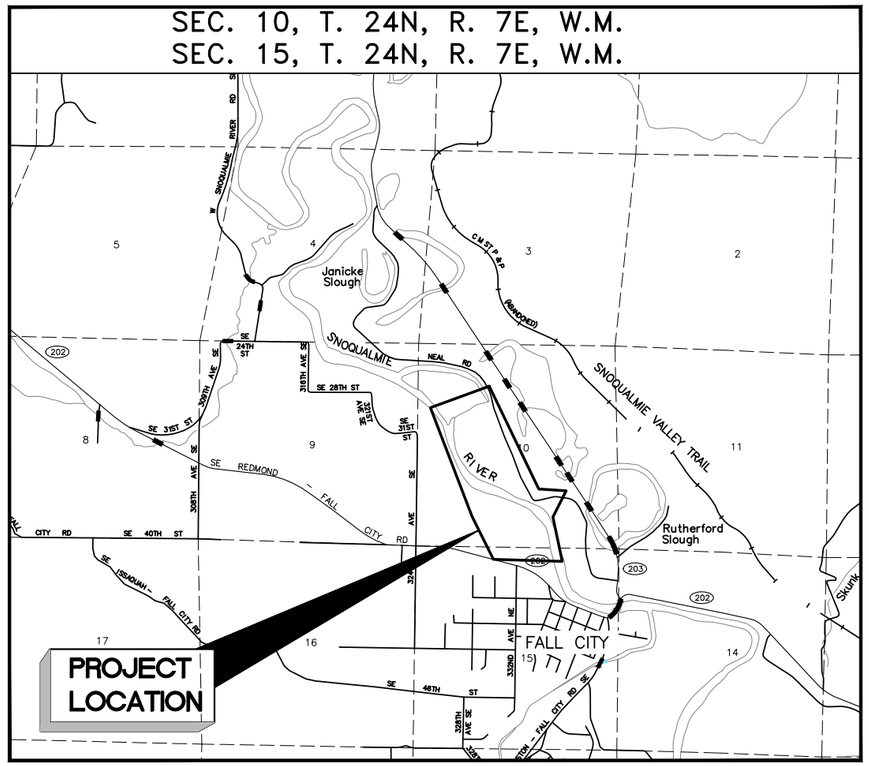
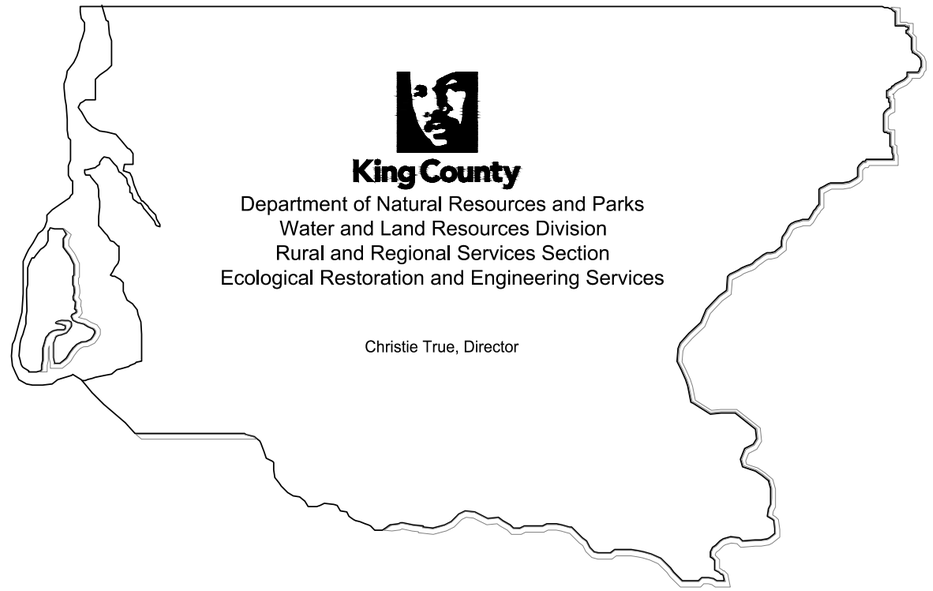


VICINITY MAP

SCALE: 1" = 2000'



King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY

FLOODPLAIN RESTORATION PROJECT

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CHECKED: T. WELLER (TRANTECH) 2–09–22
PROJECT No. KC: 1133842 HERRERA: 18–06954–000 TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

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PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
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Ecological Restoration and Engineering Services
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FALL CITY
FLOODPLAIN RESTORATION PROJECT

COVER SHEET

SHEET 1 OF 61 SHEETS

2021-07

LEGEND

- PARCEL LINE (APPROX)
- PROJECT LIMITS
- CONSERVATION EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- SURVEY EXTENTS
- BFE LINE
- FLOODWAY BOUNDARY
- 100-YEAR FLOODPLAIN BOUNDARY
- ORDINARY HIGH WATER MARK
- CLEARING LIMITS
- WEED MANAGEMENT LIMITS
- TEMPORARY CONSTRUCTED ACCESS ROAD
- TEMPORARY UNIMPROVED ACCESS ROAD
- RIPRAP EXPLORATION TRENCH
- STRAW WATTLES
- SILT FENCE
- HIGH VISIBILITY SILT FENCE
- HIGH VISIBILITY FENCING
- TURBIDITY CURTAIN
- ROCK CHECKDAM
- TEMPORARY BULK BAG DEFLECTOR
- TEMPORARY SAND BAG INLET CONTROL
- EXISTING TREE LINE (APPROX)
- EXISTING CONTOURS (1 FT INTERVAL)
- PROPOSED CONTOURS (1 FT INTERVAL)
- GUARDRAIL
- WIRE FENCE (TYPE 2)
- CUT LINE
- FILL LINE
- NEW ASPHALT
- FILTER STRIP
- EXISTING RIPRAP (SHOWN ON EXISTING CONDITIONS SHEETS ONLY)
- EXISTING RIPRAP TO BE REMOVED
- POSSIBLE EXISTING BURIED RIPRAP TO BE REMOVED, IF ENCOUNTERED
- EXISTING RIPRAP TO REMAIN
- NEW RIPRAP
- PRE-CONSTRUCTION COTTONWOOD BOLE PLANTING ZONE (NIC)
- COIR WRAP BANK PROTECTION
- SLASH PLACEMENT ZONE
- SALVAGE RACKING LOG PLACEMENT ZONE

- ASPHALT REMOVAL
- CONSTRUCTION STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE
- WETLAND
- SURPLUS EXCAVATION SPOILS
- TOPSOIL TYPE B
- EXISTING SUBGRADE
- TOPSOIL PLACEMENT – PLACE 12"
- TOPSOIL PLACEMENT – RIP AND DECOMPACT TO 12", AND AMEND
- TOPSOIL PLACEMENT – REMOVE ACCESS ROAD AND DECOMPACT
- RM 34.3 — RIVER MILE 34.3
- RIVER FLOW DIRECTION
- TEMPORARY SIDE CHANNEL AND WETLAND CROSSING
- EXISTING TREES (EVERGREEN/DECIDUOUS)
- TREE REMOVAL
- INDIVIDUALLY PLACED SALVAGED CLASS R LOG
- INDIVIDUALLY PLACED SALVAGED CLASS L LOG
- BLC TYPE 1
- BLC TYPE 2
- BLC TYPE 2 NO L5 LOGS
- BANK DEFLECTOR ELS
- FLOODPLAIN ROUGHENING ELS
- SLS TYPE 1
- SLS TYPE 2
- SLS TYPE 3

- CPT
- BORING
- HAND AUGER BORING
- TEST PIT
- KC GW MONITORING WELL
- KC RIVER GAGE
- TEMPORARY PROJECT SURVEY CONTROL HUB

ABBREVIATIONS

APPROX	APPROXIMATE	LF	LINEAL FOOT/FEET
ATB	ASPHALT TREATED BASE	LT	LEFT
AVG	AVERAGE	MAX	MAXIMUM
B	BORING	MIN	MINIMUM
BD	BANK DEFLECTOR	N	NORTH/NORTHING
BFE	BASE FLOOD ELEVATION	NA	NOT APPLICABLE
BLDG	BUILDING	NIC	NOT IN CONTRACT
BLC	BURIED LOG CLUSTER	NO	NUMBER
BMP	BEST MANAGEMENT PRACTICE	NTS	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	OC	ON CENTER
CB	CATCH BASIN	OHW	ORDINARY HIGH WATER
CFS	CUBIC FEET PER SECOND	PC	POINT OF CURVATURE
CG	CLEAR AND GRUB	PI	POINT OF INTERSECTION
C/L, CL	CENTERLINE	PREP	PREPARATION
CMP	CORRUGATED METAL PIPE	PT	POINT
CONC	CONCRETE	PVI	POINT OF VERTICAL INTERSECTION
CONST	CONSTRUCT, CONSTRUCTION	QTY	QUANTITY
COS	CITY OF SEATTLE	RB	RIGHT BANK
CP	CONTROL POINT	RCG	REED CANARY GRASS
CPE	CORRUGATED POLYETHYLENE PIPE	RD	ROAD
CPP	CORRUGATED PLASTIC PIPE	REF	REFERENCE
CPT	CONE PENETRATION TEST	RM	RIVER MILE
CSBC	CRUSHED SURFACING BASE COURSE	ROW, R/W	RIGHT-OF-WAY
CSTC	CRUSHED SURFACING TOP COURSE	RT	RIGHT
DBH	DIAMETER AT BREAST HEIGHT	S	SOUTH, SLOPE
DEMO	DEMOLITION	SLC	SALVAGE LOG CLUSTER
DIA	DIAMETER	SLS	SMALL LOG STRUCTURE
DLS	DEPARTMENT OF LOCAL SERVICES	SPEC	SPECIFICATION
DWG	DRAWING	SRR	SETBACK ROCK REVETMENT
E	EAST, EASTING	STA	STATION
EA	EACH	STD	STANDARD
EG	EXISTING GROUND	SWDM	SURFACE WATER DESIGN MANUAL
EL	ELEVATION	SWPPP	STORMWATER POLLUTION PREVENTION PLAN
ELS	ENGINEERED LOG STRUCTURE		
ESC	EROSION AND SEDIMENT CONTROL	SWPPS	STORMWATER POLLUTION PREVENTION AND SPILL CONTROL
EVC	END VERTICAL CURVE		
EX, EXIST	EXISTING	TCE	TEMPORARY CONSTRUCTION EASEMENT
FG	FINISHED GROUND	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
FT	FEET/FOOT		
H	HAND AUGER BORING	TP	TEST PIT
HMA	HOT MIX ASPHALT	TYP	TYPICAL
HOR	HORIZONTAL	VCL	VERTICAL CURVE LENGTH
HR	HAFFNER REVETMENT	W	WEST, WATER
HT	HEIGHT	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
IE	INVERT ELEVATION		
IN	INCH/INCHES		
KC	KING COUNTY	WSE	WATER SURFACE ELEVATION
L	LENGTH	WQPMP	WATER QUALITY PROTECTION AND MONITORING PLAN
LBFEF	LEFT BANK FLOODPLAIN EMBANKMENT FILL		
LiDAR	LIGHT DETECTION AND RANGING		

1/5 — DETAIL REFERENCE NUMBER; DRAWING ON WHICH DETAIL IS SHOWN

A/5 — SECTION REFERENCE LETTER; DRAWING ON WHICH SECTION IS SHOWN

SECTION/DETAIL 1/5 (SCALE: 1"=XX') — SECTION/DETAIL REFERENCE NUMBER/LETTER; DRAWING FROM WHICH SECTION/DETAIL WAS TAKEN

"–" INDICATES THAT THE DETAIL/SECTION IS SHOWN ON THE SAME DRAWING

"TYP" INDICATES THAT THE DETAIL/SECTION IS UNIFORMLY TYPICAL THROUGHOUT PROJECT EXCEPT WHERE OTHERWISE NOTED

"VAR" SPECIFIES THAT DETAIL/SECTION WAS TAKEN FROM VARIOUS DRAWINGS

NOTE AND DETAIL/SECTION REFERENCING

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Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

LEGEND AND ABBREVIATIONS

SHEET 2 OF 61 SHEETS

2021-07

GENERAL CONSTRUCTION NOTES

1. THE WORK INCLUDES CLEARING WORK AREAS OF VEGETATION, STOCKPILING CLEARED VEGETATION, OFFSITE DISPOSAL OF INVASIVE VEGETATION THAT IS CLEARED, REMOVING AN EXISTING LEVEE AND ROCK ARMORING, CONSTRUCTING A NEW SETBACK ROCK REVETMENT, CONSTRUCTING NEW CHANNELS, FLOODPLAIN GRADING, CONSTRUCTING ENGINEERED LOG STRUCTURES, INSTALLING TIMBER PILES AND IMPORTED AND SALVAGED LOGS IN THE FLOODPLAIN, PLANTING, CONSTRUCTING AND REMOVING TEMPORARY FACILITIES, WORKING AROUND EXISTING ABOVE GROUND UTILITIES, ROAD REALIGNMENT, AND RESTORING THE DISTURBED AREAS.

2. THE WORK SHOWN ON THE PLANS SHALL BE SEQUENCED AND PERFORMED IN A MANNER THAT MINIMIZES IMPACTS TO THE RIVER, WETLANDS, EXISTING VEGETATION, THE WORK SITE AND ADJACENT PRIVATE PROPERTY AND PUBLIC INFRASTRUCTURE.

3. THE CONTRACTOR MAY DECIDE HOW TO SEQUENCE THE WORK AT EACH SITE. HOWEVER THIS PROJECT WILL BE CONSTRAINED BY THE MIGRATORY BIRD TREATY ACT AND BY AN IN-WATER WORK WINDOW. THE WORK WINDOW RESTRICTIONS ARE PROVIDED IN THE CONTRACT SPECIAL PROVISIONS AND PERMITS INCLUDED IN THE CONTRACT DOCUMENTS INCLUDING THE PROJECT HYDRAULIC PROJECT APPROVAL, SECTION 404 PERMIT, AND ANY OTHER APPLICABLE PERMIT. NO IN-WATER WORK MAY OCCUR WITHIN THE ORDINARY HIGH WATER LINE FOR THE DATES SET FORTH IN THE HYDRAULIC PROJECT APPROVAL.

4. PROJECT REPRESENTATIVE IS DEFINED AS THE OWNER'S REPRESENTATIVE OR OWNER'S PROJECT REPRESENTATIVE. KING COUNTY IS DEFINED AS THE OWNER.

5. THE CONTRACTOR SHALL STAKE THE PROJECT CONSTRUCTION LIMITS FOR APPROVAL BY THE OWNER OR PROJECT REPRESENTATIVE AT LEAST 5 WORKING DAYS PRIOR TO COMMENCING ONSITE ACTIVITIES. PROJECT CONSTRUCTION LIMITS SHOWN ON THE PLANS REPRESENT WORK AREAS AND DO NOT REPRESENT CLEARING LIMITS. CLEARING LIMITS ARE SHOWN.

6. TREES AND BRUSH NOT SHOWN ON THE PLANS WILL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES. THE OWNER SHALL IDENTIFY AND FLAG ALL TREES TO BE REMOVED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL OTHER TREES NOT MARKED. FOLLOWING CLEARING OF ALLOWED VEGETATION, THE CONTRACTOR SHALL STOCKPILE ALL TREES AND BRUSH PRIOR TO AND DURING CONSTRUCTION ACTIVITIES, FOR USE IN AREAS AS SHOWN ON THE PLANS, AND AS DIRECTED BY THE OWNER OR PROJECT REPRESENTATIVE TO CREATE ROUGH FINISHED GRADED SURFACES. CERTAIN VEGETATION MAY BE FLAGGED BY THE PROJECT REPRESENTATIVE OR OWNER FOR SALVAGE, AND CARE SHALL BE TAKEN TO PROTECT THOSE PLANTS FROM DAMAGE AND DESICCATION.

7. ALTERATION OR DISTURBANCE OF THE CHANNEL, FLOODPLAIN, AND ANY BANK AND FLOODPLAIN VEGETATION SHALL BE MINIMIZED TO THAT NECESSARY TO CONSTRUCT THE PROJECT. THE CONTRACTOR SHALL KEEP DISTURBED AREAS WITHIN THE PROJECT CONSTRUCTION LIMITS SHOWN ON THE PLANS, AND SHALL NOT EXTEND THESE LIMITS UNLESS APPROVED BY THE PROJECT REPRESENTATIVE.

8. THE CONTRACTOR SHALL PROVIDE 24 HOURS ADVANCE NOTICE TO THE OWNER OR PROJECT REPRESENTATIVE PRIOR TO ANY REQUIRED SPECIAL INSPECTION.

9. CONSTRUCTION MATERIAL AND EQUIPMENT STAGING AREAS SHALL BE LOCATED ENTIRELY WITHIN THE PROJECT CONSTRUCTION LIMITS. CONSTRUCTION MATERIALS AND EQUIPMENT SHALL NOT BE STORED OUTSIDE OF IDENTIFIED STAGING AREAS, UNLESS APPROVED BY THE OWNER OR PROJECT REPRESENTATIVE. THE CONTRACTOR SHALL PROTECT ALL CONSTRUCTION MATERIALS AND EQUIPMENT FROM DAMAGE AT ALL TIMES.

10. NO EQUIPMENT OR CONSTRUCTION MATERIALS SHALL BE STORED OVERNIGHT BELOW THE ORDINARY HIGH WATER (OHW) LINE. EQUIPMENT FUELING AREAS SHALL BE LOCATED MORE THAN 150' FROM THE EXISTING OHW LINE OF THE RIVER AND WETLAND BOUNDARIES.

11. EQUIPMENT USED FOR THIS PROJECT SHALL BE FREE OF EXTERNAL PETROLEUM-BASED PRODUCTS WHILE WORKING WITHIN THE OHWM, IN ANY SURFACE WATER, OR WETLANDS. ACCUMULATION OF SOILS OR DEBRIS SHALL BE REMOVED FROM EQUIPMENT PRIOR TO ITS WORKING BELOW THE OHW LINE AND WITHIN THE WATER.

12. ALL EQUIPMENT OPERATING BELOW OHW AND WITHIN WETLANDS SHALL USE ONLY BIODEGRADABLE, VEGETABLE BASED HYDRAULIC FLUIDS OR APPROVED OTHER.

13. EQUIPMENT SHALL BE CHECKED AT THE BEGINNING OF EACH WORK SHIFT FOR LEAKS, AND ANY NECESSARY REPAIRS SHALL BE COMPLETED PRIOR TO COMMENCING WORK ACTIVITIES.

14. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUID, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE RIVER, WETLANDS OR THE PROJECT SITE FROM EQUIPMENT OR SUPPLIES USED DURING CONSTRUCTION.

15. CONTRACTOR SHALL LIMIT MACHINERY MOVEMENT TO THE PROJECT CONSTRUCTION LIMITS DEFINED ON THE PLANS OR IDENTIFIED AS ACCEPTABLE BY THE OWNER OR PROJECT REPRESENTATIVE.

16. IF AT ANY TIME, AS A RESULT OF PROJECT ACTIVITIES, FISH ARE OBSERVED IN DISTRESS, A FISH KILL OCCURS, OR WATER QUALITY PROBLEMS DEVELOP (INCLUDING EQUIPMENT LEAKS OR SPILLS), OPERATIONS SHALL CEASE AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY. WASHINGTON DEPARTMENT OF FISH AND WILDLIFE AND WASHINGTON STATE DEPARTMENT OF ECOLOGY SHALL BE CONTACTED IMMEDIATELY BY THE OWNER OR BY HIS/HER DESIGNEE. WORK SHALL NOT RESUME UNTIL FURTHER APPROVAL BY THE OWNER.

17. EROSION AND SEDIMENT CONTROL METHODS SHALL BE USED TO MINIMIZE SILT-LADEN WATER FROM ENTERING THE RIVER AND WETLANDS. MINIMUM EROSION AND WATER POLLUTION CONTROL AND WATER MANAGEMENT BMPS ARE SHOWN ON THE TESC AND WATER MANAGEMENT SITE PLAN. THE CONTRACTOR SHALL IMPLEMENT THE PLAN, ADD ANY ADDITIONAL MEASURES REQUIRED TO MEET WASHINGTON STATE WATER QUALITY STANDARDS AND PROJECT PERMIT CONDITIONS, AND SHALL BE RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROL AND WATER MANAGEMENT NEEDED DURING CONSTRUCTION ACTIVITIES.

18. IF HIGH FLOW CONDITIONS THAT MAY CAUSE SILTATION, EROSION OR A DANGEROUS WORK ENVIRONMENT ARE ENCOUNTERED DURING CONSTRUCTION, WORK SHALL STOP IN THOSE AFFECTED AREAS UNTIL THE FLOW SUBSIDES.

19. CULTURAL RESOURCES MONITORING WILL BE COMPLETED BY THE OWNER DURING CONSTRUCTION. IF AT ANY TIME, AS A RESULT OF PROJECT ACTIVITIES, ARTIFACTS OR HUMAN REMAINS ARE FOUND, OPERATIONS SHALL CEASE AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY. ALL CONSTRUCTION STAFF SHALL BE TRAINED IN CULTURAL RESOURCES MONITORING BASICS.

RECOMMENDED CONSTRUCTION SEQUENCE

1. HOLD THE PRE-CONSTRUCTION MEETING.
2. POST SIGN WITH NAME AND PHONE NUMBER OF CSWPP/ESC SUPERVISOR (MAY BE CONSOLIDATED WITH THE REQUIRED NOTICE OF CONSTRUCTION SIGN).
3. FLAG OR FENCE CLEARING LIMITS.
4. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
5. INSTALL PERIMETER PROTECTION (SILT FENCE, STRAW WATTLES, ETC.).
6. GRADE AND STABILIZE CONSTRUCTION ROADS AND CROSSINGS.
7. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, TEMPORARY CULVERTS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
8. MAINTAIN EROSION CONTROL AND SWPPS MEASURES IN ACCORDANCE WITH KING COUNTY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
9. RELOCATE EROSION CONTROL AND SWPPS MEASURES, OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL AND POLLUTANT PROTECTION IS ALWAYS IN ACCORDANCE WITH THE KING COUNTY CONSTRUCTION STORMWATER POLLUTION PREVENTION STANDARDS.
10. COVER ALL AREAS THAT WILL BE UNWORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT.
11. STABILIZE ALL AREAS WITHIN SEVEN DAYS OF REACHING FINAL GRADE.
12. SEED, SOD, STABILIZE, OR COVER ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
13. UPON COMPLETION OF THE PROJECT, OR BEGINNING OF WET SEASON (OCTOBER 1 TO APRIL 30) STABILIZE ALL DISTURBED AREAS AND REMOVE BMPS IF APPROPRIATE.

ESC NOTES

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.).
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC COVER METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
11. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
12. ALL AREAS SHALL BE SEEDED ACCORDING TO SEEDING PLANS AND SECTION 8-02.3.

SWPPS NOTES

1. ALL POLLUTANTS, INCLUDING WASTE MATERIALS, THAT OCCUR ONSITE SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
2. COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND NON-INERT WASTES PRESENT ON THE SITE (SEE CHAPTER 173-304 WAC FOR THE DEFINITION OF INERT WASTE). ONSITE FUELING TANKS SHALL INCLUDE SECONDARY CONTAINMENT.
3. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF MUST BE CONDUCTED USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. EMERGENCY REPAIRS MAY BE PERFORMED ONSITE USING TEMPORARY PLASTIC PLACED BENEATH AND, IF RAINING, OVER THE VEHICLE.
4. APPLICATION OF AGRICULTURAL CHEMICALS, INCLUDING FERTILIZERS AND PESTICIDES, SHALL BE CONDUCTED IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICAL TO STORMWATER RUNOFF. MANUFACTURERS' RECOMMENDATIONS FOR APPLICATION RATES AND PROCEDURES SHALL BE FOLLOWED.

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2-09-22
CHECKED: T. WELLER (TRANTECH) 2-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE		02-2022
PROJECT SUPERVISOR: J. HANSEN		02-2022
PROJECT MANAGER: F. NOPP		02-2022
DESIGNED: I.M, K.F., J.W.		02-2022
DESIGN ENTERED: E.M., R.B.		02-2022

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(206) 441-9080

IAN B. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 02/09

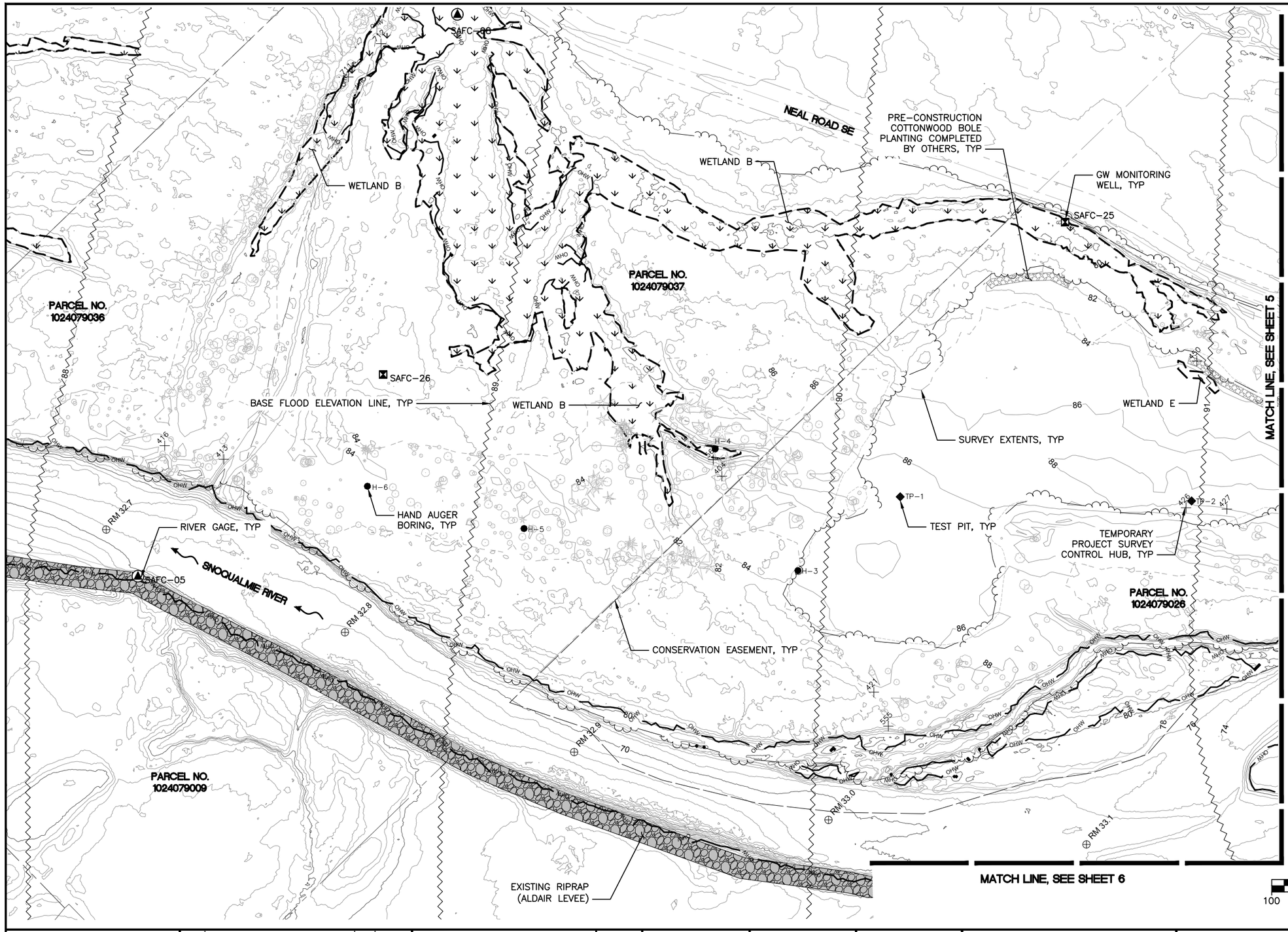
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

GENERAL NOTES

SHEET 3 OF 61 SHEETS

2021-07



HORIZONTAL DATUM

THE HORIZONTAL DATUM FOR THIS SURVEY IS NAD 83–91, WASHINGTON NORTH ZONE, STATE PLANE COORDINATE SYSTEM BASED ON PUBLISHED COORDINATES FOR WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) MONUMENT WITH DESIGNATION 'KC NEAL' AND MONUMENT ID 5215

NORTHING: 209787.674 US SURVEY FEET
EASTING: 1380151.400 US SURVEY FEET

VERTICAL DATUM

THE VERTICAL DATUM FOR THIS SURVEY IS NAVD 88, BASED ON PUBLISHED COORDINATES FOR WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) MONUMENT WITH DESIGNATION 'KC NEAL' AND MONUMENT ID 5215

ELEVATION: 94.760 US SURVEY FEET

SURVEYOR'S NOTES

1. ALL DOCUMENTS ARE RECORDS OF WSDOT AND KING COUNTY, WASHINGTON. LINES OF OCCUPATION WERE NOT SURVEYED AND NO CORNERS WERE SET IN THE COURSE OF THIS SURVEY. GIS DATA FOR SNOQUALMIE RIVER WAS USED TO DEPICT THE NORTHERLY AND EASTERLY BOUNDARIES OF PARCELS 1254079002 AND 1524079145. A PORTION OF THE SURVEYED LOCATION OF NEAL ROAD IS IN CONFLICT WITH THE COUNTY ENGINEER'S SURVEY OF THE RIGHT OF WAY. IT WAS NOT WITHIN THE SCOPE OF THIS PROJECT TO ADDRESS OR RESOLVE THIS SITUATION.
2. PGS, INC COLLECTED TOPOGRAPHIC DATA WITHIN THE OUTLINED AREAS MARKED HEREON. THIS DATA WAS MERGED WITH AN EXISTING LiDAR DATASET PROVIDED TO PGS, INC BY HERRERA ENVIRONMENTAL CONSULTANTS ON JULY 29, 2020. LiDAR WAS FLOWN IN 2019 BY GEOTERRA FOR KING COUNTY.
3. ALL UNDERGROUND UTILITY LOCATIONS ARE BASED ON OBSERVED EVIDENCE OF STRUCTURES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN–SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION PROVIDED. UTILITY LOCATIONS ARE JUST FOR PLANNING PURPOSES. CONTRACTOR SHALL COMPLETE THEIR OWN UTILITY LOCATE FOR CONSTRUCTION.
4. EXISTING TREES ONLY SHOWN WITHIN PROJECT SURVEY LIMITS.

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2–09–22, T. WELLER (TRANTECH) 2–09–22
PROJECT No. KC: 1133842, HERRERA: 18–06954–000, TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022
PROJECT SUPERVISOR: J. HANSEN	02–2022
PROJECT MANAGER: F. NOPP	02–2022
DESIGNED: I.M, K.F., J.W.	02–2022
DESIGN ENTERED: E.M., R.B.	02–2022

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LEN B. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 03/01/22

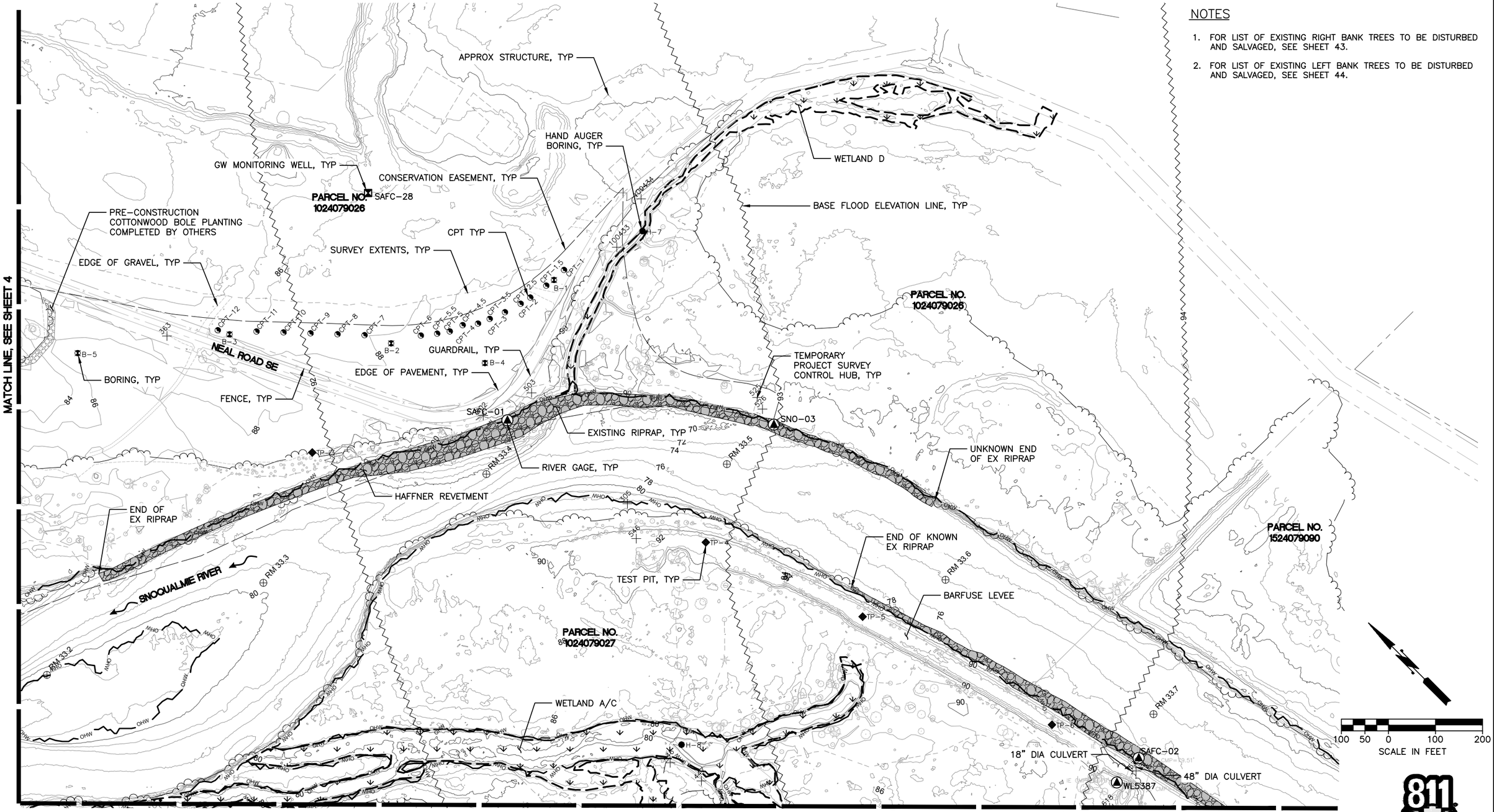
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

EXISTING CONDITIONS 1

SHEET 4 OF 61 SHEETS

2021-07



NOTES

1. FOR LIST OF EXISTING RIGHT BANK TREES TO BE DISTURBED AND SALVAGED, SEE SHEET 43.
2. FOR LIST OF EXISTING LEFT BANK TREES TO BE DISTURBED AND SALVAGED, SEE SHEET 44.

100 50 0 100 200
SCALE IN FEET

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)				APPROVED: W. MANSFIELD, PE	02-2022	HERRERA 2200 Sixth Avenue Suite 1100 Seattle, WA 98121 (206) 441-9080	I. B. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 02/09/22		King County Department of Natural Resources and Parks Water and Land Resources Division Rural and Regional Services Section Ecological Restoration and Engineering Services *Christie True, Director*	**FALL CITY FLOODPLAIN RESTORATION PROJECT**	SHEET 5 OF 61 SHEETS
SURVEY BASE MAP:				PROJECT SUPERVISOR: J. HANSEN	02-2022						
I. MOSTRENKO (HERRERA) 2-09-22 CHECKED: T. WELLER (TRANTECH) 2-09-22				PROJECT MANAGER: F. NOPP	02-2022						
KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031				DESIGNED: I.M, K.F., J.W.	02-2022					EXISTING CONDITIONS 2	2021-07
SURVEY No.	NUM.	REVISION	BY	DESIGN ENTERED: E.M., R.B.	02-2022						

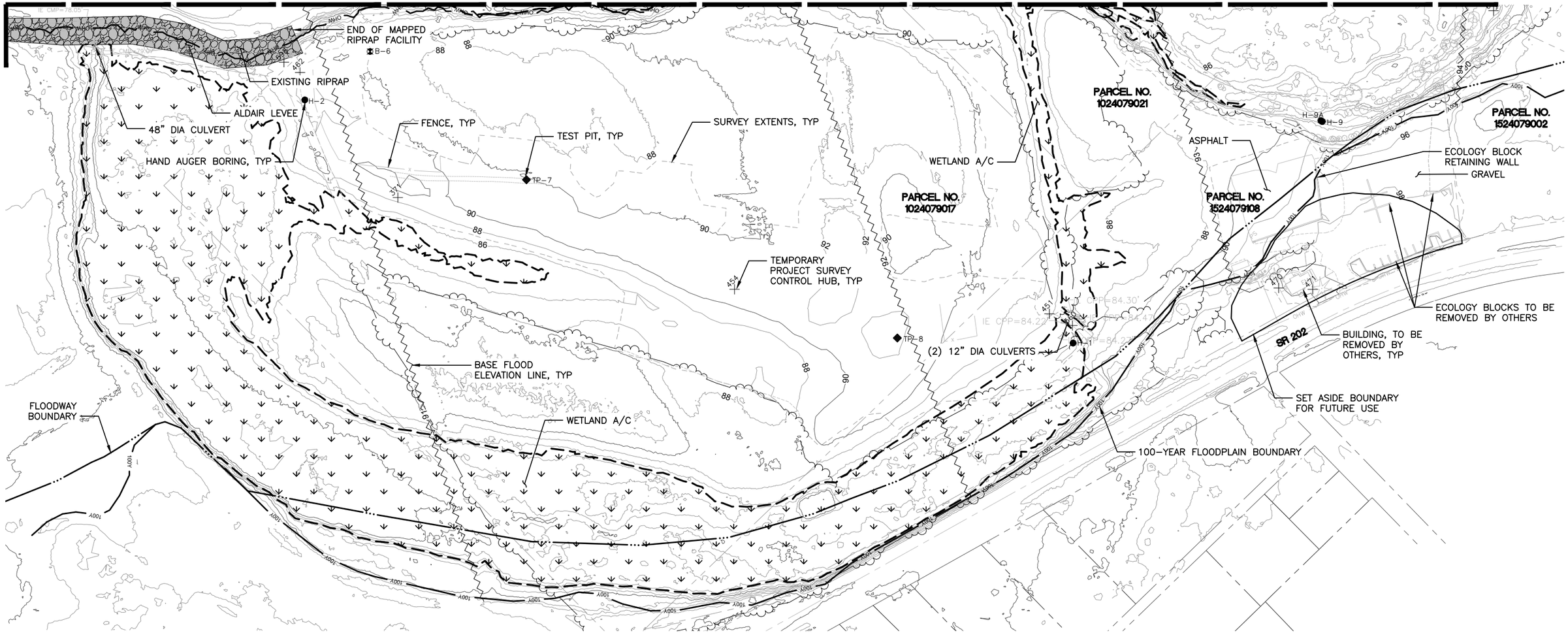


TABLE: TEMPORARY PROJECT SURVEY CONTROL

PT	NORTHING	EASTING	EL	DESC
305	211535.727	1378158.323	85.87	HUB&TACK
363	212480.010	1377718.505	86.82	HUB&TACK
371	211653.119	1376593.251	88.86	HUB&TACK
404	213346.967	1376552.569	86.43	HUB&TACK
413	214081.742	1375866.016	86.57	HUB&TACK
416	214185.454	1375801.114	86.40	HUB&TACK
421	212822.023	1376461.274	87.47	HUB&TACK
426	212639.751	1377169.751	87.55	HUB&TACK
427	212579.644	1377226.334	88.10	HUB&TACK
446	211082.288	1377833.444	86.14	HUB&TACK
447	211007.890	1377852.963	86.93	HUB&TACK
450	212833.813	1377394.505	81.62	HUB&TACK
451	210555.928	1377358.340	86.45	HUB&TACK
454	211040.950	1376943.285	90.88	HUB&TACK
462	211971.601	1376632.013	88.56	HUB&TACK
470	210265.253	1377722.785	99.41	HUB&TACK
471	210214.576	1377769.561	100.31	HUB&TACK
502	211885.233	1378074.248	90.48	HUB&TACK
503	211846.596	1378181.136	91.03	HUB&TACK
525	211500.316	1378513.217	90.99	HUB&TACK
526	211475.229	1378503.749	91.15	HUB&TACK
535	210369.656	1378521.227	95.17	HUB&TACK
546	211470.105	1378119.314	91.83	HUB&TACK
555	212752.822	1376433.311	88.73	HUB&TACK
560	210506.475	1377374.480	86.13	HUB&TACK
567	213383.169	1376564.088	79.08	HUB&TACK
598	212009.230	1376623.770	88.10	HUB&TACK
618	210354.169	1378425.975	89.16	HUB&TACK
711	214449.597	1376589.349	77.74	HUB&TACK
712	214450.581	1376683.439	77.77	HUB&TACK
100433	211937.225	1378528.030	88.99	HUB&TACK
100434	211973.634	1378637.060	89.99	HUB&TACK

100 50 0 100 200
SCALE IN FEET

811 Know what's below. Call before you dig.

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SURVEY BASE MAP:
I. MOSTRENKO (HERRERA) 2-09-22
CHECKED: T. WELLER (TRANTECH) 2-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

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APPROVED: W. MANSFIELD, PE	02-2022
PROJECT SUPERVISOR: J. HANSEN	02-2022
PROJECT MANAGER: F. NOPP	02-2022
DESIGNED: I.M, K.F., J.W.	02-2022
DESIGN ENTERED: E.M., R.B.	02-2022

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JAN E. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 02/09/22

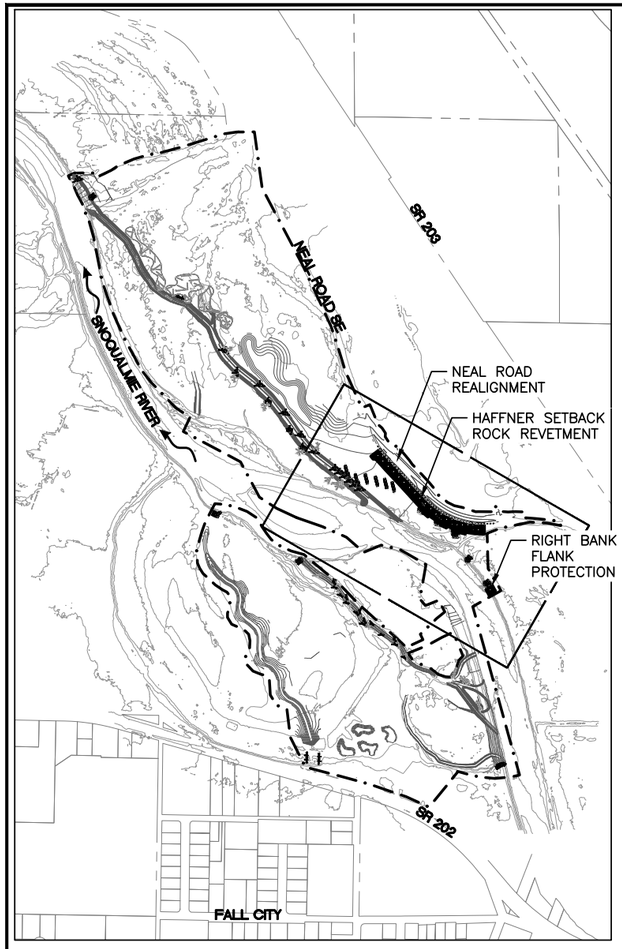
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

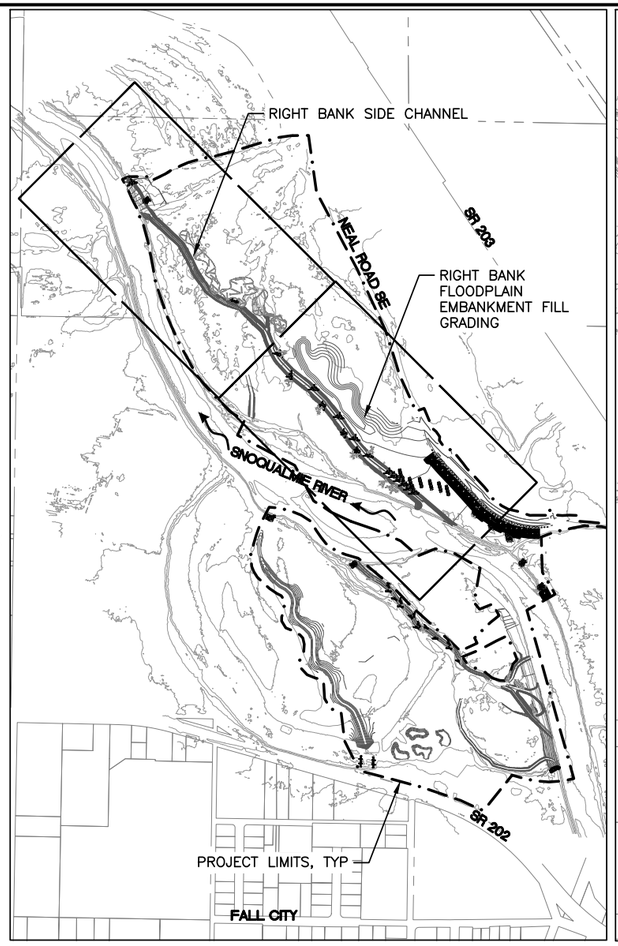
EXISTING CONDITIONS 3

SHEET 6 OF 61 SHEETS

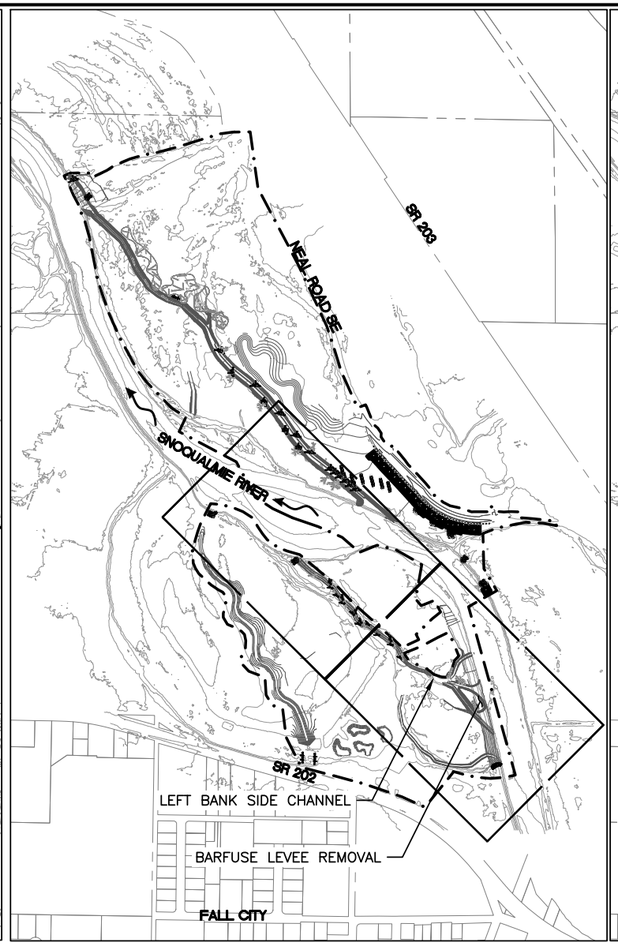
2021-07



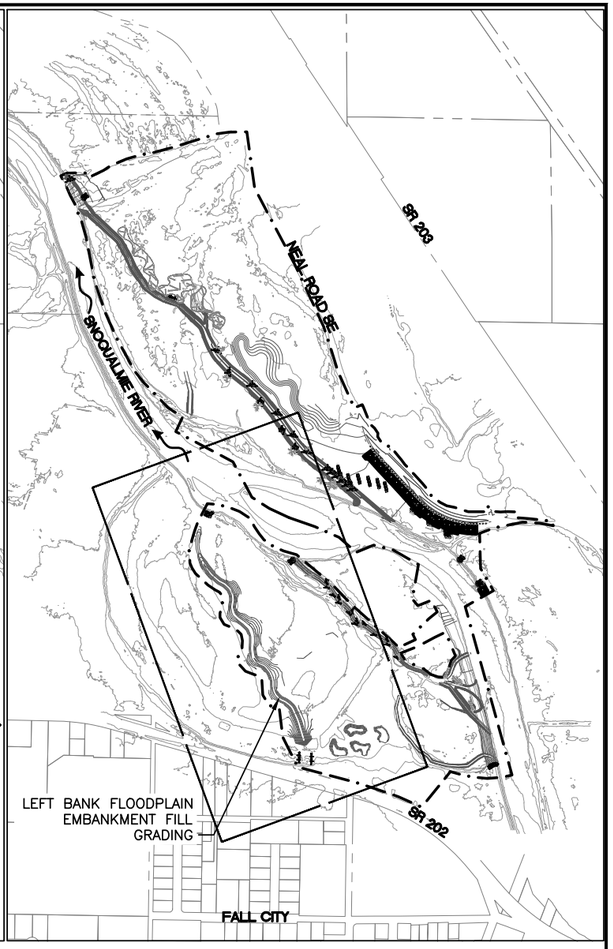
NEAL ROAD SE REALIGNMENT, SEE SHEETS 8-17
HAFFNER SETBACK ROCK REVETMENT, SEE SHEETS 18-19
HAFFNER REVETMENT REMOVAL, SEE SHEETS 38-39



RIGHT BANK SIDE CHANNEL AND FLOODPLAIN EMBANKMENT FILL GRADING, SEE SHEETS 20-26



BARFUSE LEVEE REMOVAL AND LEFT BANK SIDE CHANNEL, SEE SHEETS 27-30 AND 40-41



LEFT BANK FLOODPLAIN EMBANKMENT FILL GRADING, SEE SHEETS 31-32

500 250 0 500 1000
SCALE IN FEET

N

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2-09-22, T. WELLER (TRANTECH) 2-09-22
PROJECT No. KC: 1133842, HERRERA: 18-06954-000, TRANTECH: 2018031
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NUM.	REVISION	BY	DATE

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PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: I.M, K.F., J.W.	02-2022	
DESIGN ENTERED: E.M., R.B.	02-2022	

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IAN B. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 05/09/22

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

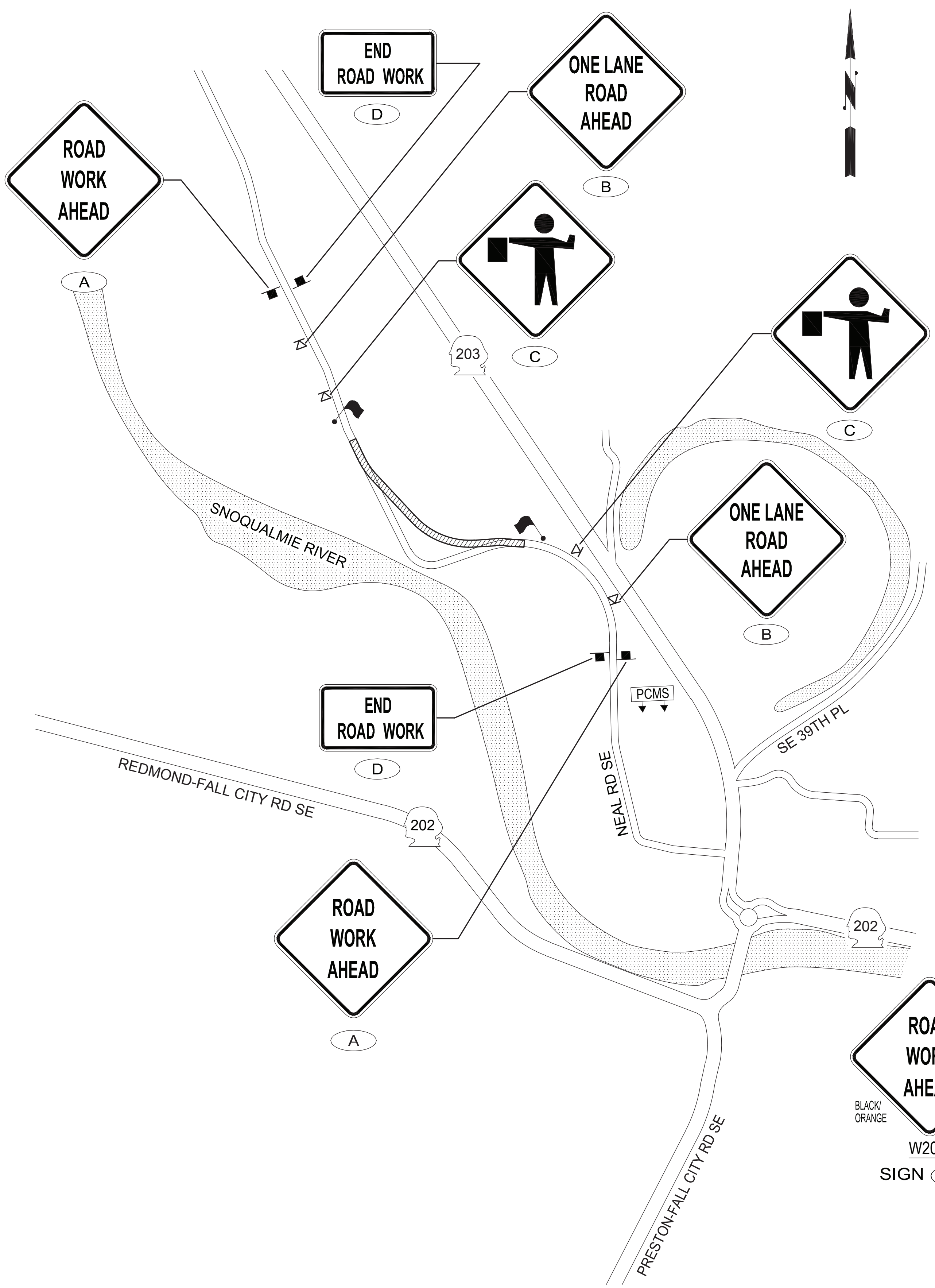
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

KEY MAP – CONSTRUCTION ELEMENTS

SHEET 7 OF 61 SHEETS

2021-07



MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

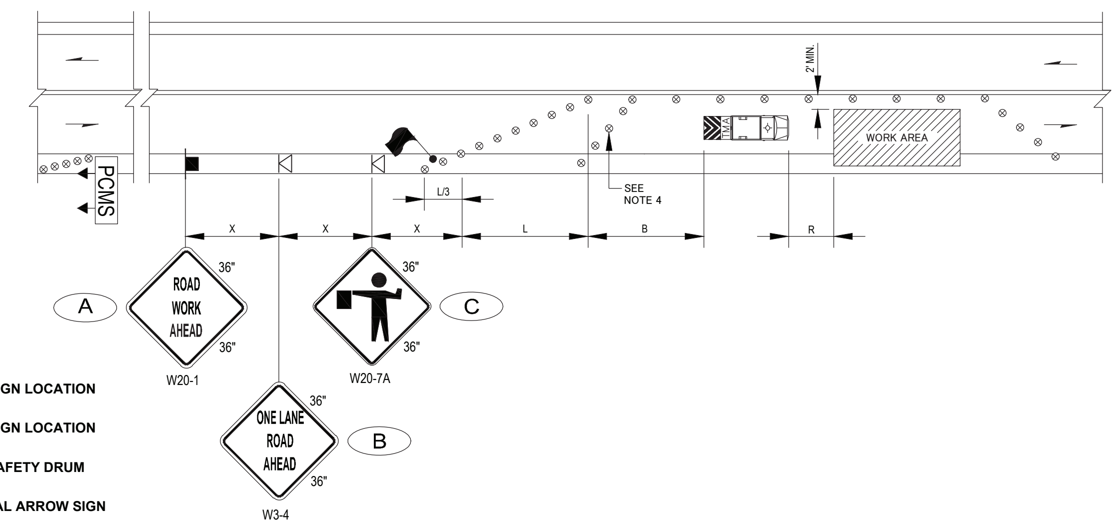
MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)										
SHOULDER WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.										

SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500'
RURAL HIGHWAYS	60 / 65 MPH	800'
RURAL ROADS	45 / 55 MPH	500'
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' *
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' (2)
URBAN STREETS	25 MPH OR LESS	100' (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
POSTED SPEED	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRUCK MOUNTED ATTENUATOR MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.	30 FEET MIN. TO 100 FEET MAX.									



PCMS	
1	2
LANE CLOSURE AHEAD	PREPARE TO STOP
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ✓ IN ADVANCE OF LANE CLOSURE SIGNING.

FLAGGER
CLASS A SIGN LOCATION
CLASS B SIGN LOCATION
TRAFFIC SAFETY DRUM
SEQUENTIAL ARROW SIGN
TRUCK MOUNTED ATTENUATOR (WHEN WARRANTED)
PCMS PORTABLE CHANGEABLE MESSAGE SIGN

SINGLE-LANE CLOSURE FOR TWO-LANE ROADWAYS

N.T.S.

NOTES:

1. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
2. EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER.
3. DEVICES SHALL NOT ENCROACH INTO THE ADJACENT LANE.
4. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (FT) (RECOMMENDED).
5. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
6. ALL SIGNS ARE BLACK ON ORANGE.
7. IDENTICAL SIGNAGE CONFIGURATION FOR TRAFFIC IN BOTH DIRECTIONS

FILE NAME				
TIME				
DATE				
PLOTTED BY				
DESIGNED BY				
ENTERED BY				
CHECKED BY				
PROJ. ENGR.				
REGIONAL ADM.	REVISION	DATE	BY	

REGION NO. STATE WASH JOB NUMBER CONTRACT NO. PLAN REF NO SHEET OF SHEETS

CONSTRUCTION NOTES:

CONTRACTOR SHALL ESTABLISH A TEMPORARY DRIVING SURFACE FOR THE REALIGNED NEAL ROAD FOR THE USE BY THE CONTRACTOR'S VEHICLES AND EQUIPMENT, AND BY THE GENERAL PUBLIC. A FUNCTIONAL ROADWAY SURFACE SHALL BE IN PLACE PRIOR TO THE REMOVAL OF ANY EXISTING NEAL ROAD PAVEMENT UNTIL THE PERMANENT NEAL ROAD SURFACING IS CONSTRUCTED. REFER TO SHEET 13 FOR THE DETAILS OF PERMANENT NEAL ROAD SURFACING.

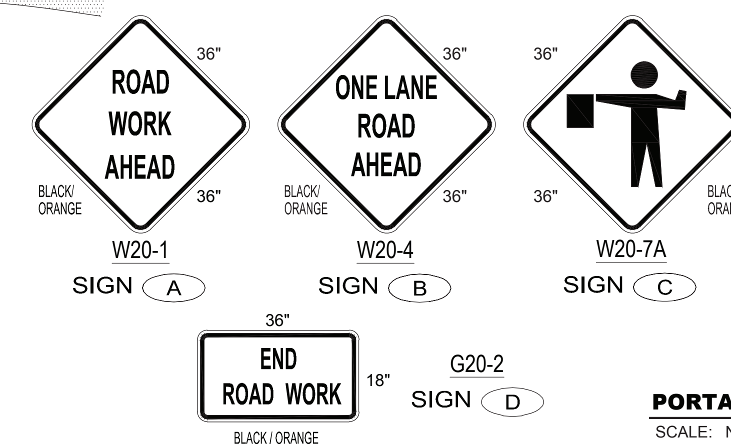
OPERATIONS NOTES:

1. THE CURRENT POSTED SPEED LIMIT IS 35 MPH
2. DURING HOURS OF CONSTRUCTION, FLAGGERS WILL CONTROL VEHICULAR TRAFFIC THROUGH WORK ZONE WHEN WARRANTED.
3. AT THE END OF EACH WORKING DAY THE CONTRACTOR SHALL PROVIDE THE PUBLIC FULL USE OF BOTH TRAVEL LANES OF NEAL ROAD SE.

GENERAL NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SECTION 6 AND THE WSDOT STANDARD SPECIFICATIONS.
2. ALL SIGNS SHALL BE PER WSDOT SIGN FABRICATION MANUAL, UNLESS OTHERWISE SPECIFIED. DIAMOND SHAPED SIGNS SHALL BE 36 IN x 36 IN.
3. REMOVE CONFLICTING EXISTING PAVEMENT MARKINGS AND SECURELY COVER CONFLICTING EXISTING SIGNS.
4. A MINIMUM OF 5 CHANNELIZATION DEVICES SHALL BE USED ON TAPERS.
5. TYPE C STEADY BURNING LIGHTS REQUIRED ON ALL CHANNELIZING DEVICES USED DURING HOURS OF DARKNESS.
6. CONTRACTOR SHALL INSTALL AND REMOVE ALL NECESSARY TEMPORARY TRAFFIC CONTROL SIGNS, AS NOTED ON THESE PLANS. ANY REGULATORY SIGN REMOVED AS PART OF THIS PROJECT SHALL BE STORED ON SITE. NOTIFY THE AGENCY FOR SIGN PICK UP.
7. NOTIFY THE FOLLOWING AGENCIES 14 CALENDAR DAYS PRIOR TO ANY TEMPORARY CLOSURE, DETOUR, OR TRAFFIC CONTROL CHANGES:
   - KING COUNTY ROADS SERVICES DIVISION
   - KING COUNTY SHERIFF DEPARTMENT
   - KING COUNTY FIRE DISTRICT #27
   - KING COUNTY FLOOD CONTROL DISTRICT
   - SNOQUALMIE VALLEY SCHOOL DISTRICT
   - WASTE MANAGEMENT NORTH KING COUNTY
   - U.S. POSTAL SERVICE
   - AFFECTED PROPERTY OWNERS

811 Know what's below. Call before you dig.



PCMS														
PANEL 1							PANEL 2							
R	O	A	D	W	O	R	K		E	X	P	E	C	T
	B	E	G	I	N	S			D	E	L	A	Y	S
M	M	/	D	D	/	Y	Y							
2.0 SEC							2.0 SEC							

PORTABLE CHANGEABLE MESSAGE SIGN DETAIL 1 / -

SCALE: NTS

SURVEYED:	R. HILLIARD (PMX)
SURVEY BASE MAP:	
CHECKED:	I. MOSTRENKO (HERRERA) 02-09-22 T. WELLER (TRANTECH) 02-09-22
PROJECT No.	KC: 1133842 HERRERA: 18-06954-000 TRANTECH: 2018031
SURVEY No.	

NUM.	REVISION	BY	DATE

APPROVED:	W. MANSFIELD, PE	02-2022
PROJECT SUPERVISOR:	J. HANSEN	02-2022
PROJECT MANAGER:	F. NOPP	02-2022
DESIGNED:	T.W., D.M.	02-2022
DESIGN ENTERED:	R.B.	02-2022

TRANTECH Engineering LLC
1221 Fraser Street
Suite E-3
Bellingham, WA 98229
P: 360.255.2563

THOMAS M. WELLER STATE OF WASHINGTON 36669 REGISTERED PROFESSIONAL ENGINEER
02/09/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

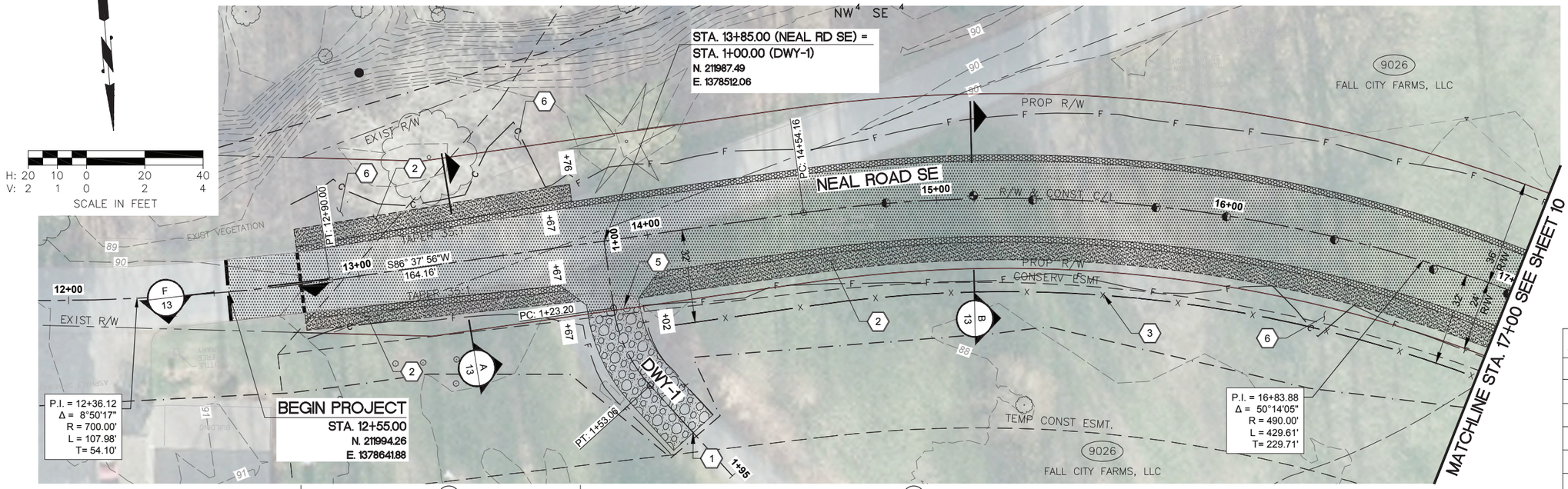
NEAL RD SE REALIGNMENT – TRAFFIC CONTROL PLAN

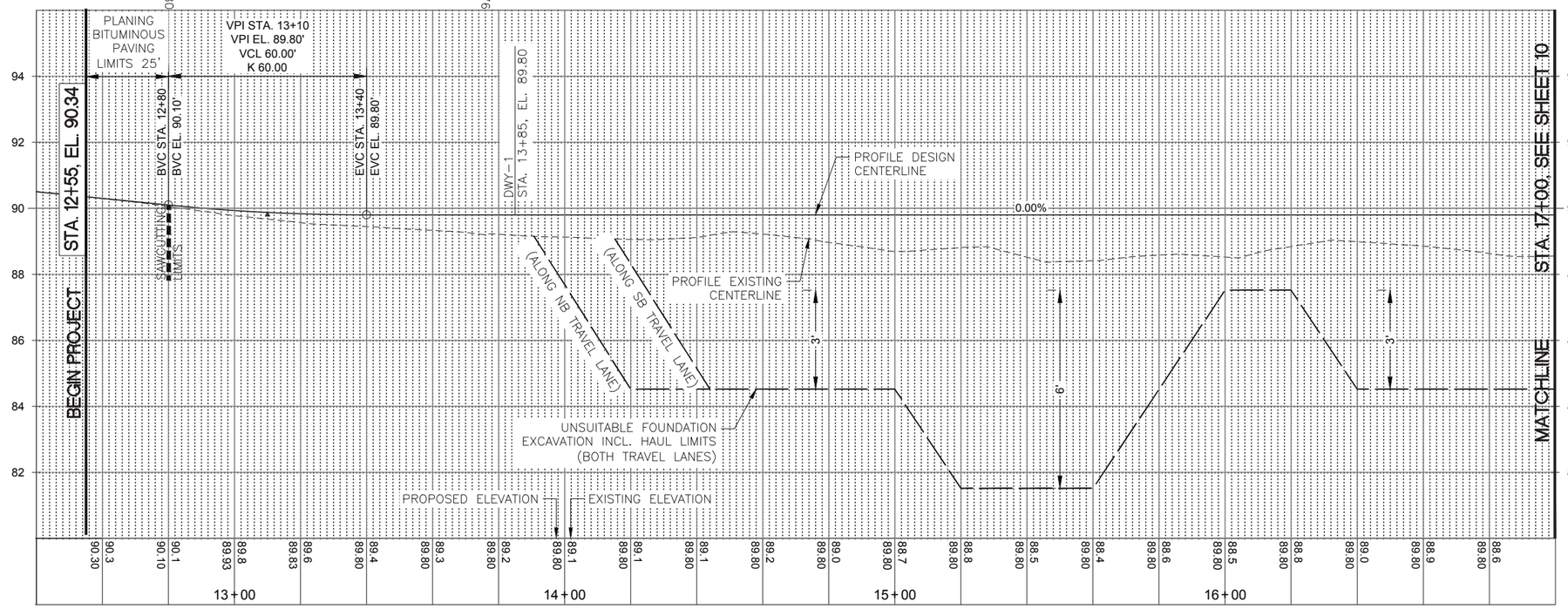
SHEET 8 OF 61 SHEETS

2021-07

Plotted: Feb 07, 2022 - 4:47:32pm By rbrar
File: Z:\2018\2018031 - King County Hafner Barfuse Floodplain Restoration\000 CAD-2019\010 Drawing\B-Civil Sheet\2018031-TC.dwg Layout: TC01

SEC. 10, T.24 N., R.07 E., W.M.





GENERAL NOTES:

1. SEE TESC SHEETS FOR TESC MEASURES RELATED TO ROAD CONSTRUCTION.

(XX) CONSTRUCTION NOTES:

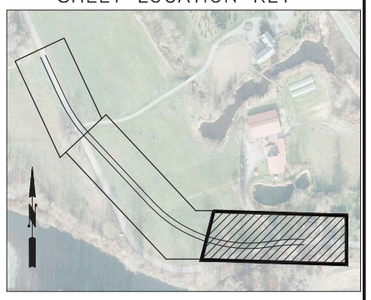
1. DRIVEWAY LIMITS. MATCH EXIST. REFER TO SHEET 14 FOR DETAILS.
2. CONSTRUCT FILTER STRIP PER TYPICAL SECTIONS.
3. CONSTRUCT WIRE FENCE (TYPE 2) PER WSDOT STD. PLAN L-10.10.
4. CONSTRUCT DOUBLE WIRE GATE PER WSDOT STD PLAN L-10.10.
5. PAVE DRIVEWAY TO R/W LIMITS. REFER TO SHEET 14 FOR DETAILS.
6. GRADE AREA TO ENSURE POSITIVE SHEETFLOW DRAINAGE INTO SURROUNDING FLOODPLAIN.
7. TIE NEWLY CONSTRUCTED WIRE FENCE INTO EXIST. FENCE.

UNSUITABLE EXCAVATION LIMITS

STATION.	DEPTH
STA. 13+90* – STA. 14+20*	0'–3'
STA. 14+20** – STA. 15+00	3'
STA. 15+00 – STA. 15+20	3'–6'
STA. 15+20 – STA. 15+60	6'
STA. 15+60 – STA. 15+80	6'–0'
STA. 16+20 – STA. 16+40	0'–3'
STA. 16+40 – STA. 17+00	3'

*NOTE: FOR SB LANE BEGIN AT STATION 14+20 AND END AT STATION 14+50
**NOTE: FOR SB LANE BEGIN AT STATION 14+50

SHEET LOCATION KEY



MERIDIAN
W.S.L.G.N.Z.
DATUM
NAVD88

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 02-09-22
CHECKED: T. WELLER (TRANTECH) 02-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: T.W., D.M.	02-2022	
DESIGN ENTERED: R.B.	02-2022	

TRANTECH Engineering LLC
1221 Fraser Street
Suite E-3
Bellingham, WA 98229
P: 360.255.2563

02/09/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

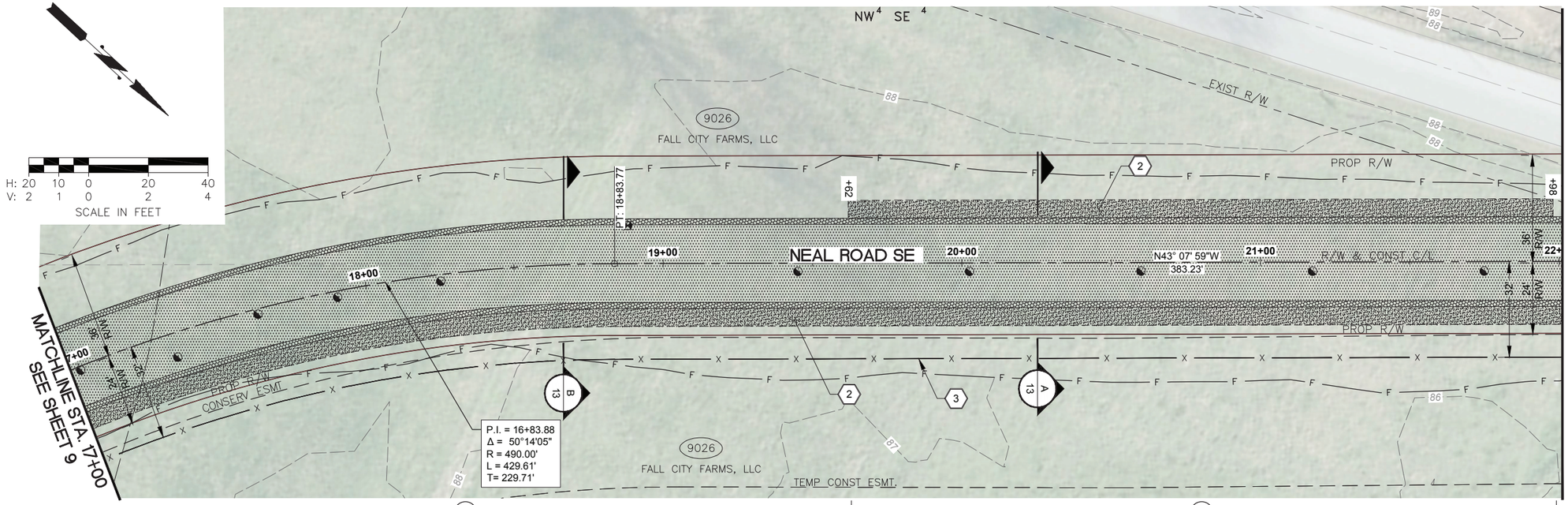
NEAL RD SE REALIGNMENT – PLAN & PROFILE 1

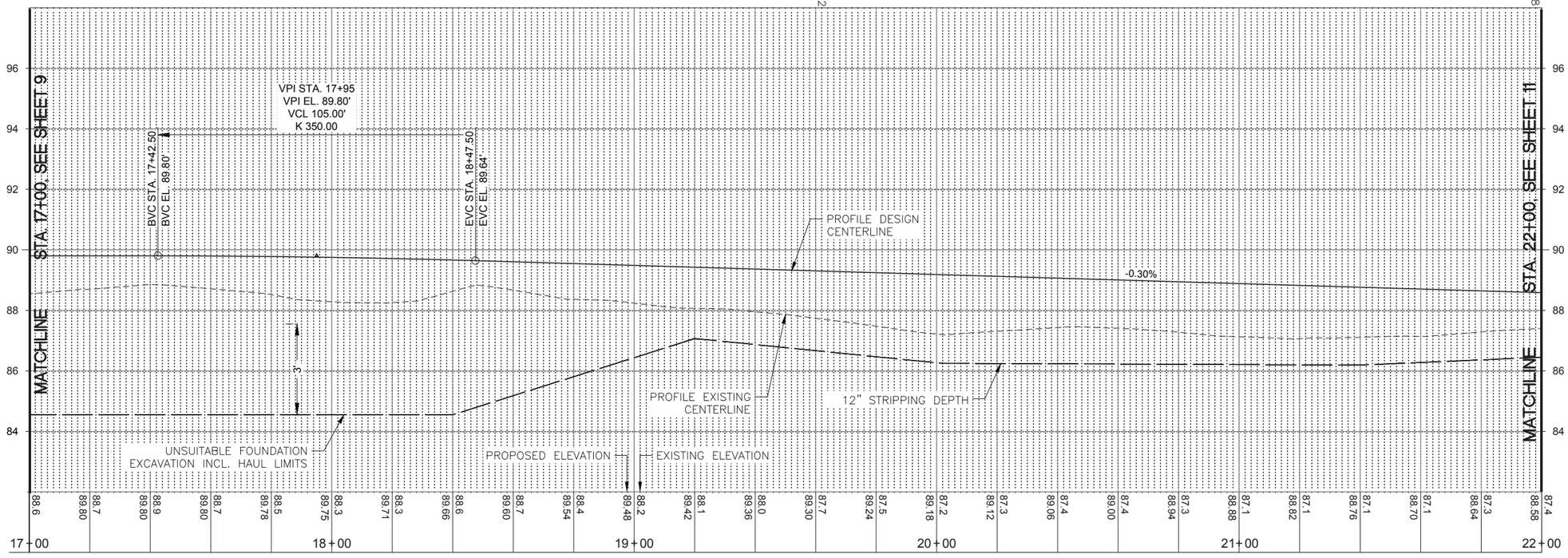
SHEET 9 OF 61 SHEETS

2021-07

Plotted: Feb 07, 2022 - 4:42:07pm By: dtrar
File: Z:\2018\2018031 - King County Hether Barlow Floodplain Restoration\000 CAD-2019\010 Drawing\B-Civil Sheet\2018031-PP.dwg Layout: PP01

SEC. 10, T.24 N., R.07 E., W.M.





GENERAL NOTES:

1. SEE TESC SHEETS FOR TESC MEASURES RELATED TO ROAD CONSTRUCTION.

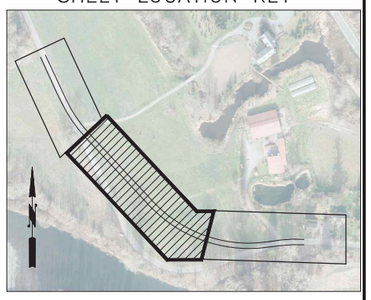
(XX) CONSTRUCTION NOTES:

1. DRIVEWAY LIMITS. MATCH EXIST. REFER TO SHEET 14 FOR DETAILS.
2. CONSTRUCT FILTER STRIP PER TYPICAL SECTIONS.
3. CONSTRUCT WIRE FENCE (TYPE 2) PER WSDOT STD. PLAN L-10.10.
4. CONSTRUCT DOUBLE WIRE GATE PER WSDOT STD PLAN L-10.10.
5. PAVE DRIVEWAY TO R/W LIMITS. REFER TO SHEET 14 FOR DETAILS.
6. GRADE AREA TO ENSURE POSITIVE SHEETFLOW DRAINAGE INTO SURROUNDING FLOODPLAIN.
7. TIE NEWLY CONSTRUCTED WIRE FENCE INTO EXIST. FENCE.

UNSUITABLE EXCAVATION LIMITS

STATION.	DEPTH
STA. 17+00 – STA. 18+40	3'
STA. 18+40 – STA. 19+20	3'-0"

SHEET LOCATION KEY



MERIDIAN
W.S.L.G.N.Z.
DATUM
NAVD88

811
Know what's below.
Call before you dig.

Plotted: Feb 07, 2022 - 4:44:08pm By rbrar
File: Z:\2018\2018031 - King County Fisher Bertsee Floodplain Restoration\000 CAD-2019\010 Drawing\8-Civil Sheet\2018031-PP.dwg Layout: PP02

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 02-09-22
CHECKED: T. WELLER (TRANTECH) 02-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: T.W., D.M.	02-2022	
DESIGN ENTERED: R.B.	02-2022	

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P: 360.255.2563

STATE OF WASHINGTON 36669 REGISTERED PROFESSIONAL ENGINEER
02/09/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

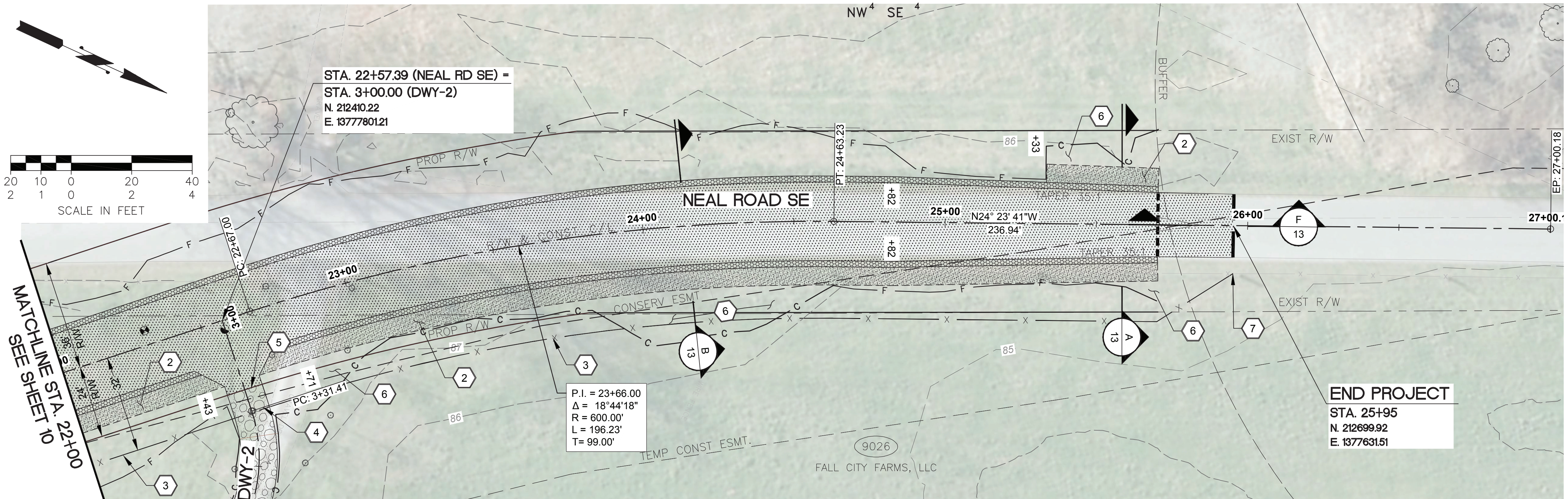
FALL CITY FLOODPLAIN RESTORATION PROJECT

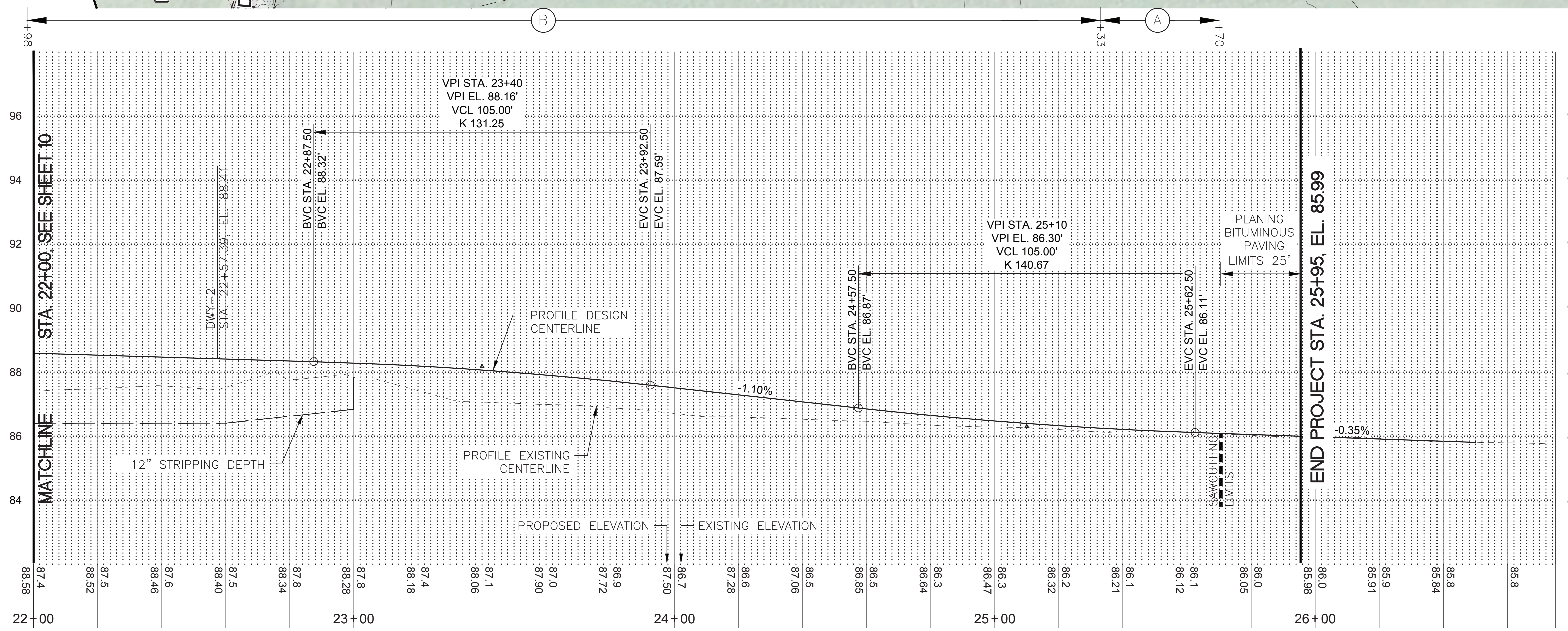
NEAL RD SE REALIGNMENT – PLAN & PROFILE 2

SHEET 10 OF 61 SHEETS

2021-07

SEC. 10, T.24 N., R.07 E., W.M.





GENERAL NOTES:

1. SEE TESC SHEETS FOR TESC MEASURES RELATED TO ROAD CONSTRUCTION.

(XX) CONSTRUCTION NOTES:

1. DRIVEWAY LIMITS. MATCH EXIST. REFER TO SHEET 14 FOR DETAILS.
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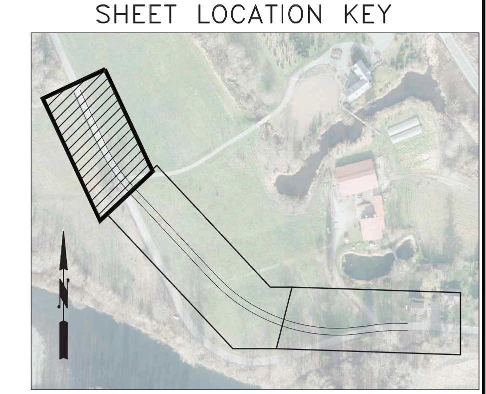
7. TIE NEWLY CONSTRUCTED WIRE FENCE INTO EXIST. FENCE.

SHEET LOCATION KEY



MERIDIAN W.S.L.G.N.Z.
DATUM
NAVD88

811 Know what's below. Call before you dig.

Plotted: Feb 07, 2022 – 4:45:23pm By rbrar
File: Z:\2018\2018031 – King County Hafner Barfuse Floodplain Restoration\000 CAD-2019\010 Drawing\B-Civil Sheet\2018031-PP.dwg Layout: PP03

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 02–09–22; T. WELLER (TRANTECH) 02–09–22
PROJECT No. KC: 1133842; HERRERA: 18–06954–000; TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED:	W. MANSFIELD, PE	02–2022
PROJECT SUPERVISOR:	J. HANSEN	02–2022
PROJECT MANAGER:	F. NOPP	02–2022
DESIGNED:	T.W., D.M.	02–2022
DESIGN ENTERED:	R.B.	02–2022

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1221 Fraser Street
Suite E-3
Bellingham, WA 98229
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THOMAS M. WELLER
STATE OF WASHINGTON
36669
REGISTERED PROFESSIONAL ENGINEER
02/09/2022

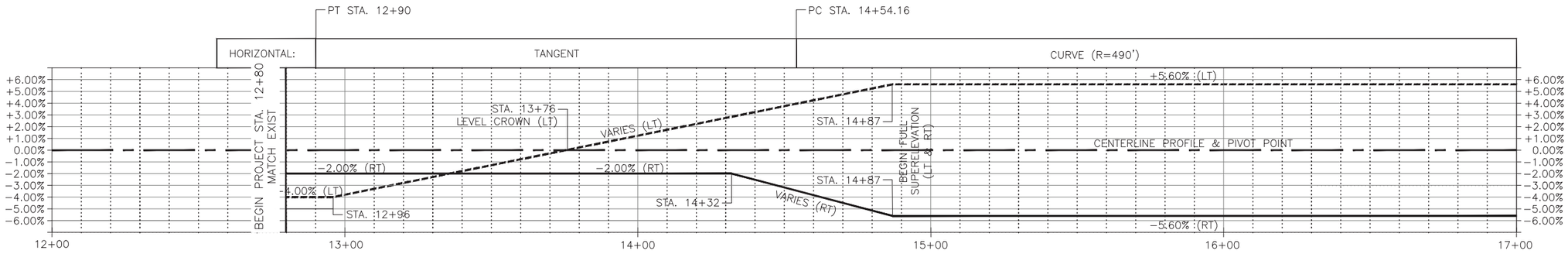
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY
FLOODPLAIN RESTORATION PROJECT

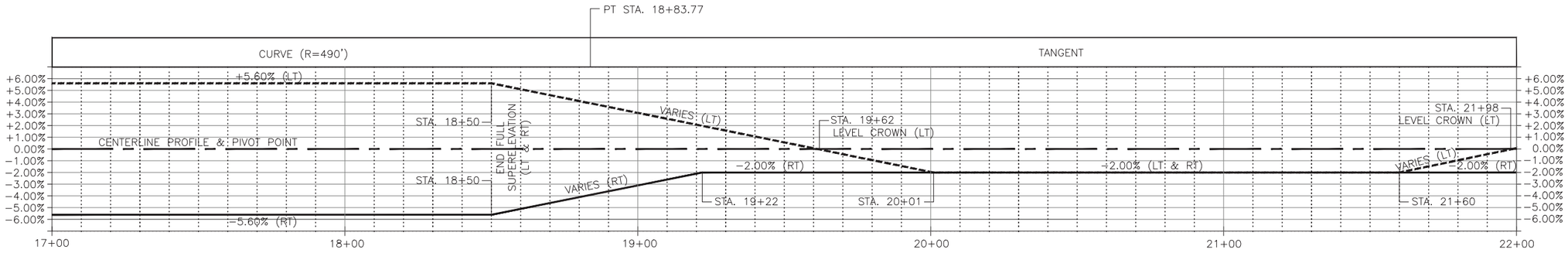
NEAL RD SE REALIGNMENT – PLAN & PROFILE 3

SHEET 11 OF 61 SHEETS

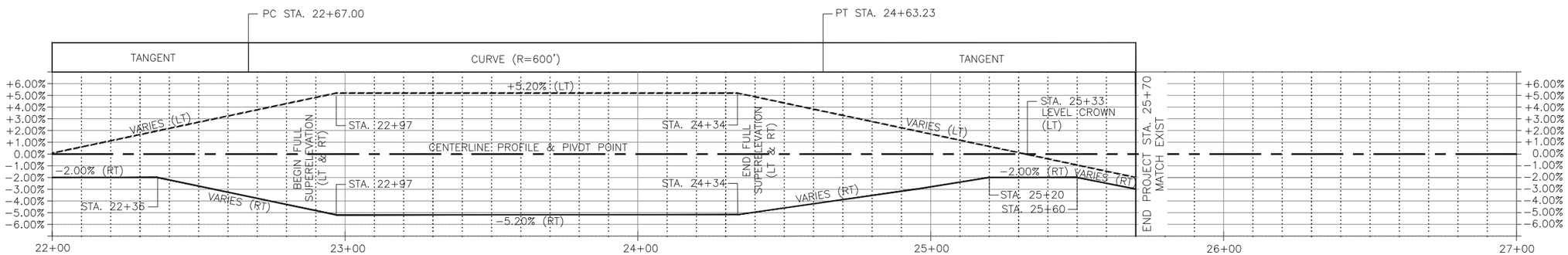
2021-07



NEAL RD SE
SCALE: N.T.S.



NEAL RD SE
SCALE: N.T.S.



NEAL RD SE
SCALE: N.T.S.

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
I. MOSTRENKO (HERRERA) 02-09-22
CHECKED: T. WELLER (TRANTECH) 02-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: T.W., D.M.	02-2022	
DESIGN ENTERED: R.B.	02-2022	

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THOMAS M. WELLER — STATE OF WASHINGTON — 36669 — REGISTERED PROFESSIONAL ENGINEER
02/09/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

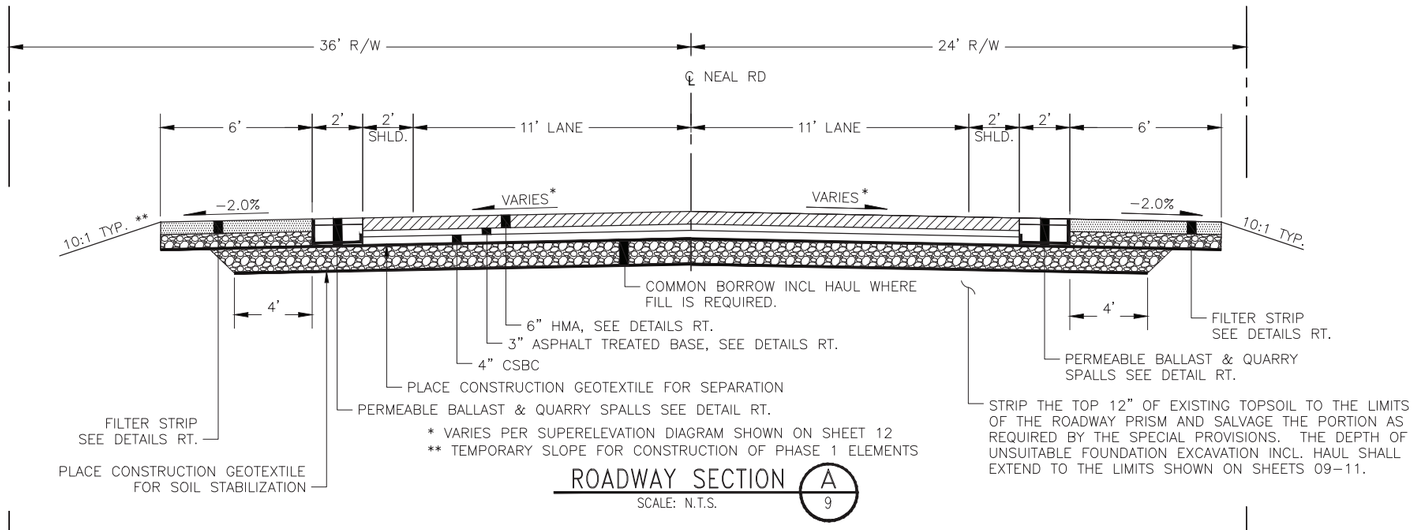
FALL CITY FLOODPLAIN RESTORATION PROJECT

NEAL RD SE REALIGNMENT – SUPERELEVATION DIAGRAM

SHEET 12 OF 61 SHEETS

2021-07

Plotted: Feb 07, 2022 - 4:48:35pm By: dtrat
File: Z:\2018\2018031 - King County Hather Barlow Floodplain Restoration\000 CAD~2019\010 Drawing\8-Civil Sheet\2018031-15.dwg Layout: 1501



ROADWAY SECTION A
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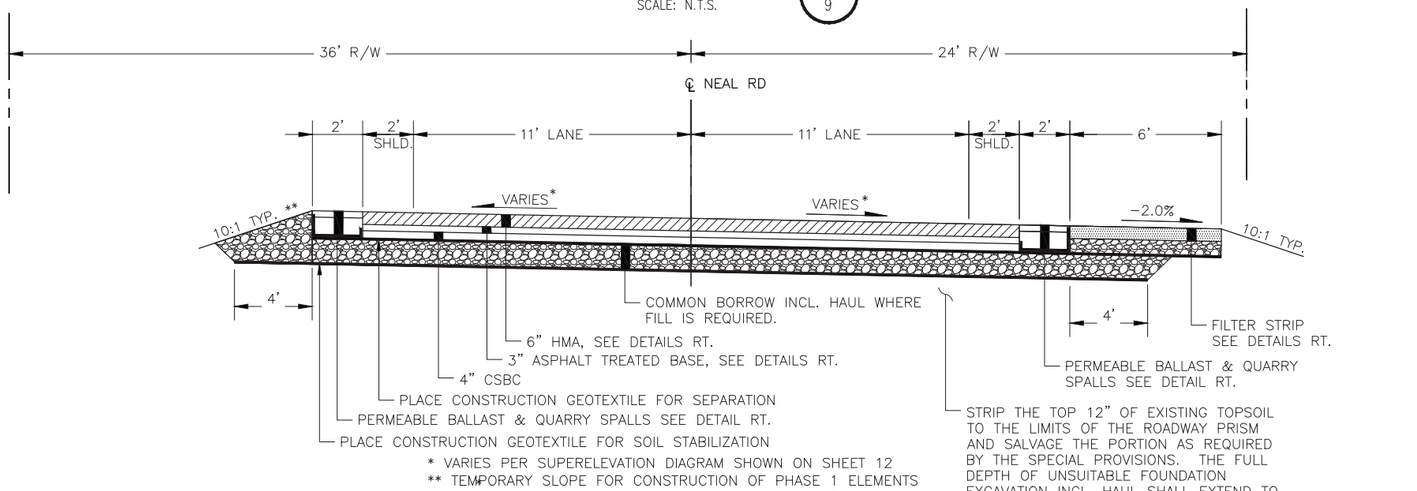
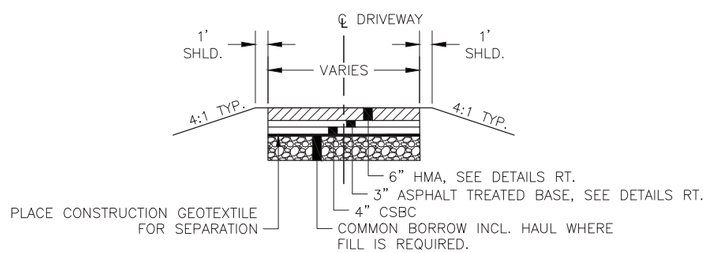
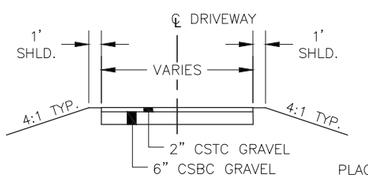
9



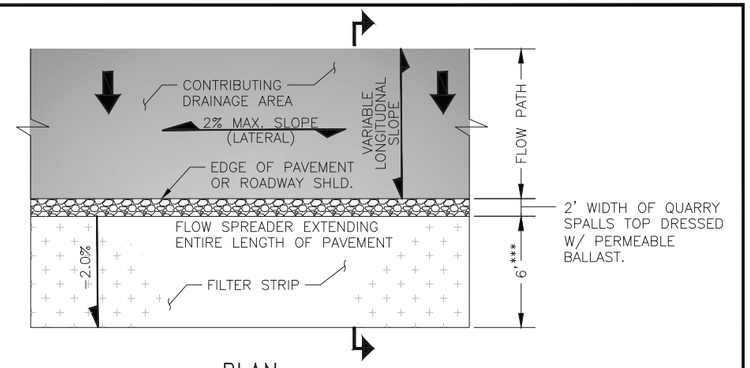
ROADWAY SECTION B
SCALE: N.T.S.
9



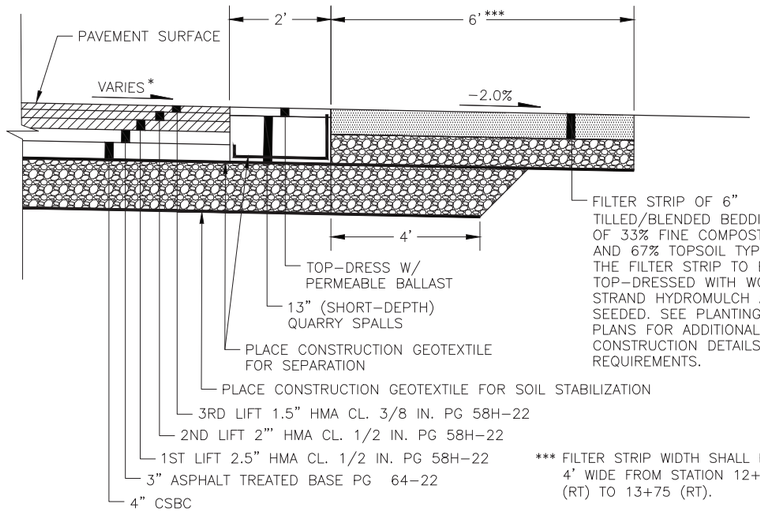
PAVED DRIVEWAY SECTION C
SCALE: N.T.S.
14



GRAVELED DRIVEWAY SECTION D
SCALE: N.T.S.
14



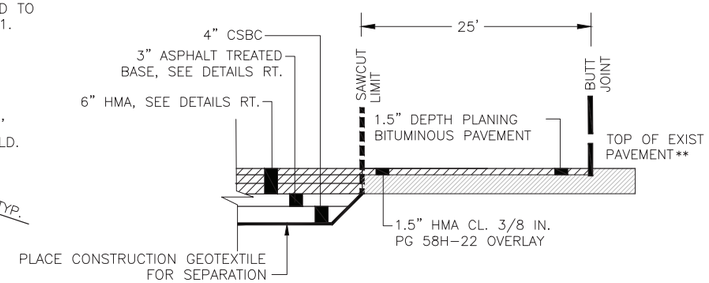
PLAN



*** FILTER STRIP WIDTH SHALL BE 4' WIDE FROM STATION 12+85 (RT) TO 13+75 (RT).

SECTION

ROAD SECTION & FILTER STRIP DETAIL E
SCALE: N.T.S.
-



** NOTE:
EXISTING HMA SURFACING IS ESTIMATED TO BE 4 OR MORE INCHES THICK. CONTRACTOR TO VERIFY PRIOR TO PLANING & BITUMINOUS PAVEMENT & NOTIFY THE ENGINEER IF FIELD CONDITIONS ARE DIFFERENT AT THE LOCATION OF PLANING.

