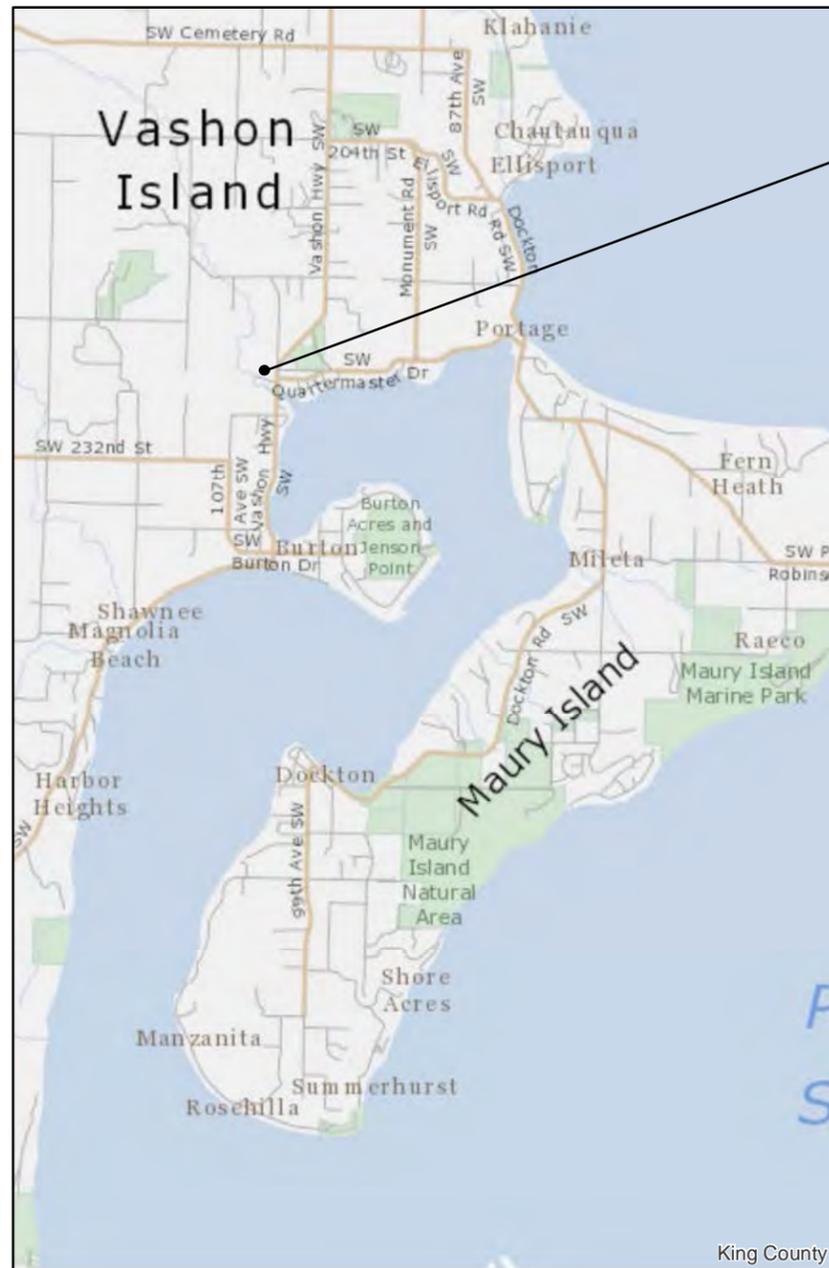


VICINITY MAP

1 in = 1 mile



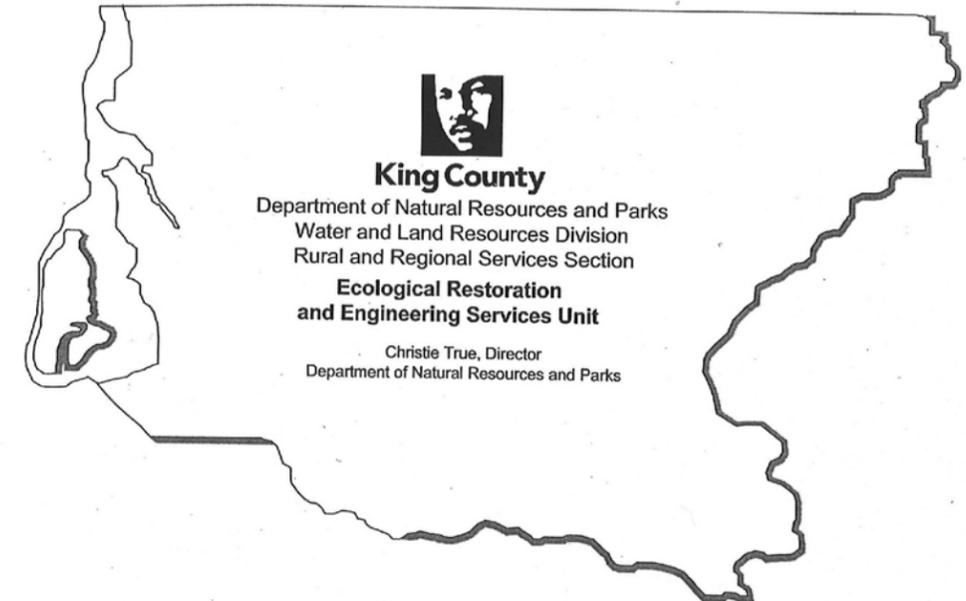
PROJECT LOCATION

10375 SW 225TH ST,
Vashon, WA 98070

PARCEL #:1822039129

INDEX

SHEET	DESCRIPTION
1	VICINITY MAP AND SHEET INDEX
2	EXISTING CONDITIONS
3	SITE PLAN
4	STREAM LWD PLAN
5	ESTUARY LWD PLAN
6	ESTUARY LWD DETAILS
7	STREAM LWD DETAILS



