

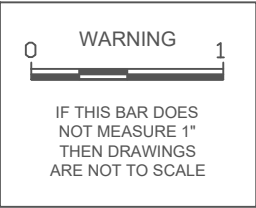
LOWER CHERRY CREEK RESTORATION PHASE II & III

DUVALL, WASHINGTON

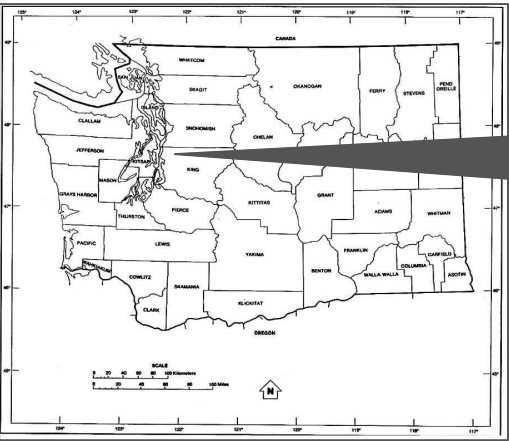
APPROVED BY:

APPROVED BY: _____ DATE _____
ENGINEER OF RECORD
WILD FISH CONSERVANCY NW
STATE OF WASHINGTON NO. _____

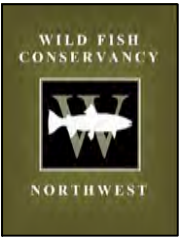
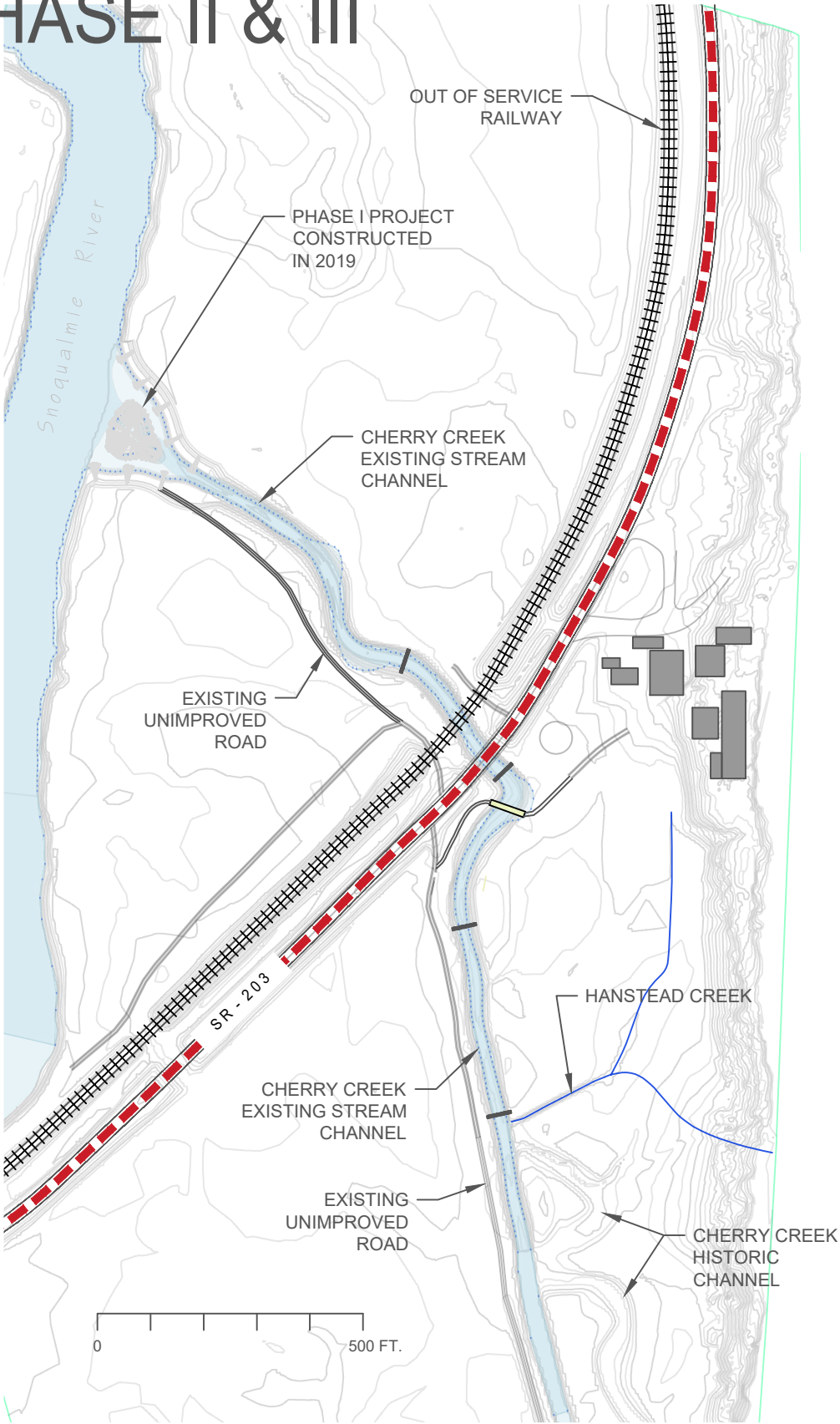
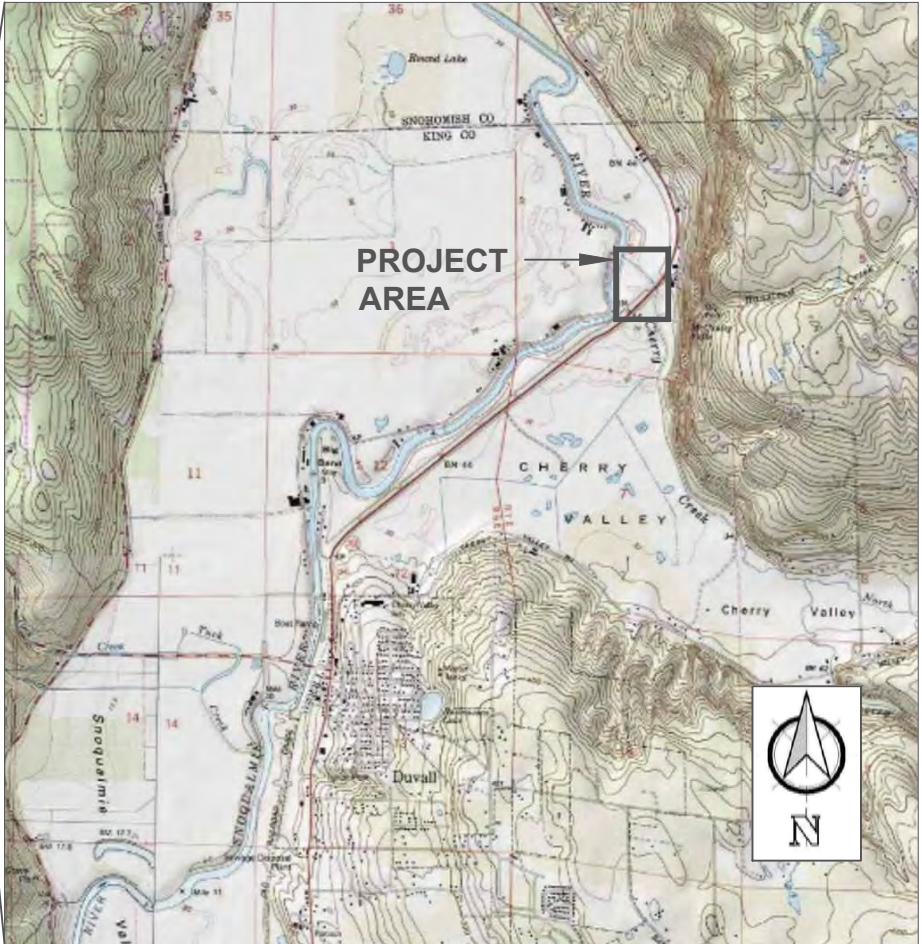
PROJECT SITE LOCATION:
LATITUDE: 47.765928 LONGITUDE: -121.957561
PARCEL NUMBER: 062607-9016
ADDRESS: 19228 DUVALL-MONROE RD NE
PLSS: SE ¼, SEC06, T26N, R07E



SHEET TITLE	NO.
INDEX SHEET	C1
SITE PLANS	C2-C4
CHANNEL PROFILES	C5
STREAMBANK ELJ DETAILS	C6
BRIDGE DETAILS	C7
STREAMBANK LOG CLUSTER	C8
DETAILS	
MAIN CHANNEL SECTIONS	S1-S9
BRIDGE PLAN	B1-B9
LEVEE PLAN	L1-L16
PLANTING PLAN	P1-P2



VICINITY MAP



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOOD23-0005

FLOOD
DEVELOPMENT
PERMIT



TITLE SHEET

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025
DRAWN BY: S. KROPP
A. JORGENSEN
DESIGNED BY: A. STONKUS
S. KROPP

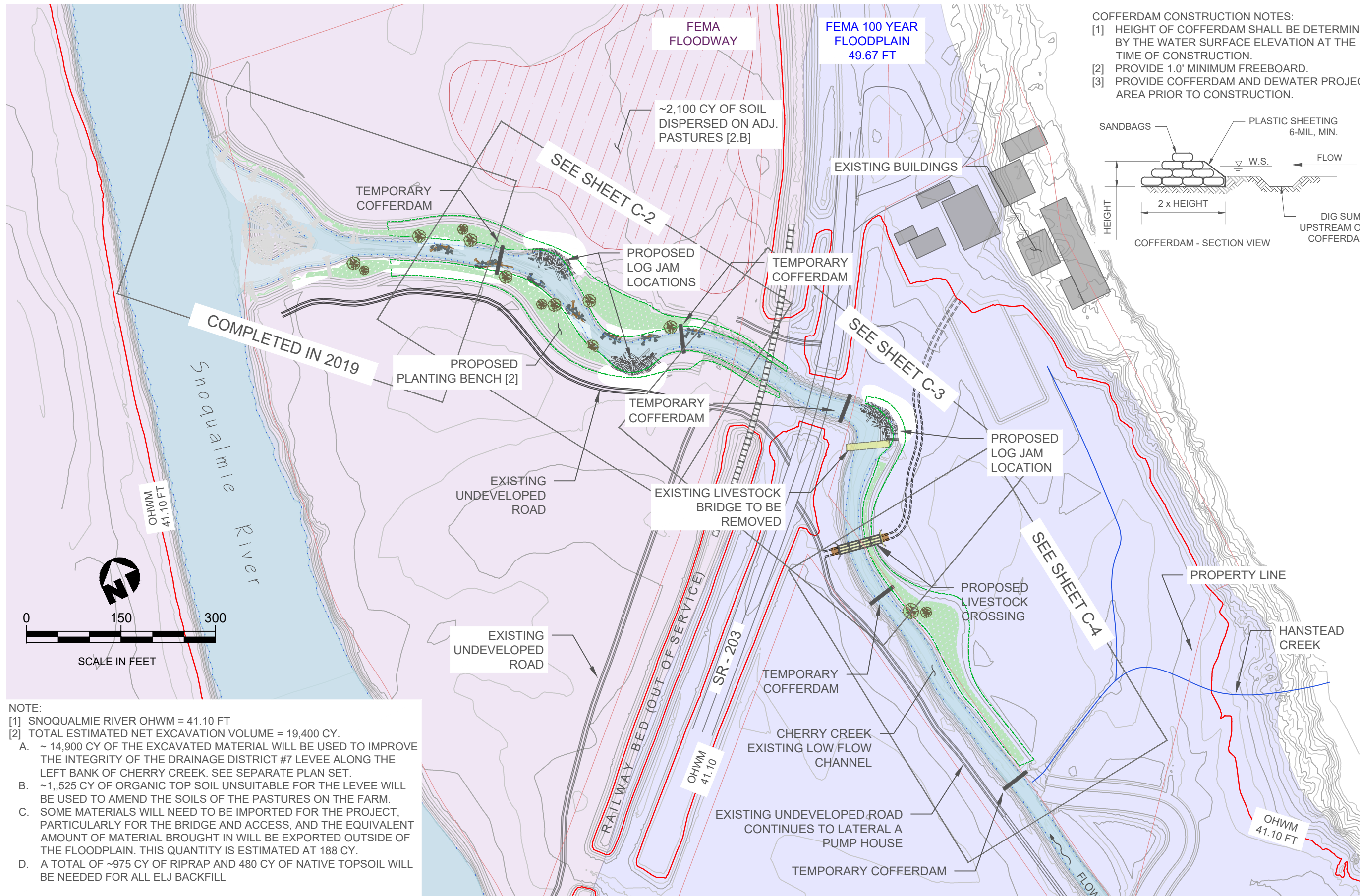
SCALE:
JOB NO.:
SHEET NO.

SHEET 1 of 45

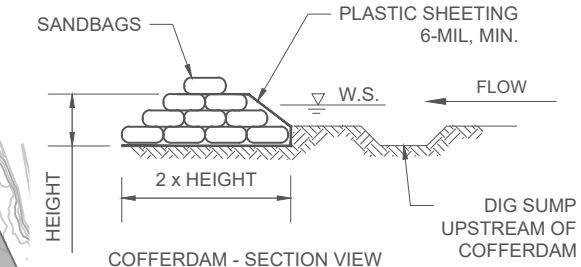
DRAFT

DESIGN DRAWINGS PREPARED BY THE
WILD FISH CONSERVANCY

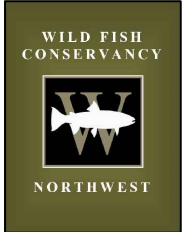
NOT FOR CONSTRUCTION



- COFFERDAM CONSTRUCTION NOTES:
- [1] HEIGHT OF COFFERDAM SHALL BE DETERMINED BY THE WATER SURFACE ELEVATION AT THE TIME OF CONSTRUCTION.
 - [2] PROVIDE 1.0' MINIMUM FREEBOARD.
 - [3] PROVIDE COFFERDAM AND DEWATER PROJECT AREA PRIOR TO CONSTRUCTION.



- NOTE:
- [1] SNOQUALMIE RIVER OHWM = 41.10 FT
 - [2] TOTAL ESTIMATED NET EXCAVATION VOLUME = 19,400 CY.
 - A. ~ 14,900 CY OF THE EXCAVATED MATERIAL WILL BE USED TO IMPROVE THE INTEGRITY OF THE DRAINAGE DISTRICT #7 LEVEE ALONG THE LEFT BANK OF CHERRY CREEK. SEE SEPARATE PLAN SET.
 - B. ~1,,525 CY OF ORGANIC TOP SOIL UNSUITABLE FOR THE LEVEE WILL BE USED TO AMEND THE SOILS OF THE PASTURES ON THE FARM.
 - C. SOME MATERIALS WILL NEED TO BE IMPORTED FOR THE PROJECT, PARTICULARLY FOR THE BRIDGE AND ACCESS, AND THE EQUIVALENT AMOUNT OF MATERIAL BROUGHT IN WILL BE EXPORTED OUTSIDE OF THE FLOODPLAIN. THIS QUANTITY IS ESTIMATED AT 188 CY.
 - D. A TOTAL OF ~975 CY OF RIPRAP AND 480 CY OF NATIVE TOPSOIL WILL BE NEEDED FOR ALL ELJ BACKFILL

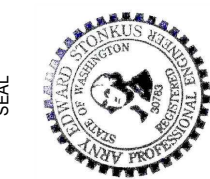


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOOD23-0005

FLOOD
DEVELOPMENT
PERMIT



INDEX SHEET

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

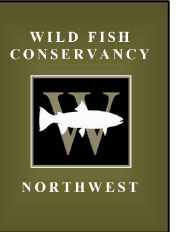
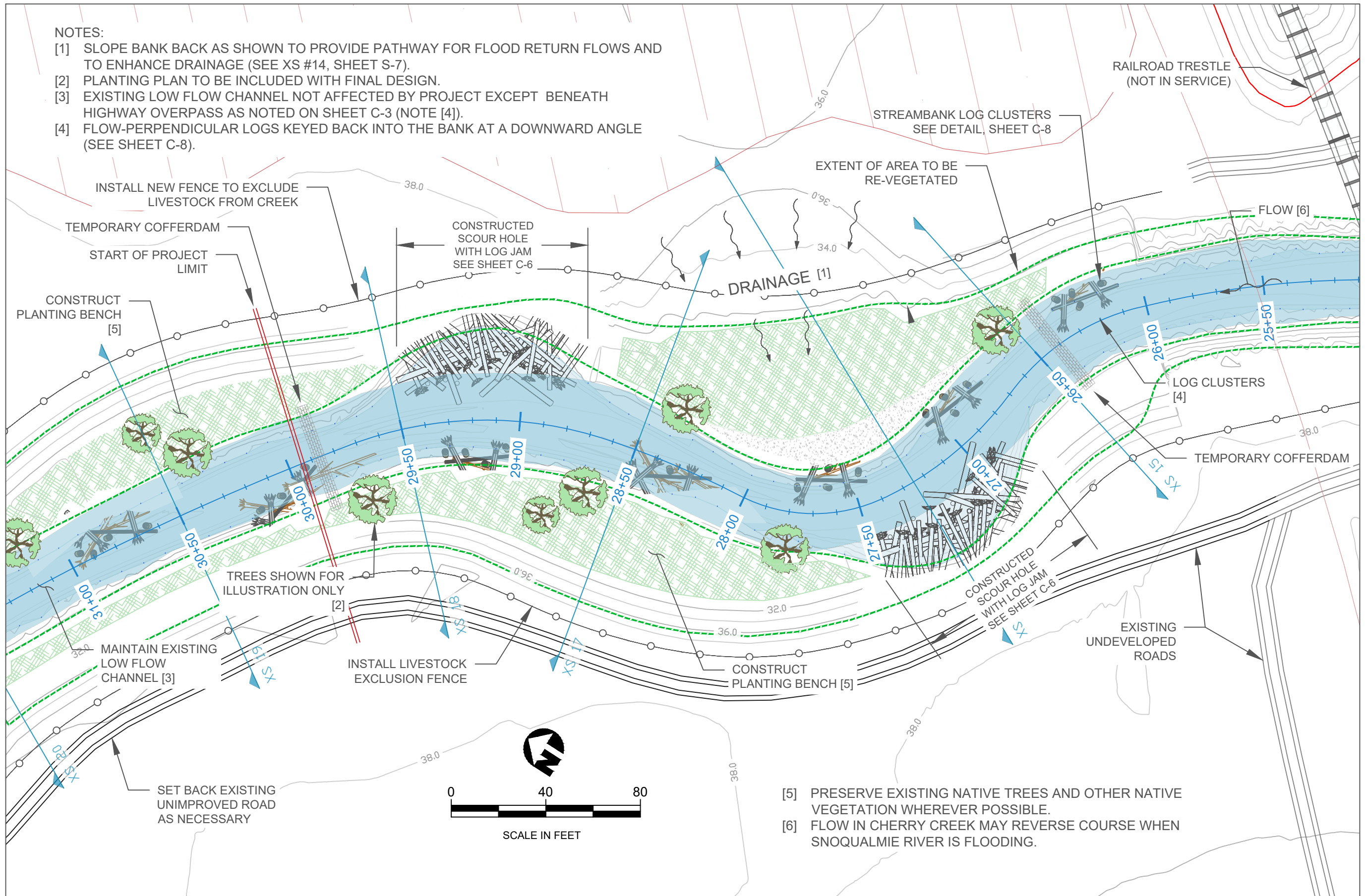
SCALE: 1" = 150'

JOB NO.:

SHEET NO.

C-1

SHEET 2 of 45

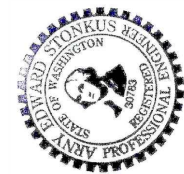


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



SITE PLAN: STA. 25+50 - 31+00

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

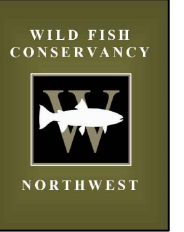
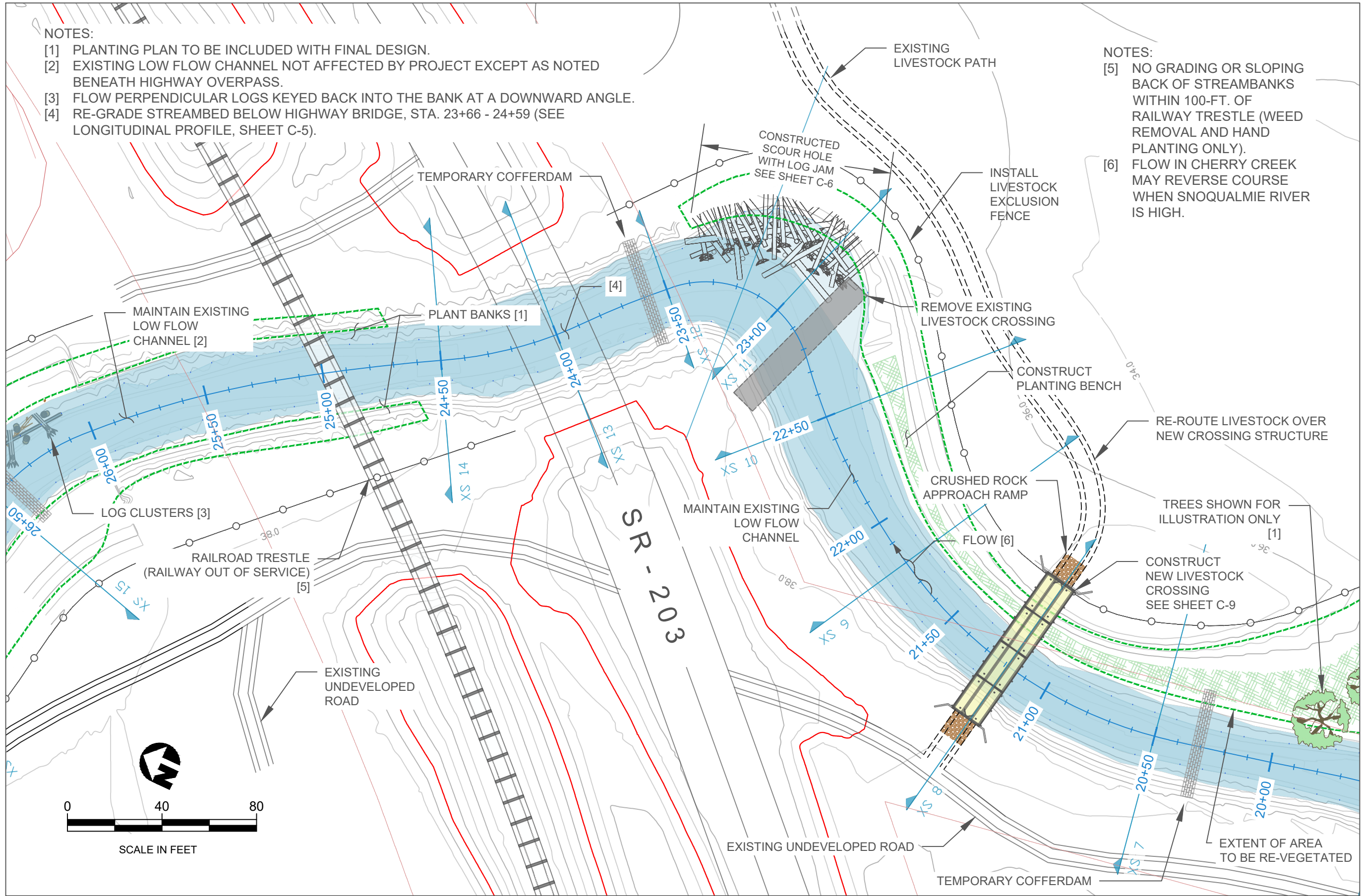
SCALE: 1" = 40'

JOB NO. :

SHEET NO.

C-2

SHEET 3 of 45



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



SITE PLAN: STA. 20+00 - 26+00

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

SCALE: 1" = 40'

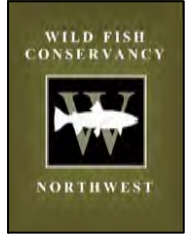
JOB NO.:

SHEET NO.

C-3

SHEET 4 of 45

- [1] SLOPE BANK BACK AS SHOWN TO PROVIDE PATHWAY FOR FLOOD RETURN FLOWS AND TO ENHANCE DRAINAGE (SEE XS # 4, SHEET S-2).
- ✓ [2] PLANTING PLAN TO BE INCLUDED WITH FINAL DESIGN.
- [3] EXISTING LOW FLOW CHANNEL NOT AFFECTED BY PROJECT EXCEPT BENEATH HIGHWAY OVERPASS AS NOTED ON SHEET C-3.
- [4] FLOW IN CHERRY CREEK MAY REVERSE COURSE WHEN SNOQUALMIE RIVER IS HIGH.
- [5] CONSTRUCT MINIMUM 10' LONG APPROACH RAMP, EACH END, USING 4" LAYER COMPACTED CRUSHED ROCK. DO NOT EXCEED 5% SLOPE. SEE BRIDGE DETAILS, SHEET C-7.



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT

SITE PLAN: STA. 16+00 - 21+50

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

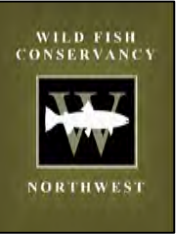
SCALE: 1" = 40'

JOB NO. :

SHEET NO.

C-4

SHEET 5 of 45



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



CHANNEL PROFILES

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

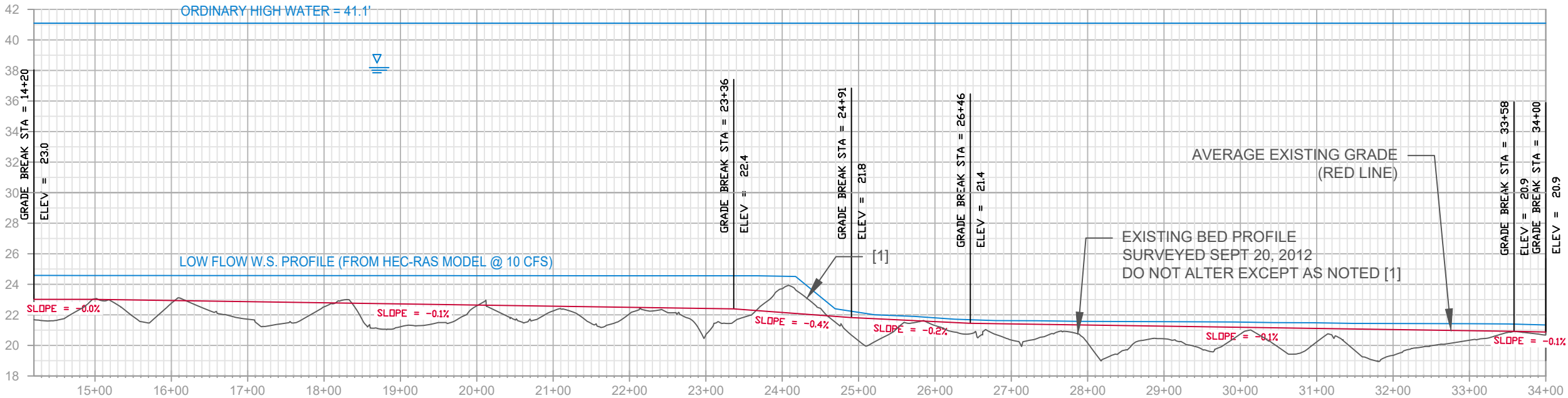
SCALE:

JOB NO.:

SHEET NO.

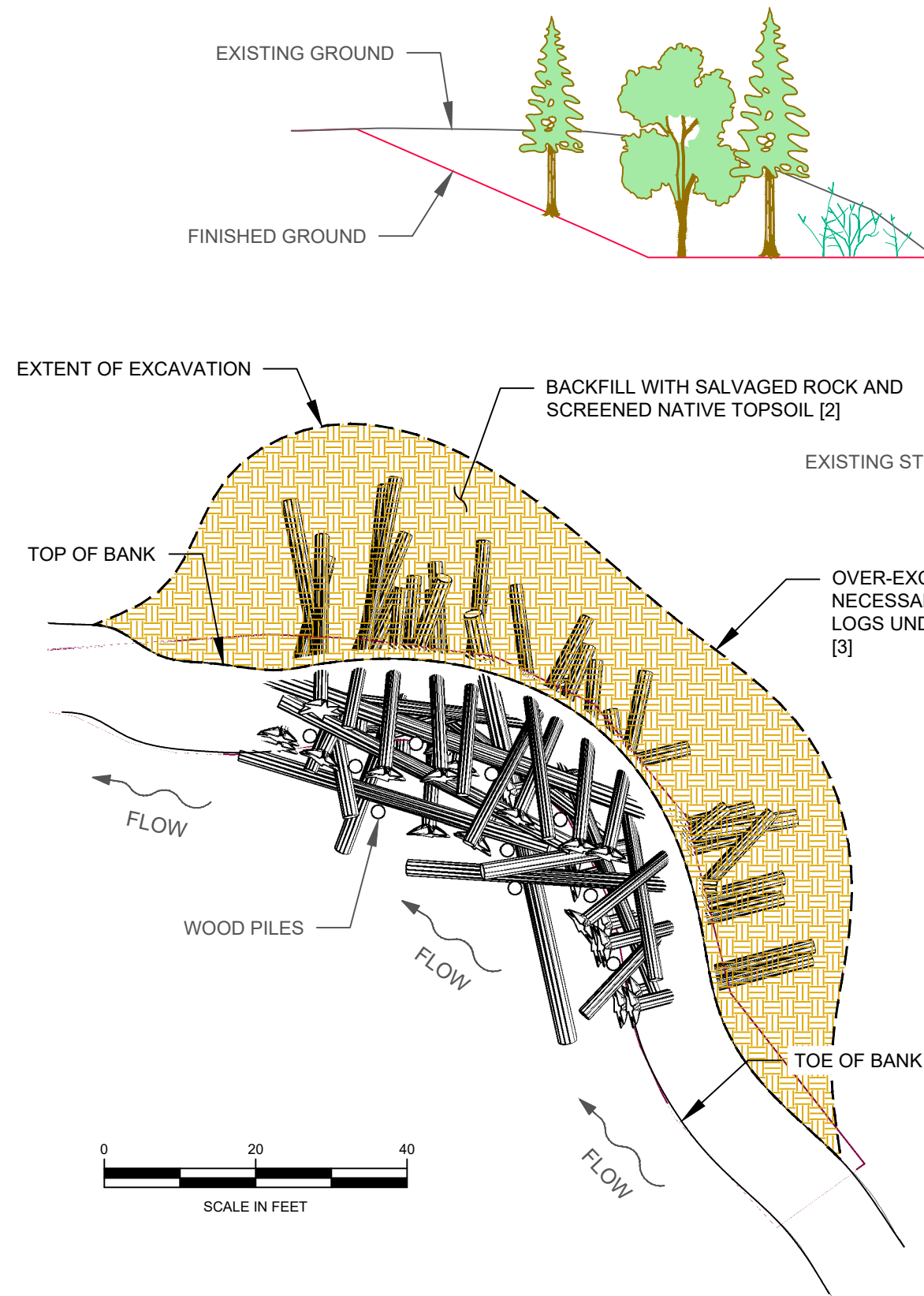
C-5

SHEET 6 of 45



MAINSTEM CHANNEL PROFILE

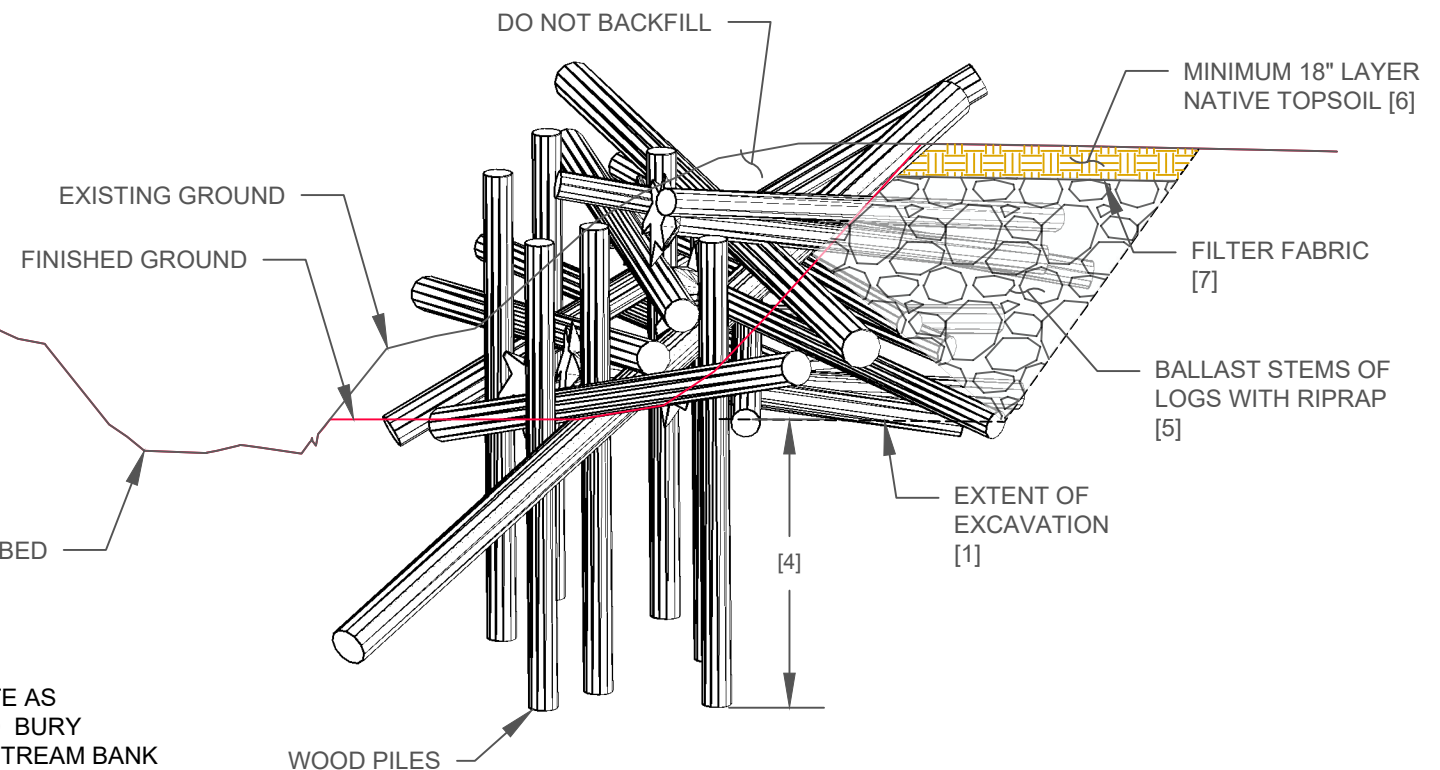
SCALE: AS SHOWN



STREAMBANK ELJ: PLAN VIEW (TYP)

SCALE: 1" = 20'

1
--



STREAMBANK ELJ: SECTION VIEW (TYP)

SCALE: 1" = 12'

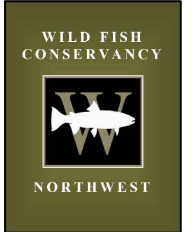
2
--

LOG SCHEDULE (EACH JAM)

LOG TYPE	QTY	LENGTH (FEET)	DBH (INCHES)	ROOTWAD
PILES	10	30	10	N/A
A	26	20-25	18-24	YES
B	2	60	24-30	YES

STREAMBANK ELJ CONSTRUCTION NOTES:

- [1] FINAL LOG PLACEMENT SHOWN. PLACE MEMBER LOGS ACCORDING TO CONSTRUCTION SEQUENCING DETAILS TO BE SHOWN IN FINAL PLAN SET.
- [2] BALLAST AND RACKED LOGS TO BE PLACED AS INSTRUCTED BY ENGINEER.
- [3] BACKFILL/BURY ENDS OF LOGS ONLY WITH NATIVE SOIL. LEAVE MIDDLE OF LOG JAM OPEN TO ALLOW WATER FOR THROUGH-FLOW AND INTERNAL SCOUR.
- [4] DRIVE PILES 18 FT BELOW GRADE OR TO REFUSAL.
- [5] USE SALVAGED RIPRAP FROM STREAMBANK EXCAVATION TO BALLAST STEMS OF LOGS AS DIRECTED BY ENGINEER ON SITE.
- [6] SCREEN NATIVE TOPSOIL TO REMOVE ANY BLACKBERRY STEMS OR ROOTS PRIOR TO BACKFILLING. RE-VEGETATE TOP OF BANK WITH NATIVE PLANTS.
- [7] INSTALL FILTER FABRIC BETWEEN ROCK AND TOPSOIL LAYER TO PREVENT PIPING OF SOIL BETWEEN ROCKS WHILE VEGETATION BECOMES ESTABLISHED.
- [8] INSTALL JUTE MATTING AFTER SOIL PLACEMENT.

