

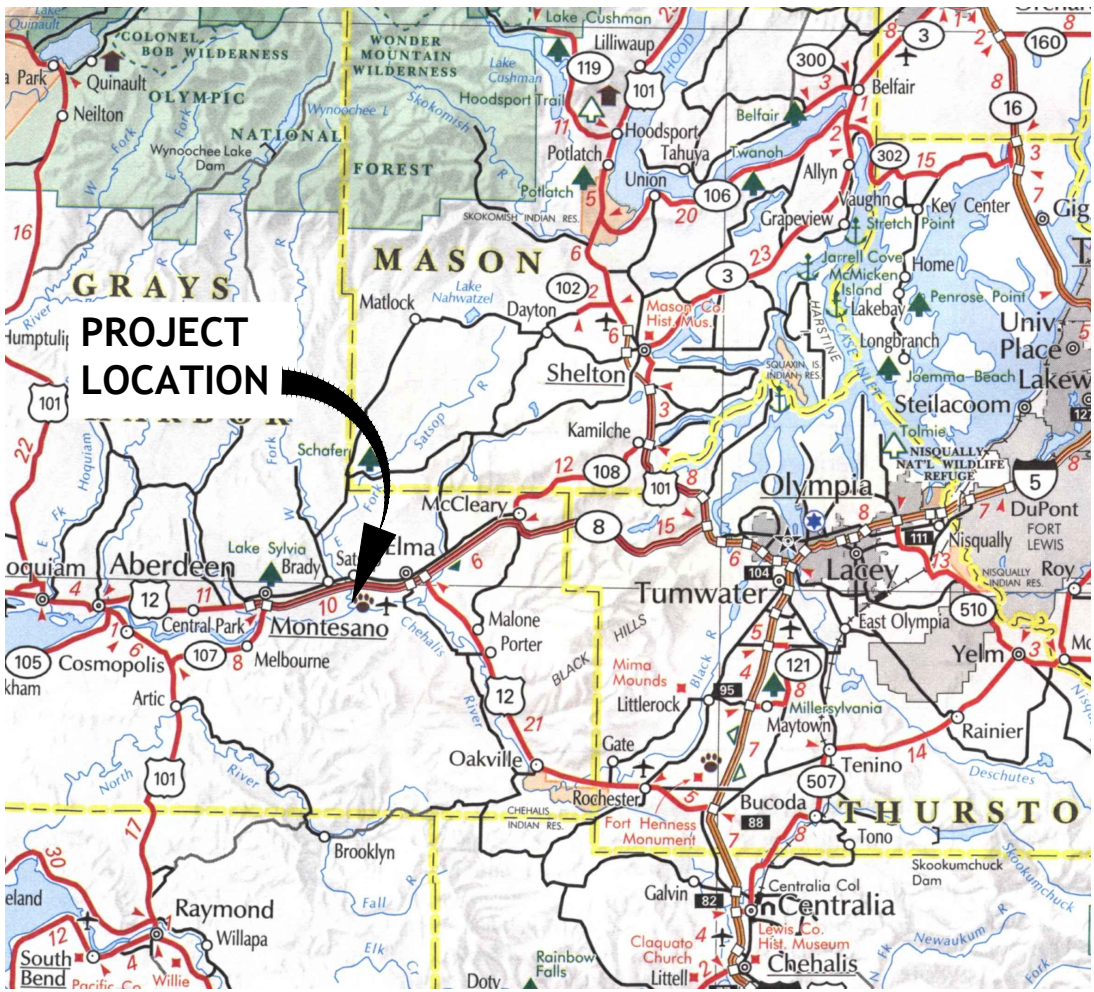
# Attachment B

Figures

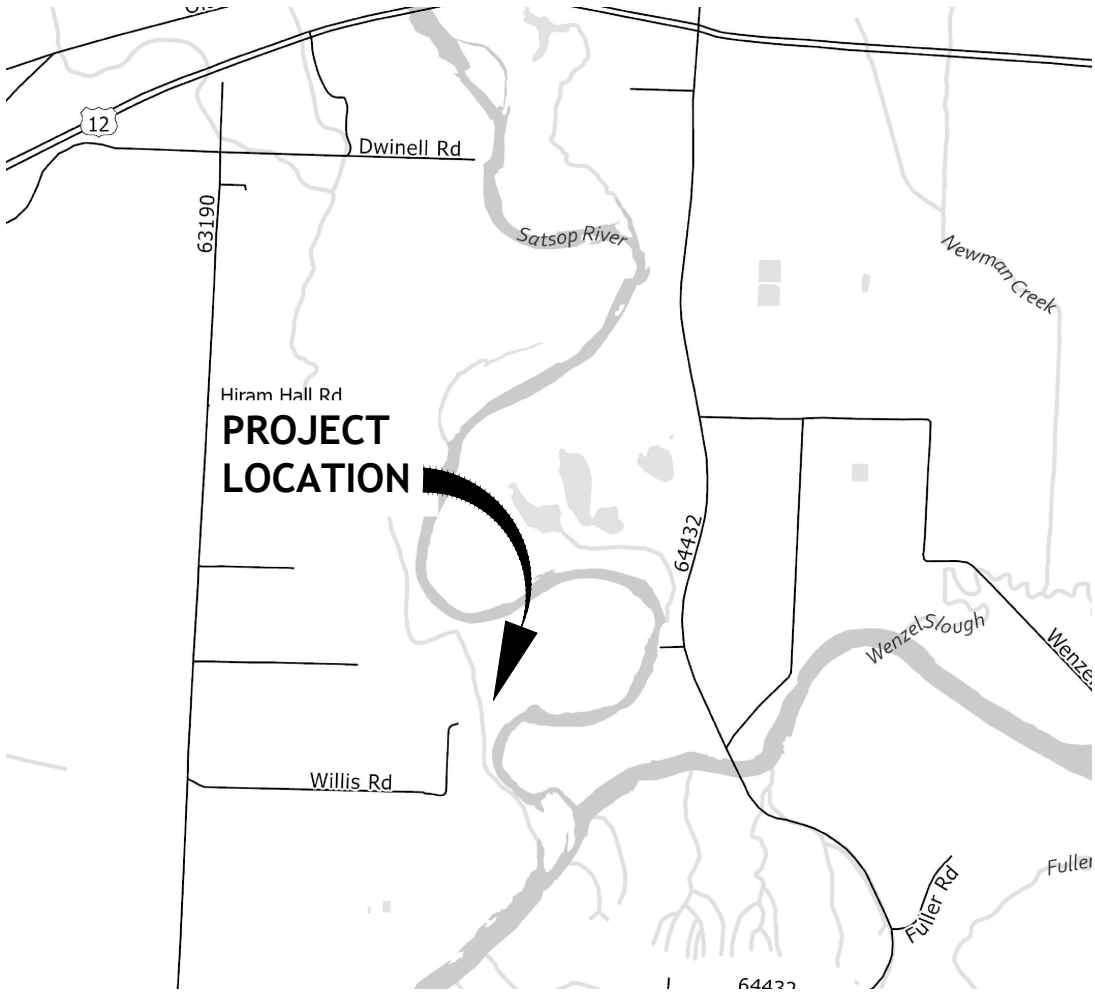


# LOWER SATSOP RIGHT BANK CONSERVATION PROJECT

## GRAYS HARBOR CONSERVATION DISTRICT



LOCATION MAP  
NO SCALE



VICINITY MAP  
NO SCALE

INDEX TO DRAWINGS		
SHT NO.	DWG NO.	SHEET TITLE
GENERAL		
1	G1	TITLE SHEET, LOCATION AND VICINITY MAPS, AND INDEX TO DRAWINGS
2	G2	GENERAL NOTES, LEGEND AND ABBREVIATIONS
CIVIL		
3	C1	EXISTING SITE PLAN
4	C2	SITE PLAN - PROPOSED - 1
5	C3*	SITE PLAN - PROPOSED - 2
6	C4*	SECTIONS
7	C5*	CONSTRUCTION SEQUENCING - 1
8	C6*	CONSTRUCTION SEQUENCING - 2
DETAILS		
9	DT1	LOG JACK DETAIL
10	DT2	LOG JACK SPUR DETAIL
11	DT3	CONTINUOUS LOG ROW DETAIL
TESC		
12	T1	STAGING AND ACCESS PLAN
13	T2*	TESC DETAILS - 1
14	T3*	TESC DETAILS - 2
* SHEET NOT INCLUDED IN PERMIT REVIEW SET		

PERMIT REVIEW SET  
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	DESIGNED CFO
			DRAWN CFO
			CHECKED ####
			APPROVED ####

ONE INCH AT FULL SCALE, IF NOT, SCALE ACCORDINGLY
FILE NAME PS7132001G-01
JOB No. 217-7132-001
DATE 08/21

PRELIMINARY



PROJECT NAME
LOWER SATSOP RIGHT BANK CONSERVATION PROJECT
MONTESANO, WA

TITLE SHEET, LOCATION AND VICINITY MAPS, AND INDEX TO DRAWINGS
--

DRAWING NO. 1 OF 14
G1

PATH: U:\PSO\Projects\Clients\7132- Groys Harbor Conservation District\217-7132-001 Satop RB Protection\985vca\CADD\DWG PLOTTED BY: alencia DATE: Friday, July 30, 2021 2:00:55 PM LAYOUT: G2

LEGEND

DESCRIPTION

PROPOSED

EXISTING

MAJOR CONTOURS

MINOR CONTOURS

2022 PROJECTED BANKLINE

2023 PROJECTED BANKLINE

SHADOW LINE

AREA OF POTENTIAL EFFECT

RIPARIAN VEGETATION LIMIT

SHORELINE BUFFER

PARCEL BOUNDARY

TEMP ACCESS ROAD

