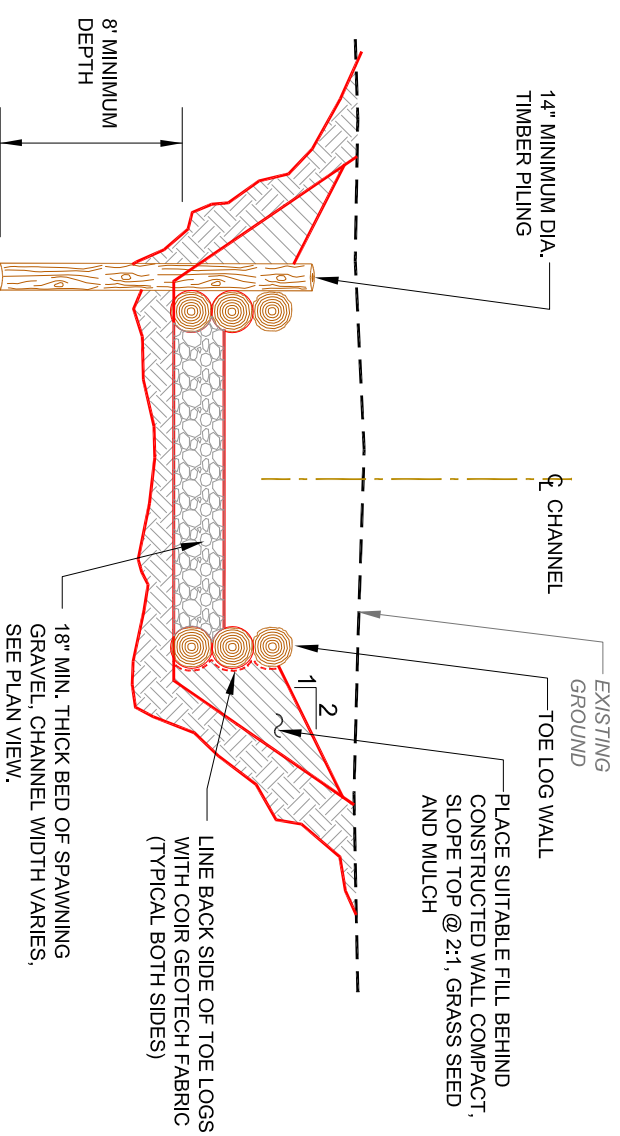
Date: 10 - 01 - 15  
Sheet: 6 of 13

**SPECIFICATION**

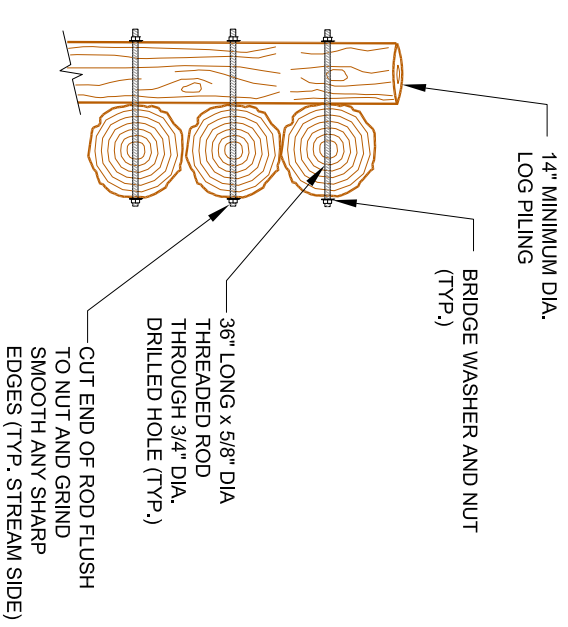
LOGS:  
 PILING: MINIMUM DIAMETER 10-14". SPECIES DOUGLAS FIR OR CEDAR. ALL LOGS SHALL BE SOUND AND FREE FROM ROT.  
 MINIMUM LENGTH OF PILING: 12 FT.  
 MINIMUM LENGTH OF HORZ. LOGS: 16 FT.



**TOE LOG DETAIL**  
NTS



**TOE LOG SECTION VIEW**  
NTS

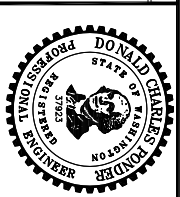


**THREADED ROD CONNECTION DETAIL**  
NTS



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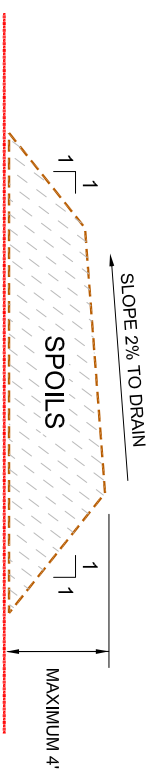
PROJECT NO.:	DESIGNED BY: P. KLAVAS
CHECKED BY: D. FONDER	DRAWN BY: B. GOWEN
FILE:	

SCALE VERIFICATION
0 1 INCH
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

<b>SKAMOKAWA CREEK</b>
<b>CHUM SALMON SPAWNING CHANNEL</b>
<b>McNALLY SITE</b>
<b>LOG TOE PROTECTION DETAILS</b>

Date:	10 - 01 - 15
Sheet:	7 of 13

NOTE:  
SPOIL MATERIAL TO BE SPREAD IN FIELD AT LOCATIONS APPROVED BY BOTH WDFW ENGINEER AND LAND OWNER. STOCKPILED MATERIAL SHALL BE SLOPED TO DRAIN AS SHOWN. SPREAD GRASS SEED AND MULCH.

