

CHESNIMNUS CREEK - WILLIAMS RESTORATION DESIGN

CHESNIMNUS CREEK, GRANDE RONDE RIVER BASIN, OREGON

DRAFT 80% DESIGN DRAWINGS



PREPARED BY:
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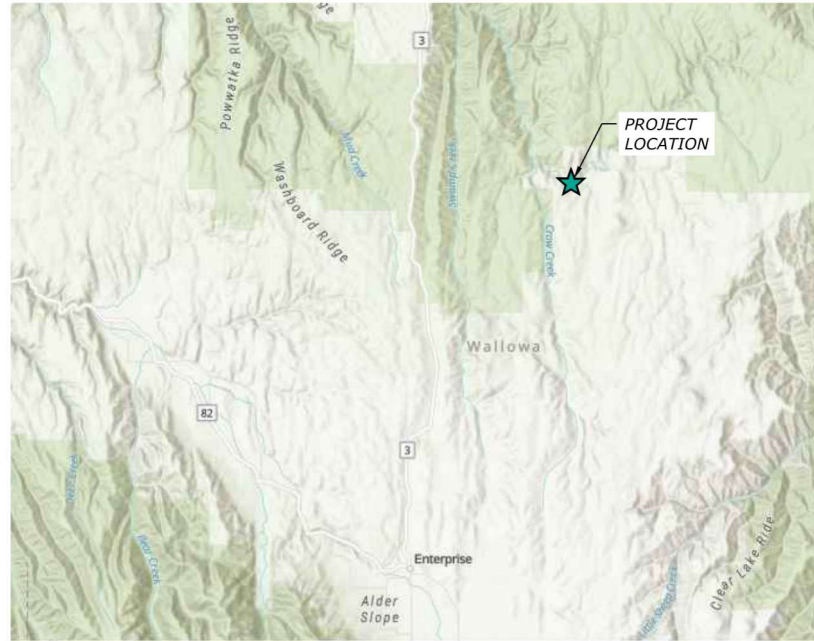
PREPARED FOR:
 NEZ PERCE TRIBE
 ATTN: KATHRYN FRENDEA
 DEPARTEMENT OF FISHERIES RESOURCES MANAGEMENT
 WATERSHED DIVISION
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GOALS AND OBJECTIVES

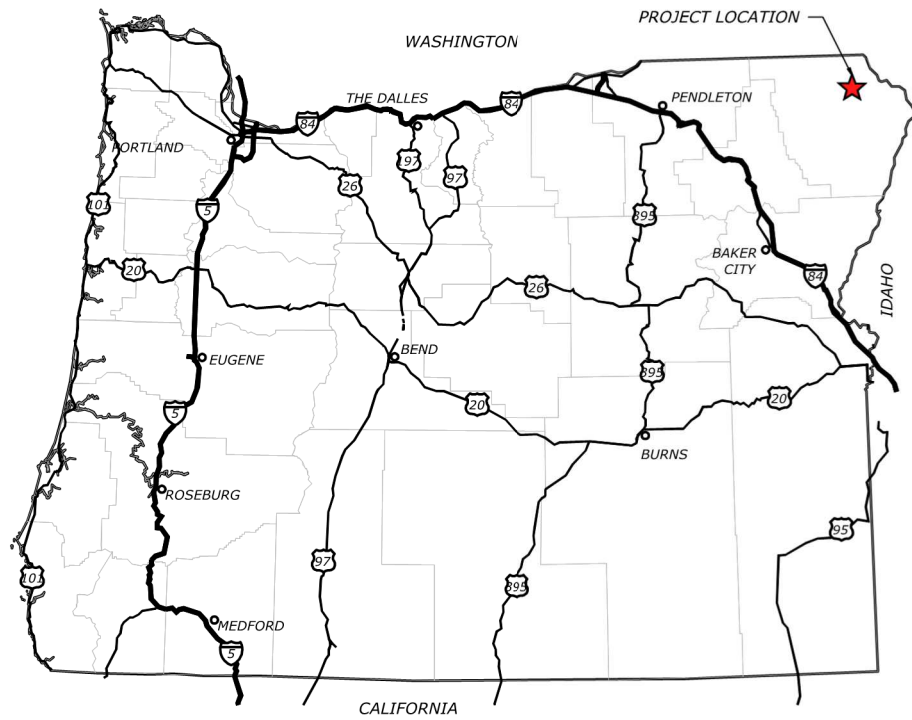
GENERAL
 THIS PROJECT IS FOCUSED ON IMPROVING LIMITING HABITAT FACTORS THAT ARE CRITICAL TO MULTIPLE LIFE STAGES OF ESA LISTED STEELHEAD AND PACIFIC LAMPREY. **THE CENTRAL GOAL OF THIS PROJECT IS TO INCREASE THE SURVIVAL AND PRODUCTIVITY OF EARLY LIFE STAGES OF STEELHEAD, LAMPREY, AND OTHER AQUATIC SPECIES.** TO ACHIEVE THIS BIOLOGICAL OUTCOME, PROJECT OBJECTIVES ARE BASED ON ESTABLISHED ECOLOGIC, GEOMORPHIC, AND HYDROLOGIC PROCESS-BASED MECHANISMS. FURTHERMORE, TO ATTAIN HABITAT RESTORATION GOALS THAT ARE SUSTAINABLE AND COMPATIBLE WITH CATTLE OPERATIONS, COORDINATION WITH LANDOWNERS IS ESSENTIAL.