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LEGEND

DESCRIPTION

PROPOSED

EXISTING

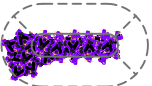
CONTINUOUS LOG ROW

LOG JACK

LOG JACK SPUR

STAGING/ STOCKPILING AREA

LOG JACK SPUR EXCAVATED AREA



DATUM

VERTICAL DATUM

NAVD88

ABBREVIATIONS

AC	ACRE
APE	AREA OF POTENTIAL EFFECT
APPROX	APPROXIMATE
CL	CENTERLINE
CLR	CLEAR, CLEARANCE
CONST	CONSTRUCT, CONSTRUCTION
CY	CUBIC YARD
DT	DETAIL
DWG	DRAWING
EA	EACH
ENGR	ENGINEER
EXIST	EXISTING
FIG	FIGURE
FT	FEET, FOOT
IN	INCH
LWM	LARGE WOODY MATERIAL
NTS	NOT TO SCALE
OHWM	ORDINARY HIGH WATER MARK
REQD	REQUIRED
SF	SQUARE FEET
SPEC	SPECIFICATION
STA	STATION
T	TON
TEMP	TEMPORARY
TESC	TEMPORARY EROSION SEDIMENT CONTROL
TOB	TOP OF BANK
TYP	TYPICAL
U	UPSIDE DOWN
WSEL	WATER SURFACE ELEVATION
WT	WEIGHT

DETAIL AND SECTION DESIGNATION



INDICATES DETAIL NUMBER

INDICATES DRAWING/SHEET WHERE DETAIL IS SHOWN



INDICATES SECTION LETTER

SECTION APPEARS ON THE SAME DRAWING/SHEET

INDICATES DETAIL NUMBER

TYPICAL  
DETAIL

NO SCALE

1

T2

INDICATES DRAWING/SHEET WHERE DETAIL IS REFERRED TO

INDICATES SECTION LETTER

TYPICAL  
SECTION

NO SCALE

A

SECTION APPEARS ON THE SAME DRAWING/SHEET

PERMIT REVIEW SET  
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	DESIGNED CFO
			DRAWN CFO
			CHECKED RSR
			APPROVED ####

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS7132001G-01
JOB No. 217-7132-001
DATE 08/21

PRELIMINARY



PROJECT NAME
LOWER SATSOP RIGHT BANK CONSERVATION PROJECT MONTESANO, WA

GENERAL NOTES, LEGEND, AND ABBREVIATIONS
---

DRAWING NO. 2 OF 14
G2



U:\PSO\Projects\Clients\7132-001 Satsop RB Protection\995\CA\DWG PLOTTED BY: alecda DATE: Friday, July 30, 2021 2:54:08 PM  
LAYOUT: C1