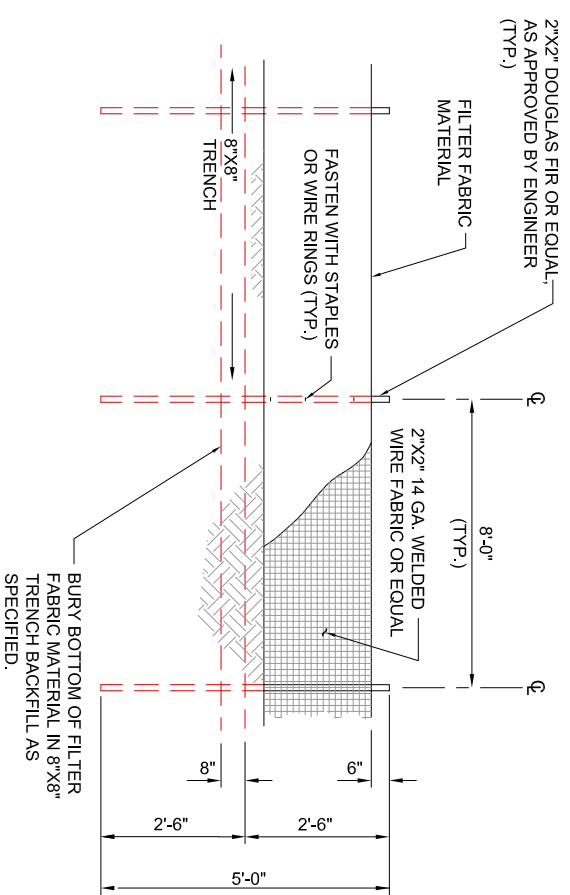


### TYPICAL SPOIL PILE DETAIL

Scale : N.T.S.

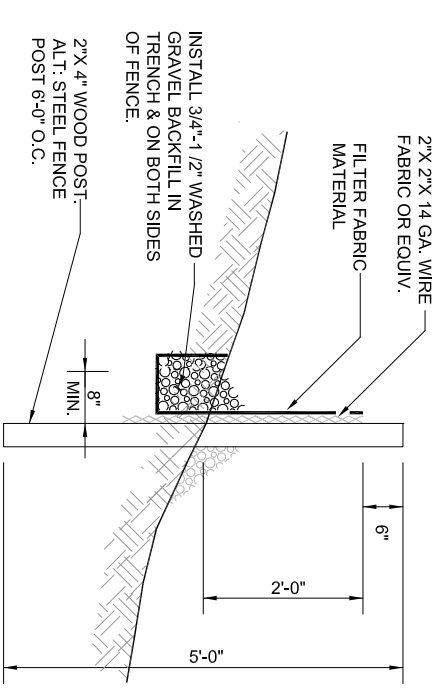
#### FILTER FABRIC NOTES:

1. FILTER FABRIC PURCHASED IN CONTINUOUS ROLL SHALL BE CUT TO LENGTH AS NEEDED. IF JOINTS ARE NECESSARY FABRIC SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POSTS WITH A MINIMUM OF (6) INCH OVERLAP. BOTH ENDS SHALL BE SECURED AS REQUIRED.
2. FILTER FABRIC SHALL BE INSTALLED TO FOLLOW CONTOURS. FENCE POSTS SHALL BE SPACED A MAXIMUM OF EIGHT (8) FEET APART UNLESS OTHERWISE SHOWN HEREIN. ALL POSTS SHALL BE DRIVEN INTO THE GROUND A MINIMUM OF 30 INCHES.
3. A TRENCH SHALL BE EXCAVATED, ROUGHLY EIGHT (8) INCHES WIDE BY EIGHT (8) INCHES DEEP UPSLOPE AND ADJACENT TO THE POST TO ALLOW THE FILTER FABRIC TO BE BURIED.
4. WHEN STANDARD STRENGTH FILTER FABRIC IS UTILIZED, A WIRE SINGLE SPACE MESH SUPPORT FENCE SHALL BE FASTENED TO THE UPSLOPE (OR UPSTREAM) SIDE OF THE POSTS USING ONE (1) INCH MINIMUM LENGTH WIRE STAPLES. THE WIRE OR APPROVED HOG RINGS. ALL WIRE SUPPORT SHALL EXTEND INTO THE TRENCH A MINIMUM OF FOUR (4) INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE ORIGINAL GRADE.
5. ALL FILTER FABRIC SHALL BE STAPLED OR WIRED TO SUPPORT FENCING AND A MINIMUM OF 20 INCHES OF FABRIC SHALL BE EXTENDED INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED OR FASTENED TO EXISTING TREES OF STRUCTURES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. IF HIGH STRENGTH FILTER FABRIC AND CLOSER SPACING ARE USED, THE WIRE SUPPORT FENCING MAY BE ELIMINATED. HIGH STRENGTH FABRIC SHALL BE STAPLED OR WIRED DIRECTLY TO POSTS AS REQUIRED BY THE ENGINEER.
7. CUTOFF TRENCH SHALL BE BACKFILLED WITH 3/4 INCH MINIMUM DIAMETER WASHED GRAVEL OR OTHER SIMILAR SOURCE AS APPROVED BY THE ENGINEER.
8. FILTER FENCING SHALL BE INSTALLED WHERE SHOWN ON THE PLAN, OR AS MARKED IN THE FIELD BY THE ENGINEER. PRIOR TO COMMENCEMENT OF WORK, ALL FENCING SHALL BE INSPECTED DAILY DURING CONSTRUCTION AND AFTER EACH SIGNIFICANT RAINFALL EVENT UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. REMOVAL OF TRAPPED SEDIMENT SHALL BE PERFORMED WHEN AMOUNTS REACH APPROXIMATELY 1/3 HEIGHT OF THE FENCE ABOVE GROUND.
10. FILTER FENCING SHALL REMAIN IN-PLACE UNTIL SITE HAS BEEN REVEGETATED TO ORIGINAL CONDITION OR DIRECTED BY THE ENGINEER.