**SCOTT PROPERTY,
JUDD CREEK HABITAT ENHANCEMENT
SMALL HABITAT RESTORATION PROJECT**

PROJECT # 1123558

**CONSTRUCTION
PLANS
3/31/2015**

Sup. Engineer	Will Mansfield, P.E.	
Project Manager	Paul Adler	
Design	Paul Adler	
Engineering	Alex Hallenius, P.E.	
Sr. Ecologist	Jon Hansen	



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 Ecological Restoration and Engineering Services Unit

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**Scott Property, Judd Creek
Habitat Enhancement SHRP**

VICINITY MAP
AND
SHEET INDEX

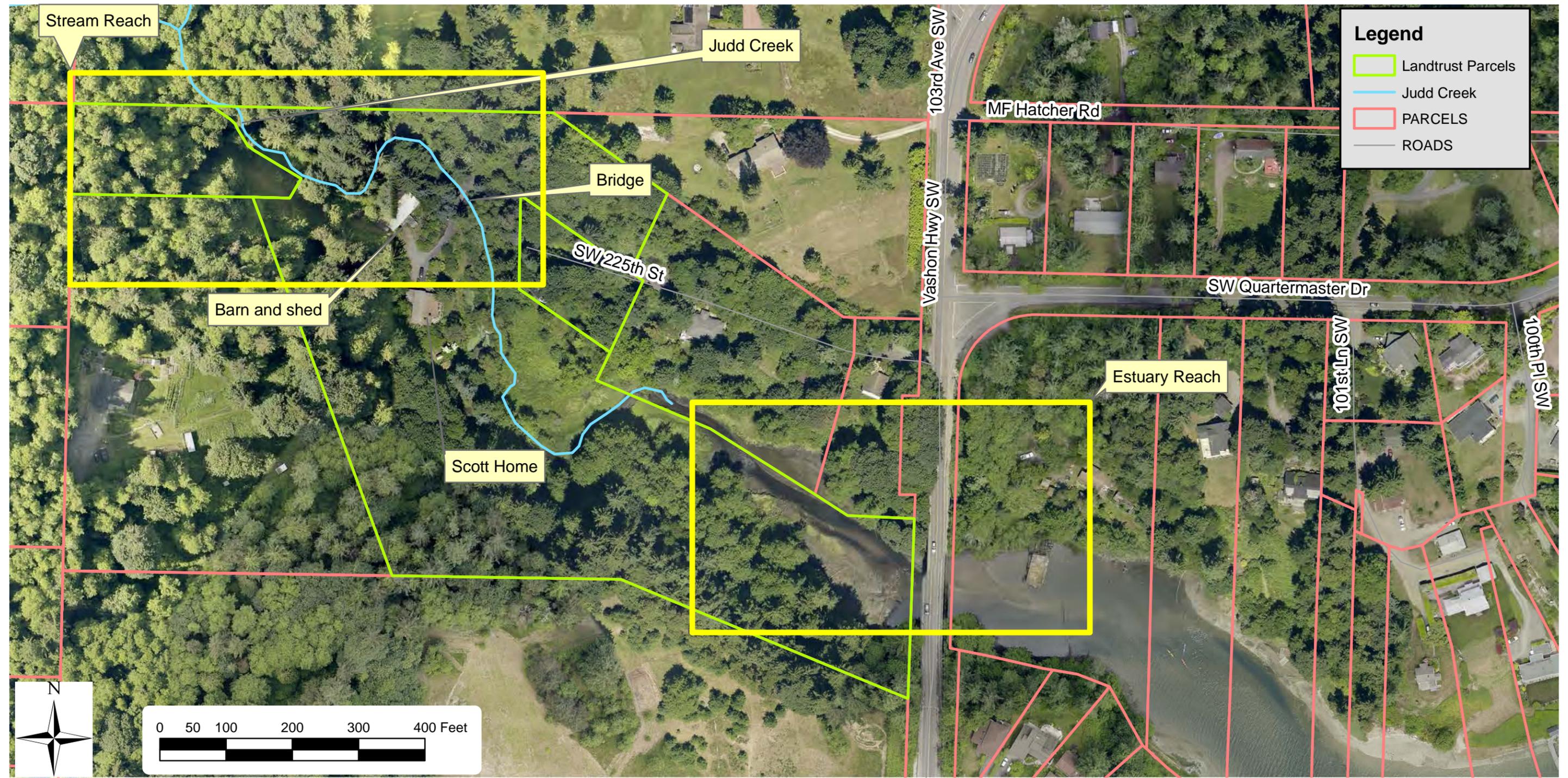
SHEET

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SHEETS



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**EXISTING
CONDITIONS**

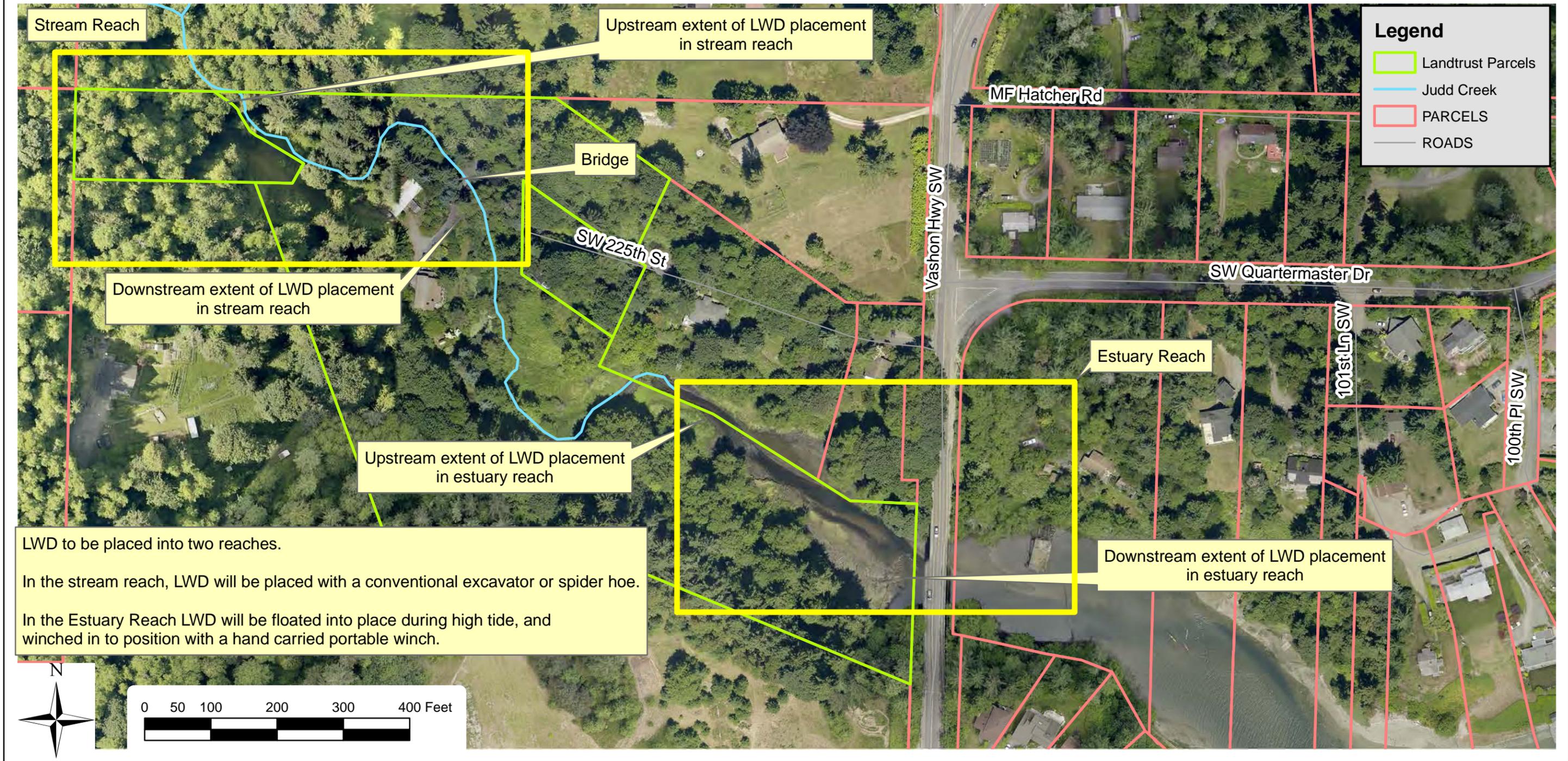
SHEET

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SHEETS



LWD to be placed into two reaches.

In the stream reach, LWD will be placed with a conventional excavator or spider hoe.

In the Estuary Reach LWD will be floated into place during high tide, and winched in to position with a hand carried portable winch.