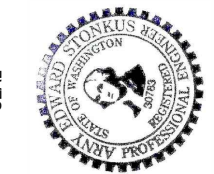


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



STREAMBANK ELJ DETAILS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

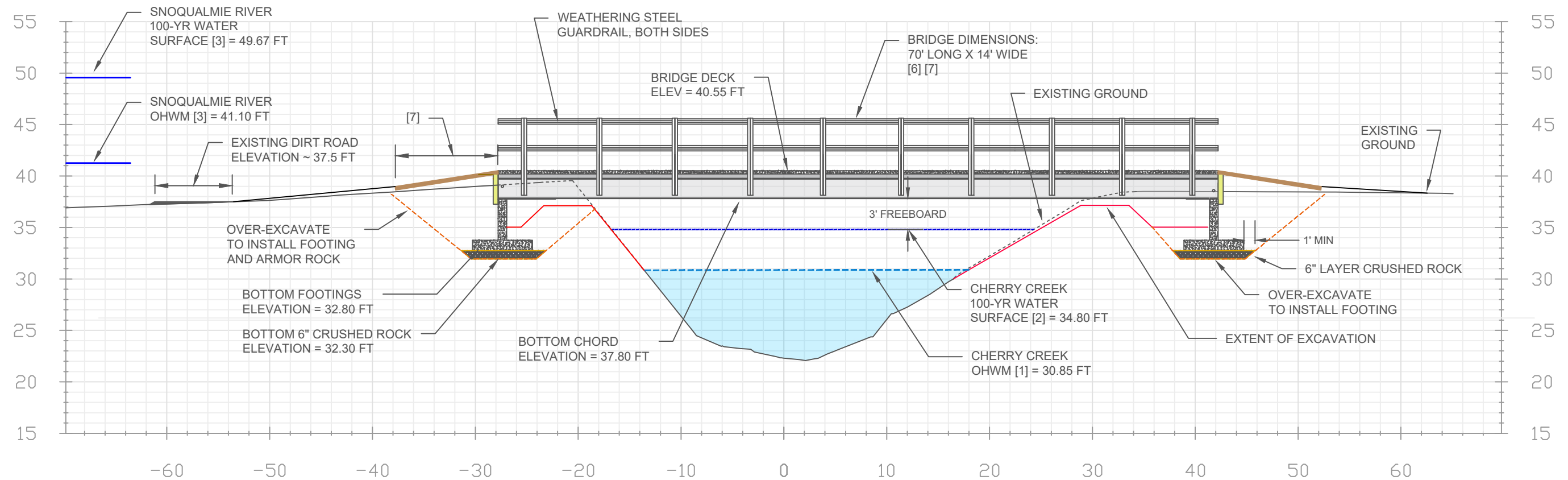
SCALE: AS SHOWN

JOB NO. :

SHEET NO.

C-6

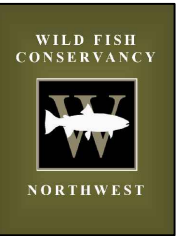
SHEET 7 of 45



Equivalent Elevation	Cut (CY)	Fill (CY)	Net Cut (CY)
Below OHWM (41.10 ft)	19,400	19,400	0
Between OHWM and 10-Yr	0	0	0
Between 10-Yr and 50-Yr	0	0	0
Between 50-Yr and 100-Yr	0	0	0

NOTES:

- [1] ORDINARY HIGH WATER SURFACE ELEVATION IN CHERRY CREEK = 30.85 FT, BASED ON HEC-RAS MODELING OF 1.67-YEAR FLOW OF 992 CFS, (POST-CONSTRUCTION). RIVER IS AT LOW FLOW AND DOES NOT EFFECT WATER SURFACE ELEVATIONS AT BRIDGE.
- [2] 100-YEAR FLOOD ELEVATION BASED ON HEC-RAS MODELING OF CHERRY CREEK = 34.80 FT; ASSUMES SNOQUALMIE RIVER DOES NOT AFFECT SURFACE WATER ELEVATIONS.
- [3] 100-YEAR FLOOD ELEVATION (49.67 FT) AND OHWM (41.10 FT) BASED ON HEC-RAS MODELING OF SNOQUALMIE RIVER
- [4] BRIDGE SHALL BE DESIGNED BY A WA LICENSED STRUCTURAL ENGINEER AND A STAMPED DRAWING OF THE BRIDGE SHALL BE REVIEWED BY THE WILD FISH CONSERVANCY PRIOR TO INSTALLATION. THE BRIDGE SHALL COMPLY WITH AASHTO HL-93 LOADING.
- [5] INSTALLATION SHALL COMPLY WITH WSDOT SEISMIC BRIDGE DESIGN SPECIFICATIONS, BRIDGE DESIGN MANUAL M23-50.04.
- [6] BRIDGE SHALL BE SECURED TO ABUTMENTS (SEE STAMPED STRUCTURAL ENGINEERING PLANS).
- [7] CONSTRUCT MINIMUM 10' LONG APPROACH RAMP, EACH END, USING 4" LAYER COMPACTED CRUSHED ROCK. DO NOT EXCEED 5% SLOPE.

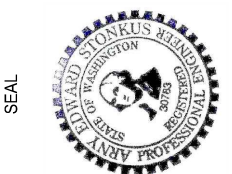


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



BRIDGE DETAILS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

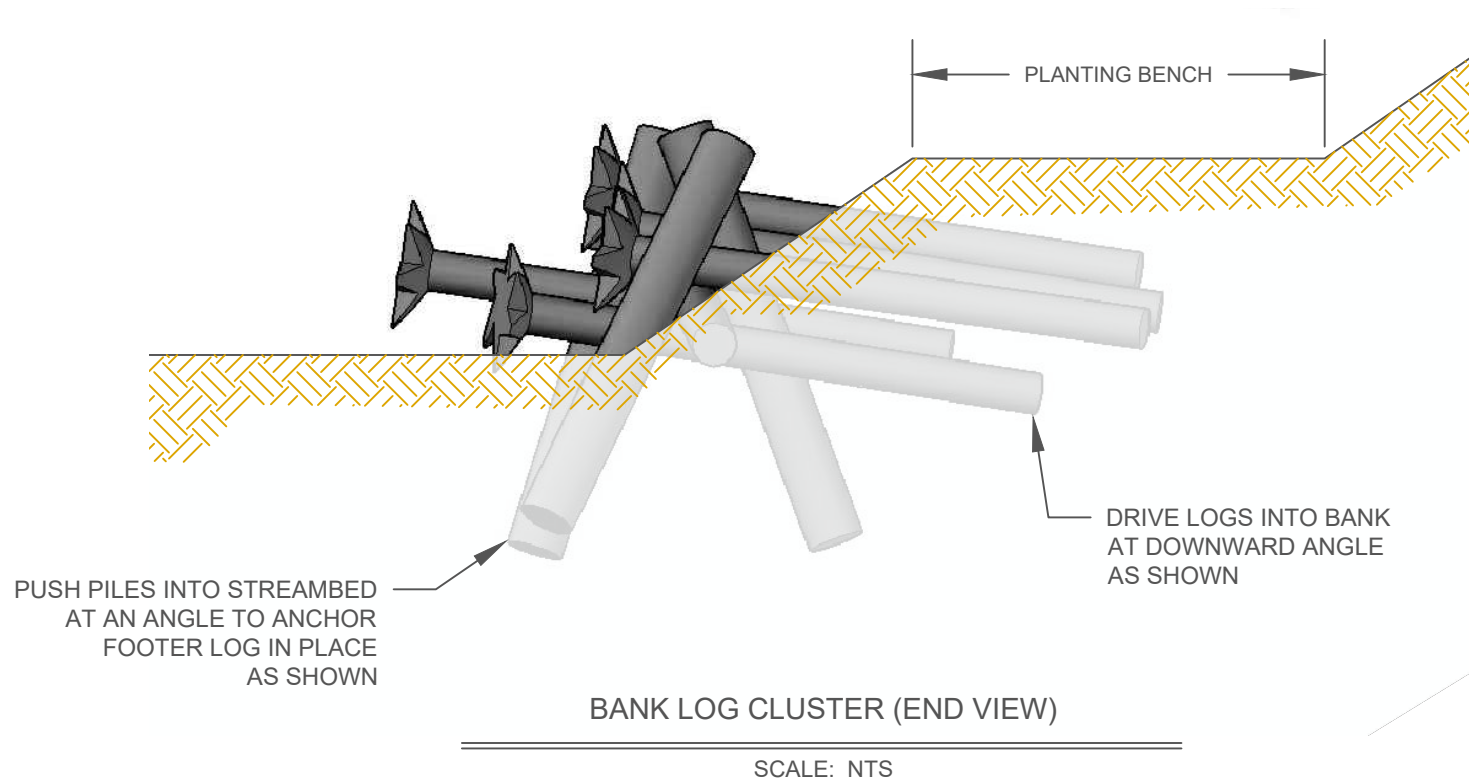
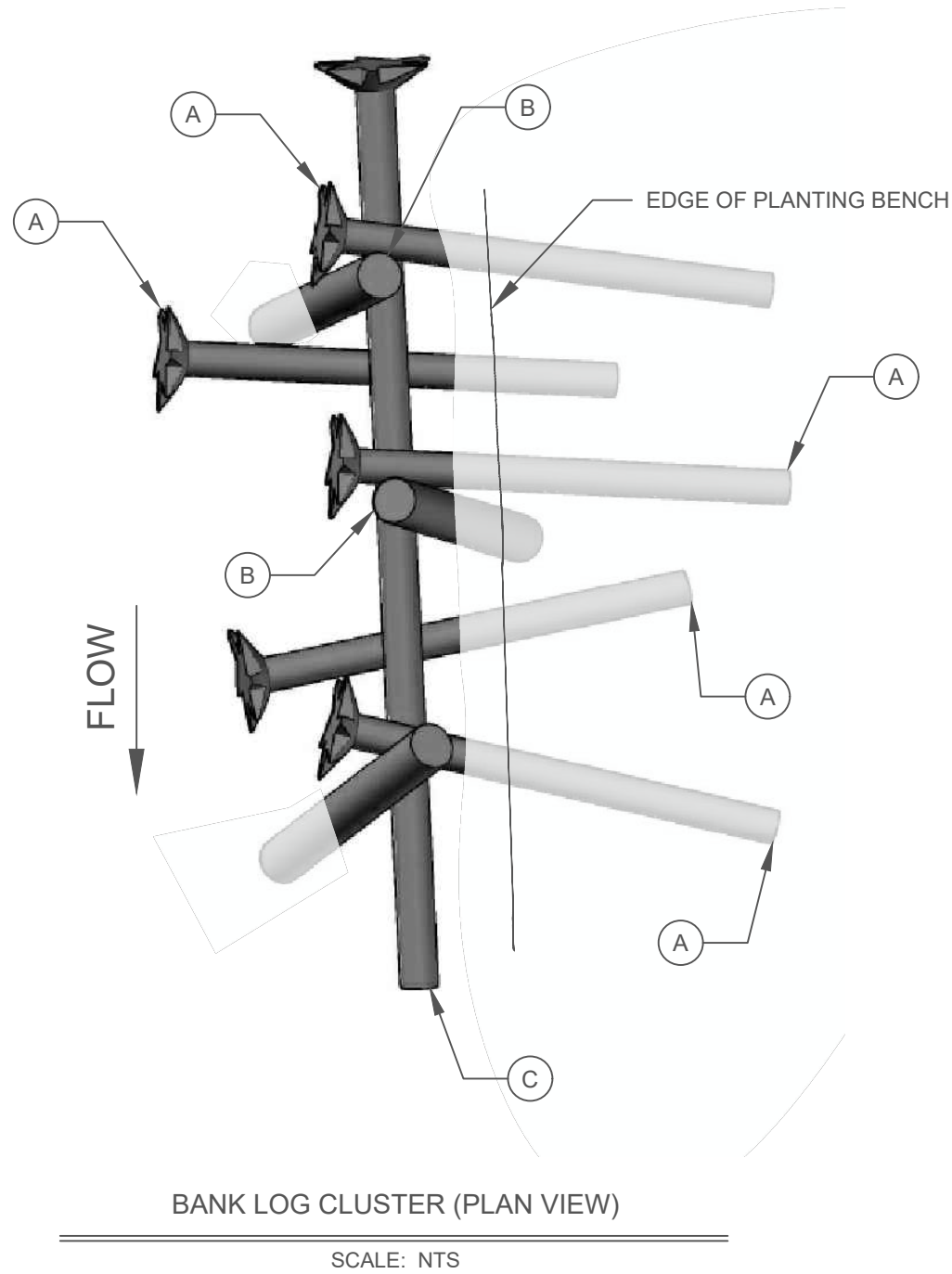
SCALE:

JOB NO.:

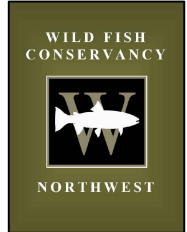
SHEET NO.

C-7

SHEET 8 of 45

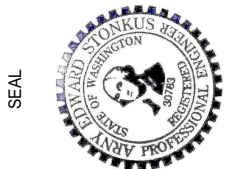


LOG SCHEDULE <i>(per cluster)</i>				
LOG TYPE	QTY	LENGTH	DBH (INCHES)	ROOTWAD
A	5	20	18-24	YES
B <i>(piles)</i>	3	15	10	NO
C	1	40	18-24	YES



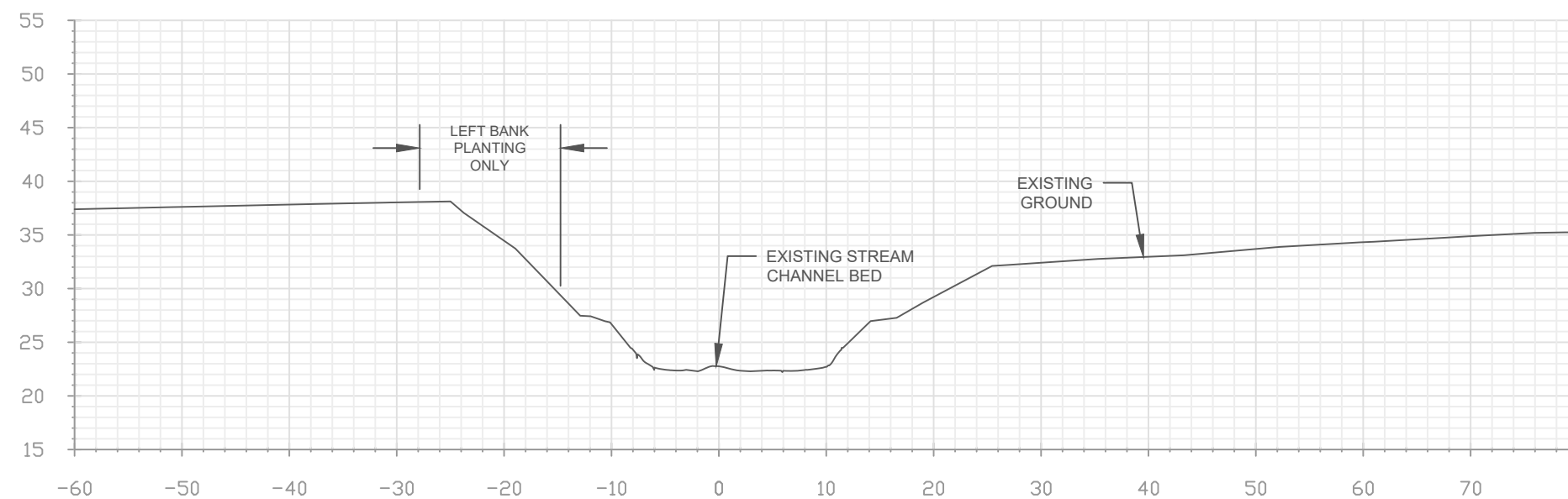
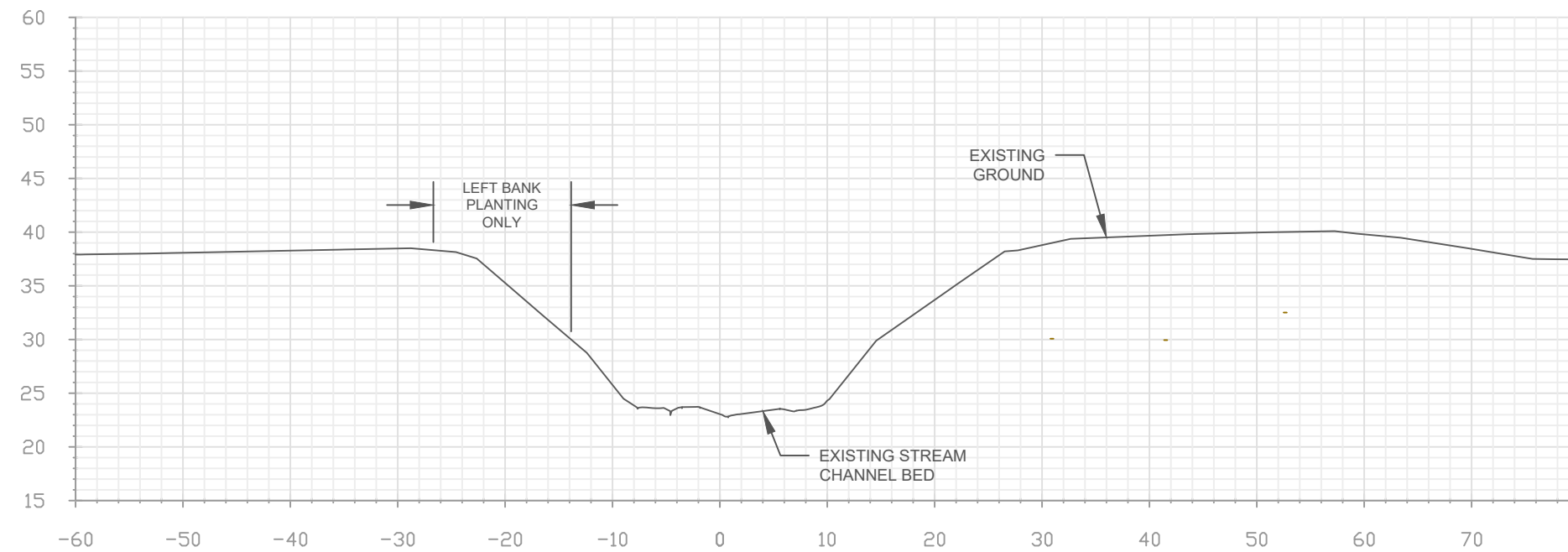
15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:
FLOD23-0005
FLOOD
DEVELOPMENT
PERMIT

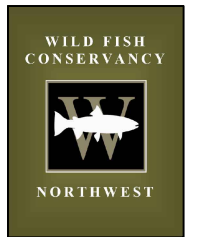


STREAM BANK LOG CLUSTERS
LOWER CHERRY CREEK RESTORATION
DUVALL, WA

DATE: 07-18-2025
DRAWN BY: S. KROPP
A. JORGENSEN
DESIGNED BY: A. STONKUS
S. KROPP
SCALE:
JOB NO.:
SHEET NO.



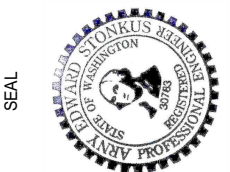
NOTE: INSTREAM LWD NOT SHOWN



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT

MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSON

DESIGNED BY: A. STONKUS
S. KROPP

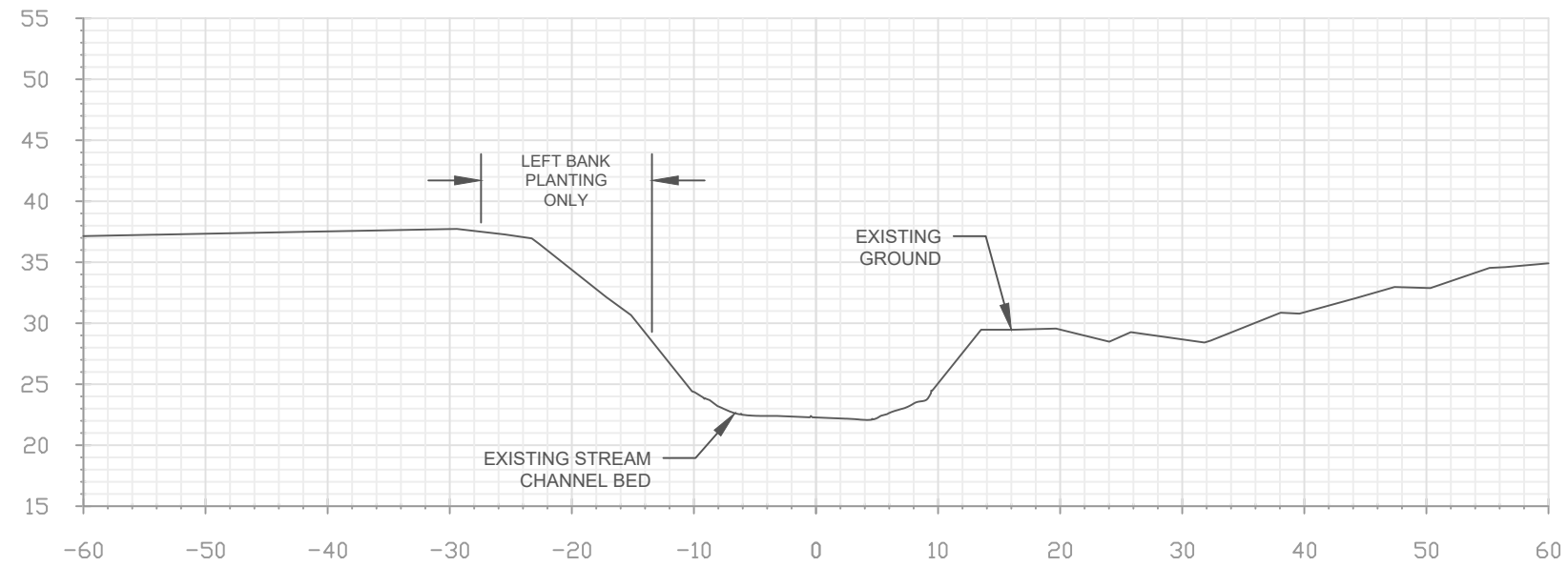
SCALE: AS SHOWN

JOB NO. :

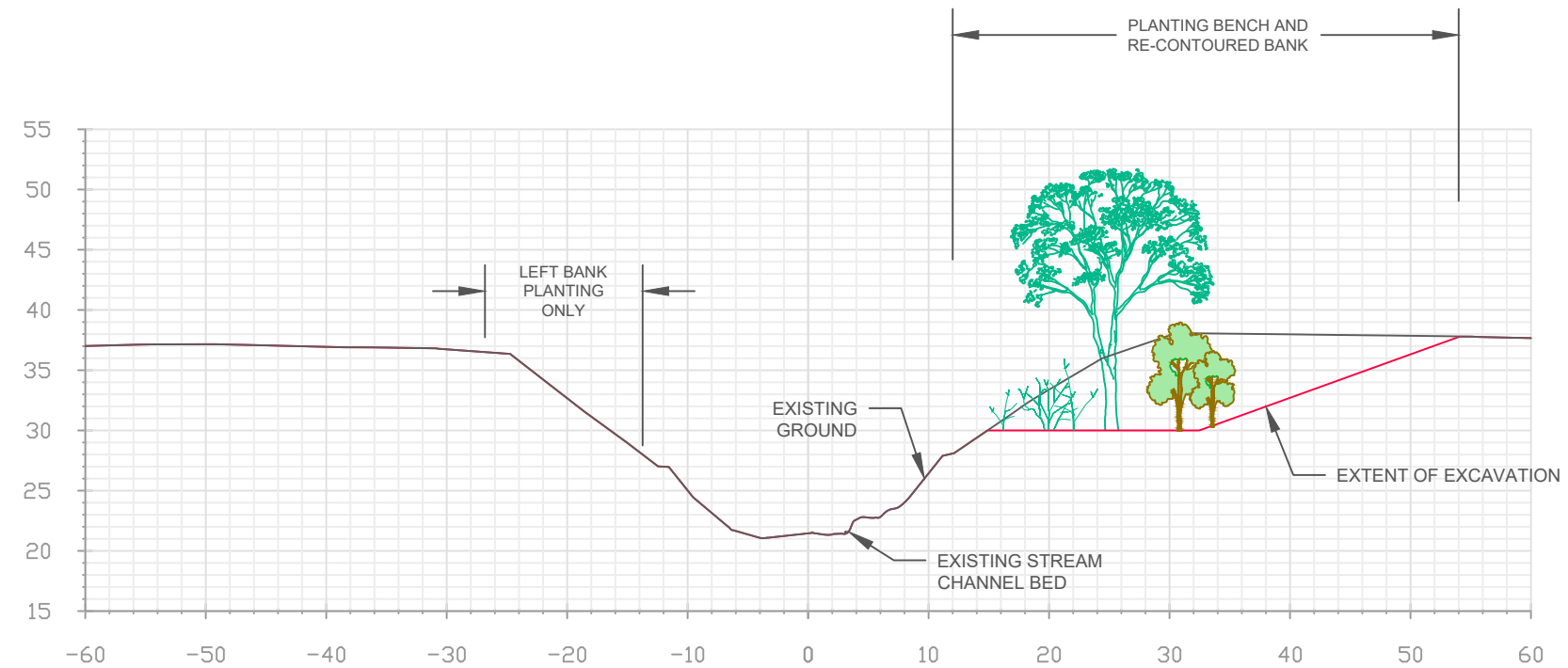
SHEET NO.

S-1

SHEET 10 of 45

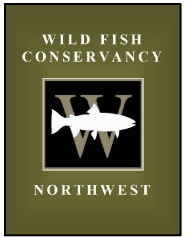


XS NO. 3: STA. 16+50



XS NO. 4: STA. 17+50

NOTE: INSTREAM LWD NOT SHOWN



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STORKUS
S. KROPP

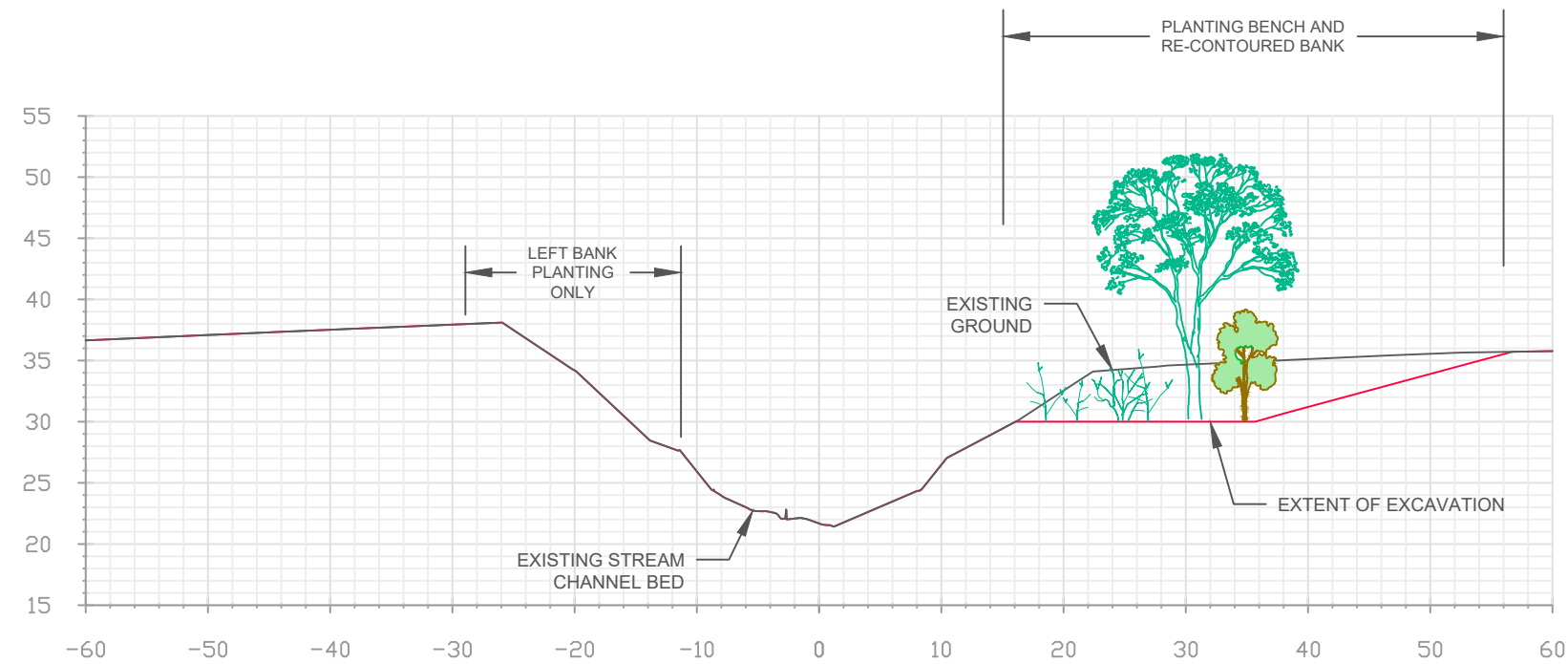
SCALE: AS SHOWN

JOB NO.:

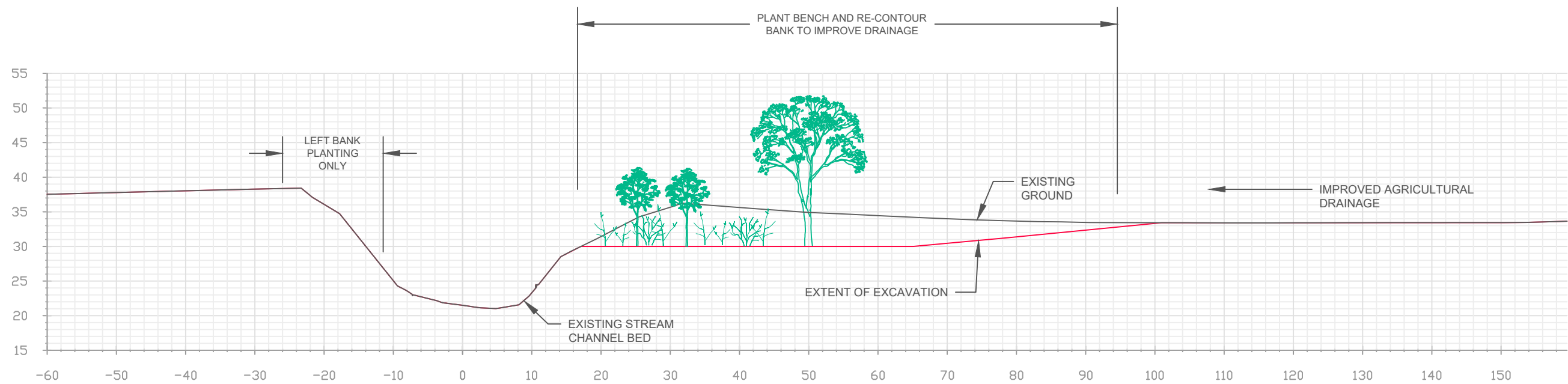
SHEET NO.