GOALS
 TO ENHANCE AQUATIC HABITAT DIVERSITY AND RESTORE NATURAL RIVER FUNCTION INCLUDING THE ENCOURAGEMENT AND/OR MIMICRY OF BEAVER ACTIVITY - FOR ALL LIFE STAGES OF THREATENED AND SENSITIVE SPECIES WITHIN THE PROJECT REACH.

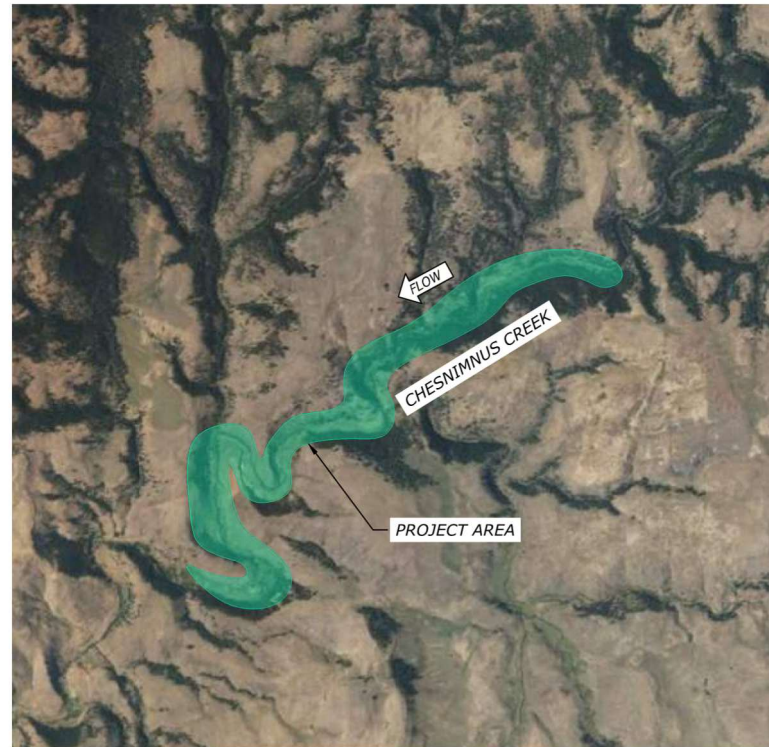
- OBJECTIVES**
- INCREASE THE SPATIAL HETEROGENEITY AND COMPLEXITY OF HIGH-QUALITY HABITAT AND DISTRIBUTE STREAM FLOW AND ENERGY THROUGH A RANGE OF HYDROLOGIC CONDITIONS BY, RECONNECTING OR CREATING NEW SECONDARY CHANNELS, OFF-CHANNEL CONNECTIONS, AND IMPROVING CHANNEL GEOMETRY TO INCLUDE A GENERALLY LOW WIDTH-TO-DEPTH RATIO WITH INCREASED HYDRAULIC DIVERSITY AND SEDIMENT SORTING THAT IS FAVORABLE FOR SPAWNING (WIDTH, DEPTH, AND VELOCITY WITH AMPLE STRUCTURE AND COVER).
 - INCREASE SEASONAL FLOODPLAIN CONNECTION AND FUNCTION TO DISSIPATE FLOOD ENERGY WHILE IMPROVING FLOOD WATER STORAGE, HYPOHEIC EXCHANGE, FLOODPLAIN FINE SEDIMENT STORAGE AND IN-CHANNEL SEDIMENT REDUCTION, HIGH-FLOW JUVENILE REFUGIA, NUTRIENT EXCHANGE, AND RIPARIAN VEGETATION.
 - PROTECT, ESTABLISH, AND MAINTAIN A ROBUST NATIVE RIPARIAN PLANT COMMUNITY ALONG CHANNEL BANKS AND FLOODPLAINS, INCREASING SHADE, IMPROVING BANK STRUCTURE AND HABITAT, AND PROVIDING A BUFFER FROM UPLAND AND FLOODPLAIN SEDIMENT SOURCES.
 - MAINTAIN AND ENHANCE EXISTING BEAVER ACTIVITY WHERE POSSIBLE AND CREATE HABITAT FEATURES THAT CAN BE UTILIZED BY BEAVER TO EXPAND THEIR AREA OF USE AND INFLUENCE.
 - PROTECT AND/OR MODIFY INFRASTRUCTURE (ROADS, BRIDGES, STRUCTURES, AND OTHER CONSTRAINTS) WHILE MAXIMIZING FISH HABITAT UPLIFT THROUGHOUT THEIR PROJECT AREA.