LONGITUDINAL BUTT-JOINT PLANING DETAIL ALONG NEAL ROAD F
SCALE: N.T.S.
-

811 Know what's below. Call before you dig.

Plotted: Feb 07, 2022 - 4:49:08pm By: rbrar
File: Z:\2018\2018031 - King County Hither Barlase Floodplain Restoration\000 CAD-2019\010 Drawing\8-Civil Sheet\2018031-TSLwg Layout: 1302

SURVEYED: R. HILLIARD (PMX)			
SURVEY BASE MAP:			
I. MOSTRENKO (HERRERA) 02-09-22			
CHECKED: T. WELLER (TRANTECH) 02-09-22			
KC: 1133842			
HERRERA: 18-06954-000			
PROJECT No. TRANTECH: 2018031			
SURVEY No.			
NUM.	REVISION	BY	DATE
APPROVED: W. MANSFIELD, PE			02-2022
PROJECT SUPERVISOR: J. HANSEN			02-2022
PROJECT MANAGER: F. NOPP			02-2022
DESIGNED: T.W., D.M.			02-2022
DESIGN ENTERED: R.B.			02-2022

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STATE OF WASHINGTON 36669 REGISTERED PROFESSIONAL ENGINEER
02/09/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

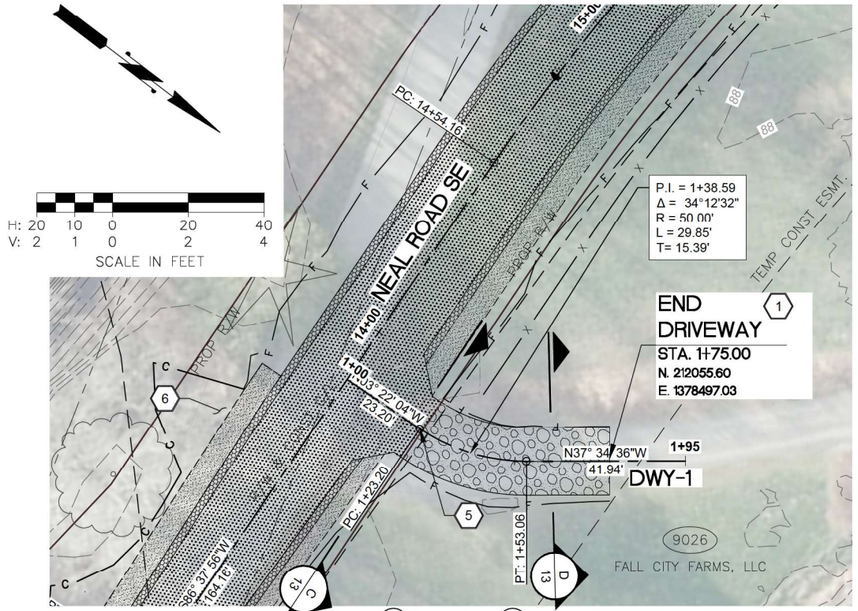
FALL CITY FLOODPLAIN RESTORATION PROJECT

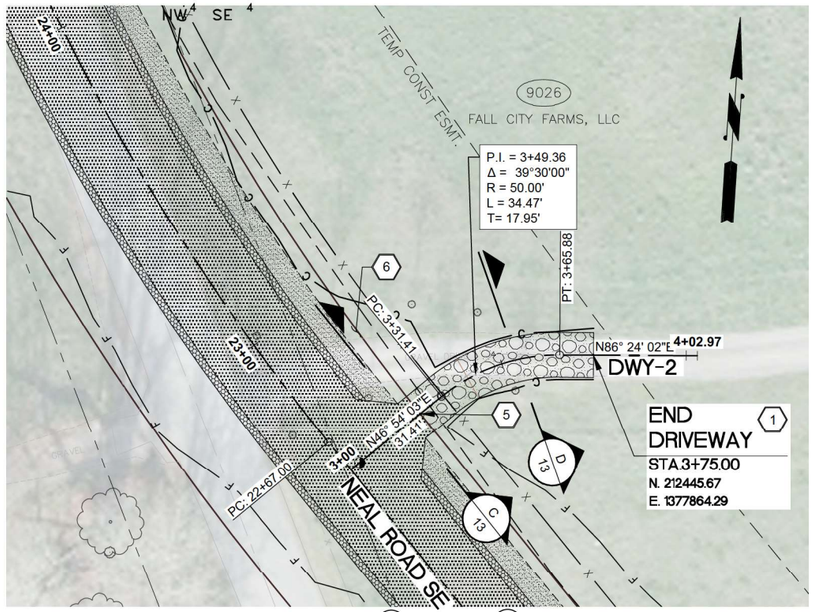
NEAL RD SE REALIGNMENT – TYPICAL SECTIONS

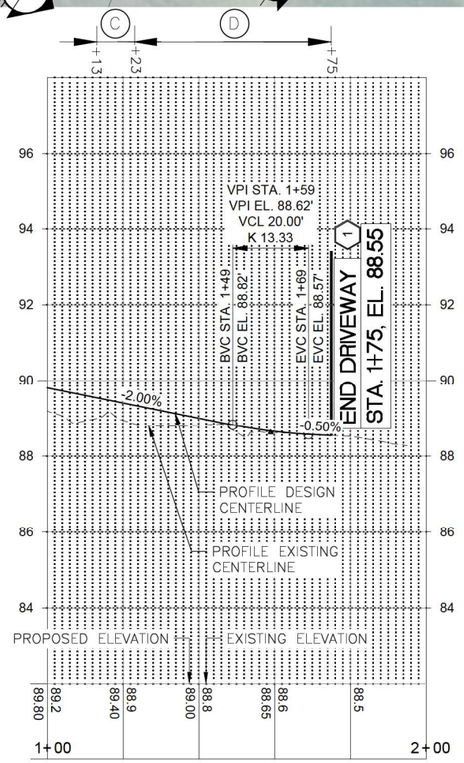
SHEET 13 OF 61 SHEETS

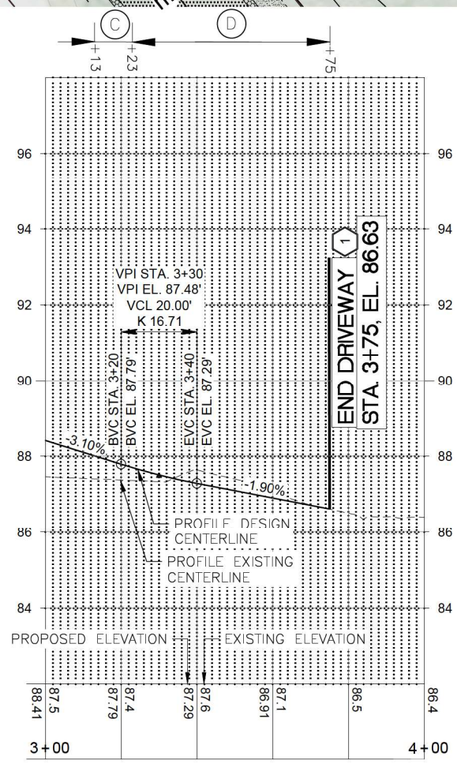
2021-07

SEC. 10, T.24 N., R.07 E., W.M.









GENERAL NOTES:

1. SEE TESC SHEETS FOR TESC MEASURES RELATED TO ROAD CONSTRUCTION.

(XX) CONSTRUCTION NOTES:

1. DRIVEWAY LIMITS. MATCH EXIST. REFER TO SHEET 14 FOR DETAILS.
2. CONSTRUCT FILTER STRIP PER TYPICAL SECTIONS.
3. CONSTRUCT WIRE FENCE (TYPE 2) PER WSDOT STD. PLAN L–10.10.
4. CONSTRUCT DOUBLE WIRE GATE PER WSDOT STD PLAN L–10.10.
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7. TIE NEWLY CONSTRUCTED WIRE FENCE INTO EXIST. FENCE.

MERIDIAN
W.S.L.G.N.Z.
DATUM
NAVD88

811
Know what's below.
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Plotted: Feb 07, 2022 – 4:46:18pm By: rtenor
File: Z:\2018\2018031 – King County Hafner Barfuse Floodplain Restoration\000 CAD–2019\010 Drawing\B–Civil Sheet\2018031–PP.dwg Layout: PP04

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 02–09–22
T. WELLER (TRANTECH) 02–09–22
PROJECT No. KC: 1133842 HERRERA: 18–06954–000 TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: T.W., D.M.	02–2022	
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THOMAS M. WELLER
STATE OF WASHINGTON
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REGISTERED
PROFESSIONAL ENGINEER
02/09/2022

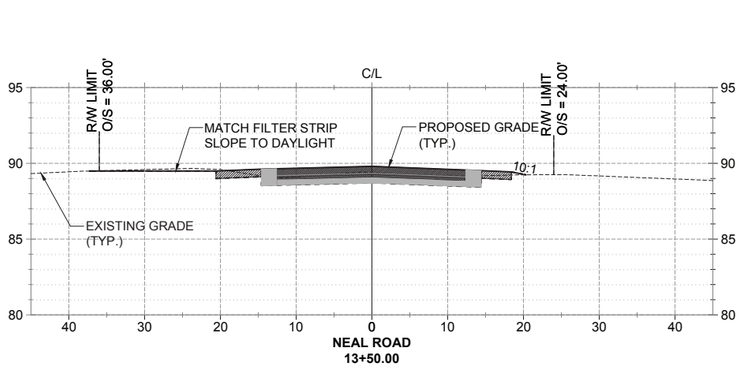
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

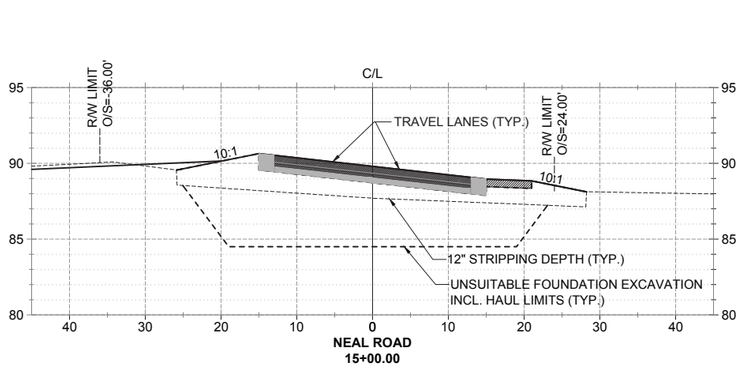
FALL CITY FLOODPLAIN RESTORATION PROJECT

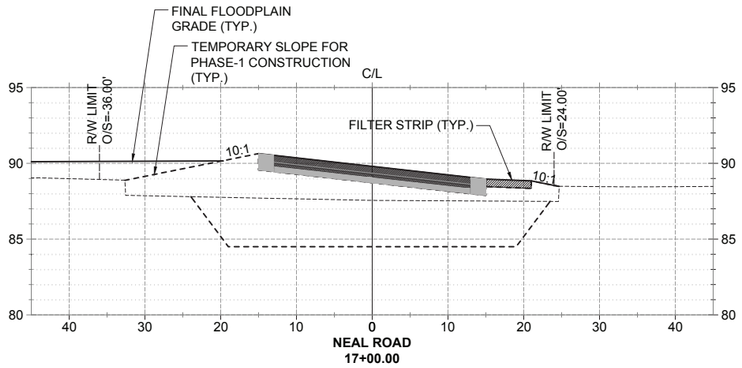
NEAL RD SE REALIGNMENT – DRIVEWAY DETAILS

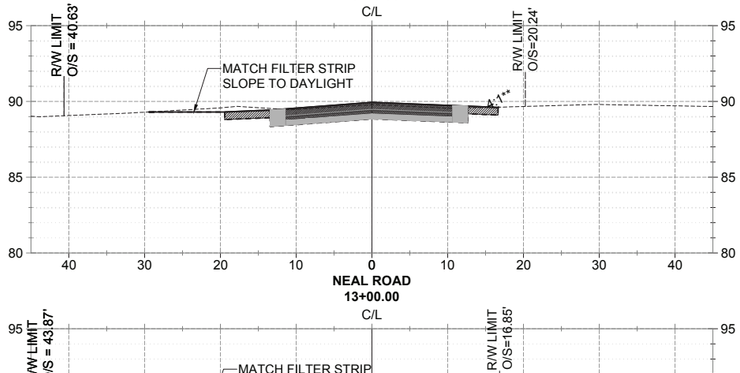
SHEET 14 OF 61 SHEETS

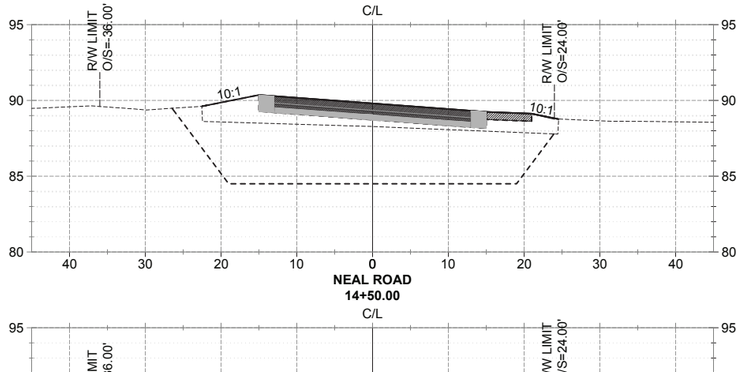
2021-07

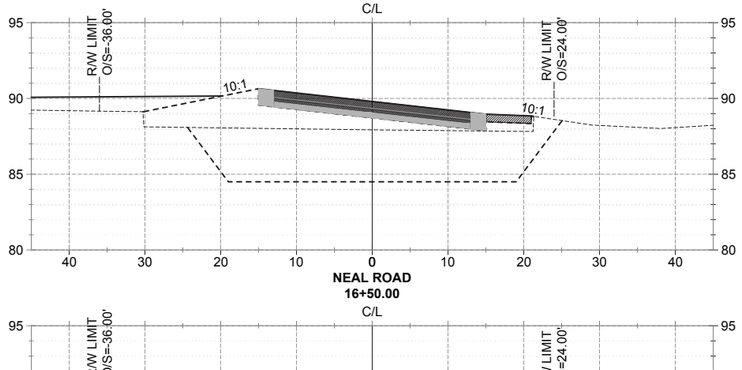


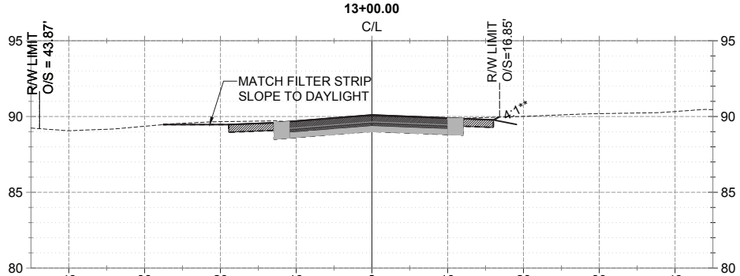


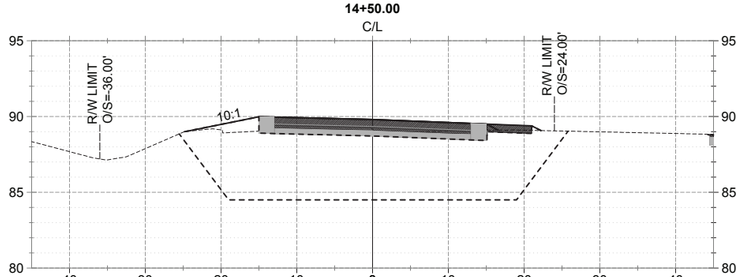


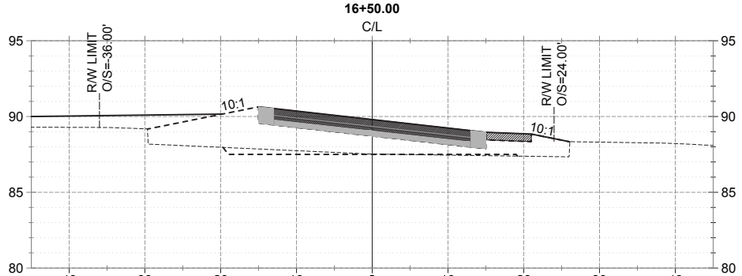


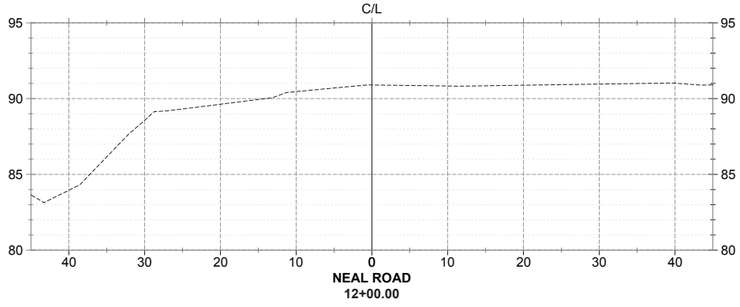


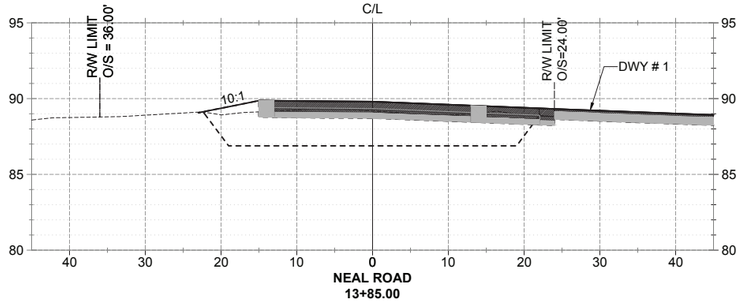


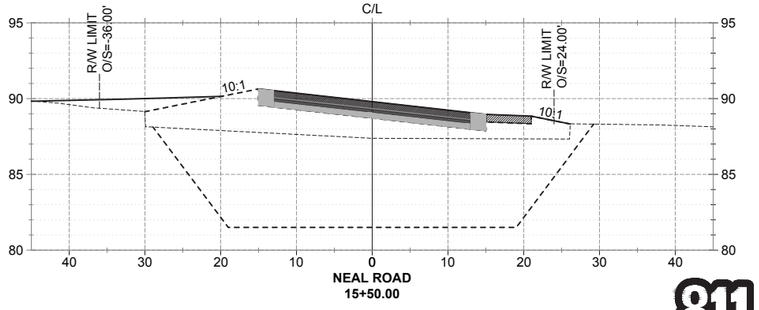


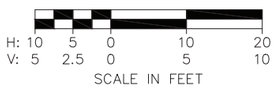












*NOTE - ALL SECTIONS ARE CUT LOOKING UP-STATION
**NOTE - PROVIDE LONGITUDINAL POSITIVE DRAINAGE WITH SHEETFLOW INTO FLOODPLAIN AT STATION 13+10.

811 Know what's below. Call before you dig.

Plotted: Feb 07, 2022 - 4:51:13pm By: rdror
File: Z:\2018\2018031 - King County Heither Barlow Floodplain Restoration\000 CAD-2019\010 Drawing\B-Civil Sheet\2018031-XS.dwg Layout: X01

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 02-09-22
CHECKED: T. WELLER (TRANTECH) 02-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: T.W., D.M.	02-2022	
DESIGN ENTERED: R.B.	02-2022	

TRANTECH Engineering LLC
1221 Fraser Street
Suite E-3
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P: 360.255.2563

THOMAS M. WELLER, STATE OF WASHINGTON, 36669, REGISTERED PROFESSIONAL ENGINEER
02/09/2022

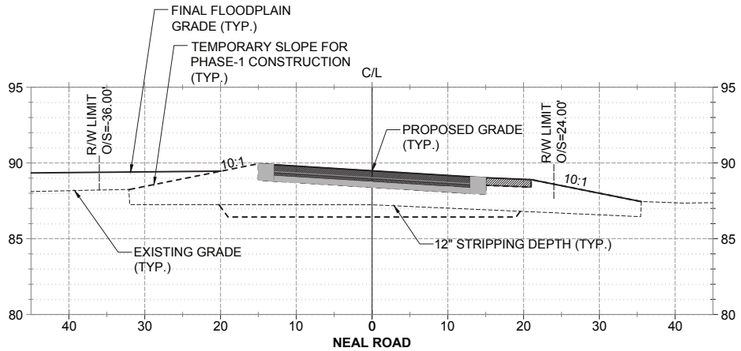
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

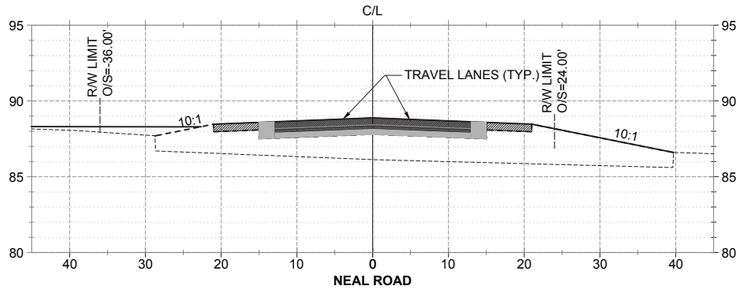
FALL CITY FLOODPLAIN RESTORATION PROJECT

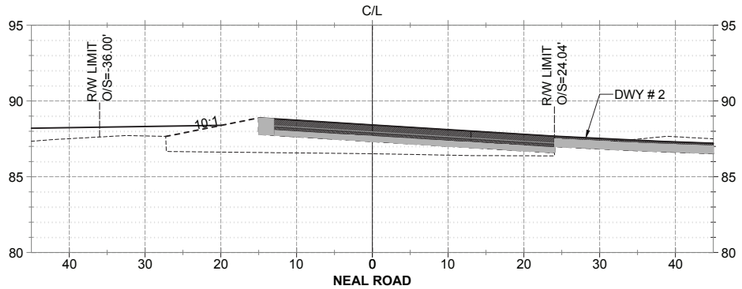
NEAL RD SE REALIGNMENT – CROSS SECTIONS 1

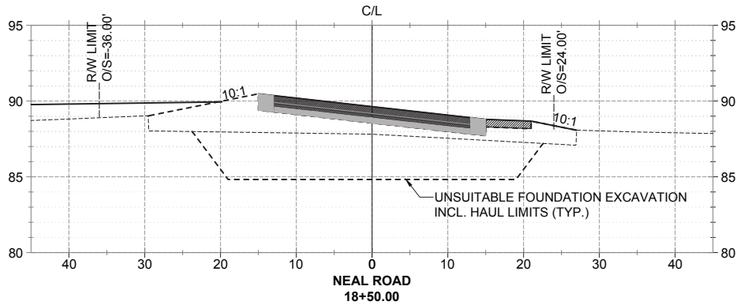
SHEET 15 OF 61 SHEETS

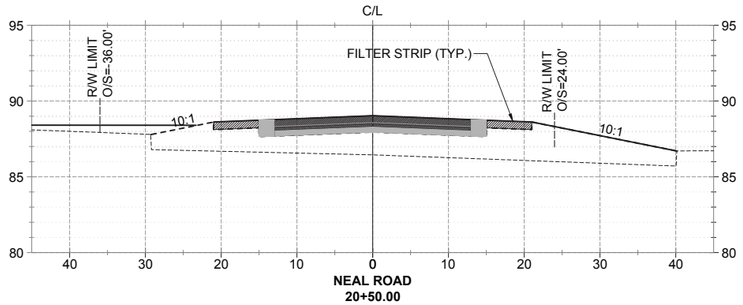
2021-07

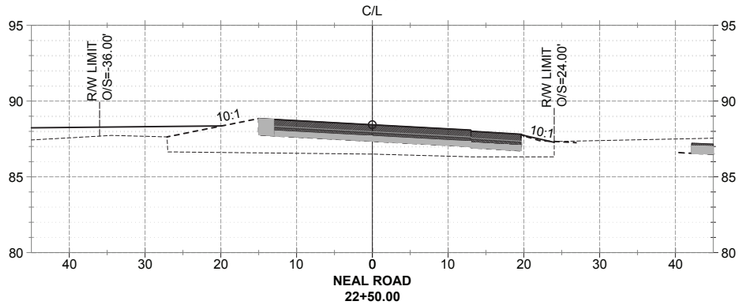


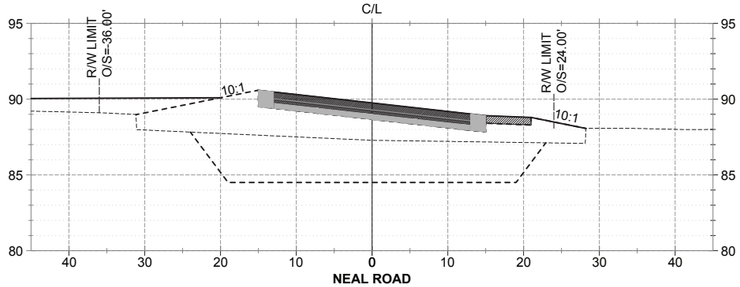


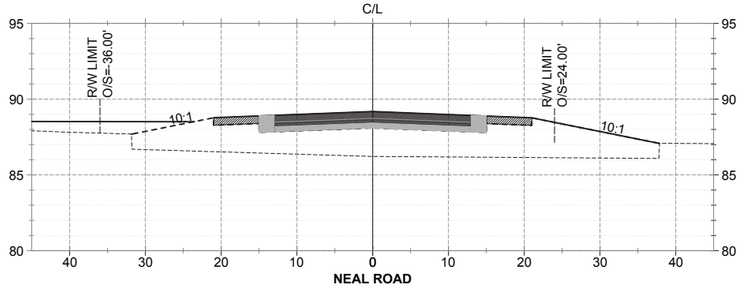


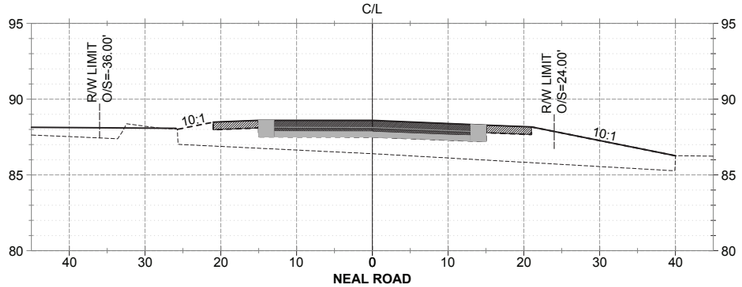


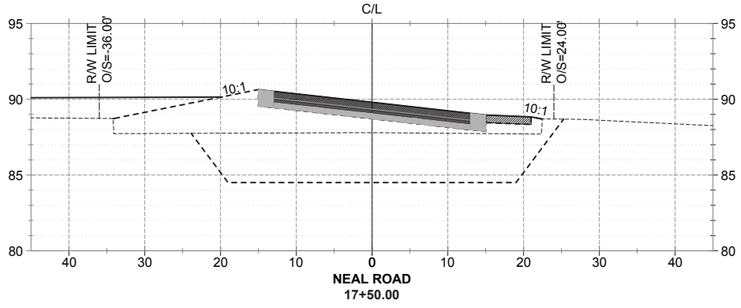


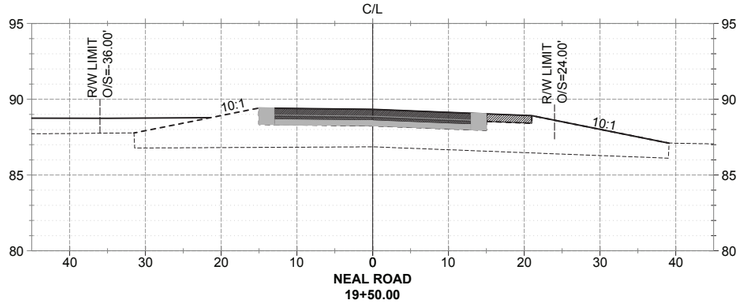


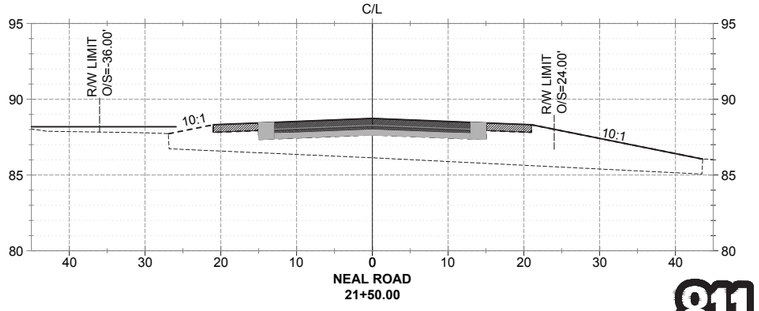


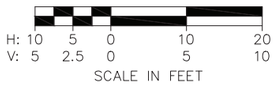










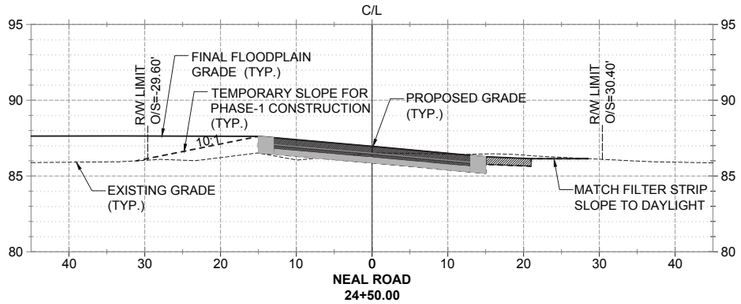


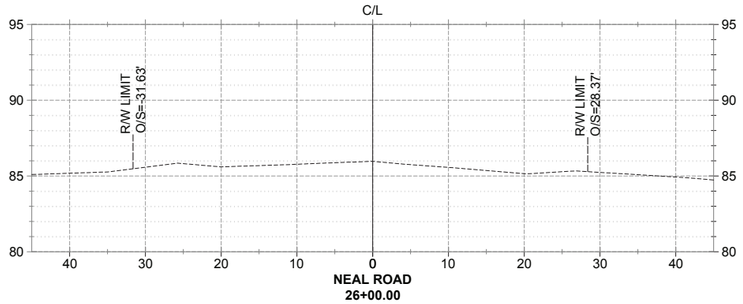
NOTE - ALL SECTIONS ARE CUT LOOKING UP-STATION

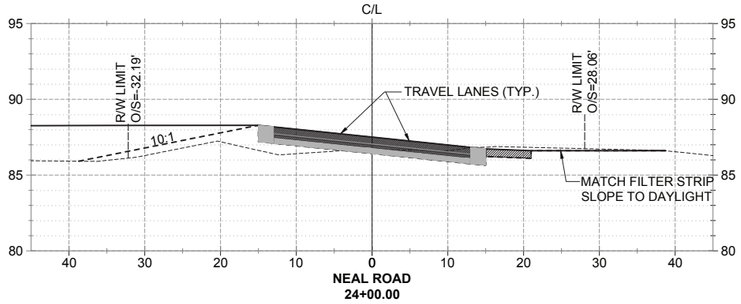
Know what's below.
Call before you dig.

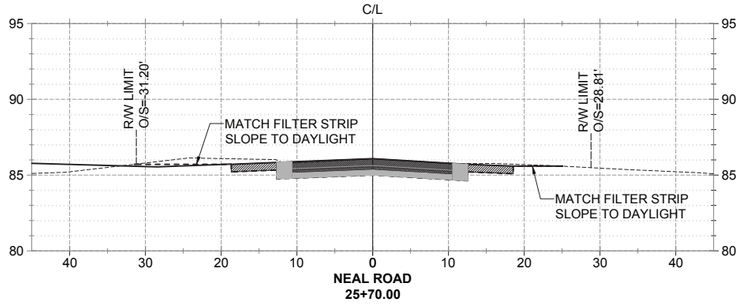
Plotted: Feb 07, 2022 - 4:52:11pm By Peter
File: Z:\2018\2018031 - King County Harbor Barfoot Floodplain Restoration\000 CAD-2019\010 Drawing\Gr-Civil Sheet\2018031-XS.dwg Layout: XS02

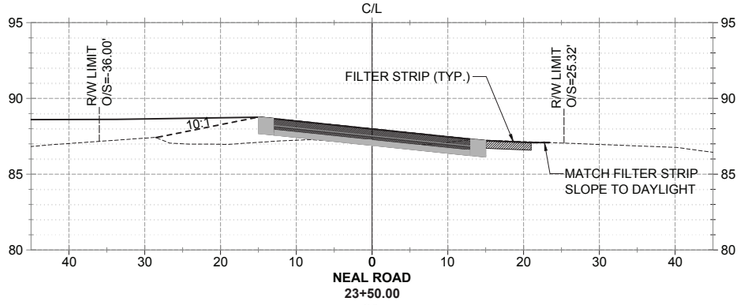
SURVEYED: R. HILLIARD (PMX)				APPROVED: W. MANSFIELD, PE	02-2022	TRANTECH Engineering LLC	King County Department of Natural Resources and Parks Water and Land Resources Division Rural and Regional Services Section Ecological Restoration and Engineering Services *Christie True, Director*
SURVEY BASE MAP:				PROJECT SUPERVISOR: J. HANSEN	02-2022	1221 Fraser Street Suite E-3 Bellingham, WA 98229 P: 360.255.2563	**FALL CITY FLOODPLAIN RESTORATION PROJECT** NEAL RD SE REALIGNMENT – CROSS SECTIONS 2
I. MOSTRENKO (HERRERA) 02-09-22 CHECKED: T. WELLER (TRANTECH) 02-09-22				PROJECT MANAGER: F. NOPP	02-2022	THOMAS M. WELLER STATE OF WASHINGTON 36669 REGISTERED PROFESSIONAL ENGINEER 02/09/2022	SHEET 16 OF 61 SHEETS **2021-07**
KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031				DESIGNED: T.W., D.M.	02-2022		
SURVEY No.	NUM.	REVISION	BY DATE	DESIGN ENTERED: R.B.	02-2022		

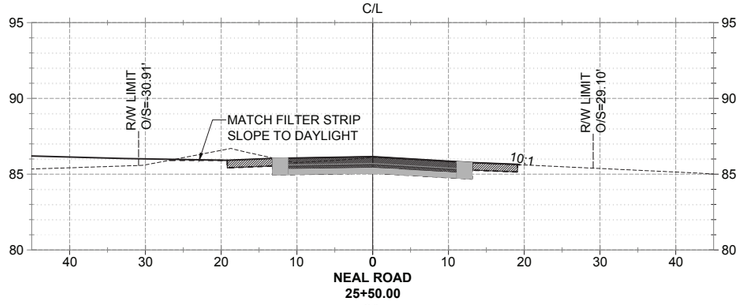


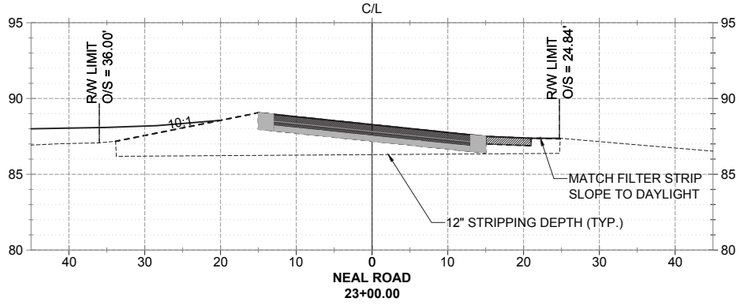


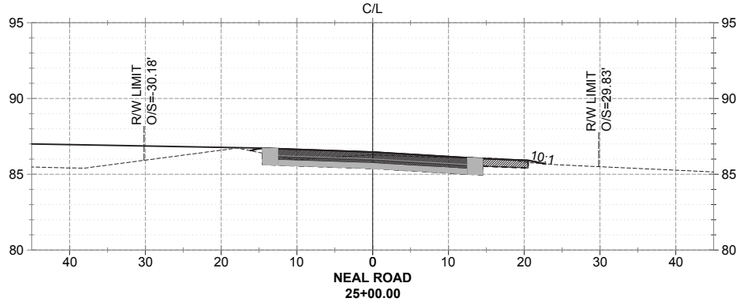


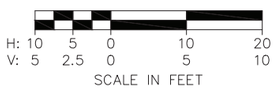












NOTE - ALL SECTIONS ARE CUT LOOKING UP-STATION

811 Know what's below. Call before you dig.

Plotted: Feb 07, 2022 - 4:53:03pm By rbrar
File: Z:\2018\2018031 - King County Hafner Barrbee Floodplain Restoration\000 CAD-2019\010 Drawing\B-Civil Sheet\2018031-XSdwg Layout: X023

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
I. MOSTRENKO (HERRERA) 02-09-22
CHECKED: T. WELLER (TRANTECH) 02-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: T.W., D.M.	02-2022	
DESIGN ENTERED: R.B.	02-2022	

TRANTECH Engineering LLC
1221 Fraser Street
Suite E-3
Bellingham, WA 98229
P: 360.255.2563

THOMAS M. WELLER — STATE OF WASHINGTON — 36669 — REGISTERED PROFESSIONAL ENGINEER
02/09/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

NEAL RD SE REALIGNMENT – CROSS SECTIONS 3

SHEET 17 OF 61 SHEETS

2021-07

PROJECT LIMITS, TYP

P3 TIMBER PILES AT 20' SPACING ALONG SRR ALIGNMENT STA 0+20 TO STA 9+80, TYP OF 49

END REVETMENT STA 9+60

BURIED HAFFNER SRR ALIGNMENT 20' OFFSET FROM EDGE OF ASPHALT (33' OFFSET FROM ROAD CENTERLINE)

START REVETMENT STA 0+80

CONSTRUCTED REVETMENT

EDGE OF ASPHALT

PROPOSED NEAL ROAD RELOCATION, SEE SHEETS 8–17

PARCEL NO. 1024079026

WETLAND D

TEMPORARY PROJECT SURVEY CONTROL HUB, TYP

CONSERVATION EASEMENT

RESTORE RUTHERFORD SLOUGH GRADES AFTER SRR CONSTRUCTION

EXPAND LAUNCHABLE TOE ROCK TRENCH WIDTH FROM 12' TO 25' FROM STA 9+55 TO 9+60

BLC TYPE 2, TYP (3/23)

BLC TYPE 2 NO L5 LOGS, TYP (3/23)

LAUNCHABLE TOE ROCK

BD ELS, TYP (1/34)

12', TYP

45', TYP

EXISTING NEAL ROAD

BURIED ELS LAUNCHABLE ROCK FOR EROSION AND SCOUR PROTECTION CLASS C, TYP

BLC TYPE 1, TYP (1/19)

BURIED ROCK FLANK STRUCTURE. 10'x10' TOP, 2H:1V SLOPES RIVERWARD AND DOWNSTREAM (C/19)

EXISTING RIGHT BANK REVETMENT RIPRAP TO REMAIN

PROPOSED SALVAGE LOG CLUSTER, TYP, SEE SHEETS 20–21

PROPOSED RIGHT BANK SIDE CHANNEL, SEE SHEETS 20–22

HAFFNER REVETMENT REMOVAL, SEE SHEETS 38–39

SNOQUALMIE RIVER

RM 33.5

TABLE – IMPORT LOG QUANTITY SUMMARY

IMPORT LOGS	DIA (IN)	LENGTH (FT)	ROOTWAD	QTY
P1	20 (BUTT) 16 (TIP)	55	NO	30
P2	12–18	25	NO	9
P3	12–18	15	NO	49
R1	24	45	YES	15
R2	24	40	YES	33
R3	24	35	YES	18
R4	24	30	YES	3
R5	18	45	YES	3
R6	18	25	YES	17
L1	24	45	NO	9
L2	24	40	NO	27
L3	24	35	NO	12
L4	24	30	NO	18
L5	18	25	NO	99
L6	24	55	NO	36
RACKING	12–18	20–40	NO	332

TABLE – SALVAGE LOG QUANTITY SUMMARY

SALVAGED WOOD	DIA (IN)	LENGTH (FT)	ROOTWAD	QTY
S–RMS	18+	40–50	YES	42
S–R1	18–24	35	YES	36
S–R1–U	18–24	50+	YES	22
S–R2	24–36	50	YES	29
S–R2–U	24–36	60+	YES	52
S–R3–U	36+	60+	YES	27
S–L1	18–24	25–30	NO	28
RACKING	12–18	20–40	NO	190

LOG NAMING CONVENTION

1. "S" PREFIX DENOTES A SALVAGED LOG.
2. "R" DENOTES LOG WITH ROOTWAD.
3. "L" DENOTES A LOG WITHOUT A ROOTWAD OBTAINED FROM THE TOP PORTION OF THE SALVAGED TREE.
4. "RMS" DENOTES ROOTWAD WITH MULTIPLE STEMS.
5. "U" DENOTES A FULL LENGTH "UNCUT" SALVAGED TREE. A SALVAGE LOG CATEGORY WITH NO "U" SUFFIX DENOTES A TREE CUT TO A STANDARD LENGTH AS SHOWN IN TABLES.

NOTES

1. CLEARING LIMITS INCLUDE CLEAR AND GRUB LIMITS AND SELECTIVE CLEARING AND GRUBBING WITHIN AREAS THAT CONTAIN BLACKBERRY AND OTHER NON–NATIVE SPECIES, SEE SPECIAL PROVISIONS AND SHEETS 47–49.