S-2

SHEET 11 of 45

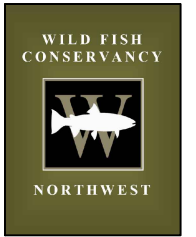


XS NO. 5: STA. 18+50



XS NO. 6: STA. 19+50

NOTE: INSTREAM LWD NOT SHOWN

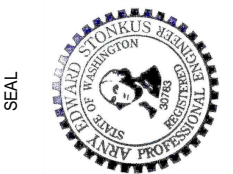


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

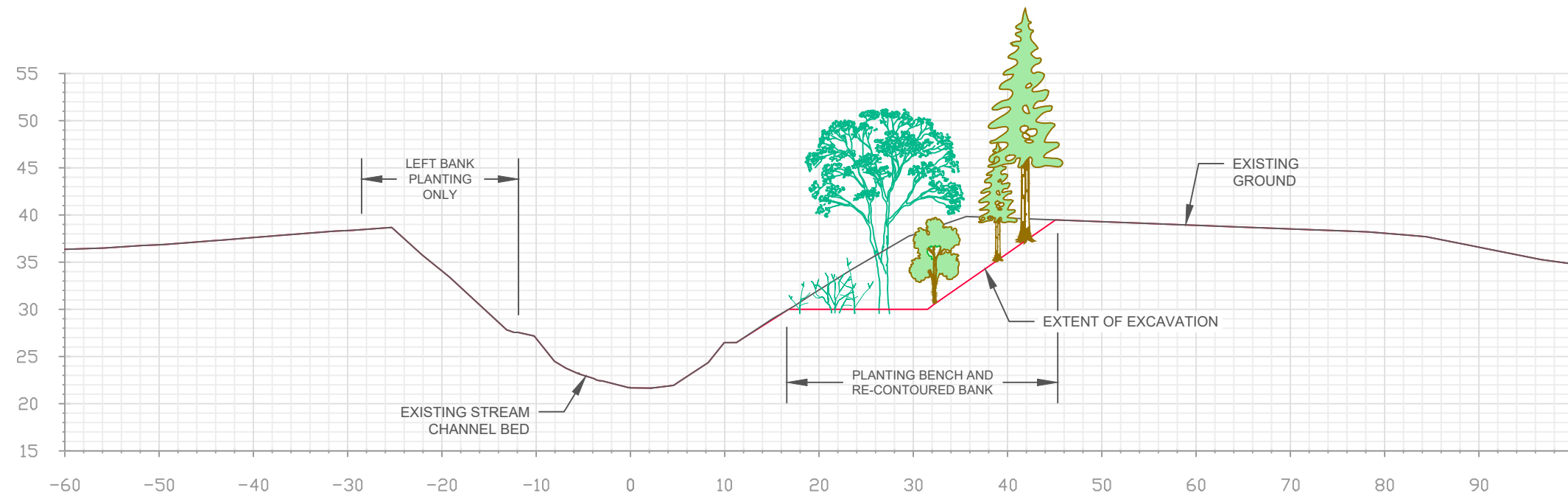
SCALE: AS SHOWN

JOB NO.:

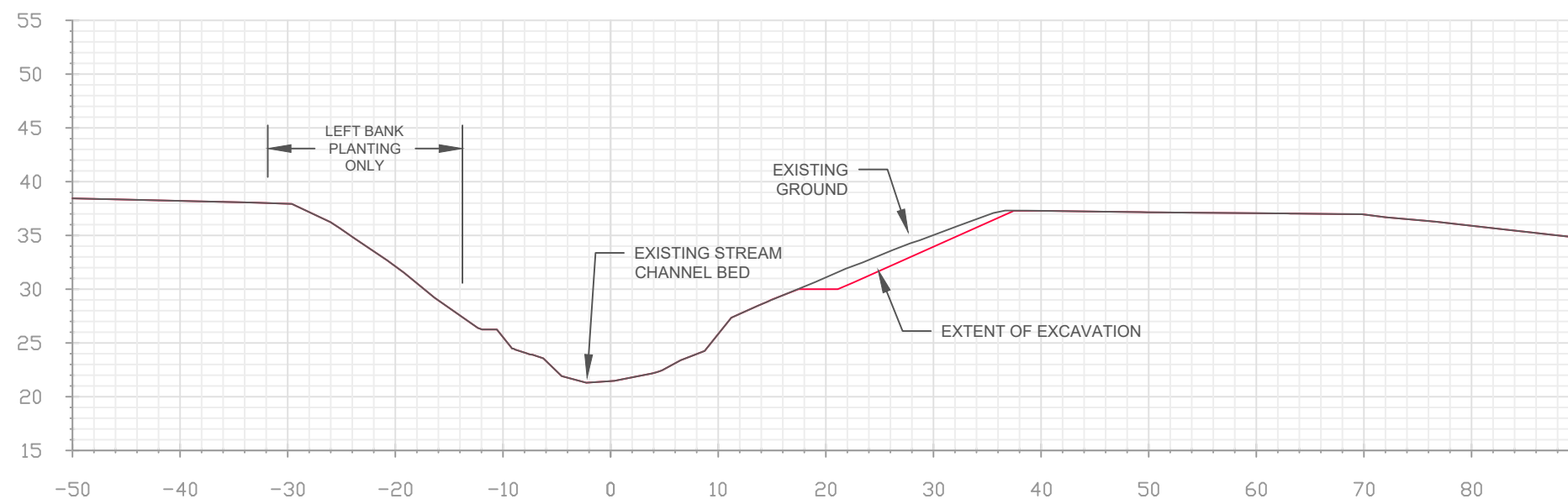
SHEET NO.

S-3

SHEET 12 of 45

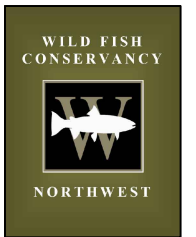


XS NO. 7: STA. 20+50



XS NO. 9: STA. 21+80

NOTE: INSTREAM LWD NOT SHOWN



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

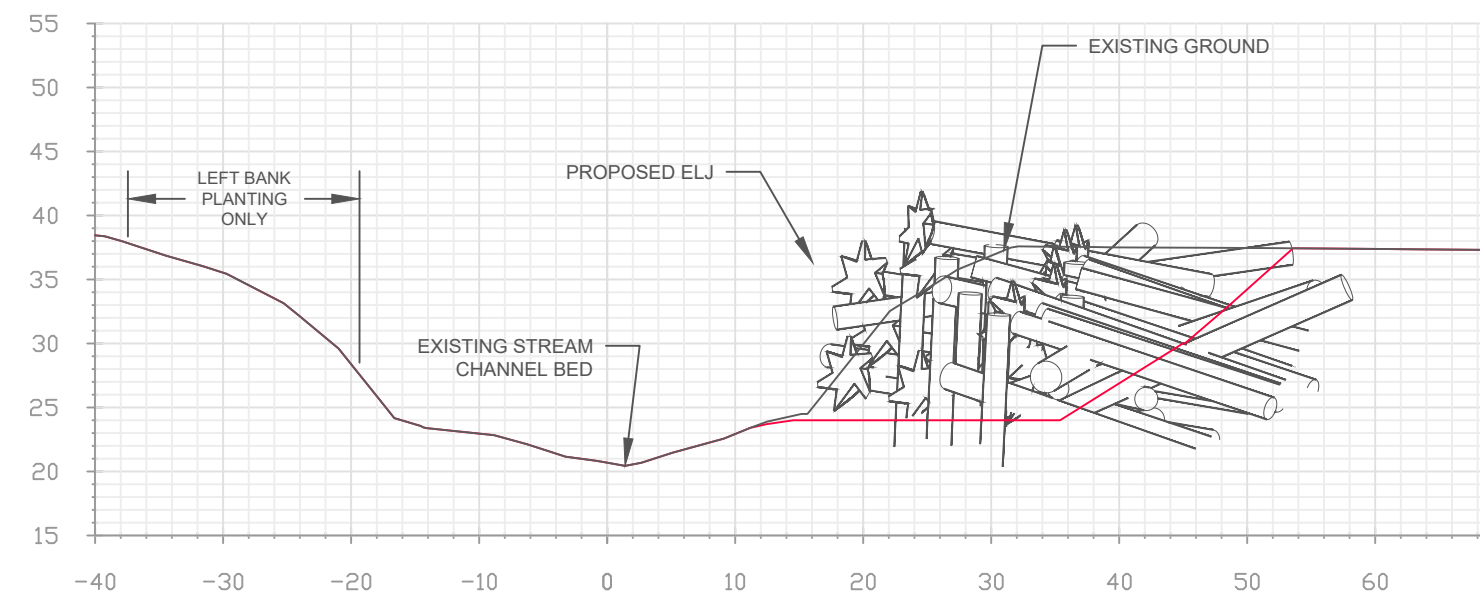
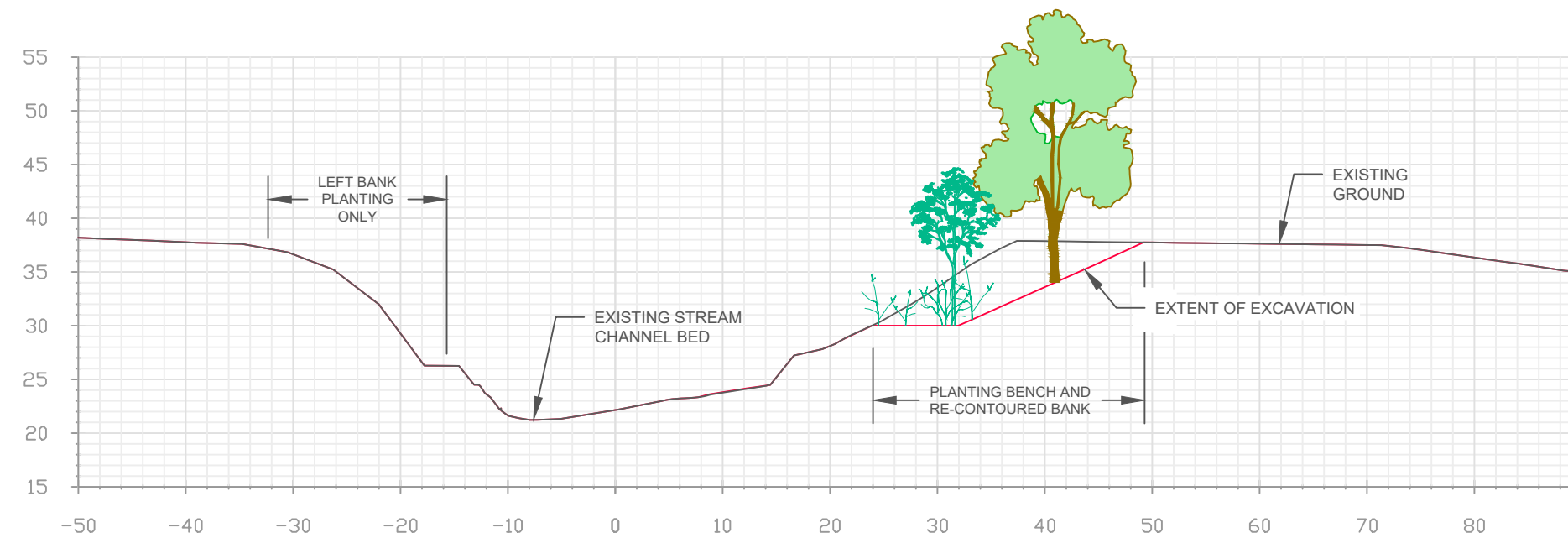
SCALE: AS SHOWN

JOB NO.:

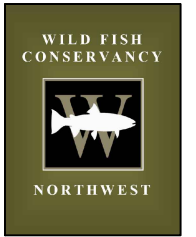
SHEET NO.

S-4

SHEET 13 of 45



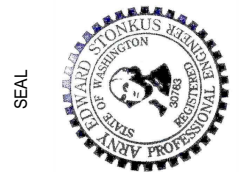
NOTE: INSTREAM LWD NOT SHOWN



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT

MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSON

DESIGNED BY: A. STONKUS
S. KROPP

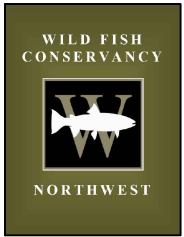
SCALE: AS SHOWN

JOB NO. :

SHEET NO.

S-5

SHEET 14 of 45

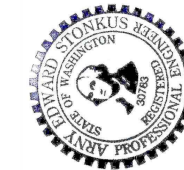


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

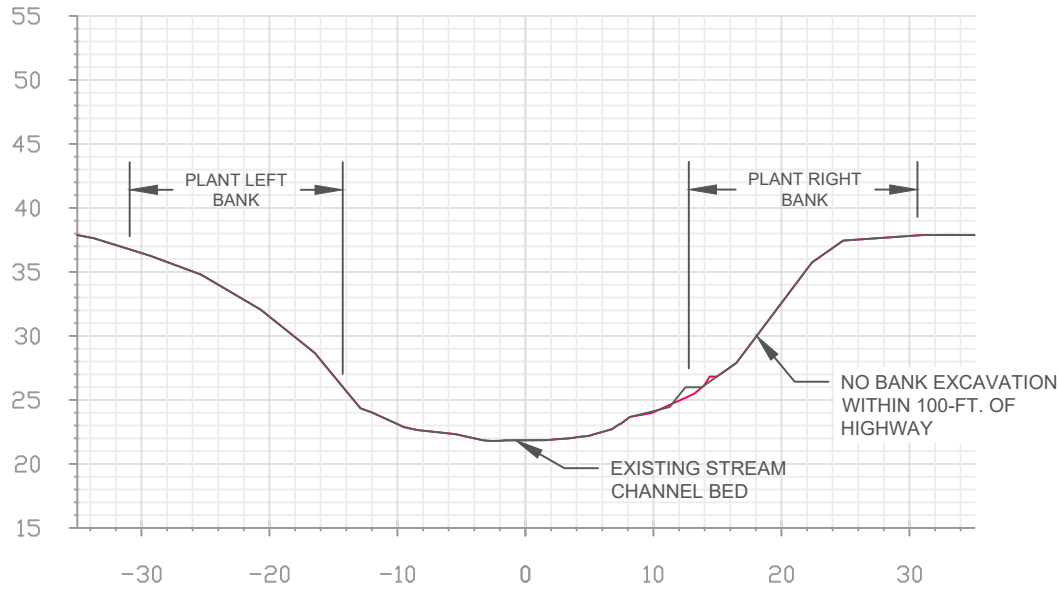
SCALE: AS SHOWN

JOB NO.:

SHEET NO.

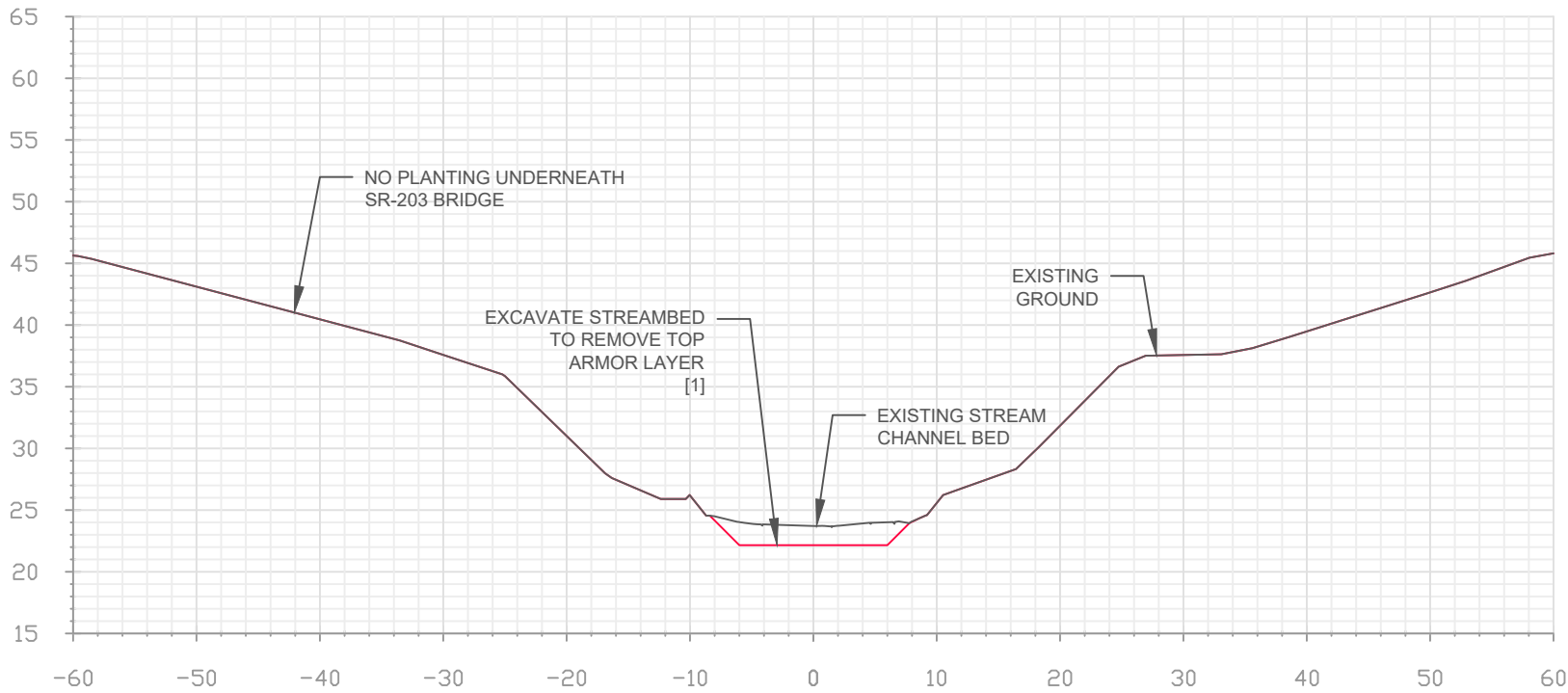
S-6

SHEET 15 of 45



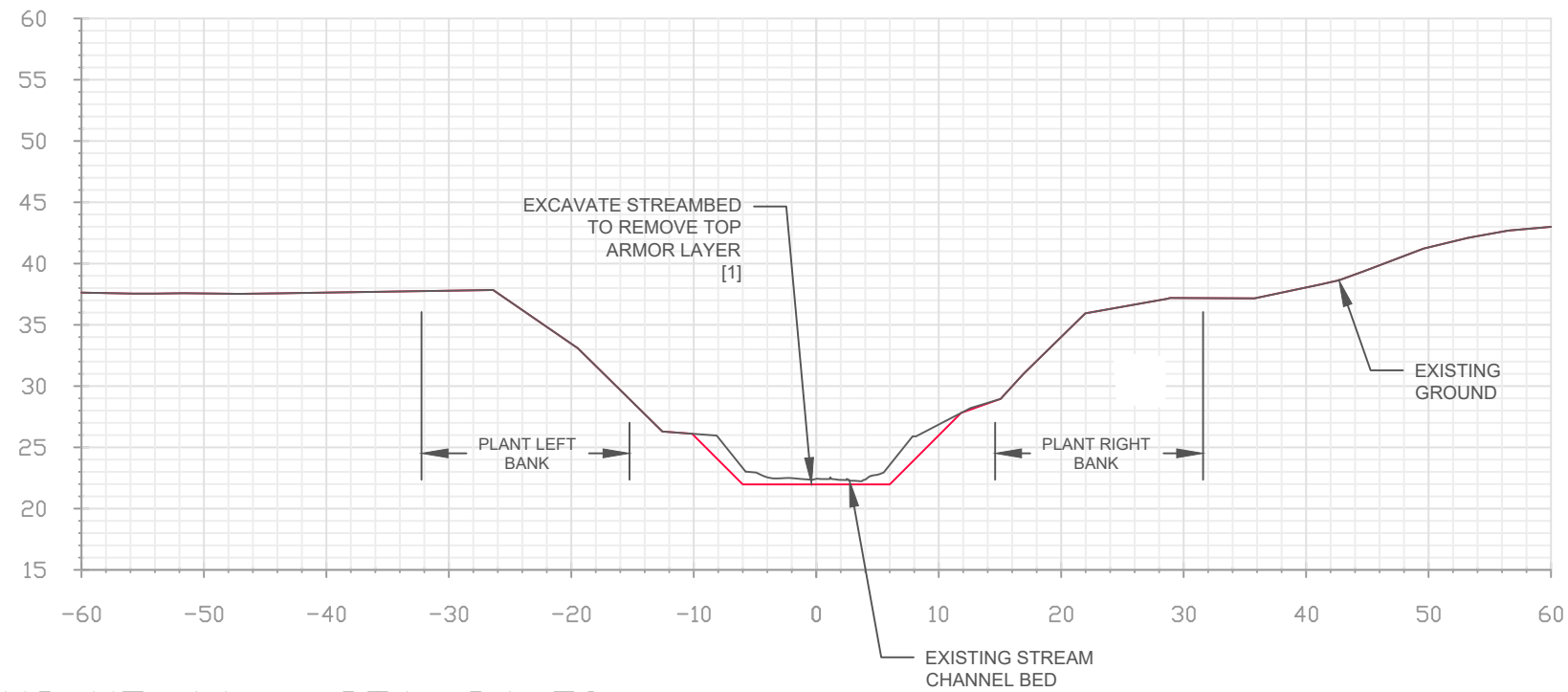
NOTE:
[1] REMOVE COARSE LAYER OF BED MATERIAL FROM STREAMBED SURFACE THAT CURRENTLY FUNCTIONS AS A GRADE CONTROL BETWEEN STA. 23+70 - 24+60 AND IMPEDES FLOW UNDER SR-203 BRIDGE (SEE LONG PROFILE, SHEET C-5)

XS NO. 12: STA. 23+50

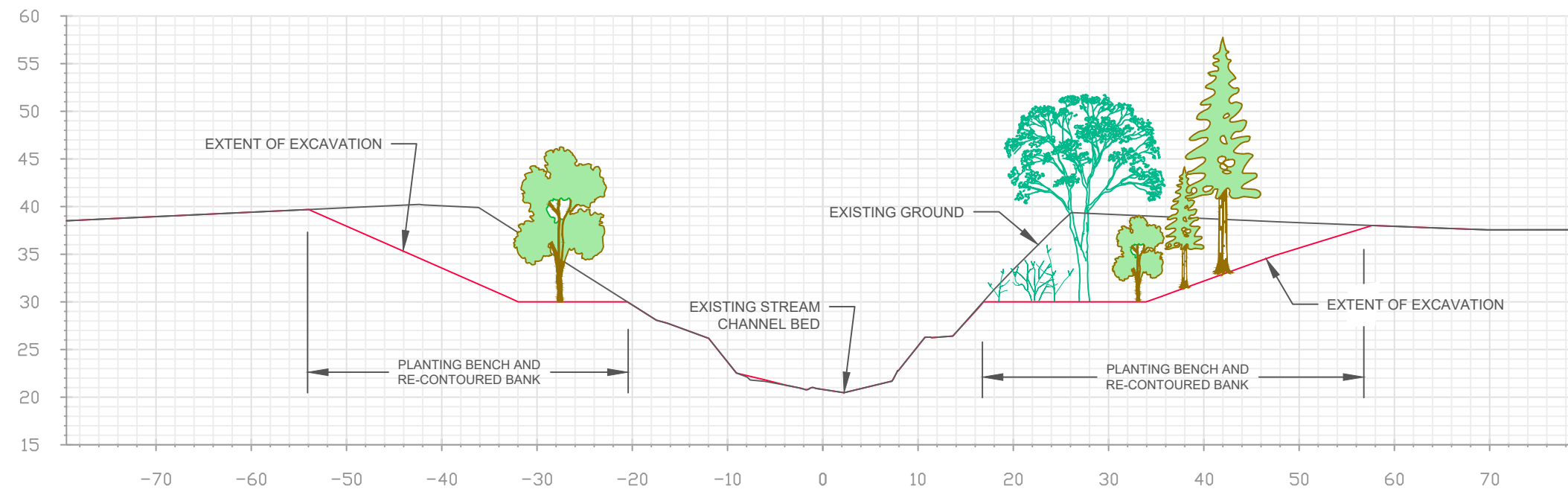


XS NO. 13: STA. 24+00

NOTE: INSTREAM LWD NOT SHOWN

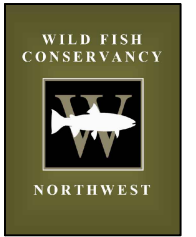


XS NO. 14: STA. 24+50



XS NO. 15: STA. 26+50

NOTE: INSTREAM LWD NOT SHOWN

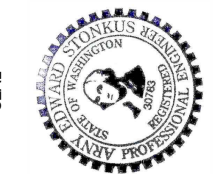


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STORKUS
S. KROPP

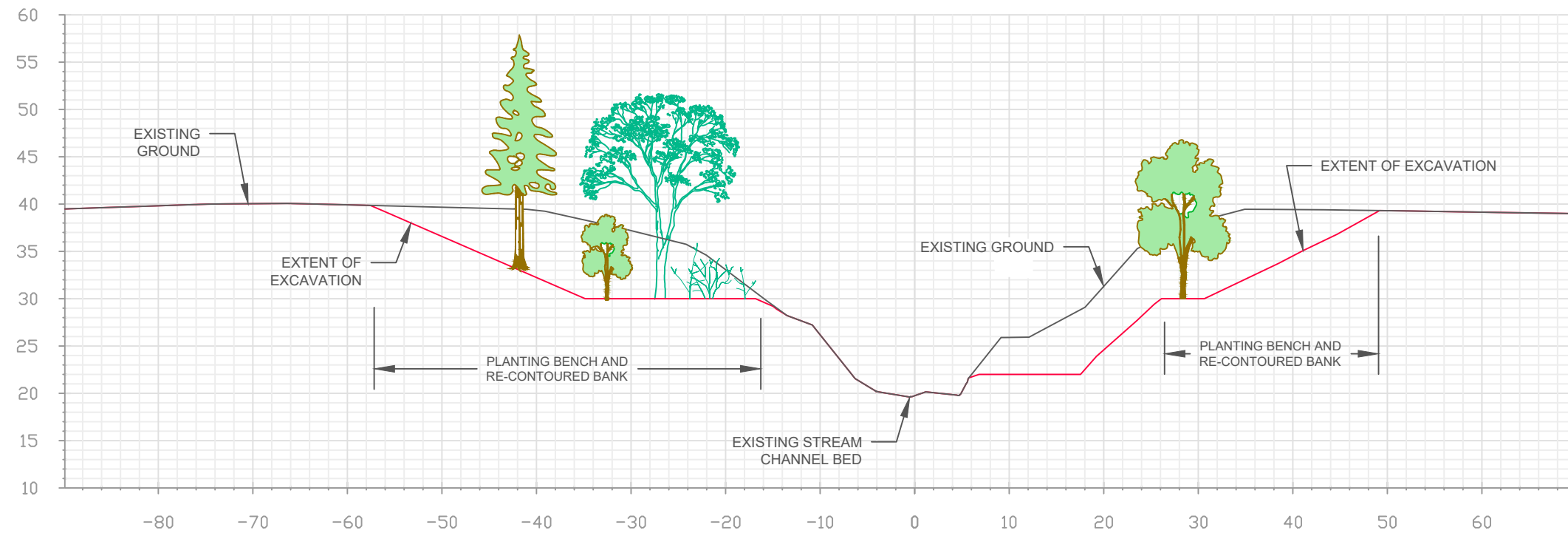
SCALE: AS SHOWN

JOB NO.:

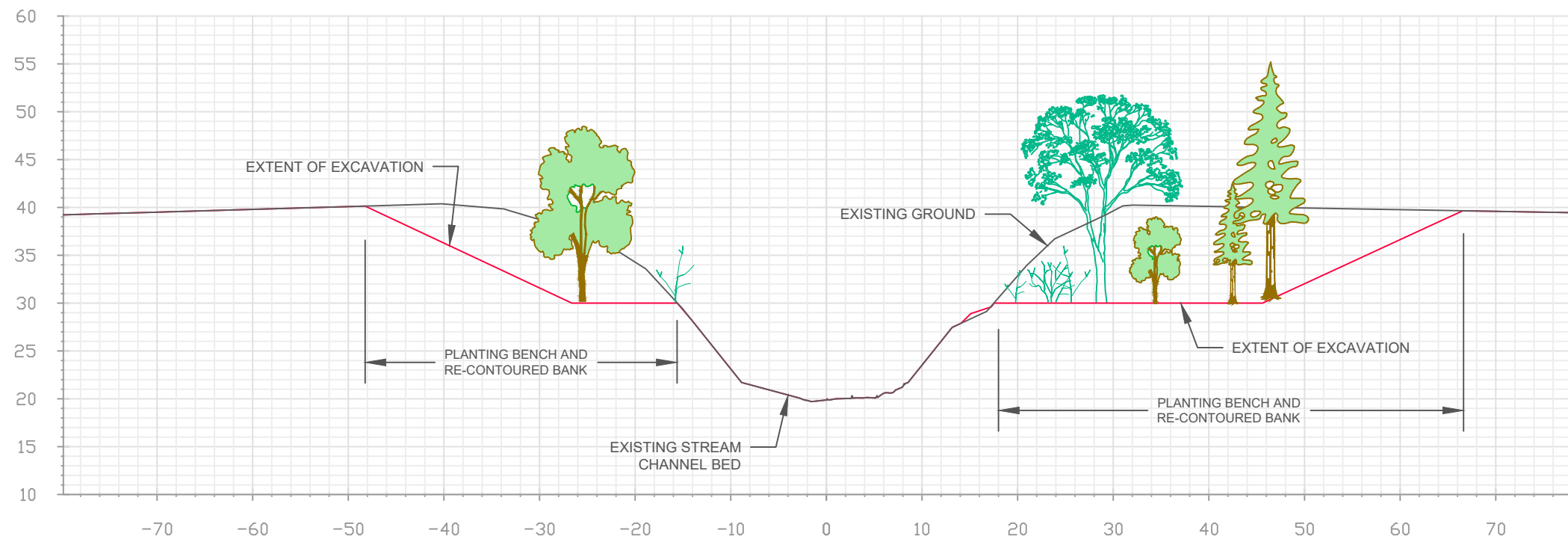
SHEET NO.