VICINITY MAP
 NOT TO SCALE



KEY MAP
 Not to scale



LOCATION:
 LOCATED WITHIN SECTIONS 21, 28, AND 29 OF TOWNSHIP 03N, RANGE 46E WALLOWA COUNTY, OREGON

LOCATION MAP
 NOT TO SCALE

SHEET INDEX		
SHEET COUNT	DRAWING NUMBER	DRAWING TITLE
GENERALS		
1	G1	COVER SHEET
2	G2	GENERAL NOTES 1
3	G3	CONSERVATION MEASURES 1
4	G4	CONSERVATION MEASURES 2
5	G5	QUANTITIES
EXISTING CONDITIONS		
6	C1	SURVEY CONTROL & KEY MAP
7	C2	OVERVIEW - 1
8	C3	OVERVIEW - 2
9	C4	PHOTOS - 1
10	C5	PHOTOS - 2
PROPOSED CONDITIONS		
11	C6	ACCESS & STAGING - 1
12	C7	ACCESS & STAGING - 2
13	C8	ACCESS & STAGING - 3
14	C9	ACCESS & STAGING - 4
15	C10	EARTHWORK - 1
16	C11	EARTHWORK - 2
17	C12	EARTHWORK - 3
18	C13	EARTHWORK - 4
19	C14	EARTHWORK - 5
20	C15	OVERVIEW
21	C16	PLAN - 1
22	C17	PLAN - 2
23	C18	PLAN - 3
24	C19	PLAN - 4
25	C20	PLAN - 5
26	C21	PLAN - 6
27	C22	PLAN - 7
28	C23	PLAN - 8
29	C24	PLAN - 9
30	C25	PLAN - 10
31	C26	PLAN - 11
34	C27	PLAN - 12
33	C28	PLAN - 13
29	C29	PLAN - 14
35	C30	PLAN - 15
36	C31	PLAN - 16
37	C32	PLAN - 17
38	C33	PLAN - 18
PLAN AND PROFILE		
39	C34	CHESNIMNUS CREEK ROAD (NF-4625) REALIGNMENT
40	C35	CHESNIMNUS CREEK ROAD (NF-4625) REALIGNMENT
41	C36	RANCH ACCESS BRIDGE 0+00 TO 4+83
42	C37	DARROW A STA 0+00 TO 11+00
43	C38	DARROW A STA 11+00 TO 18+50
44	C39	DARROW B AND C
45	C40	DARROW D STA 0+00 TO 3+73
46	C41	VIRGINIA A STA 0+00 TO 5+35
47	C42	VIRGINIA B STA 0+00 TO 6+33
48	C43	VIRGINIA C STA 0+00 TO 9+45
49	C44	VIRGINIA D STA 0+00 TO 4+25
50	C45	SEVRO A STA 0+00 TO 8+00