2018 SATSOP RIVER  
HORIZONTAL ALIGNMENT

CHAPMAN  
239 BRADY LOOP RD E  
170701440030

CHAPMAN  
239 BRADY LOOP RD E  
170701440020

CHAPMAN  
239 BRADY LOOP RD E  
170701440040

STATE OF WASHINGTON WILDLIFE  
600 CAPITOL WAY N  
170606330010

STATE OF WASHINGTON DEPT OF GAME  
905 E HERON  
170607210060

OLYMPIC VIEW DAIRY  
83 WILLIS ROAD  
170607220010

WILLIS  
83 WILLIS RD  
170712110010

OLYMPIC VIEW DAIRY  
83 WILLIS ROAD  
170701410010

CONTRERAS NORBERTO & ROSALINA  
45 N BLOCKHOUSE RD  
170701440010

CONTRERAS NORBERTO & ROSALINA  
45 N BLOCKHOUSE RD  
170701410030

TOP OF BANK

APE. SEE SHEET T1

WILLIS  
16 WILLIS RD  
170712120030

OLYMPIC VIEW DAIRY  
64 WILLIS ROAD  
170712140010

LUBBE  
186 BRADY LOOP RD E  
170701430020

CHAPMAN  
239 BRADY LOOP RD E  
170701430010

CHAPMAN  
239 BRADY LOOP RD E  
170701430030

CHAPMAN  
239 BRADY LOOP RD E  
170701430040

OLYMPIC VIEW DAIRY  
83 WILLIS ROAD  
170712120010

RESTAU DELBERT L & BETTY J  
273 BRADY LOOP RD E  
170712110040

MORENO  
271 E BRADY LOOP RD  
170712110030

MCNEIL  
269 E BRADY LOOP RD  
170712120020



SCALE IN FEET  
0 200 400

NOTES

1. SURVEY AND AERIAL IMAGERY COMPLETED  
JUNE 4, 2021.
2. PARCEL DATA INCLUDES: OWNER, ADDRESS, AND  
PARCEL NUMBER.

REVISIONS	DATE	BY	DESIGNED RSR
			DRAWN CFO
			CHECKED ####
			APPROVED ####

ONE INCH AT FULL SCALE, IF NOT, SCALE ACCORDINGLY
FILE NAME PS7132001C-01
JOB No. 217-7132-001
DATE 08/21

PRELIMINARY



PROJECT NAME  LOWER SATSOP RIGHT BANK CONSERVATION PROJECT MONTESANO, WA
--

EXISTING SITE PLAN
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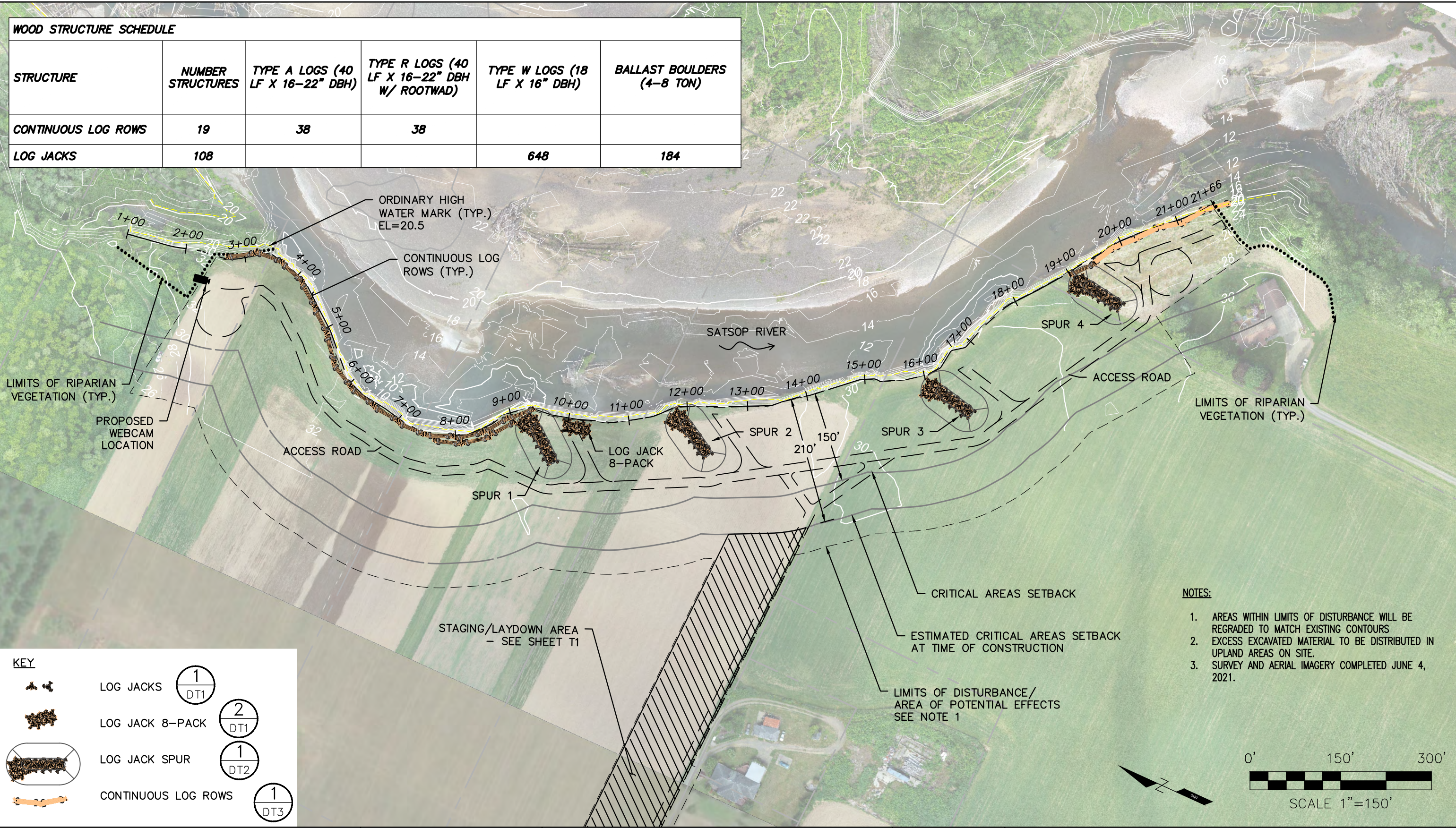
DRAWING NO. 3 OF 14
C1

PERMIT REVIEW SET  
NOT FOR CONSTRUCTION





WOOD STRUCTURE SCHEDULE


STRUCTURE	NUMBER STRUCTURES	TYPE A LOGS (40 LF X 16-22" DBH)	TYPE R LOGS (40 LF X 16-22" DBH W/ ROOTWAD)	TYPE W LOGS (18 LF X 16" DBH)	BALLAST BOULDERS (4-8 TON)
CONTINUOUS LOG ROWS	19	38	38		
LOG JACKS	108			648	184




KEY

 LOG JACKS

 LOG JACK 8-PACK

 LOG JACK SPUR

 CONTINUOUS LOG ROWS

1  
DT1

2  
DT1

1  
DT2

1  
DT3

NOTES:

- AREAS WITHIN LIMITS OF DISTURBANCE WILL BE REGRADED TO MATCH EXISTING CONTOURS
- EXCESS EXCAVATED MATERIAL TO BE DISTRIBUTED IN UPLAND AREAS ON SITE.
- SURVEY AND AERIAL IMAGERY COMPLETED JUNE 4, 2021.