60 30 0 60 120
SCALE IN FEET

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2–09–22
CHECKED: T. WELLER (TRANTECH) 2–09–22
KC: 1133842
HERRERA: 18–06954–000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE		02–2022
PROJECT SUPERVISOR: J. HANSEN		02–2022
PROJECT MANAGER: F. NOPP		02–2022
DESIGNED: I.M, K.F., J.W.		02–2022
DESIGN ENTERED: E.M., R.B.		02–2022

HERRERA
2200 Sixth Avenue
Suite 1100
Seattle, WA 98121
(206) 441–9080

IAN B. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 02/09

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

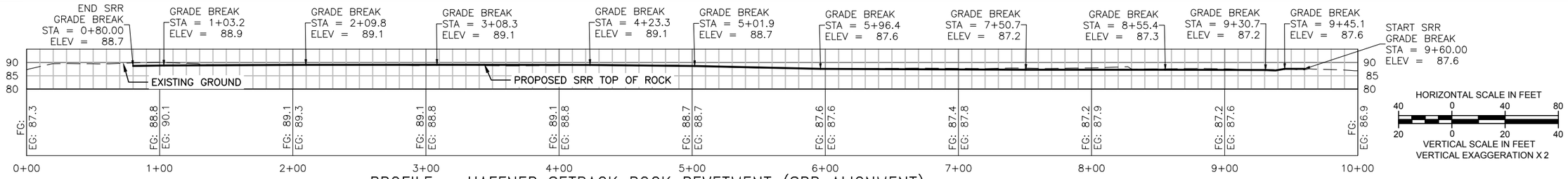
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

HAFFNER SETBACK REVETMENT AND NEAL ROAD – PLAN

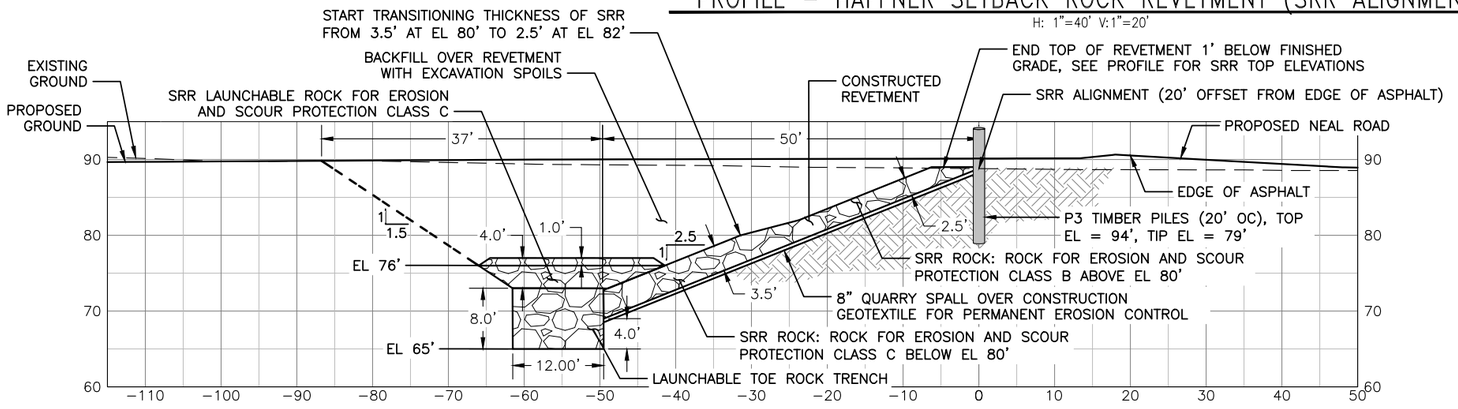
SHEET 18 OF 61 SHEETS

2021-07



PROFILE – HAFFNER SETBACK ROCK REVETMENT (SRR ALIGNMENT)

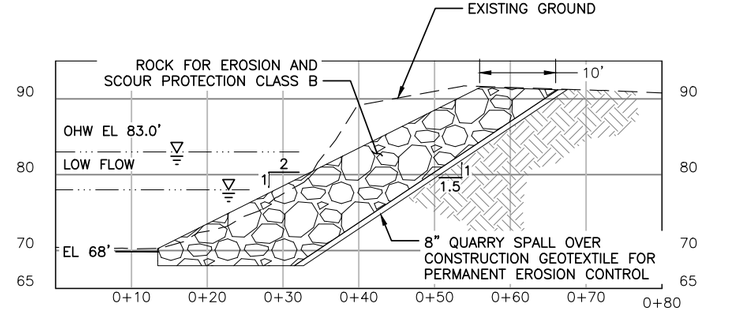
H: 1"=40' V:1"=20'



SECTION – TYPICAL SETBACK ROCK REVETMENT (SRR ALIGNMENT)

H:1"=10' V:1"=10'

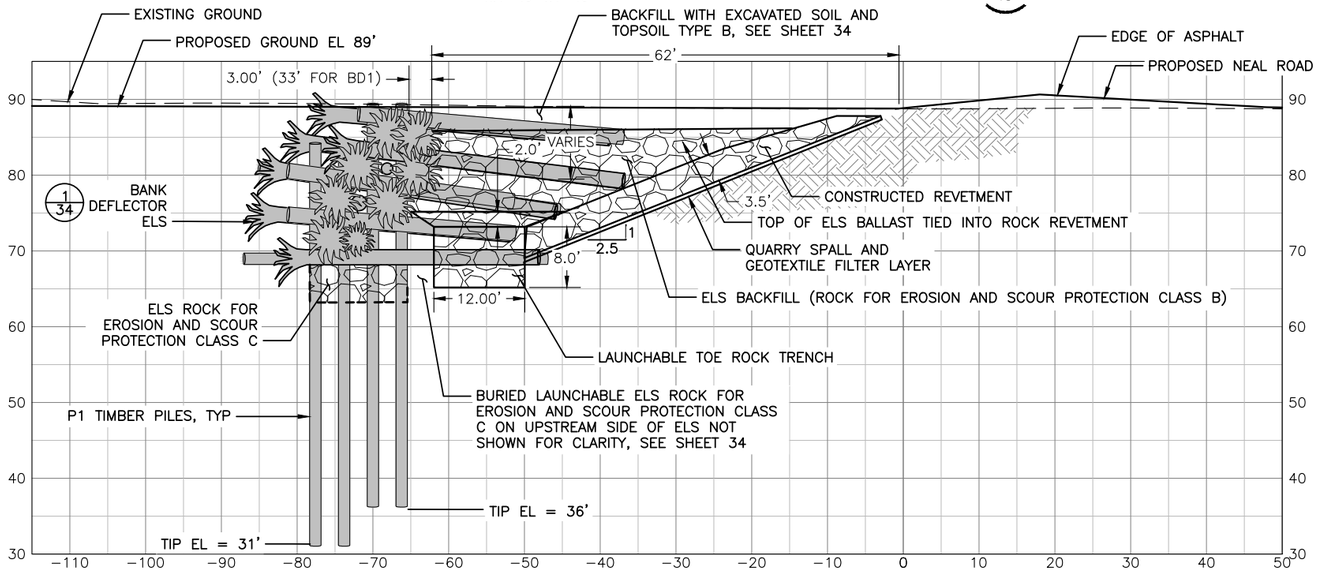
A 18



SECTION – BURIED ROCK FLANK STRUCTURE

H:1"=10' V:1"=10'

C 18



SECTION – TYPICAL HAFFNER SETBACK ROCK REVETMENT AT ELS (SRR ALIGNMENT)

H:1"=10' V:1"=10'

B 18

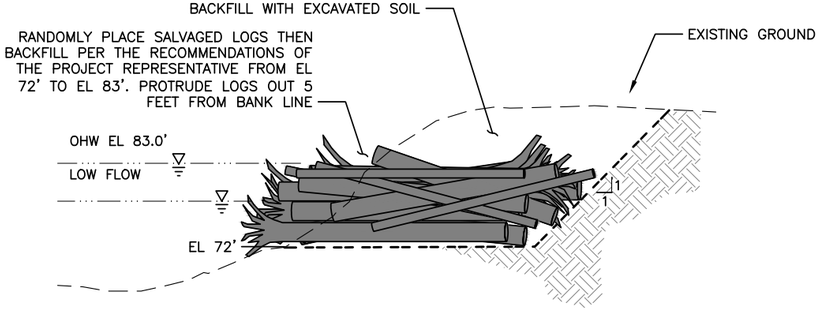


TABLE – BLC TYPE 1 LOG SCHEDULE:

LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD	QUANTITY/ STRUCTURE
S–RMS	18+	40–50	YES	3
S–R1–U	18–24	50+	YES	4
S–R2–U	24–36	60+	YES	3
S–R3–U	36+	60+	YES	2
S–L1	18–24	25–30	NO	5

DETAIL – BLC TYPE 1

NTS

1 18

HORIZONTAL SCALE IN FEET
10 0 10 20
10 0 10 20
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2–09–22
CHECKED: T. WELLER (TRANTECH) 2–09–22
KC: 1133842
HERRERA: 18–06954–000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

HERRERA
2200 Sixth Avenue
Suite 1100
Seattle, WA 98121
(206) 441-9080

IVAN B. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 05/05/22

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

HAFFNER SETBACK REVETMENT AND BURIED ROCK FLANK STRUCTURE – PROFILE AND CROSS SECTIONS

SHEET 19 OF 61 SHEETS

2021-07

MATCH LINE, SEE SHEET 21

WETLAND B

NEAL ROAD SE

NEAL ROAD REALIGNMENT, SEE SHEETS 8–17

PROJECT LIMITS, TYP

PARCEL NO. 1024079026

RIGHT BANK FLOODPLAIN EMBANKMENT FILL

WETLAND E

PARCEL NO. 1024079026

TEMPORARY PROJECT SURVEY CONTROL HUB, TYP

SLC 7: TWO S–R2–U; ONE IMPORTED L5 PIN LOG ANGLED AT 1H:1V AND MIN 8 FT DEEP

SLC 3: TWO S–R2–U; TWO IMPORTED L5 PIN LOGS ANGLED AT 1H:1V AND MIN 8 FT DEEP

3/23 BLC TYPE 2 NO L5 LOGS, TYP

3/23 BLC TYPE 2, TYP

BLC2–1, BLC2–2, BLC2–3, BLC2–4, BLC2–5, BLC2–6

HAFFNER SETBACK ROCK REVETMENT, SEE SHEETS 18–19

SLS TYPE 2, TYP 2/36

SLS2–1, SLS2–2, SLS2–3, SLS2–4, SLS2–5, SLS2–6, SLS2–7, SLS2–8, SLS2–9, SLS2–10, SLS2–11, SLS2–12, SLS3–1, SLS3–2, SLS3–3

HAFFNER REVETMENT REMOVAL, SEE SHEETS 38–39

INVERT EL: 76.00'

UPSTREAM RB SIDE CHANNEL 1,2/26

SLS TYPE 3, TYP 3/36

RB SIDE CHANNEL ALIGNMENT

CONSERVATION EASEMENT, TYP

SLC 6: TWO S–R2–U; TWO IMPORTED L5 PIN LOGS ANGLED AT 1H:1V AND MIN 8 FT DEEP

SLC 5: THREE S–R2–U; TWO IMPORTED L5 PIN LOGS ANGLED AT 1H:1V AND MIN 8 FT DEEP

SLC 4: THREE S–R2–U; ONE S–L1; USE EXISTING TREES AS ANCHORS

SLC 1: SIX S–R2–U; ONE S–L1; THREE RMS; USE EXISTING TREES AS ANCHORS

SLC 2: THREE S–R2–U; ONE S–L1; ONE S–RMS; USE EXISTING TREES AS ANCHORS

PARCEL NO. 1024079026

FLOODPLAIN SWALE 1/23

ADJUST GRADING AS DIRECTED BY PROJECT REPRESENTATIVE TO PROTECT LARGE CEDAR TREE

FLOODPLAIN SWALE ALIGNMENT

SNOQUALMIE RIVER

PARCEL NO. 1024079027

RBL33.2

NOTES

1. FOR SALVAGE LOG CLASSIFICATIONS AND DIMENSIONS SEE TABLES ON SHEETS 43 AND 44.
2. CLEARING LIMITS INCLUDE CLEAR AND GRUB LIMITS AND SELECTIVE CLEARING AND GRUBBING WITHIN AREAS THAT CONTAIN BLACKBERRY AND OTHER NON–NATIVE SPECIES, SEE SPECIAL PROVISIONS AND SHEETS 47–49.

60 30 0 60 120
SCALE IN FEET

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2–09–22; T. WELLER (TRANTECH) 2–09–22
KC: 1133842
HERRERA: 18–06954–000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022
PROJECT SUPERVISOR: J. HANSEN	02–2022
PROJECT MANAGER: F. NOPP	02–2022
DESIGNED: I.M, K.F., J.W.	02–2022
DESIGN ENTERED: E.M., R.B.	02–2022

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LEN B. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 2/10/22

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

RIGHT BANK SIDE CHANNEL – PLAN 1

SHEET 20 OF 61 SHEETS

2021-07

NOTES

1. FOR SALVAGE LOG CLASSIFICATIONS AND DIMENSIONS SEE TABLES ON SHEETS 43 AND 44.
2. CLEARING LIMITS INCLUDE CLEAR AND GRUB LIMITS AND SELECTIVE CLEARING AND GRUBBING WITHIN AREAS THAT CONTAIN BLACKBERRY AND OTHER NON-NATIVE SPECIES, SEE SPECIAL PROVISIONS AND SHEETS 47-49.
3. EXCAVATE EXPLORATION TRENCHES IN APPROXIMATE LOCATION AND AS DIRECTED BY PROJECT REPRESENTATIVE TO DEPTHS SPECIFIED ON PLANS.

INSET

NEAL RD SE

SEE INSET FOR CONTINUATION OF RIPRAP REMOVAL

ESTABLISH ACCESS ROAD IF EXPLORATION TRENCHES SHOW BURIED RIPRAP

WETLAND B

APPROX CUT LINE FOR RB FLOODPLAIN RIPRAP REMOVAL

PARCEL NO. 1024079037

PARCEL NO. 1024079036

RIPRAP EXPLORATION TRENCH, TYP

ESTABLISH ACCESS ROAD IF EXPLORATION TRENCHES SHOW BURIED RIPRAP

PROJECT LIMITS, TYP

2/23 RB FLOODPLAIN RIPRAP REMOVAL

TEMPORARY PROJECT SURVEY CONTROL HUB, TYP

PROTECT 36" TREE. LOCALLY ADJUST GRADING IN DRIPLINE AS DIRECTED BY PROJECT REPRESENTATIVE

PROTECT 24" TREE. LOCALLY ADJUST GRADING IN DRIPLINE AS DIRECTED BY PROJECT REPRESENTATIVE

25' WIDE CONSTRUCTED ACCESS ROAD, TYP 3/46

SLC LOG PLACEMENT FIELD DIRECTED BY PROJECT REPRESENTATIVE, TYP

SLC 9: TWO S-R3-U; SIX S-R2-U

SLC 8: THREE S-R3-U; FOUR S-R2-U; TWO S-L1

SLC 10: FIVE S-R3-U; SIX S-RMS; ONE S-R1-U

SLC 11: FIVE S-R3-U; FIVE S-RMS; TWO S-R1-U

FLOODPLAIN ROUGHENING ELS 1/33

SLS2-13

BLC1-3

OUTLET EL: 69.00'

2/36 SLS TYPE 2, TYP

RM 32.7

3/23 BLC TYPE 1

REMOVE EXPOSED RIPRAP

RB SIDE CHANNEL ALIGNMENT

SNOQUALMIE RIVER

S-RMS LOG

S-RMS LOG

S-RMS LOG

RIGHT BANK OVERFLOW CHANNEL 4/26

DOWNSTREAM 2-STAGE SIDE CHANNEL 3/26

CONSERVATION EASEMENT

PARCEL NO. 1024079026

MATCH LINE, SEE SHEET 20

60 30 0 60 120
SCALE IN FEET

811 Know what's below. Call before you dig.

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PROJECT No. KC: 1133842 HERRERA: 18-06954-000 TRANTECH: 2018031			
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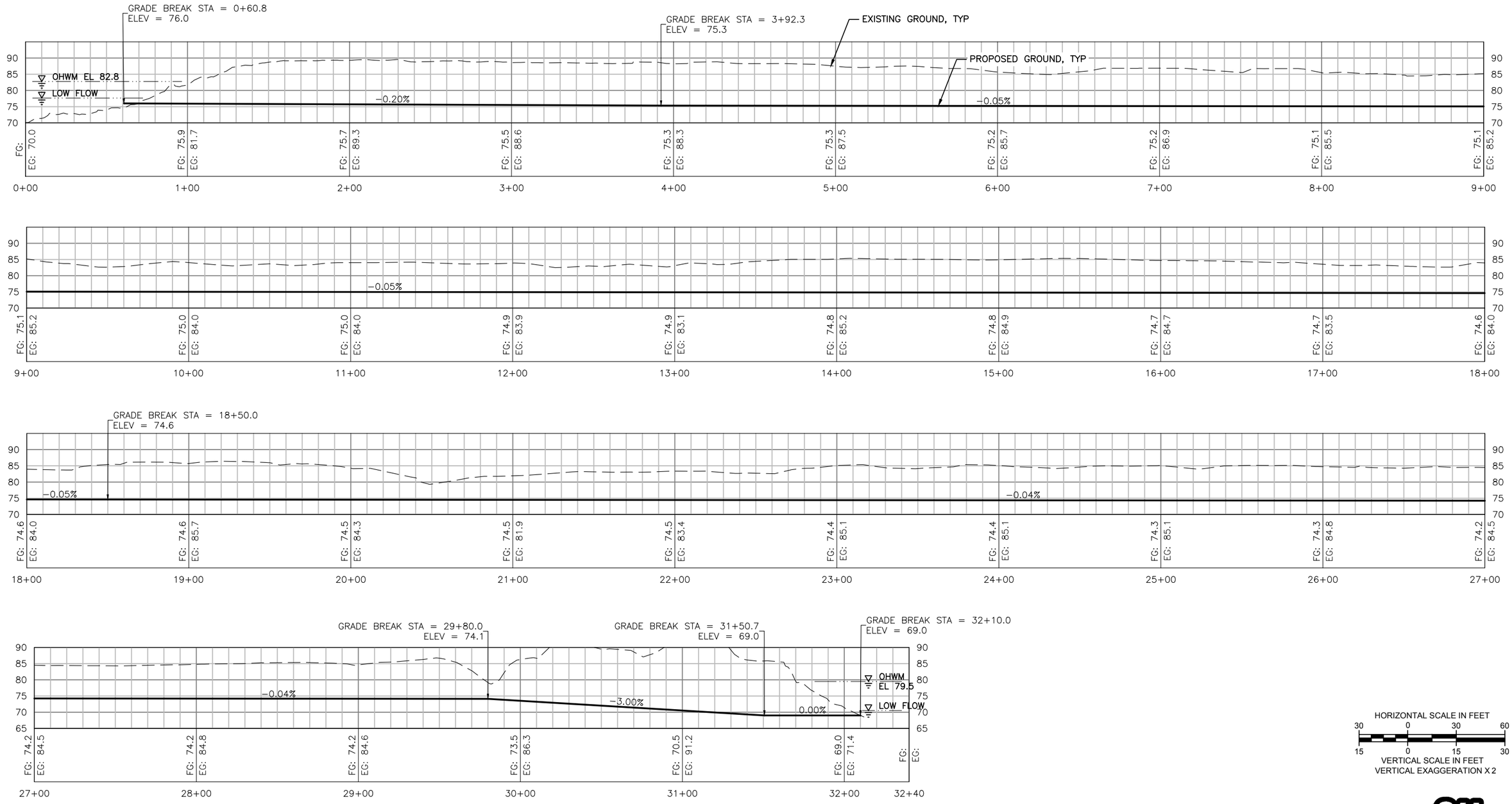
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

RIGHT BANK SIDE CHANNEL – PLAN 2

2021-07



HORIZONTAL SCALE IN FEET
30 0 30 60
15 0 15 30
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 2

PROFILE – RIGHT BANK SIDE CHANNEL

H: 1"=30' V: 1"=15'

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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

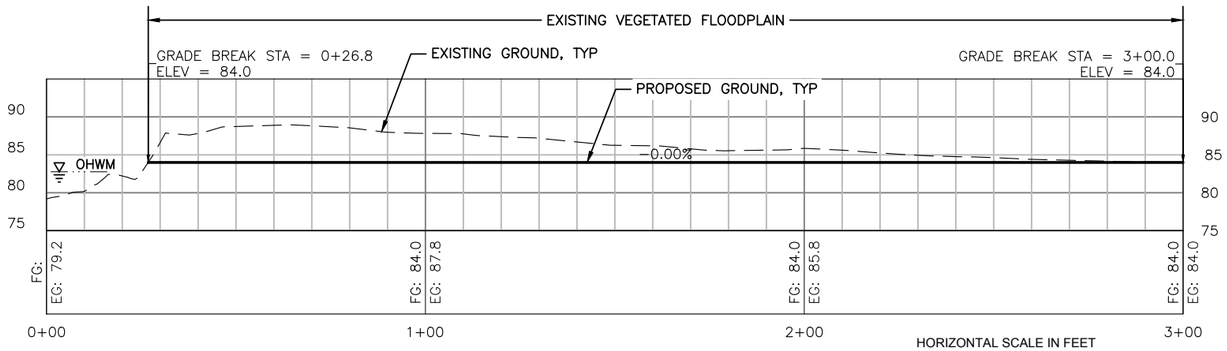
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

RIGHT BANK SIDE CHANNEL – PROFILE

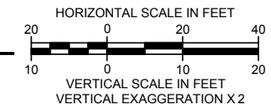
SHEET 22 OF 61 SHEETS

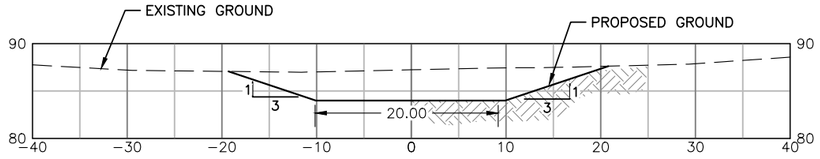
2021-07



PROFILE – FLOODPLAIN SWALE

H: 1"=20' V: 1"=10'



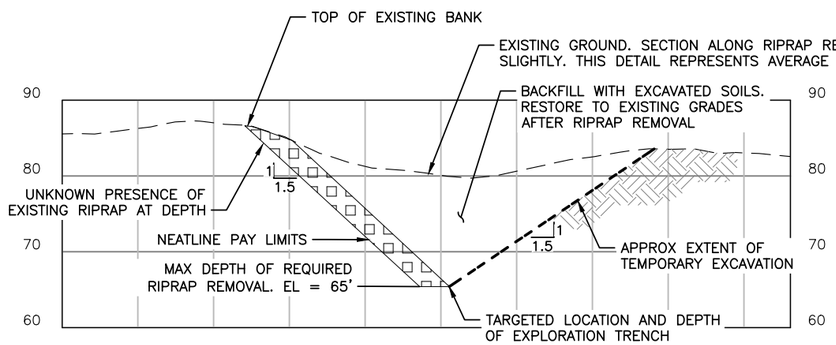


DETAIL – TYPICAL FLOODPLAIN SWALE

NTS

1

20

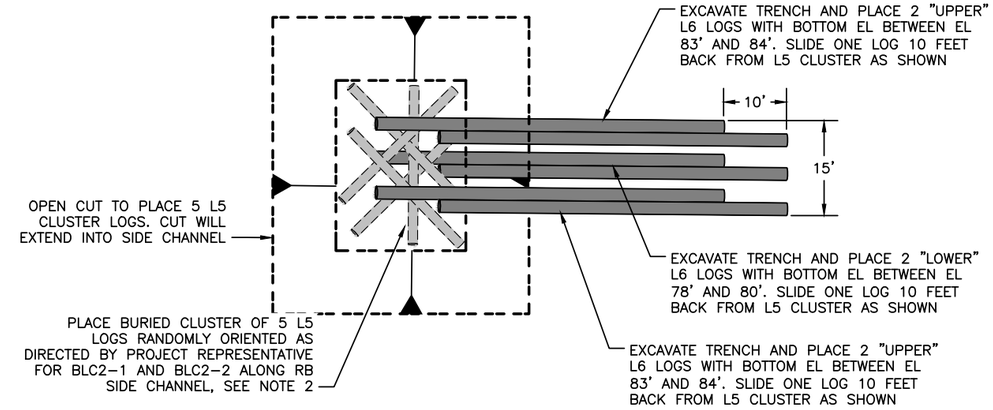


DETAIL – RIGHT BANK FLOODPLAIN RIPRAP REMOVAL

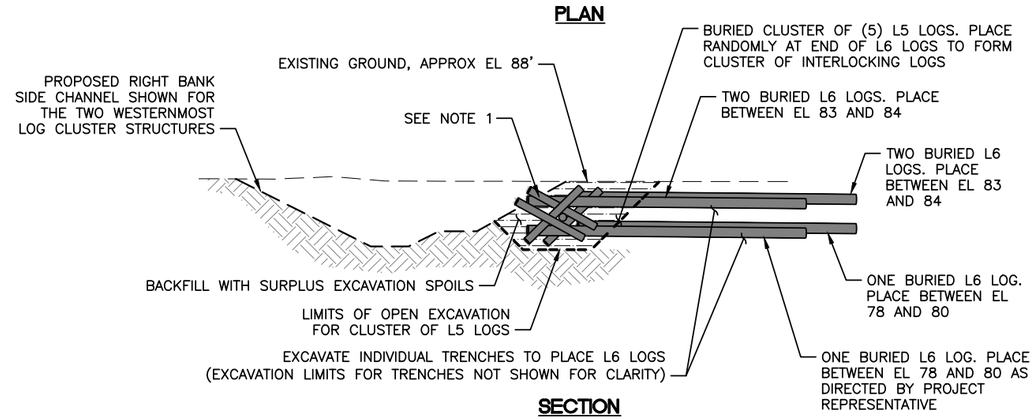
NTS

2

21



PLAN



SECTION

NOTES:

1. FOR BLC2–1 AND BLC2–2 STRUCTURES NEXT TO SIDE CHANNEL, ALIGN END OF CENTRAL HORIZONTAL PIN LOG WITH TOP OF BANK SO THAT MIDDLE OF THE CLUSTER OF L5 LOGS ARE FLUSH WITH THE BANK, THE UPSTREAM END OF CLUSTER OF L5 LOGS ARE BURIED, AND DOWNSTREAM END OF CLUSTER OF L5 LOGS PROTRUDE OUT OF THE BANK AS DIRECTED BY THE PROJECT REPRESENTATIVE.
2. BLS2–1 AND BLC2–2 INCLUDE L5 CLUSTER LOGS. BLC2–3 THROUGH BLC2–6 DO NOT INCLUDE L5 CLUSTER LOGS.

TABLE – BLC TYPE 2 LOG SCHEDULE:

LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD	QUANTITY/ STRUCTURE
L5	18	25	NO	5
L6	24	55	NO	6

DETAIL – BLC TYPE 2

NTS

3

VAR

811 Know what's below. Call before you dig.

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PROJECT No. TRANTECH: 2018031
SURVEY No.

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PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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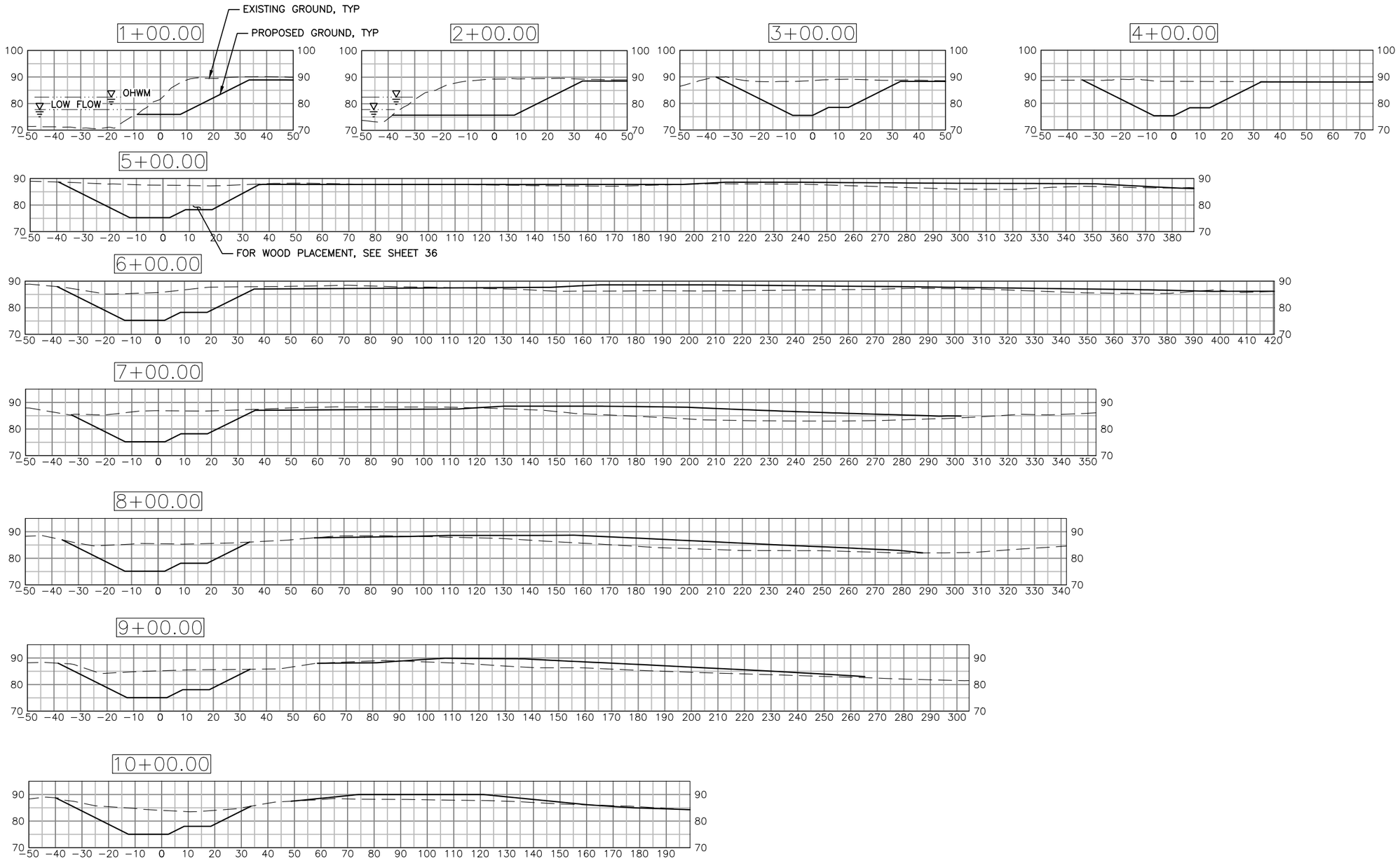
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

RIGHT BANK FLOODPLAIN DETAILS

SHEET 23 OF 61 SHEETS

2021-07



NOTES:

1. ALL CROSS SECTIONS ORIENTED LOOKING DOWNSTREAM.
2. NEW WOOD PLACEMENT NOT SHOWN FOR CLARITY.

HORIZONTAL SCALE IN FEET
20 0 20 40
20 0 20 40
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1

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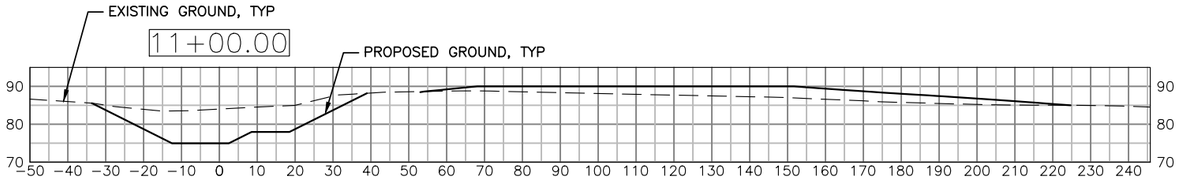
Christie True, Director

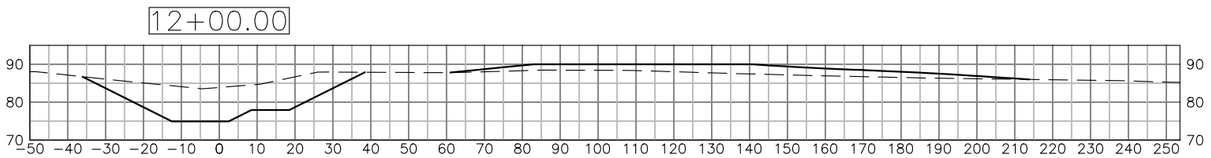
FALL CITY FLOODPLAIN RESTORATION PROJECT

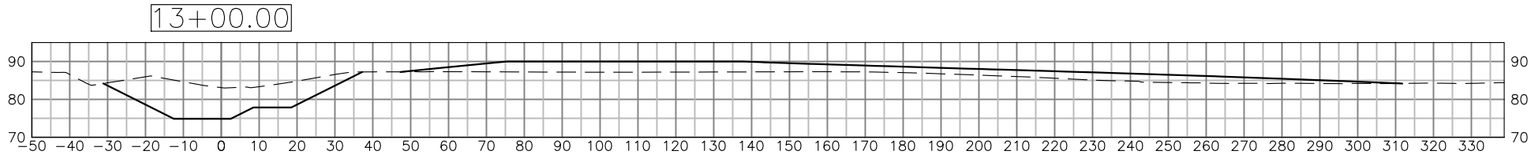
RIGHT BANK SIDE CHANNEL – CROSS SECTIONS 1

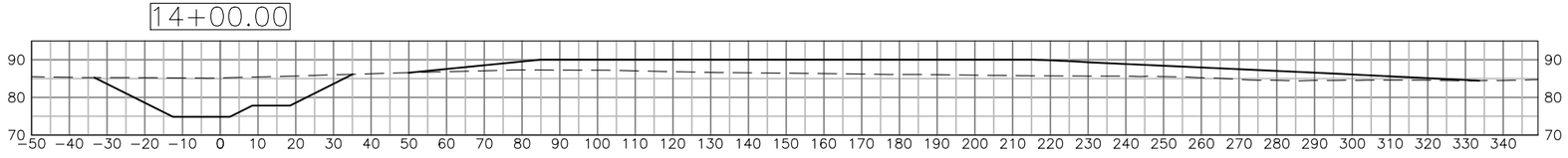
SHEET 24 OF 61 SHEETS

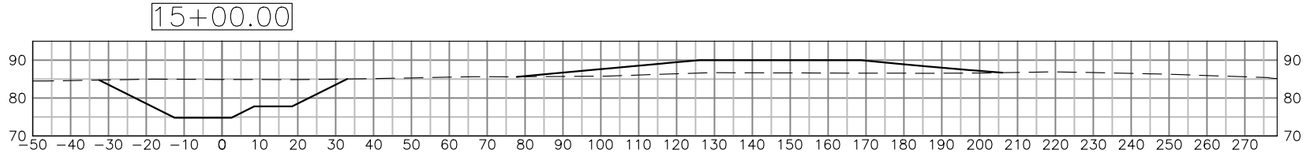
2021-07

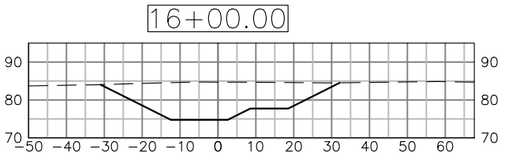


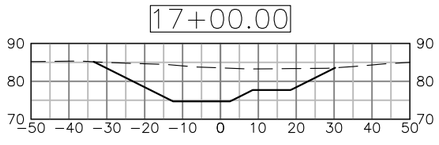


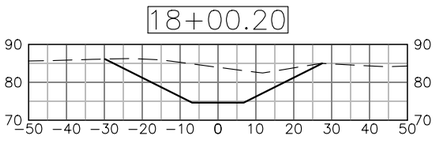












NOTES:

1. ALL CROSS SECTIONS ORIENTED LOOKING DOWNSTREAM.
2. NEW WOOD PLACEMENT NOT SHOWN FOR CLARITY.

HORIZONTAL SCALE IN FEET
20 0 20 40
20 0 20 40
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1

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IAN B. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 2/2/09

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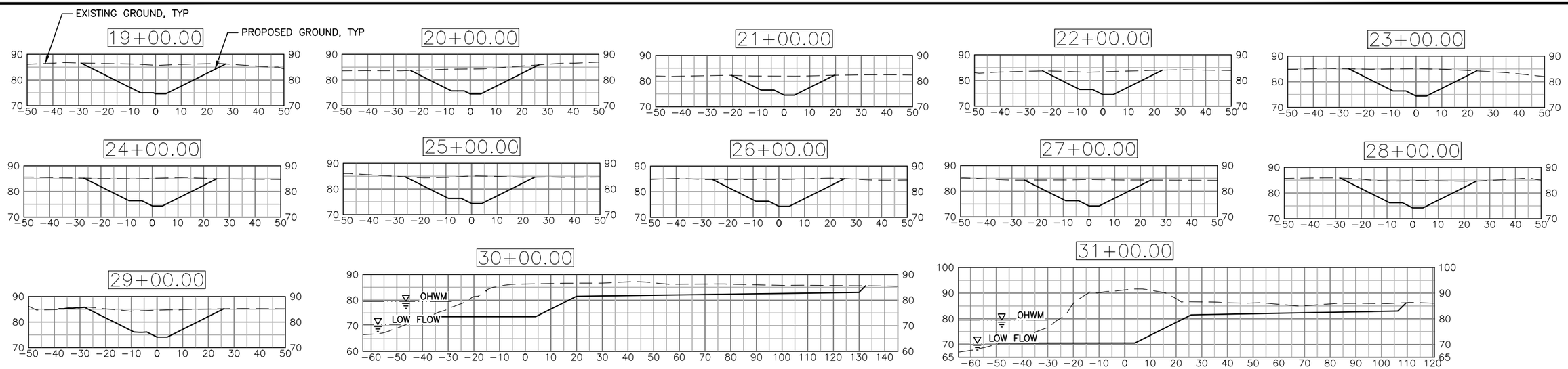
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

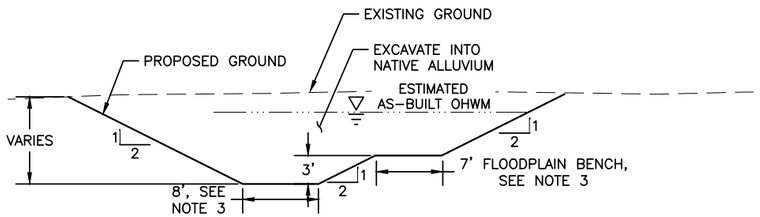
FALL CITY FLOODPLAIN RESTORATION PROJECT

RIGHT BANK SIDE CHANNEL – CROSS SECTIONS 2

SHEET 25 OF 61 SHEETS

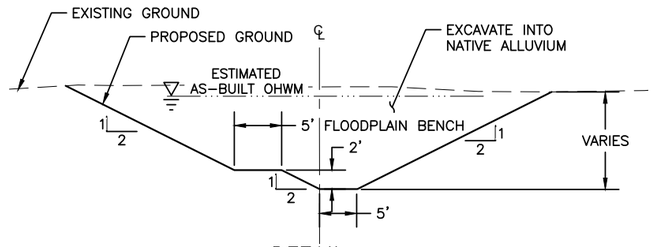
2021-07





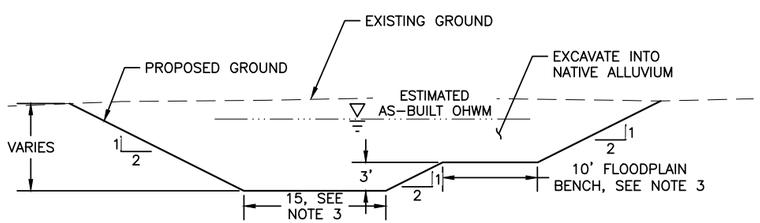
DETAIL – TYPICAL UPSTREAM SIDE CHANNEL, STA 2+75 TO 4+60 — 1/20

NTS



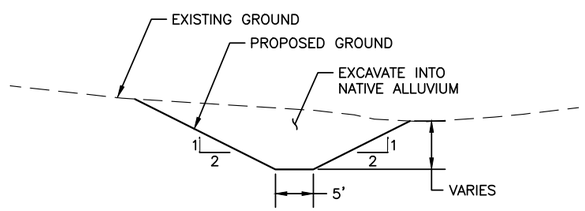
DETAIL – TYPICAL DOWNSTREAM SIDE CHANNEL, STA 20+00 TO 29+00 — 3/21

NTS



DETAIL – TYPICAL UPSTREAM SIDE CHANNEL, STA 4+60 TO 17+00 — 2/20

NTS



DETAIL – TYPICAL RIGHT BANK OVERFLOW CHANNEL — 4/21

NTS

SIDE CHANNEL BOTTOM WIDTH VARIATIONS

FROM STATION	TO STATION	CHANNEL BOTTOM WIDTH (FT)	FLOODPLAIN BENCH WIDTH (FT)
2+75	4+60	8'	7'
4+60	4+75	TRANSITION 8' TO 15'	TRANSITION 7' TO 10'
4+75	17+00	15'	10'
17+00	19+00	TRANSITION 15' TO 12'	TRANSITION 10' TO 0'
19+00	20+00	TRANSITION 12' TO 5'	TRANSITION 0' TO 5'
20+00	29+00	5'	5'

NOTES:

1. ALL CROSS SECTIONS ORIENTED LOOKING DOWNSTREAM.
2. NEW WOOD PLACEMENT NOT SHOWN FOR CLARITY.
3. CHANNEL BOTTOM AND FLOODPLAIN BENCH WIDTHS TAPER IN TRANSITION ZONES BETWEEN TYPICAL SECTIONS SHOWN. SEE TABLE FOR TRANSITION DIMENSIONS.

HORIZONTAL SCALE IN FEET
20 0 20 40
20 0 20 40
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1

811 Know what's below. Call before you dig.

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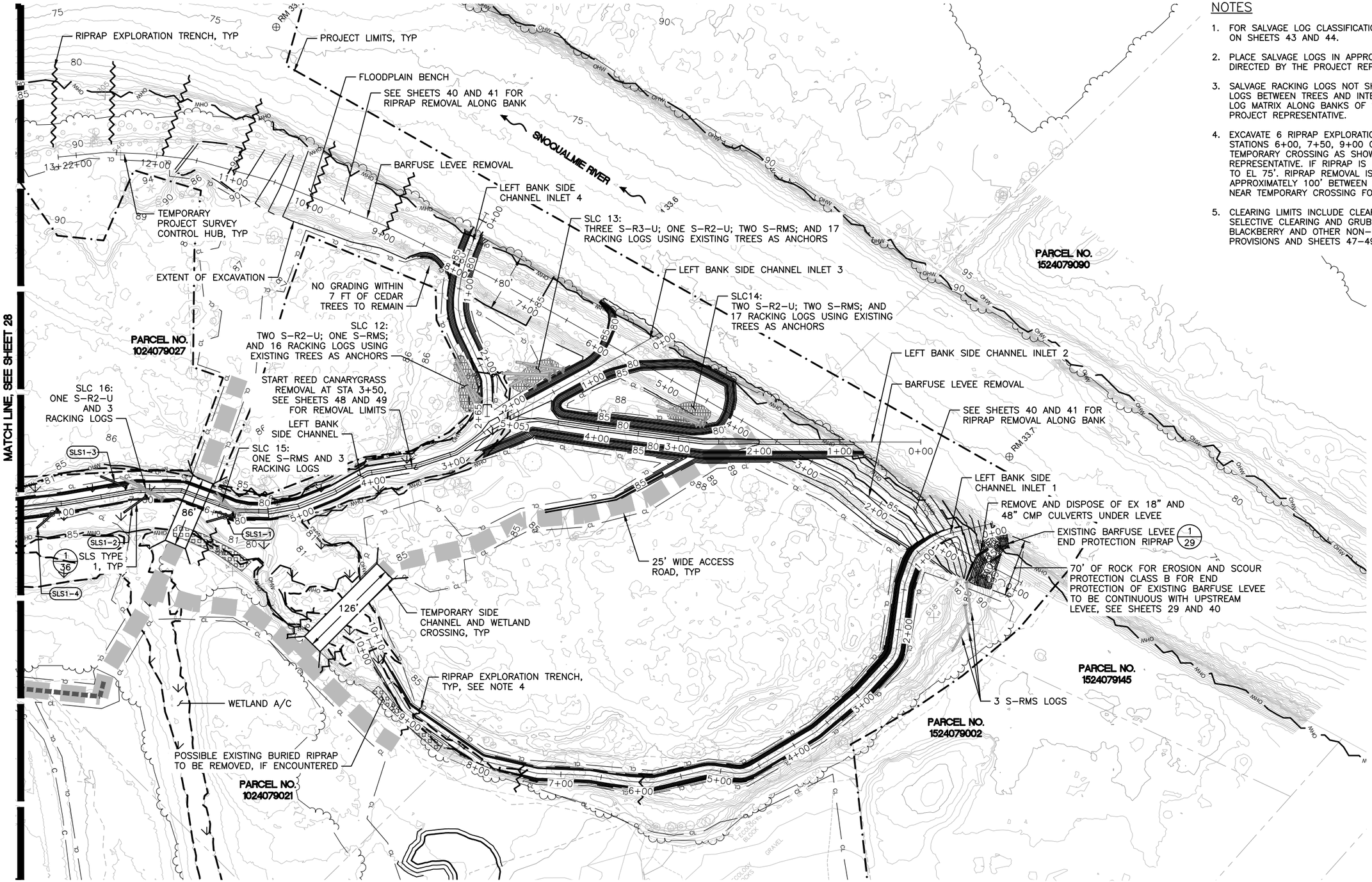
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

RIGHT BANK SIDE CHANNEL – CROSS SECTIONS 3

SHEET 26 OF 61 SHEETS

2021-07



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JANE E. MOSTRENKO
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02/09/22

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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

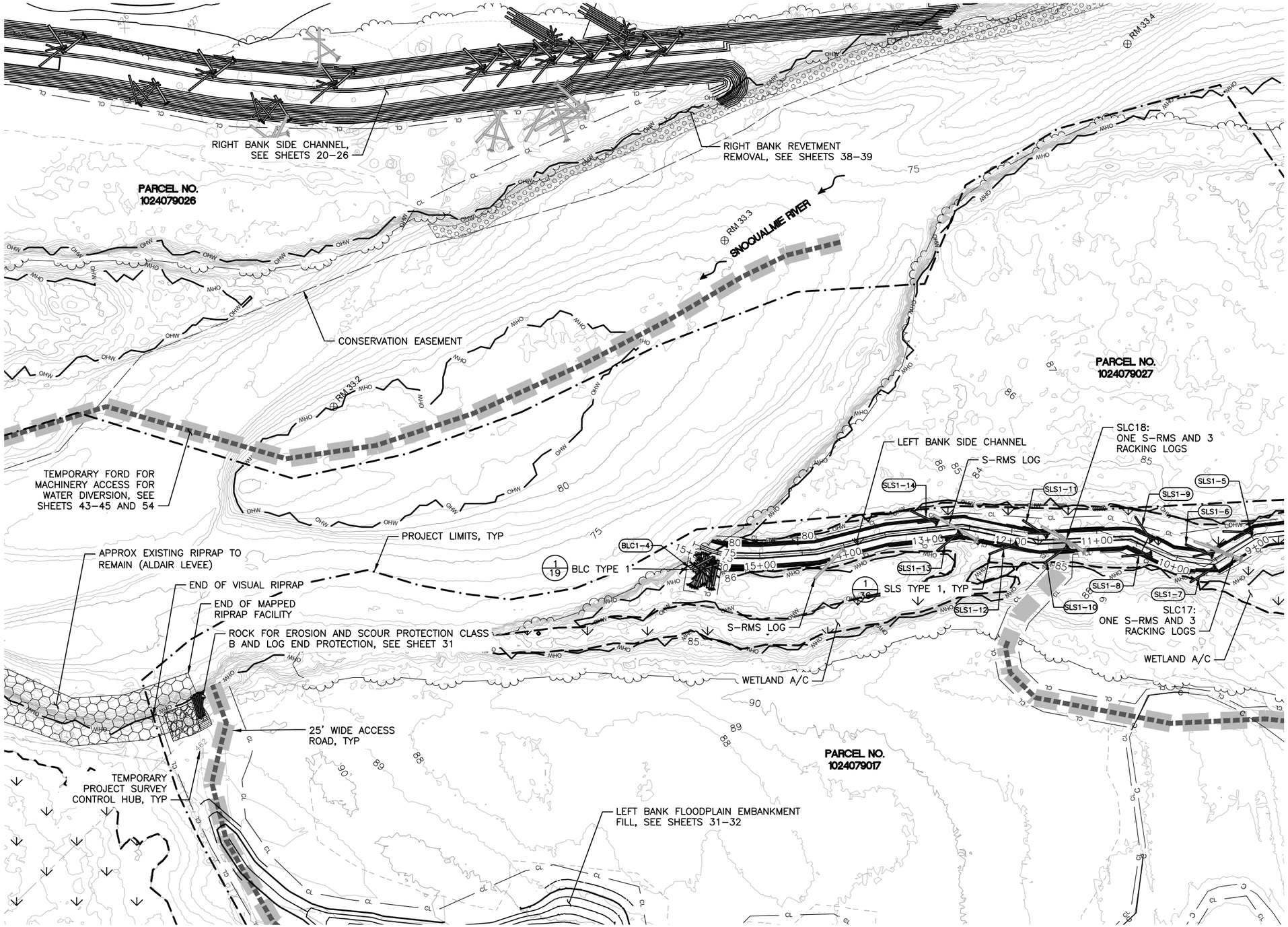
BARFUSE LEVEE REMOVAL AND LEFT BANK SIDE CHANNEL – PLAN 1

SHEET 27 OF 61 SHEETS

2021-07

NOTES

1. CLEARING LIMITS INCLUDE CLEAR AND GRUB LIMITS AND SELECTIVE CLEARING AND GRUBBING WITHIN AREAS THAT CONTAIN BLACKBERRY AND OTHER NON-NATIVE SPECIES, SEE SPECIAL PROVISIONS AND SHEETS 47-49.



60 30 0 60 120
SCALE IN FEET

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)				
SURVEY BASE MAP:				
CHECKED: I. MOSTRENKO (HERRERA) 2-09-22 T. WELLER (TRANTECH) 2-09-22				
KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031				
SURVEY No.				
	NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022
PROJECT SUPERVISOR: J. HANSEN	02-2022
PROJECT MANAGER: F. NOPP	02-2022
DESIGNED: I.M, K.F., J.W.	02-2022
DESIGN ENTERED: E.M., R.B.	02-2022

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IAN S. MOSTRENKO — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — 03/07/22

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

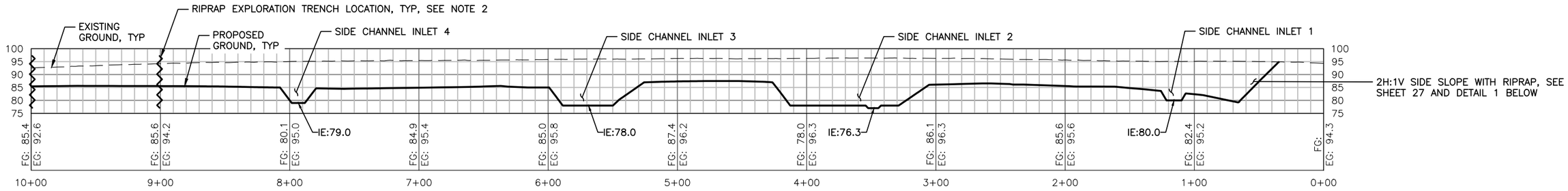
Christie True, Director

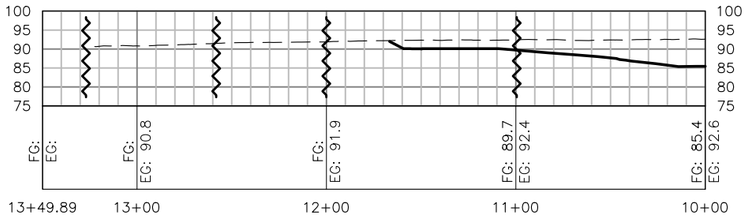
FALL CITY FLOODPLAIN RESTORATION PROJECT

LEFT BANK SIDE CHANNEL – PLAN 2

SHEET 28 OF 61 SHEETS

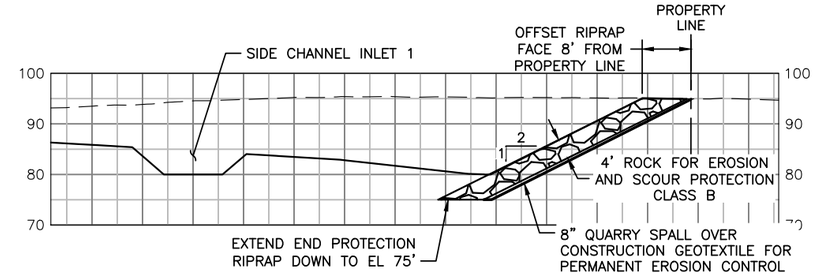
2021-07





PROFILE – BARFUSE LEVEE REMOVAL

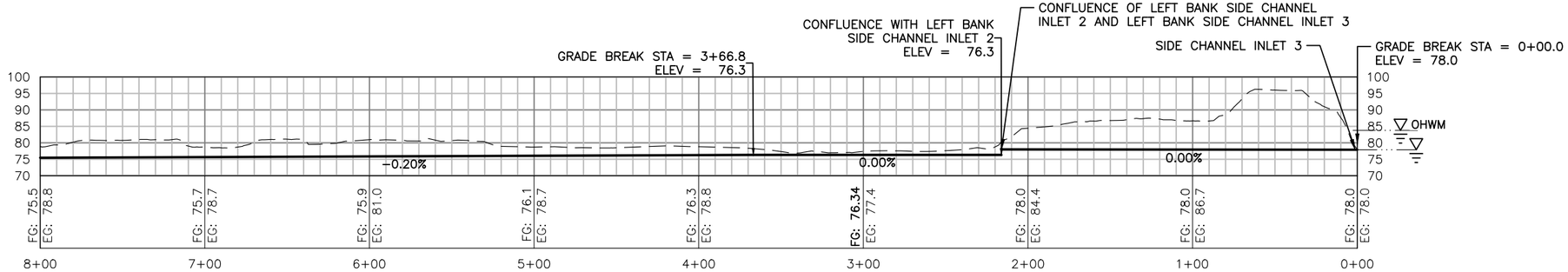
H: 1"=40' V: 1"=20'

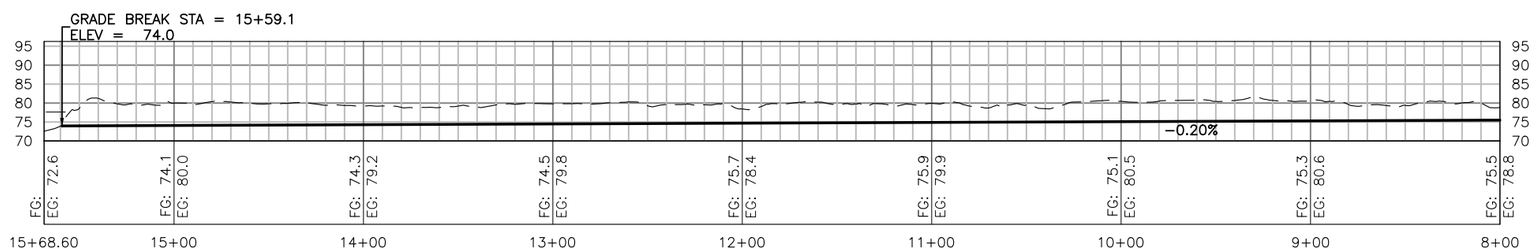


DETAIL – EXISTING BARFUSE LEVEE END PROTECTION RIPRAP

1

SCALE: NTS





PROFILE – LEFT BANK SIDE CHANNEL (WITH INLET 3)

H: 1"=40' V: 1"=20'

NOTES

1. GRADE BREAKS ALONG LEVEE REMOVAL MATCH ELEVATION OF THE FLOODPLAIN ON LANDWARD SIDE OF LEVEE.
2. EXCAVATE RIPRAP EXPLORATION TRENCHES TO MIN EL 77'. IF RIPRAP IS ENCOUNTERED, REMOVE RIPRAP DOWN TO EL 71'. BACKFILL RIPRAP EXPLORATION TRENCHES TO ELEVATION 86' OR AS DIRECTED BY PROJECT REPRESENTATIVE WITH EXCAVATION SPOILS.