SHEET INDEX		
SHEET COUNT	DRAWING NUMBER	DRAWING TITLE
51	C46	SEVRO B STA 0+00 TO 4+99
52	C47	RAGNAR A STA 0+00 TO 7+18
53	C48	CASSIUS A STA 0+00 TO 8+78
54	C49	CASSIUS B STA 0+00 TO 4+54
55	C50	ELECTRA A STA 0+00 TO 13+67
56	C51	ELECTRA B STA 0+00 TO 4+81
57	C52	PAX A STA 0+00 TO 13+00
58	C53	PAX A STA 13+00 TO 25+34
59	C54	PAX B AND C
60	C55	VICTRA A STA 0+00 TO 13+00
61	C56	VICTRA A STA 13+00 TO 17+32
62	C57	VICTRA B STA 0+00 TO 6+35
63	C58	VICTRA C STA 0+00 TO 1+27
64	C59	VICTRA D AND E
65	C60	EO AND ROQUE B
66	C61	ROQUE STA 0+00 TO 11+00
67	C62	ROQUE STA 11+00 TO 21+87
68	C63	ORION A AND B
69	C64	ORION C STA 0+00 TO 4+67
70	C65	SEFI A STA 0+00 TO 10+56
71	C66	SEFI B STA 0+00 TO 3+92
72	C67	LORN A AND B
73	C68	ATLAS A STA 0+00 TO 7+16
74	C69	ATLAS B AND C
DETAILS		
75	D1	ACCESS & EROSION CONTROL DETAILS
76	D2	CHANNEL FILL AND SEQUENCING
77	D3	CONSTRUCTED RIFFLE
78	D4	HS-1 - THREE-LOG STRUCTURE
79	D5	HS-2 - SINGLE LOG STRUCTURE
80	D6	HS-3 - WHOLE TREE STRUCTURE
81	D7	HS-4 - BLEEDER JAM
82	D8	HS-5 - CONSTRUCTION JAM
83	D9	HS-6 - SMALL APEX JAM
84	D10	HS-7 - FELLED WHOLE TREE
85	D11	BRUSH BANK
86	D12	ROUGHENED EDGE
87	D13	WILLOW BAFFLES AND LIVE CUTTINGS
88	D14	BEAVER DAM ANALOGUE
89	D15	BOULDER AND RACKING PLACEMENT
90	D16	TYPICAL SECTIONS
91	D17	WILDLIFE FRIENDLY FENCING
CROSS SECTIONS		
92	XS1	VALLEY SECTIONS KEY MAP
93	XS2	VALLEY CROSS SECTIONS
REVEGETATION		
94	L1	PLANTING AND SEEDING

CHESNIMNUS CREEK - WILLIAMS RESTORATION DESIGN
 DRAFT 80% DESIGN DRAWINGS
 FOR NEZ PERCE TRIBE
 CHESNIMNUS CREEK, GRANDE RONDE RIVER BASIN, OREGON
 WALLOWA COUNTY, OREGON

WORKING DRAFT FOR REVIEW AND REVISION

DATE: JULY, 2025
 DESIGNED: MP, IB, JF, ZS, SB
 APPROVED: JF

DRAWING NAME
 GENERALS
 COVER SHEET

DRAWING NO.
 G1
 SHEET 1 OF 94

FILE: R:\PROJECTS\LOWER GRANDE RONDE\CHESNIMNUS CREEK\NT\CAD\PRODUCTION\CHESNIMNUS-INT-GENERALS.DWG SAVED BY: ISABELLE.PLOT DATE: 7/30/2025 6:14 PM