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**SITE
PLAN**

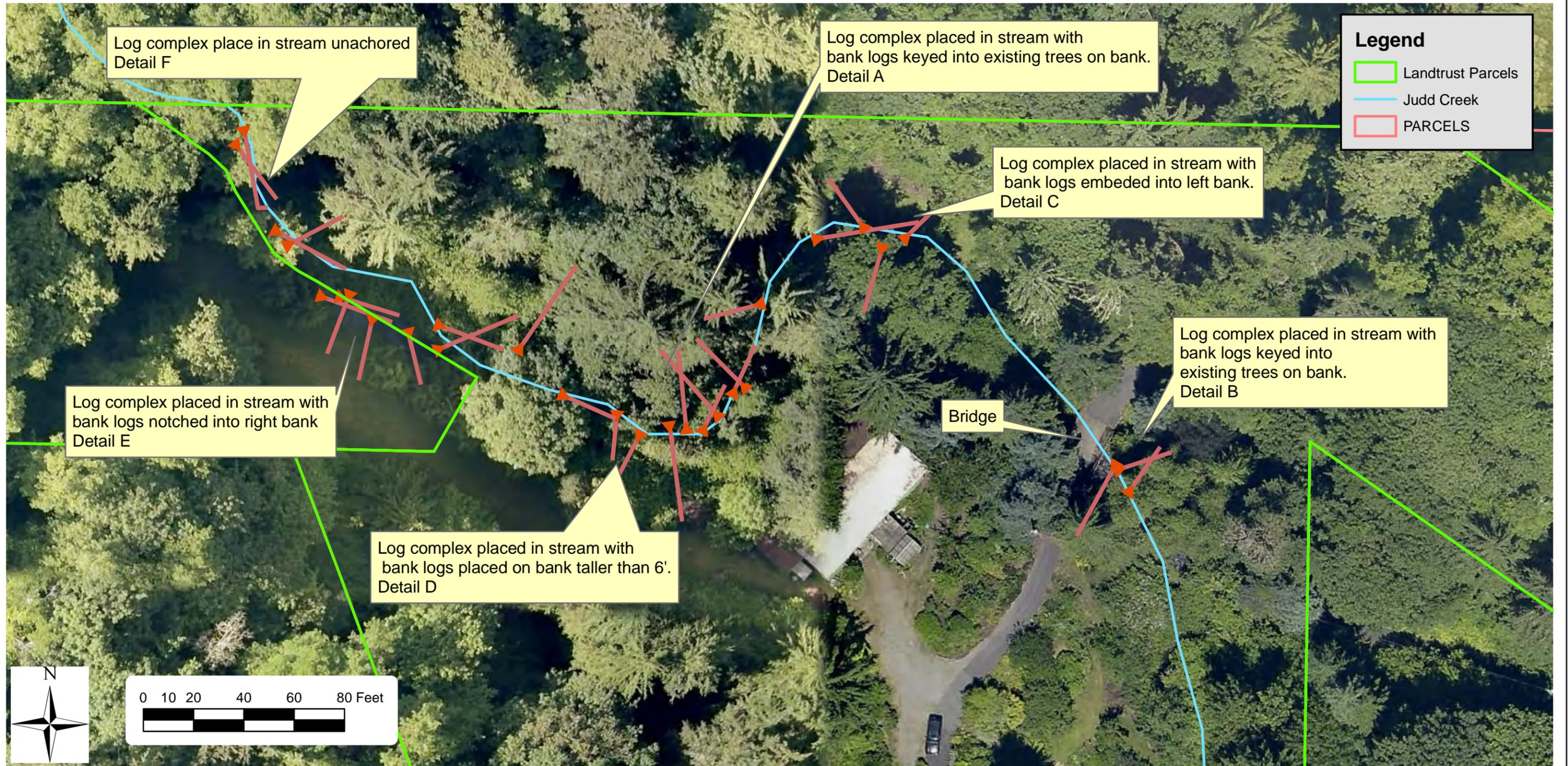
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SHEETS



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**STREAM LWD
PLAN**

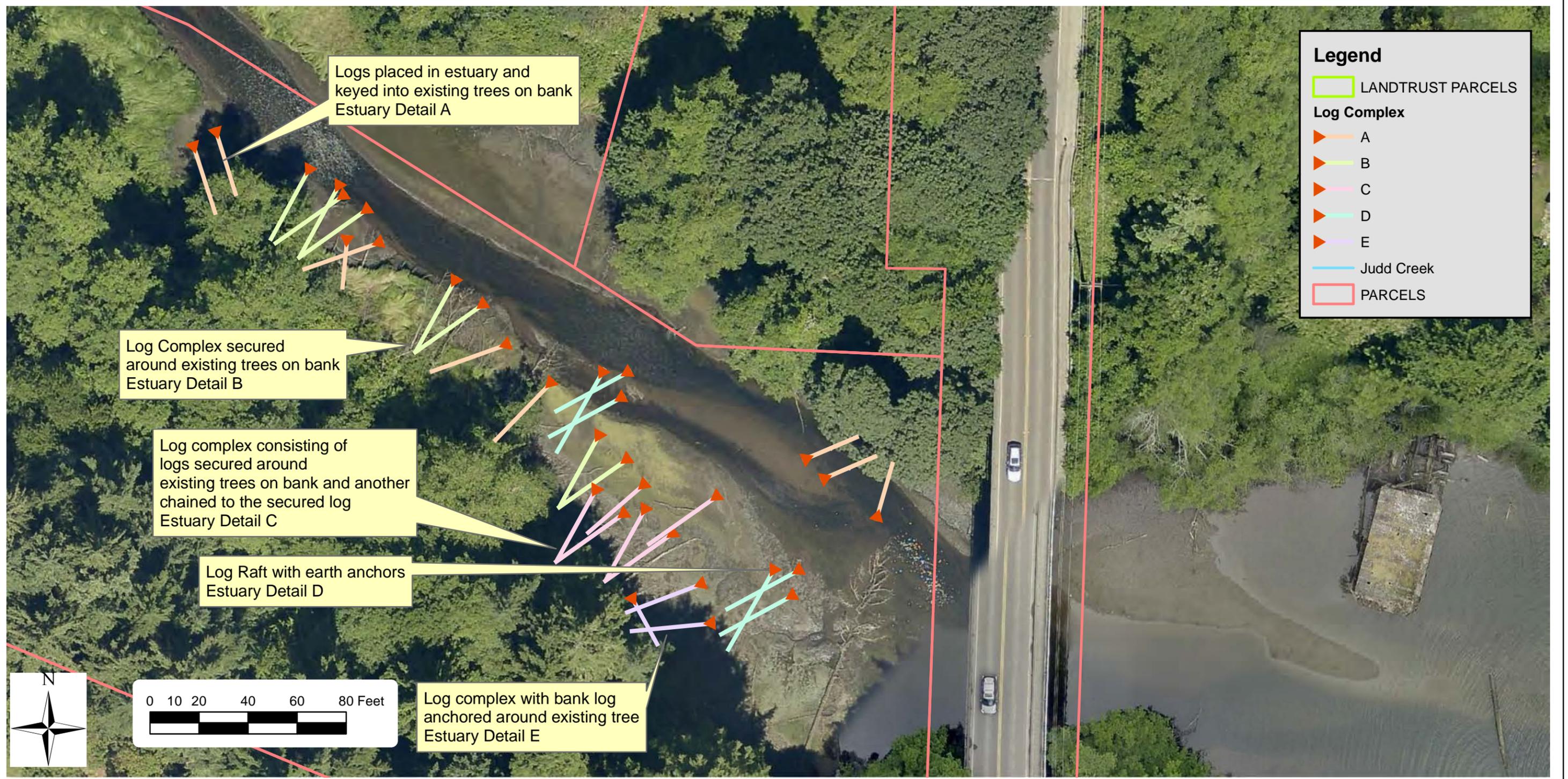
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SHEETS