S-7

SHEET 16 of 45

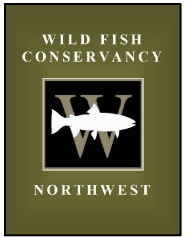


XS NO. 18: STA. 29+50



XS NO. 19: STA. 30+50

NOTE: INSTREAM LWD NOT SHOWN

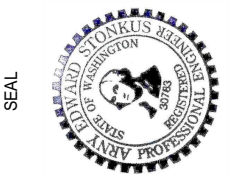


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



MAINSTEM CHERRY SECTIONS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 07-18-2025

DRAWN BY: S. KROPP
A. JORGENSEN

DESIGNED BY: A. STONKUS
S. KROPP

SCALE: AS SHOWN

JOB NO.:

SHEET NO.

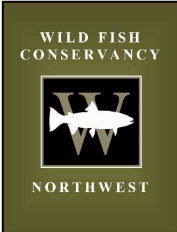
S-9

SHEET 18 of 45

LOWER CHERRY CREEK BRIDGE

DUVALL, WA

WILD FISH CONSERVANCY

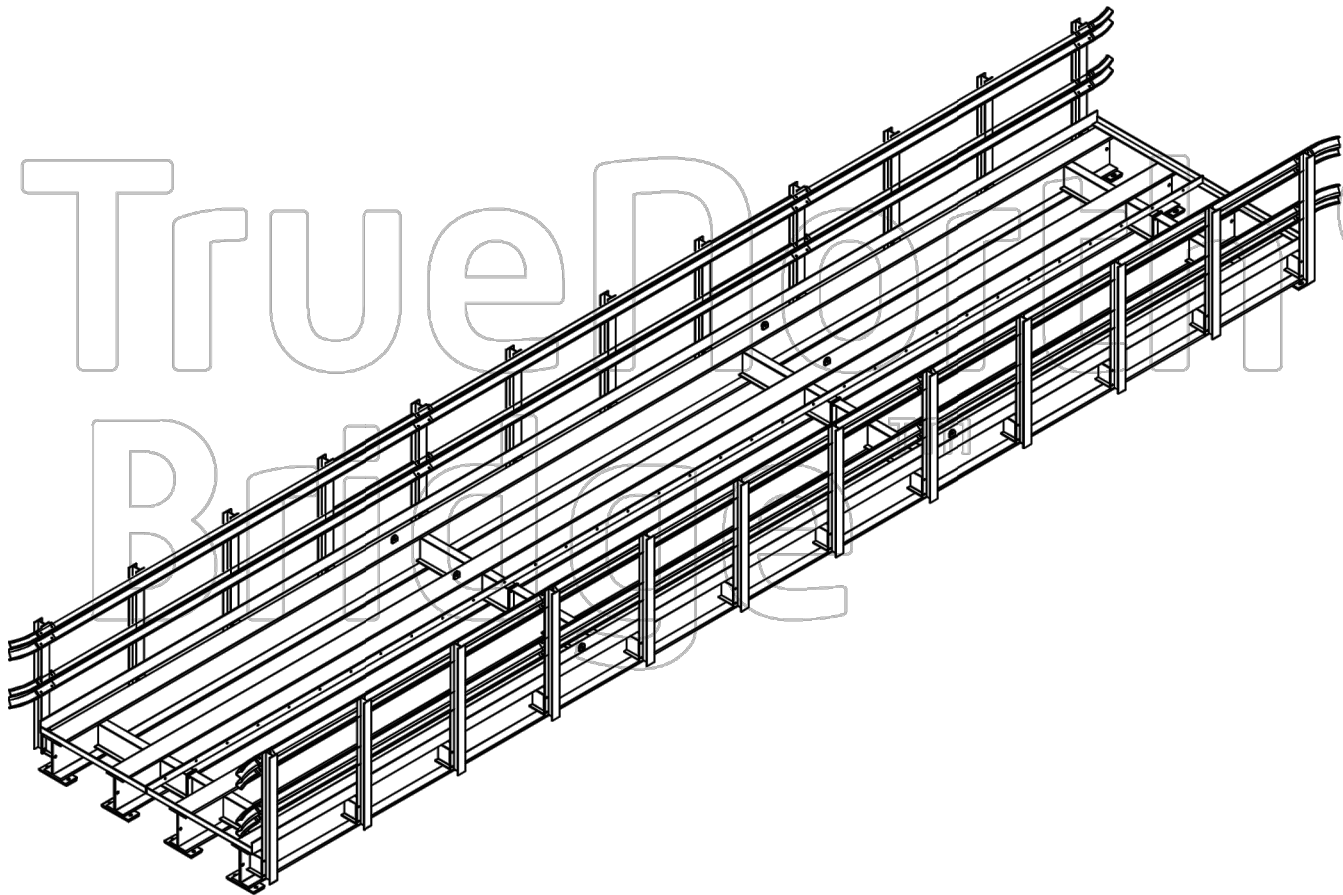


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

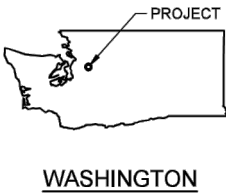
FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



SHEET INDEX

1	COVER SHEET
2	GENERAL NOTES
3	BRIDGE PLAN VIEW
4	BRIDGE SECTIONS & BEARING DETAILS
5	BRIDGE DETAILS
6	BRIDGE RAIL DETAILS
7	BILL OF MATERIAL



FOR SHOP USE ONLY

FINISH	OUTSIDE INSPECTION	DOT PROJECT	DOT SPECIFICATIONS	ANCHOR BOLTS INCLUDED	SUPERSILL w/ ANCHOR PLATE	BACKWALL	RAILS SHIPPED LOOSE	CVN	BOLT HOLES
WEATHERING	NO	NO	NO	NO	N/A	N/A	NO	NO	DRILLED OR THERMALLY CUT

S/N: 70MB14HL93 - BWFO67

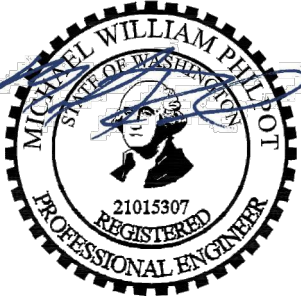
REV	DATE	DESCRIPTION	NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL	DESIGN BY: SM	CHECKED BY: MP	DRAWN BY: RH	JOB NUMBER:
A	04/07/23	SUBMITTED FOR APPROVAL	THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE			SCALE: AS NOTED	BWFO67
				PROJECT:	14'-0" x 70'-0"		DRAWING NO:
					LOWER CHERRY CREEK BRIDGE		1
					DUVALL, WA		
				CLIENT:	WILD FISH CONSERVANCY		

FARGO, ND
MISSOULA, MT
BILLINGS, MT
LUBBOCK, TX
TrueNorthSteel.com



FOR APPROVAL
ONLY

Please verify dimensions or details
as requested on these sheets. Any
unverified dimensions will be
assumed to be correct



BRIDGE
COVER SHEET

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 04-28-2025
DRAWN BY: TrueNorth Steel Bridge
DESIGNED BY: TrueNorth Steel Bridge
SCALE:
JOB NO.:
SHEET NO.

B-1
SHEET 19 of 45

GENERAL NOTES:

1. ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270 GRADE 50W (ASTM A709 / ASTM A588 WEATHERING STEEL), HSS STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A474 WEATHERING STEEL, UNLESS NOTED OTHERWISE.
2. LOW IMPACT GUIDERAIL DESIGN IN ACCORDANCE WITH OWNER REQUIREMENTS. LOW IMPACT GUIDERAIL HAS NOT BEEN CRASH TESTED PER AASHTO REQUIREMENTS. GUIDERAIL DOES NOT MEET AASHTO REQUIRMENTS.
3. STEEL DECKING SHALL BE 4.25" DEEP BY 12" LAY LENGTH "TYPE A" ROLLED FORMED OR PRESS BREAK FORMED GALVANIZED CORRUGATED STEEL CONFORMING TO ASTM A653 GRADE 50. STEEL DECKING SHALL BE INSTALLED PERPENDICULAR TO THE DIRECTION OF SUPPORTING GIRDERS. SEE BILL OF MATERIAL FOR STEEL GAUGE.
4. ALL STRUCTURAL STEEL CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS (ASTM A325X TYPE 3), AND NUTS (ASTM A563 GR DH3), CONFORMING TO AASHTO M 164. UNLESS NOTED OTHERWISE, TYPICAL CONNECTIONS ARE "SNUG TIGHT" BEARING CONNECTIONS. ALL DIAPHRAGM AND DECK SPLICE BOLTS SHALL BE FULLY PRETENSIONED PER THE REQUIREMENTS OF THE LATEST EDITION OF THE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS. METHOD FOR TENSIONING SHALL BE TURN OF NUT METHOD. ANCHOR STUDS SHALL CONFORM TO ASTM F1554 GR. 36.
5. CERTIFIED MILL TEST REPORTS SHALL BE FURNISHED FOR THE STEEL GIRDERS, STRUCTURAL STEEL PLATES AND SHAPES, STEEL BRIDGE DECKING, HIGH STRENGTH BOLTS, PLAIN ELASTOMERIC LEVELING PADS AND ANCHOR STUDS IF REQUIRED BY OWNER.
6. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.5 BRIDGE WELDING CODE. ALL ELECTRODES SHALL BE AS FOLLOWS:

a. FCAW - E81T WEATHERING

b. SMAW - E80XX L.H. WEATHERING.
7. ALL HSS WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 STRUCTURAL WELDING CODE - STEEL.
8. ALL WELDING OF STEEL DECK SHALL BE IN ACCORDANCE WITH AWS D1.3 STRUCTURAL WELDING CODE.

a. GMAW - E70C - XM

TOUCH UP WELDS WITH ZINC RICH PAINT, MEETING THE MATERIAL AND PERFORMANCE REQUIREMENTS OF ASTM A780.
9. INSPECTION AND TESTING REQUIREMENTS:

a. 100% VISUAL INSPECTION

b. NO MAGNETIC PARTICLE TESTING REQUIRED

c. NO ULTRASONIC TESTING REQUIRED

d. DECK INSPECTION; VISUALLY 100% OF ALL WELDS.
10. PLAIN ELASTOMERIC LEVELING PADS SHALL BE HARDNESS (SHORE A) 60 AND SHALL CONFORM TO AASHTO M 251 AND ASTM D4014. THESE ARE DESIGNED AS LEVELING PADS ONLY AND DO NOT CONFORM TO AASHTO.
11. EXTERIOR SURFACES SHALL BE CLEANED PER SSPC-SP1 PRIOR TO SHIPMENT TO ASSURE UNIFORM WEATHERING IN ACCORDANCE WITH OWNER REQUIREMENTS.
12. GUIDERAIL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 180 AND THESE PLANS. SEE BILL OF MATERIAL FOR GUIDERAIL GAUGE AND FINISH.
13. GEOTECHNICAL DESIGN BY OTHERS. ALL LOADING CAN BE FOUND ON THESE PLANS. TRUENORTH STEEL SUGGESTS A PROFESSIONAL GEOTECHNICAL CONSULTANT BE HIRED BY THE OWNER AND OR CONTRACTOR TO VERIFY THE SOIL CONDITIONS AND PROVIDE FILL MATERIAL AND COMPACTION. FILL BEHIND BACKWALL SHALL BE COMPETENT FREE DRAINING, NON FROST SUSCEPTIBLE MATERIAL FREE OF ORGANICS OR DEBRIS.
14. THE BOTTOM OF ALL FOOTINGS AND SLABS SHALL BEAR ON SOLID NATIVE, INORGANIC, UNDISTURBED SOIL OR APPROVED COMPACTED FILL. THE FOUNDATION TYPE AND DESIGN CRITERIA ARE BASED ON ASSUMED SOIL CONDITIONS AND PRESUMPTIVE VALUES FROM AASHTO TABLE C10.6.2.6.1-1. TRUENORTH STEEL SUGGESTS A PROFESSIONAL GEOTECHNICAL CONSULTANT BE HIRED BY THE OWNER AND OR CONTRACTOR TO VERIFY THESE ASSUMPTIONS. ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED TO BE 5000 PSF.
15. AS THE SPECIALTY STRUCTURAL ENGINEER (SSE) TRUENORTH STEEL HAS DESIGNED THE ELEMENTS CONTAINED IN THE INCLUDED STRUCTURAL STEEL SHOP DRAWINGS PER THE REQUIREMENTS OF THE LISTED DESIGN SPECIFICATIONS AS PROVIDED BY THE OWNER/ENGINEER OF RECORD (EOR). THE EOR, OWNER OR QUALIFIED OWNERS REPRESENTATIVE SHALL ESTABLISH CONSTRUCTION QUALITY ASSURANCE MEASURES IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION (AHJ) FOR THE PROJECT. THE EOR, OWNER OR QUALIFIED OWNERS REPRESENTATIVE SHALL OVERSEE IMPLEMENTATION AND DOCUMENTATION OF THESE MEASURES. IN THE ABSENCE OF AN AHJ SPECIFIED CONSTRUCTION SPECIFICATIONS DOCUMENT, THE LATEST EDITION OF AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS SHALL BE USED AS IN-FIELD QUALITY CONTROL GUIDANCE AS IT PERTAINS TO FOUNDATION PREPARATION AND STEEL ERECTIONS.
16. DO NOT APPLY DE-ICING SALTS OR CHEMICALS TO THE BRIDGE.
17. ALL STRUCTURAL STEEL SHALL BE MELTED AND MANUFACTURED IN THE UNITED STATES.

BRIDGE LOADING:

1. DEAD LOAD (DC): SELF WEIGHT OF THE BRIDGE AND CORRUGATED DECKING
2. WEARING SURFACE (DW): 80 PSF
3. LIVE LOAD: HL-93 (L/572)
4. PED LOAD: 120 PSF (L/569)
5. WIND LOAD: 44 PSF
6. SEISMIC LOAD:

PGA: 0.35

S_g: 0.80

S_s: 0.30

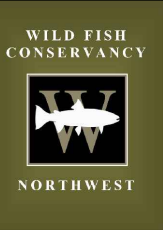
SITE CLASS: E

LATITUDE = 47.7656

LONGITUDE = -121.958

BRIDGE REACTIONS	EXTERIOR GIRDERS			INTERIOR GIRDERS		
	P (LBS)	H (LBS)	L (LBS)	P (LBS)	H (LBS)	L (LBS)
DEAD (DC)	10 kips			9 kips		
WEARING SURFACE (DW)	9 kips			12 kips		
LIVE LOAD (LL)*	23 kips			38 kips		
LANE LOAD (LL)	8 kips			14 kips		
PEDESTRIAN LOAD (PL)	13 kips			18 kips		
BRAKING FORCE (BR)			6 kips			6 kips
WIND LOADING (WS)	-2 kips	3 kips		-2 kips	3 kips	
THERMAL (TU)			5 kips			5 kips
EARTHQUAKE (EQ)		24 kips	48 kips		24 kips	48 kips

"P": LOADS ARE VERTICAL LOADS AT EACH GIRDER
"H": LOADS ARE TRANSVERSE LOADS AT EACH GIRDER
"L": LOADS ARE LONGITUDINAL AT EACH GIRDER
* DOES NOT INCLUDE IM.



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT

BRIDGE
GENERAL NOTES

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 04-28-2025

DRAWN BY: TrueNorth
Steel Bridge

DESIGNED BY: TrueNorth
Steel Bridge

SCALE:

JOB NO.:

SHEET NO.

B-2

SHEET 20 of 45

REV	DATE	DESCRIPTION	NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL	DESIGN BY: SM	CHECKED BY: MP	DRAWN BY: RH	JOB NUMBER:
A	04/07/23	SUBMITTED FOR APPROVAL	THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE			SCALE: AS NOTED	BWF087
				PROJECT: 14'-0" x 70'-0" LOWER CHERRY CREEK BRIDGE			DRAWING NO:
				DUVALL, WA			2
				CLIENT: WILD FISH CONSERVANCY			

FOR APPROVAL
ONLY

Please verify dimensions or details as requested on these sheets. Any unverified dimensions will be assumed to be correct

FARGO, ND

MISSOULA, MT

BILLINGS, MT

LUBBOCK, TX

TrueNorthSteel.com

TrueNorth Steel

Bridge

TrueNorth Steel

Bridge

MICHAEL WILLIAM PHILLIPS

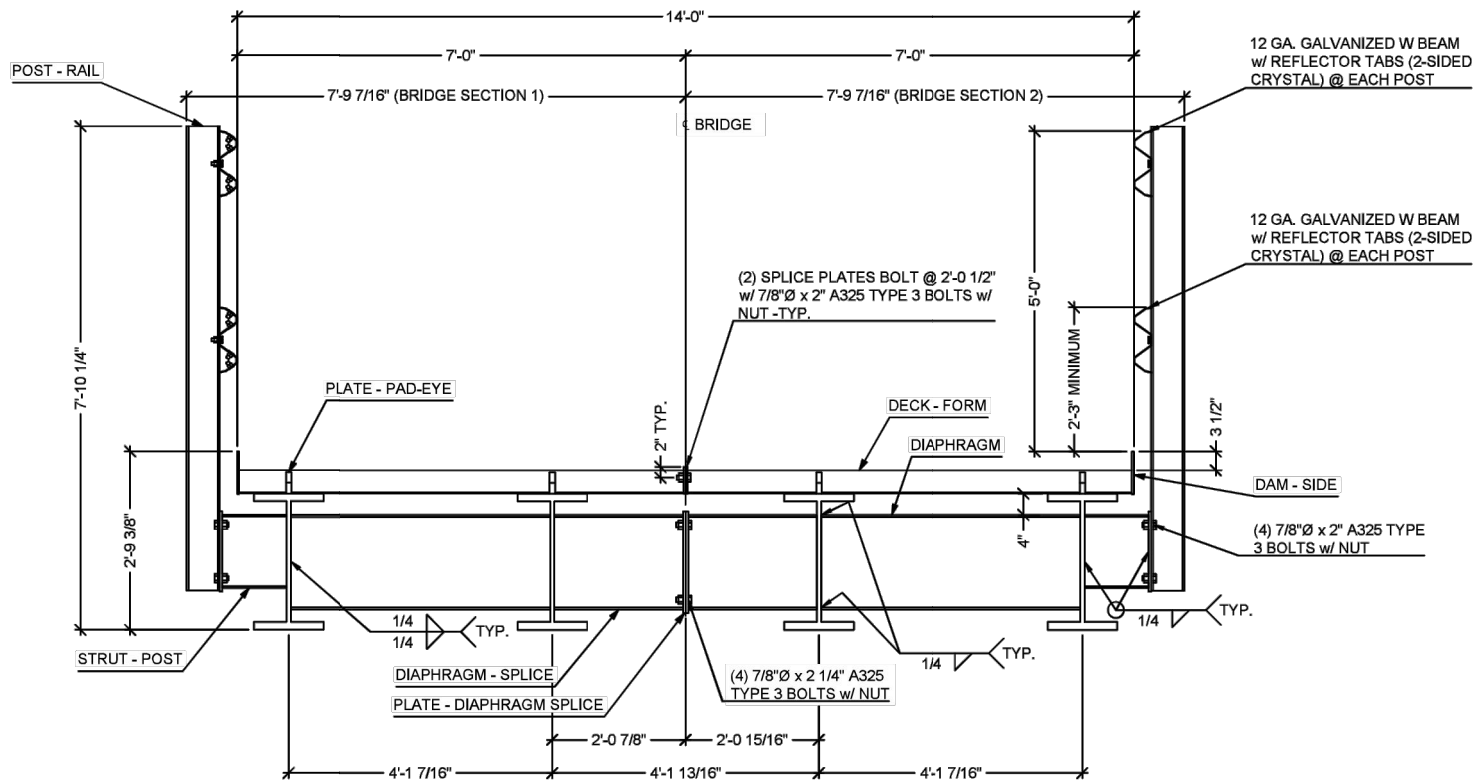
STATE OF WASHINGTON

21015307

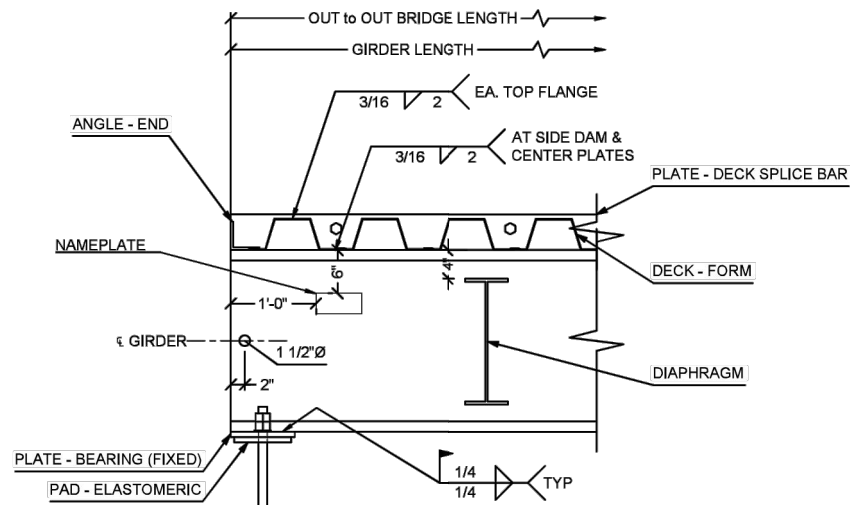
REGISTERED

PROFESSIONAL ENGINEER

04/07/2023

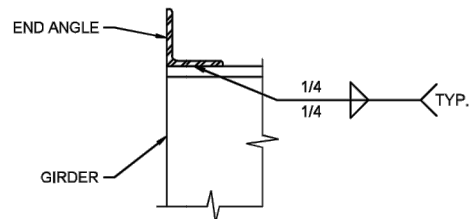


CROSS SECTION A
3

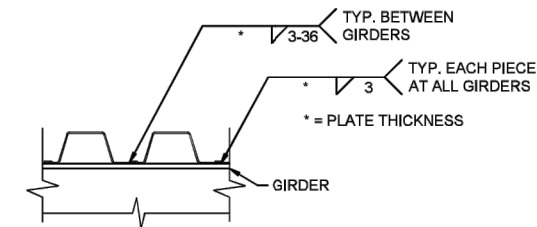


BEARING DETAIL 1

- NAMEPLATE NOTES:
1. PLACE NAMEPLATE AT TOP LEFT CORNER OF EACH OUTSIDE GIRDER OF OUTSIDE MODULES AND ON ONE GIRDER OF CENTER MODULES.
 2. PLACE NAMEPLATE AS CLOSE AS POSSIBLE TO DIMENSIONS SHOWN. VARY PLACEMENT AS NEEDED TO AVOID OBSTACLES.
 3. ATTACH NAMEPLATE WITH #6 x 1/2" STAINLESS STEEL U-DRIVE SCREWS.

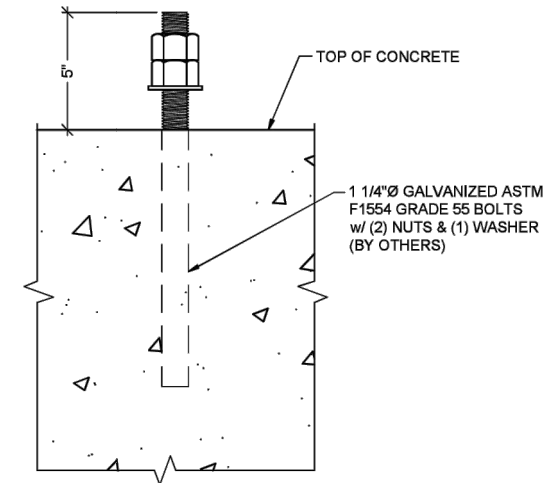


END ANGLE CONNECTION DETAIL 2

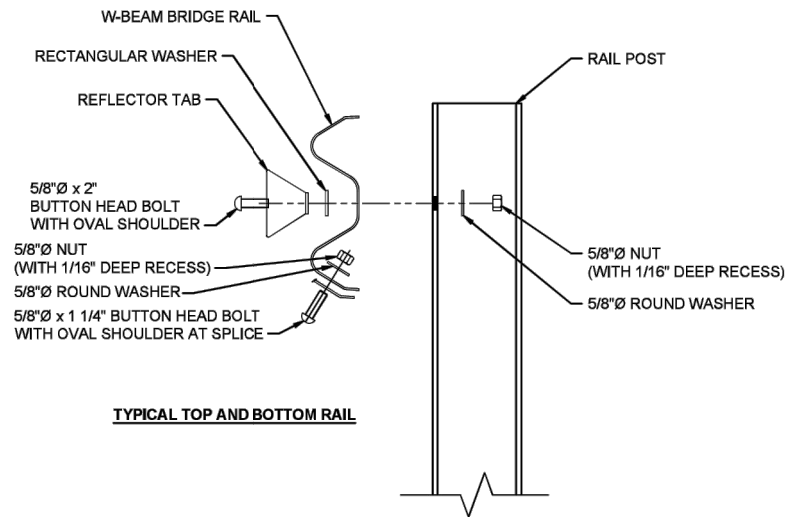


DECK TO GIRDER WELD 3

BRIDGE DIMENSIONS			
SECTION	LENGTH	WIDTH	HEIGHT
1	70'-0"	7'-9 7/16"	7'-10 1/4"
2	70'-0"	7'-9 7/16"	7'-10 1/4"

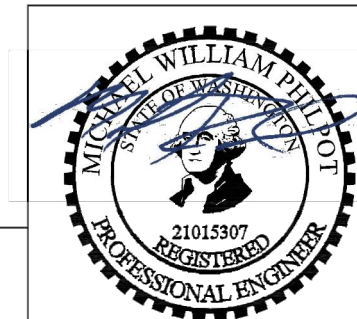


ANCHOR BOLT DETAIL 4



TYPICAL TOP AND BOTTOM RAIL

W-BEAM RAIL ATTACHMENT DETAIL 5

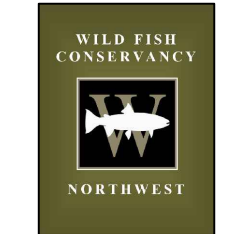


REV	DATE	DESCRIPTION	NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL
A	04/07/23	SUBMITTED FOR APPROVAL	THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE
			FARGO, ND MISSOULA, MT LUBBOCK, TX TrueNorthSteel.com

DESIGN BY: SM	CHECKED BY: MP	DRAWN BY: RH	JOB NUMBER:
PROJECT: 14'-0" x 70'-0" LOWER CHERRY CREEK BRIDGE DUVALL, WA CLIENT: WILD FISH CONSERVANCY		SCALE: AS NOTED	BWF087 DRAWING NO: 4

FOR APPROVAL ONLY

Please verify dimensions or details as requested on these sheets. Any unverified dimensions will be assumed to be correct.



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOOD23-0005

FLOOD
DEVELOPMENT
PERMIT

BRIDGE
SECTIONS & BEARING DETAILS
LOWER CHERRY CREEK RESTORATION
DUVALL, WA

DATE: 04-28-2025

DRAWN BY: TrueNorth
Steel Bridge

DESIGNED BY: TrueNorth
Steel Bridge

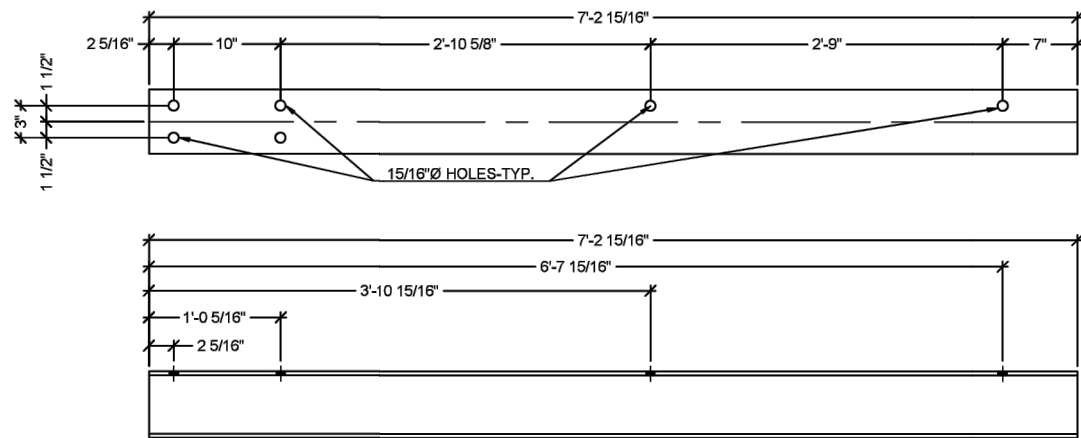
SCALE:

JOB NO.:

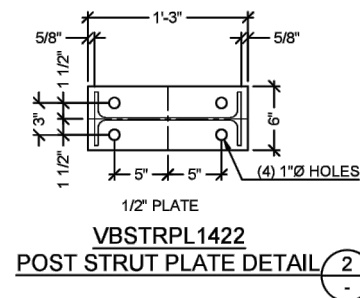
SHEET NO.

B-4

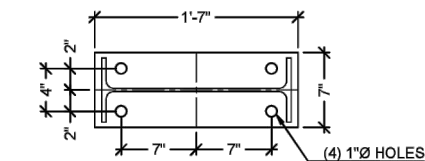
SHEET 22 of 45



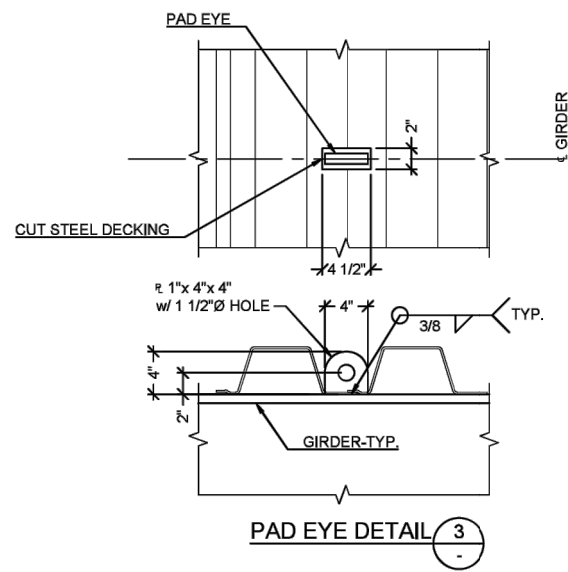
W6x20
b101 BRIDGE RAIL POST DETAIL 1



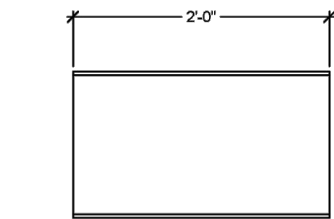
1/2" PLATE
VBSTRPL1422
POST STRUT PLATE DETAIL 2



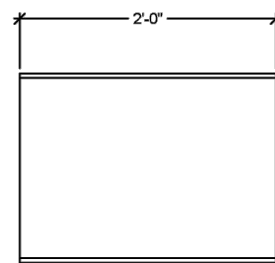
1/2" PLATE
VBDIAPL1835
DIAPHRAGM SPLICE PLATE DETAIL 4



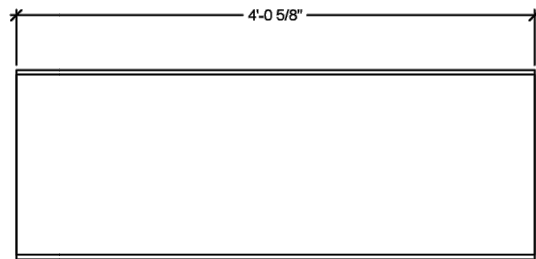
PAD EYE DETAIL 3



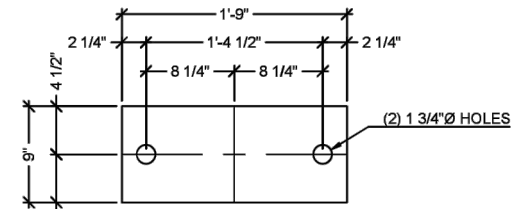
W14x22
VBW142220 POST STRUT DETAIL 5



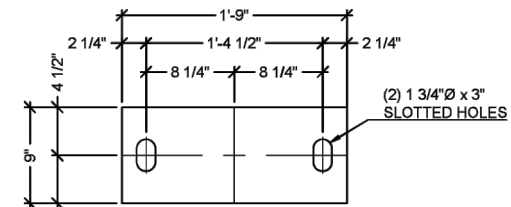
W18x35
VBW183520 SPLICE DIAPHRAGM DETAIL 6



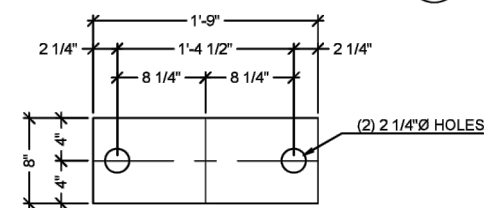
W18x35
DIAPHRAGM DETAIL 7



3/4" PLATE
VB34919SP
FIXED BEARING PLATE DETAIL 8



3/4" PLATE
VB34919SPE
EXPANSION BEARING PLATE DETAIL 9



3/4" PAD
VBEP34819
ELASTOMERIC PAD DETAIL 10

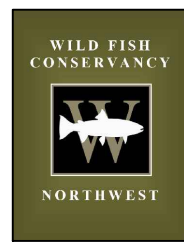
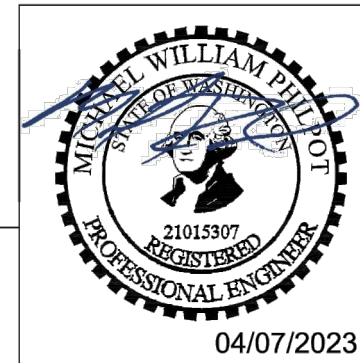
REV	DATE	DESCRIPTION	NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL
A	04/07/23	SUBMITTED FOR APPROVAL	THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE.
			FARGO, ND
			MISSOULA, MT
			LUBBOCK, TX
			TrueNorthSteel.com



DESIGN BY: SM	CHECKED BY: MP	DRAWN BY: RH	JOB NUMBER:
			BWF087
PROJECT:	14'-0" x 70'-0"	SCALE: AS NOTED	DRAWING NO:
	LOWER CHERRY CREEK BRIDGE		5
CLIENT:	DUVALL, WA		
	WILD FISH CONSERVANCY		

FOR APPROVAL ONLY

Please verify dimensions or details as requested on these sheets. Any unverified dimensions will be assumed to be correct.