QUANTITIES

Quantities						
Bid Item	Description	Zone 1	Zone 2	Zone 3	Zone 4	Unit
1	Mobilization/Demobilization	1	1	1	1	LS
2	Environmental Controls (SWPPP, ESC, etc.)	1	1	1	1	LS
3	Site Access (Temp Access Only)	1	1	1	1	LS
4	Work Area Isolation, Channel Diversion, Water Management	1	1	1	1	LS
5	Earthwork	8061	6758	16348	20,471	CY
6	On-site Spoils Areas	2104	3296	-	-	CY
7	Site Demo (Fence)	4990	2964	5860	7,315	LF
8	Class 1 Riffle Construction (Sorting and placement)	752	1067	1990	2,110	CY
9	Boulders (Small)	34	48	45	47	EA
10	Boulders (Large)	17	24	90	95	EA
11	Hardened Crossing	-	2	2	3	EA
12	Road Surfacing (Ranch access)	689	24	67	-	CY
13	Large Woody Material Acquisition and Delivery	1	1	1	1	LS
14	Habitat Structure 1 - three log structure - Install	8	12	15	13	EA
15	Habitat Structure 2 - Single Log Structure - Install	18	26	23	27	EA
16	Habitat Structure 3 - Whole Tree Structure - Install	33	43	56	75	EA
17	Habitat Structure 4 - Bleeder Jam - Install	-	-	4	3	EA
18	Habitat Structure 5 - Constriction Jam - Install	14	10	13	19	EA
19	Habitat Structure 6 - Small Apex Jam -Install	6	7	9	10	EA
20	Habitat Structure 7 - Felled Tree - Install	41	21	7	-	EA
21	Habitat Structure 8 - Relic BDA - Install	905	226	800	730	LF
22	Short Roughened Edge Bank Treatment	548	1625	1670	1,577	LF
23	Brush Bank Treatment	394	532	548	702	LF
24	Willow Baffles	440	400	320	720	LF
25	Revegetation (Seeding and Mulch)	9.02	5.21	14.11	22	Acre
26	Revegetation (Potted Plants)	9.02	5.21	14.11	22	Acre
27	Wildlife Friendly 4-string Barbed Wire Fence	5842	3315	227	2,952	LF
28	16-ft Steel Farm Gate and Bracing	2	1	2	2	EA
29	Cattle Guards (Materials and Install)	1	-	-	-	EA
30	12" Corrugated Metal Pipe (CMP) Culvert (Materials and Install)	60	-	-	-	FT
31	Existing Bridge Modification	-	-	1	-	LS
32	Railcar Bridge Modification	-	1	-	-	LS
33	Pre-fabricated Steel Bridge (Acquisition, Abutments and Installation)	-	-	1	-	LS
34	Small Track Hoe (i.e. CAT 318 or similar)	30	30	30	30	HR
35	Medium Track Hoe (i.e. CAT 330 or similar)	30	30	30	30	HR
36	Off-Road Dump Truck (i.e. CAT 735 or similar)	30	30	30	30	HR
37	Dozer (i.e. CAT D6 or similar)	20	20	20	20	HR

WOOD ACQUISITION SCHEDULE													
MATERIAL TYPE	SIZE (DBH) (IN)	MIN. LENGTH (FT)	ROOTWAD	MIN. ROOTWAD DIA. (FT)	BRANCHES	ZONE 1	ZONE 2	ZONE 3	ZONE 4	PHASE 1	PHASE 2	TOTAL	
TYPE 1	13" - 22"	30 - 40	YES	4.5	NO	88	94	126	142	268	182	450	EA
TYPE 2	13" - 22"	30 - 40	NO	NA	NO	112	191	222	245	467	303	768	EA
TYPE 3	13" - 22"	40 - 60	YES	4	YES	33	43	60	78	138	76	214	EA
TYPE 4	12" - 14"	20 - 35	NO	NA	NO	6	7	9	10	19	13	32	EA
TYPE 5	13" - 22"	40 - 50	YES	4.5	NO	41	21	11	3	14	62	76	EA
RACKING-1	4" - 12"	15 - 25	YES	2.5	YES	247	612	654	629	1283	859	2,141	EA
RACKING-2	4" - 12"	15 - 25	OPTIONAL	NA	YES	1415	1076	1758	1779	3537	2491	6,026	EA
SLASH-1	1" - 4"	5 - 15	NA	NA	YES	739	1318	1489	1601	3090	2057	5,146	CY
SLASH-2	1" - 4"	5 - 15	NA	NA	YES	1610	1572	2148	2281	4429	3182	7,610	CY
LIVE STAKES	> 3/4"	6 - 8	NA	NA	NA	4073	4187	5518	6097	11615	8260	19,873	EA