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King County

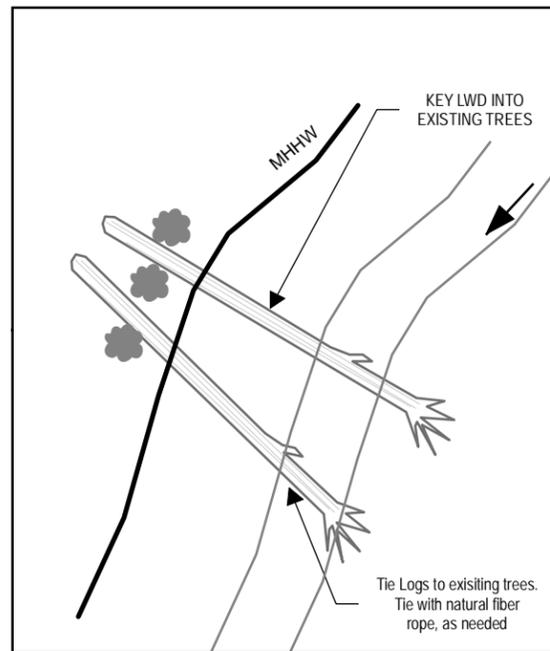
King County Department of Natural Resources and Parks
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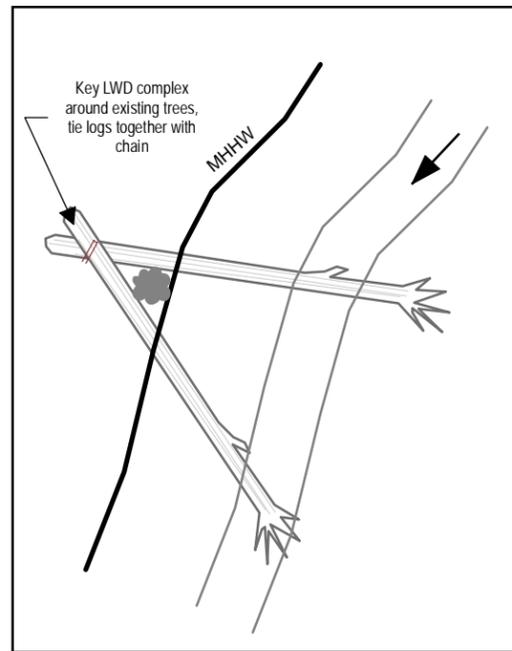
**Scott Property, Judd Creek
Habitat Enhancement SHRP**

**ESTUARY
LWD
PLAN**

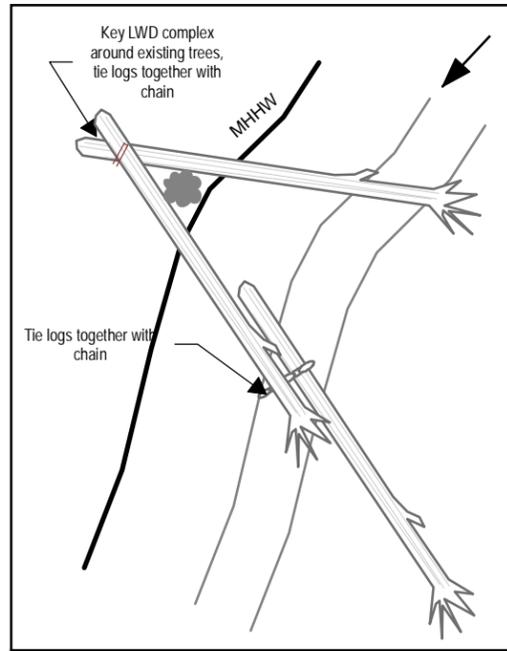
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of
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SHEETS



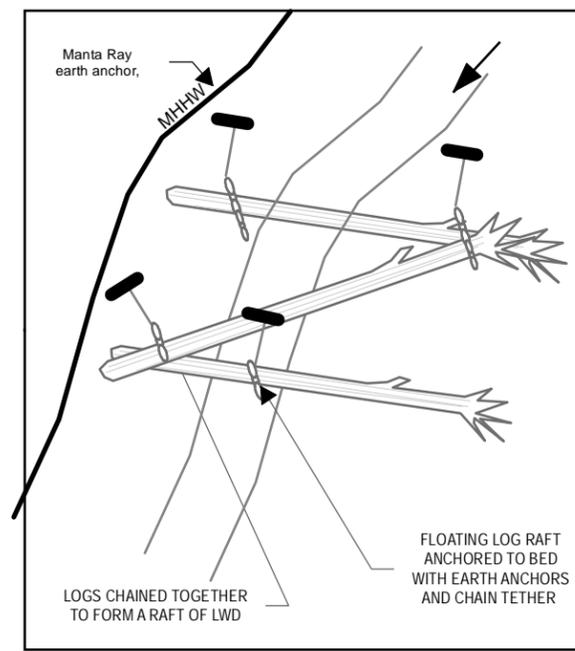
LOGS KEIED INTO EXISTING TREES
ESTUARY LWD DETAIL A