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:
FLOOD23-0005
FLOOD
DEVELOPMENT
PERMIT

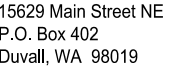
BRIDGE
DETAILS

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 04-28-2025
DRAWN BY: TrueNorth Steel Bridge
DESIGNED BY: TrueNorth Steel Bridge
SCALE:
JOB NO.:
SHEET NO.

B-5



DLS FLOOD PERMIT
NUMBER:
FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT

BRIDGE
RAIL DETAILS

DATE: 04-28-2025	
DRAWN BY:	TrueNorth Steel Bridge
DESIGNED BY:	TrueNorth Steel Bridge

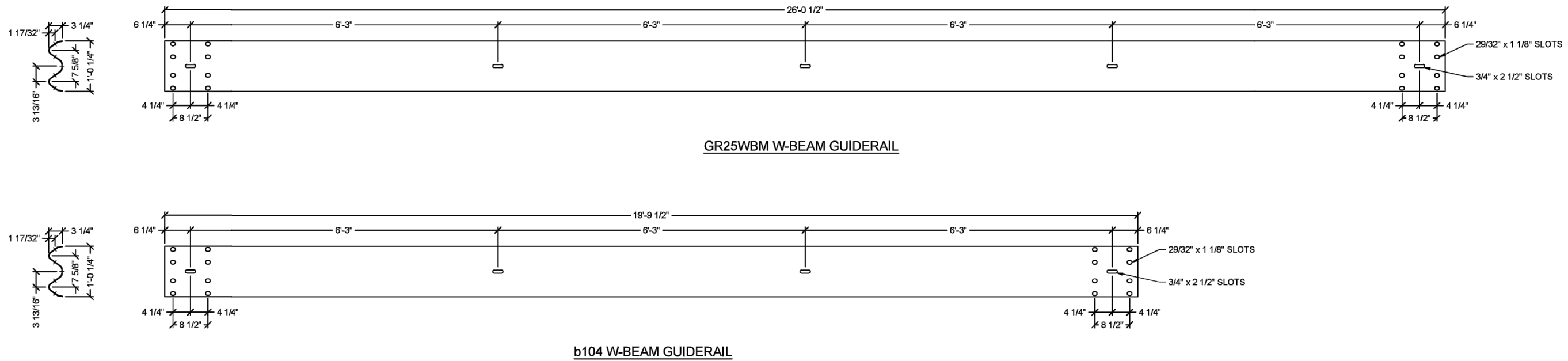
SCALE: _____

JOB NO. : _____

SHEET NO.

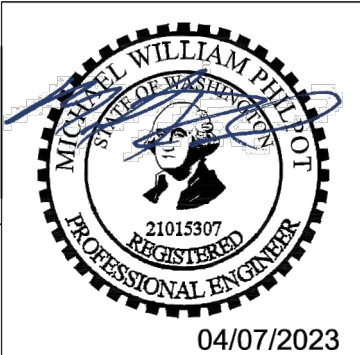
B-6

SHEET 24 of 45



REV	DATE	DESCRIPTION	NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL		DESIGN BY: SM	CHECKED BY: MP	DRAWN BY: RH	JOB NUMBER:
A	04/07/23	SUBMITTED FOR APPROVAL	THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE.				SCALE: AS NOTED	BWF067
			FARGO, ND MISSOULA, MT BILLINGS, MT LUBBOCK, TX TrueNorthSteel.com		 		PROJECT: 14'-0" x 70'-0" LOWER CHERRY CREEK BRIDGE DUVALL, WA CLIENT: WILD FISH CONSERVANCY	
							DRAWING NO: 6	

FOR APPROVAL ONLY	Please verify dimensions or details as requested on these sheets. Any unverified dimensions will be assumed to be correct
-------------------------------------	--



Quantity	Mark	Material	Description	Length (inch)	Coating Grade	Part weight pound	Total weight pound
4	BPE FIELD INSTALL			SP1			
4	VB34919SPE	PL 3/4"x9"x1'-9"	PLATE - BEARING (EXP)	1'-9"	A709-50W	40.22	160.89
						TOTAL	160.89
4	BPF FIELD INSTALL			SP1			
4	VB34919SP	PL 3/4"x9"x1'-9"	PLATE - BEARING (FIXED)	1'-9"	A709-50W	40.22	160.89
						TOTAL	160.89
1	BS1			SP1			
4	VBW183520	W18x35	DIAPHRAGM - SPLICE	2'-0"	A709-50W	70.03	280.12
12	VBSTRPL1422	PL 1/2"x6"x1'-3"	PLATE - POST STRUT	1'-3"	A709-50W	12.77	153.23
4	VBPADEYE144	PL 1"x4"x0'-4"	PLATE - PAD-EYE	0'-4"	A709-50W	4.05	16.21
4	VBDIAPL1835	PL 1/2"x7"x1'-7"	PLATE - DIAPHRAGM SPLICE	1'-7"	A709-50W	18.87	75.48
1	p104	PL 3/8"x8"x70'-0"	DAM - SIDE	70'-0"	A709-50W	715.05	715.05
1	p103	PL 3/8"x5"x70'-0"	PLATE - DECK SPLICE BAR	70'-0"	A709-50W	446.91	446.91
4	GRENFL	12 GA W-BEAM RAIL	RAIL - GALVANIZED FLARED END	2'-7 1/2"	A653 GALV	18.49	73.94
4	GR25WBM	12 GA W-BEAM RAIL	RAIL - GALVANIZED W BEAM	26'-0 1/2"	A653 GALV	183.43	733.71
68	BD1261114	4 1/4 12 Ga.	DECK - FORM	6'-11 1/4"	A653 GALV	46.28	3,147.13
2	b106	W24x192	GIRDER	70'-0"	A709-50W	13,447.15	26,894.29
2	b105	L4X4X3/8	ANGLE - END	6'-11 1/4"	A709-50W	68.02	136.05
2	b104	12 GA W-BEAM RAIL	RAIL - GALVANIZED W BEAM	19'-9 1/2"	A653 GALV	139.40	278.81
4	b103	W18x35	DIAPHRAGM	4'-0 5/8"	A709-50W	141.91	567.62
12	b101	W6x20	POST - RAIL	7'-2 15/16"	A709-50W	144.94	1,739.26
12	b100	W14x22	STRUT - POST	1'-0"	A709-50W	22.01	264.09
						TOTAL	35,521.89
1	BS2			SP1			
4	VBW183520	W18x35	DIAPHRAGM - SPLICE	2'-0"	A709-50W	70.03	280.12
12	VBSTRPL1422	PL 1/2"x6"x1'-3"	PLATE - POST STRUT	1'-3"	A709-50W	12.77	153.23
4	VBPADEYE144	PL 1"x4"x0'-4"	PLATE - PAD-EYE	0'-4"	A709-50W	4.05	16.21
4	VBDIAPL1835	PL 1/2"x7"x1'-7"	PLATE - DIAPHRAGM SPLICE	1'-7"	A709-50W	18.87	75.48
1	p104	PL 3/8"x8"x70'-0"	DAM - SIDE	70'-0"	A709-50W	715.05	715.05
1	p103	PL 3/8"x5"x70'-0"	PLATE - DECK SPLICE BAR	70'-0"	A709-50W	446.91	446.91
4	GRENFL	12 GA W-BEAM RAIL	RAIL - GALVANIZED FLARED END	2'-7 1/2"	A653 GALV	18.49	73.94
4	GR25WBM	12 GA W-BEAM RAIL	RAIL - GALVANIZED W BEAM	26'-0 1/2"	A653 GALV	183.43	733.71
68	BD1261114	4 1/4 12 Ga.	DECK - FORM	6'-11 1/4"	A653 GALV	46.28	3,147.13
2	b106	W24x192	GIRDER	70'-0"	A709-50W	13,447.15	26,894.29
2	b105	L4X4X3/8	ANGLE - END	6'-11 1/4"	A709-50W	68.02	136.05
2	b104	12 GA W-BEAM RAIL	RAIL - GALVANIZED W BEAM	19'-9 1/2"	A653 GALV	139.40	278.81
4	b103	W18x35	DIAPHRAGM	4'-0 5/8"	A709-50W	141.91	567.62
12	b101	W6x20	POST - RAIL	7'-2 15/16"	A709-50W	144.94	1,739.26
12	b100	W14x22	STRUT - POST	1'-0"	A709-50W	22.01	264.09
						TOTAL	35,521.89
8	EBP FIELD INSTALL						
8	VBEP3419	PL 3/4"x8"x1'-9"	PAD - ELASTOMERIC	1'-9"	60 DUROMETER	7.32	58.59
						TOTAL	58.59
			TOTAL WEIGHT:			71,424.14	pound

List produced by AUTODESK Advance Steel

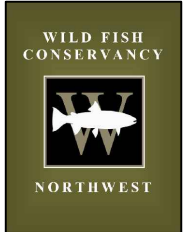
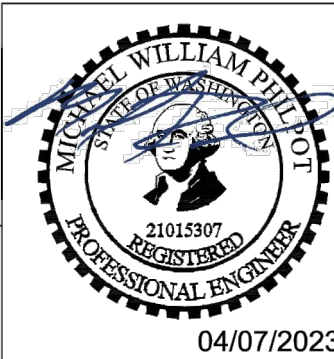
Quantity	Material	Grade	Coating	Length (inch)	Part weight pound	Total weight pound
96	A325 7/8 x 2	A325 TYPE 3	WEATHERING	0'-2"	0.86	82.74
96	A563 NUT 7/8	A563 DH3	WEATHERING		0.30	28.38
48	5/8 BUTTON HEAD BOLT	A307 GALV	GALVANIZED	0'-2"	0.40	19.05
128	5/8 BUTTON HEAD BOLT	A307 GALV	GALVANIZED	0'-1 1/4"	0.35	45.12
176	5/8 NUT	A563 DH GALV	GALVANIZED		0.66	116.38
176	5/8" FLAT STEEL WASHER	F844 GALV	GALVANIZED		0.01	1.54
48	REFLECTOR TAB	CRYSTAL TAB	GALVANIZED		0.34	16.23
48	5/8 RECTANGULAR WASHER	A36 GALV	GALVANIZED		0.22	10.59
			TOTAL WEIGHT		320.03	pound

List produced by AUTODESK Advance Steel

Quantity	Material	Grade	Coating	Length (inch)	Part weight pound	Total weight pound
16	A325 7/8 x 2 1/4	A325 TYPE 3	WEATHERING	0'-2 1/4"	0.90	14.46
34	A325 7/8 x 2	A325 TYPE 3	WEATHERING	0'-2"	0.86	29.30
50	A563 NUT 7/8	A563 DH3	WEATHERING		0.30	14.78
			TOTAL WEIGHT		58.54	pound

List produced by AUTODESK Advance Steel

REV	DATE	DESCRIPTION	NO BACK CHARGES ACCEPTED WITHOUT WRITTEN APPROVAL	DESIGN BY: SM	CHECKED BY: MP	DRAWN BY: RH	JOB NUMBER:
A	04/07/23	SUBMITTED FOR APPROVAL	THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE			SCALE: AS NOTED	BWF067
				PROJECT:	14'-0" x 70'-0" LOWER CHERRY CREEK BRIDGE DUVALL, WA		DRAWING NO: 7
				CLIENT:	WILD FISH CONSERVANCY		



15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOOD23-0005

FLOOD
DEVELOPMENT
PERMIT

BRIDGE
BILL OF MATERIAL

LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 04-28-2025

DRAWN BY: TrueNorth Steel Bridge

DESIGNED BY: TrueNorth Steel Bridge

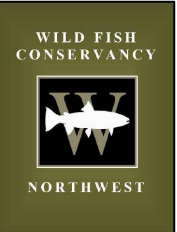
SCALE:

JOB NO.:

SHEET NO.

B-7

SHEET 25 of 45

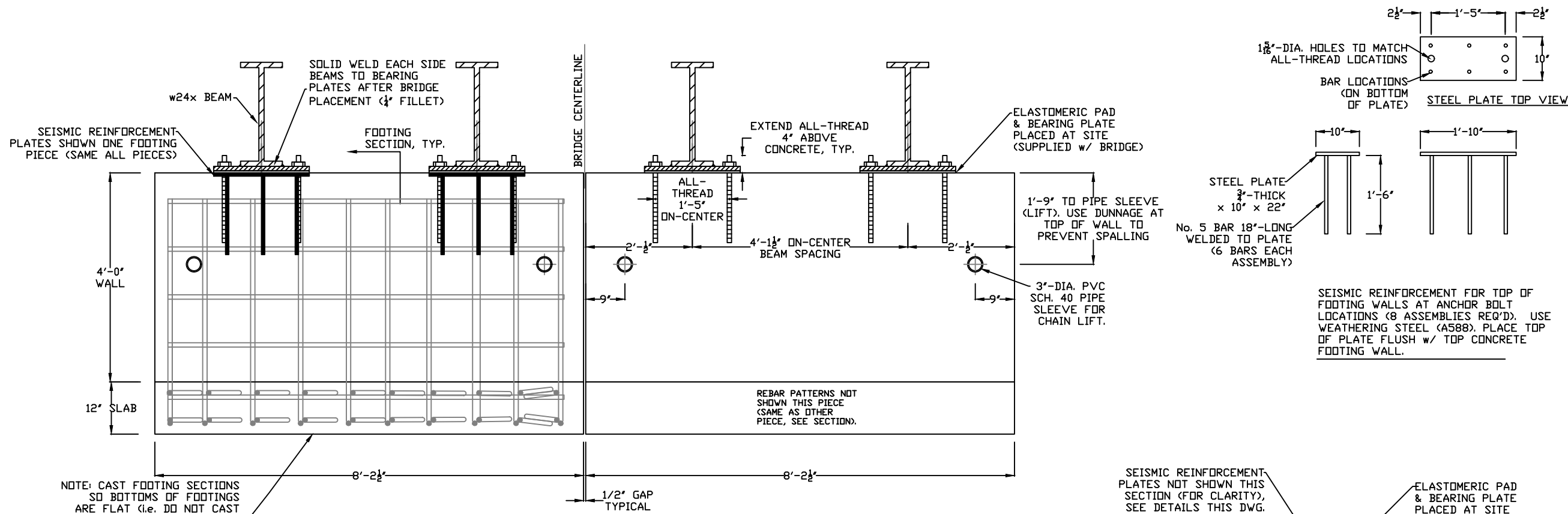


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

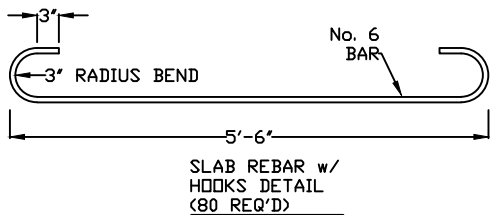
DLS FLOOD PERMIT
NUMBER:
FLOD23-0005
FLOOD
DEVELOPMENT
PERMIT

BRIDGE FOOTINGS
LOWER CHERRY CREEK RESTORATION
DUVALL, WA

DATE: 04-28-2025
DRAWN BY: P. TAPPEL
DESIGNED BY: P. TAPPEL
SCALE:
JOB NO.:
SHEET NO.



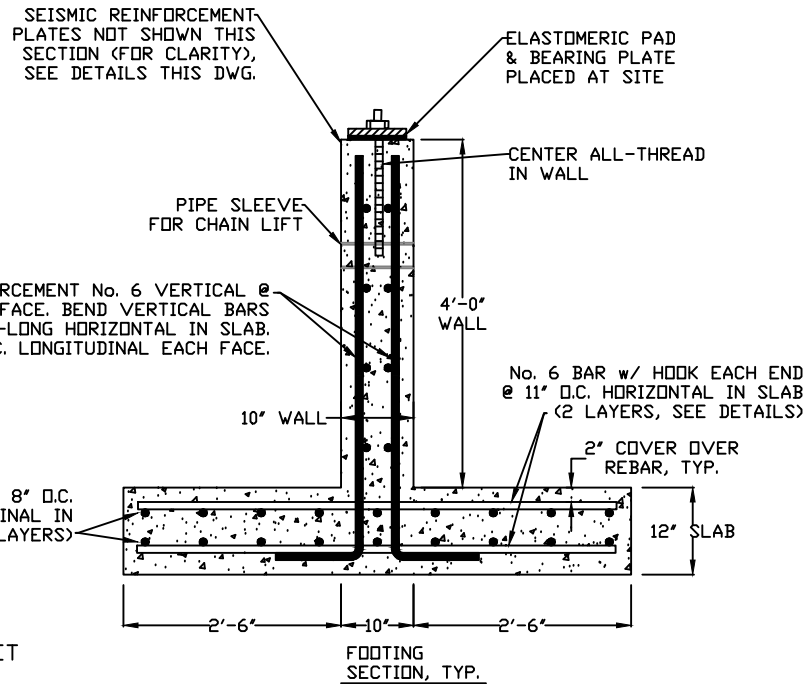
FOOTING FRONT VIEW
NOTE: FOUR PRE-CAST CONCRETE FOOTING PIECES REQUIRED (TWO SHOWN THIS VIEW).



WALL REINFORCEMENT No. 6 VERTICAL @ 11" O.C. EACH FACE. BEND VERTICAL BARS 90° TO IMBED 12"-LONG HORIZONTAL IN SLAB.
No. 4 BAR @ 11" O.C. LONGITUDINAL EACH FACE.

No. 4 BAR @ 8" O.C. LONGITUDINAL IN SLAB (2 LAYERS)

0 1 2 4 FEET
SCALE: 1/2" = 1'0"

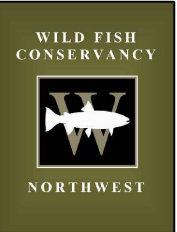


LOWER CHERRY CREEK RESTORATION
WILD FISH CONSERVANCY
PRE-CAST CONCRETE FOOTINGS
DRAWING 1

PRE-CAST CONCRETE NOTES & SPECIFICATIONS:

1. PRE-CAST CONCRETE SUPPLIER MAY DESIGN AND INSTALL ALTERNATE LIFT SYSTEM FOR FOOTING PIECES, INSTEAD OF 3"-DIA. HOLES THROUGH FOOTING WALLS. THESE POSSIBLE CHANGES SHALL BE COORDINATED WITH ENGINEER (APPROVAL REQUIRED), AND ALL LIFTING HARDWARE (e.g. CLUTCHES) SHALL BE LOANED TO GENERAL CONTRACTOR FOR THE ON-SITE WORK.
2. CONCRETE - CLASS 4000A, WSDOT SPEC. 6-02. REINFORCEMENT - GRADE 60 DEFORMED STEEL BARS, WSDOT SPEC. 9-07. THESE CONCRETE REQUIREMENTS APPLY TO FOOTINGS AND BACKWALLS.
3. ANCHORS FOR BEARING PLATES = 1.25"-DIA. x 20"-LONG STAINLESS STEEL (ALLOY 316) ALL-THREAD. IMBED 16" IN CONCRETE, 4"-LENGTH THREADS (+/-) EXPOSED, SUPPLY STAINLESS STEEL NUT AND FLAT WASHER EACH ALL-THREAD. 16 ANCHOR ASSEMBLIES REQUIRED.
4. PRE-CAST CONCRETE SUPPLIER TO SUPPLY FOUR PRE-CAST CONCRETE FOOTING PIECES ON-SITE w/ ANCHOR ASSEMBLIES & HARDWARE. BRIDGE SUPPLIER TO SUPPLY BEARING PLATES AND ELASTOMERIC PADS. PRE-CAST CONCRETE SUPPLIER ALSO TO SUPPLY FOUR BACKWALL PIECES ON-SITE.
5. ON-SITE GENERAL CONTRACTOR TO LIFT PRE-CAST FOOTING PIECES OFF TRUCK AND PLACE ON PEA GRAVEL SUBGRADE. FIELD WELD STEEL BEAMS TO EACH BEARING PLATE. PRE-CAST CONCRETE BACKWALLS ALSO REST ON TOP OF PEA GRAVEL BEDDING (SEPARATE FROM FOOTINGS).
6. FOOTING PIECES = 12,500 LB. EACH (APPROX.).

NOTE: BRIDGE SUPERSTRUCTURE DESIGN HAS BEEN REVIEWED BY THE ENGINEER. THIS DRAWING SHALL BE USED FOR PRE-CAST CONCRETE CONSTRUCTION.



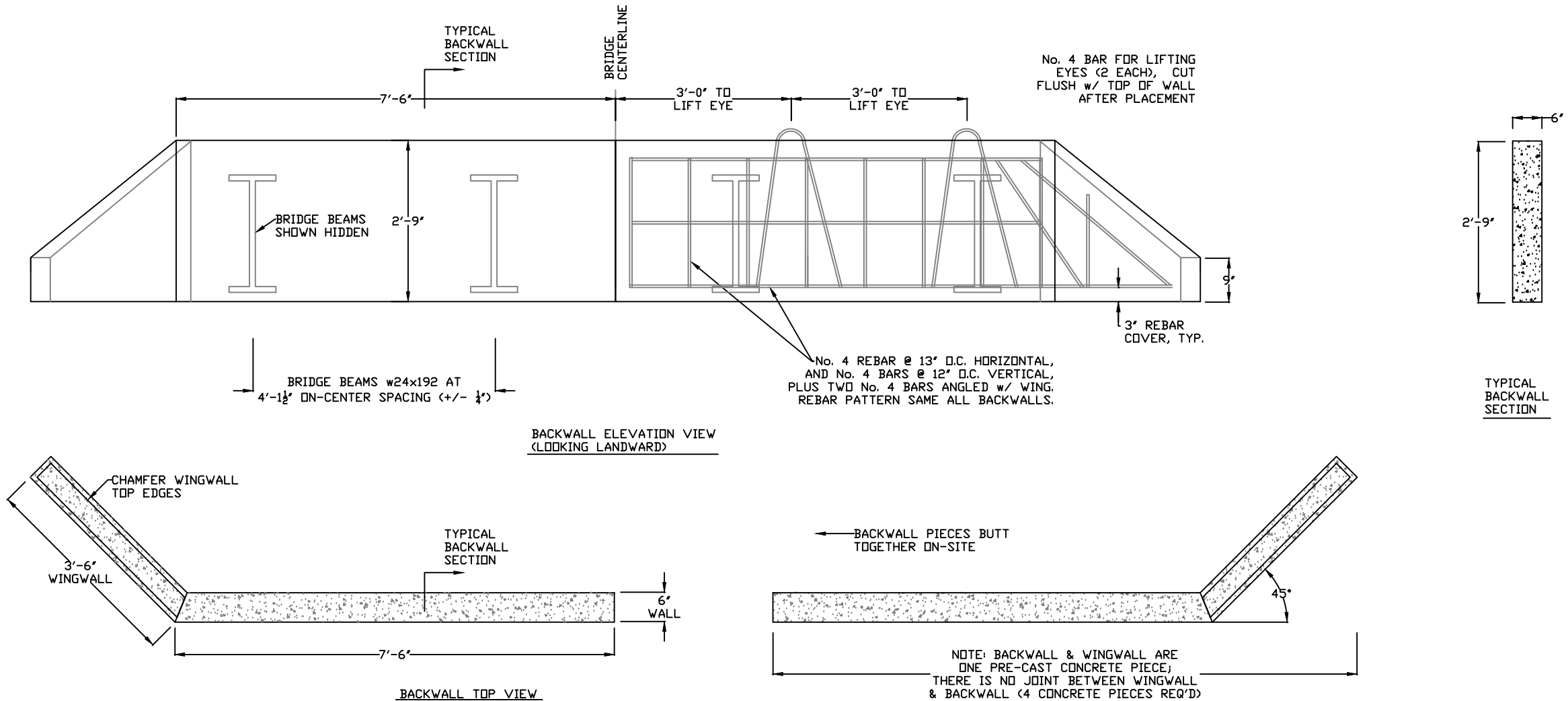
15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:
FLOD23-0005
FLOOD
DEVELOPMENT
PERMIT

BRIDGE BACKWALLS
LOWER CHERRY CREEK RESTORATION
DUVALL, WA

DATE: 04-28-2025
DRAWN BY: P. TAPPEL
DESIGNED BY: P. TAPPEL
SCALE:
JOB NO.:
SHEET NO.

B-9
SHEET 27 of 45

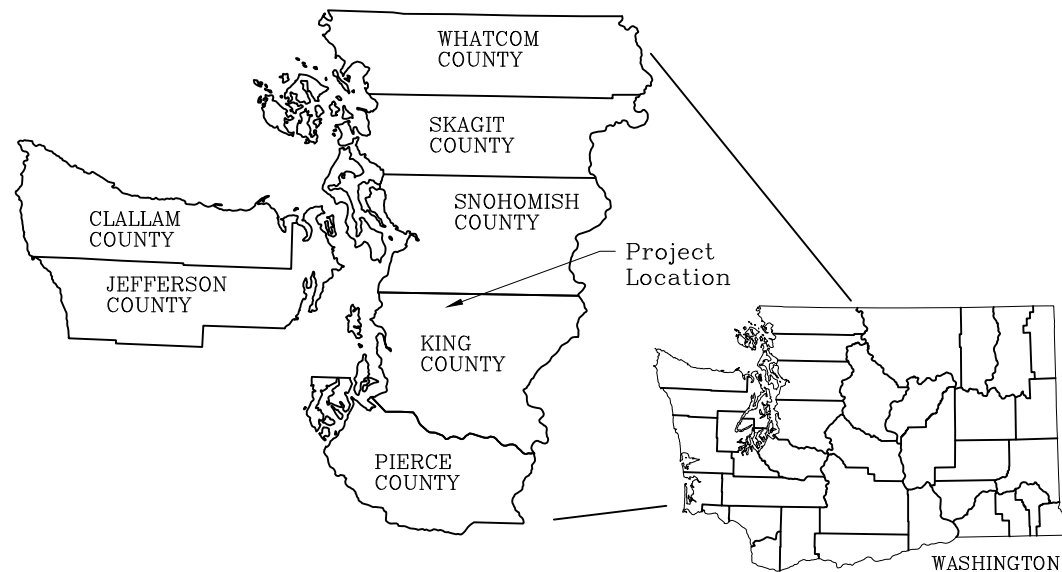


PRE-CAST CONCRETE BACKWALL NOTES:

1. TWO PAIRS REQ'D AS SHOWN. EACH OF TWO PIECES (FOR EACH PAIR) ARE OPPOSITE HAND.
2. CHAMFER TOP AND END EDGES 1" ON OUTSIDE LENGTHS EACH WINGWALL SECTION.
3. CUT OFF REBAR LIFT LOOPS FLUSH w/ TOP OF BACKWALL AFTER PLACEMENT.
4. EACH BACKWALL & WINGWALL SIDE TO BE CAST AS ONE PIECE; THERE IS NO JOINT BETWEEN BACKWALL & WINGWALL.
5. TWO BACKWALL PIECES HAVE SMALL BLOCKOUTS FOR BURIED UTILITY. CAST AS SHOWN THIS DRAWING (AS IF BOTH BLOCKOUTS ON ONE END BRIDGE), BUT ON-SITE BLOCKOUTS WILL BE PLACED ON OPPOSITE ENDS OF THE BRIDGE FOR CONDUIT PASSAGE ALONG ONE BRIDGE BEAM.

NOTE: BRIDGE SUPERSTRUCTURE HAS BEEN REVIEWED BY THE ENGINEER, AND BRIDGE DESIGN HAS BEEN INCORPORATED INTO THIS DRAWING. THIS DRAWING SHALL BE USED FOR PRE-CAST CONCRETE CONSTRUCTION.





DRAINAGE DISTRICT #7

KING COUNTY, WASHINGTON
19228 DUVAL-MONROE RD NE,
28702 NE CHERRY VALLEY RD
DUVALL, WA 98019

CHERRY CREEK LEVEE

PREPARED BY
KING CONSERVATION DISTRICT

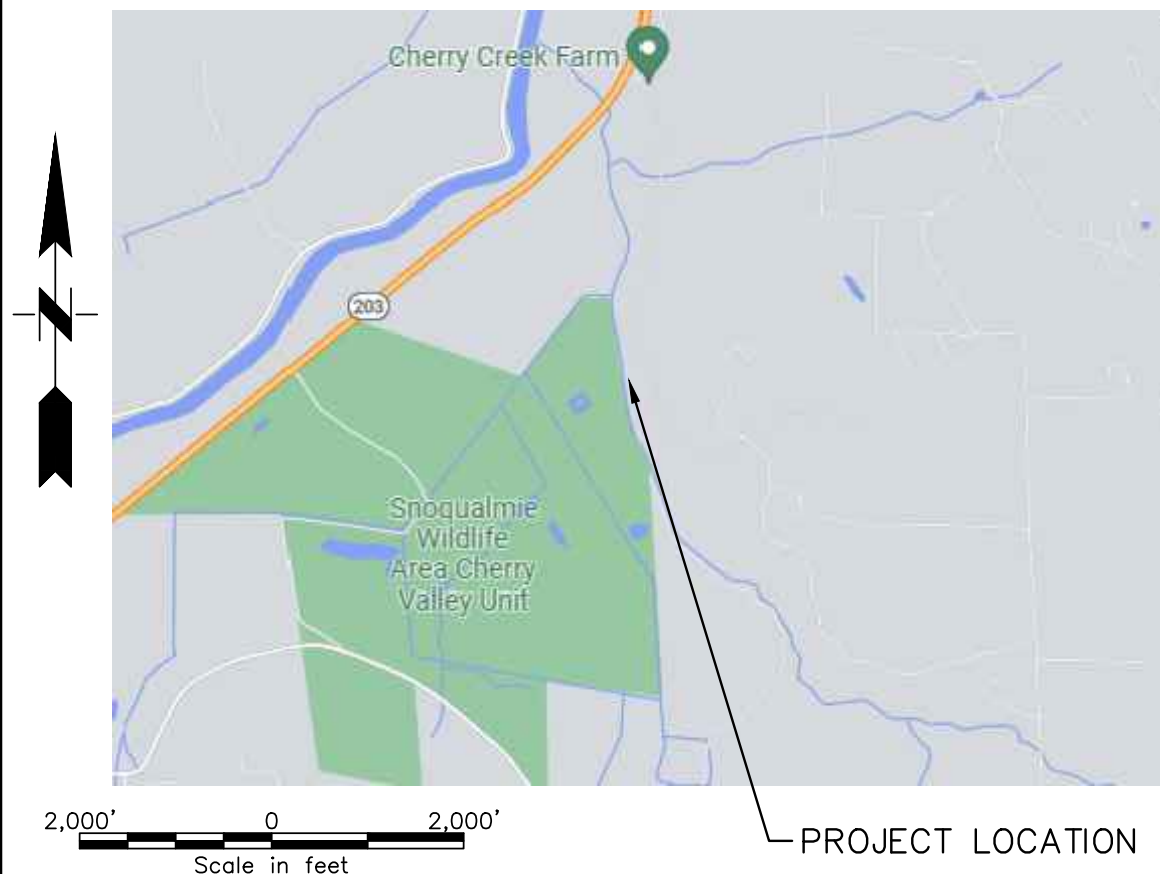


6/10/2026



DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

LOCATION MAP



INDEX OF DRAWINGS

SHEET NO.	TITLE
L-1	COVER PAGE
L-2	SITE PLAN
L-3	HAUL/MOBILIZATION ROUTES
L-4	NORTH LEVEE - STA 0+00 - 5+00
L-5	NORTH LEVEE - STA 5+00 - 10+00
L-6	NORTH LEVEE - STA 10+00 - 15+00
L-7	NORTH LEVEE - STA 15+00 - 18+06
L-8	SOUTH LEVEE - STA 19+29 - 25+00
L-9	SOUTH LEVEE - STA 25+00 - 30+00
L-10	SOUTH LEVEE - STA 30+00 - 35+00
L-11	SOUTH LEVEE - STA 35+00 - 40+00
L-12	SOUTH LEVEE - STA 40+00 - 45+00
L-13	SOUTH LEVEE - STA 45+00 - 50+00
L-14	SOUTH LEVEE - STA 50+00 - 55+00
L-15	SOUTH LEVEE - STA 55+00 - 60+00
L-16	TEMPORARY BRIDGE DETAIL

GENERAL NOTES

1. THE ATTACHED NRCS CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE PART OF THIS PLAN AND SHALL GOVERN THE INSTALLATION OF THIS PROJECT.
2. THIS PROJECT SHALL BE CONSTRUCTED TO THE LINES AND GRADES AS SHOWN IN THE DRAWINGS AND DETAILED IN THE CONSTRUCTION SPECIFICATIONS.
3. THE PROJECT WILL BE OPERATED AND MAINTAINED AS DESCRIBED IN THE OPERATION AND MAINTENANCE PLAN THAT IS ATTACHED TO THIS PLAN.