HORIZONTAL SCALE IN FEET
40 0 40 80
10 0 10 20
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 4

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2-09-22
CHECKED: T. WELLER (TRANTECH) 2-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

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APPROVED: W. MANSFIELD, PE	02-2022	
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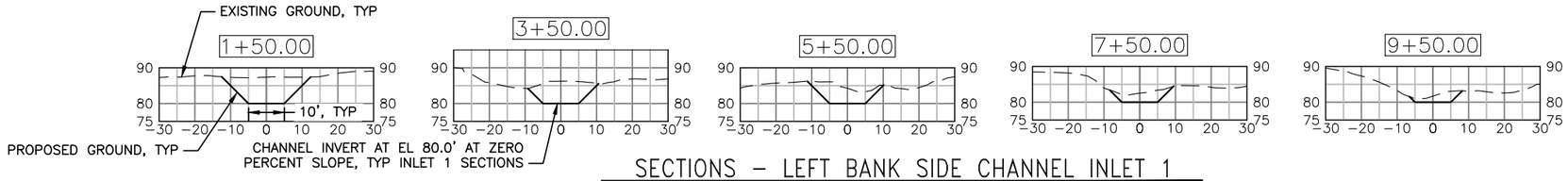
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

BARFUSE LEVEE REMOVAL AND LEFT BANK SIDE CHANNEL – PROFILES

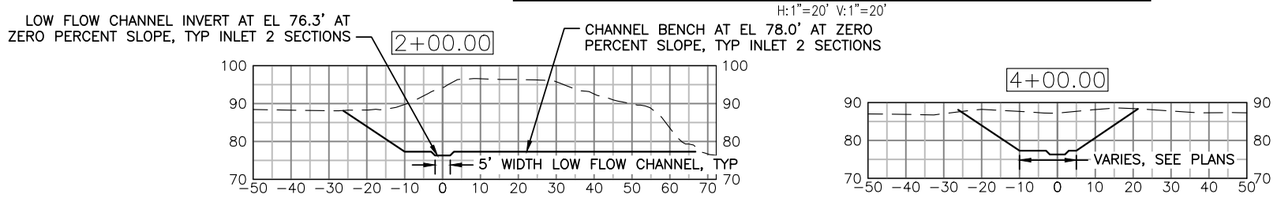
SHEET 29 OF 61 SHEETS

2021-07



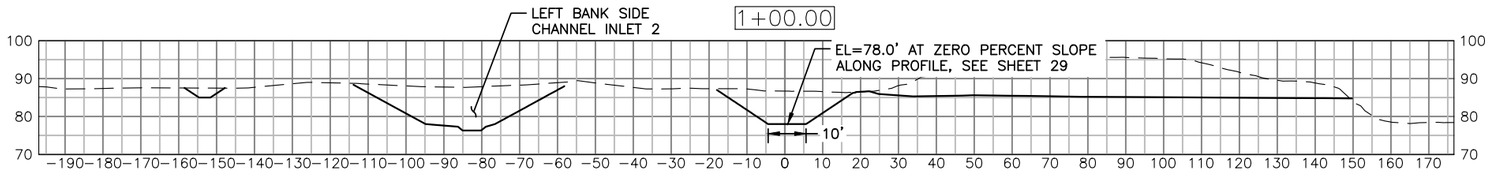
SECTIONS – LEFT BANK SIDE CHANNEL INLET 1

H:1"=20' V:1"=20'



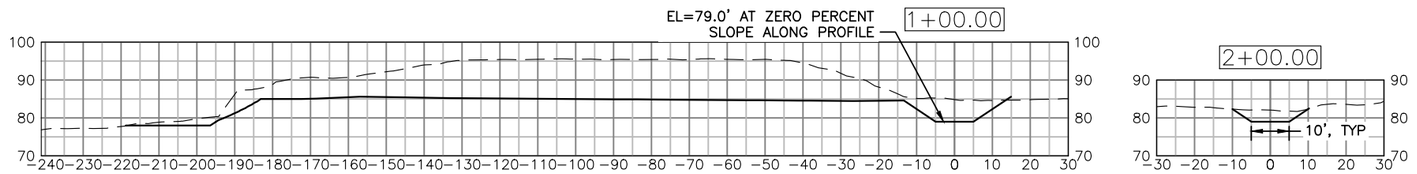
SECTIONS – LEFT BANK SIDE CHANNEL INLET 2

H:1"=20' V:1"=20'



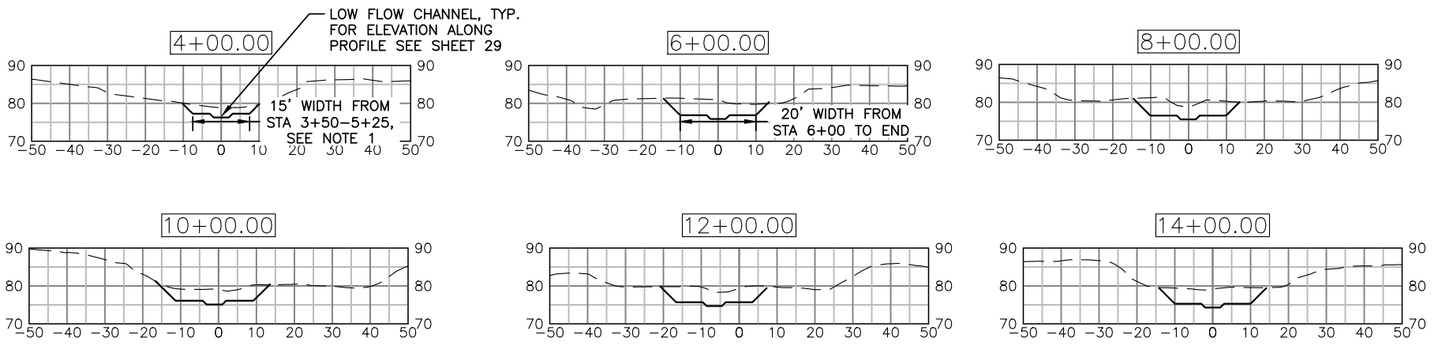
SECTIONS – LEFT BANK SIDE CHANNEL INLET 3

H:1"=20' V:1"=20'



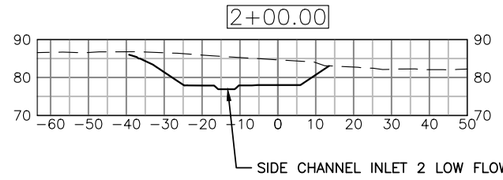
SECTIONS – LEFT BANK SIDE CHANNEL INLET 4

H:1"=20' V:1"=20'



SECTIONS – LEFT BANK SIDE CHANNEL

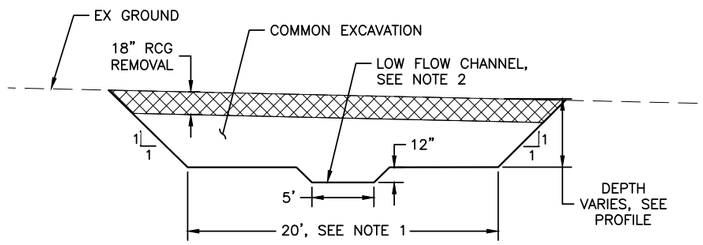
H:1"=20' V:1"=20'



NOTES

1. CROSS SECTIONS ORIENTED LOOKING DOWNSTREAM.
2. NEW WOOD PLACEMENT NOT SHOWN FOR CLARITY.

HORIZONTAL SCALE IN FEET
20 0 20 40
20 0 20 40
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1



NOTES

1. CHANNEL BOTTOM WIDTH FOR LEFT BANK SIDE CHANNEL REDUCED TO 15 FEET IN AREAS WITH EXISTING HIGH QUALITY BANK VEGETATION FROM STATION 3+50 TO 5+25. MINIMIZE BANK DISTURBANCE.
2. VARY LOCATION OF LOW FLOW IN CHANNEL CROSS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY PROJECT REPRESENTATIVE TO AVOID DOGWOOD AND WILLOW THICKETS. WILLOW THICKETS DISTURBED SHALL BE CUT AND SALVAGED FOR LIVE STAKE REUSE (SEE CONTRACT SPECIAL PROVISIONS).
3. RCG REMOVAL INCLUDES TOP 18 INCHES OF EXCAVATED MATERIAL. THE REMAINING EXCAVATION TO FINAL GRADES IS COMMON EXCAVATION.

DETAIL – TYPICAL LEFT BANK SIDE CHANNEL 1

NTS

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2–09–22
CHECKED: T. WELLER (TRANTECH) 2–09–22
KC: 1133842
HERRERA: 18–06954–000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

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PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

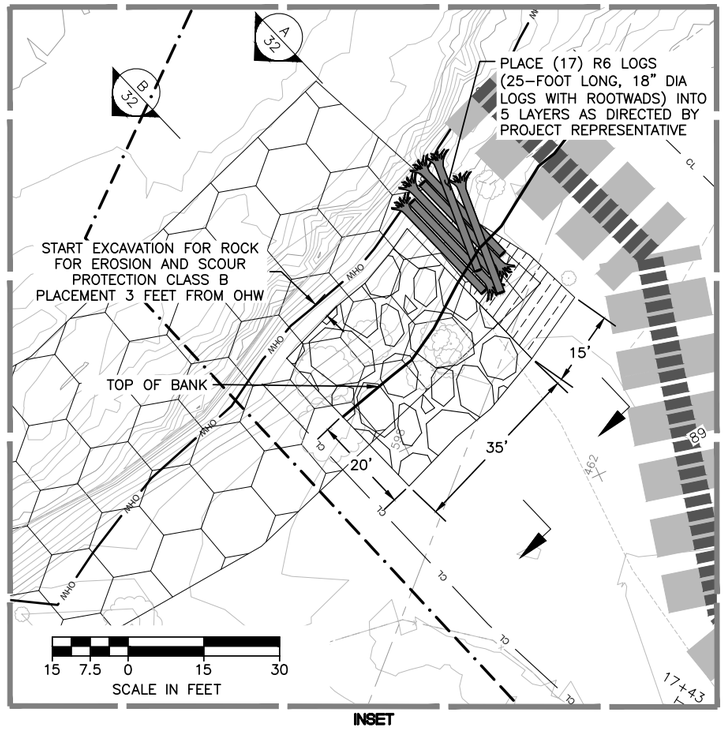
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

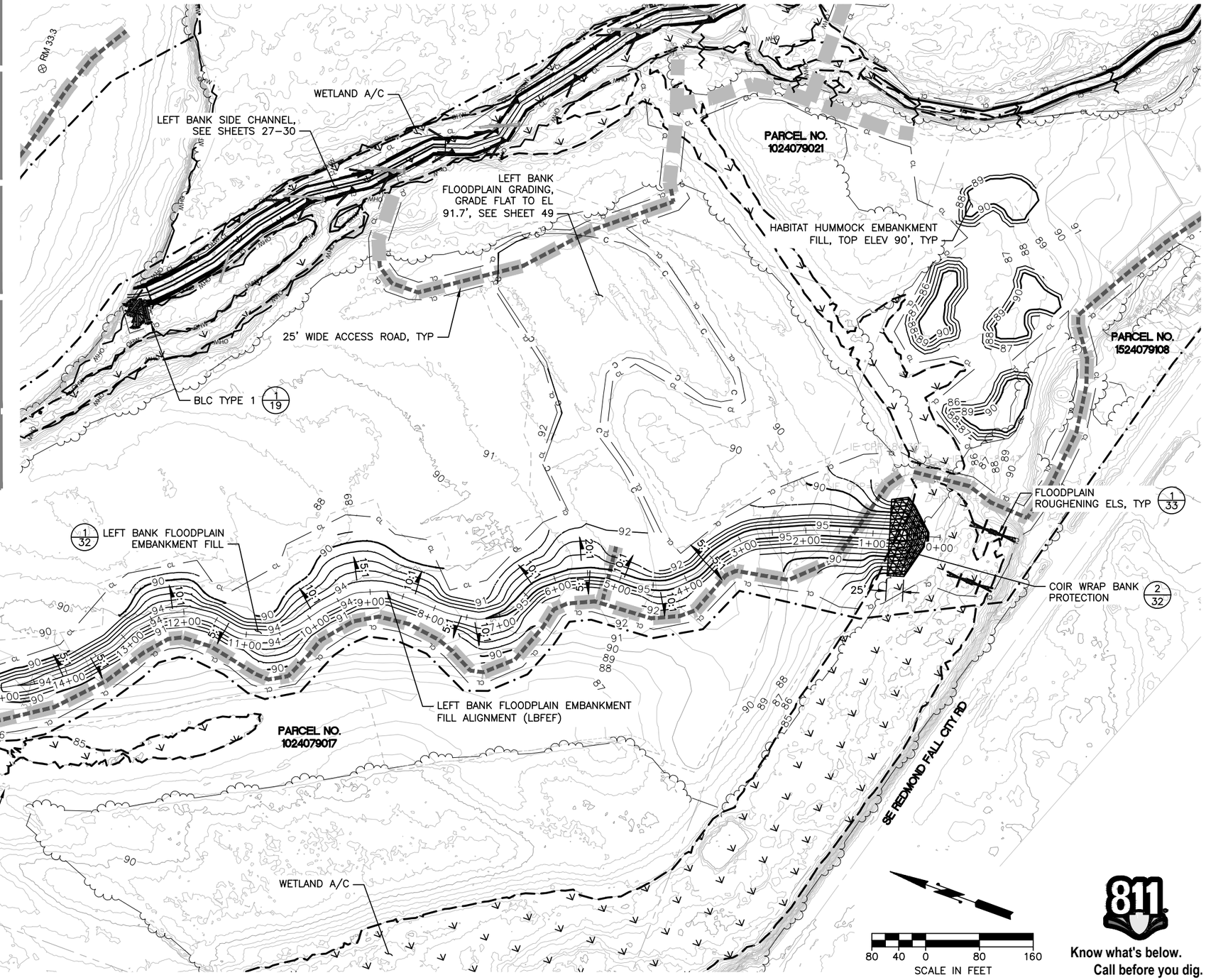
LEFT BANK SIDE CHANNEL – CROSS SECTIONS

SHEET 30 OF 61 SHEETS

2021-07



INSET



NOTES

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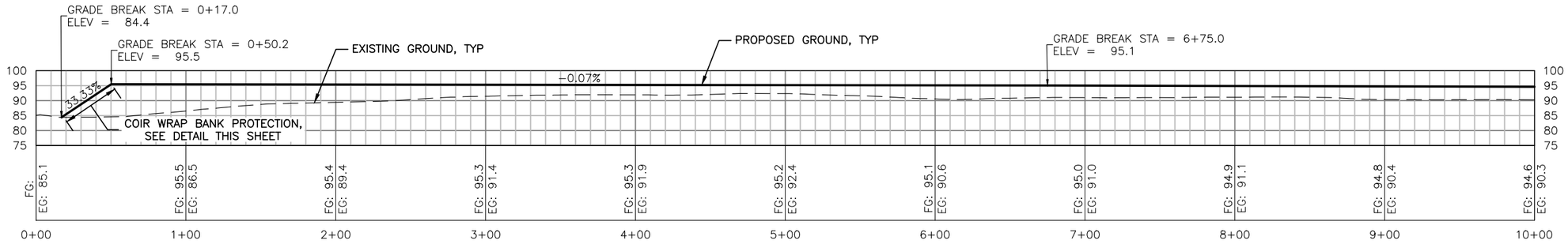
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

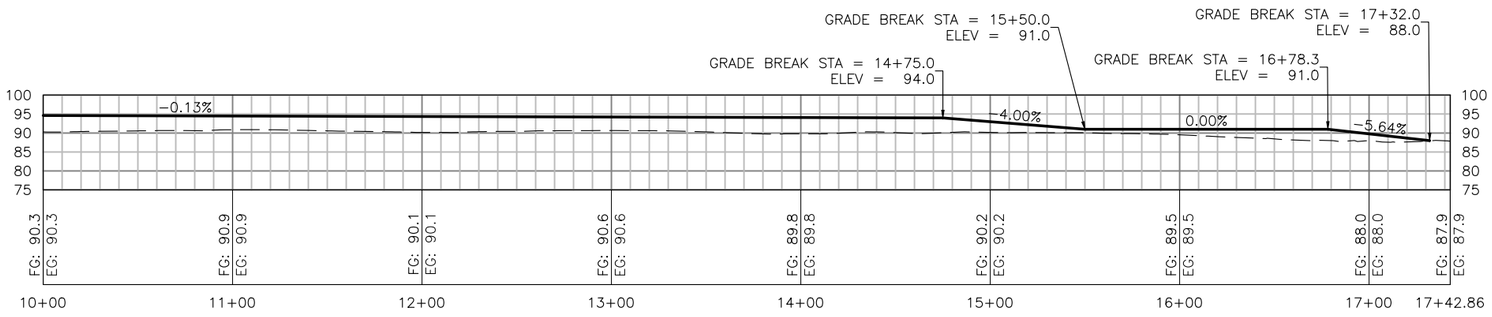
FALL CITY FLOODPLAIN RESTORATION PROJECT

LEFT BANK EMBANKMENT FILL – PLAN

SHEET 31 OF 61 SHEETS

2021-07

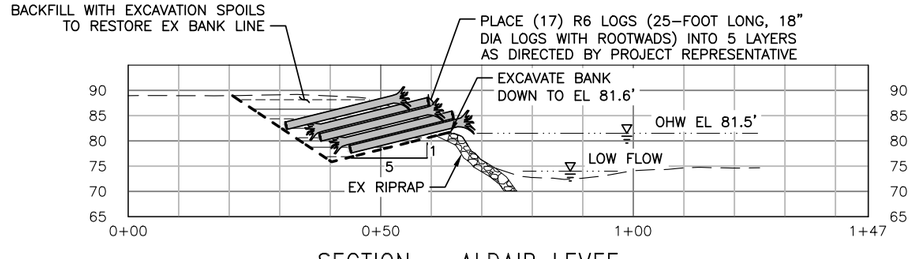




PROFILE – LEFT BANK FLOODPLAIN EMBANKMENT FILL

H:1"=40' V:1"=20'

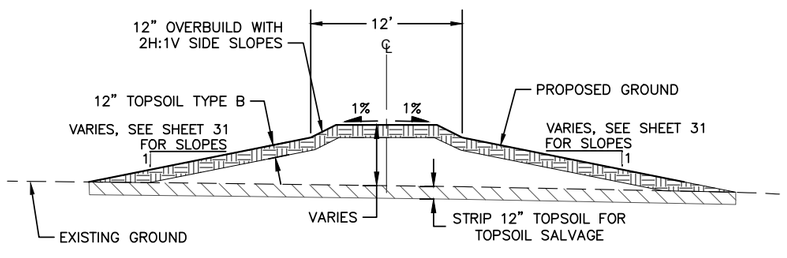
HORIZONTAL SCALE IN FEET
40 0 40 80
20 0 20 40
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 2



SECTION – ALDAIR LEVEE END PROTECTION – UPSTREAM LOGS

NTS

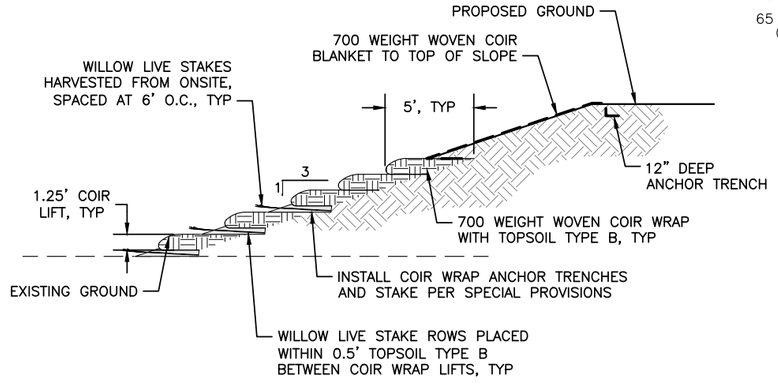
A
31



DETAIL – TYPICAL LEFT BANK FLOODPLAIN EMBANKMENT FILL

NTS

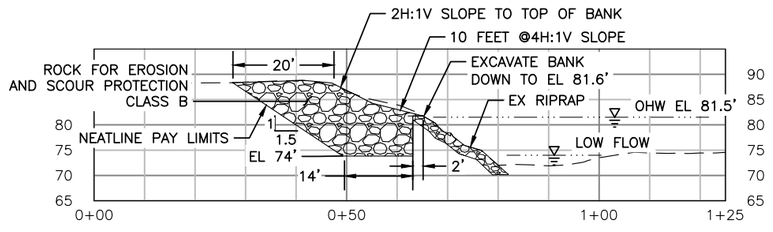
1
31



DETAIL – COIR WRAP BANK PROTECTION

NTS

2
31



SECTION – ALDAIR LEVEE END PROTECTION – DOWNSTREAM ROCK

NTS

B
31

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)				
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2–09–22				
CHECKED: T. WELLER (TRANTECH) 2–09–22				
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Rural and Regional Services Section
Ecological Restoration and Engineering Services

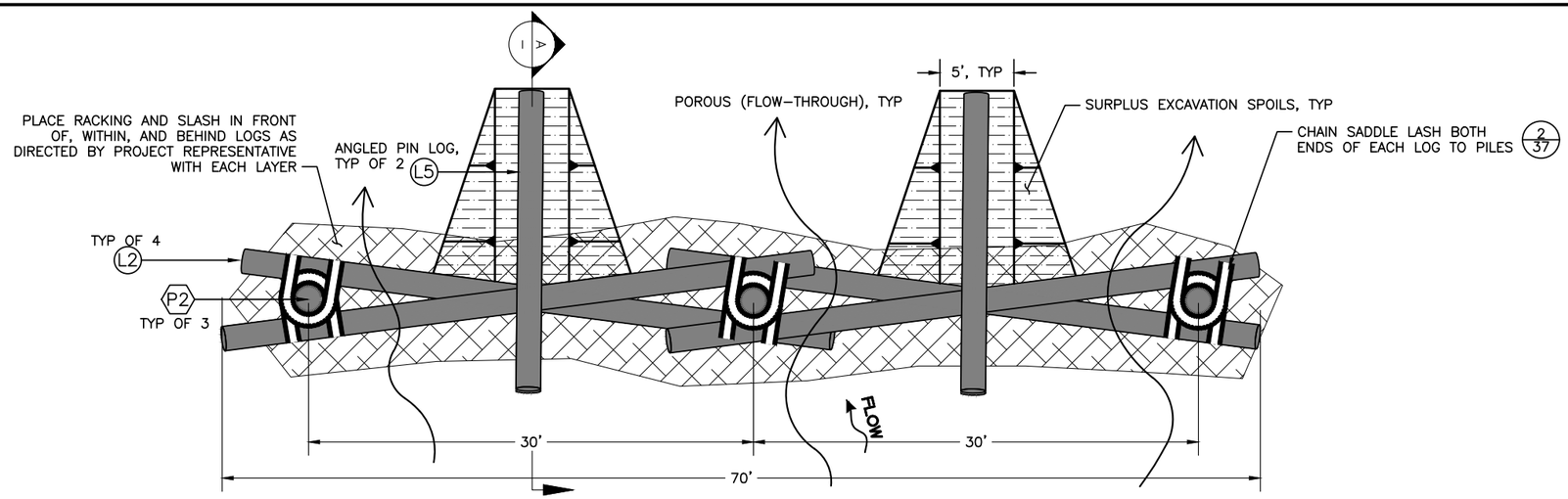
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

LEFT BANK EMBANKMENT FILL – PROFILE AND DETAIL

SHEET 32 OF 61 SHEETS

2021-07

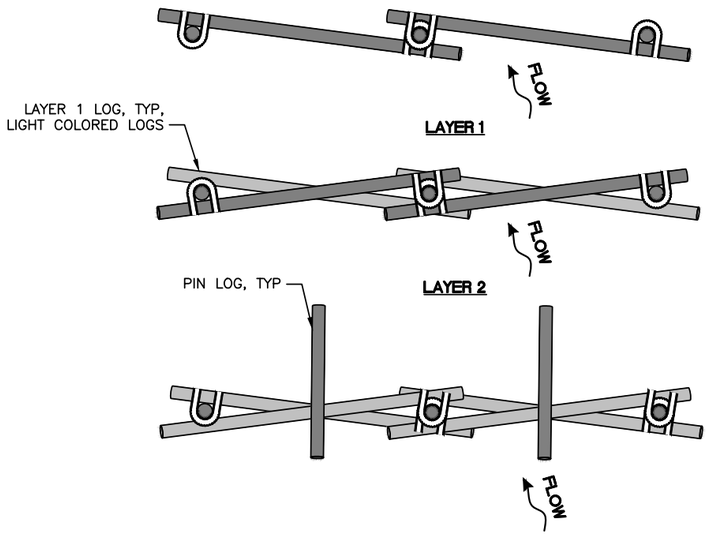


PLAN – FLOODPLAIN ROUGHENING ELS 1/VAR

1"=5'

5 2.5 0 5 10

SCALE IN FEET



FLOODPLAIN ROUGHENING ELS LAYERING PLAN

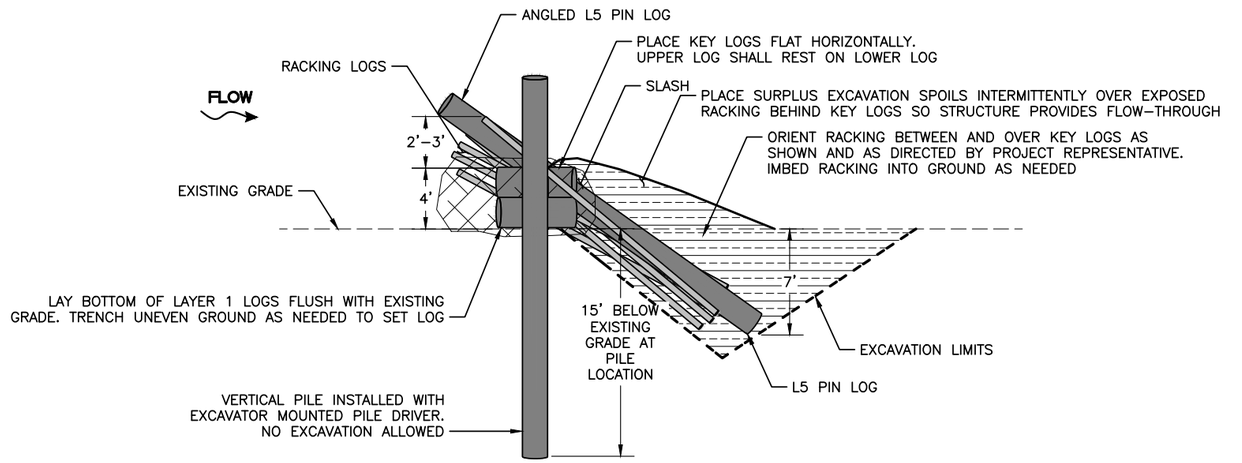
1"=10'

10 5 0 10 20

SCALE IN FEET

NOTES:

1. ALL PILE LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE PROJECT REPRESENTATIVE PRIOR TO PILE INSTALLATION.
2. LOG MATERIALS SHALL BE PLACED AT THE LOCATIONS AND ELEVATIONS SPECIFIED ON THE DRAWINGS OR AS DIRECTED BY THE PROJECT REPRESENTATIVE.
3. RACKING AND SLASH NOT SHOWN IN LAYERING PLAN FOR CLARITY.



SECTION – FLOODPLAIN ROUGHENING ELS A/–

1"=5'

TABLE – FLOODPLAIN ROUGHENING ELS LOG SCHEDULE:

LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD	QUANTITY/ STRUCTURE
L5	18	25	NO	2
L2	24	40	NO	4
PILE P2	12–18	25	NO	3

TABLE – FLOODPLAIN ROUGHENING ELS RACKING & SLASH SCHEDULE:

	QUANTITY/ STRUCTURE
RACKING LOGS	30
SLASH	60 CY

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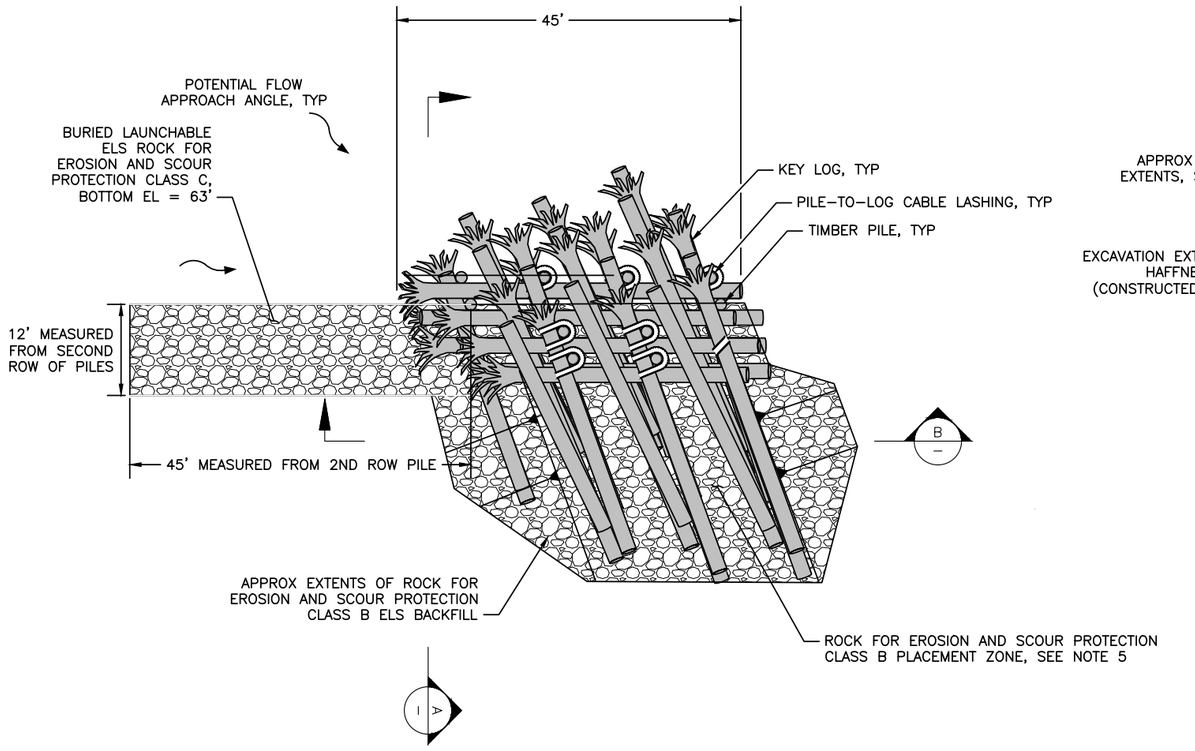
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

FLOODPLAIN ROUGHENING ELS DETAILS

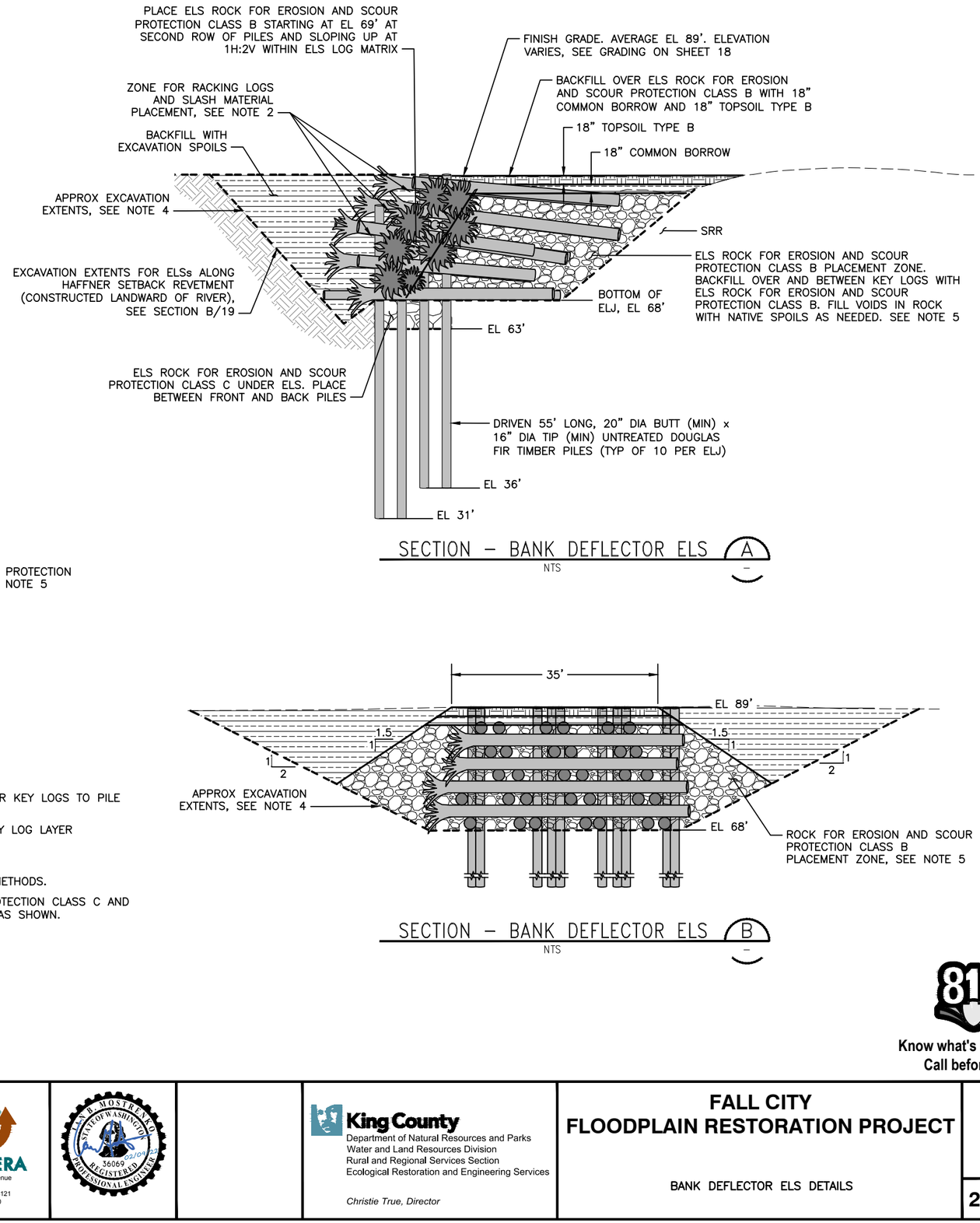
SHEET 33 OF 61 SHEETS

2021-07



PLAN – BANK DEFLECTOR ELS 1

1"=10'



SECTION – BANK DEFLECTOR ELS A

NTS

SECTION – BANK DEFLECTOR ELS B

NTS

NOTES:

1. ONLY THE TOP LAYER OF LOGS FOR EACH STRUCTURE SHALL BE CHAINED TO DRIVEN PILES. DO NOT SECURE LOWER LAYER KEY LOGS TO PILE OR TO ANOTHER KEY LOG.
2. RACKING LOGS AND SLASH MATERIAL NOT SHOWN FOR CLARITY. RACKING LOG PLACEMENT SHALL BE COORDINATED WITH KEY LOG LAYER PLACEMENT AND SLASH PLACEMENT TO ENSURE RACKING AND SLASH EXTEND THROUGH WATERWARD FACE OF STRUCTURE.
3. EXTENTS OF BACKFILL SHOWN ARE APPROXIMATE AND WILL VARY FOR EACH STRUCTURE.
4. EXCAVATION LIMITS SHOWN ARE BASIS FOR NEATLINE PAY LIMITS. LIMITS MAY VARY BASED ON CONSTRUCTION MEANS AND METHODS.
5. RIPRAP FOR ELS BACKFILLING WILL CONSIST OF SALVAGED RIPRAP AND/OR IMPORTED ROCK FOR EROSION AND SCOUR PROTECTION CLASS C AND CLASS B AS APPROVED BY THE PROJECT REPRESENTATIVE IF SALVAGED ROCK VOLUME IS INSUFFICIENT TO COMPLETE ELS AS SHOWN.

10 5 0 10 20
SCALE IN FEET

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: _____
CHECKED: I. MOSTRENKO (HERRERA) 2-09-22, T. WELLER (TRANTECH) 2-09-22
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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

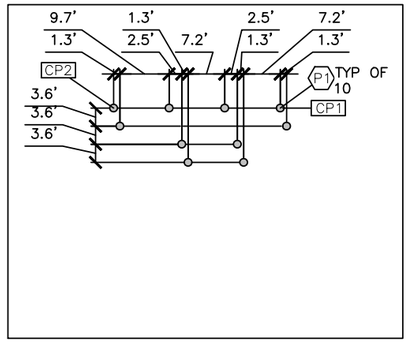
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

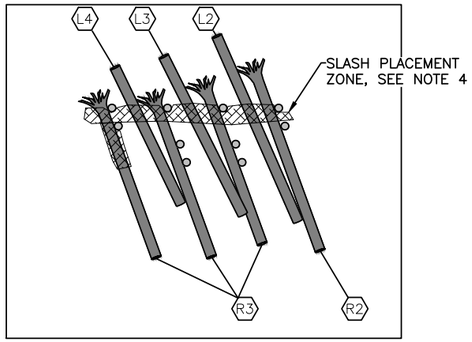
BANK DEFLECTOR ELS DETAILS

SHEET 34 OF 61 SHEETS

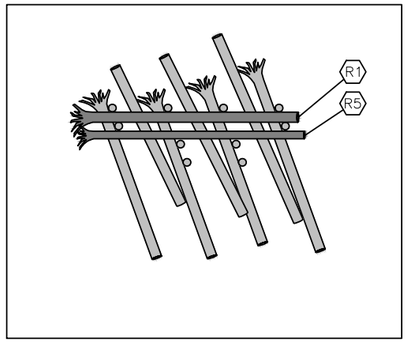
2021-07



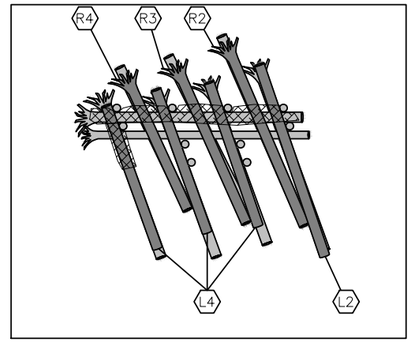
PILES



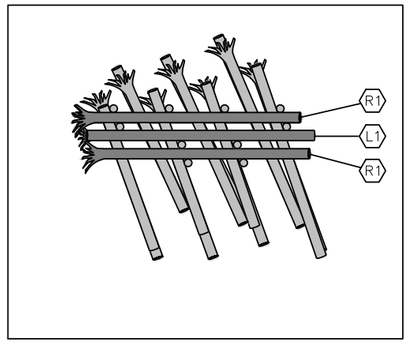
LAYER 1



LAYER 2



LAYER 3



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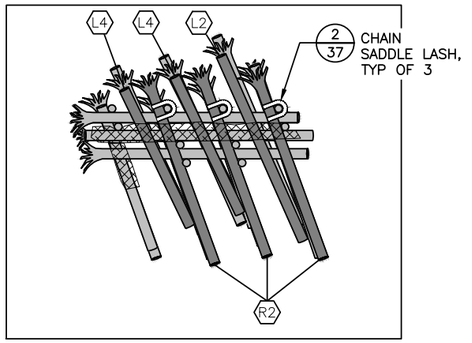
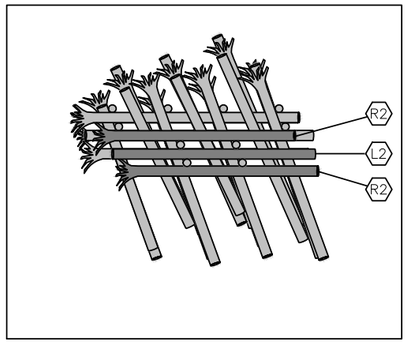


LAYER 5



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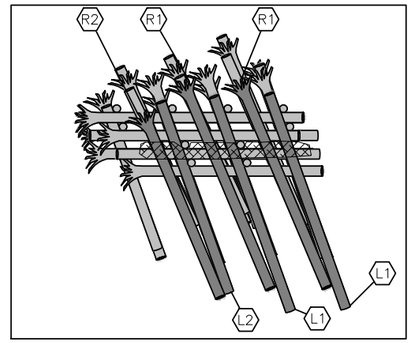

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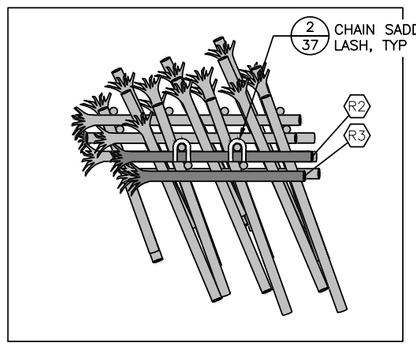

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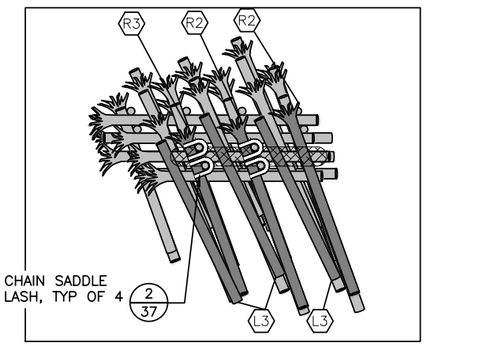

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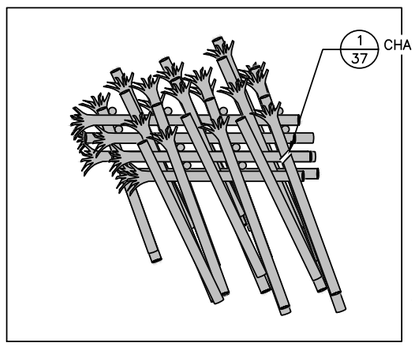

COMPLETE

LEGEND:

- CURRENT LAYER KEY LOG
- PREVIOUS LAYER KEY LOG (AFTER BACKFILLING)
- TIMBER PILE
- SLASH PLACEMENT ZONE
- L1 — KEY LOG TYPE ID (LOG TYPE L1)
- CP1 — STRUCTURE CONTROL POINT (1)

NOTES:

1. GENERAL STRUCTURE LOCATION AND ORIENTATION SHALL BE STAKED BY THE CONTRACTOR. FINAL STRUCTURE LOCATION AND ORIENTATION TO BE FIELD VERIFIED BY THE PROJECT REPRESENTATIVE FOLLOWING CONTRACTOR STAKING.
2. ALL PILE LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE PROJECT REPRESENTATIVE PRIOR TO PILE INSTALLATION.
3. LOG MATERIALS SHALL BE PLACED AT THE LOCATIONS AND ORIENTATIONS SPECIFIED ON THE DRAWINGS OR AS DIRECTED BY THE PROJECT REPRESENTATIVE. TRIM CUT ENDS OF HORIZONTAL KEY LOGS TO FIT AS REQUIRED.
4. PLACE SLASH OVER AND BETWEEN KEY LOGS AND PILES AS SHOWN FOR EACH LAYER SPECIFIED FOLLOWING PLACEMENT OF KEY LOGS AND RACKING LOGS. PLACE APPROXIMATELY 2' TO 3' OF EXCAVATION SPOILS OR SALVAGED LEVEE REMOVAL SPOILS OVER 1/2 THE WIDTH OF SLASH TO SECURE IN PLACE SUCH THAT SLASH IS VISIBLE FOLLOWING CONSTRUCTION. COORDINATE WITH THE PROJECT REPRESENTATIVE PRIOR TO PLACING RACKING AND SLASH.
5. INDIVIDUAL RACKING LOGS NOT SHOWN FOR CLARITY. RACKING LOGS SHALL BE PLACED IN ZONES AND LAYERS SHOWN IN SLASH PLACEMENT ZONES. PLACE RACKING LOGS ALONG UPSTREAM FACES OF STRUCTURE. APPROXIMATELY 1/2 OF RACKING LOGS SHALL BE PLACED ACROSS PILE ROWS AND 1/2 OF THE LOGS EXTENDING INTO THE CORE OF THE STRUCTURE BETWEEN HORIZONTAL LOGS. RACKING SHALL BE PLACED WITH EACH LAYER OF LOGS, SHALL BE ANGLED UP AND DOWN FROM THE HORIZONTAL, AND SHALL BE PLACED TO CREATE AN INTERLOCKING MATRIX OF LOGS SECURED BETWEEN VERTICAL PILE LOGS AND HORIZONTAL LOGS. COORDINATE WITH PROJECT REPRESENTATIVE PRIOR TO PLACING RACKING LOGS, SLASH AND BACKFILLING.
6. BACKFILL EACH LAYER WITH SALVAGED RIPRAP PRIOR TO CONSTRUCTING SUBSEQUENT LAYER. USE EXCAVATION SPOILS OR SMALLER SALVAGED RIPRAP TO FILL VOIDS BEFORE SUBSEQUENT LAYERS ARE PLACED AND COMPACT BACKFILL WITH EXCAVATOR BUCKET TO ACHIEVE A WELL GRADED AND COMPACTED MASS.