**Parametrix**  
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1019 39th Ave. SE, Suite 100  
Puyallup, WA 98374

**nhc**  
northwest hydraulic consultants  
12787 gateway drive south  
tukwila, washington 98168-3308  
phone: (206) 241-6000  
fax: (206) 439-2420

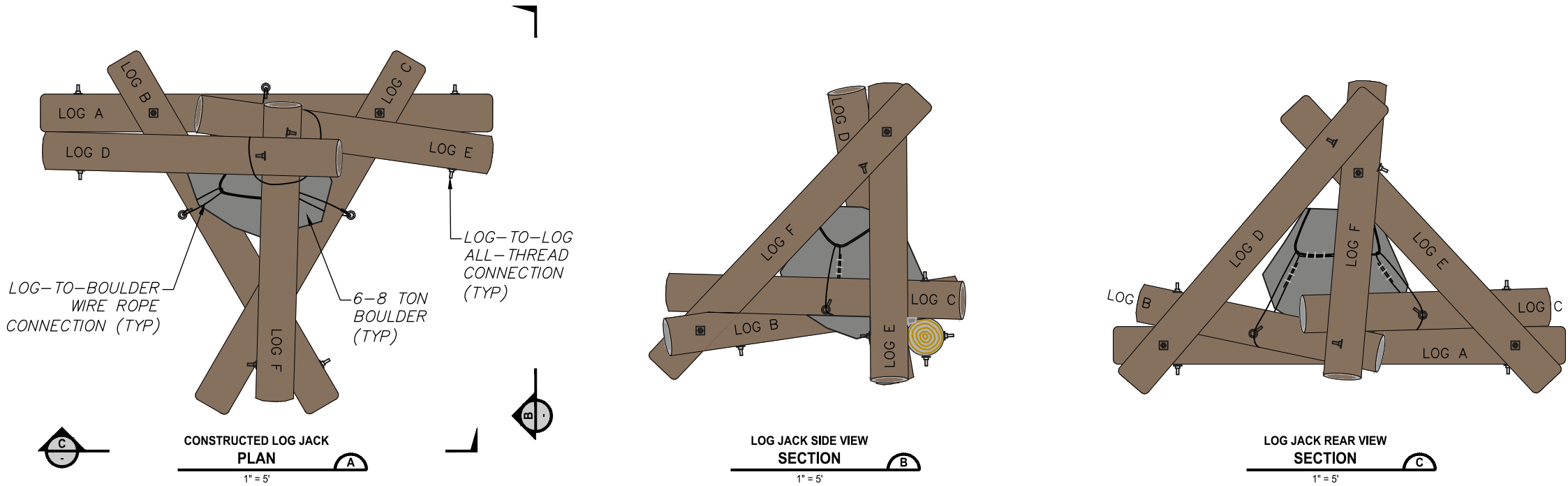
PRELIMINARY – NOT FOR  
CONSTRUCTION

Job:2006723  
Rev:  
Drft: CB  
Chkd: JL  
Date: 30Jul21

Lower Satsop Right Bank Conservation Project  
SITE PLAN - PROPOSED  
Shoreline Permit

C2



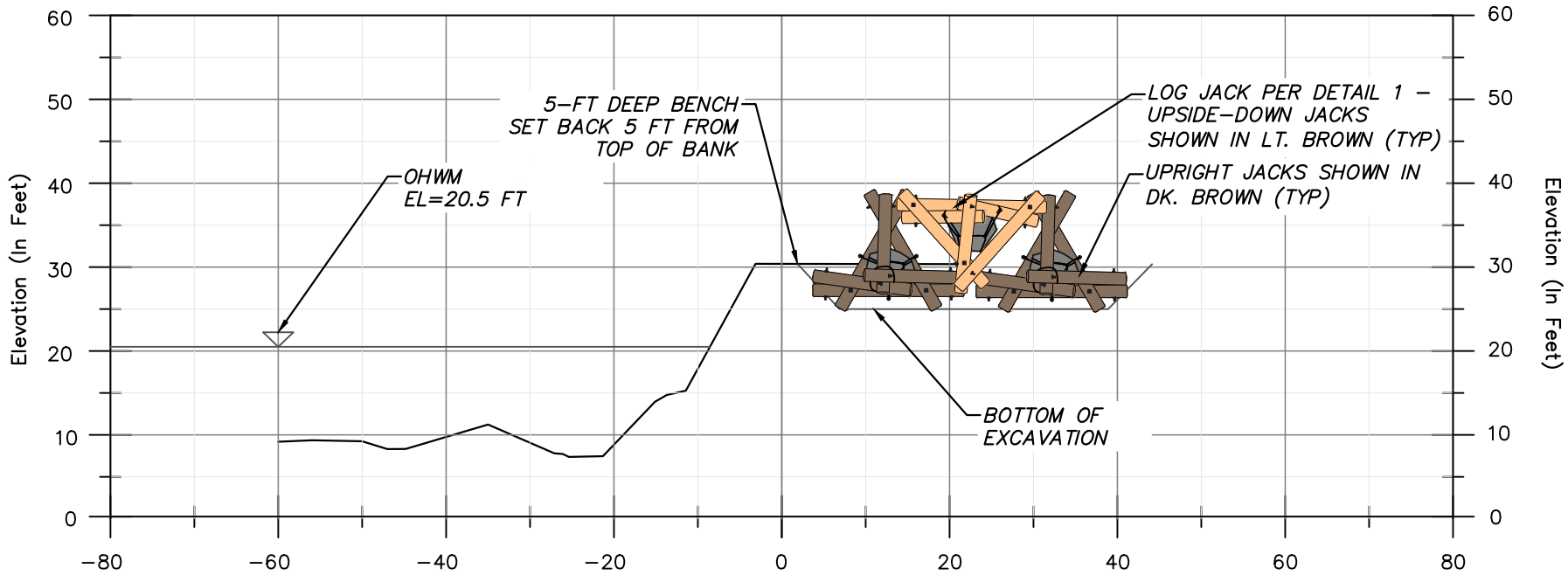


THE LOG JACK IN THE IMAGE ABOVE IS TYPICAL AND FOR ILLUSTRATION ONLY. DISCREPANCIES EXIST BETWEEN THE IMAGE AND THE LOG JACK DESIGN. SLASH NOT SHOWN FOR CLARITY.