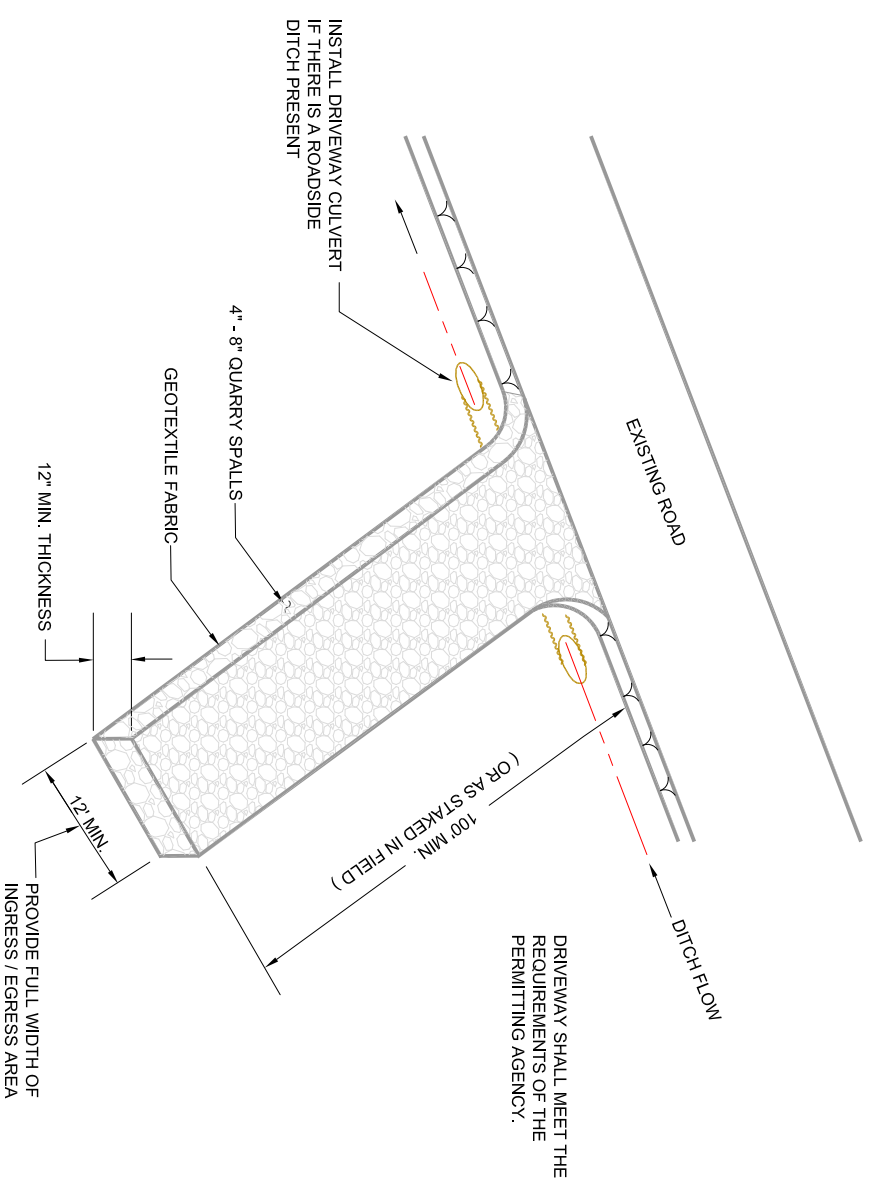
### TYPICAL SILT FENCE DETAIL

Scale: N.T.S.



### TYPICAL SILT FENCE SECTION VIEW

Scale: N.T.S.



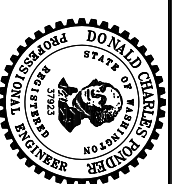
### STABILIZED CONSTRUCTION ENTRANCE

Scale: N.T.S.