TABLE – ELS CONTROL POINTS:

ELS NO.	CONTROL POINT NO.	NORTHING	EASTING
BD1	CP–1	211862.65	1378240.73
	CP–2	211873.82	1378209.68
BD2	CP–1	211942.13	1378122.87
	CP–2	211957.74	1378093.79
BD3	CP–1	212021.48	1378007.21
	CP–2	212046.11	1377985.26

TABLE – ELS LOG SCHEDULE:

LOG TYPE	DIAMETER (IN)	LENGTH (FT)	ROOTWAD	TOTAL/ELS
P1	20 (BUTT), 16 (TIP)	55	NO	10
R1	24	45	YES	5
R2	24	40	YES	11
R3	24	35	YES	6
R4	24	30	YES	1
R5	18	45	YES	1
L1	24	45	NO	3
L2	24	40	NO	5
L3	24	35	NO	4
L4	24	30	NO	6
RACKING	4"–16"	15–30	OPTIONAL	100
SLASH				120 CY

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2–09–22, T. WELLER (TRANTECH) 2–09–22
PROJECT No. KC: 1133842, HERRERA: 18–06954–000, TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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IVAN B. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 02/09/22

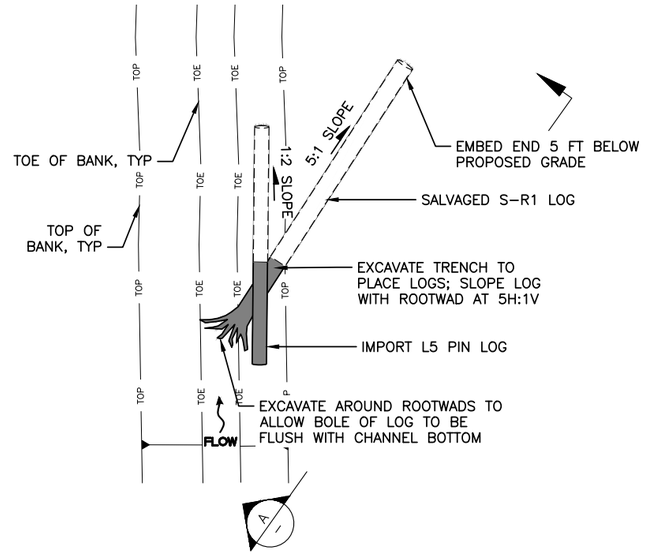
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

BANK DEFLECTOR ELS LAYERING PLAN

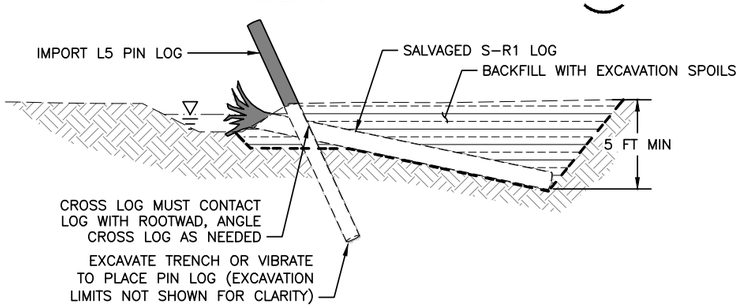
SHEET 35 OF 61 SHEETS

2021-07



PLAN – SLS TYPE 1 — 1

SCALE: NTS

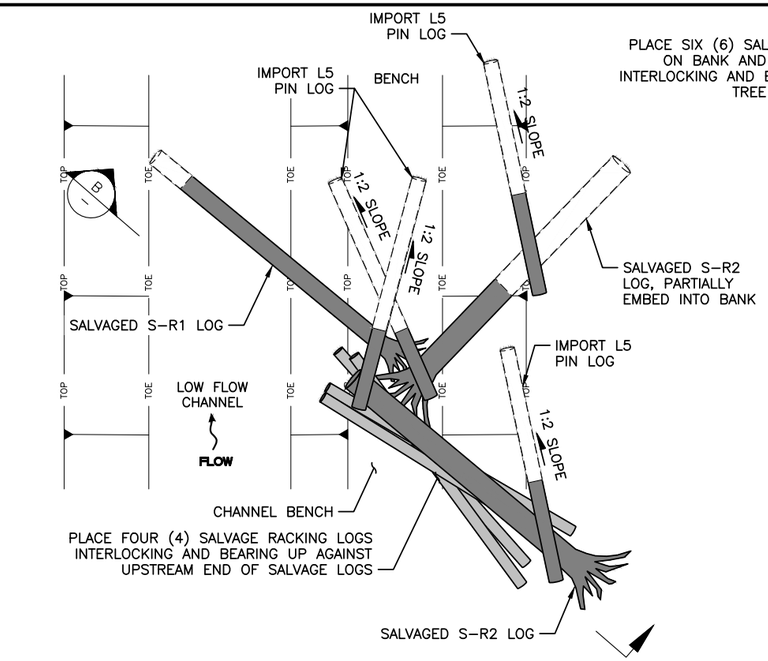


SECTION – SLS TYPE 1 — A

SCALE: NTS

TABLE – SLS TYPE 1 LOG SCHEDULE

LOG	DIA (IN)	LENGTH (FT)	ROOTWAD	QTY
S–R1	18–24	35	YES	1
L5	18	25	NO	1



PLAN – SLS TYPE 2 — 2

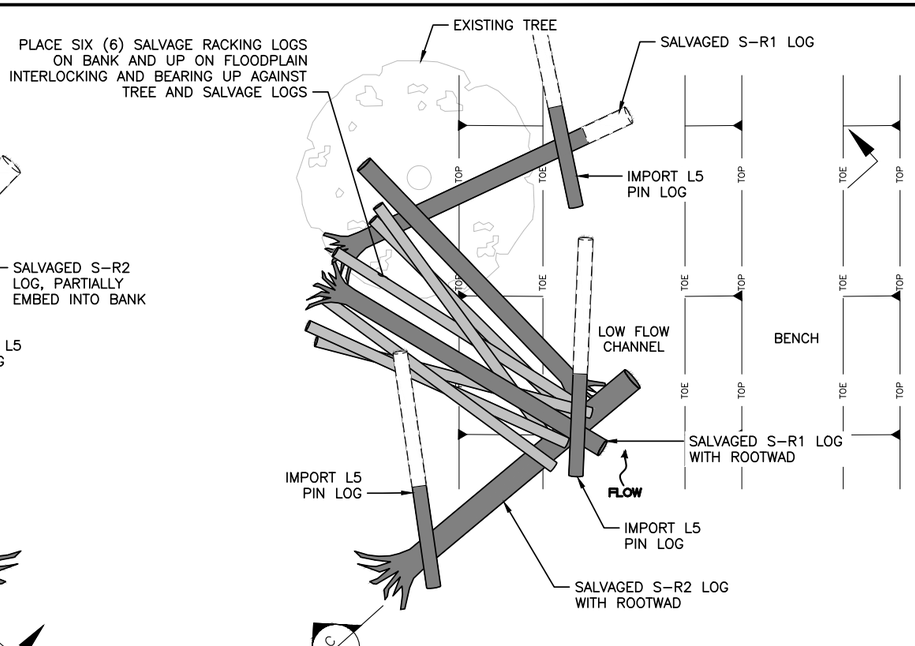
SCALE: NTS

SECTION – SLS TYPE 2 — B

SCALE: NTS

TABLE – SLS TYPE 2 LOG SCHEDULE

LOG	DIA (IN)	LENGTH (FT)	ROOTWAD	QTY
S–R1	18–24	35	YES	1
S–R2	24–36	50	YES	2
L5	18	25	NO	4
RACKING	12–18	20–40	NO	4



PLAN – SLS TYPE 3 — 3

SCALE: NTS

SECTION – SLS TYPE 3 — C

SCALE: NTS

TABLE – SLS TYPE 3 LOG SCHEDULE

LOG	DIA (IN)	LENGTH (FT)	ROOTWAD	QTY
S–R1	18–24	35	YES	2
S–R2	24–36	50	YES	1
L5	18	25	NO	3
RACKING	12–18	20–40	NO	6

NOTES:

1. SEE LOG SALVAGE TABLES FOR LOG DIMENSIONS AND QUANTITIES.
2. LOG ORIENTATIONS MAY VARY BASED ON GRADING, LOCATION OF SURROUNDING TREES, AND ACTUAL DIMENSIONS OF SALVAGED LOGS. ADJUSTMENTS AND FIELD DIRECTION FROM THE PROJECT REPRESENTATIVE WILL BE REQUIRED.
3. EMBED SALVAGED LOGS AS DIRECTED BY PROJECT REPRESENTATIVE.

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: _____
CHECKED: I. MOSTRENKO (HERRERA) 2–09–22; T. WELLER (TRANTECH) 2–09–22
KC: 1133842
HERRERA: 18–06954–000
PROJECT No. TRANTECH: 2018031
SURVEY No. _____

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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LEN B. MOSTRENKO — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — 02/09/22

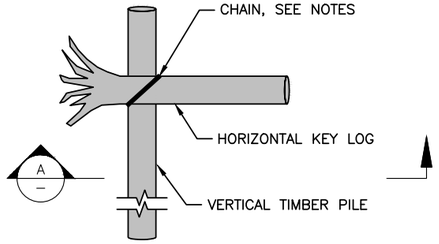
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

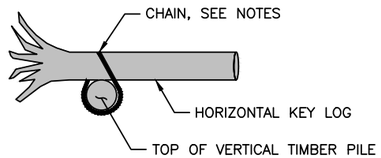
SIDE CHANNEL SMALL LOG STRUCTURE DETAILS

SHEET 36 OF 61 SHEETS

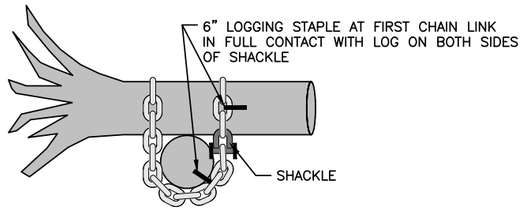
2021-07



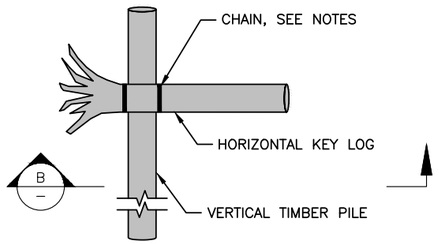
DETAIL – SIMPLE LASHING 1
SCALE: NTS VAR



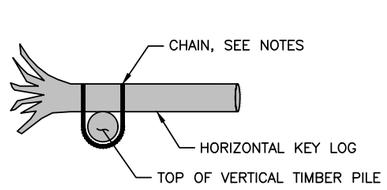
SECTION – SIMPLE LASHING A
SCALE: NTS –



DETAIL – CHAIN CONNECTION 3
SCALE: N.T.S. –



DETAIL – SADDLE LASHING 2
SCALE: NTS VAR



SECTION – SADDLE LASHING B
SCALE: NTS –

LASHING NOTES:

1. LASHING SHALL USE 5/8"ø GRADE 43 NATURAL FINISH CHAIN.
2. ALL LASHING CONNECTION HARDWARE SHALL BE STAINLESS STEEL OR NATURAL UNTREATED STEEL AND HAVE A RATED WORKING LOAD LIMIT OF EQUAL OR GREATER STRENGTH THAN THE CHAIN WORKING LOAD LIMIT.
3. SHACKLES SHALL BE SAFETY SHACKLES AND THREADS SHALL BE MARRED TO PREVENT REMOVAL OF SHACKLES.
4. CHAIN LASHING SYSTEM SHALL BE PUT IN TENSION TO 1/4 OF THE CHAIN WORKING LOAD LIMIT AND BE MAINTAINED DURING CHAIN SHACKLING.
5. CHAIN LENGTHS NEEDED PER LASHING WILL VARY BASED ON DIAMETER OF LOGS AT THE ACTUAL LOCATIONS THEY ARE LASHED TOGETHER.
6. MAR ALL EXPOSED CONNECTION HARDWARE THREADS AFTER INSTALLATION TO PREVENT REMOVAL OF NUTS AND BOLTS.
7. CONTRACTOR MAY SUBMIT ALTERNATIVE CHAIN CONNECTION SYSTEM FOR APPROVAL.
8. CUT OFF ENDS OF CHAIN CLOSE TO FINAL CONNECTION AFTER LASHING IS IN PLACE SO THAT NO LOOSE ENDS EXIST AND DISPOSE OF CHAIN CUTTING OFF SITE.

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: –
CHECKED: I. MOSTRENKO (HERRERA) 2–09–22, T. WELLER (TRANTECH) 2–09–22
PROJECT No. KC: 1133842, HERRERA: 18–06954–000, TRANTECH: 2018031
SURVEY No. –

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M., K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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IAN E. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 02/09/22

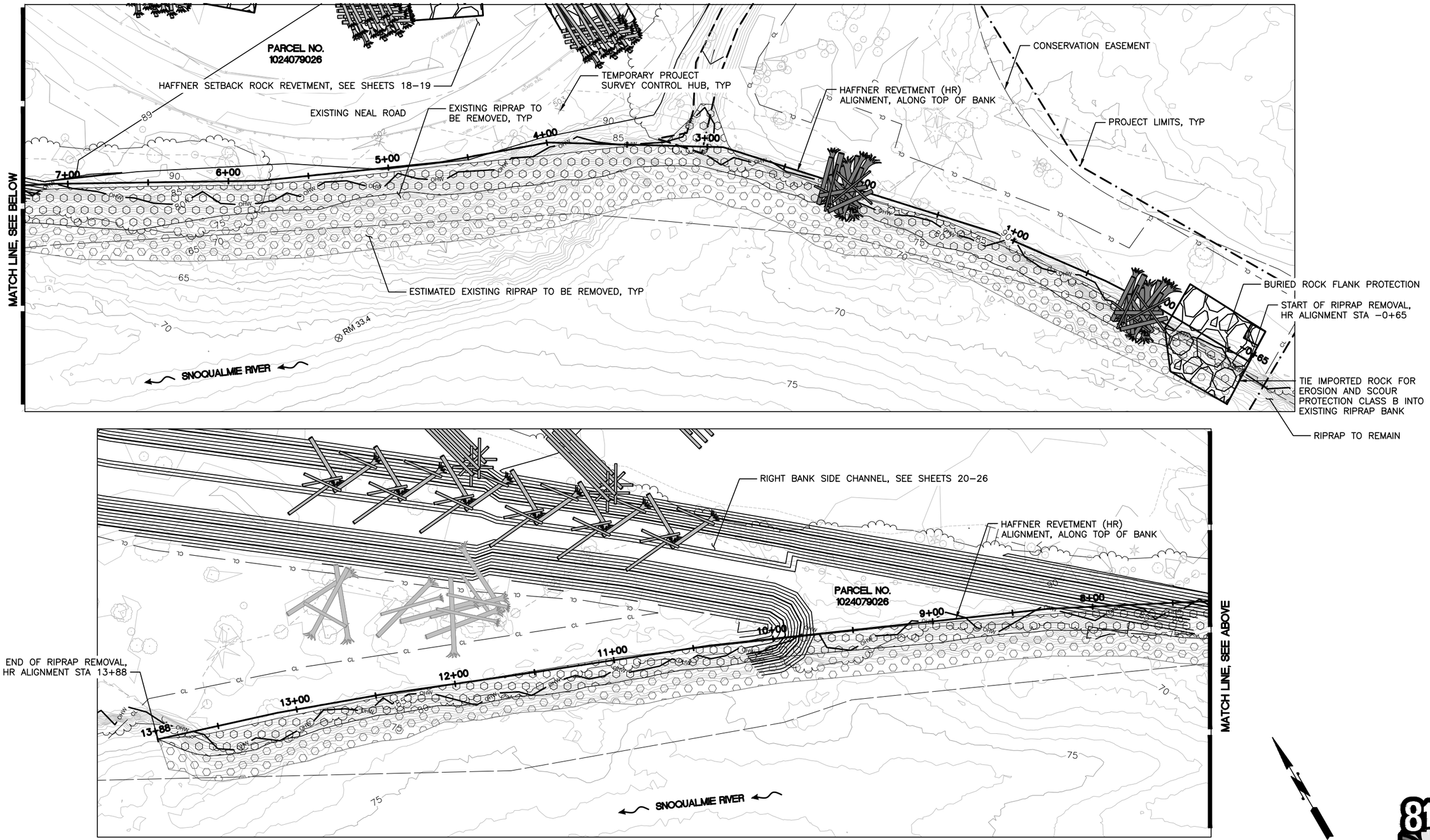
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

LOG LASHING AND BANK REINFORCEMENT DETAILS

SHEET 37 OF 61 SHEETS

2021-07



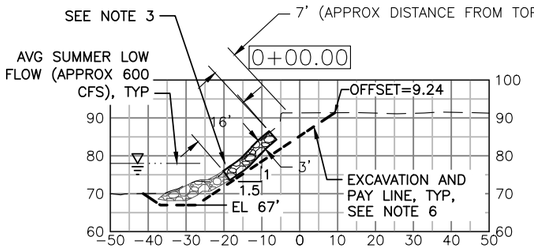
SURVEYED: R. HILLIARD (PMX)					APPROVED: W. MANSFIELD, PE	02–2022	HERRERA 2200 Sixth Avenue Suite 1100 Seattle, WA 98121 (206) 441-9080		King County Department of Natural Resources and Parks Water and Land Resources Division Rural and Regional Services Section Ecological Restoration and Engineering Services *Christie True, Director*
SURVEY BASE MAP:					PROJECT SUPERVISOR: J. HANSEN	02–2022			
I. MOSTRENKO (HERRERA) 2–09–22 CHECKED: T. WELLER (TRANTECH) 2–09–22					PROJECT MANAGER: F. NOPP	02–2022			
KC: 1133842 HERRERA: 18–06954–000 PROJECT No. TRANTECH: 2018031					DESIGNED: I.M, K.F., J.W.	02–2022			
SURVEY No.	NUM.	REVISION	BY	DATE	DESIGN ENTERED: E.M., R.B.	02–2022			

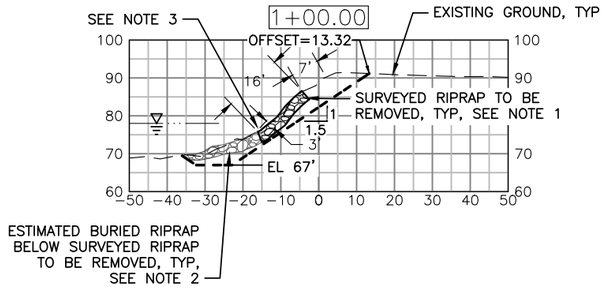
FALL CITY FLOODPLAIN RESTORATION PROJECT

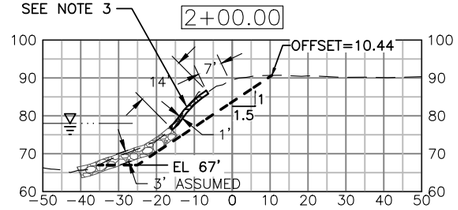
HAFFNER REVETMENT RIPRAP REMOVAL – PLAN

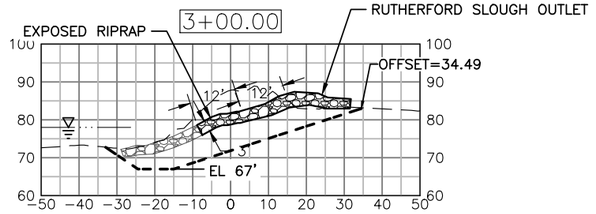
SHEET 38 OF 61 SHEETS

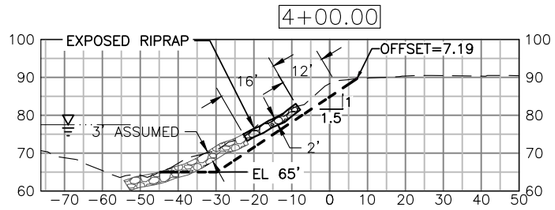
2021-07

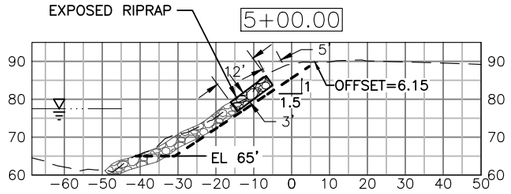


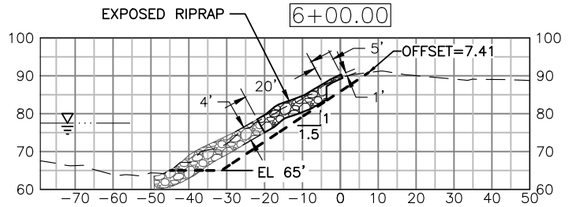


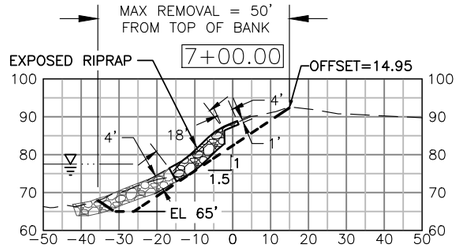


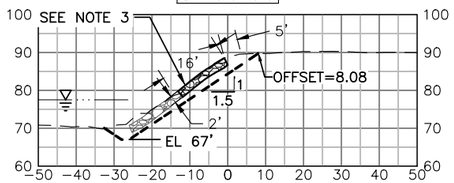


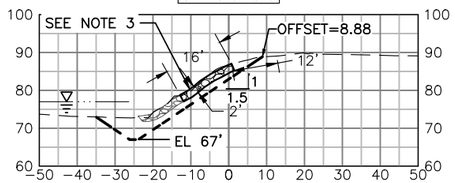


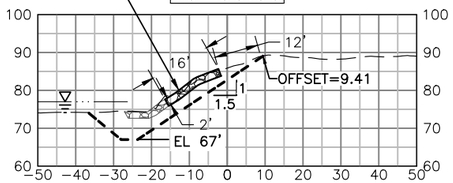


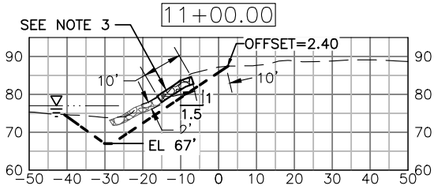


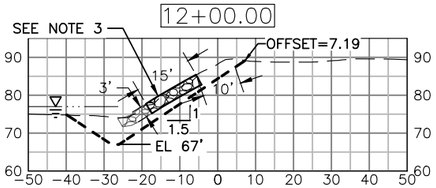


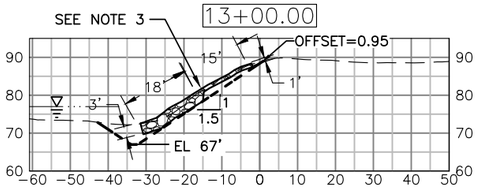












NOTES

1. SURVEYED RIPRAP EXTENTS PER SHANNON AND WILSON OCTOBER 2021 GEOTECHNICAL DESIGN REPORT.
2. ESTIMATED QUANTITIES OF RIPRAP TO BE REMOVED INCLUDE ADDITIONAL RIPRAP LIKELY BURIED AND BELOW AVERAGE SUMMER LOW FLOW WATER CONDITIONS (APPROX 600 CFS) THAT WAS NOT ACCESSIBLE FOR SURVEY.
3. RIPRAP IS BURIED UNDER A THIN LAYER OF SOIL.
4. EXCAVATE BANK TO PAY LIMITS SHOWN. OFFSET FROM HR ALIGNMENT TO TOP OF EXCAVATION PAY LIMITS PROVIDED FOR EACH 100–FOOT SECTION. REMOVE AND SEPARATE RIPRAP AND NON–NATIVE ANGULAR ROCK FROM NATIVE FOR DISPOSAL.
5. EXCAVATE TO ROCK REMOVAL DEPTH SHOWN. ROCK REMOVAL DEPTH WILL BE TO EL 67' WITH ADDITIONAL EXCAVATION OF KNOWN EXPOSED ROCK TO EL 65' FROM STA 3+75 TO STA 7+00 UP TO A MAX DISTANCE OF 50 FEET FROM THE TOP OF BANK.
6. PAY LIMIT EXCAVATION ASSUMES AN AVERAGE 4 FOOT THICK EXCAVATION INTO BANK. IF ADDITIONAL RIPRAP OR OTHER NON–NATIVE ANGULAR ROCK IS ENCOUNTERED ON THE BANK PAST THE PAY LIMITS, CONTRACTOR SHALL REMOVE ROCK ON A FORCE ACCOUNT BASIS AS DIRECTED BY THE PROJECT REPRESENTATIVE.
7. SURVEYED RIPRAP QUANTITY = 2,510 CUBIC YARDS.
8. ESTIMATED BURIED AND SUBMERGED RIPRAP = 3,000 CUBIC YARDS.

HORIZONTAL SCALE IN FEET
20 0 20 40
20 0 20 40
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2–09–22
CHECKED: T. WELLER (TRANTECH) 2–09–22
KC: 1133842
HERRERA: 18–06954–000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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I. M. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 02/09/22

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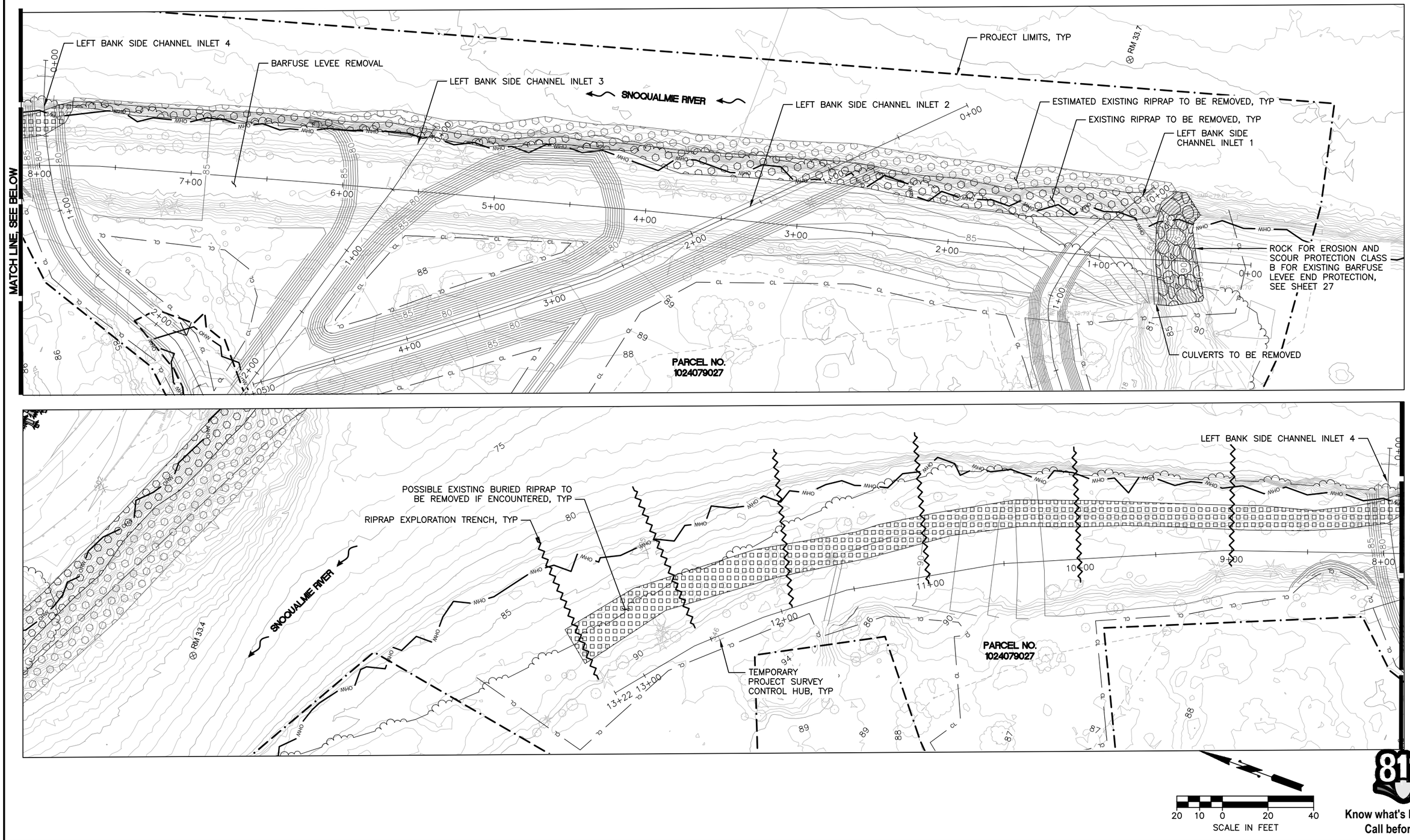
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

HAFFNER REVETMENT RIPRAP REMOVAL – CROSS SECTIONS

SHEET 39 OF 61 SHEETS

2021-07



SURVEYED: R. HILLIARD (PMX)

SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2-09-22

CHECKED: T. WELLER (TRANTECH) 2-09-22

PROJECT No. KC: 1133842 HERRERA: 18-06954-000 TRANTECH: 2018031

SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: I.M, K.F., J.W.	02-2022	
DESIGN ENTERED: E.M., R.B.	02-2022	

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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

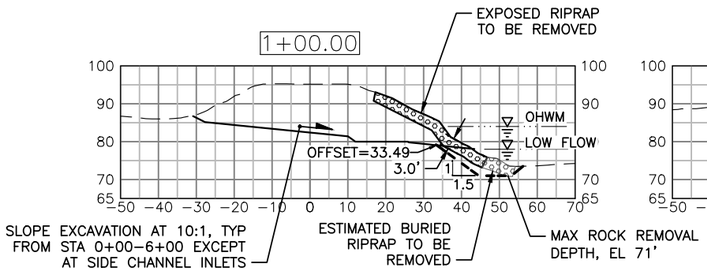
Christie True, Director

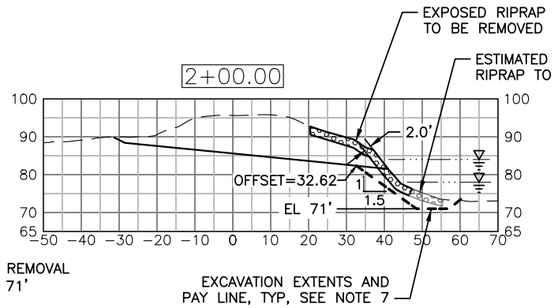
FALL CITY FLOODPLAIN RESTORATION PROJECT

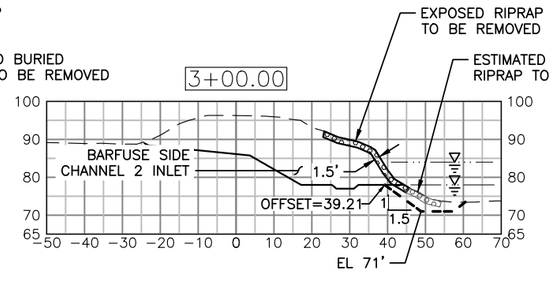
BARFUSE LEVEE RIPRAP REMOVAL – PLAN

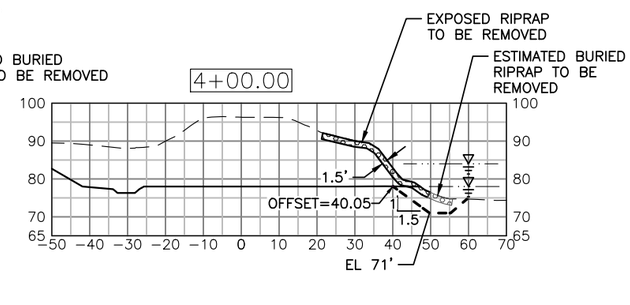
SHEET 40 OF 61 SHEETS

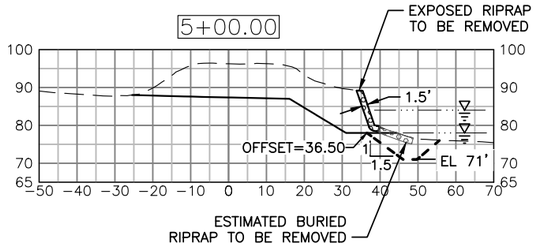
2021-07

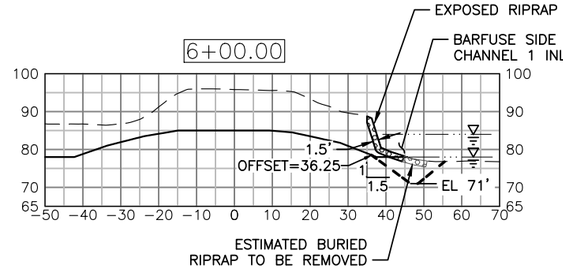


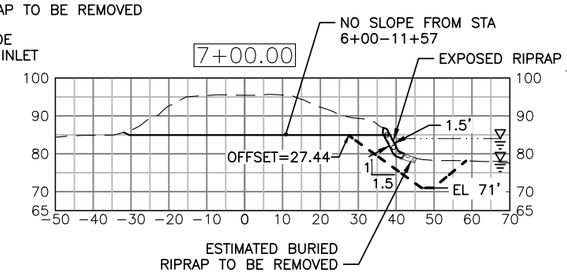


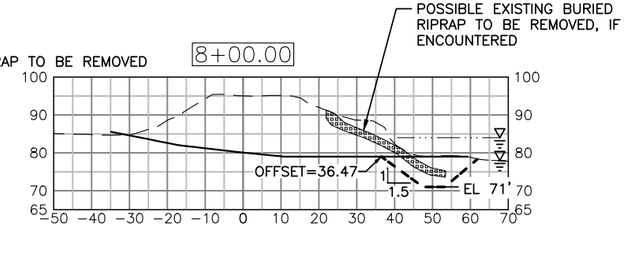


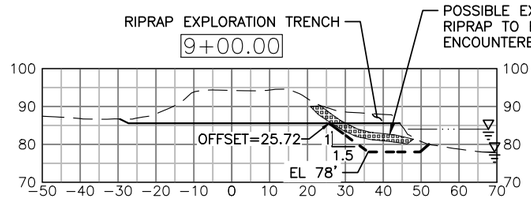


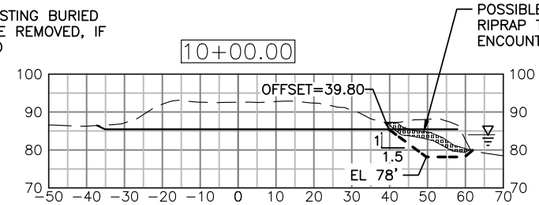


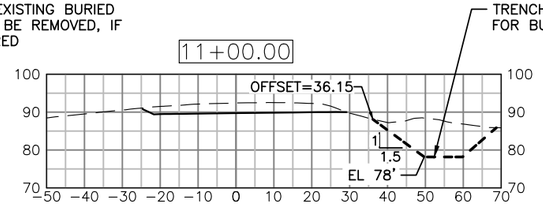


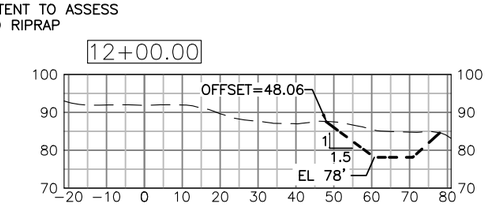












SECTIONS – BARFUSE LEVEE RIPRAP REMOVAL

H:1"=20' V:1"=20'

NOTES

1. SURVEYED RIPRAP EXTENTS PER SHANNON AND WILSON OCTOBER 2021 GEOTECHNICAL DESIGN REPORT.
2. ESTIMATED QUANTITIES OF RIPRAP TO BE REMOVED INCLUDE ADDITIONAL RIPRAP LIKELY BURIED AND BELOW AVERAGE SUMMER LOW FLOW WATER CONDITIONS (APPROX 600 CFS) THAT WAS NOT ACCESSIBLE FOR SURVEY.
3. RIPRAP IS BURIED UNDER A THIN LAYER OF SOIL.
4. EXCAVATE BANK TO PAY LIMITS SHOWN. OFFSET FROM LEVEE REMOVAL ALIGNMENT TO TOP OF EXCAVATION PAY LIMITS PROVIDED FOR EACH 100–FOOT SECTION. REMOVE AND SEPARATE RIPRAP AND SMALLER ANGULAR ROCK FROM NATIVE SAND, GRAVEL, AND SILT FOR DISPOSAL.
5. THE EXTENT OF ROCK REMOVAL FROM STA 8+00 TO STA 12+00 WILL BE BASED ON FINDINGS FROM EXPLORATION TRENCHES. FOR BIDDING PURPOSES, THE MAXIMUM ROCK REMOVAL DEPTH IS ASSUMED TO BE EL 78' AS SHOWN. NOTIFY PROJECT REPRESENTATIVE 48 HOURS BEFORE EXCAVATING EXPLORATORY TRENCHES.
6. PAY LIMIT EXCAVATION ASSUMES AN AVERAGE 3 FOOT EXCAVATION INTO BANK. IF ADDITIONAL RIPRAP OR OTHER NON–NATIVE ANGULAR ROCK IS ENCOUNTERED ON THE BANK PAST THE PAY LIMITS, CONTRACTOR SHALL REMOVE ROCK ON A FORCE ACCOUNT BASIS AS DIRECTED BY THE PROJECT REPRESENTATIVE.
7. SURVEYED RIPRAP QUANTITY = 1,100 CUBIC YARDS.
8. ESTIMATED BURIED AND SUBMERGED RIPRAP = 1,200 CUBIC YARDS.

HORIZONTAL SCALE IN FEET
20 0 20 40
20 0 20 40
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2–09–22, T. WELLER (TRANTECH) 2–09–22
KC: 1133842
HERRERA: 18–06954–000
PROJECT No. TRANTECH: 20180031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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IAN B. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 02/07/22

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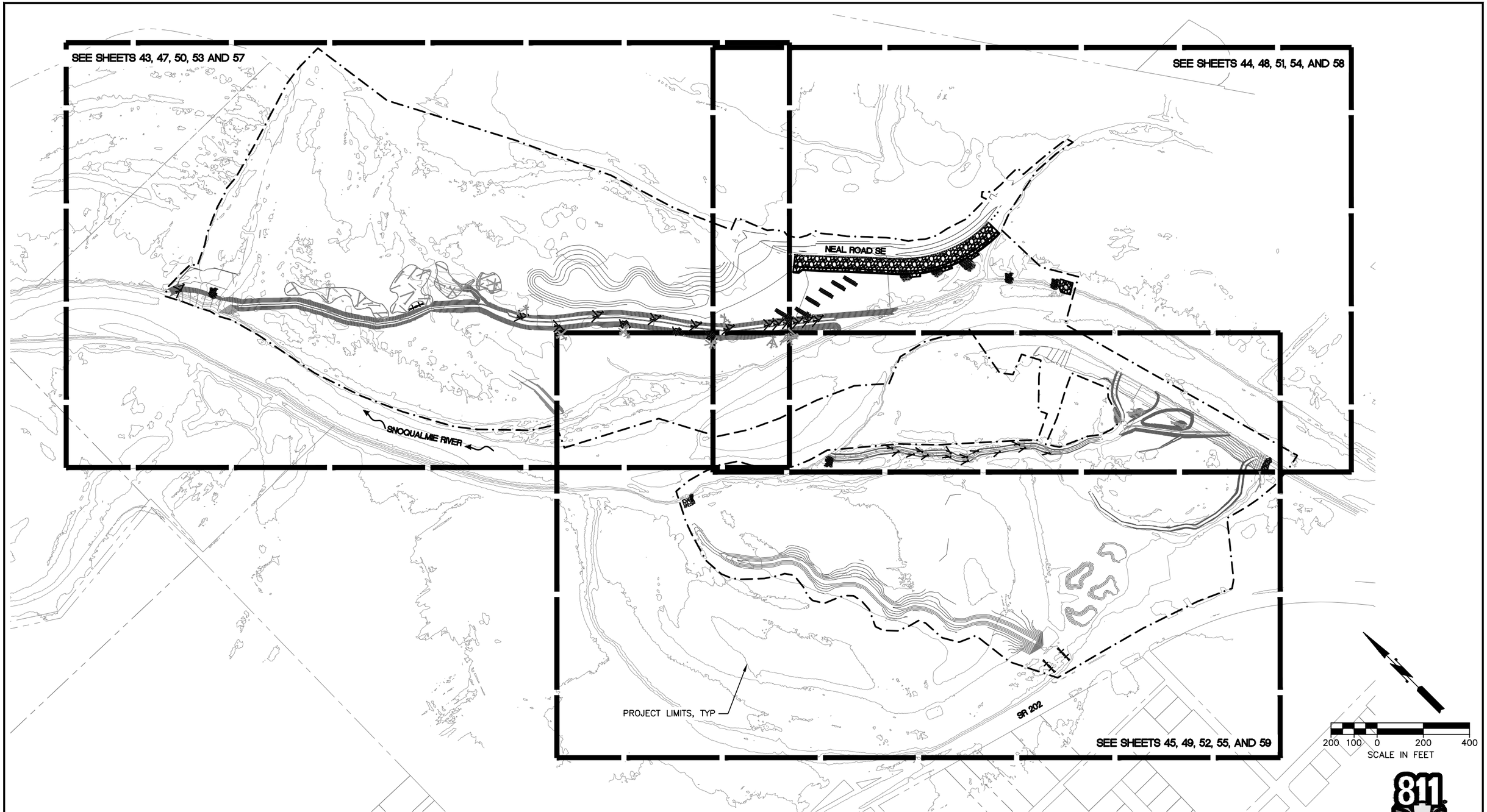
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

BARFUSE LEVEE RIPRAP REMOVAL – CROSS SECTIONS

SHEET 41 OF 61 SHEETS

2021-07



811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)			
SURVEY BASE MAP:			
I. MOSTRENKO (HERRERA) 2-09-22			
CHECKED: T. WELLER (TRANTECH) 2-09-22			
KC: 1133842			
HERRERA: 18-06954-000			
PROJECT No. TRANTECH: 2018031			
SURVEY No.			

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022
PROJECT SUPERVISOR: J. HANSEN	02-2022
PROJECT MANAGER: F. NOPP	02-2022
DESIGNED: I.M., K.F., J.W.	02-2022
DESIGN ENTERED: E.M., R.B.	02-2022

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IAN R. MOSTRENKO
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36069
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02/09/22

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

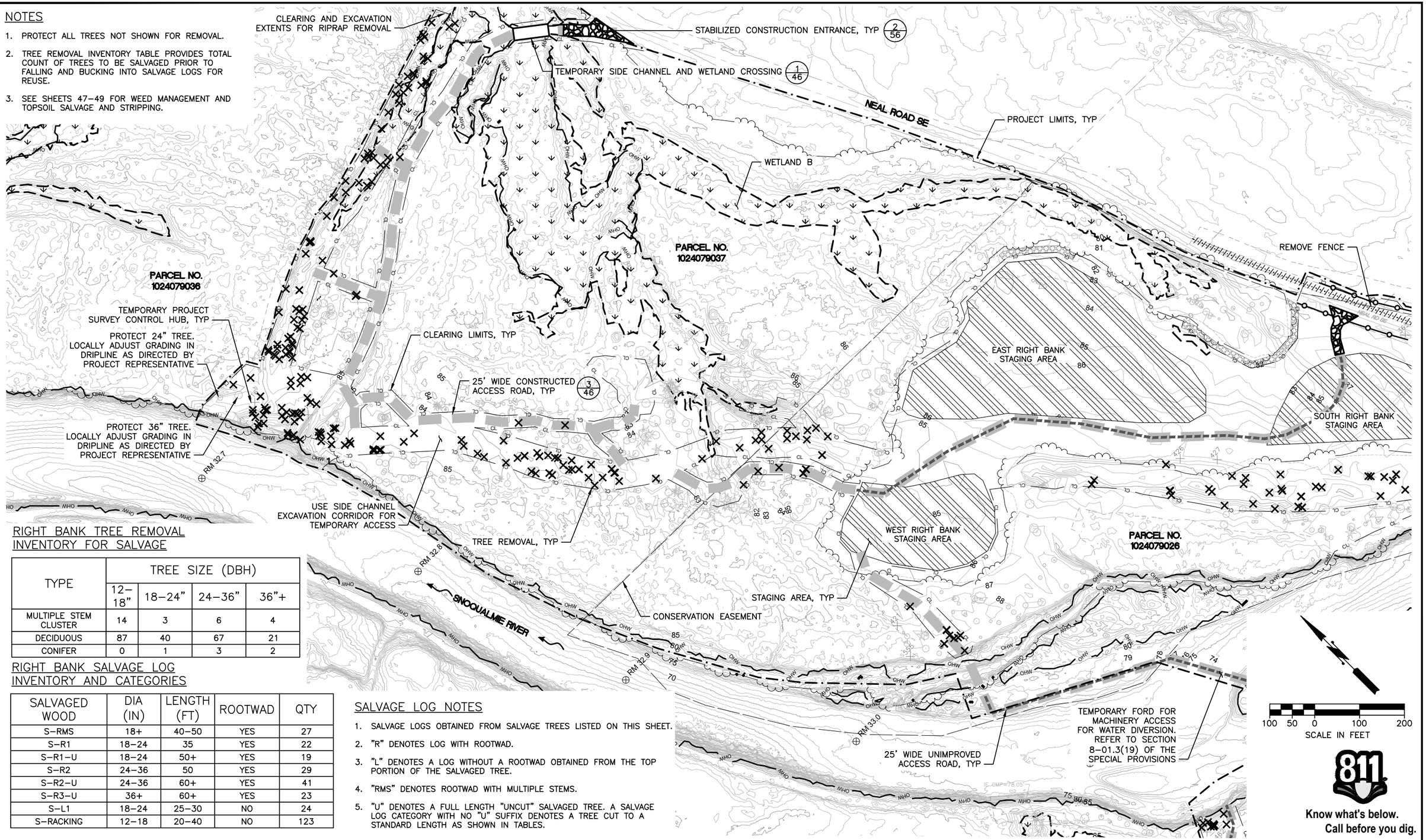
KEY MAP – SITE PREP, TESC, PLANTING SITE PLANS

SHEET 42 OF 61 SHEETS

2021-07

NOTES

1. PROTECT ALL TREES NOT SHOWN FOR REMOVAL.
2. TREE REMOVAL INVENTORY TABLE PROVIDES TOTAL COUNT OF TREES TO BE SALVAGED PRIOR TO FALLING AND BUCKING INTO SALVAGE LOGS FOR REUSE.
3. SEE SHEETS 47–49 FOR WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING.



RIGHT BANK TREE REMOVAL INVENTORY FOR SALVAGE

TYPE	TREE SIZE (DBH)			
	12–18"	18–24"	24–36"	36"+
MULTIPLE STEM CLUSTER	14	3	6	4
DECIDUOUS	87	40	67	21
CONIFER	0	1	3	2

RIGHT BANK SALVAGE LOG INVENTORY AND CATEGORIES

SALVAGED WOOD	DIA (IN)	LENGTH (FT)	ROOTWAD	QTY
S–RMS	18+	40–50	YES	27
S–R1	18–24	35	YES	22
S–R1–U	18–24	50+	YES	19
S–R2	24–36	50	YES	29
S–R2–U	24–36	60+	YES	41
S–R3–U	36+	60+	YES	23
S–L1	18–24	25–30	NO	24
S–RACKING	12–18	20–40	NO	123

SALVAGE LOG NOTES

1. SALVAGE LOGS OBTAINED FROM SALVAGE TREES LISTED ON THIS SHEET.
2. "R" DENOTES LOG WITH ROOTWAD.
3. "L" DENOTES A LOG WITHOUT A ROOTWAD OBTAINED FROM THE TOP PORTION OF THE SALVAGED TREE.
4. "RMS" DENOTES ROOTWAD WITH MULTIPLE STEMS.
5. "U" DENOTES A FULL LENGTH "UNCUT" SALVAGED TREE. A SALVAGE LOG CATEGORY WITH NO "U" SUFFIX DENOTES A TREE CUT TO A STANDARD LENGTH AS SHOWN IN TABLES.

Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2–09–22; T. WELLER (TRANTECH) 2–09–22
PROJECT No. KC: 1133842 HERRERA: 18–06954–000 TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: I.M, K.F., J.W.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

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IAN B. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 2/10/22

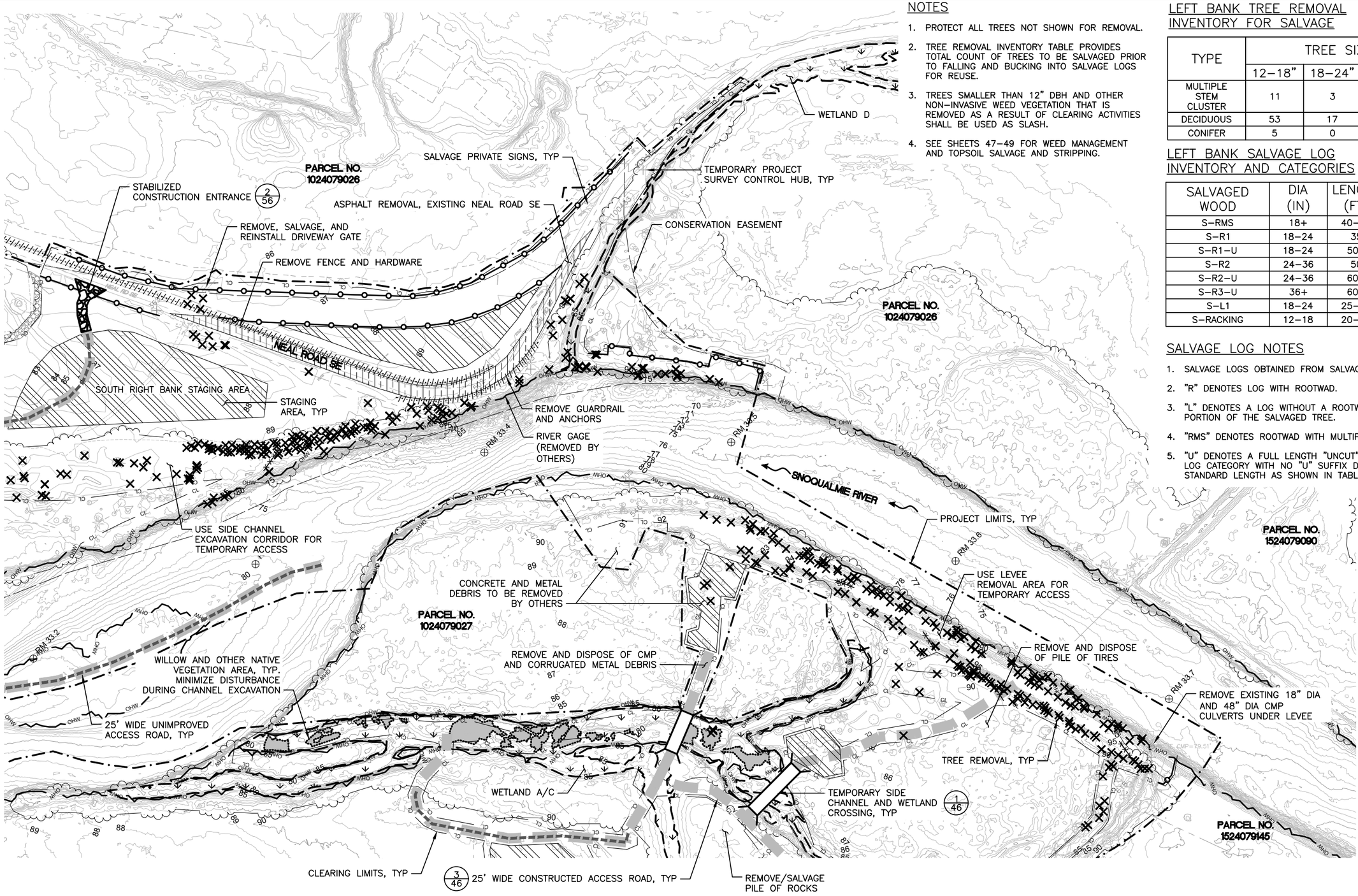
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SITE PREPARATION, ACCESS ROADS, AND DEMOLITION – PLAN 1

SHEET 43 OF 61 SHEETS

2021-07



NOTES

1. PROTECT ALL TREES NOT SHOWN FOR REMOVAL.
2. TREE REMOVAL INVENTORY TABLE PROVIDES TOTAL COUNT OF TREES TO BE SALVAGED PRIOR TO FALLING AND BUCKING INTO SALVAGE LOGS FOR REUSE.
3. TREES SMALLER THAN 12" DBH AND OTHER NON-INVASIVE WEED VEGETATION THAT IS REMOVED AS A RESULT OF CLEARING ACTIVITIES SHALL BE USED AS SLASH.
4. SEE SHEETS 47-49 FOR WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING.