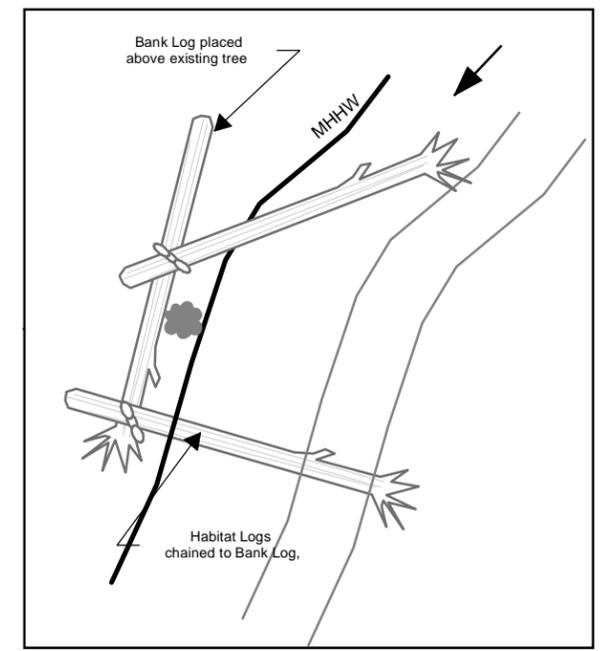
LOG COMPLEX ANCHORED AROUND EXISTING TREE
ESTUARY LWD DETAIL B



LOG COMPLEX ANCHORED AROUND EXISTING TREE WITH ADDITIONAL BED LOG CHAINED TO KEIED LOGS
ESTUARY LWD DETAIL C



LOG RAFT WITH EARTH ANCHORS
ESTUARY LWD DETAIL D



LOG COMPLEX WITH BANK LOG ANCHORED AROUND EXISTING TREE
ESTUARY LWD DETAIL E

GENERAL NOTES:

1. ALL PLACEMENTS TO BE DETERMINED BY ENGINEER OR ECOLOGIST.
2. ALL IN-WATER WORK WILL BE DONE USING BMPS TO MINIMIZE TURBIDITY AND IMPACTS TO AQUATIC ORGANISMS.
3. ALL IN-WATER WORK TO BE DONE UNDER THE DIRECTION OF AN EXPERIENCED ENGINEER OR ECOLOGIST, WHO IS A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL).
4. AREAS OF GROUND DISTURBANCE WILL BE LIMITED TO AREA SHOWN AND AREAS SURVEYED FOR CULTURAL RESOURCES.

LWD NOTES:

1. ADDITIONAL SMALL WOOD CONSISTING OF < 12' DIAMETER BRUSH TO BE ADDED TO LWD COMPLEXES TO ADD COVER AND COMPLEXITY (NOT SHOWN).
2. ALL LWD TO BE NATIVE CONIFER SPECIES, 10" TO 24" DBH.
3. LWD TO BE PLACED IN COMPLEXES. LWD MAY BE TIED TOGETHER WITH NATURAL FIBER ROPE OR MARINE GRADE CHAIN AS SHOWN.

TIDAL DATUM NOTES:

1. MEAN HIGHER HIGH WATER (MHHW) BASED ON NOAA STATION ID 9446254 BURTON INSIDE, VASHON ISLAND, QUARTERMASER HARBOR = 12.05 FT (NAVD88)
2. MHHW MARKED IN FIELD BASED ON HIGH TIDE OF 12.14 ON 7/11/2014

EARTH ANCHOR NOTES:

1. EARTH ANCHORS WILL CONSIST OF MANTA RAY EARTH ANCHORS OR EQUIVALENT.
2. INSTALL ANCHORS ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS
3. PROOF TEST ANCHORS TO 1,000 LBS. LOAD, IF ANCHOR ACHIEVES THIS LOAD, TEST TO 2,000 LBS.
4. THE NUMBER OF ANCHORS REQUIRED PER LOG IS DEFINED BY THE LOG SIZE AND THE PROOF TEST LOAD.
5. REFER TO TABLE 1, FOR ANCHORS THAT ACHIEVE 2,000 LBLS PROOF LOAD
6. REFER TO TABLE 2 FOP ANCHORS THAT ACHIEVE 1,000 LBS. PROOF LOAD.

MINIMUM NUMBER OF ANCHORS PER LOG									
Table 1: For anchors which achieve 2,000 lbs. proof load									
Mean Dia. Of Log		Diameter Rootwad	Length Rootwad	Number of Anchors required for length of log L _w (ft.)					
D _L (in)	D _L (ft.)	D _{rw} (ft.)	L _{rw} (ft.)	15	20	25	30	35	40
6	0.50	1.5	0.8	1	1	1	1	1	1
8	0.67	2.0	1.0	1	1	1	1	1	1
10	0.83	2.5	1.3	1	1	1	1	1	1
12	1.00	3.0	1.5	1	1	1	1	1	2
14	1.17	3.5	1.8	1	1	1	2	2	2
16	1.33	4.0	2.0	1	2	2	2	2	2