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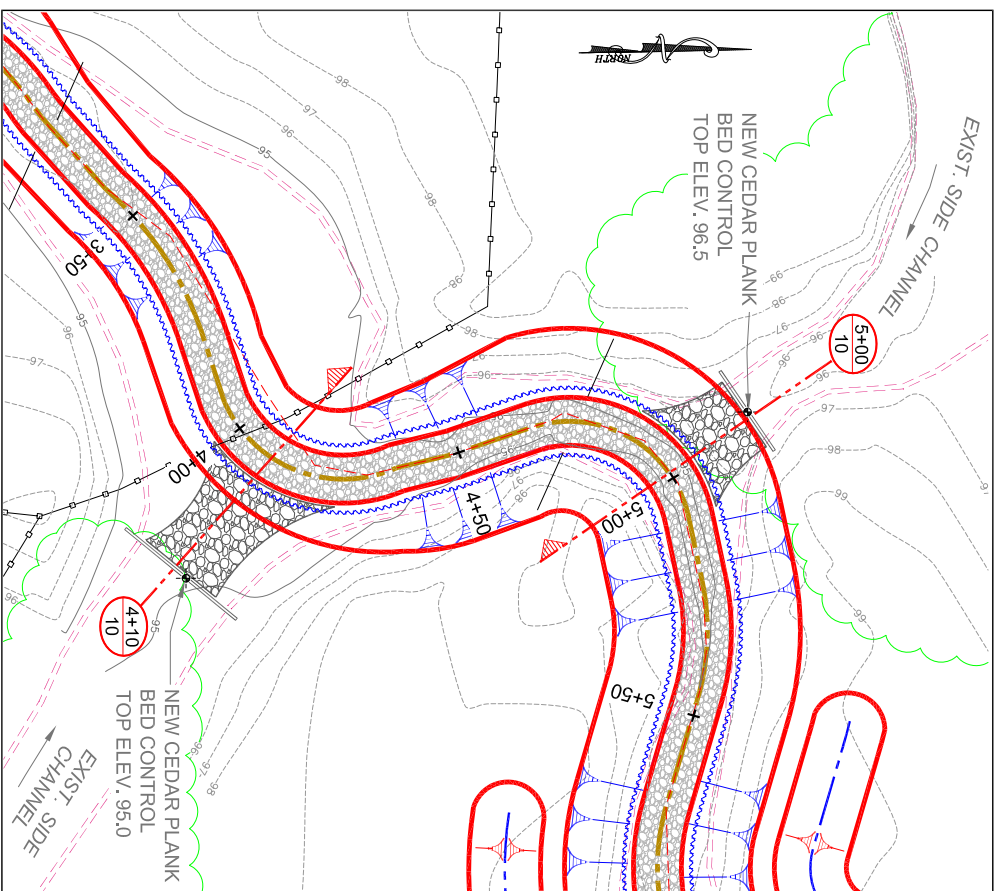
SCALE VERIFICATION  
0 1 INCH  
BAR MEASURES ONE INCH ON ORIGINAL DRAWINGS

SKAMOKAWA CREEK  
CHUM SALMON SPawning CHANNEL  
McNALLY SITE  
EROSION CONTROL

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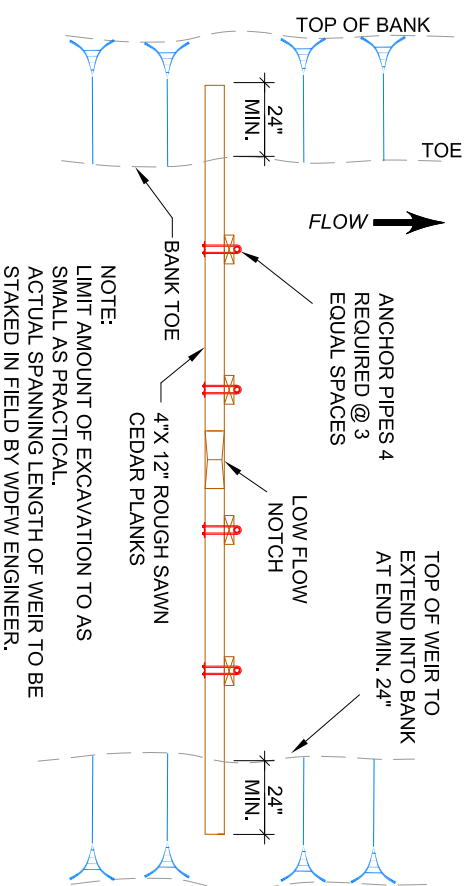






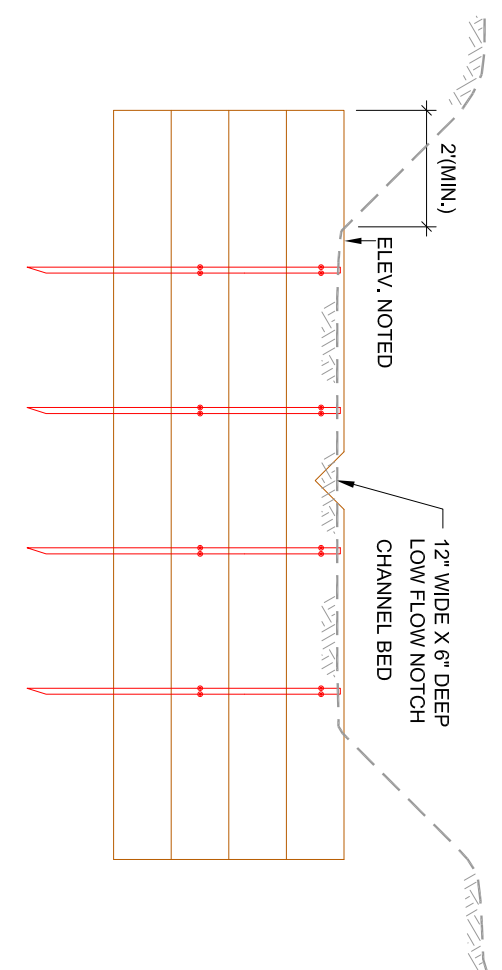
**SIDE CHANNEL STABILIZATION PLAN**

Scale: 1" = 20'