1 LOG JACK UNIT - TYPICAL PLAN & SECTION VIEWS  
SCALE: 1"=20'

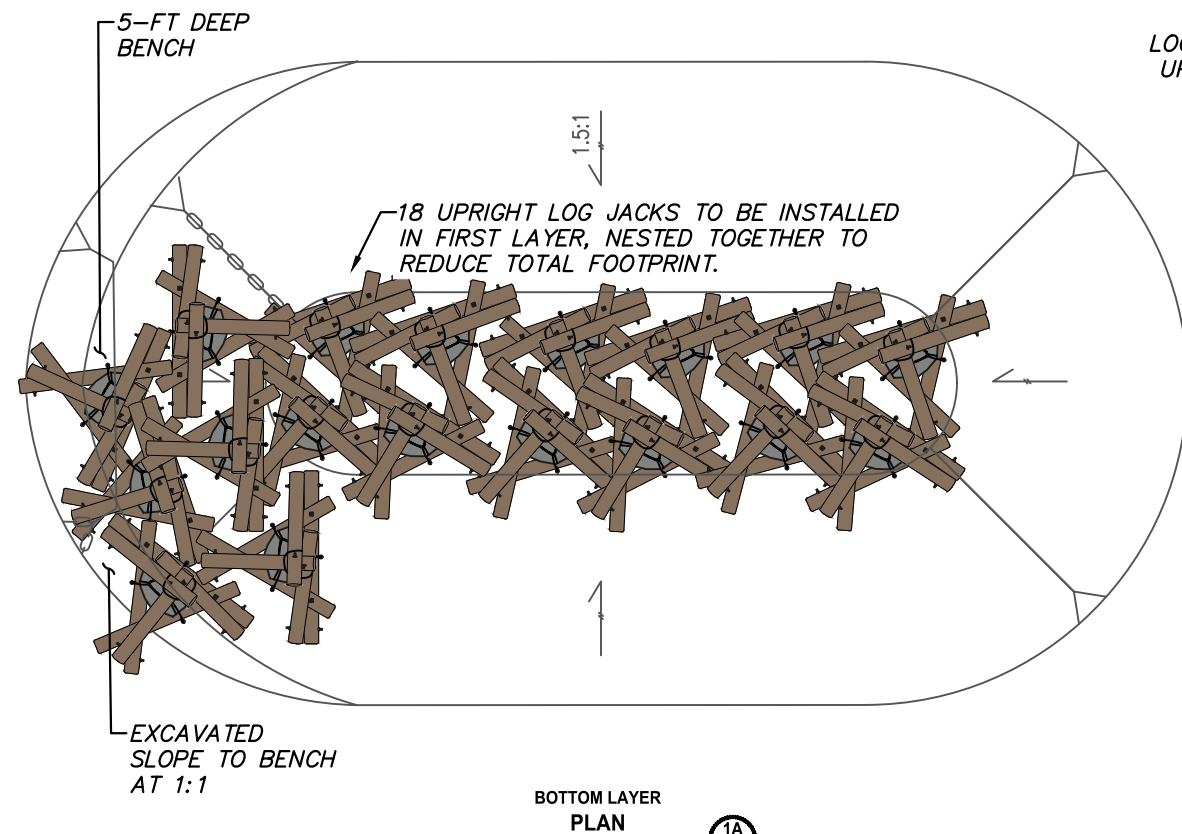
NOTES FOR LOG JACK CONSTRUCTION:

- LOG JACKS SHALL BE CONSTRUCTED FROM DOUGLAS FIR, WESTERN RED CEDAR OR SITKA SPRUCE, 18 FEET IN LENGTH AND 16 TO 22 INCHES IN DIAMETER.
- 6-8 TON BOULDERS SHALL BE USED FOR LOG JACK BALLAST.
- LOGS AND BOULDERS ARE NOT SYMMETRICAL AND HAVE NATURALLY OCCURRING VARIATIONS THAT NECESSITATE CUSTOM FITTING. THE CONTRACTOR WILL MODIFY THE LOG-TO-LOG AND LOG-TO-BOULDER CONNECTIONS SO THAT THE COMPLETED JACK IS A TIGHT AND COMPACT UNIT. THERE SHOULD BE NO PLAY IN THE LOG- TO-LOG CONNECTIONS. THE BOULDER SHOULD BE SECURELY CONTAINED WITHIN AND IN CONTACT WITH A MINIMUM OF 5 LOGS.
- REMOVE ALL BARK BETWEEN LOG- TO-LOG CONNECTIONS.
- FOR ALL LOG-TO-LOG CONNECTIONS, USE CHAINSAW LOG DEBARKER OR SIMILAR SO THAT ONE LOG NESTLES INTO THE OTHER. THE LOG- TO-LOG CONNECTION MUST NOT BE A SINGLE POINT OF CONTACT. A TYPICAL LOG NOTCH WILL BE ~1 0" WIDE BY ~2" DEEP CUT AT THE APPROPRIATE ANGLE.
- ALL LOG-TO-LOG ALL-THREAD CONNECTIONS MUST BE MADE THROUGH THE CENTER OF THE LOG WITH A MINIMUM OF 18" BETWEEN THE ALL-THREAD AND THE LOG END.
- FOR ALL LOG-TO-LOG CONNECTIONS, PEEN THE ALL-THREAD TO A DEPTH OF 1/2 THE THREAD DEPTH IN TWO OPPOSING LOCATIONS IMMEDIATELY AGAINST THE NUT. LEAVE NO MORE THAN 3" OF ALL-THREAD EXPOSED PAST THE NUT.
- WIRE ROPE SHOULD BE MECHANICALLY TENSIONED TO ~¾ OF THE ROPE WORKING LOAD. FOR LOG JACKS PLACED UPSIDE DOWN, THE TOPS OF LOGS D, E, AND F SHOULD BE TRIMMED TO AN EVEN HEIGHT, LEAVING A MINIMUM OF 18" BEYOND THE CONNECTION POINTS.
- COMPLETED LOG JACKS CAN BE TRIMMED DURING PLACEMENT TO FACILITATE FITTING THEM ADJACENT TO ONE ANOTHER, LEAVING A MINIMUM OF 18" BEYOND THE CONNECTION POINTS.