Table 2: For anchors which achieve 1,000 lbs. proof load									
Mean Dia. Of Log		Diameter Rootwad	Length Rootwad	Number of Anchors required for length of log L _w (ft.)					
D _L (in)	D _L (ft.)	D _{rw} (ft.)	L _{rw} (ft.)	15	20	25	30	35	40
6	0.50	1.5	0.8	1	1	1	1	1	1
8	0.67	2.0	1.0	1	1	1	1	1	1
10	0.83	2.5	1.3	1	1	1	2	2	2
12	1.00	3.0	1.5	1	2	2	2	2	3
14	1.17	3.5	1.8	2	2	2	3	3	3
16	1.33	4.0	2.0	2	3	3	4	4	4

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ESTUARY LWD
DETAILS

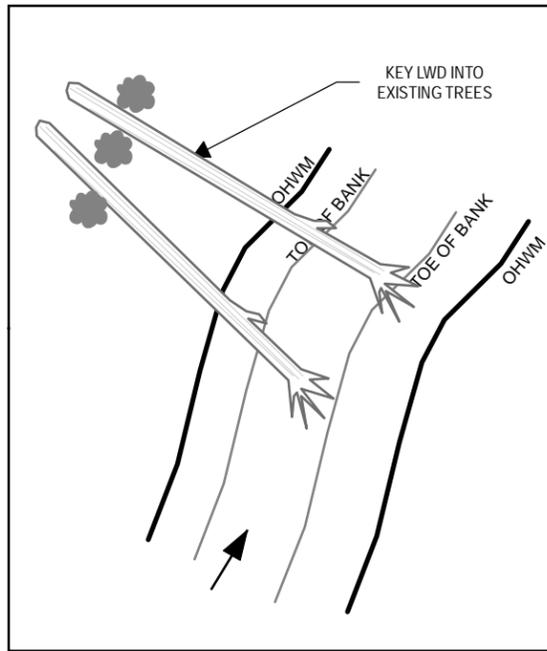
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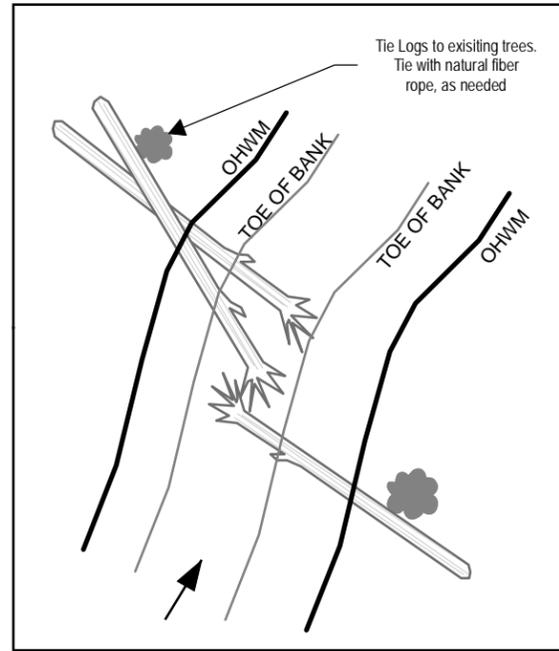
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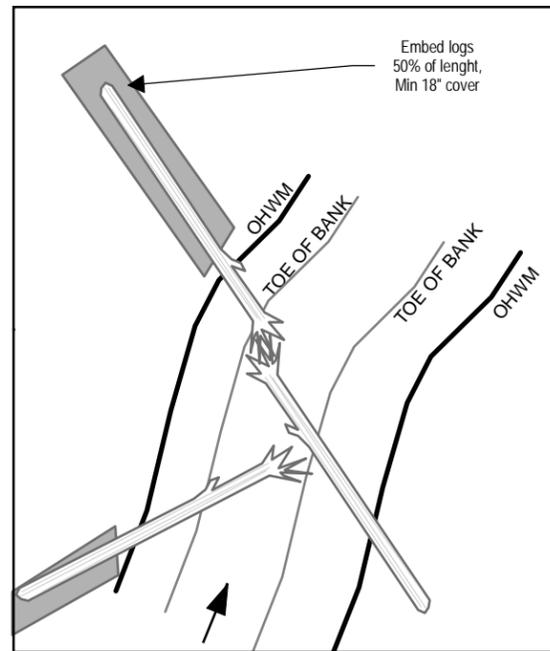
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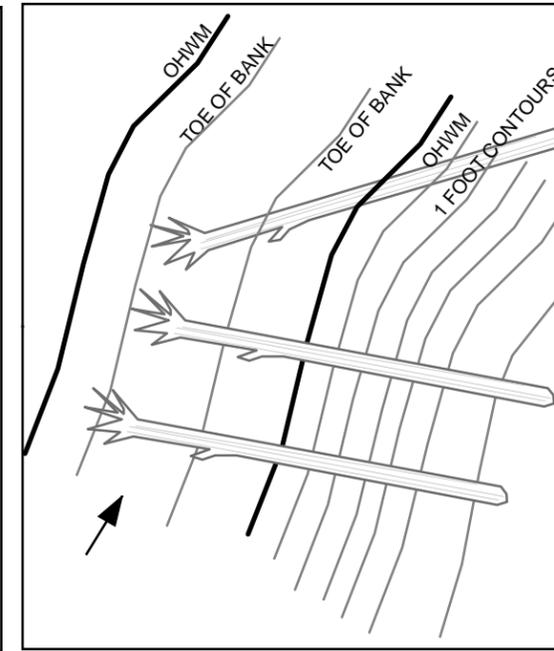
LOGS KEYED INTO EXISTING TREES
STREAM LWD DETAIL A