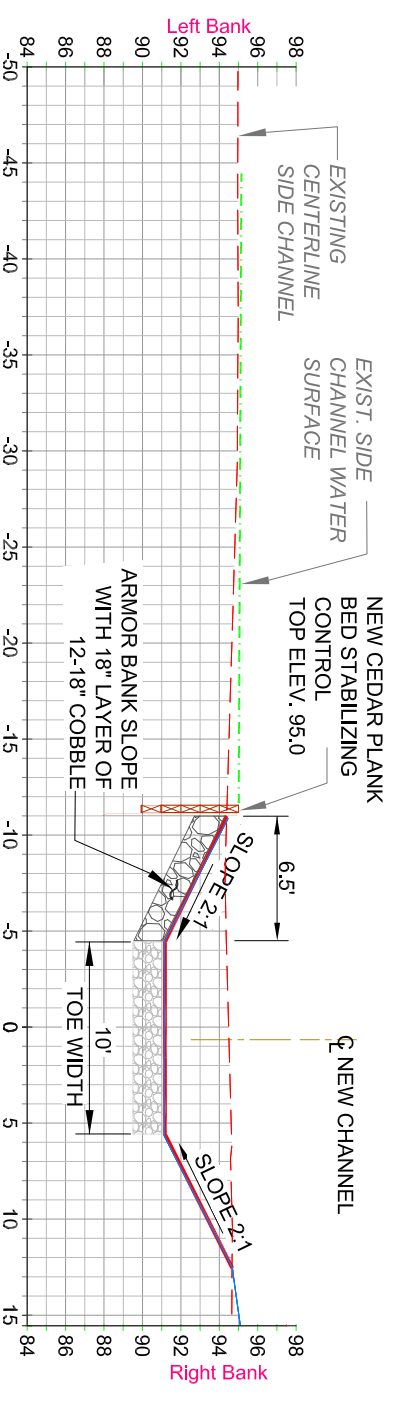
**PLAN VIEW**

Scale: NTS



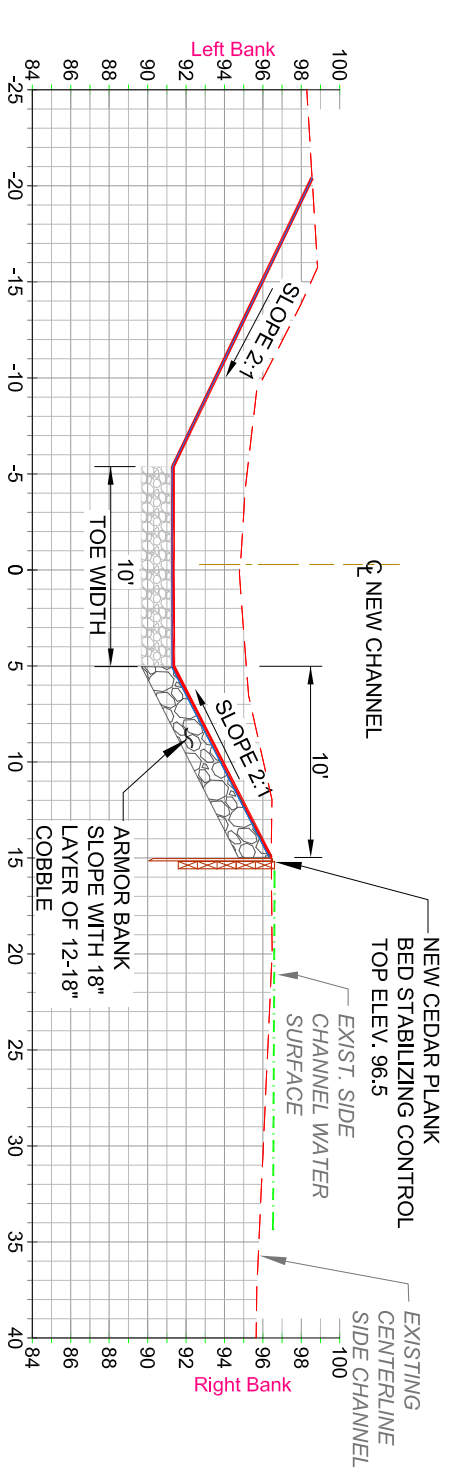
**ELEVATION**

Scale: NTS



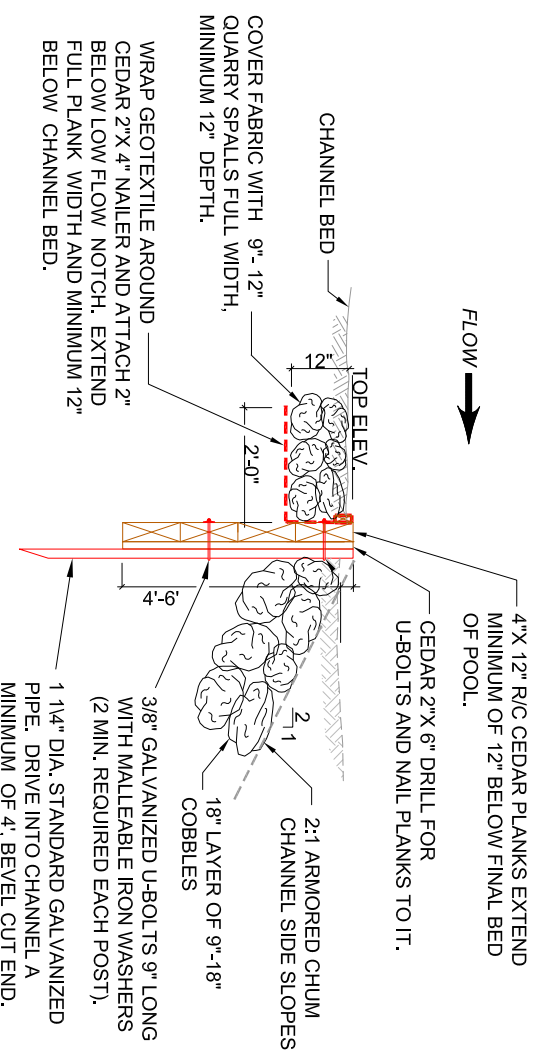
**SECTION VIEW STA. 4+10**

Scale: 1" = 5', Horiz. & Vert.