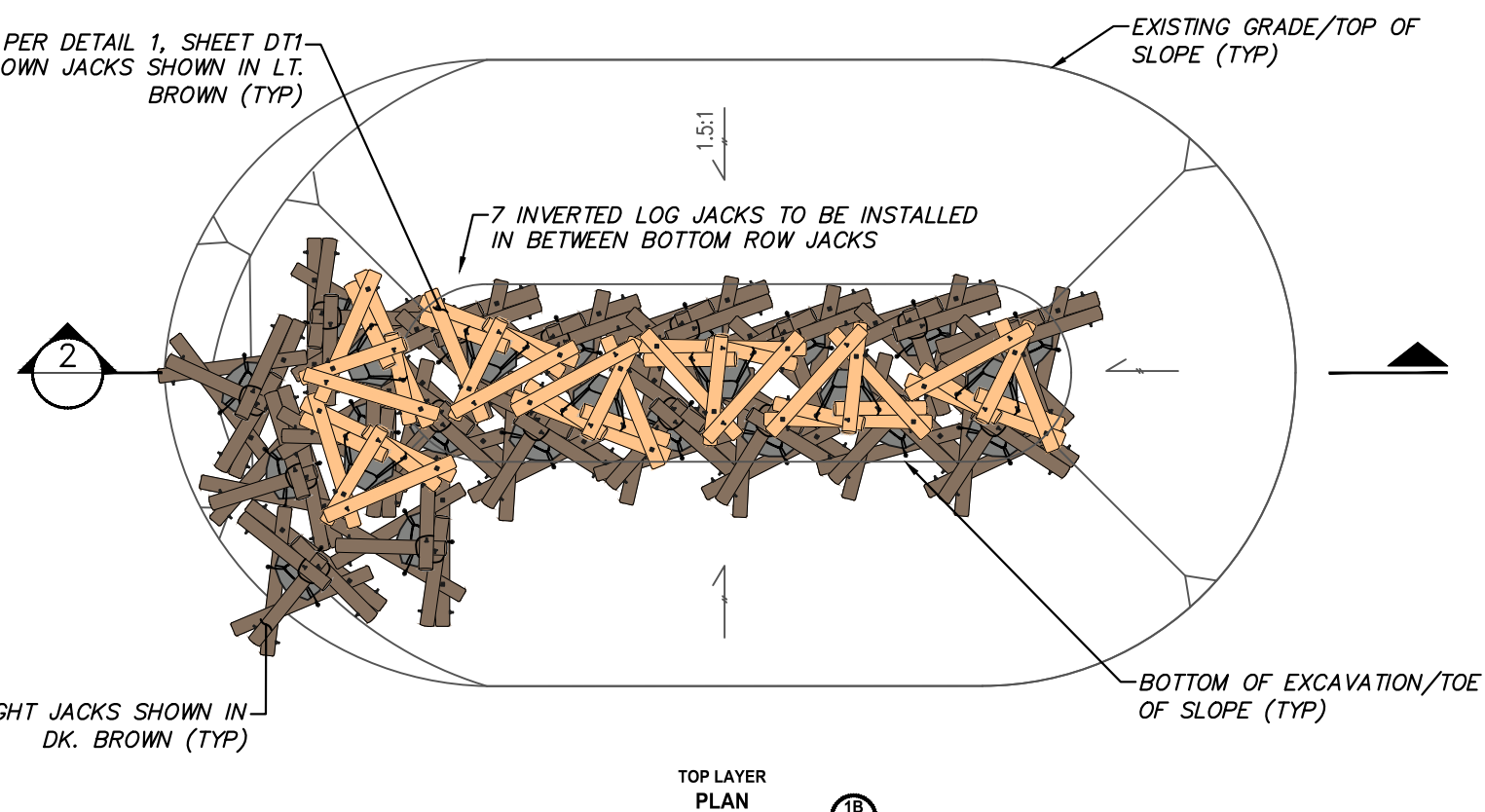


2 LOG JACK 8-PACK - SECTION  
SCALE: 1"=20'





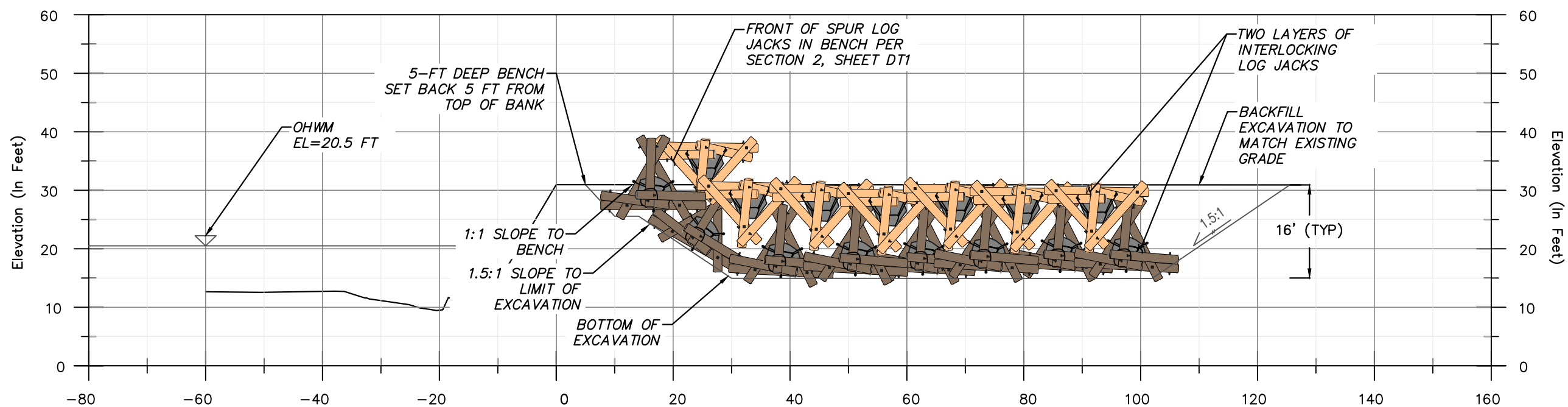
LOG JACK PER DETAIL 1, SHEET DT1  
UPSIDE-DOWN JACKS SHOWN IN LT. BROWN (TYP)



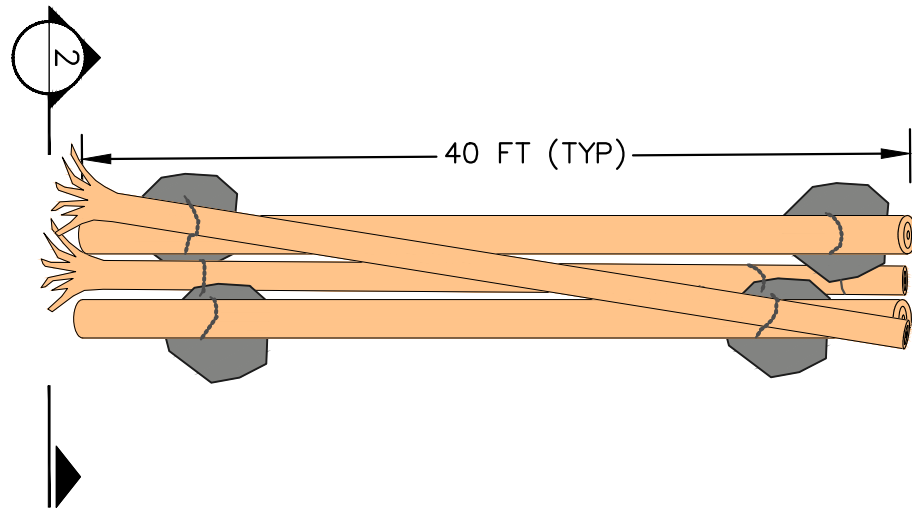
1 LOG JACK SPUR - PLAN  
SCALE: 1"=20'

NOTES ON LOG JACK SPUR CONSTRUCTION:

- LOG JACKS ARE HELD TOGETHER BY FRICTION IN THE SPUR CONFIGURATION - NO ANCHORING BETWEEN ADJACENT UNITS WILL OCCUR.
- ALL EXCAVATED SLOPES ARE 1.5:1 UNLESS NOTED OTHERWISE
- PACK SLASH INTO JACK VOIDS BEFORE BACKFILLING
- STOCKPILE EXCAVATED SOILS AND BACKFILL EXCAVATION TO MATCH EXISTING CONTOURS.