CONDITIONS AND TERMS

1. KING CONSERVATION DISTRICT/NRCS DOES NOT ASSUME ANY RESPONSIBILITY IN THE DETERMINATION, APPLICATION AND/OR SECURING OF ANY NECESSARY PERMITS FOR THE CONSTRUCTION AND OPERATION OF THIS PROJECT. ALL PERMITS ARE THE RESPONSIBILITY OF THE OWNER, OPERATOR AND/OR CONTRACTOR.
2. THE DRAWINGS, SPECIFICATIONS, AND OPERATION AND MAINTENANCE PLANS FOR THIS PROJECT ARE SUBJECT TO REVISION AND/OR CANCELLATION BY KING CONSERVATION DISTRICT/NRCS ONE YEAR AFTER THE DATE SHOWN BELOW IN THE REVIEW AND ACCEPTANCE.

REVIEW AND ACCEPTANCE OF PLANS

THE DRAWINGS, SPECIFICATIONS, AND OPERATIONS AND MAINTENANCE PLANS FOR THIS PROJECT HAVE BEEN REVIEWED BY ME AND ARE ACCEPTED FOR INSTALLATION. I ALSO ACKNOWLEDGE THAT ANY MODIFICATION PRIOR TO REVIEW BY THE KCD/NRCS BEFORE IMPLEMENTATION MAY RESULT IN KCD/NRCS DISAPPROVAL OF THIS INSTALLATION. I HEREBY ACKNOWLEDGE RECEIPT OF A COPY(IES) OF THIS PLAN.

LOCATION OF UTILITIES

KING CONSERVATION DISTRICT/NRCS DOES NOT MAKE ANY REPRESENTATION TO THE EXISTENCE OR NON-EXISTENCE OF ANY PUBLIC AND/OR PRIVATE BURIED OR OVERHEAD UTILITIES. WHERE UTILITIES ARE SHOWN ON THE DRAWING, THEIR LOCATION, DEPTH AND/OR HEIGHT ARE APPROXIMATE. THE EXACT LOCATION, DEPTH AND/OR HEIGHT SHALL BE DETERMINED BY THE RESPONSIBLE UTILITY. ANY CONSTRUCTION AND/OR O&M ACTIVITIES WITHIN THE UTILITY EASEMENT SHALL BE IN COMPLIANCE WITH THE UTILITIES REQUIREMENTS. CALL UTILITY AT 1(800) 424-5555 AT LEAST TWO BUSINESS DAYS BEFORE EXCAVATING, AS REQUIRED BY WASHINGTON STATE LAW.

REVISION BLOCK

APPROVED BY

DATE

COOPERATOR

DATE

COOPERATOR

DATE

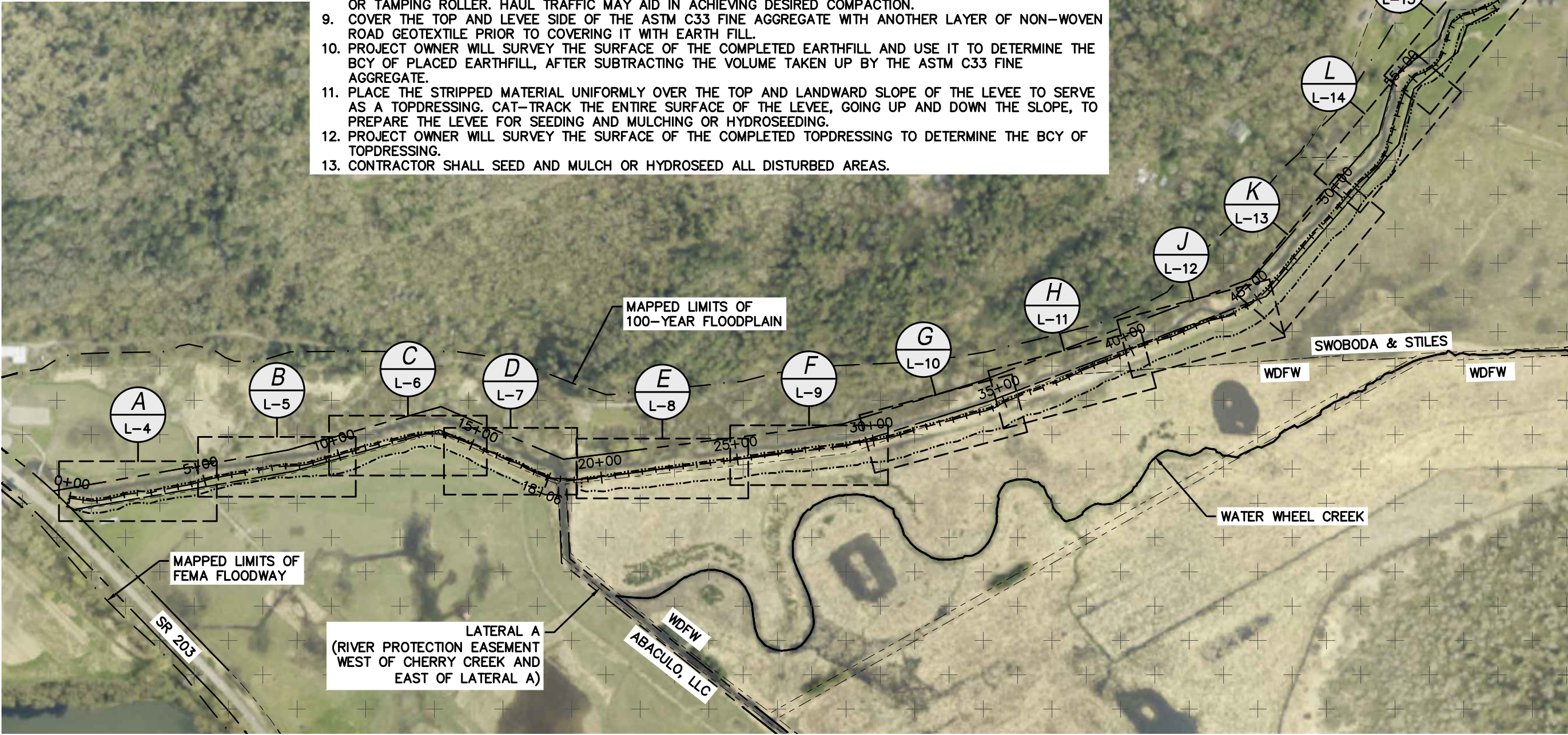
DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
COVER PAGE
KING CONSERVATION DISTRICT

SHEET NO.

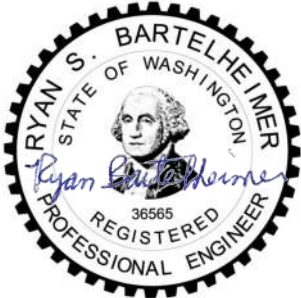
L-1

SHEET 28 of 45

LEGEND	
LEVEE EASEMENT	---
AREA OF WORK	-----
FEMA 100-YEAR FLOODPLAIN	+++++
LAND OWNERSHIP BOUNDARIES	----
AERIAL PHOTO	2025



- SEQUENCING:**
1. CONTRACTOR WILL INSTALL THE TEMPORARY BRIDGE OVER LATERAL A AT THEIR CONVENIENCE AND INSTALL THE NEEDED ACCESS ROAD IMPROVEMENTS FOR ABOUT 550 FEET IN THE VICINITY OF THE BRIDGE.
 2. THE EXISTING BRIDGES ON WDFW PROPERTY CAN BE USED TO MOBILIZE EQUIPMENT. IF EQUIPMENT WILL EXCEED 10 TONS, CONTRACTOR SHALL MAKE PROVISIONS TO AVOID OVERLOADING THE 10-TON RATED BRIDGE OVER LATERAL A.
 3. CONTRACTOR WILL MOW THE ENTIRE LEVEE, INCLUDING THE TOP, LANDWARD SLOPE, AND AREA ADJACENT TO THE TOE WHERE GRADING IS PROPOSED. LEVEE WORK SHALL START AT 19+29 AND PROCEED TO 60+13, THEN FROM STATION 18+06 TO 0+00, SUBJECT TO AVAILABLE BUDGET AND MATERIAL AVAILABILITY.
 4. PROJECT OWNER WILL RE-SURVEY EXISTING CONDITIONS.
 5. CONTRACTOR WILL PERFORM STRIPPING FROM STATION 19+29 TO AT LEAST 40+00, STOCKPILING THE STRIPPED MATERIAL IN A WINDROW OUTSIDE OF THE PROPOSED LEVEE FOOTPRINT.
 6. PROJECT OWNER WILL SURVEY THE SURFACE WHERE STRIPPING WAS COMPLETED TO DETERMINE THE STRIPPING QUANTITY.
 7. CONTRACTOR WILL PLACE 15-FOOT-WIDE NON-WOVEN ROAD GEOTEXTILE THEN PLACE 12 INCHES OF ASTM C33 FINE AGGREGATE ON TOP TO SERVE INITIALLY AS A DRIVING SURFACE FROM STATION 20+00 TO 40+00. THIS DRAINAGE LAYER IS NOT PROPOSED OUTSIDE OF THESE LIMITS.
 8. CONTRACTOR WILL BEGIN HAULING EARTH FILL, MOISTURE CONDITIONING IT TO +/- 3% OF OPTIMUM MOISTURE, THEN COMPACTING IT WITH LOOSE LIFTS NOT EXCEEDING 8 INCHES THICK USING A SHEEPSFOOT OR TAMPING ROLLER. HAUL TRAFFIC MAY AID IN ACHIEVING DESIRED COMPACTION.
 9. COVER THE TOP AND LEVEE SIDE OF THE ASTM C33 FINE AGGREGATE WITH ANOTHER LAYER OF NON-WOVEN ROAD GEOTEXTILE PRIOR TO COVERING IT WITH EARTH FILL.
 10. PROJECT OWNER WILL SURVEY THE SURFACE OF THE COMPLETED EARTHFILL AND USE IT TO DETERMINE THE BCY OF PLACED EARTHFILL, AFTER SUBTRACTING THE VOLUME TAKEN UP BY THE ASTM C33 FINE AGGREGATE.
 11. PLACE THE STRIPPED MATERIAL UNIFORMLY OVER THE TOP AND LANDWARD SLOPE OF THE LEVEE TO SERVE AS A TOPDRESSING. CAT-TRACK THE ENTIRE SURFACE OF THE LEVEE, GOING UP AND DOWN THE SLOPE, TO PREPARE THE LEVEE FOR SEEDING AND MULCHING OR HYDROSEEDING.
 12. PROJECT OWNER WILL SURVEY THE SURFACE OF THE COMPLETED TOPDRESSING TO DETERMINE THE BCY OF TOPDRESSING.
 13. CONTRACTOR SHALL SEED AND MULCH OR HYDROSEED ALL DISTURBED AREAS.



6/10/2026

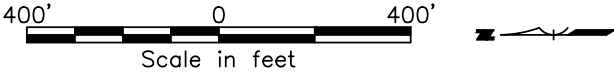


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SITE PLAN
KING CONSERVATION DISTRICT

SITE PLAN

SCALE: 1" = 400'



SHEET NO.

L-2

SHEET 29 of 45

NOTES:
WDFW WILDLIFE UNIT RESTRICTS ACCESS
THROUGH ITS PROPERTY DURING PHEASANT
AND WATERFOWL HUNTING SEASONS.

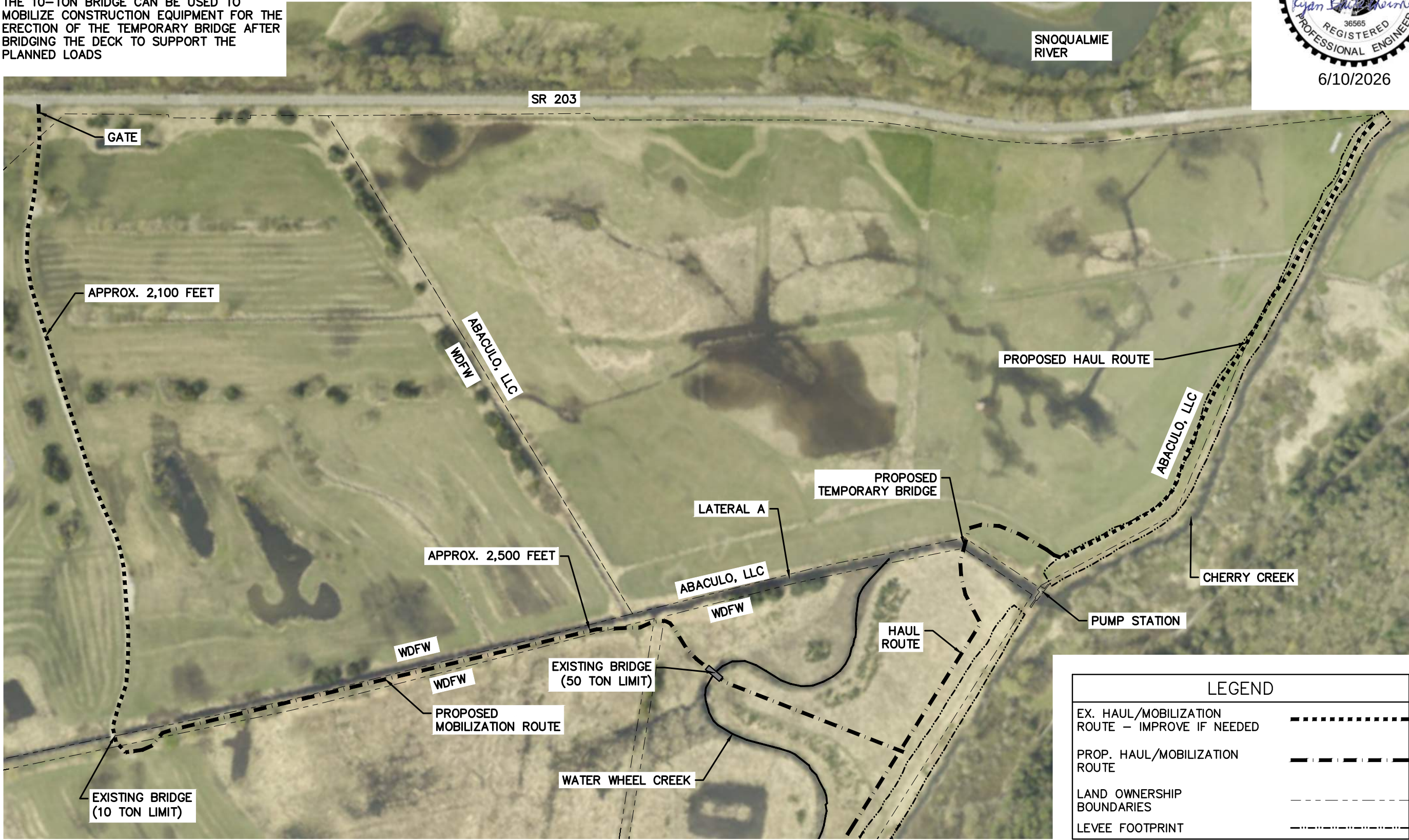
THE 10-TON BRIDGE CAN BE USED TO
MOBILIZE CONSTRUCTION EQUIPMENT FOR THE
ERECTION OF THE TEMPORARY BRIDGE AFTER
BRIDGING THE DECK TO SUPPORT THE
PLANNED LOADS



6/10/2026

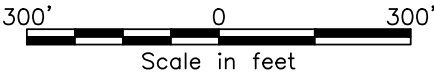


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	



HAUL/MOBILIZATION ROUTES

SCALE: 1" = 300'



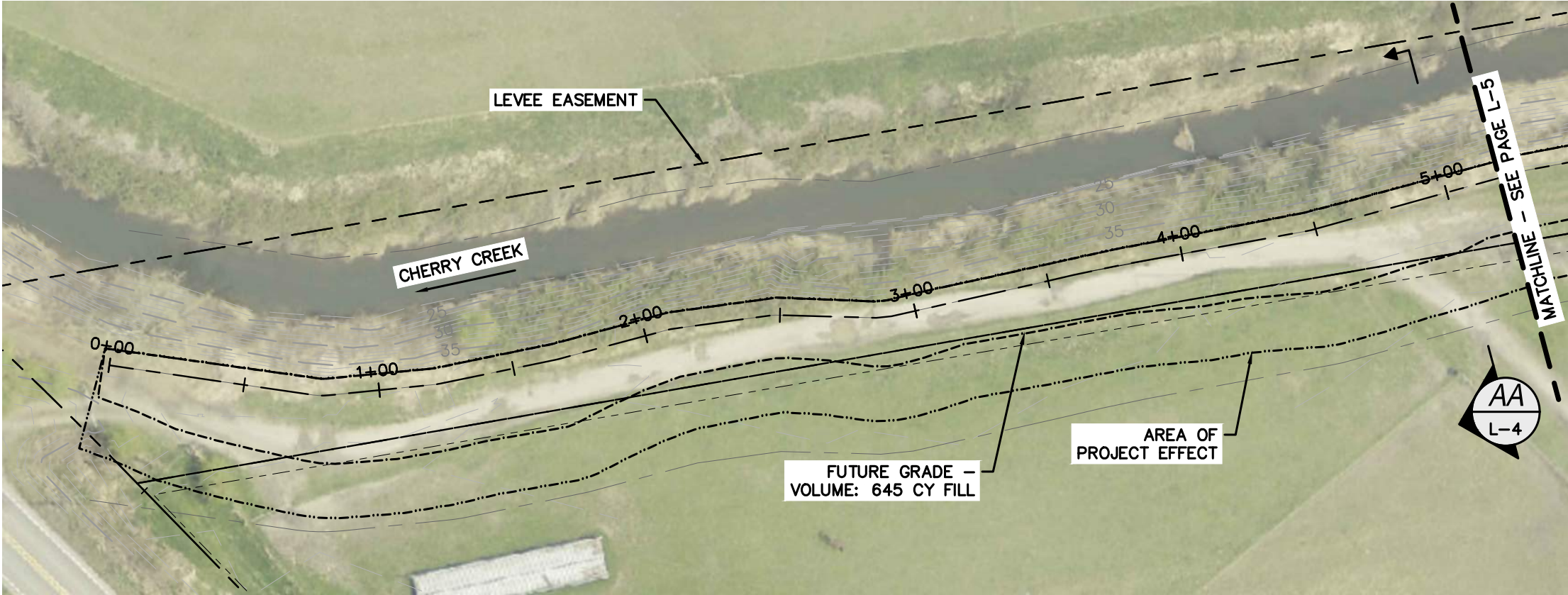
DRAINAGE DISTRICT #7 – CHERRY CREEK LEVEE
HAUL/MOBILIZATION ROUTES

KING CONSERVATION
DISTRICT

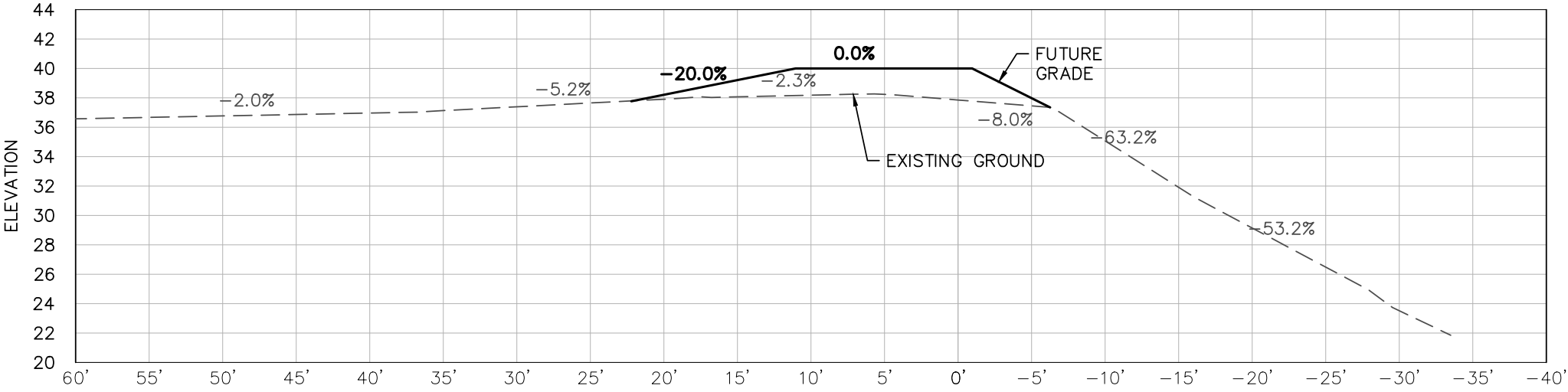
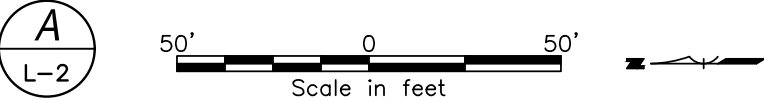
SHEET NO.

L-3

SHEET 30 of 45



DETAIL VIEW - NORTH STA 0+00 - 5+00
SCALE: 1" = 50'



SECTION VIEW - NORTH STA 0+00 - 5+00
SCALE: 1" = 10'



6/10/2026

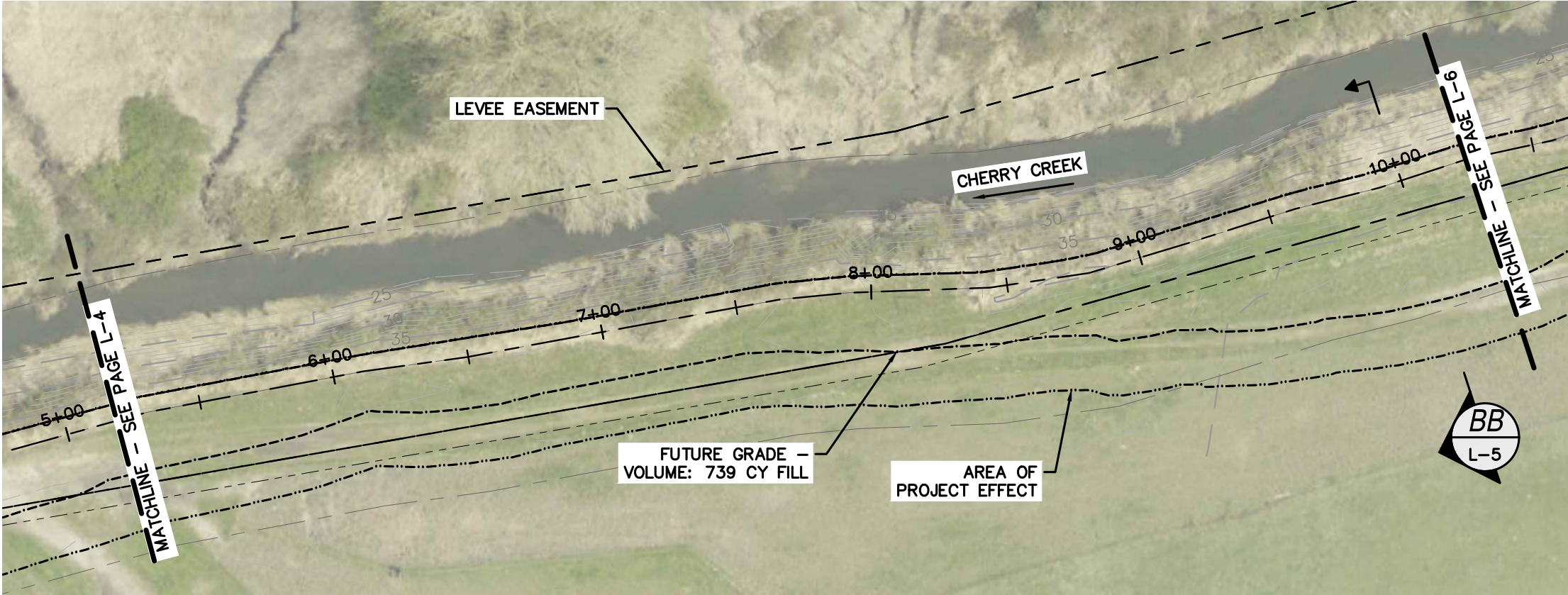


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

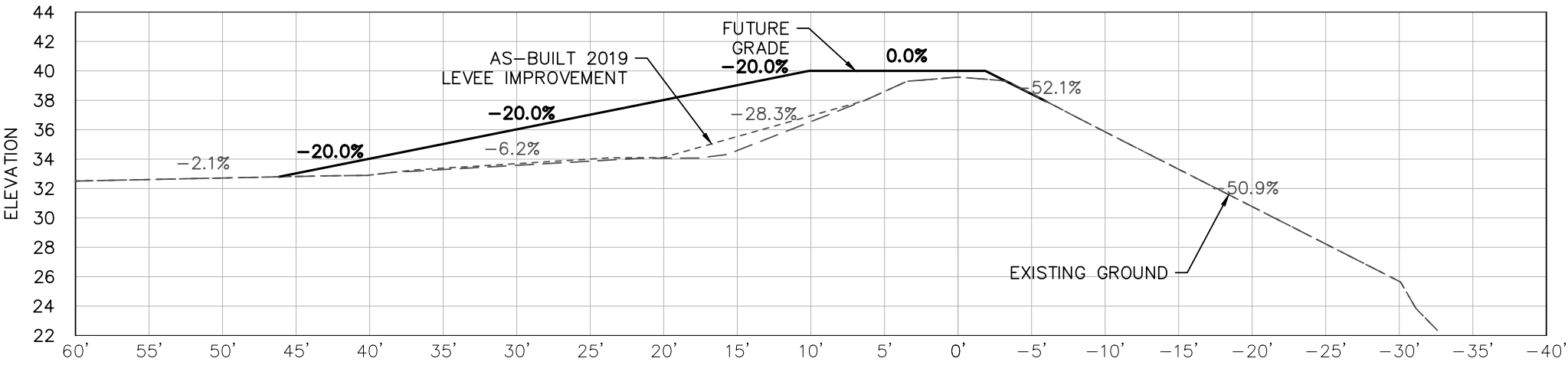
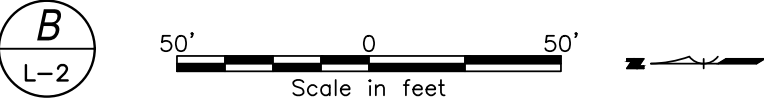
DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
NORTH LEVEE - STA 0+00 - 5+00
KING CONSERVATION DISTRICT

SHEET NO.
L-4

SHEET 31 of 45



DETAIL VIEW - NORTH STA 5+00 - 10+00
SCALE: 1" = 50'



SECTION VIEW - NORTH STA 5+00 - 10+00
SCALE: 1" = 10'



6/10/2026

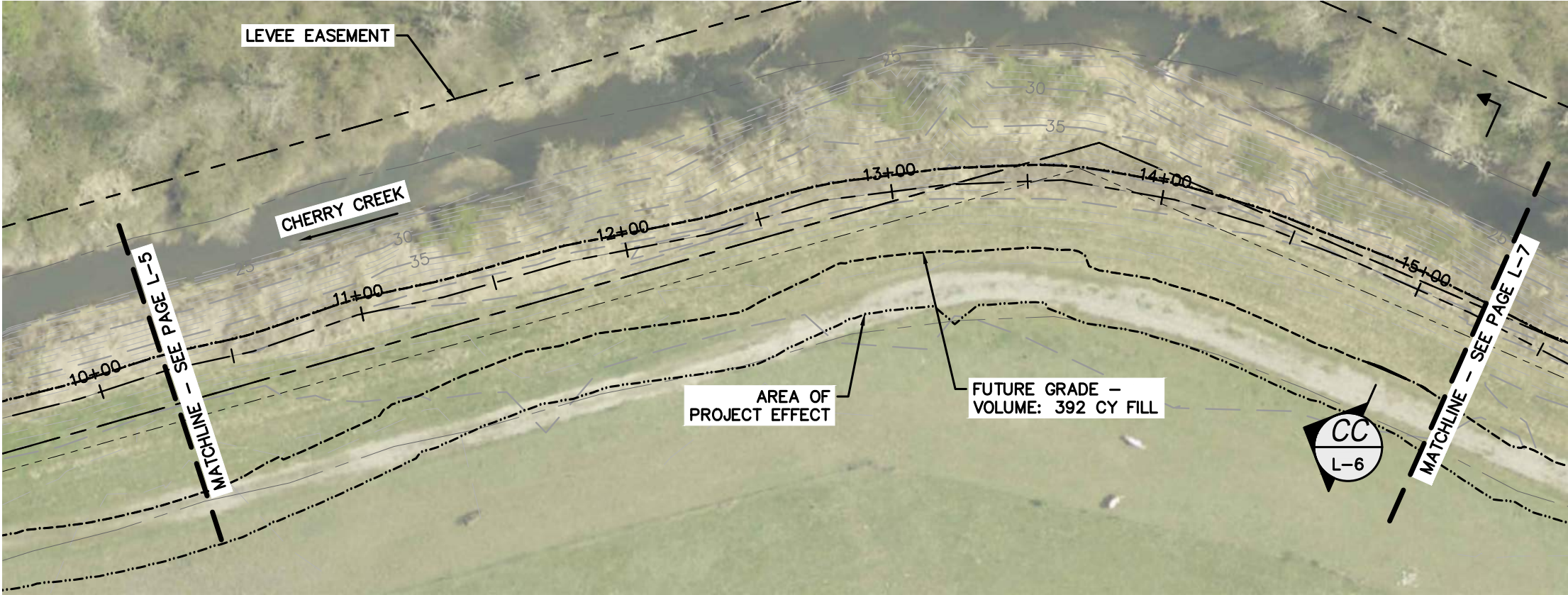


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

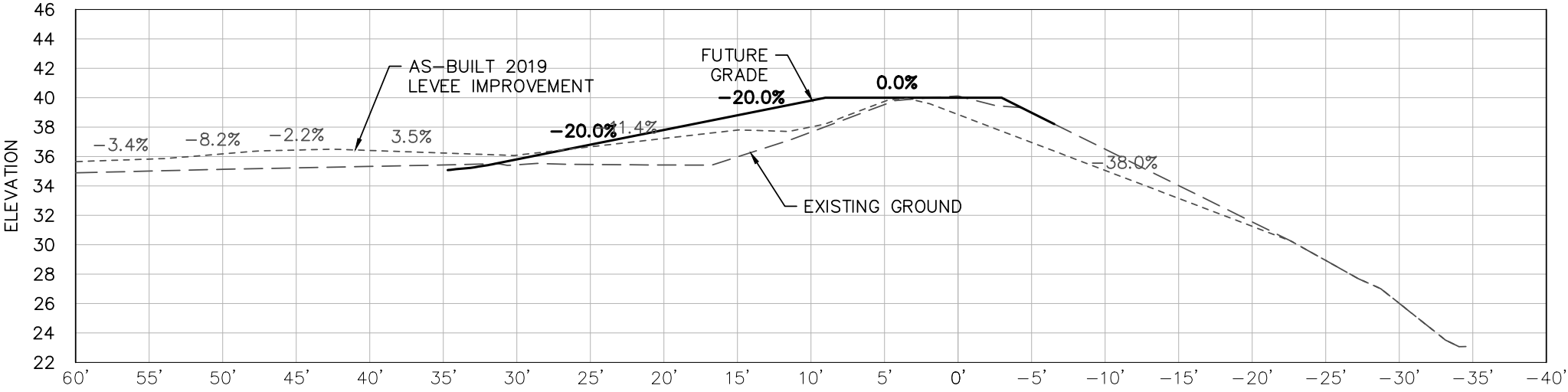
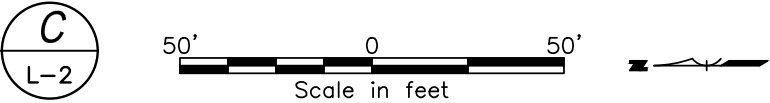
DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
NORTH LEVEE - STA 5+00 - 10+00
KING CONSERVATION DISTRICT