**SECTION VIEW STA. 5+00**

Scale: 1" = 5', Horiz. & Vert.



**SECTION**

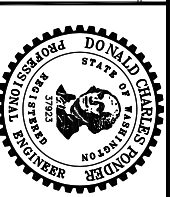
Scale: NTS

**CEDAR PLANK BED CONTROL DETAILS**

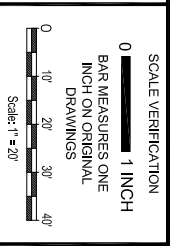


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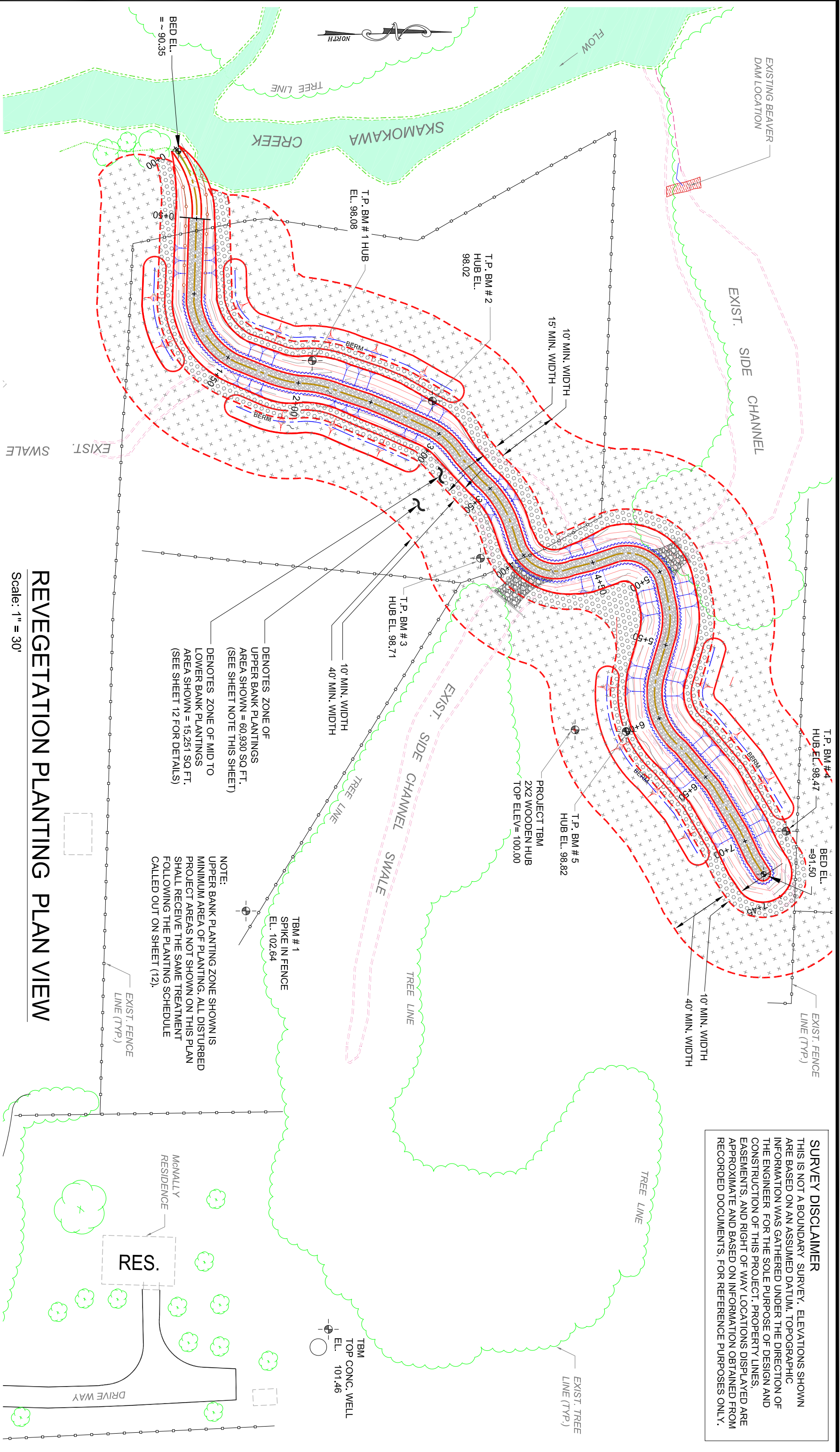
PROJECT NO.:	P. KLAVAS
DESIGNED BY:	D. FONDER
CHECKED BY:	B. GOWEN
DRAWN BY:	
FILE:	



**SKAMOKAWA CREEK**  
**CHUM SALMON SPawning CHANNEL**  
**McNALLY SITE**  
**SIDE CHANNEL PROTECTION DETAIL**

Date:	10 - 01 - 15
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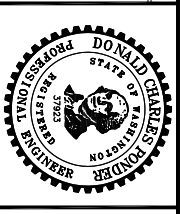
# REVEGETATION PLANTING PLAN VIEW

Scale: 1" = 30'