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WALLOWA COUNTY, OREGON

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DRAWING NAME
GENERALS

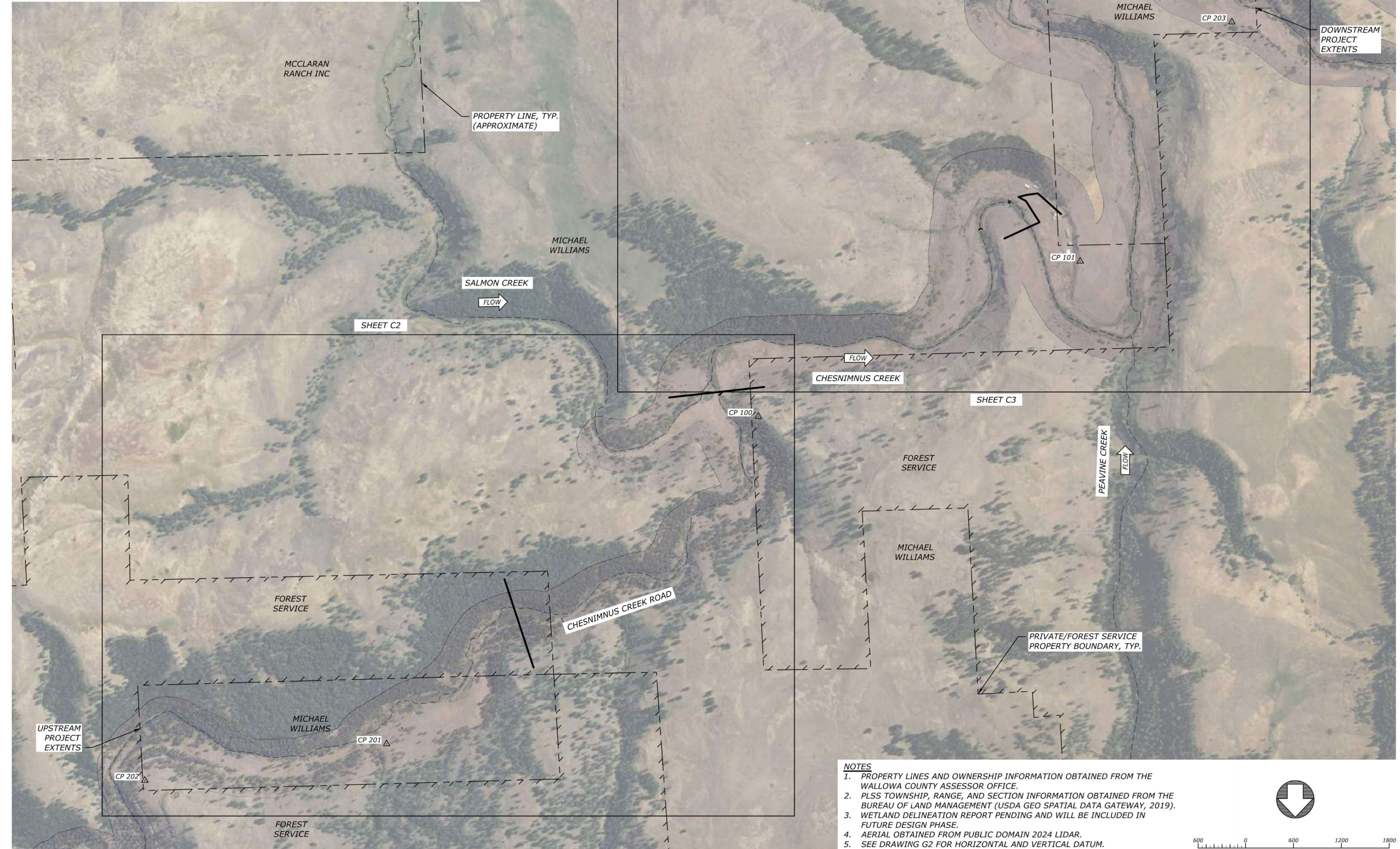
QUANTITIES

DRAWING NO.
G5
SHEET 5 OF 94

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CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 100	768195.1200	9078587.9400	3669.7000	RIO CP 100
CP 101	766251.3100	9074554.2900	3546.9100	RIO CP 101
CP 201	772296.3400	9083245.0400	3663.2500	RIO CP 201
CP 202	772755.0800	9086278.8700	3780.9000	RIO CP 202
CP 203	763254.6900	9072657.4600	3430.0200	RIO CP 203
CP 204	762756.1200	9075180.1500	3466.3000	RIO CP 204