SHEET NO.
L-5

SHEET 32 of 45



DETAIL VIEW - NORTH STA 10+00 - 15+00
SCALE: 1" = 50'



SECTION VIEW - NORTH STA 10+00 - 15+00
SCALE: 1" = 10'



6/10/2026



DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
NORTH LEVEE - STA 10+00 - 15+00
KING CONSERVATION DISTRICT

SHEET NO.
L-6

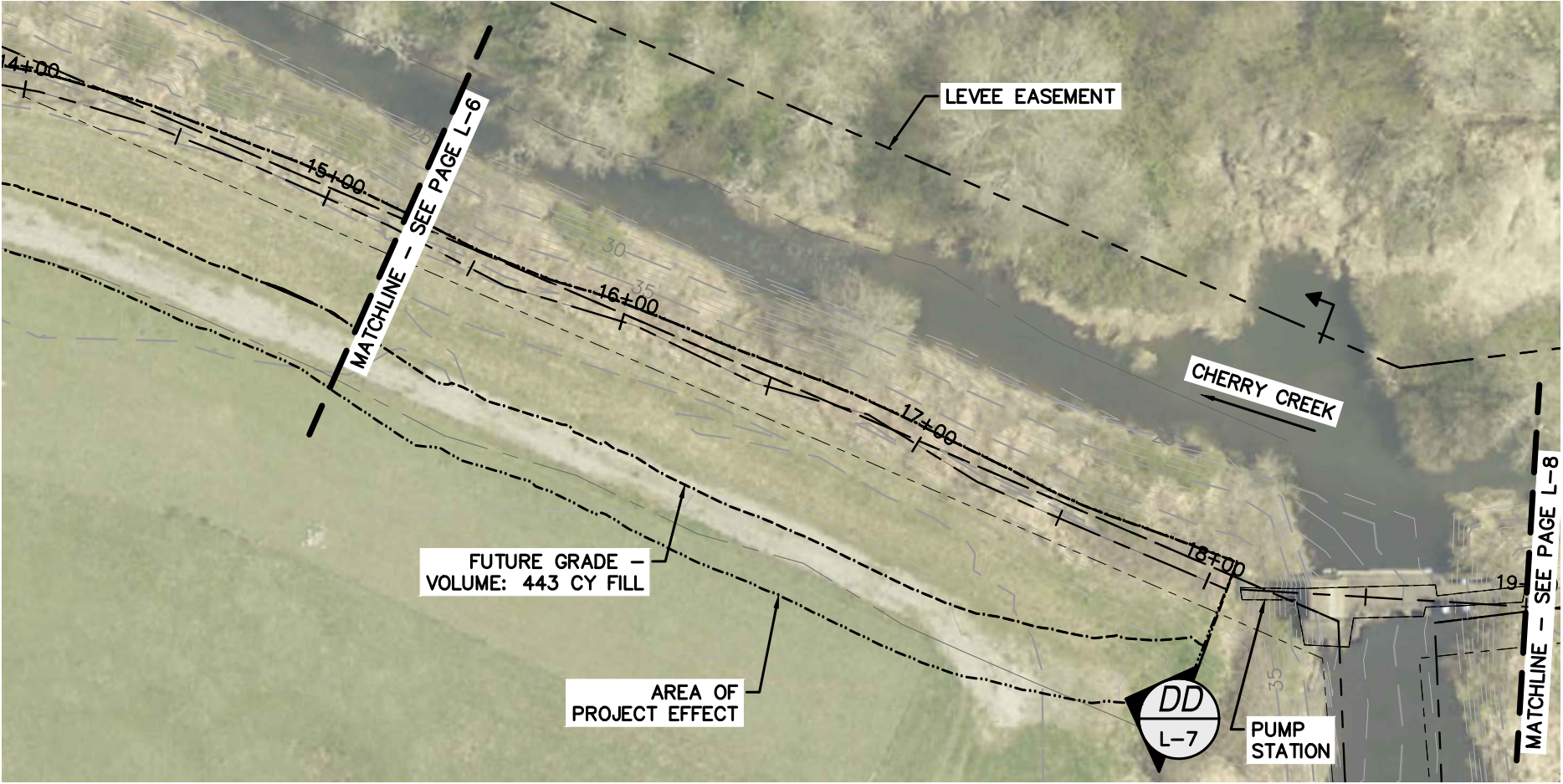
SHEET 33 OF 45



6/10/2026

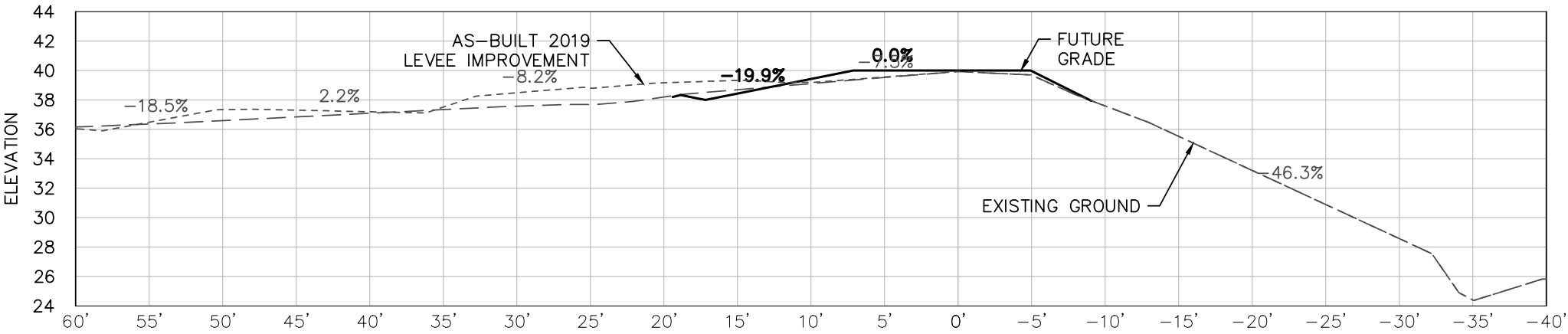
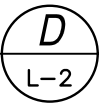


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	



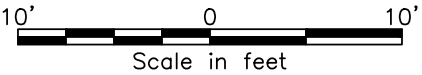
DETAIL VIEW - NORTH STA 15+00 - 18+06

SCALE: 1" = 50'



SECTION VIEW - NORTH STA 15+00 - 18+06

SCALE: 1" = 10'



DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE

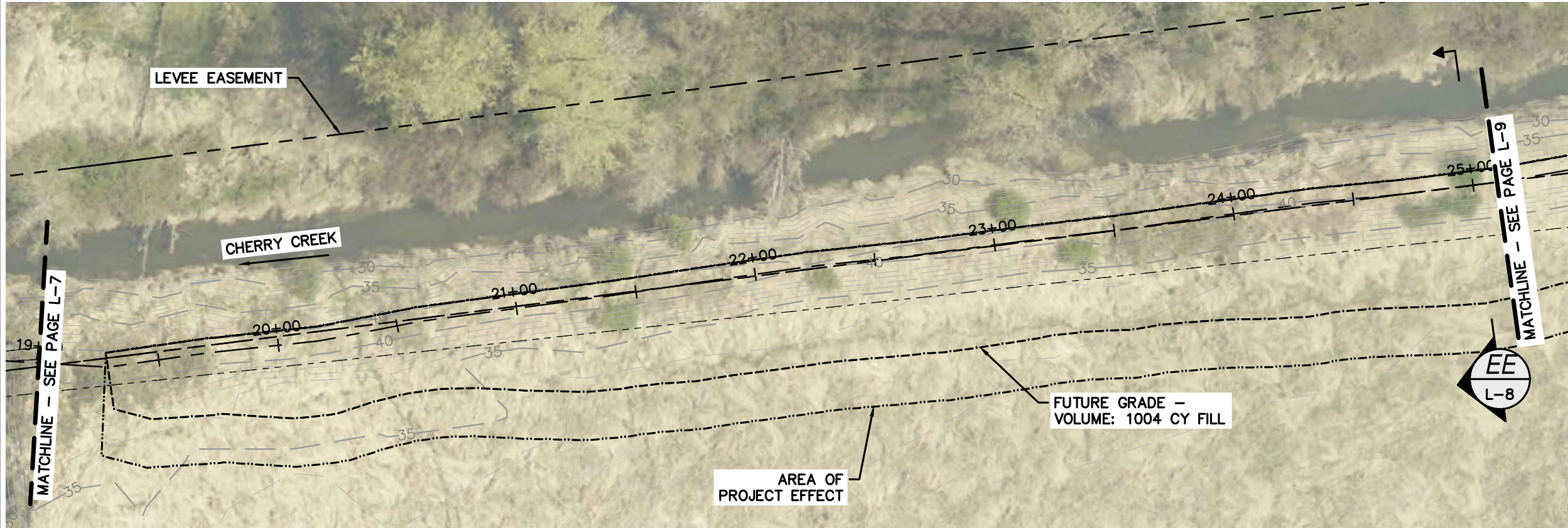
NORTH LEVEE - STA 15+00 - 18+06

KING CONSERVATION DISTRICT

SHEET NO.

L-7

SHEET 34 OF 45



6/10/2026



DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

DETAIL VIEW - SOUTH STA 19+29 - 25+00
SCALE: 1" = 50'

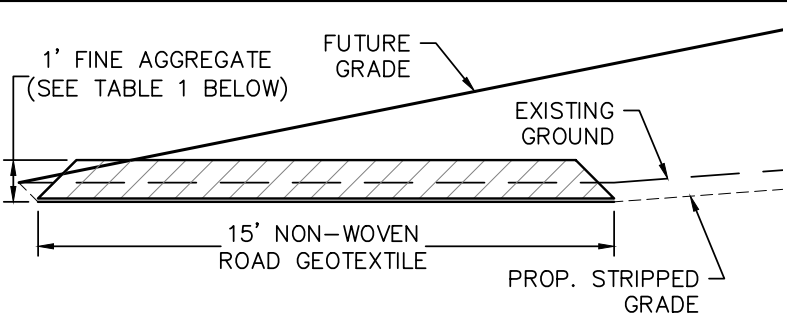
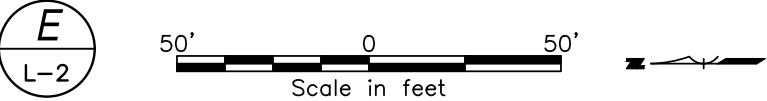
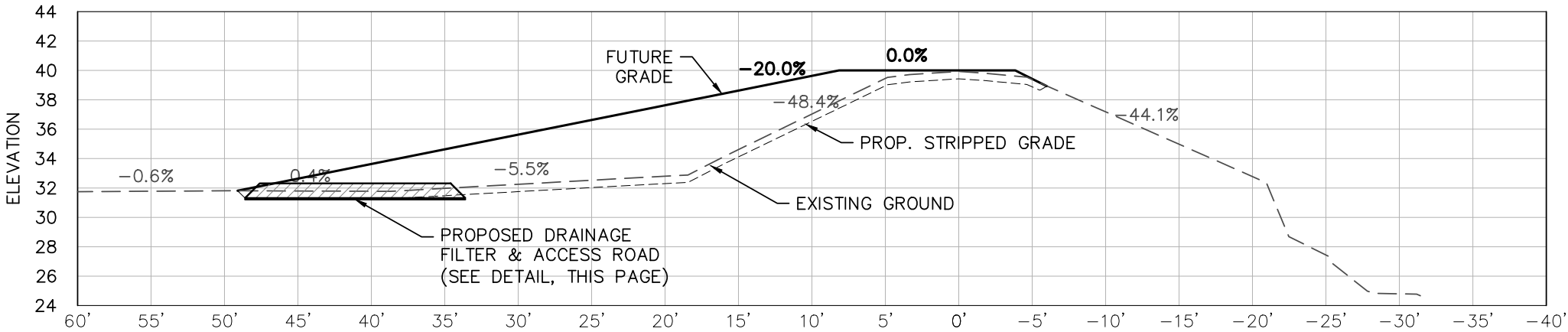


TABLE 1: ASTM C33

SIEVE (SPECIFICATION E11)	PERCENT PASSING
9.5-MM (3/8-IN.)	100
4.75-MM (NO. 4)	95 TO 100
2.36-MM (NO. 8)	80 TO 100
1.18-MM (NO. 16)	50 TO 85
600-μM (NO. 30)	25 TO 60
300-μM (NO. 50)	5 TO 30
150-μM (NO. 100)	0 TO 10
75-μM (NO. 200)	0 TO 3.0*

*MAXIMUM OF 3% FINES IN STOCKPILE;
MAXIMUM OF 5% FINES IN PLACE
DRAINAGE FILTER - 19+29 - 40+00
NOT TO SCALE



SECTION VIEW - SOUTH STA 19+29 - 25+00
SCALE: 1" = 10'

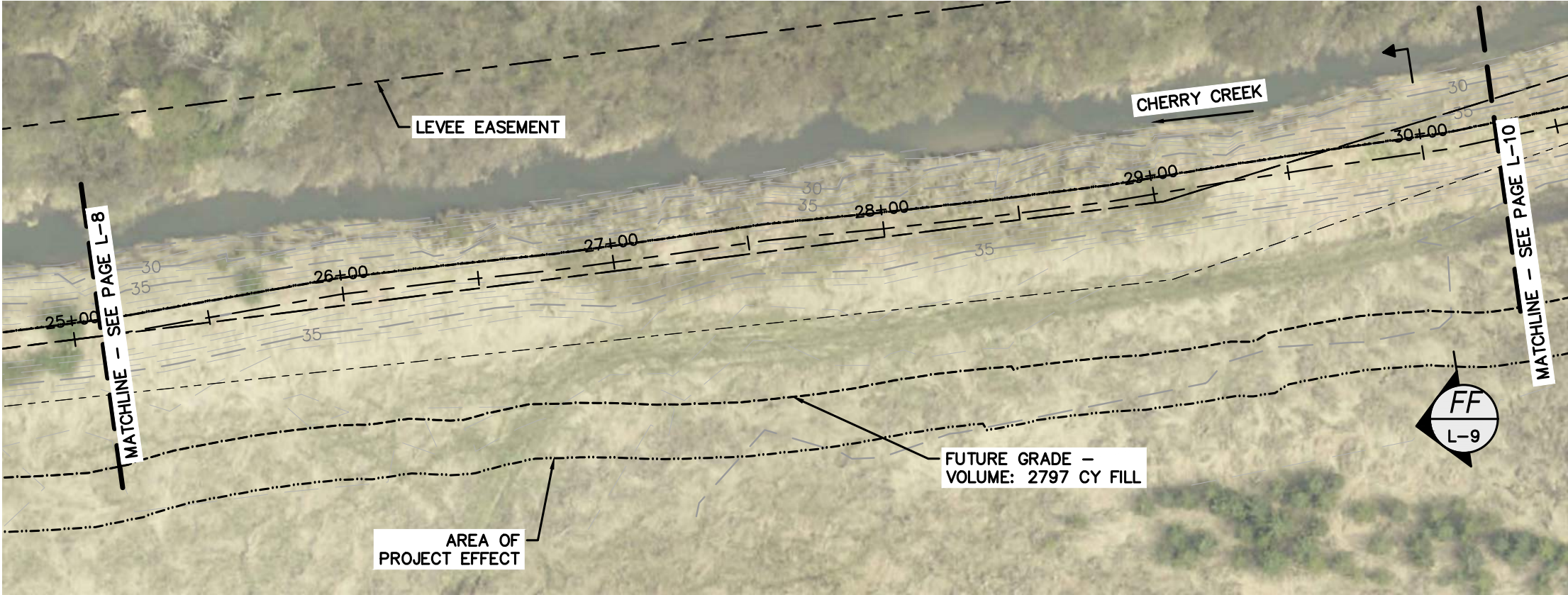


DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 19+29 - 25+00
KING CONSERVATION DISTRICT

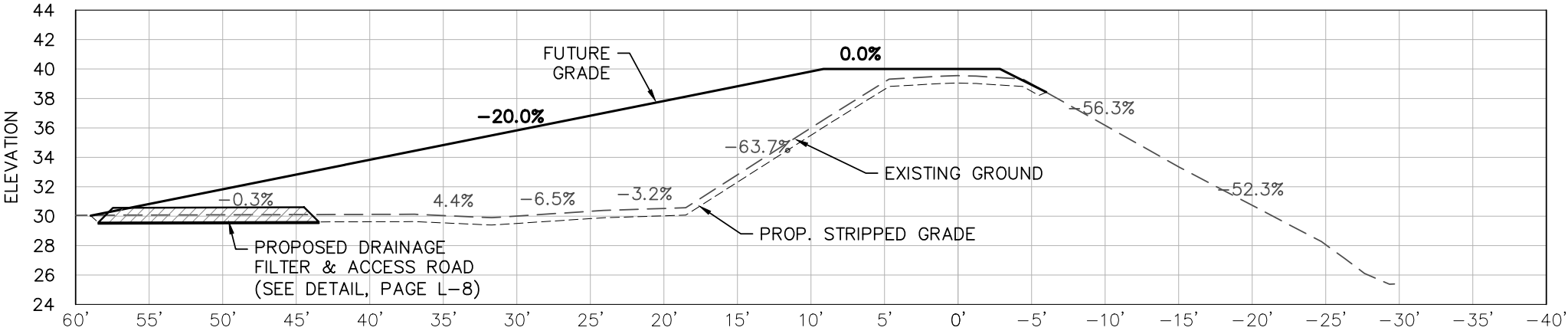
SHEET NO.

L-8

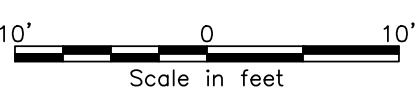
SHEET 35 OF 45



DETAIL VIEW - SOUTH STA 25+00 - 30+00
SCALE: 1" = 50'



SECTION VIEW - SOUTH STA 25+00 - 30+00
SCALE: 1" = 10'



6/10/2026

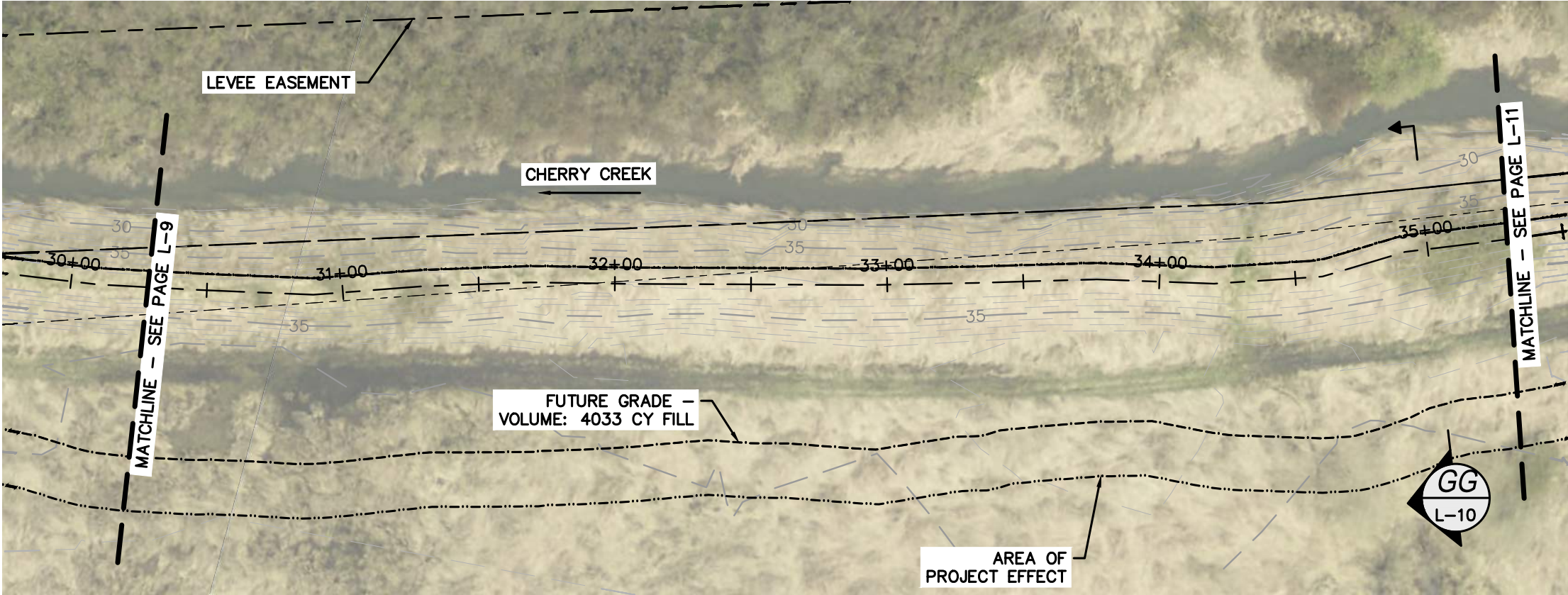


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

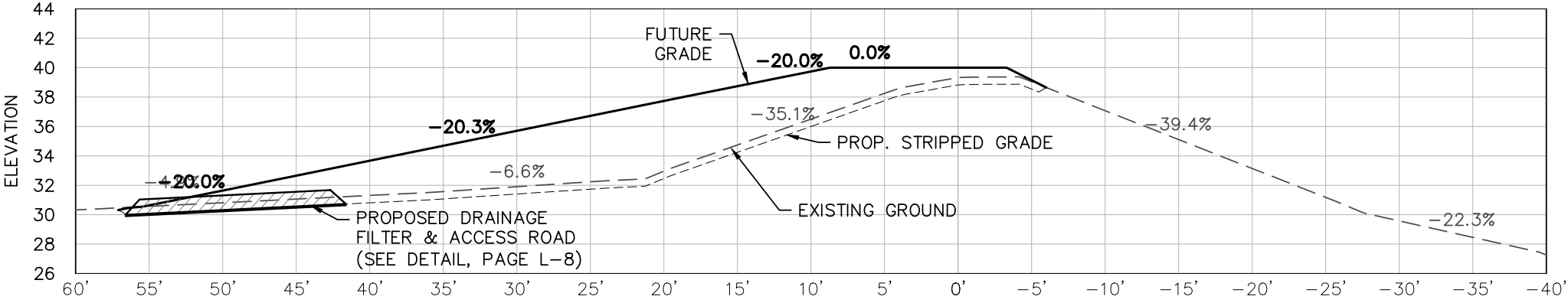
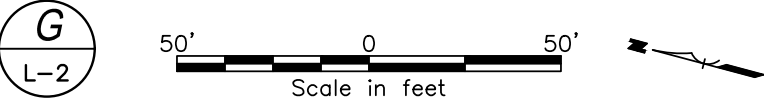
DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 25+00 - 30+00
KING CONSERVATION DISTRICT

SHEET NO.
L-9

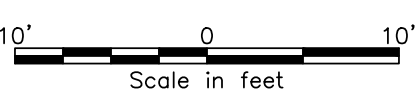
SHEET 36 OF 45



DETAIL VIEW - SOUTH STA 30+00 - 35+00
SCALE: 1" = 50'



SECTION VIEW - SOUTH STA 30+00 - 35+00
SCALE: 1" = 10'



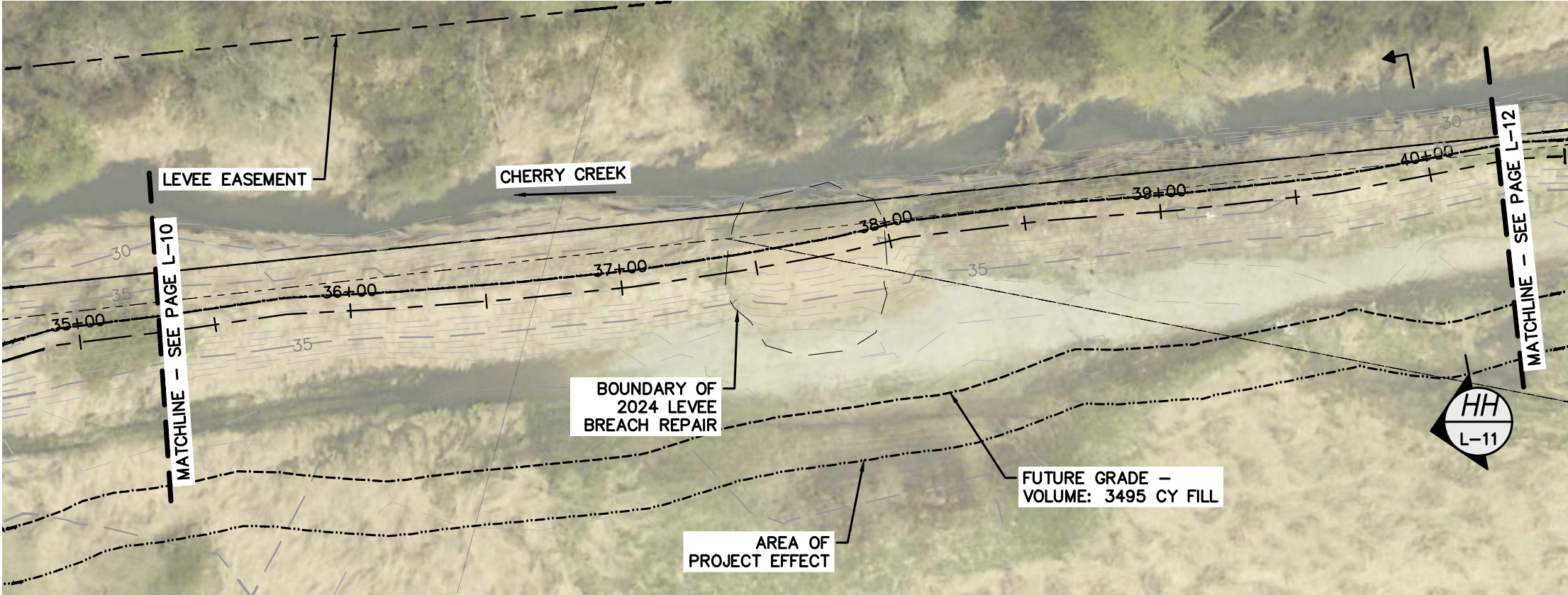
6/10/2026



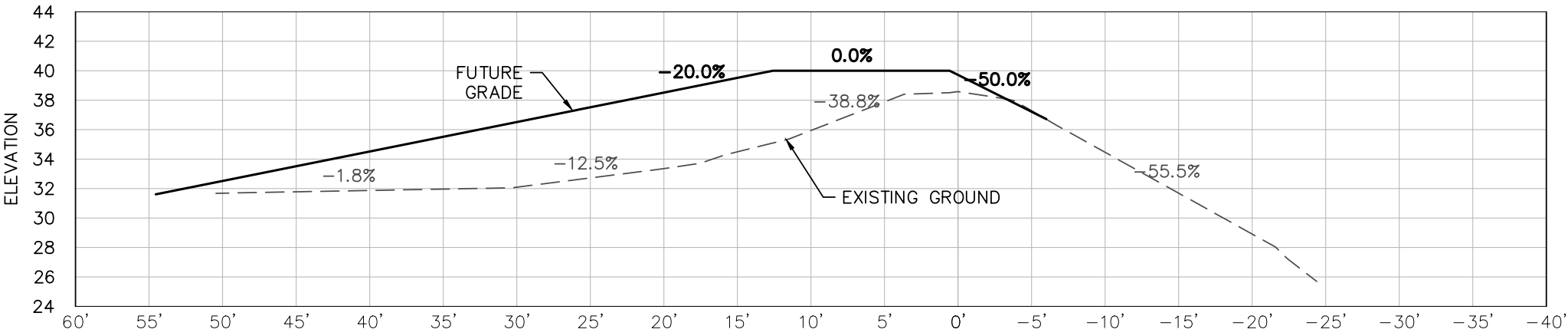
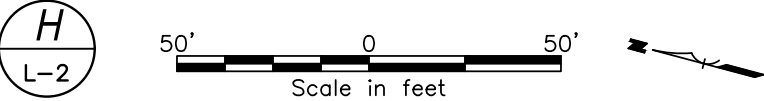
DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 30+00 - 35+00

KING CONSERVATION
DISTRICT



DETAIL VIEW - SOUTH STA 35+00 - 40+00
SCALE: 1" = 50'



SECTION VIEW - SOUTH STA 35+00 - 40+00
SCALE: 1" = 10'



6/10/2026



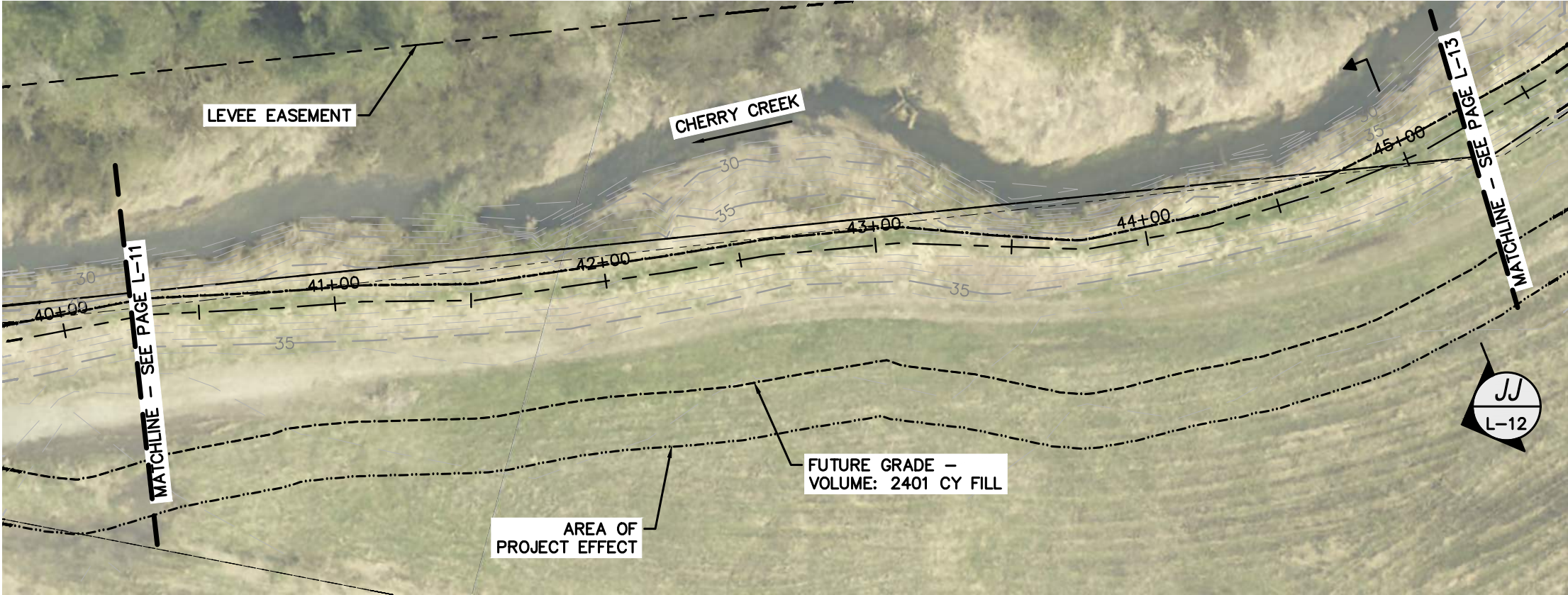
DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 35+00 - 40+00

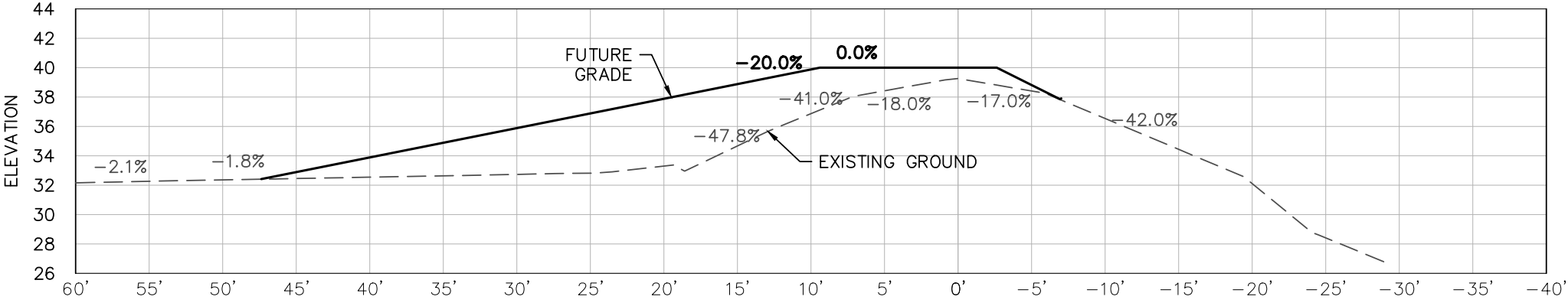
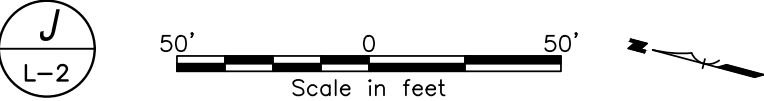
KING CONSERVATION
DISTRICT