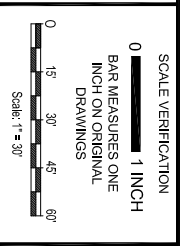


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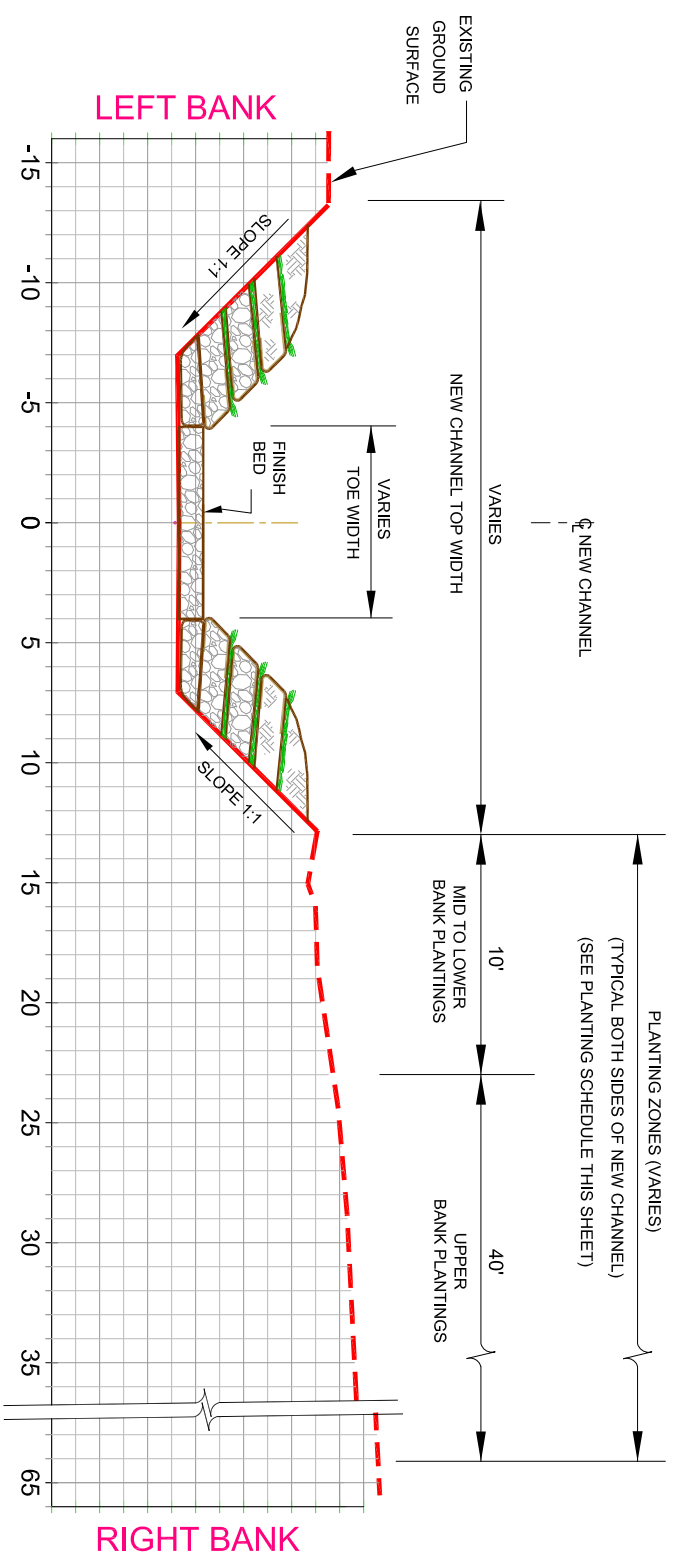


PROJECT NO.:  
 DESIGNED BY: P. KLAVAS  
 CHECKED BY: D. FONDER  
 DRAWN BY: B. GOWEN  
 FILE: \_\_\_\_\_



**SKAMOKAWA CREEK**  
**CHUM SALMON SPAWNING CHANNEL**  
**McNALLY SITE**  
**REVEGETATION PLAN**

Date: 10-01-15  
 Sheet: 11 of 13



**TYPICAL PLANTING ZONE SECTION**

Scale: N.T.S.

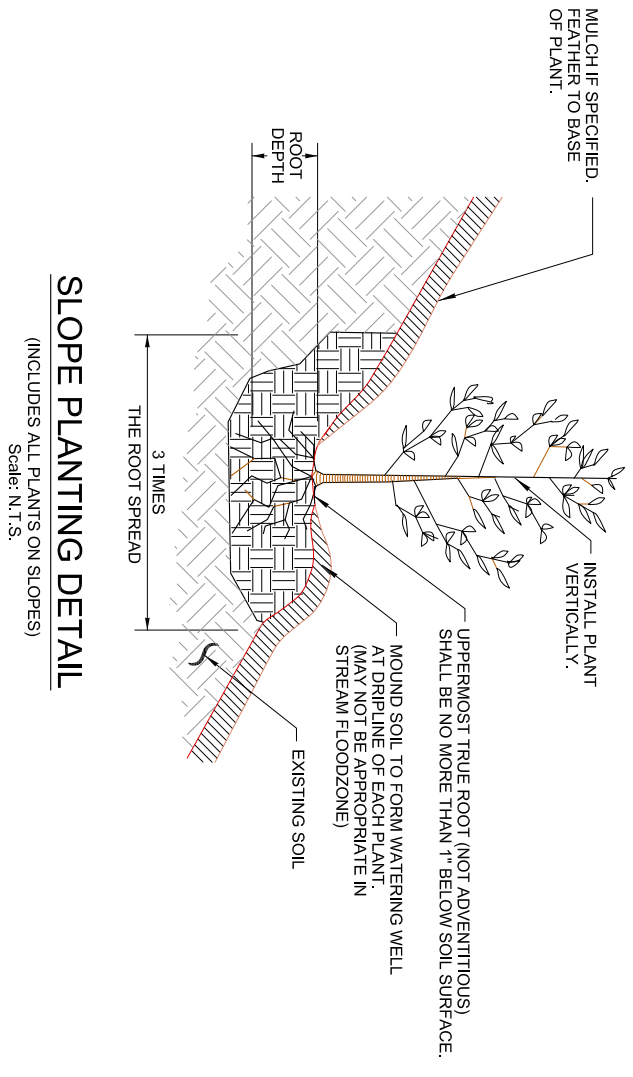
UPPER BANK PLANTING	SPACING	MID TO LOWER BANK PLANTING	SPACING
12" DOUGLAS FIR	20' ON CENTER	8" RED ALDER	10'-15' ON CENTER
12" WESTERN RED CEDAR	20' ON CENTER	8" PACIFIC NINEBARK	3'-5' ON CENTER
8" THIMBLEBERRY	3'-5' ON CENTER	8" SALMONBERRY	3'-5' ON CENTER
8" NOOTKA ROSE	3'-5' ON CENTER	8" VINE MAPLE	3'-5' ON CENTER
12" BIGLEAF MAPLE	20' ON CENTER		