- NOTES**
1. PROPERTY LINES AND OWNERSHIP INFORMATION OBTAINED FROM THE WALLOWA COUNTY ASSESSOR OFFICE.
 2. PLSS TOWNSHIP, RANGE, AND SECTION INFORMATION OBTAINED FROM THE BUREAU OF LAND MANAGEMENT (USDA GEO SPATIAL DATA GATEWAY, 2019).
 3. WETLAND DELINEATION REPORT PENDING AND WILL BE INCLUDED IN FUTURE DESIGN PHASE.
 4. AERIAL OBTAINED FROM PUBLIC DOMAIN 2024 LIDAR.
 5. SEE DRAWING G2 FOR HORIZONTAL AND VERTICAL DATUM.



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DRAWING NAME
 EXISTING CONDITIONS

SURVEY CONTROL & KEY MAP

DRAWING NO.
C1
 SHEET 6 OF 94

EXISTING CONDITIONS - SURVEY CONTROL & KEY MAP

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RESTORATION DESIGN
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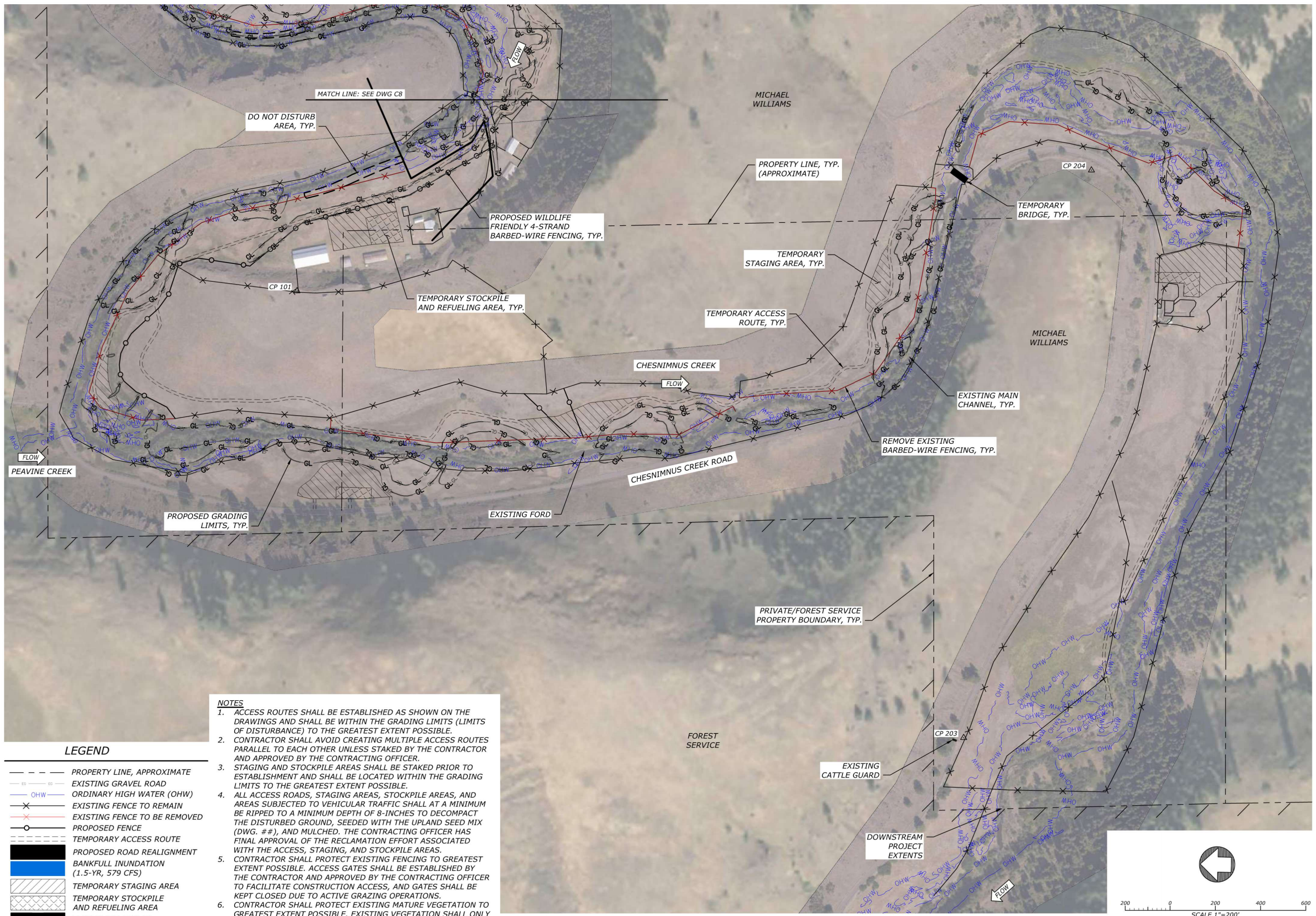
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DRAWING NAME
PROPOSED CONDITIONS