LEFT BANK TREE REMOVAL INVENTORY FOR SALVAGE

TYPE	TREE SIZE (DBH)			
	12-18"	18-24"	24-36"	36"+
MULTIPLE STEM CLUSTER	11	3	0	1
DECIDUOUS	53	17	11	4
CONIFER	5	0	0	0

LEFT BANK SALVAGE LOG INVENTORY AND CATEGORIES

SALVAGED WOOD	DIA (IN)	LENGTH (FT)	ROOTWAD	QTY
S-RMS	18+	40-50	YES	15
S-R1	18-24	35	YES	14
S-R1-U	18-24	50+	YES	3
S-R2	24-36	50	YES	0
S-R2-U	24-36	60+	YES	11
S-R3-U	36+	60+	YES	4
S-L1	18-24	25-30	NO	4
S-RACKING	12-18	20-40	NO	67

SALVAGE LOG NOTES

1. SALVAGE LOGS OBTAINED FROM SALVAGE TREES LISTED ON THIS SHEET.
2. "R" DENOTES LOG WITH ROOTWAD.
3. "L" DENOTES A LOG WITHOUT A ROOTWAD OBTAINED FROM THE TOP PORTION OF THE SALVAGED TREE.
4. "RMS" DENOTES ROOTWAD WITH MULTIPLE STEMS.
5. "U" DENOTES A FULL LENGTH "UNCUT" SALVAGED TREE. A SALVAGE LOG CATEGORY WITH NO "U" SUFFIX DENOTES A TREE CUT TO A STANDARD LENGTH AS SHOWN IN TABLES.

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2-09-22
CHECKED: T. WELLER (TRANTECH) 2-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: I.M, K.F., J.W.	02-2022	
DESIGN ENTERED: E.M., R.B.	02-2022	

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JAN B. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 02/09/22

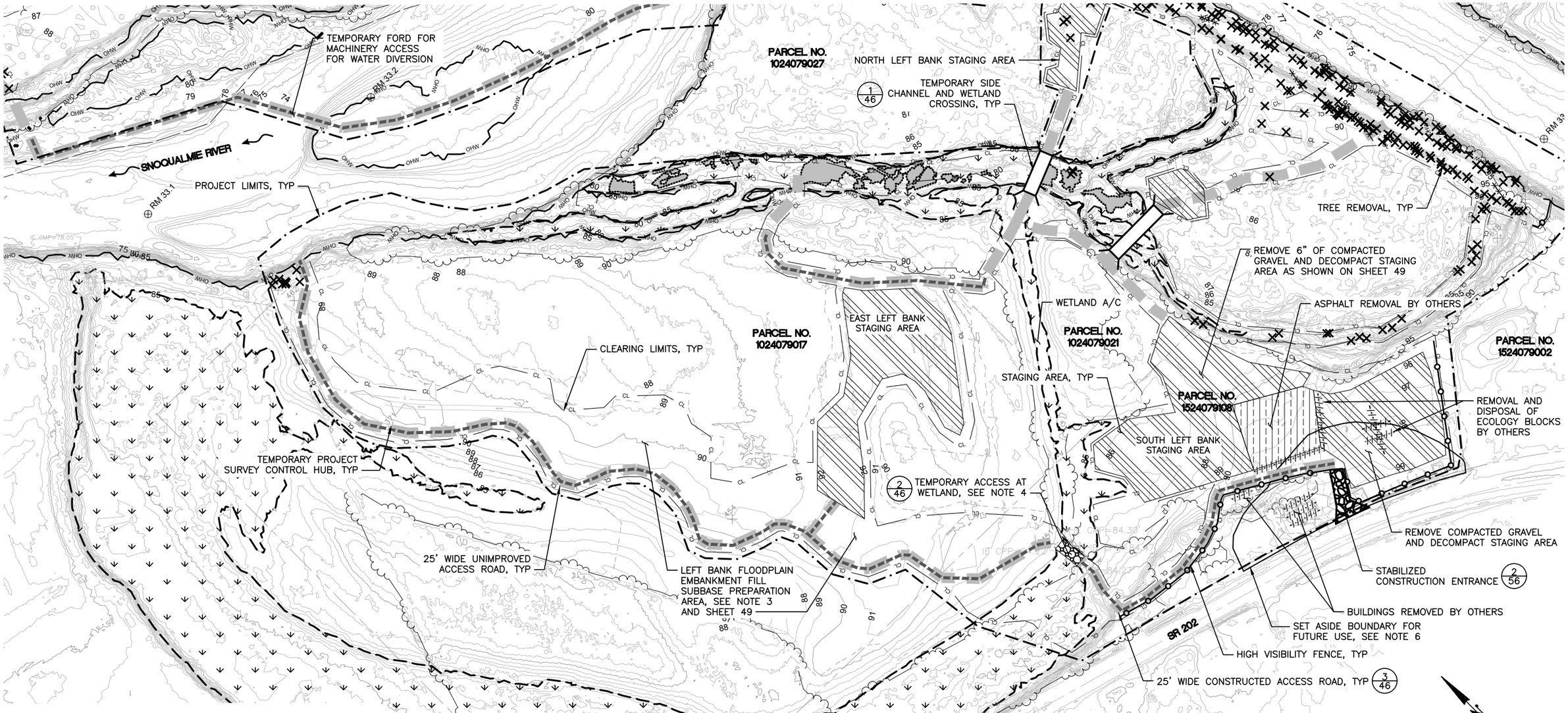
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SITE PREPARATION, ACCESS ROADS, AND DEMOLITION – PLAN 2

SHEET 44 OF 61 SHEETS

2021-07



NOTES

1. PROTECT ALL TREES NOT SHOWN FOR REMOVAL.
2. REFER TO TREE SALVAGE INVENTORY TABLE ON SHEETS 43 AND 44.
3. TOP 1 FOOT OF MATERIAL SHALL BE REMOVED FOR PREPARING SUBBASE FOR LEFT BANK EMBANKMENT FILL. THIS MATERIAL MAY BE USED FOR SALVAGE TOPSOIL MATERIAL.
4. REMOVE CULVERTS AND HOG FUEL FILL AND STABILIZE CROSSING PER DETAIL 2/46. TEMPORARY ACCESS AT WETLAND TO BE REMOVED AFTER PLANT MONITORING PERIOD.
5. SEE SHEETS 47–49 FOR WEED MANAGEMENT AND FOR TOPSOIL SALVAGE AND STRIPPING.
6. CONTRACTOR CAN USE SET ASIDE AREA FOR ACCESS AND STAGING BUT SHALL RESTORE TO EXISTING CONDITIONS FOR FUTURE USE BY OTHERS.

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2-09-22
CHECKED: T. WELLER (TRANTECH) 2-09-22
PROJECT No. KC: 1133842 HERRERA: 18-06954-000 TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022	
PROJECT SUPERVISOR: J. HANSEN	02-2022	
PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: I.M, K.F., J.W.	02-2022	
DESIGN ENTERED: E.M., R.B.	02-2022	

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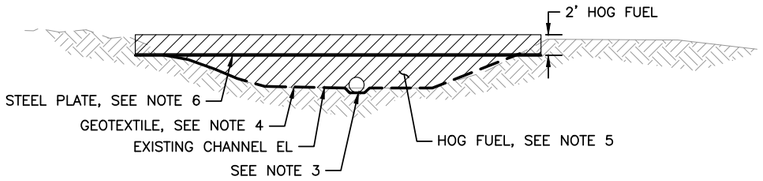
I.M. MOSTRENKO — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — 02/01/22

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SITE PREPARATION, ACCESS ROADS, AND DEMOLITION – PLAN 3

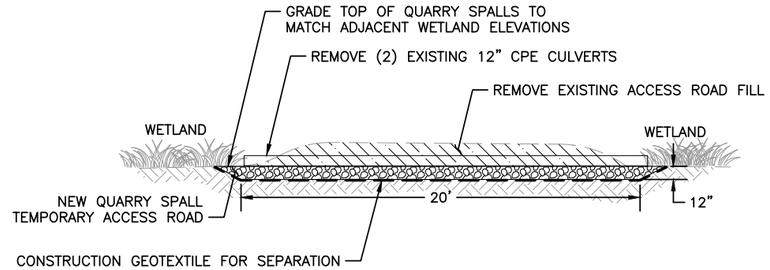
2021-07



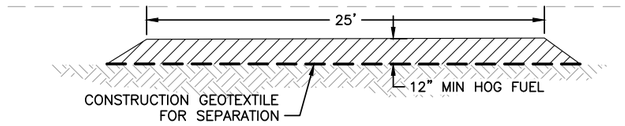
NOTES:

1. CROSSING LOCATIONS HAVE VERY LITTLE WATER EXCEPT DURING HIGH FLOW.
2. EACH CROSSING LOCATION HAS A SMALL PORTION WITHIN OHW OR WETLAND.
3. PLACE TEMPORARY CONSTRUCTION GEOTEXTILE FOR SEPARATION.
4. PLACE TEMPORARY CULVERT THAT IS SIZED TO CONVEY FLOW.
5. PLACE TEMPORARY HOG FUEL OVER GEOTEXTILE AND UP TO 2' BELOW DESIRED CROSSING ELEVATION.
6. PLACE STEEL PLATE 2' BELOW DESIRED CROSSING ELEVATION.
7. PLACE 2' OF HOG FUEL TO ESTABLISH MAINTAINABLE TRAVEL SURFACE.
8. WHEN CROSSING IS NO LONGER NEEDED, REMOVE CROSSING MATERIALS.
9. REMOVE REED CANARY GRASS ON CHANNEL BOTTOM AFTER CROSSING HAS BEEN REMOVED.

DETAIL – TEMPORARY
SIDE CHANNEL AND WETLAND CROSSING — 1 / VAR
SCALE: NTS



DETAIL – TEMPORARY ACCESS AT WETLAND — 2 / 45
SCALE: NTS



DETAIL – TEMPORARY
CONSTRUCTED ACCESS ROAD — 3 / VAR
SCALE: NTS

GENERAL NOTES:

1. MAINTAIN ALL CROSSING AND ACCESS ROADS DURING CONSTRUCTION.
2. ACCESS AT WETLAND TO BE REMOVED BY OTHERS AFTER VEGETATION MONITORING PERIOD.
3. TEMPORARY CONSTRUCTED ACCESS ROADS TO BE REMOVED, SUBSOILS DECOMPACTED, AND GRADES RESTORED TO FINAL GRADES PER SPECIAL PROVISIONS.

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2-09-22, T. WELLER (TRANTECH) 2-09-22
PROJECT No. KC: 1133842, HERRERA: 18-06954-000, TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02-2022
PROJECT SUPERVISOR: J. HANSEN	02-2022
PROJECT MANAGER: F. NOPP	02-2022
DESIGNED: I.M, K.F., J.W.	02-2022
DESIGN ENTERED: E.M., R.B.	02-2022

HERRERA
2200 Sixth Avenue
Suite 1100
Seattle, WA 98121
(206) 441-9080

IVAN B. MOSTRENKO, STATE OF WASHINGTON, 36069, REGISTERED PROFESSIONAL ENGINEER, 02/09/22

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SITE PREPARATION DETAILS

SHEET 46 OF 61 SHEETS

2021-07

NOTES:

1. WEED MANAGEMENT AREAS ARE BASED ON FALL 2021 FIELD SURVEY AND ARE SUBJECT TO CHANGE. SURFACE AREAS AND VOLUMES FOR EACH OF THE DELINEATED WEEDY AREAS IS PROVIDED IN SECTION 2-01.3 OF THE SPECIAL PROVISIONS. CONTRACTOR TO COORDINATE WITH PROJECT REPRESENTATIVE TO UPDATE BOUNDARIES AS NEEDED AND INCORPORATE CHANGES INTO WEED AND PEST CONTROL PLAN PRIOR TO COMMENCING WEED MANAGEMENT ACTIVITIES.
2. ALL NATIVE VEGETATION WITHIN THE FOOTPRINT OF EXCAVATION AREAS WILL BE CLEARED AND GRUBBED. ALL NATIVE VEGETATION AREAS OUTSIDE OF EXCAVATION AREAS WILL BE CLEARED ONLY AS NEEDED FOR ACCESS AND STAGING.
3. SEE WEED COVER WITHIN WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING AREAS TABLE IN SECTION 2-01.3(3)A OF THE SPECIAL PROVISIONS FOR WEED COVER AREA ASSUMPTIONS.

811 Know what's below. Call before you dig.

PROJECT LIMITS, TYP
NEAL ROAD SE
WETLAND B
WETLAND E
PARCEL NO. 1024079036
PARCEL NO. 1024079037
PARCEL NO. 1024079026
CLEARING LIMITS, TYP
WEED MANAGEMENT LIMITS, TYP
TEMPORARY PROJECT SURVEY CONTROL HUB, TYP
SNOQUALMIE RIVER
RM 32.7
RM 32.9
CONSERVATION EASEMENT
LWSA
KCA
CGA
WCG
MHSW
OHW
MHO

WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING AREAS

LOW WEED OCCURRENCE AND TOPSOIL SALVAGE AREA

LWSA

1. SPOT CLEARING AND GRUBBING OF EXISTING INVASIVE AND WEEDY VEGETATION ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. SALVAGE TOPSOIL (TOPSOIL TYPE B) FROM TOP FOOT ACCORDING TO SECTION 2-03.1 AND 8-02.3(4)B OF SPECIAL PROVISIONS EXCEPT FOR WHERE NOTED ON PLANS (SEE NOTE 4).

MODERATE TO HIGH WEED SOIL EXCAVATION AREA

MHSW

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE OR DISPOSED OF ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. STRIP, HAUL, AND DISPOSE OF TOP FOOT OF TOPSOIL ACCORDING TO SECTION 2-01.3(3)F OF SPECIAL PROVISIONS (SCG-GENERAL WEEDY SOIL).

KNOTWEED CONTROL AREA

KCA

1. CLEAR ABOVE GROUND VEGETATION AND COMPOST ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. EXCAVATE TOP 2 FEET OF SOIL TO BE RETAINED AND PLACED ON SITE ACCORDING TO SECTION 2-01.3(3)E OF SPECIAL PROVISIONS.
3. MONITOR EXCAVATION AREAS FOR ADDITIONAL ROOT FRAGMENTS. IF ADDITIONAL ROOT FRAGMENTS ARE PRESENT, EXCAVATE SUBSOIL PER SECTION 2-01.3(3)E OF SPECIAL PROVISIONS. IF NO ADDITIONAL EVIDENCE OF ROOT FRAGMENTS ARE PRESENT, CONTINUE COMMON EXCAVATION ACCORDING TO SPECIAL PROVISIONS.

WEEDY CLEARING AND GRUBBING AREA (MODERATE TO HIGH WEED COVERAGE)

WCG

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. NO EXCAVATION IN THIS AREA.

CLEARING AND GRUBBING AREA (SPOTTY WEED COVER)

CGA

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. NO EXCAVATION IN THIS AREA.

100 50 0 100 200
SCALE IN FEET

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: I. MOSTRENKO (HERRERA) 2-09-22, T. WELLER (TRANTECH) 2-09-22
PROJECT No. KC: 1133842, HERRERA: 18-06954-000, TRANTECH: 2018031
SURVEY No.

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DESIGNED: I.M, K.F., J.W.		02-2022
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KATHRYN SUZANNE FORESTER, STATE OF WASHINGTON, 1448, LICENSED LANDSCAPE ARCHITECT, EXP. 12/12/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING – PLAN 1

SHEET 47 OF 61 SHEETS

2021-07

NOTES:

1. WEED MANAGEMENT AREAS ARE BASED ON FALL 2021 FIELD SURVEY AND ARE SUBJECT TO CHANGE. SURFACE AREAS AND VOLUMES FOR EACH OF THE DELINEATED WEEDY AREAS IS PROVIDED IN SECTION 2-01.3 OF THE SPECIAL PROVISIONS. CONTRACTOR TO COORDINATE WITH PROJECT REPRESENTATIVE TO UPDATE BOUNDARIES AS NEEDED AND INCORPORATE CHANGES INTO WEED AND PEST CONTROL PLAN PRIOR TO COMMENCING WEED MANAGEMENT ACTIVITIES.
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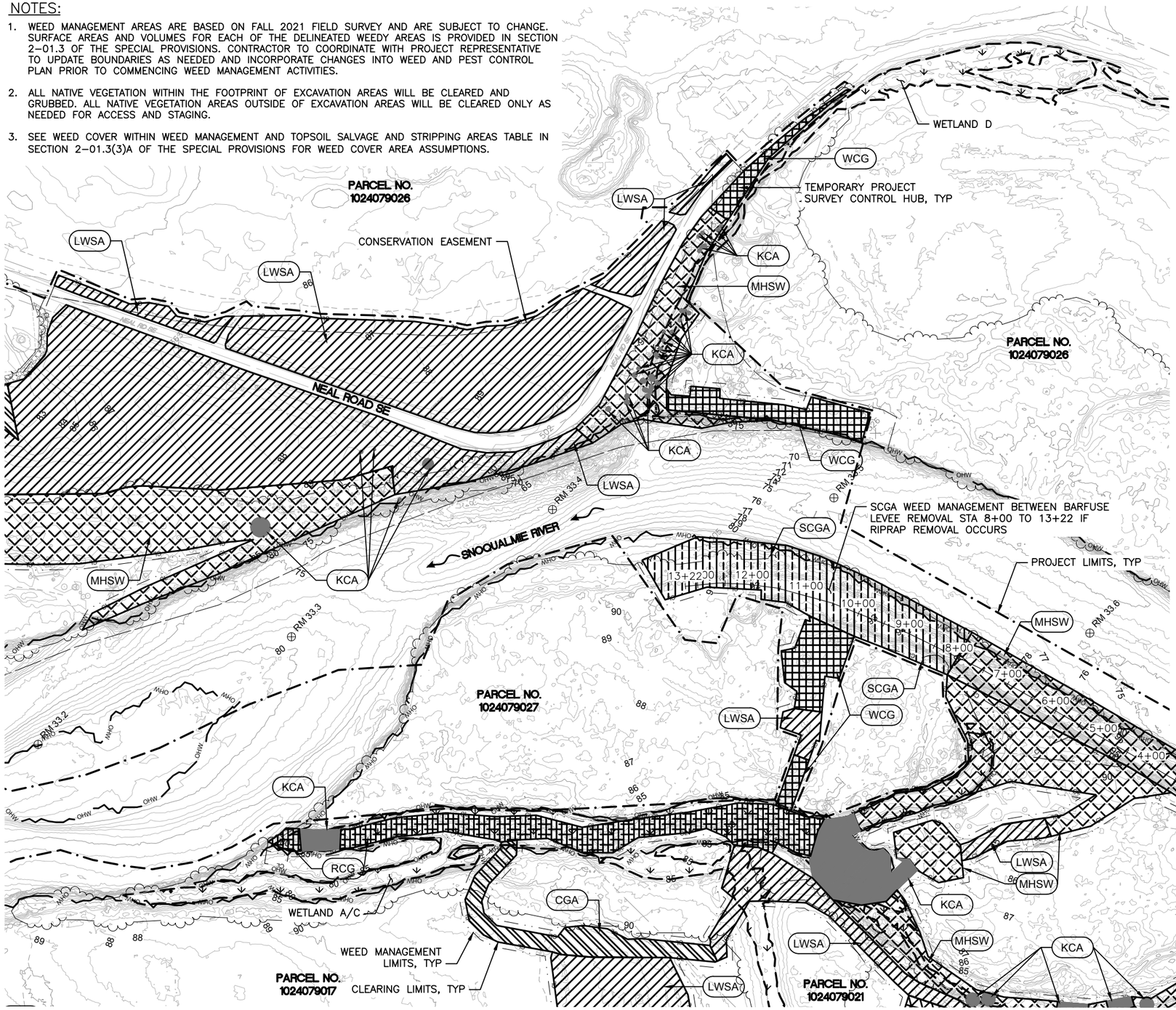
3. SEE WEED COVER WITHIN WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING AREAS TABLE IN SECTION 2-01.3(3)A OF THE SPECIAL PROVISIONS FOR WEED COVER AREA ASSUMPTIONS.



WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING AREAS

LOW WEED OCCURRENCE AND TOPSOIL SALVAGE AREA

LWSA

1. SPOT CLEARING AND GRUBBING OF EXISTING INVASIVE AND WEEDY VEGETATION ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. SALVAGE TOPSOIL (TOPSOIL TYPE B) FROM TOP FOOT ACCORDING TO SECTION 2-03.1 AND 8-02.3(4)B OF SPECIAL PROVISIONS EXCEPT FOR WHERE NOTED ON PLANS (SEE NOTE 4).

MODERATE TO HIGH WEED SOIL EXCAVATION AREA

MHSW

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE OR DISPOSED OF ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. STRIP, HAUL, AND DISPOSE OF TOP FOOT OF TOPSOIL ACCORDING TO SECTION 2-01.3(3)F OF SPECIAL PROVISIONS (SCG-GENERAL WEEDY SOIL).

KNOTWEED CONTROL AREA

KCA

1. CLEAR ABOVE GROUND VEGETATION AND COMPOST ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. EXCAVATE TOP 2 FEET OF SOIL TO BE RETAINED AND PLACED ON SITE ACCORDING TO SECTION 2-01.3(3)E OF SPECIAL PROVISIONS.
3. MONITOR EXCAVATION AREAS FOR ADDITIONAL ROOT FRAGMENTS. IF ADDITIONAL ROOT FRAGMENTS ARE PRESENT, EXCAVATE SUBSOIL PER SECTION 2-01.3(3)E OF SPECIAL PROVISIONS. IF NO ADDITIONAL EVIDENCE OF ROOT FRAGMENTS ARE PRESENT, CONTINUE COMMON EXCAVATION ACCORDING TO SPECIAL PROVISIONS.

REED CANARYGRASS CONTROL AREA

RCG

1. MOW REED CANARYGRASS SURFACE VEGETATION AND COMPOST ACCORDING TO SECTION 2-01.3(3)C OF SPECIAL PROVISIONS.
2. STRIP TOP 18 INCHES OF VEGETATION, ROOT, AND SOIL MATERIAL AND HAUL TO OFF-SITE DISPOSAL ACCORDING TO SECTION 2-01.3(3)D OF SPECIAL PROVISIONS. CONTINUE COMMON EXCAVATION BELOW RCG TO FINAL GRADES.

WEEDY CLEARING AND GRUBBING AREA (MODERATE TO HIGH WEED COVERAGE)

WCG

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. NO EXCAVATION IN THIS AREA.

CLEARING AND GRUBBING AREA (SPOTTY WEED COVER)

CGA

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. NO EXCAVATION IN THIS AREA.

SELECTIVE CLEARING AND GRUBBING AREA

SCGA

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2-01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION IF RIPRAP TRENCH EXPLORATION VERIFIES NEED FOR EXCAVATION ACCORDING TO SECTION 2-03.3(20) OF THE SPECIAL PROVISIONS.

100 50 0 100 200
SCALE IN FEET

811
Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2-09-22
CHECKED: T. WELLER (TRANTECH) 2-09-22
KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 2018031
SURVEY No.

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PROJECT MANAGER: F. NOPP	02-2022	
DESIGNED: I.M, K.F., J.W.	02-2022	
DESIGN ENTERED: E.M., R.B.	02-2022	

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IAN B. MOSTRENKO
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05/01/23

STATE OF WASHINGTON
KATHRYN SUZANNE FORES
1448
LICENSED LANDSCAPE ARCHITECT
12/31/2022

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING – PLAN 2

SHEET 48 OF 61 SHEETS

2021-07

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NOTES:

1. WEED MANAGEMENT AREAS ARE BASED ON FALL 2021 FIELD SURVEY AND ARE SUBJECT TO CHANGE. SURFACE AREAS AND VOLUMES FOR EACH OF THE DELINEATED WEEDY AREAS IS PROVIDED IN SECTION 2–01.3 OF THE SPECIAL PROVISIONS. CONTRACTOR TO COORDINATE WITH PROJECT REPRESENTATIVE TO UPDATE BOUNDARIES AS NEEDED AND INCORPORATE CHANGES INTO WEED AND PEST CONTROL PLAN PRIOR TO COMMENCING WEED MANAGEMENT ACTIVITIES.
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3. SEE WEED COVER WITHIN WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING AREAS TABLE IN SECTION 2–01.3(3)A OF THE SPECIAL PROVISIONS FOR WEED COVER AREA ASSUMPTIONS.
4. DEPTH OF EXCAVATION FOR TOPSOIL TYPE B WILL VARY BETWEEN 0.1 FEET TO 1.5 FT FOR LEFT BANK FLOODPLAIN GRADING AS SHOWN ON SHEET 31 WHERE FLOODPLAIN IS GRADED FLAT TO EL 91.7.

WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING AREAS

LOW WEED OCCURRENCE AND TOPSOIL SALVAGE AREA

LWSA

1. SPOT CLEARING AND GRUBBING OF EXISTING INVASIVE AND WEEDY VEGETATION ACCORDING TO SECTION 2–01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. SALVAGE TOPSOIL (TOPSOIL TYPE B) FROM TOP FOOT ACCORDING TO SECTION 2–03.1 AND 8–02.3(4)B OF SPECIAL PROVISIONS EXCEPT FOR WHERE NOTED ON PLANS (SEE NOTE 4).

MODERATE TO HIGH WEED SOIL EXCAVATION AREA

MHSW

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE OR DISPOSED OF ACCORDING TO SECTION 2–01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. STRIP, HAUL, AND DISPOSE OF TOP FOOT OF TOPSOIL ACCORDING TO SECTION 2–01.3(3)F OF SPECIAL PROVISIONS (SCG–GENERAL WEEDY SOIL).

KNOTWEED CONTROL AREA

KCA

1. CLEAR ABOVE GROUND VEGETATION AND COMPOST ACCORDING TO SECTION 2–01.3(3) OF SPECIAL PROVISIONS.
2. EXCAVATE TOP 2 FEET OF SOIL TO BE RETAINED AND PLACED ON SITE ACCORDING TO SECTION 2–01.3(3)E OF SPECIAL PROVISIONS.
3. MONITOR EXCAVATION AREAS FOR ADDITIONAL ROOT FRAGMENTS. IF ADDITIONAL ROOT FRAGMENTS ARE PRESENT, EXCAVATE SUBSOIL PER SECTION 2–01.3(3)E OF SPECIAL PROVISIONS. IF NO ADDITIONAL EVIDENCE OF ROOT FRAGMENTS ARE PRESENT, CONTINUE COMMON EXCAVATION ACCORDING TO SPECIAL PROVISIONS.

REED CANARYGRASS CONTROL AREA

RCG

1. MOW REED CANARYGRASS SURFACE VEGETATION AND COMPOST ACCORDING TO SECTION 2–01.3(3)C OF SPECIAL PROVISIONS.
2. STRIP TOP 18 INCHES OF VEGETATION, ROOT, AND SOIL MATERIAL AND HAUL TO OFF–SITE DISPOSAL ACCORDING TO SECTION 2–01.3(3)D OF SPECIAL PROVISIONS. CONTINUE COMMON EXCAVATION BELOW RCG TO FINAL GRADES.

WEEDY CLEARING AND GRUBBING AREA (MODERATE TO HIGH WEED COVERAGE)

WCG

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2–01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. NO EXCAVATION IN THIS AREA.

CLEARING AND GRUBBING AREA (SPOTTY WEED COVER)

CGA

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2–01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR NATIVE VEGETATION AND SALVAGE PER SPECIAL PROVISIONS.
3. NO EXCAVATION IN THIS AREA.

SELECTIVE CLEARING AND GRUBBING AREA

SCGA

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2–01.3(3) OF SPECIAL PROVISIONS.
2. CLEAR AND GRUB NATIVE VEGETATION IF RIPRAP TRENCH EXPLORATION VERIFIES NEED FOR EXCAVATION ACCORDING TO SECTION 2–03.3(20) OF THE SPECIAL PROVISIONS.

WEEDY CLEARING AND GRUBBING (GRAVEL AREA)

WCGG

1. CLEAR AND GRUB INVASIVE AND WEEDY VEGETATION TO BE COMPOSTED ON SITE ACCORDING TO SECTION 2–01.3(3) OF SPECIAL PROVISIONS.
2. STRIP, EXCAVATE, AND REMOVE TOP 6 INCHES OF GRAVEL.

SCALE IN FEET: 100 50 0 100 200

SURVEYED: R. HILLIARD (PMX)				
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2–09–22				
CHECKED: T. WELLER (TRANTECH) 2–09–22				
KC: 1133842 HERRERA: 18–06954–000 PROJECT No. TRANTECH: 2018031				
SURVEY No.				
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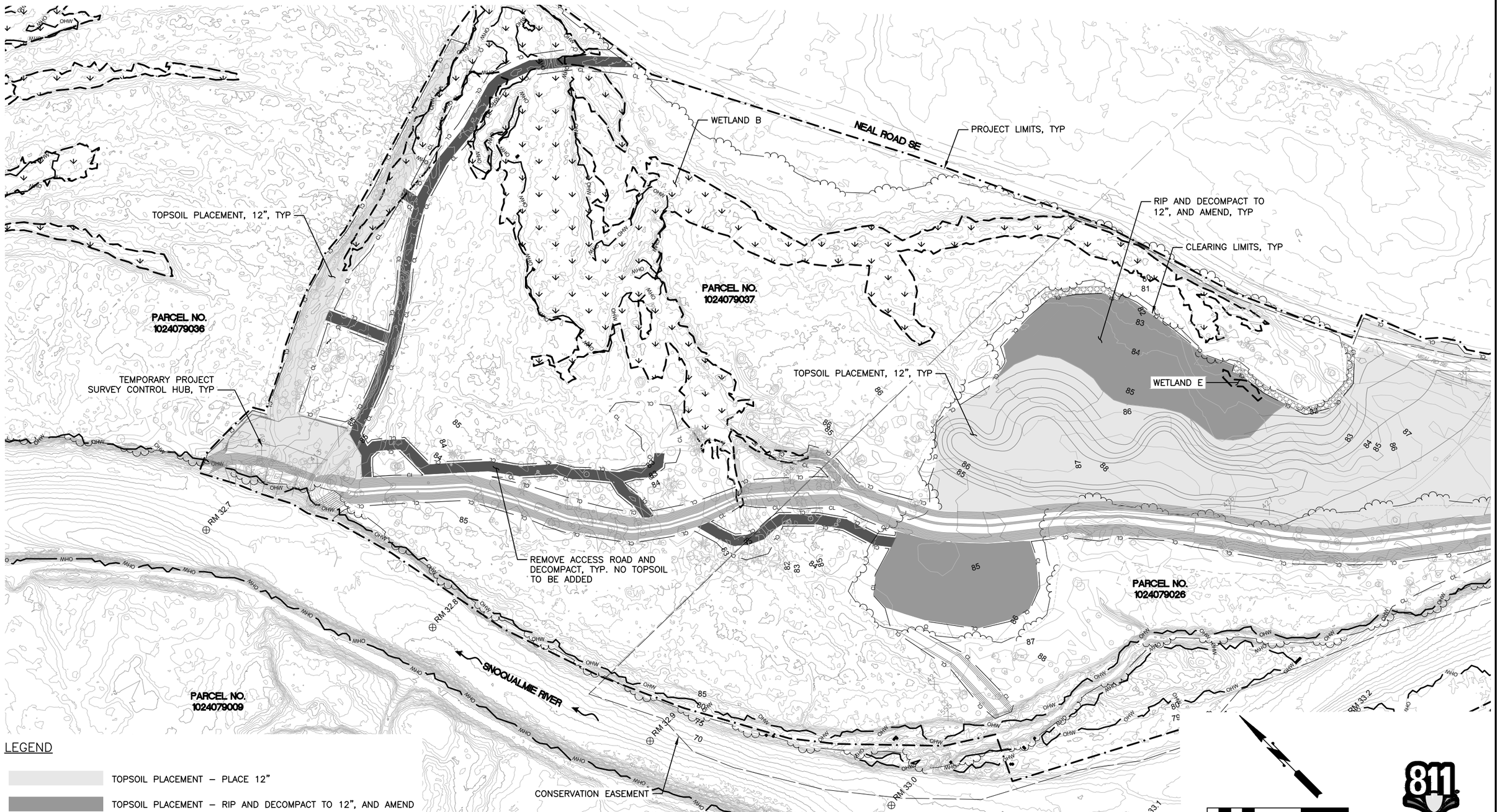
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

WEED MANAGEMENT AND TOPSOIL SALVAGE AND STRIPPING – PLAN 3

SHEET 49 OF 61 SHEETS

2021-07



LEGEND

- TOPSOIL PLACEMENT – PLACE 12"
- TOPSOIL PLACEMENT – RIP AND DECOMPACT TO 12", AND AMEND
- TOPSOIL PLACEMENT – REMOVE ACCESS ROAD AND DECOMPACT

100 50 0 100 200
SCALE IN FEET

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
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CHECKED: I. MOSTRENKO (HERRERA) 2-09-22
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IAN E. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 02/09/22

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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

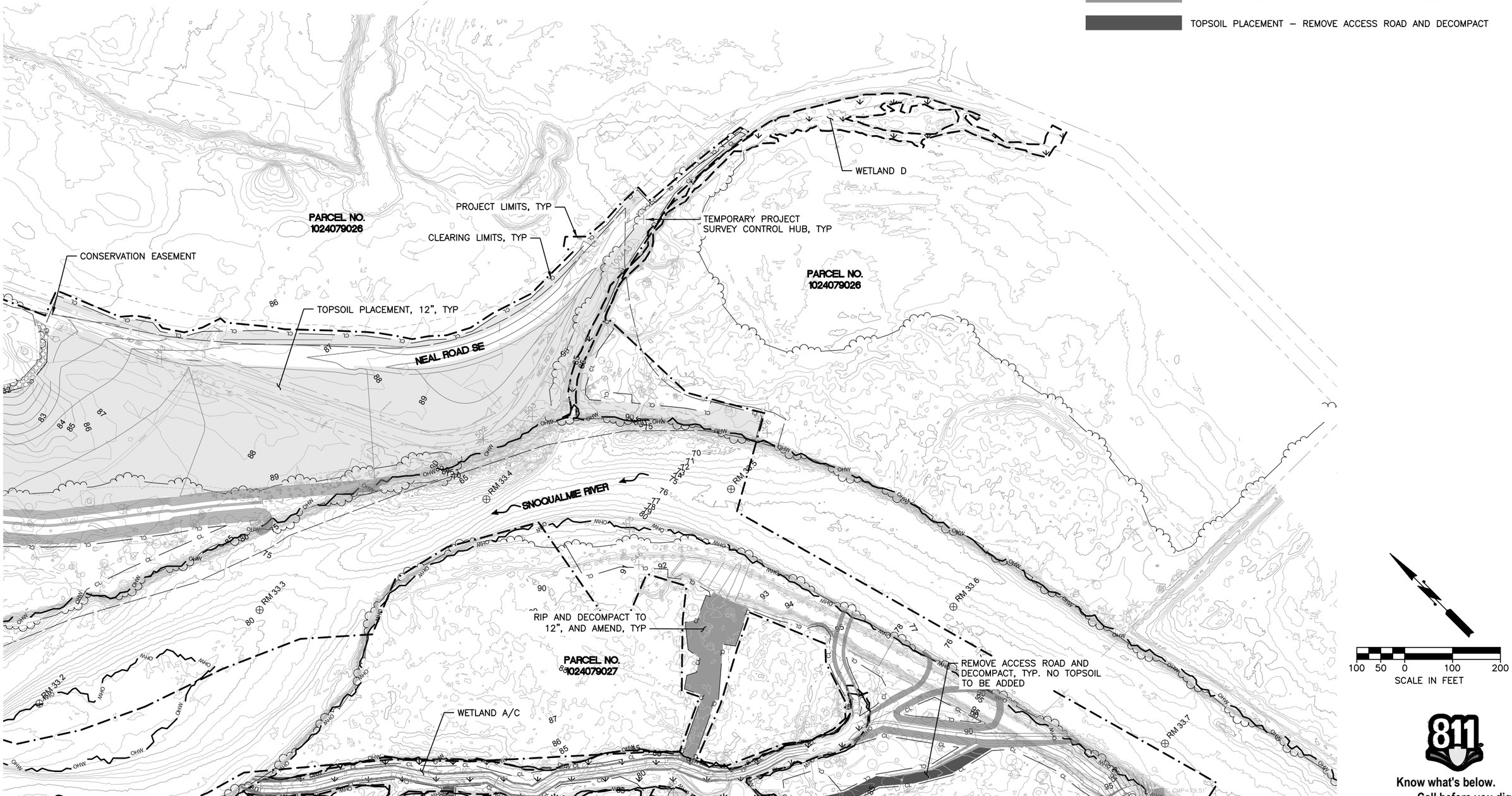
TOPSOIL PLACEMENT AND SEEDING PREPARATION – PLAN 1

SHEET 50 OF 61 SHEETS

2021-07

LEGEND

- TOPSOIL PLACEMENT – PLACE 12"
- TOPSOIL PLACEMENT – RIP AND DECOMPACT TO 12", AND AMEND
- TOPSOIL PLACEMENT – REMOVE ACCESS ROAD AND DECOMPACT



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Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

TOPSOIL PLACEMENT AND SEEDING PREPARATION – PLAN 2

SHEET 51 OF 61 SHEETS

2021-07

PARCEL NO. 1024079026

PARCEL NO. 1024079027

PARCEL NO. 1024079017

PARCEL NO. 1024079021

PARCEL NO. 1524079108

CONSERVATION EASEMENT

SNOQUALMIE RIVER

RM 33.1

RM 33.2

RM 33.3

RM 33.6

PROJECT LIMITS, TYP

CLEARING LIMITS, TYP

RIP AND DECOMPACT TO 12", AND AMEND, TYP

REMOVE ACCESS ROAD AND DECOMPACT, TYP. NO TOPSOIL TO BE ADDED

TOPSOIL PLACEMENT, 12", TYP

RIP AND DECOMPACT TO 12", AND AMEND AFTER STRIPPING AND EXCAVATION TO FINAL GRADES

TOPSOIL PLACEMENT, 6", TYP

WETLAND A/C

TEMPORARY PROJECT SURVEY CONTROL HUB, TYP

SR 202

LEGEND

- TOPSOIL PLACEMENT – PLACE 12"
- TOPSOIL PLACEMENT – RIP AND DECOMPACT TO 12", AND AMEND
- TOPSOIL PLACEMENT – REMOVE ACCESS ROAD AND DECOMPACT
- TOPSOIL PLACEMENT – PLACE 6"

100 50 0 100 200
SCALE IN FEET

811
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IAN B. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER 2/9/09

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Department of Natural Resources and Parks
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Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

TOPSOIL PLACEMENT AND SEEDING PREPARATION – PLAN 3

SHEET 52 OF 61 SHEETS

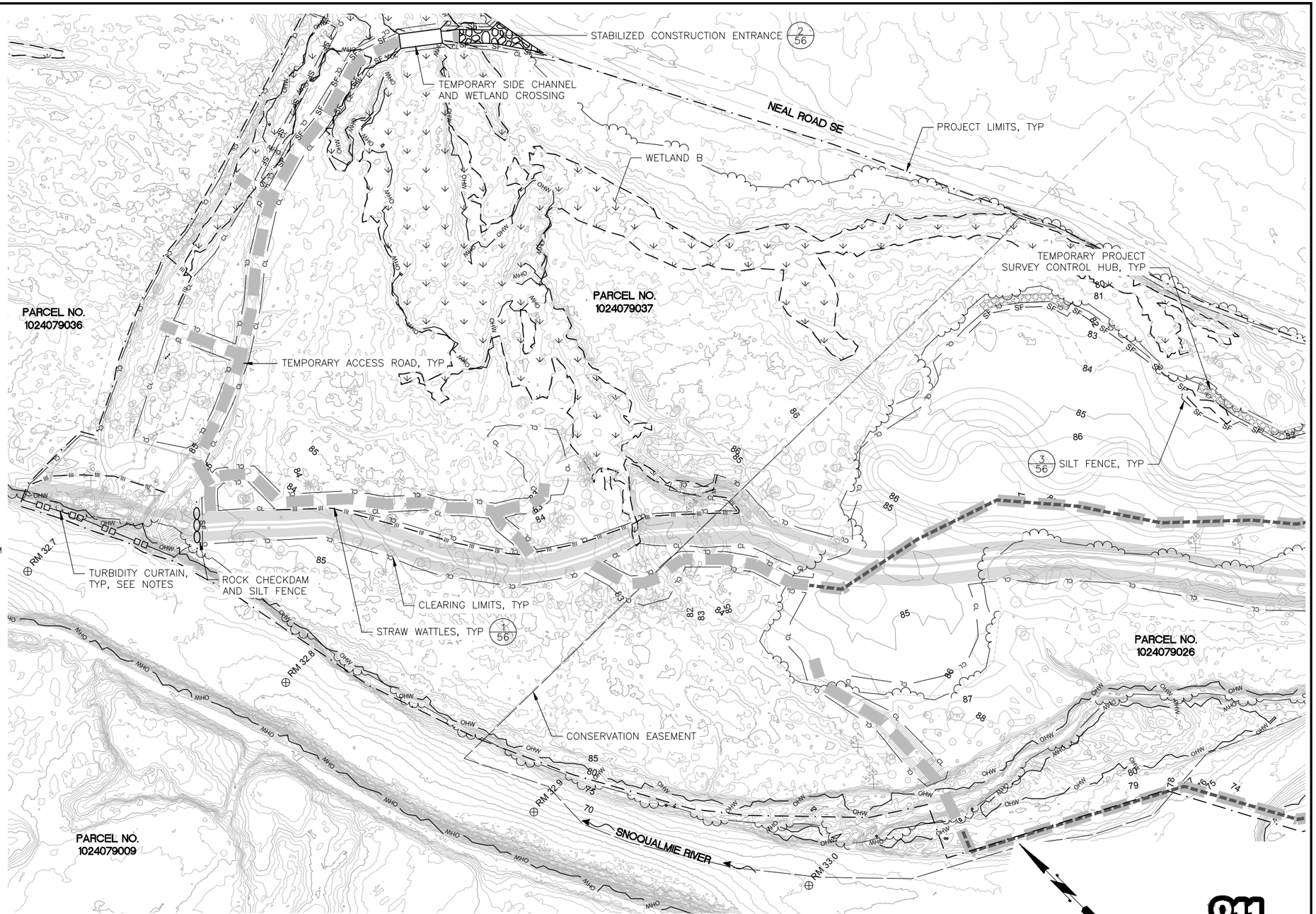
2021-07

CONSTRUCTION SEQUENCING NOTES FOR ESC AND WATER MANAGEMENT:

1. SURVEY AND STAKE CLEARING AND GRADING LIMITS.
2. INSTALL TESC MEASURES AND ACCESS ROADS.
3. INSTALL CROSSINGS AS REQUIRED TO MINIMIZE IMPACTS TO WETLANDS AND SENSITIVE AREAS.
4. COMPLETE AS MUCH WORK AS POSSIBLE OUTSIDE OF THE OHW PRIOR TO IN-WATER WORK AND RIPRAP REMOVAL.
5. CONTRACTOR SHALL SUBMIT A TEMPORARY WATER ISOLATION PLAN (TWIP) AS DESCRIBED IN 8-01.3(19) THAT DESCRIBES WORK SEQUENCING, BMPS, AND OTHER DETAILS RELEVANT TO ENSURING STATE WATER QUALITY REQUIREMENTS ARE MET. OBTAIN PROJECT REPRESENTATIVE APPROVAL OF THE TEMPORARY WATER ISOLATION PLAN BEFORE INITIATING ANY WORK ACTIVITIES INSIDE OF THE OHW.
6. OWNER SHALL ESTABLISH MULTIPLE DOWNSTREAM MONITORING AND COMPLIANCE POINTS WITH CONTINUOUS DATA COLLECTION METHODS. TURBIDITY SHALL BE MONITORED AT POINT OF COMPLIANCE CORRESPONDING TO ACTIVE IN-WATER WORK AREA AS DESCRIBED IN WQPMP. WORK SHALL BE STOPPED IF DOWNSTREAM MONITORING INDICATES ANY POTENTIAL FOR TURBIDITY EXCEEDANCE AT CORRESPONDING COMPLIANCE POINT.
7. COORDINATE WITH OWNER TO PERFORM FISH-OUT IN LEFT BANK SIDE CHANNEL.
8. INSTALL DOWNSTREAM CHECK DAMS IN EXISTING SIDE CHANNELS AS SHOWN.
9. EXCAVATE SIDE CHANNELS EXCEPT INLET CONNECTIONS TO RIVER.
10. WORK AREA ISOLATION FOR RIPRAP REMOVAL ON BARFUSE LEFT BANK AND HAFFNER RIGHT BANK CAN OCCUR CONCURRENTLY OR SEPARATELY, BUT THE MOST STRICT POINT OF COMPLIANCE WILL APPLY FOR ALL CONCURRENT WORK.
11. PLACE TEMPORARY BULK BAG DEFLECTORS TO ANCHOR TURBIDITY CURTAINS.
12. INSTALL TURBIDITY CURTAINS. NO FISH-OUT IS REQUIRED FOR TURBIDITY CURTAIN-ISOLATED AREAS.
13. REMOVE LEVEE AND REVETMENT RIPRAP.
14. REMOVE TURBIDITY CURTAINS AND BULK BAG DEFLECTORS.
15. FOR HAFFNER REVETMENT REMOVAL IN DEEP AND SWIFT WATER (HR ALIGNMENT STA 3+00 TO 9+00), WORK SHALL OCCUR IN LATE SUMMER DURING THE LOWEST FLOWS POSSIBLE. CONTRACTOR TO CONTROL THE RATE OF WORK TO ENSURE WATER QUALITY COMPLIANCE.
16. FOR DOWNSTREAM SEGMENT OF HAFFNER RIPRAP REMOVAL FROM HR ALIGNMENT STA 9+00 TO 13+88:
    a. ACCESS MID-CHANNEL GRAVEL BAR BY WET CROSSING DURING LATE SUMMER LOW FLOW CONDITIONS.
    b. INSTALL TEMPORARY BULK BAG DEFLECTORS TO DIRECT FLOW TOWARD THE RIGHT BANK.
    c. EXCAVATE A SMALL AREA ON THE LEFT BANK AT THE HEAD OF THE GRAVEL BAR RIFFLE TO ENCOURAGE MORE FLOW INTO THE CHANNEL TO THE SOUTH (LEFT) SIDE OF THE MID-CHANNEL GRAVEL BAR. ESTIMATED EXCAVATION VOLUME LESS THAN 250 CY.
    d. RELOCATE TEMPORARY BULK BAG DEFLECTORS TO TEMPORARY DAM OR REMOVE TEMPORARY BULK BAG DEFLECTORS AND CONSTRUCT TEMPORARY DAM TO DIRECT FLOW TOWARD THE LEFT BANK THROUGH RIFFLE EXCAVATION.
    e. COORDINATE WITH OWNER TO FISH-OUT ON NORTH (RIGHT) SIDE OF MID-CHANNEL GRAVEL BAR DOWNSTREAM OF DIVERSION DAM.
    f. REMOVE RIPRAP. INSTALL CHECK DAM AND DEWATER EXCAVATION BY PUMPING TO VEGETATED UPLAND AREAS AS NEEDED.
    g. REMOVE TEMPORARY DAM.
17. COMPLETE ALL SIDE CHANNEL EXCAVATION AND SALVAGED LOG PLACEMENT.
18. REMOVE DOWNSTREAM CHECK DAMS.
19. 19. COMPLETE SIDE CHANNEL INLET EXCAVATIONS. A COFFERDAM CONSTRUCTED OF BURLAP SACKS SHALL BE USED TO PREVENT ACTIVE FLOW FROM ENTERING THE SIDE CHANNEL THROUGH THE DURATION OF CONSTRUCTION.