**PLANTING ZONE SCHEDULE**

Scale: N.T.S.

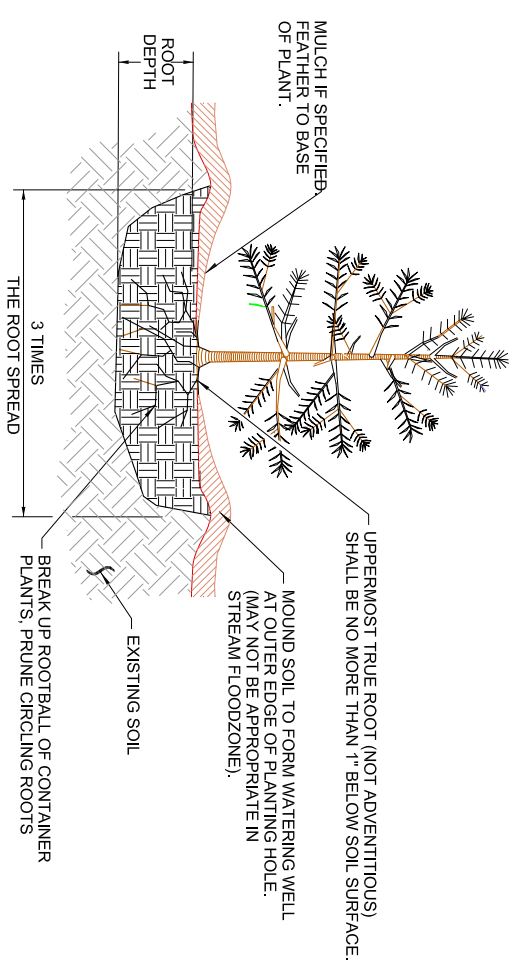
**NOTES:**

- 1 WDFW PROJECT BIOLOGIST SHALL FLAG ADDITIONAL AREAS THAT SHALL RECEIVE PLANTINGS
- 2 PLANTING ZONES PROVIDED ARE APPROXIMATE. APPROPRIATE PLANT SPECIES AND DISTRIBUTION VARY WITH EACH INDIVIDUAL SITE AND PLANT SPECIES CHARACTERISTICS.
- 3 HERBACEOUS PLANTINGS MAY BE APPROPRIATE WITH WOODY PLANTINGS.
- 4 PLANTING TO OCCUR WINTER OR EARLY SPRING.
- 5 PLANTS SHALL BE MIN. 2-YRS. OLD.
- 6 IF CONTAINERIZED PLANTS USED - MIN. 1 GA. CONTAINERS.
- 7 IF BARE ROOT STOCK USED, PLANTS SHALL BE PLANTED WITHIN (2) DAYS.



**SLOPE PLANTING DETAIL**

(INCLUDES ALL PLANTS ON SLOPES)  
Scale: N.T.S.



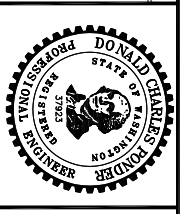
**SHRUB, TREE AND GROUND COVER PLANTING DETAIL**

Scale: N.T.S.

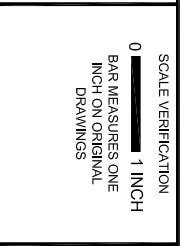


STATE OF WASHINGTON  
DEPARTMENT OF FISH & WILDLIFE  
HABITAT PROGRAM

SWM	DATE:	BY:	REVISION DESCRIPTION



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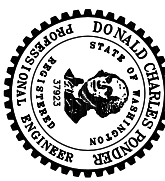


**SKAMOKAWA CREEK**  
**CHUM SALMON SPawning CHANNEL**  
**McNALLY SITE**  
**REVEGETATION DETAILS**

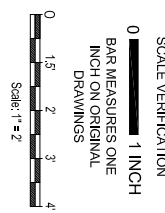
Date:	10 - 01 - 15
Sheet:	12 of 13



SWM	DATE	BY	REVISION DESCRIPTION



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**SKAMOKAWA CREEK**  
**CHUM SALMON SPAWNING CHANNEL**  
**McNALLY SITE**  
**MONITORING WEIR**

Date: 10-01-15  
Sheet: 13 of 13