ACCESS & STAGING - 4

DRAWING NO.
C9
SHEET 14 OF 94

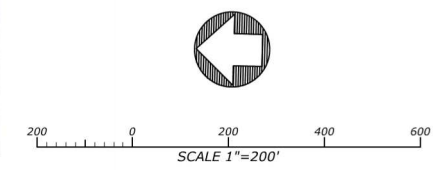


- NOTES**
1. ACCESS ROUTES SHALL BE ESTABLISHED AS SHOWN ON THE DRAWINGS AND SHALL BE WITHIN THE GRADING LIMITS (LIMITS OF DISTURBANCE) TO THE GREATEST EXTENT POSSIBLE.
 2. CONTRACTOR SHALL AVOID CREATING MULTIPLE ACCESS ROUTES PARALLEL TO EACH OTHER UNLESS STAKED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER.
 3. STAGING AND STOCKPILE AREAS SHALL BE STAKED PRIOR TO ESTABLISHMENT AND SHALL BE LOCATED WITHIN THE GRADING LIMITS TO THE GREATEST EXTENT POSSIBLE.
 4. ALL ACCESS ROADS, STAGING AREAS, STOCKPILE AREAS, AND AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL AT A MINIMUM BE RIPPED TO A MINIMUM DEPTH OF 8-INCHES TO DECOMPACT THE DISTURBED GROUND, SEEDED WITH THE UPLAND SEED MIX (DWG. #), AND MULCHED. THE CONTRACTING OFFICER HAS FINAL APPROVAL OF THE RECLAMATION EFFORT ASSOCIATED WITH THE ACCESS, STAGING, AND STOCKPILE AREAS.
 5. CONTRACTOR SHALL PROTECT EXISTING FENCING TO GREATEST EXTENT POSSIBLE. ACCESS GATES SHALL BE ESTABLISHED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER TO FACILITATE CONSTRUCTION ACCESS, AND GATES SHALL BE KEPT CLOSED DUE TO ACTIVE GRAZING OPERATIONS.
 6. CONTRACTOR SHALL PROTECT EXISTING MATURE VEGETATION TO GREATEST EXTENT POSSIBLE. EXISTING VEGETATION SHALL ONLY BE REMOVED WITH APPROVAL FROM THE CONTRACTING OFFICER.

LEGEND

---	PROPERTY LINE, APPROXIMATE
---	EXISTING GRAVEL ROAD
— OHW —	ORDINARY HIGH WATER (OHW)
— X —	EXISTING FENCE TO REMAIN
— X —	EXISTING FENCE TO BE REMOVED
— O —	PROPOSED FENCE
---	TEMPORARY ACCESS ROUTE
█	PROPOSED ROAD REALIGNMENT
█	BANKFULL INUNDATION (1.5-YR, 579 CFS)
█	TEMPORARY STAGING AREA
█	TEMPORARY STOCKPILE AND REFUELING AREA
█	TEMPORARY BRIDGE

PROPOSED CONDITIONS - ACCESS & STAGING - 4



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