NOTES

1. LOCATION OF TURBIDITY CURTAIN WILL DEPEND ON CONTRACTOR CONSTRUCTION SEQUENCING AND WQPMP REQUIREMENTS.
2. USE OF TURBIDITY CURTAIN, SILT FENCE, TRIANGULAR SILT DYKE, OR ROCK CHECK DAMS MAY BE REQUIRED DEPENDING ON ACCESS AND CONSTRUCTION SEQUENCING OF RIGHT BANK SIDE CHANNEL EXCAVATION.
3. WATER MANAGEMENT FACILITIES AND SEQUENCING SHOWN ARE EXAMPLES OF MEASURES THAT MEET THE INTENT OF THE WATER QUALITY PROTECTION AND MONITORING PLAN (WQPMP). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THESE WATER QUALITY PERFORMANCE STANDARDS. IF APPROVED BY THE PROJECT REPRESENTATIVE, THE CONTRACTOR MAY MODIFY THESE MEASURES, INCLUDING WORK AREA ISOLATION MEASURES, SEQUENCING, RATE OF WORK, AND OTHER BMPS NECESSARY TO MEET WATER QUALITY STANDARDS.
4. DEWATERING MAY BE REQUIRED FOR DEEP EXCAVATIONS. CONTRACTOR SHALL SEQUENCE WORK WITH BENCHING AND STAGED EXCAVATION. FOR DEWATERING, CONTRACTOR SHALL PUMP TO AND DISPERSE IN AN UPLAND AREA WITHIN THE PROJECT LIMITS. SEE SPECIAL PROVISIONS FOR GROUNDWATER INFORMATION.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN PUBLIC SAFETY (E.G. BOATERS) DURING THE FELLING OF TREES, DIVERSION OF WATER FROM THE WORK AREA AND EXCAVATION OF TOE ROCK. DIVERSION STRUCTURES (I.E., TEMPORARY DAM AND TEMPORARY BULK BAG DEFLECTORS) SHALL NOT BE LEFT IN PLACE THROUGH A WEEKEND UNLESS ACTIVE TOE ROCK REMOVAL IS OCCURRING ON WEEKENDS.

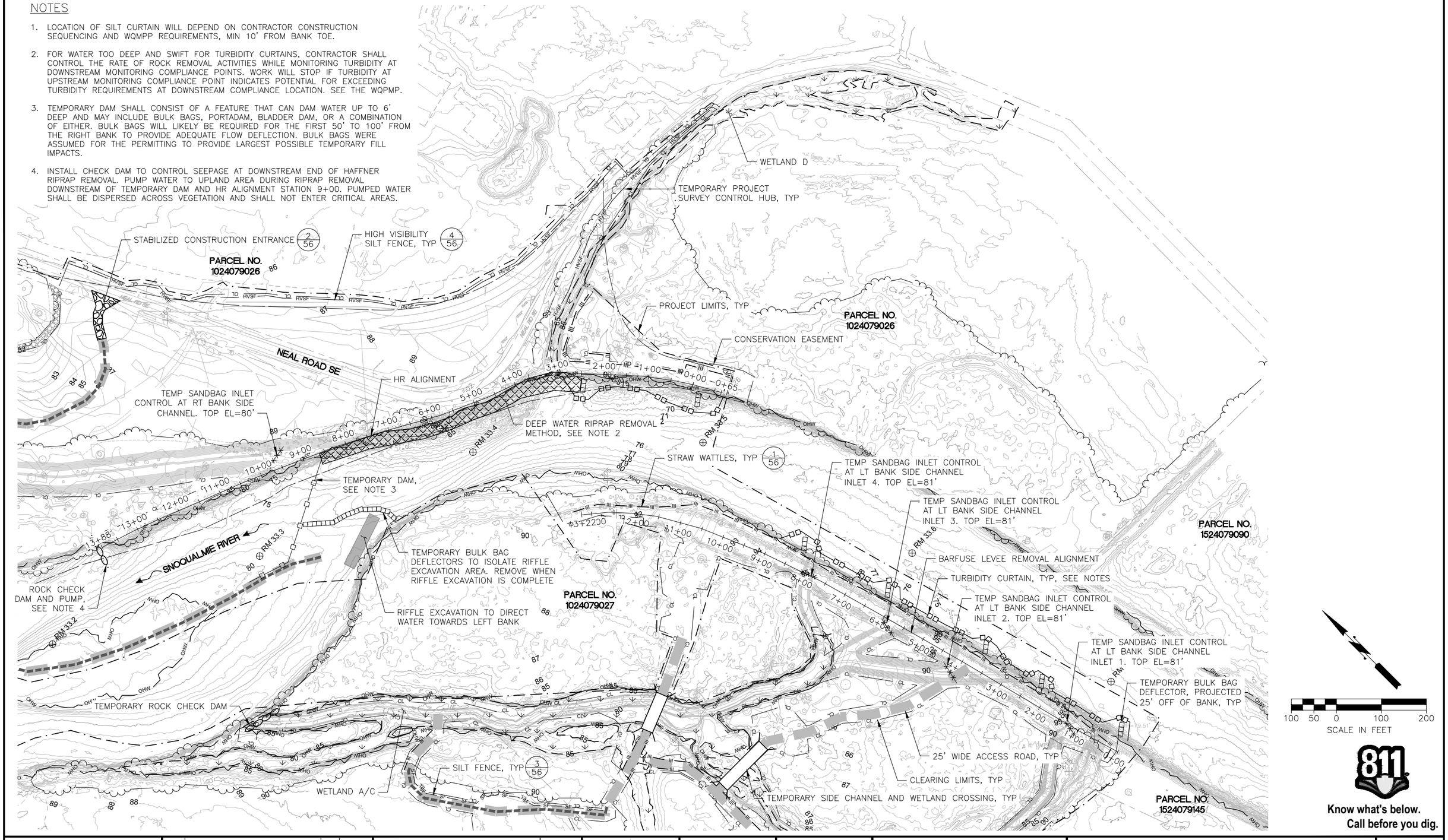


811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)				APPROVED: W. MANSFIELD, PE	02-2022	HERRERA 2200 Sixth Avenue Suite 1100 Seattle, WA 98121 (206) 441-9080	King County Department of Natural Resources and Parks Water and Land Resources Division Rural and Regional Services Section Ecological Restoration and Engineering Services *Christie True, Director*
SURVEY BASE MAP:				PROJECT SUPERVISOR: J. HANSEN	02-2022		**FALL CITY FLOODPLAIN RESTORATION PROJECT**
CHECKED: I. MOSTRENKO (HERRERA) 2-09-22 T. WELLER (TRANTECH) 2-09-22				PROJECT MANAGER: F. NOPP	02-2022		TESC AND WATER MANAGEMENT – PLAN 1
KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031				DESIGNED: I.M, K.F., J.W.	02-2022		SHEET 53 OF 61 SHEETS
SURVEY No.	NUM.	REVISION	BY	DESIGN ENTERED: E.M., R.B.	02-2022		2021-07

NOTES

1. LOCATION OF SILT CURTAIN WILL DEPEND ON CONTRACTOR CONSTRUCTION SEQUENCING AND WQMPP REQUIREMENTS, MIN 10' FROM BANK TOE.
2. FOR WATER TOO DEEP AND SWIFT FOR TURBIDITY CURTAINS, CONTRACTOR SHALL CONTROL THE RATE OF ROCK REMOVAL ACTIVITIES WHILE MONITORING TURBIDITY AT DOWNSTREAM MONITORING COMPLIANCE POINTS. WORK WILL STOP IF TURBIDITY AT UPSTREAM MONITORING COMPLIANCE POINT INDICATES POTENTIAL FOR EXCEEDING TURBIDITY REQUIREMENTS AT DOWNSTREAM COMPLIANCE LOCATION. SEE THE WQPMP.
3. TEMPORARY DAM SHALL CONSIST OF A FEATURE THAT CAN DAM WATER UP TO 6' DEEP AND MAY INCLUDE BULK BAGS, PORTADAM, BLADDER DAM, OR A COMBINATION OF EITHER. BULK BAGS WILL LIKELY BE REQUIRED FOR THE FIRST 50' TO 100' FROM THE RIGHT BANK TO PROVIDE ADEQUATE FLOW DEFLECTION. BULK BAGS WERE ASSUMED FOR THE PERMITTING TO PROVIDE LARGEST POSSIBLE TEMPORARY FILL IMPACTS.
4. INSTALL CHECK DAM TO CONTROL SEEPAGE AT DOWNSTREAM END OF HAFFNER RIPRAP REMOVAL. PUMP WATER TO UPLAND AREA DURING RIPRAP REMOVAL DOWNSTREAM OF TEMPORARY DAM AND HR ALIGNMENT STATION 9+00. PUMPED WATER SHALL BE DISPERSED ACROSS VEGETATION AND SHALL NOT ENTER CRITICAL AREAS.



Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)			
SURVEY BASE MAP: I. MOSTRENKO (HERRERA) 2-09-22			
CHECKED: T. WELLER (TRANTECH) 2-09-22			
KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031			
SURVEY No.			

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE		02-2022
PROJECT SUPERVISOR: J. HANSEN		02-2022
PROJECT MANAGER: F. NOPP		02-2022
DESIGNED: I.M, K.F., J.W.		02-2022
DESIGN ENTERED: E.M., R.B.		02-2022

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I. E. MOSTRENKO — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — 02/09/22

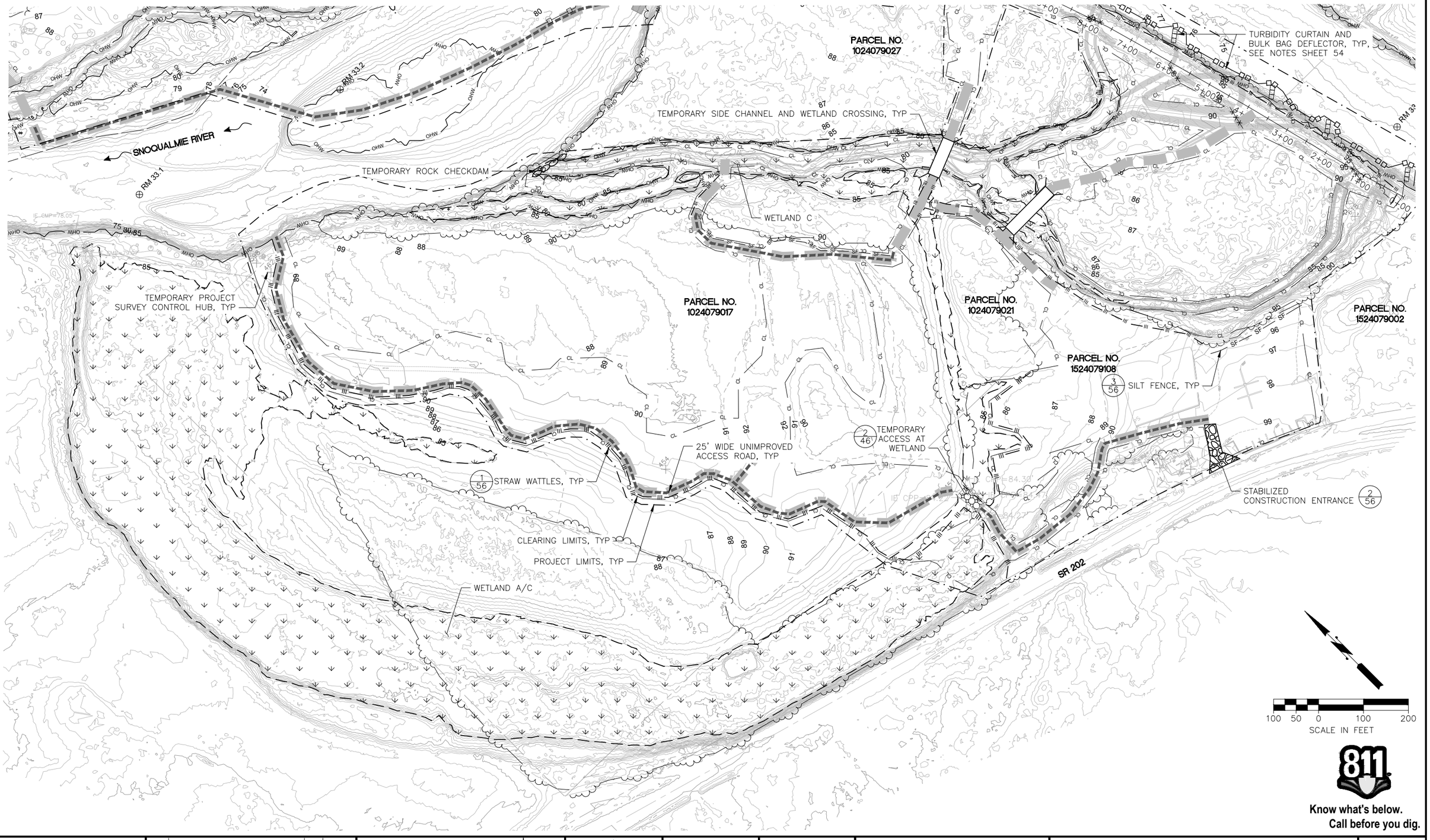
King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

TESC AND WATER MANAGEMENT – PLAN 2

SHEET 54 OF 61 SHEETS

2021-07



SURVEYED: R. HILLIARD (PMX)

SURVEY BASE MAP:

I. MOSTRENKO (HERRERA) 2-09-22

CHECKED: T. WELLER (TRANTECH) 2-09-22

KC: 1133842
HERRERA: 18-06954-000
PROJECT No. TRANTECH: 20180031

SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE		02-2022
PROJECT SUPERVISOR: J. HANSEN		02-2022
PROJECT MANAGER: F. NOPP		02-2022
DESIGNED: I.M, K.F., J.W.		02-2022
DESIGN ENTERED: E.M., R.B.		02-2022

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Rural and Regional Services Section
Ecological Restoration and Engineering Services

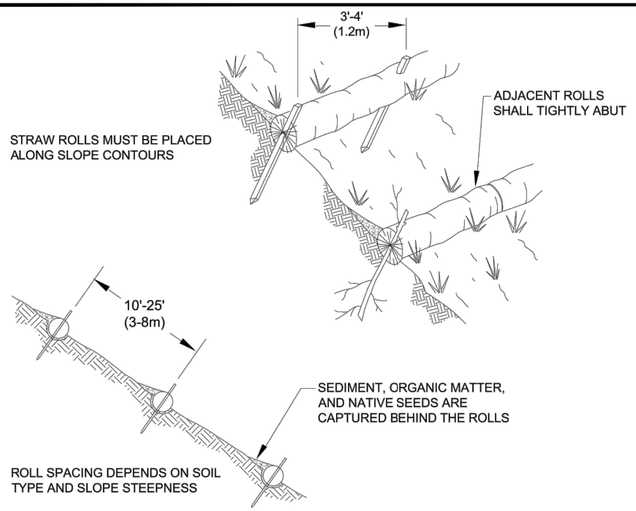
Christie True, Director

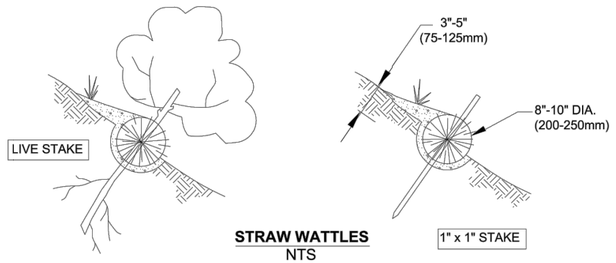
FALL CITY FLOODPLAIN RESTORATION PROJECT

TESC AND WATER MANAGEMENT – PLAN 3

SHEET 55 OF 61 SHEETS

2021-07





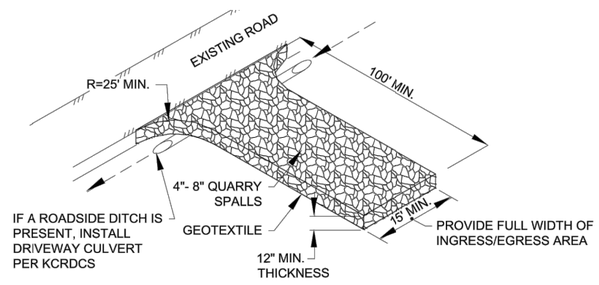
STRAW WATTLES
NTS

NOTES:

1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" x 5" (75-125mm) DEEP, DUG ON CONTOUR.
2. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

DETAIL – STRAW WATTLES 1 VAR

SCALE: NTS

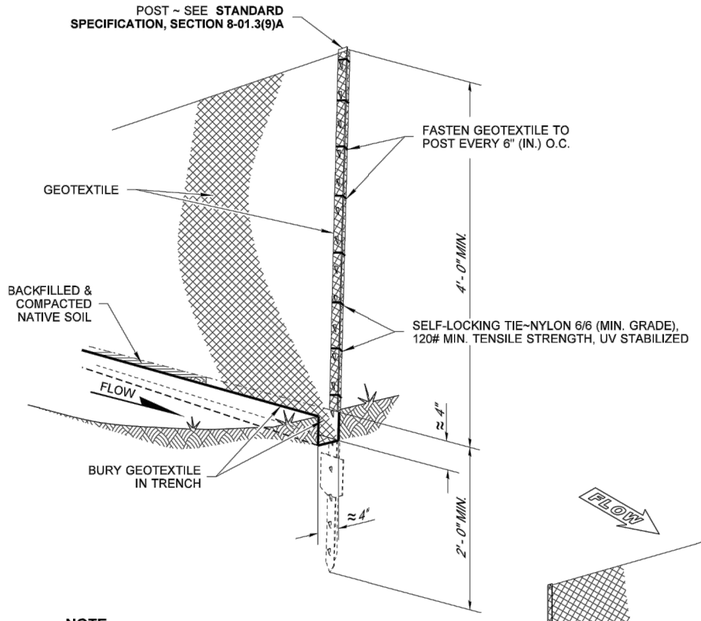


NOTES:

- PER KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (KCRDCS), DRIVEWAYS SHALL BE PAVED TO EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY.
- IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.

DETAIL – STABILIZED CONSTRUCTION ENTRANCE 2 VAR

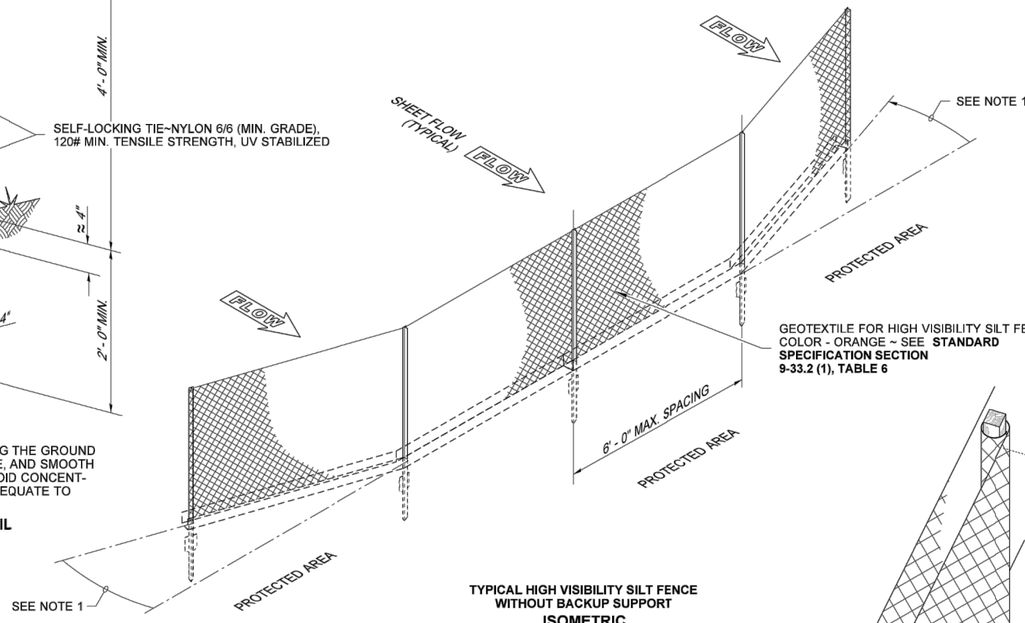
SCALE: NTS



NOTE

DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENT-RATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

TYPICAL INSTALLATION DETAIL
(STEEL POSTS SHOWN)



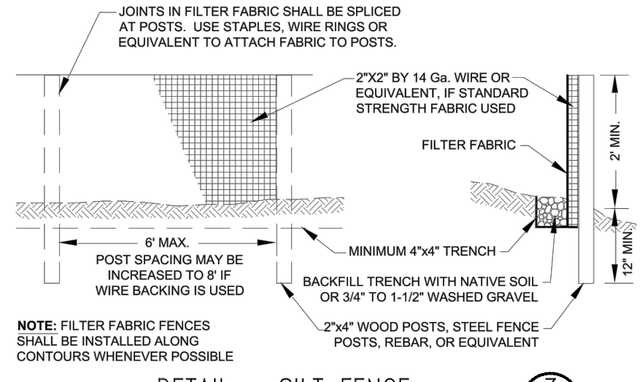
TYPICAL HIGH VISIBILITY SILT FENCE WITHOUT BACKUP SUPPORT
ISOMETRIC
(STEEL POSTS SHOWN)

NOTES

1. Angle Terminal end uphill 24" (in) to 48" (in) to prevent flow around fence (Typical).
2. Perform maintenance in accordance with **Standard Specification, Sections 8-01.3(9)A and 8-01.3(15)**.
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.

DETAIL – HIGH VISIBILITY SILT FENCE 4 VAR

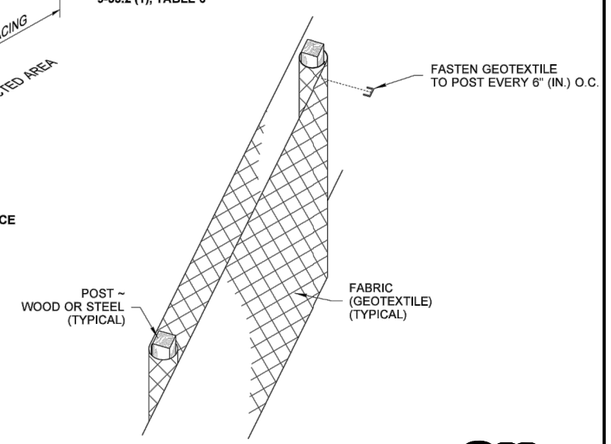
SCALE: NTS



NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOURS WHENEVER POSSIBLE

DETAIL – SILT FENCE 3 VAR

SCALE: NTS



SPLICED FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP. JOINING SECTIONS SHALL NOT BE PLACED IN LOW SPOTS OR IN SUMP LOCATIONS.

SPLICE DETAIL
(WOOD POSTS SHOWN)

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CHECKED: T. WELLER (TRANTECH) 2-09-22			
KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031			
SURVEY No.			
NUM.	REVISION	BY	DATE
APPROVED: W. MANSFIELD, PE			02-2022
PROJECT SUPERVISOR: J. HANSEN			02-2022
PROJECT MANAGER: F. NOPP			02-2022
DESIGNED: I.M, K.F., J.W.			02-2022
DESIGN ENTERED: E.M., R.B.			02-2022

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King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

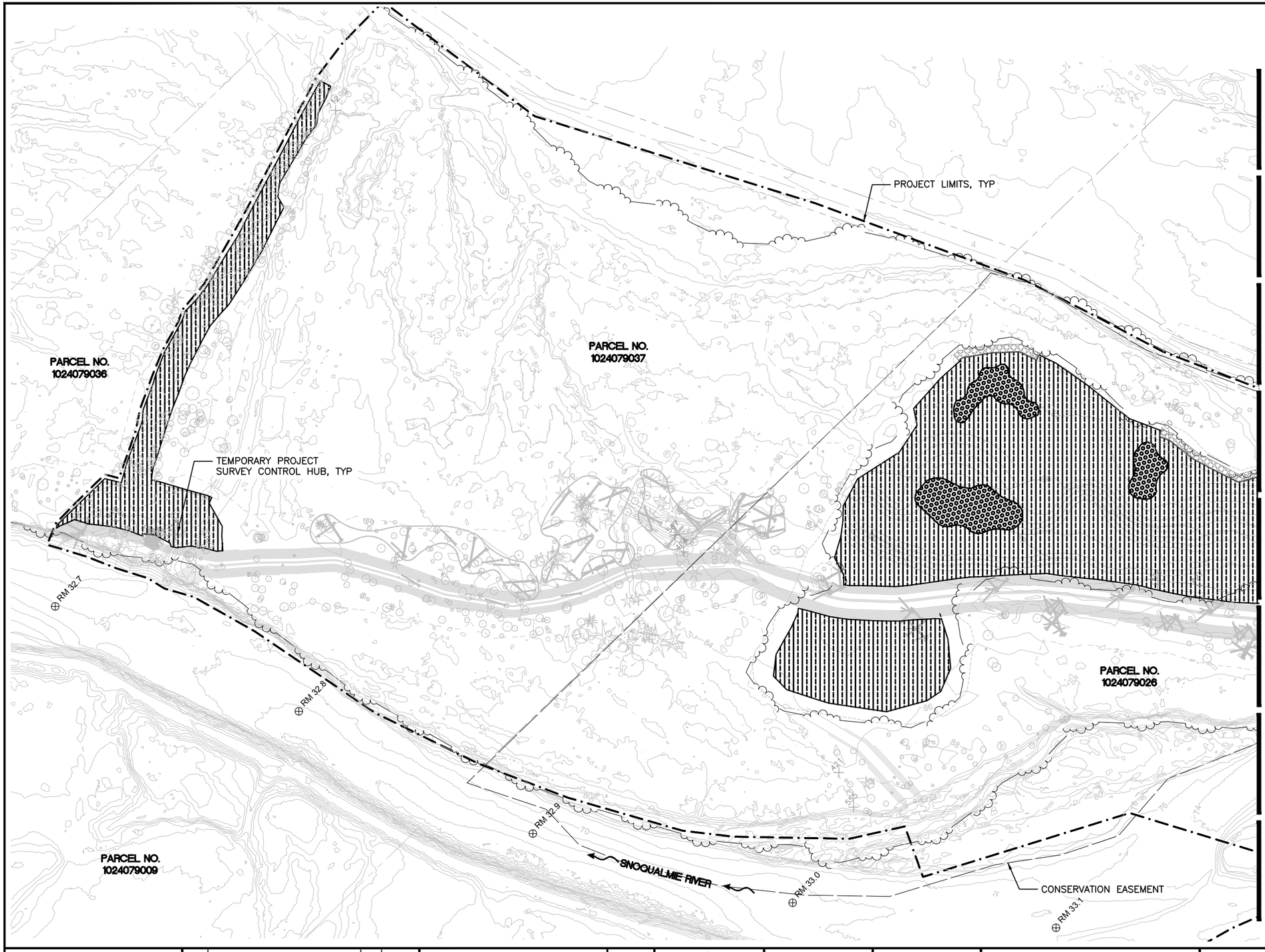
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

TESC DETAILS

SHEET 56 OF 61 SHEETS

2021-07



PLANTING ZONES

MEADOW SEED MIX

TEMPORARY EROSION CONTROL SEED MIX

NOTES:

1. SEE SHEET 60 FOR SEEDING NOTES AND SCHEDULES.

100 50 0 100 200
SCALE IN FEET

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Know what's below.
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SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: K. FORESTER (HERRERA) 2-09-22
T. WELLER (TRANTECH) 2-09-22
PROJECT No. KC: 1133842 HERRERA: 18-06954-000 TRANTECH: 2018031
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STATE OF WASHINGTON
KATHRYN SUZANNE FORESTER
NO. 1448 EXP. 10/2/22
LICENSED LANDSCAPE ARCHITECT

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SEEDING AND PLANTING – PLAN 1

SHEET 57 OF 61 SHEETS

2021-07

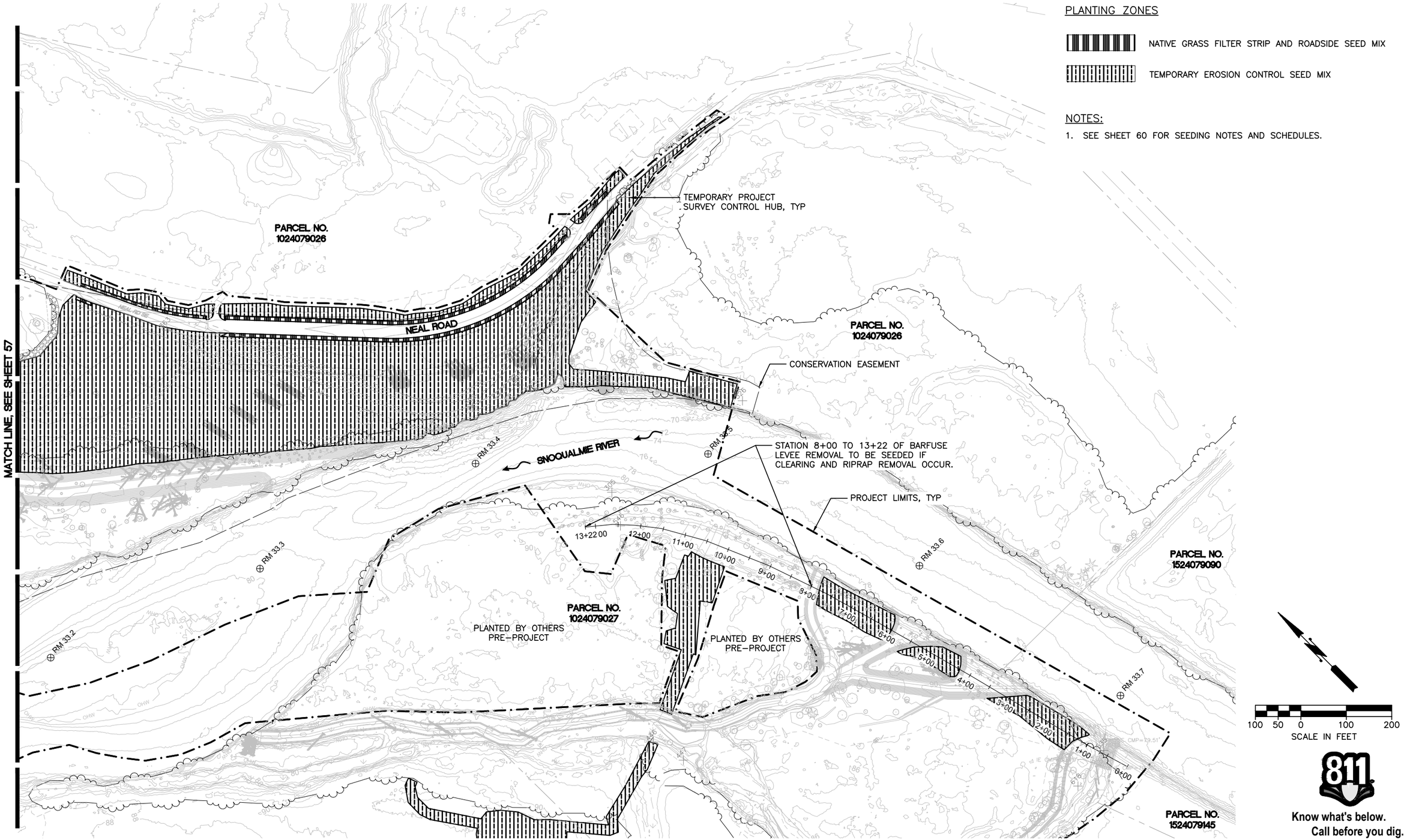
PLANTING ZONES

NATIVE GRASS FILTER STRIP AND ROADSIDE SEED MIX

TEMPORARY EROSION CONTROL SEED MIX

NOTES:

1. SEE SHEET 60 FOR SEEDING NOTES AND SCHEDULES.



811 Know what's below. Call before you dig.

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SURVEY BASE MAP: K. FORESTER (HERRERA) 2-09-22			
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KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031			
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STATE OF WASHINGTON KATHRYN SUZANNE FRIEDT NO. 1448 EXP. 01/01/22 LICENSED LANDSCAPE ARCHITECT

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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

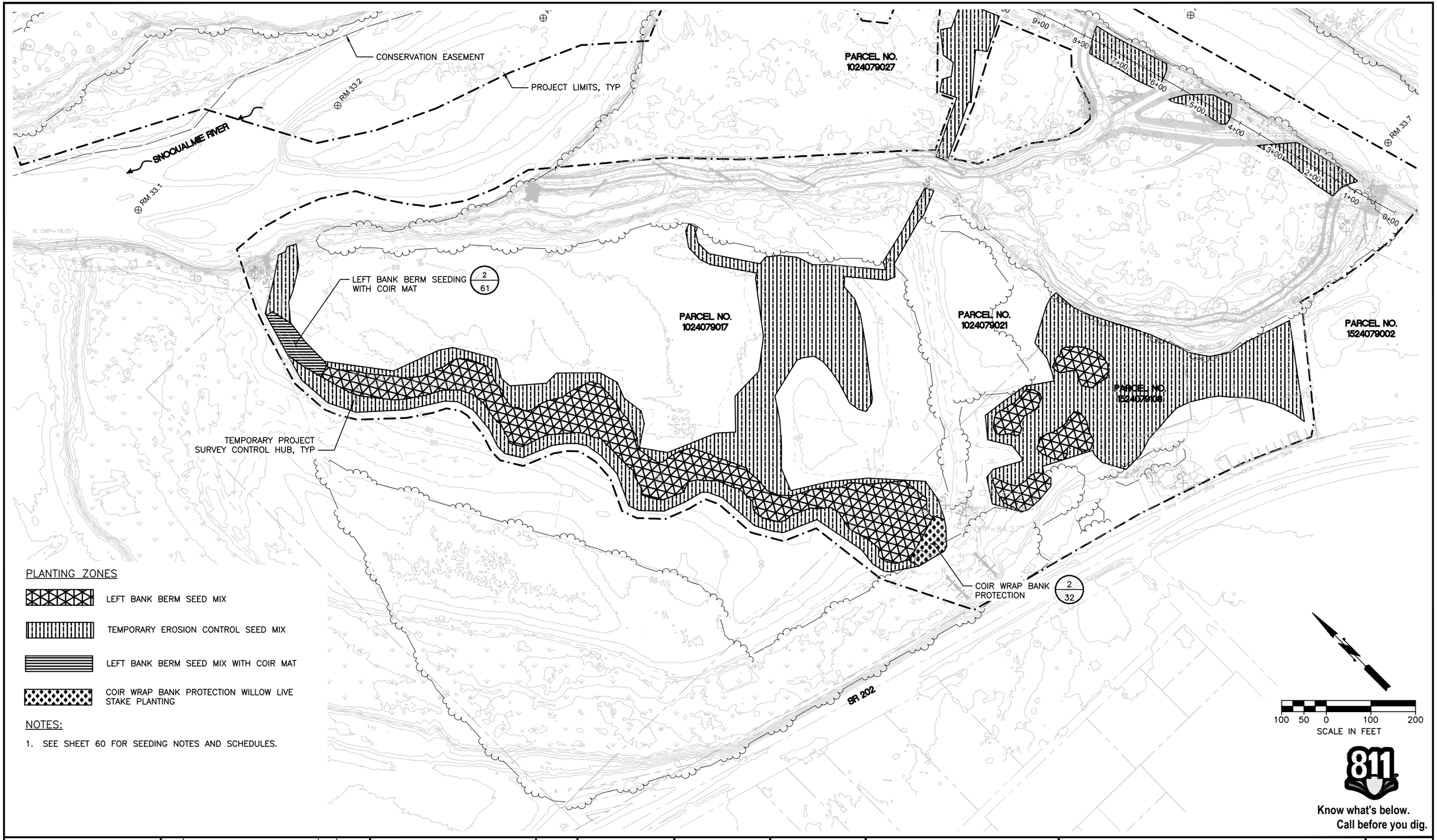
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SEEDING AND PLANTING – PLAN 2

SHEET 58 OF 61 SHEETS

2021-07



PLANTING ZONES

- LEFT BANK BERM SEED MIX
- TEMPORARY EROSION CONTROL SEED MIX
- LEFT BANK BERM SEED MIX WITH COIR MAT
- COIR WRAP BANK PROTECTION WILLOW LIVE STAKE PLANTING

NOTES:

1. SEE SHEET 60 FOR SEEDING NOTES AND SCHEDULES.

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PROJECT No. KC: 1133842 HERRERA: 18-06954-000 TRANTECH: 2018031
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King County
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Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SEEDING AND PLANTING – PLAN 3

SHEET 59 OF 61 SHEETS

2021-07

SEED MIXES

Left Bank Berm Seed Mix - Estimated PLS Pounds Per Acre - 66.48

Scientific name	Common Name	Target Seeds Per Square Foot	% of Species Composition Within Mix	Estimated PLS Pounds/Species
Achillea millefolium	Common Yarrow	3	3%	0.06
Chamerion angustifolium	Fireweed	1	1%	0.49
Deschampsia cespiitosa	Tufted hairgrass	28	28%	1.12
Elymus glaucus	Blue wildrye	26	26%	11.33
Festuca rubra var rubra	Red fescue	30	30%	2.96
Triticum aestivum x Elytrigia elongata	Regreen	12	12%	50.53

**PLS = Pure Live Seed*

Meadow Seed Mix - Estimated PLS Pounds Per Acre - 104.55

Scientific name	Common Name	Target Seeds Per Square Foot	% of Species Compostion Within Mix	Estimated PLS Pounds/Species
Achillea millefolium	Common yarrow	3	3%	0.06
Anaphalis margaritacea	Pearly everlasting	2	2%	0.01
Chamerion angustifolium	Fireweed	1	1%	0.01
Clarkia amoena	Farewell to spring	4	4%	0.21
Deschampsia cespiitosa	Tufted hairgrass	20	20%	0.92
Elymus glaucus	Blue wildrye	18	18%	7.84
Geum macrophyllum	Large-leaved avens	2	2%	0.13
Hordeum vulgare var. poco	Poco Barley	21	21%	90.44
Koeleria macrantha	Prairie junegrass	20	20%	1.14
Lupinus rivularis	Riverbank lupine	3	3%	7.23
Solidago canadensis	Canada goldenrod	3	3%	0.03
Symphoyotrichum subspicatum	Douglas aster	3	3%	0.16

**PLS = Pure Live Seed*

Native Grass Filter Strip and Roadside Seed Mix - Estimated PLS Pounds Per Acre - 61.66

Scientific name	Common Name	Target Seeds Per Square Foot	% of Species Composition Within Mix	Estimated PLS Pounds/Species
Achillea millefolium	Common yarrow	3	3%	0.06
Elymus glaucus	Blue wildrye	20	20%	8.99
Festuca rubra var rubra	Red fescue	18	18%	0.83
Geum macrophyllum	Large-leaved avens	2	2%	0.13
Koeleria macrantha	Prairie junegrass	23	23%	0.76
Poa palustris	Poa palustris	22	22%	0.36
Triticum aestivum x Elytrigia elongata	Regreen	12	12%	50.53

**PLS = Pure Live Seed*

Temporary Erosion Control Seed Mix - Estimated PLS Pounds Per Acre - 84.21

Scientific name	Common Name	Target Seeds Per Square Foot	% of Species Composition Within Mix	Estimated PLS Pounds/Species
Hordeum vulgare var. poco	Poco Barley	20	100%	84.21

**PLS = Pure Live Seed*

PLANTING NOTES:

1. SEEDING PREP SHALL OCCUR ACCORDING TO SECTION 8–02.3 OF THE SPECIAL PROVISIONS.
2. SEEDING, FERTILIZING, AND MULCHING SHALL OCCUR ACCORDING TO SECTION 8–02.3 OF THE SPECIAL PROVISIONS.
3. TEMPORARY SOIL STOCKPILES FOR TOPSOIL TYPE B SHALL BE SEEDED WITH "TEMPORARY EROSION CONTROL SEED MIX" AT RATES SPECIFIED WITHIN SECTION 9–14 OF THE SPECIAL PROVISIONS.
4. ALL SEEDING AREAS SHALL BE PREPARED AND APPROVED BY PROJECT REPRESENTATIVE PRIOR TO SEEDING.
5. BOUNDARIES BETWEEN SEEDING ZONES SHALL BE MARKED AND APPROVED BY PROJECT REPRESENTATIVE PRIOR TO SEEDING OPERATIONS.
6. THE SEEDING SCHEDULE SHALL BE PROVIDED ACCORDING TO SECTION 8–02.3(2)C OF THE SPECIAL PROVISIONS.
7. CONTRACTOR SHALL NOTIFY PROJECT REPRESENTATIVE A MINIMUM OF 5 WORKING DAYS BEFORE SEEDING START DATE.
8. SEEDING AREAS WITHIN 50 FEET OF ROADWAYS SHALL BE INSTALLED BY SEPTEMBER 1 AND IRRIGATED ADEQUATELY TO ENCOURAGE HEALTHY ESTABLISHMENT. ALL OTHER SEEDING AREAS SHALL BE INSTALLED NOT LATER THAN OCTOBER 1 AND IRRIGATED, IF NECESSARY, TO ENCOURAGE HEALTHY ESTABLISHMENT.

811 Know what's below. Call before you dig.

SURVEYED: R. HILLIARD (PMX)
SURVEY BASE MAP:
CHECKED: K. FORESTER (HERRERA) 2–09–22; T. WELLER (TRANTECH) 2–09–22
PROJECT No. KC: 1133842; HERRERA: 18–06954–000; TRANTECH: 2018031
SURVEY No.

NUM.	REVISION	BY	DATE

APPROVED: W. MANSFIELD, PE	02–2022	
PROJECT SUPERVISOR: J. HANSEN	02–2022	
PROJECT MANAGER: F. NOPP	02–2022	
DESIGNED: K.F., R.T.	02–2022	
DESIGN ENTERED: E.M., R.B.	02–2022	

HERRERA
2200 Sixth Avenue
Suite 1100
Seattle, WA 98121
(206) 441-9080

STATE OF WASHINGTON · KATHRYN SUZANNE FORES · 21711 · EXP. 10/2/2022 · REGISTERED LANDSCAPE ARCHITECT

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services

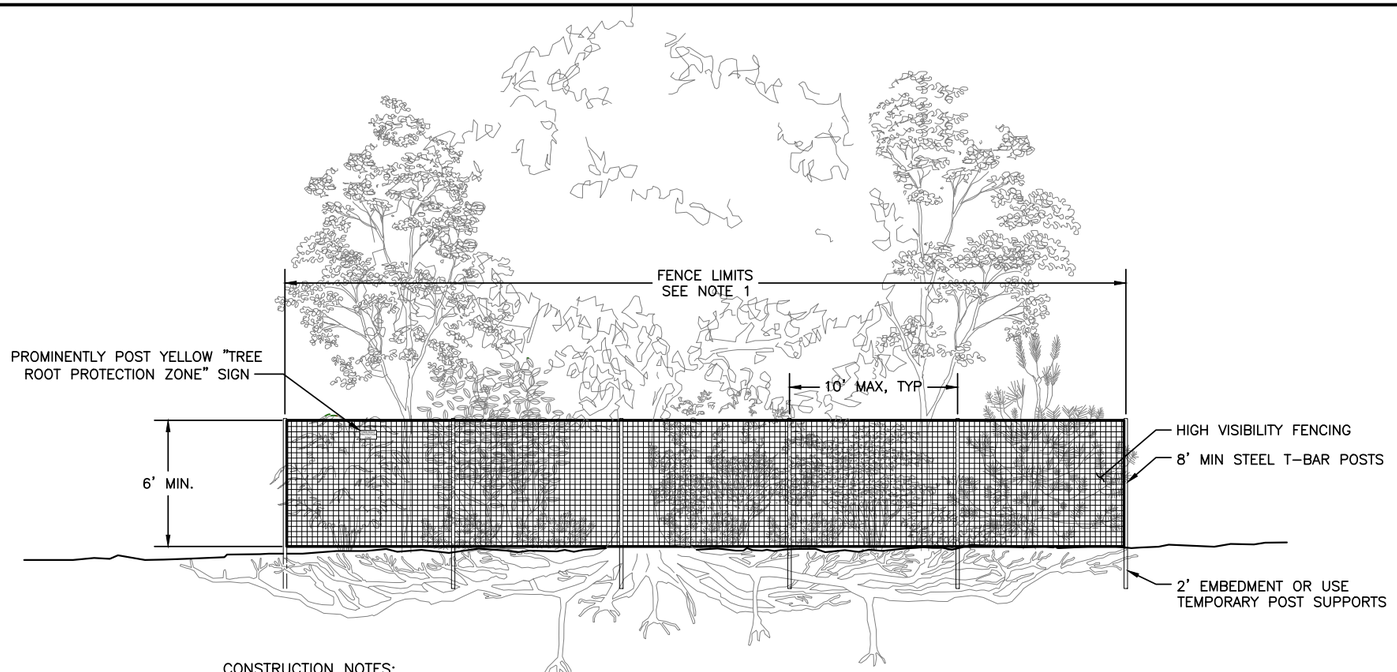
Christie True, Director

FALL CITY FLOODPLAIN RESTORATION PROJECT

SEEDING AND PLANTING – NOTES AND SCHEDULES

SHEET 60 OF 61 SHEETS

2021-07



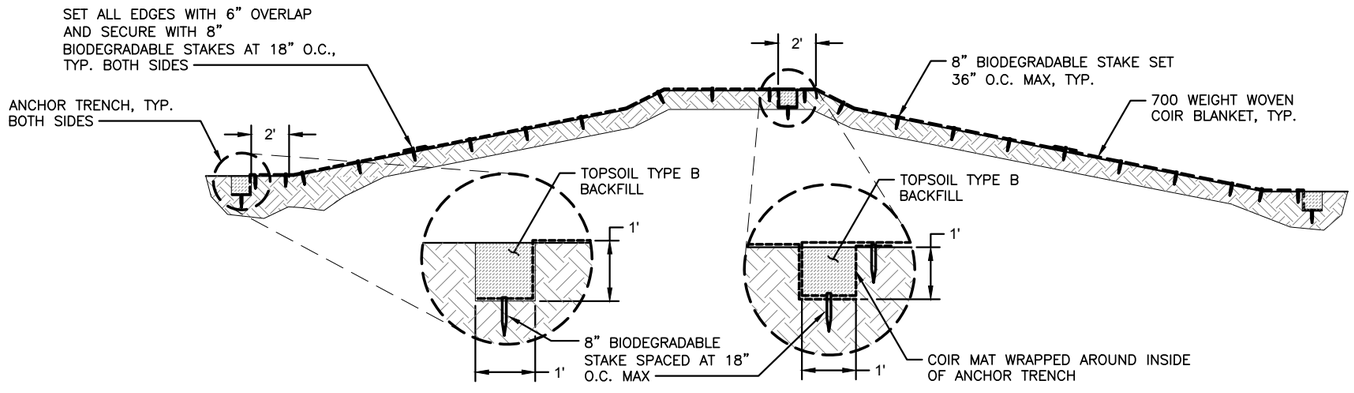
CONSTRUCTION NOTES:

1. MAXIMIZE BUFFER BETWEEN FENCE LINE AND PLANT COMMUNITY FOR NATIVE VEGETATION PROTECTION ZONES. WHERE POSSIBLE, PLACE FENCING OUTSIDE OF THE ROOT PROTECTION ZONE (RPZ) FOR TREES. RPZ IS DEFINED AS AREA EQUAL TO A 1-FOOT RADIUS FROM THE BASE OF THE TREE'S TRUNK FOR EACH 1-INCH OF THE TREE'S DIAMETER AT 4.5 FEET ABOVE GRADE (DIAMETER AT BREAST HEIGHT: DBH).

DETAIL – NATIVE VEGETATION PROTECTION FENCING

SCALE: NTS

1



DETAIL – LEFT BANK BERM SEEDING W/ COIR MAT

SCALE: NTS

2

59

Know what's below.
Call before you dig.

SURVEYED: R. HILLIARD (PMX)					APPROVED: W. MANSFIELD, PE	02-2022	HERRERA 2200 Sixth Avenue Suite 1100 Seattle, WA 98121 (206) 441-9080	STATE OF WASHINGTON KATHRYN SUZANNE FORES No. 1448 EXP. 12/12/2022 REGISTERED LANDSCAPE ARCHITECT	King County Department of Natural Resources and Parks Water and Land Resources Division Rural and Regional Services Section Ecological Restoration and Engineering Services *Christie True, Director*	**FALL CITY FLOODPLAIN RESTORATION PROJECT**	SHEET 61 OF 61 SHEETS
SURVEY BASE MAP: K. FORESTER (HERRERA) 2-09-22					PROJECT SUPERVISOR: J. HANSEN	02-2022				SEEDING AND PLANTING – DETAILS	2021-07
CHECKED: T. WELLER (TRANTECH) 2-09-22					PROJECT MANAGER: F. NOPP	02-2022					
KC: 1133842 HERRERA: 18-06954-000 PROJECT No. TRANTECH: 2018031					DESIGNED: K.F., R.T.	02-2022					
SURVEY No.	NUM.	REVISION	BY	DATE	DESIGN ENTERED: E.M., R.B.	02-2022					