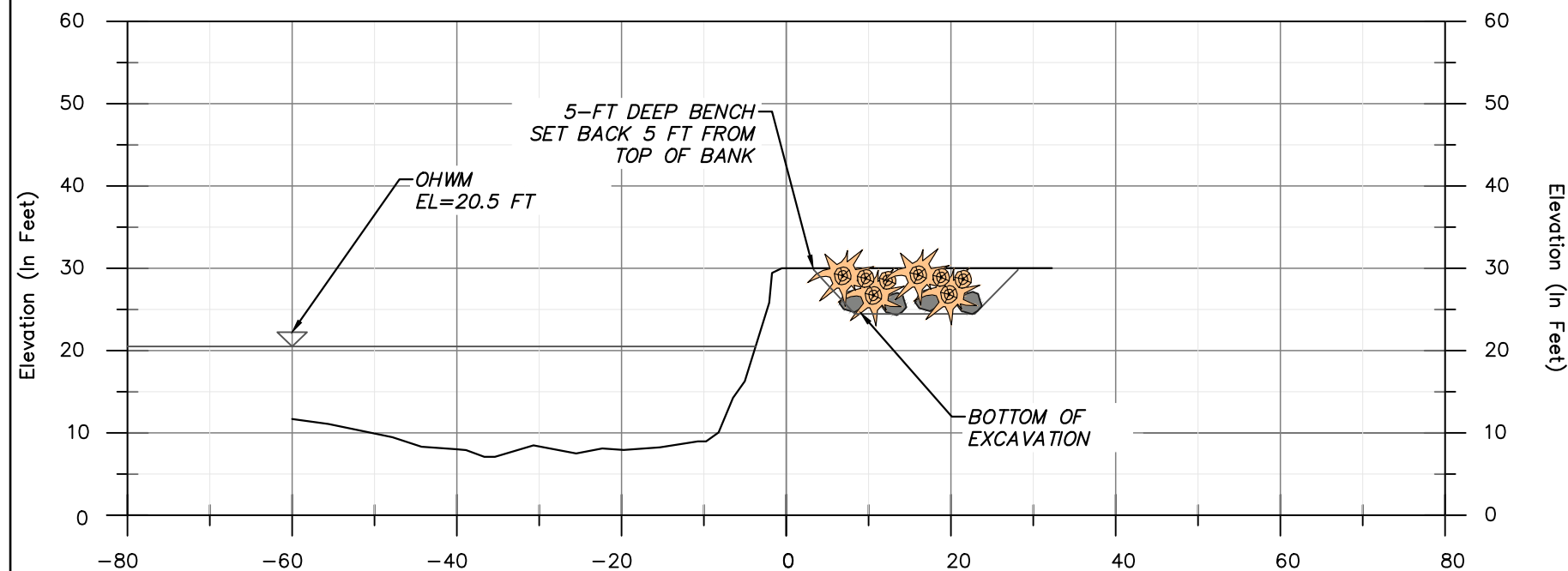
2 LOG JACK SPUR - SECTION  
SCALE: 1"=20'



NOTES FOR CONTINUOUS LOG ROWS:

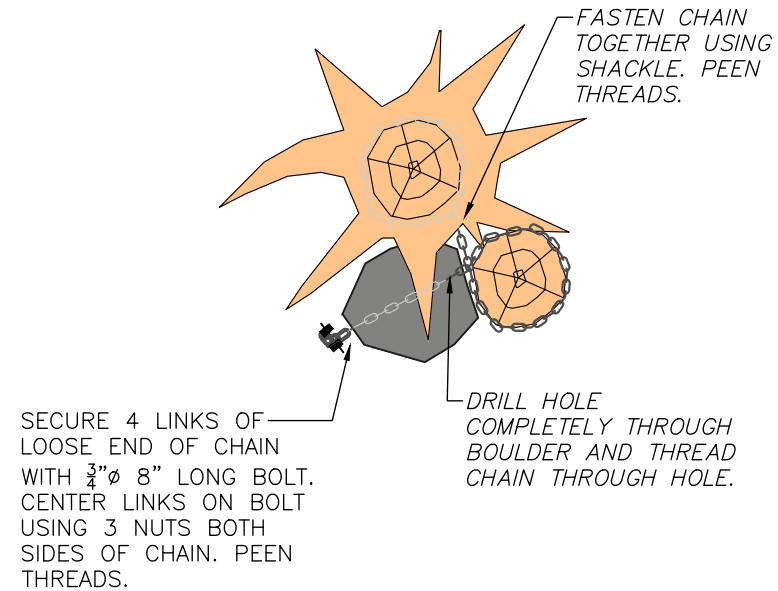
1. EACH UNIT CONSISTS OF FOUR LOGS (TWO WITH ROOTWADS) AND FOUR BALLAST BOULDERS CONNECTED WITH CHAIN.
2. ASSEMBLED UNITS WILL BE INSTALLED WITHIN A 5 FOOT DEEP TRENCH, SET BACK MINIMUM 5 FEET FROM TOP OF BANK.
3. UNITS WILL BE INSTALLED END-TO-END, ADJACENT UNITS WILL NOT BE CHAINED OR CONNECTED TOGETHER.