SHEET NO.
L-11

SHEET **38** OF **45**



DETAIL VIEW - SOUTH STA 40+00 - 45+00
SCALE: 1" = 50'



SECTION VIEW - SOUTH STA 40+00 - 45+00
SCALE: 1" = 10'



6/10/2026

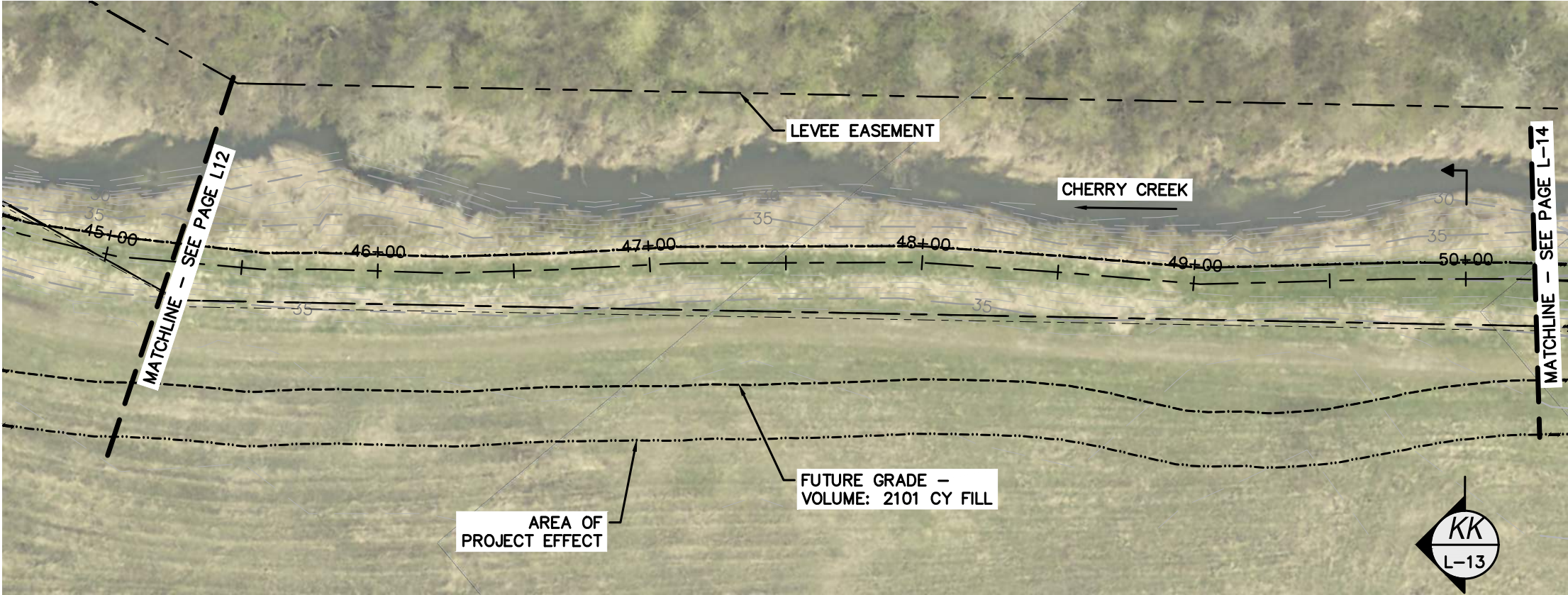


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

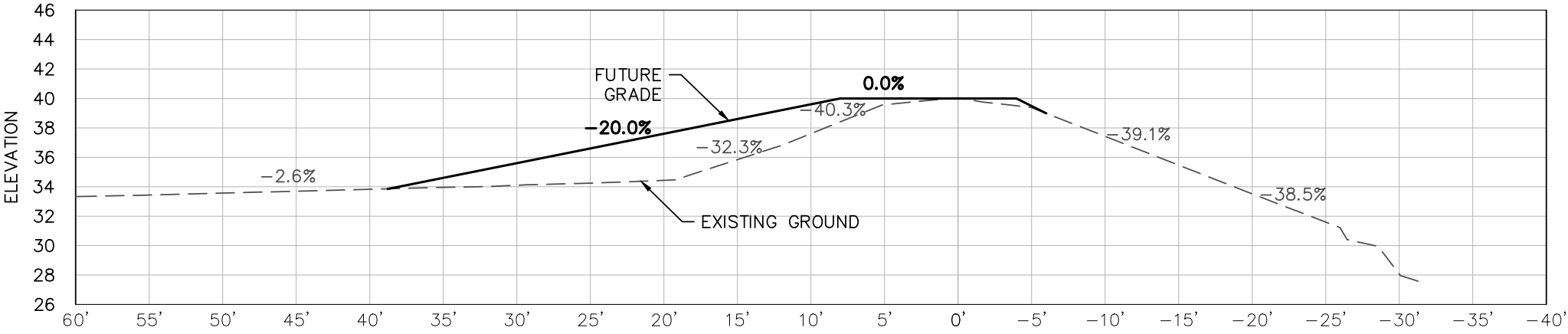
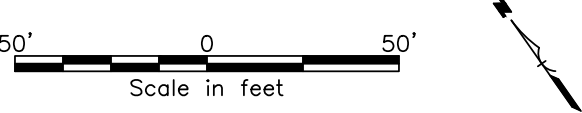
DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 40+00 - 45+00
KING CONSERVATION DISTRICT

SHEET NO.
L-12

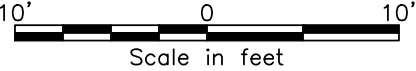
SHEET **39** OF **45**



DETAIL VIEW - SOUTH STA 45+00 - 50+00
SCALE: 1" = 50'



SECTION VIEW - SOUTH STA 45+00 - 50+00
SCALE: 1" = 10'



6/10/2026



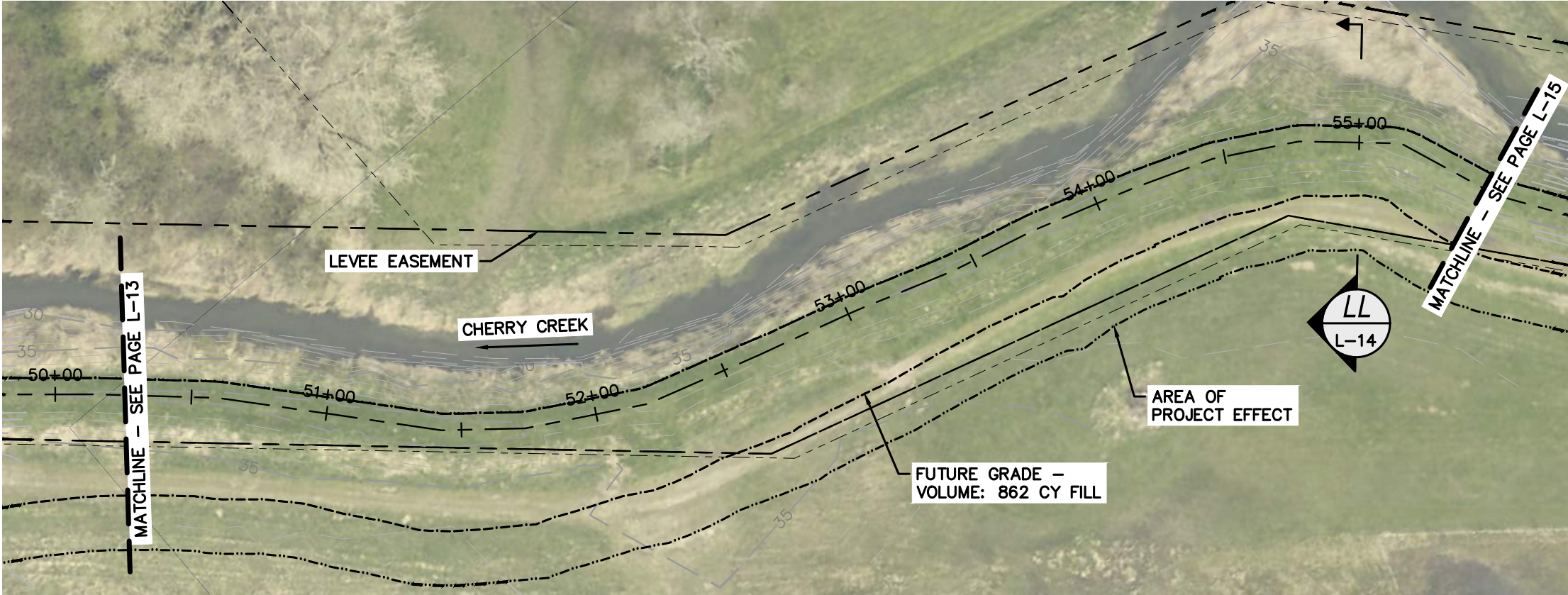
DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 45+00 - 50+00

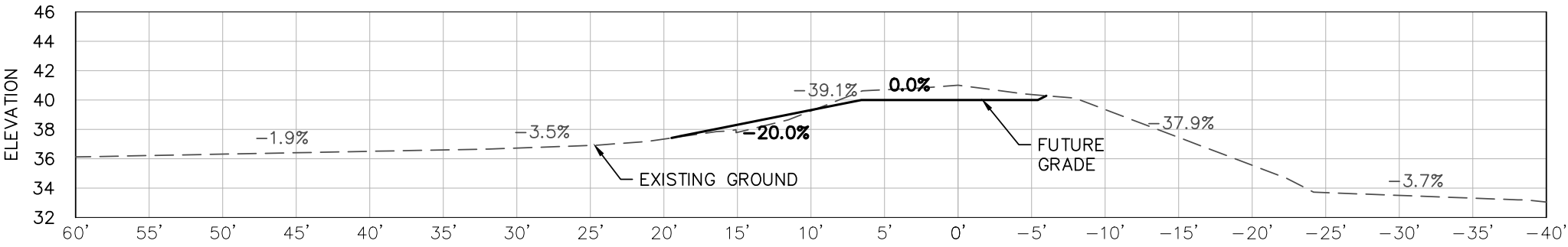
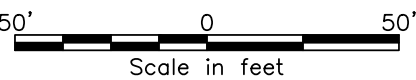
KING CONSERVATION
DISTRICT

SHEET NO.
L-13

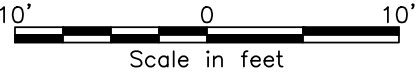
SHEET **40** OF **45**



DETAIL VIEW - SOUTH STA 50+00 - 55+00
SCALE: 1" = 50'



SECTION VIEW - SOUTH STA 50+00 - 55+00
SCALE: 1" = 10'



6/10/2026

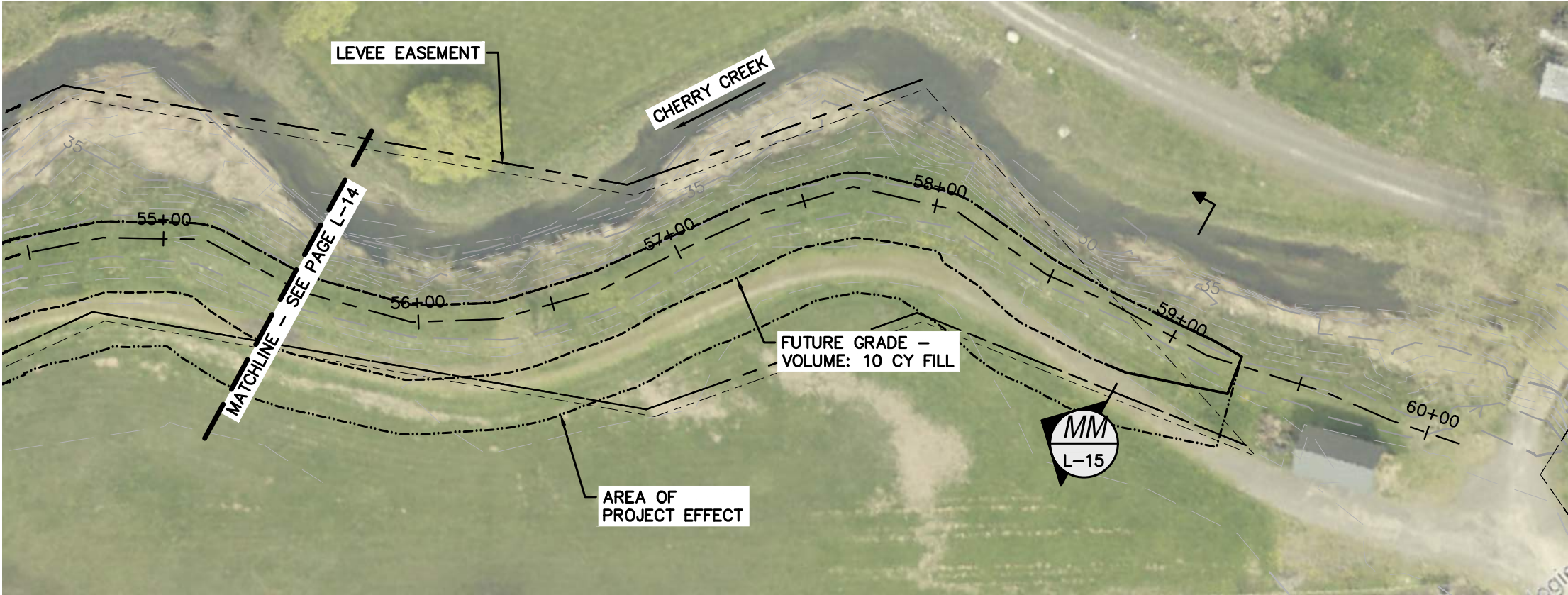


DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

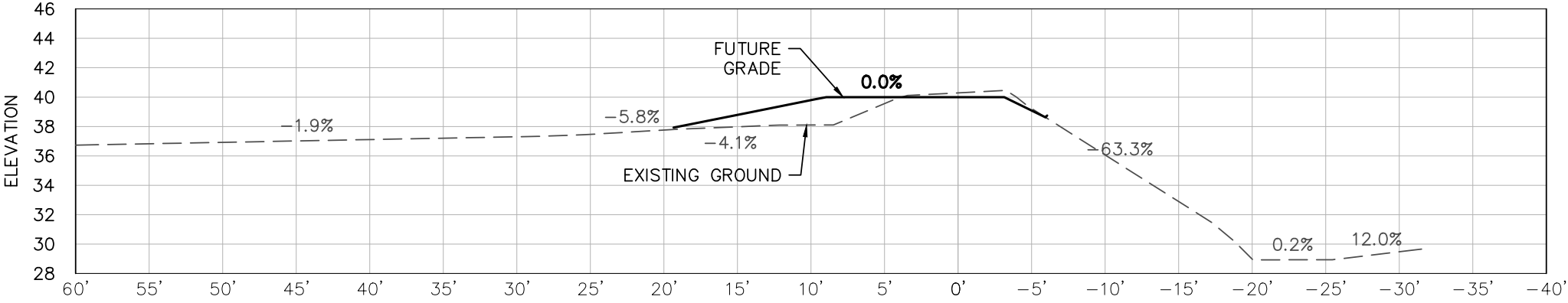
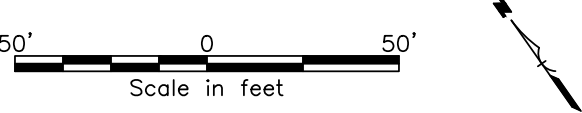
DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 50+00 - 55+00
KING CONSERVATION DISTRICT

SHEET NO.
L-14

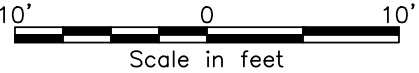
SHEET **41** of **45**



DETAIL VIEW - SOUTH STA 55+00 - 60+00
SCALE: 1" = 50'



SECTION VIEW - SOUTH STA 55+00 - 60+00
SCALE: 1" = 10'



6/10/2026



DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	

DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
SOUTH LEVEE - STA 55+00 - 60+00
KING CONSERVATION DISTRICT

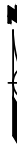
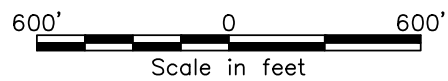
SHEET NO.
L-15

SHEET 42 of 45



SITE PLAN

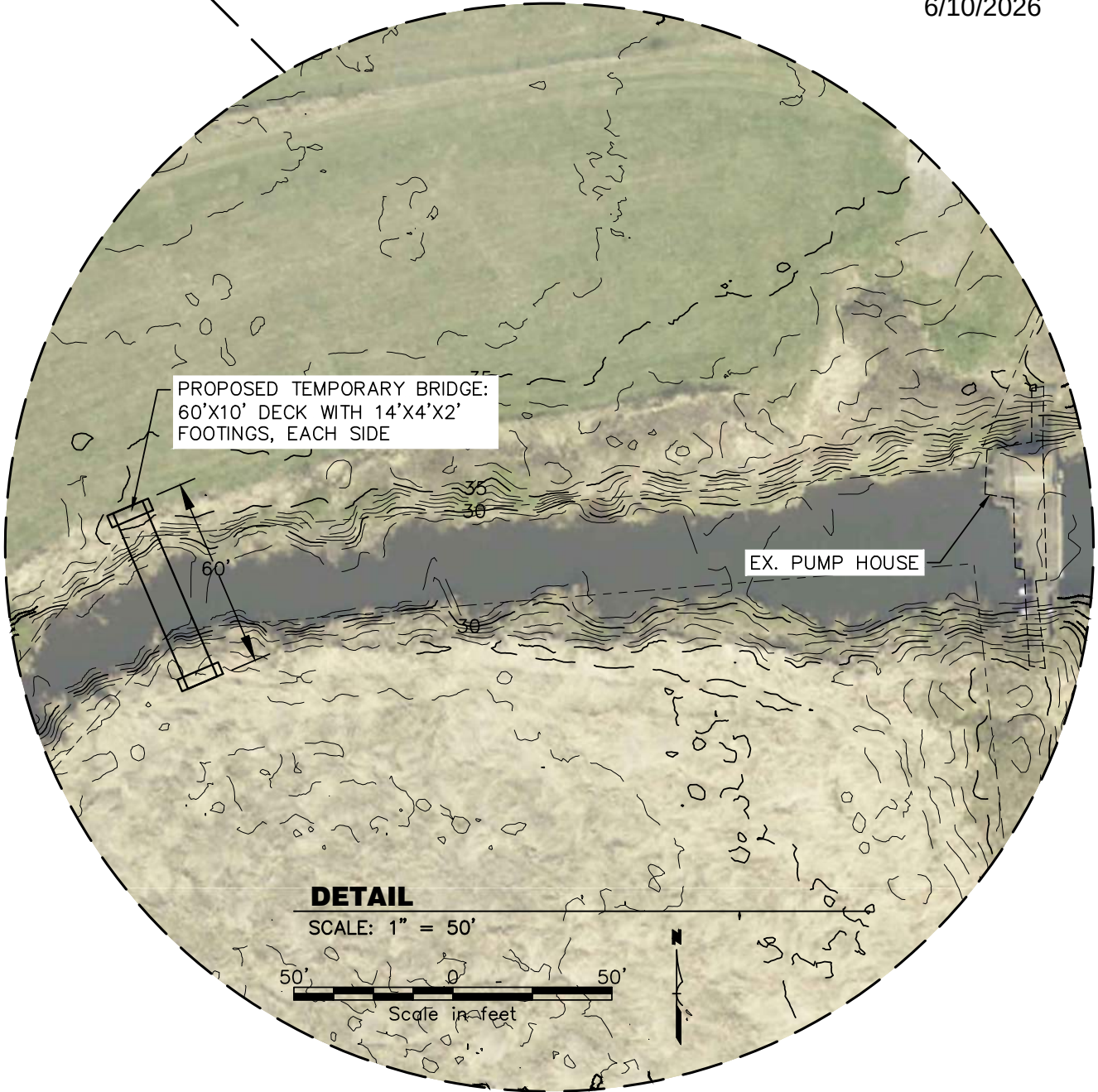
SCALE: 1" = 600'



6/10/2026



DESIGNED	RSB	DATE	03/25
DRAWN	SHE	DATE	03/25
TRACED		DATE	
CHECKED		DATE	



TEMPORARY BRIDGE AND ITS FOUNDATIONS TO BE
DESIGNED BY CONTRACTOR BASED ON PLANNED LOADS

**DRAINAGE DISTRICT #7 - CHERRY CREEK LEVEE
TEMPORARY BRIDGE DETAILS**

KING CONSERVATION
DISTRICT

SHEET NO.

L-16

SHEET 43 of 45



15629 Main Street NE
P.O. Box 402
Duwall, WA 98019

DLS FLOOD PERMIT
NUMBER:
FLOD23-0005
FLOOD
DEVELOPMENT
PERMIT



SEAL

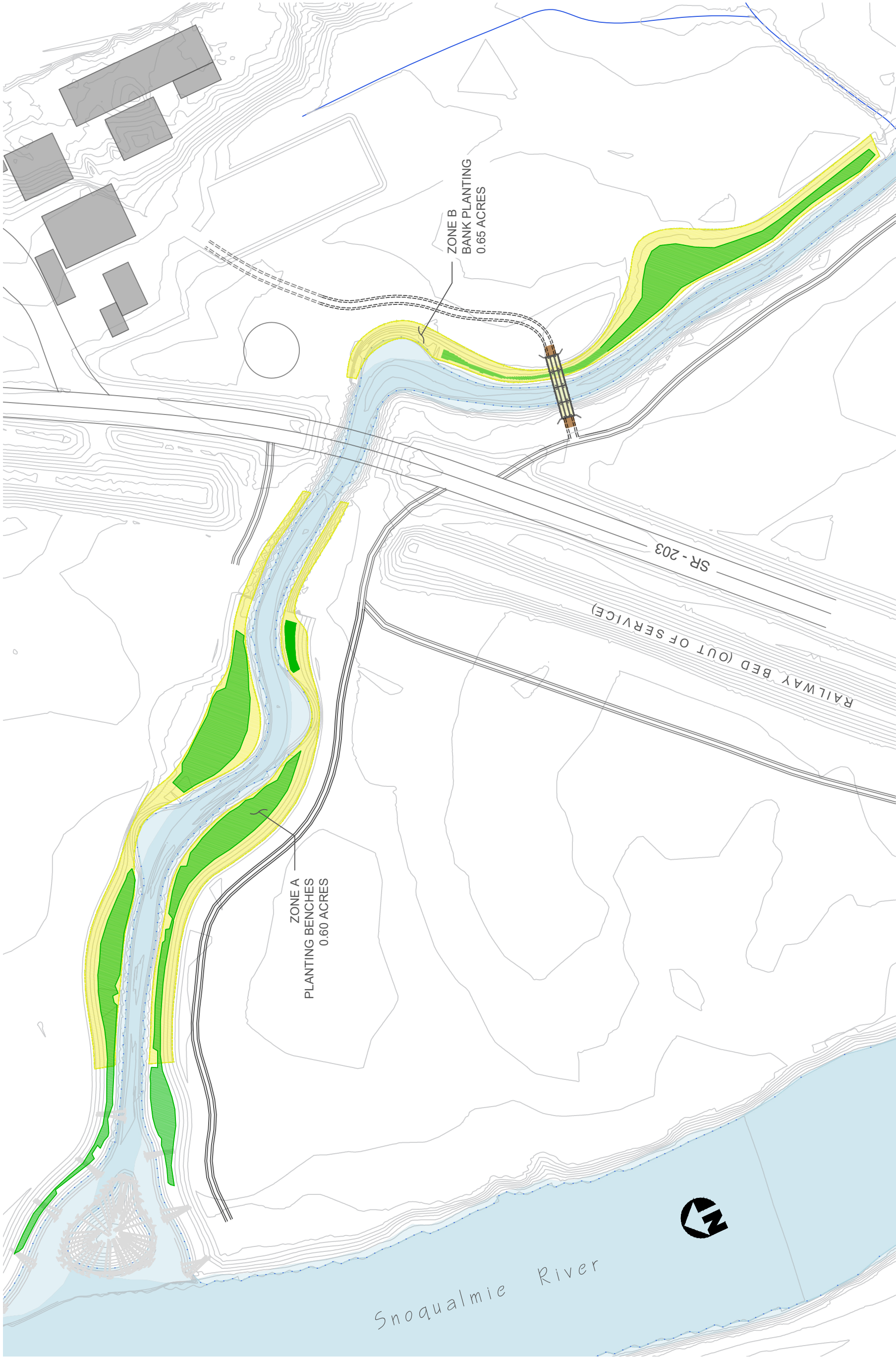
LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 04-28-2025
DRAWN BY: S. KROPP
A. JORGENSON
DESIGNED BY: A. STOKUS
S. KROPP
SCALE:
JOB NO. :
SHEET NO.:

P-1

SHEET 44 of 45



PLANT LIST

TYPE / SPECIES	ZONE A	ZONE B	TOTAL
POTTED TREES			
SITKA SPRUCE (1 GAL)		100	100
WESTERN RED CEDAR (1 GAL)		20	20
RED ALDER (1 GAL)		100	100
BIG LEAF MAPLE (1 GAL)		50	50
STAKED TREES			
BLACK COTTONWOOD	100	100	200
POTTED SHRUBS			
SNOWBERRY	170	40	210
PACIFIC NINEBARK		70	70
TWINBERRY		70	70
STAKED SHRUBS			
RED OSIER DOGWOOD	560		560
NATIVE WILLOW SPECIES	1120		1120
SUM	1950	550	2500

- ZONE A - PLANTING BENCHES = 0.60 ACRES**

 - TREES (LIVE STAKE) AT 8 FT SPACING
 - SHRUBS (LIVE STAKE) AT 3 FT SPACING
 - SHRUBS (POTTED) AT 6 FT SPACING
- ZONE B - BANK PLANTING = 0.65 ACRES**

 - TREES (LIVE STAKE) AT 8 FT SPACING
 - TRESS (POTTED) AT 8 FT SPACING
 - SHRUBS (POTTED) AT 6 FT SPACING

- WILLOW / RED OSIER PLANTING NOTES:
- [1] HARVEST WILLOWS WHEN PLANTS ARE DORMANT (BETWEEN NOVEMBER AND MARCH); INSTALL IMMEDIATELY AFTER HARVEST. CUTTINGS SHALL BE MIN. 3/4" DIA. AND 3 TO 5 FT LONG.

[2] CAREFULLY TRIM ALL BRANCHES WITHOUT DAMAGING BARK; SOAK STAKES FOR 24 HOURS MIN PRIOR TO INSTALLATION.

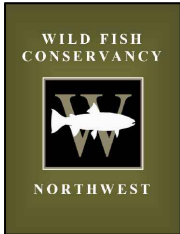
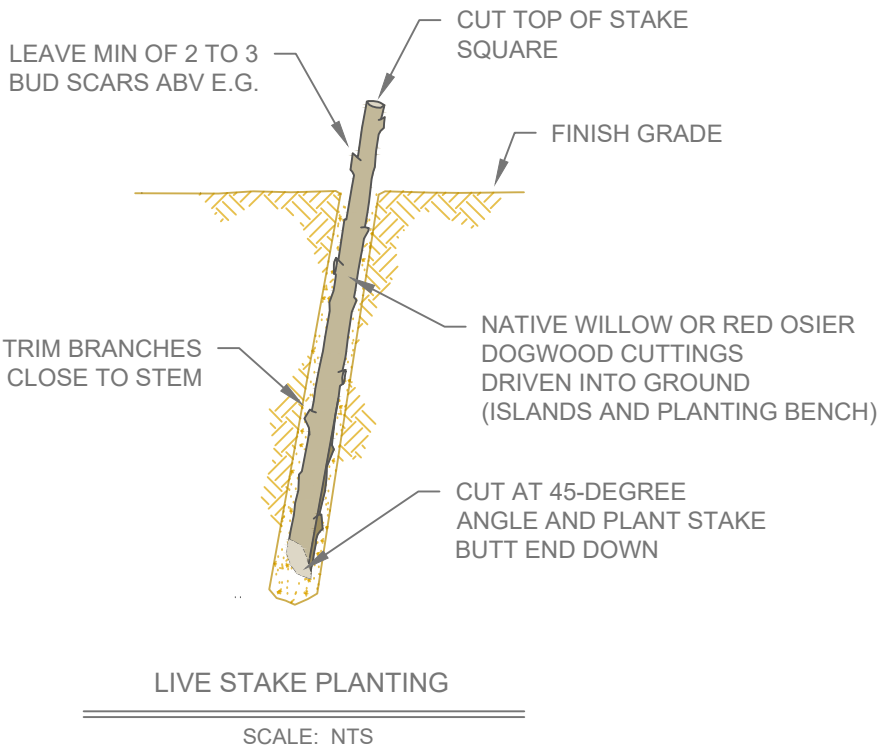
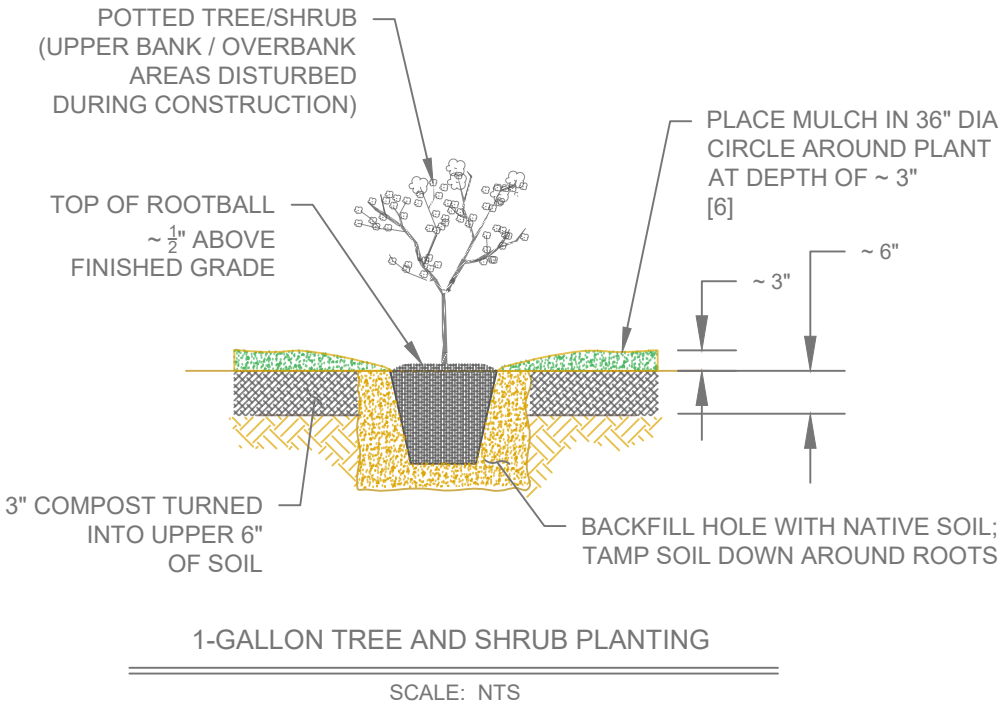
[3] USE HEALTHY, STRAIGHT, LIVE STEMS AT LEAST ONE YEAR OLD. CUT OFF APEX AND FLOWERING PARTS (TOP FOOT) OF THE STEM. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS.

[4] CREATE A PILOT HOLE FOR EACH STAKE THAT IS PERPENDICULAR TO THE SURFACE OF THE BANK; THE HOLE SHOULD BE TWICE THE DIAMETER OF THE WILLOW STAKE AND ROUGHLY ¾ THE LENGTH OF THE STAKE, AND EXTEND DOWN INTO THE PERMANENT WATER TABLE

[5] BACKFILL PILOT HOLE WITH NATIVE SOIL AND WATER SLURRY TO ELIMINATE AIR POCKETS.

[6] KEEP MULCH AWAY FROM THE BASE OF THE PLANT STEM.

[7] SEED ALL DISTURBED AREAS WITH NATIVE GRASS MIX.

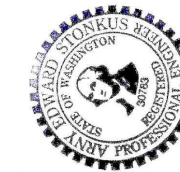


15629 Main Street NE
P.O. Box 402
Duvall, WA 98019

DLS FLOOD PERMIT
NUMBER:

FLOD23-0005

FLOOD
DEVELOPMENT
PERMIT



LOWER CHERRY CREEK RESTORATION

DUVALL, WA

DATE: 04-28-2025
DRAWN BY: S. KROPP
A. JORGENSEN
DESIGNED BY: A. STONKUS
S. KROPP
SCALE:
JOB NO. :
SHEET NO.

P-2

SHEET 45 of 45