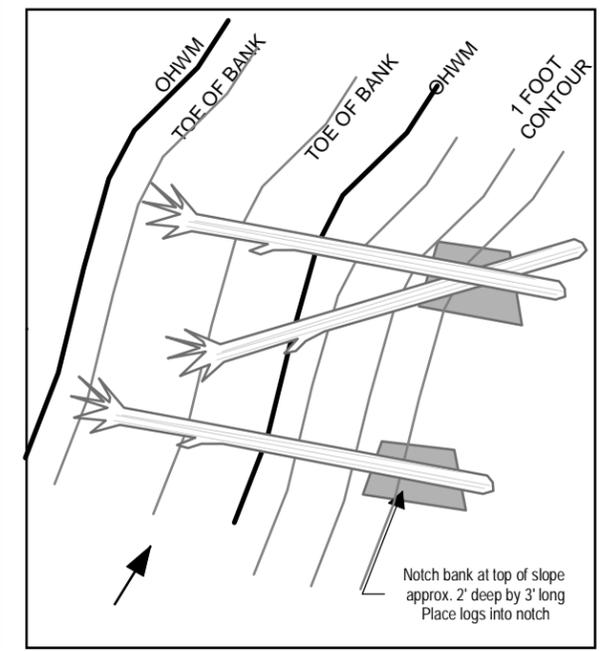
LOGS KEYED INTO EXISTING TREES
ON BOTH BANKS
STREAM LWD DETAIL B



LOG COMPLEX WITH
KEY LOGS EMBEDDED INTO BANK
STREAM LWD DETAIL C



LOGS PLACED ON SLOPE
GREATER THAN 6' HIGH
STREAM LWD DETAIL D



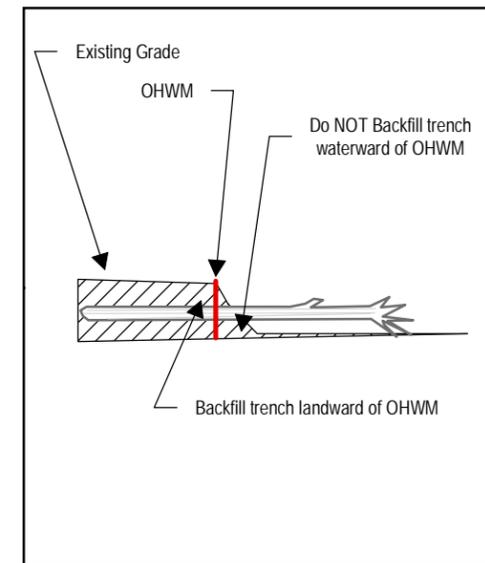
LOGS PLACED ON SLOPE
LESS THAN 6' HIGH
STREAM LWD DETAIL E

GENERAL NOTES:

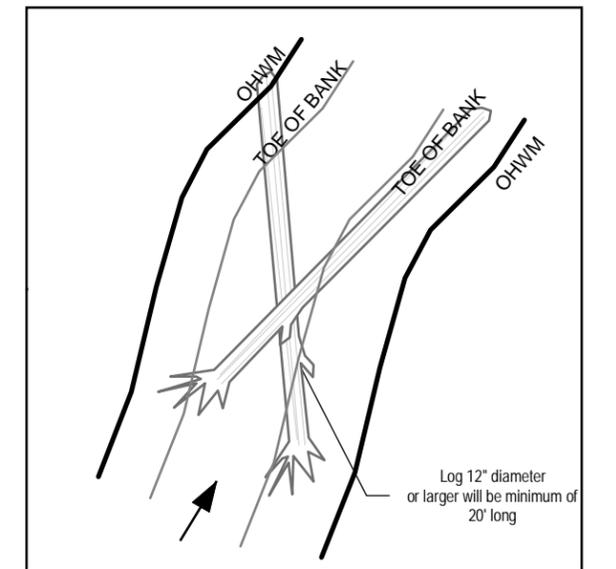
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3. ALL IN-WATER WORK TO BE DONE UNDER THE DIRECTION OF AN EXPERIENCED ENGINEER OR ECOLOGIST, WHO IS A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL).
4. AREAS OF GROUND DISTURBANCE WILL BE LIMITED TO AREA SHOWN.
5. AREAS OF GROUND DISTURBANCE HAVE BEEN SURVEYED FOR CULTURAL RESOURCES BY A PROFESSIONAL ARCHAEOLOGIST.

LWD NOTES:

1. ADDITIONAL SMALL WOOD CONSISTING OF BRANCHES AND TREE TOPS < 10" DIAMETER TO BE ADDED TO LWD COMPLEXES TO ADD COVER AND COMPLEXITY (NOT SHOWN).
2. ALL LWD TO BE NATIVE SPECIES. 10" TO 24" DBH.
3. LWD TO BE PLACED IN COMPLEXES. LWD MAY BE TIED TOGETHER WITH NATURAL FIBER ROPE OR MARINE GRADE CHAIN AS SHOWN.
4. WHERE LWD IS EMBEDDED INTO THE BANKS, BACKFILL TRENCHES ONLY LANDWARD OF OHWM AS SHOWN IN DETAIL G.



EMBEDDED LWD TRENCH BACKFILL
STREAM LWD DETAIL G



UNANCHORED LWD COMPLEX
STREAM LWD DETAIL F

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