**1** CONTINUOUS LOG ROW UNIT - PLAN  
SCALE: 1"=20'

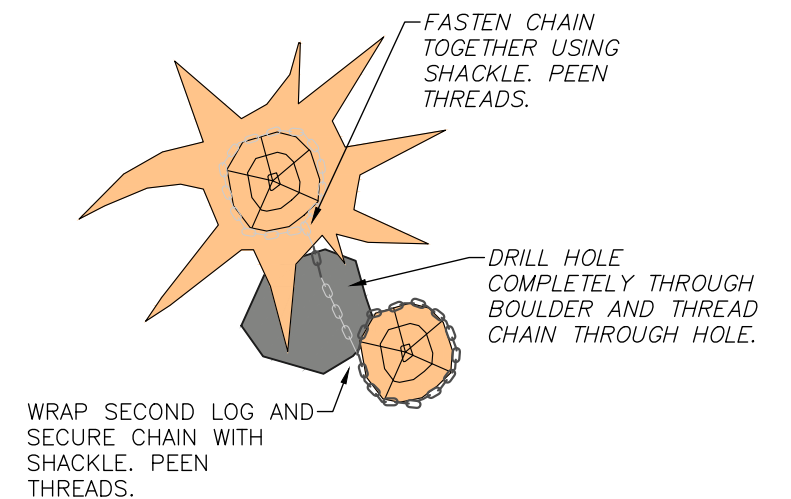


**2** CONTINUOUS LOG ROW INSTALLATION - SECTION  
SCALE: 1"=20'

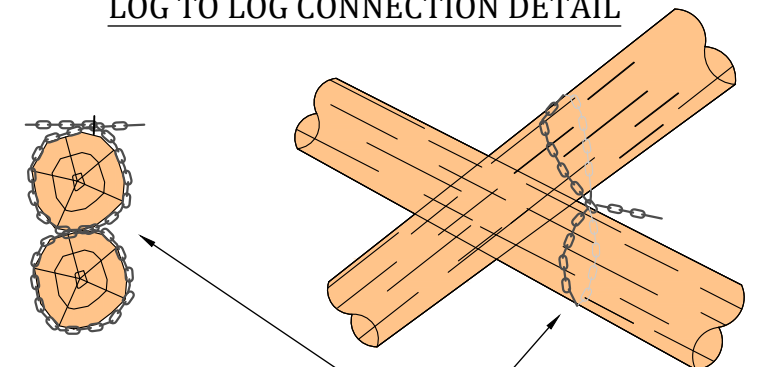
LOG TO LOG TO BOULDER CONNECTION DETAIL



LOG TO BOULDER TO LOG CONNECTION DETAIL



LOG TO LOG CONNECTION DETAIL



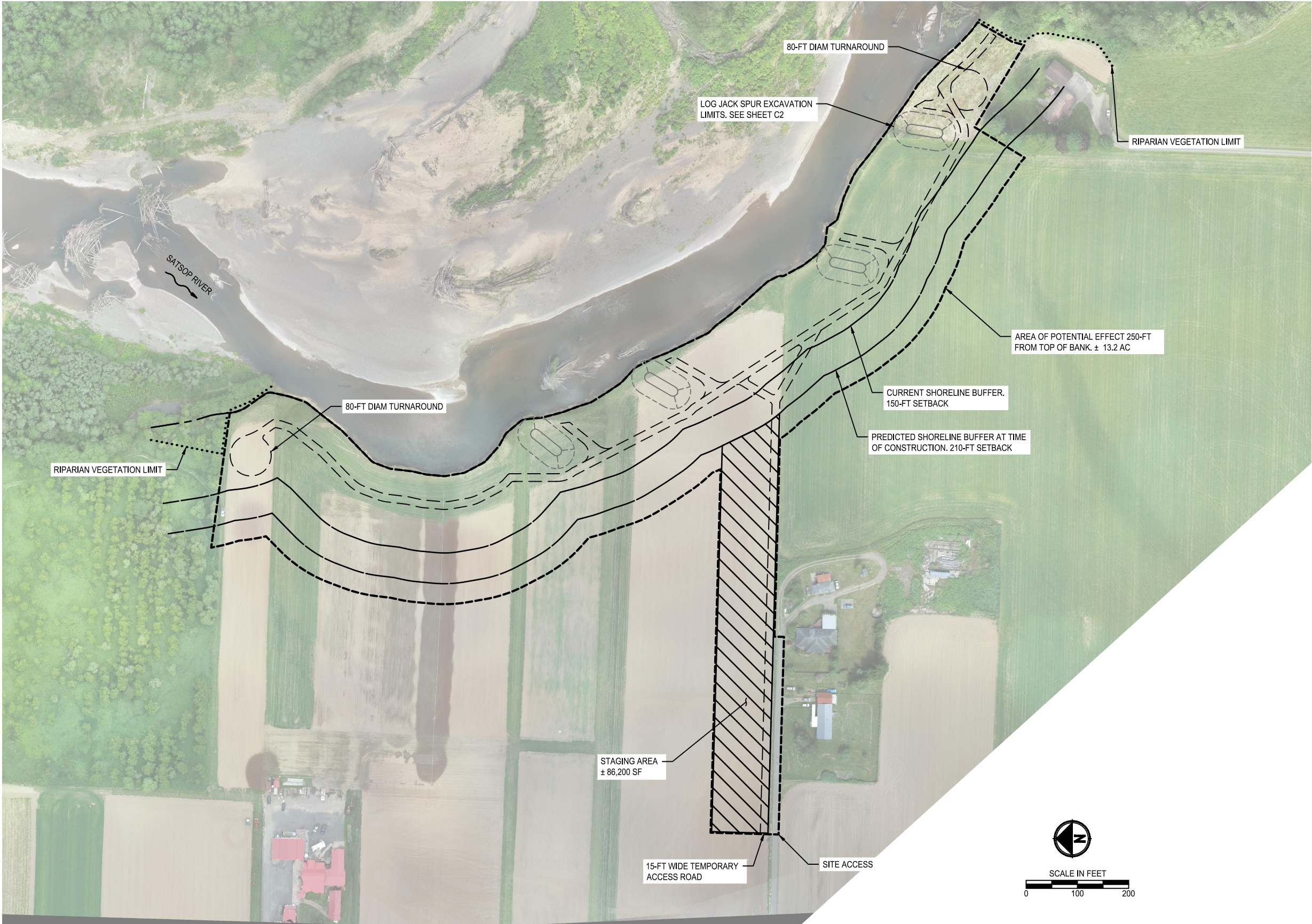
LOG TO LOG CONNECTIONS ARE MADE WHERE ONE LOG RESTS ON ANOTHER (NO GAP BETWEEN LOGS). SECURE CHAIN AROUND LOGS IN A FIGURE-8 FASHION. LOG TO LOG CONNECTIONS ARE MADE BETWEEN 2 LOGS ONLY, NO MORE.

NOTES FOR LOG TO BOULDER AND LOG TO LOG CONNECTIONS:

- PROVIDE 2" DEEP NOTCH AND SEAT CHAIN WITHIN THE GROOVE. USE STAPLES TO SECURE CHAIN WITHIN NOTCH.
- BOULDERS AS CLOSE TO EACH LOG AS POSSIBLE, NO SLACK IN THE CHAIN UNLESS OTHERWISE NOTED.



PATH: U:\PSO\Projects\Clients\7132- Graye Harbor Conservation District\217-7132-001 Satsop RB Protection\995\ca\CADD\DWG PLOTTED BY: alecda DATE: Friday, July 30, 2021 2:57:17 PM LAYOUT: T1



- NOTES
1. SURVEY AND AERIAL IMAGERY COMPLETED JUNE 4, 2021.
  2. SITE ACCESS SHALL BE FROM THE WILLIS PROPERTY'S PRIVATE ROAD.
  3. TEMPORARY ACCESS ROAD SHALL BE 15-FT WIDE AND CONSIST OF GEOTEXTILE AND HOG FUEL (WOOD CHIPS). ACCESS ROAD SHALL BE INSTALLED AND MAINTAINED THROUGH THE DURATION OF THE PROJECT AND REMOVED PRIOR TO THE END OF THE 3-YEAR MAINTENANCE PERIOD. FOLLOWING REMOVAL, AREA WILL BE RESTORED TO PRE-EXISTING CONDITIONS AND RE-SEEDED WITH PASTURE GRASS OR CROP.
  4. GRAVEL CONSTRUCTION ENTRANCE SHALL BE INSTALLED AND MAINTAINED THROUGH THE DURATION OF THE PROJECT.
  5. WILLOW WATTLES OR OTHER BIOENGINEERING TECHNIQUES MAY BE INSTALLED AT UNDETERMINED LOCATIONS ALONG THE BANK FOLLOWING EROSION AS STRUCTURES SLUFF DOWN TO THE RIVERBANK, PER THE ADAPTIVE MANAGEMENT PLAN.
  6. MAINTENANCE AGREEMENT AND/ OR TEMPORARY ACCESS/ CONSTRUCTION EASEMENT WILL BE IN PLACE BETWEEN APPLICANT AND LANDOWNERS PRIOR TO CONSTRUCTION.

PERMIT REVIEW SET  
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	DESIGNED
			RSR
			DRAWN
			CFO
			CHECKED
			RSR
			APPROVED
			####

ONE INCH AT FULL SCALE, IF NOT, SCALE ACCORDINGLY
FILE NAME
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JOB No.
217-7132-001
DATE
08/21

PRELIMINARY



PROJECT NAME
LOWER SATSOP RIGHT BANK CONSERVATION PROJECT
MONTESANO, WA

STAGING AND ACCESS PLAN
-------------------------

DRAWING NO. 12 OF 14
T1