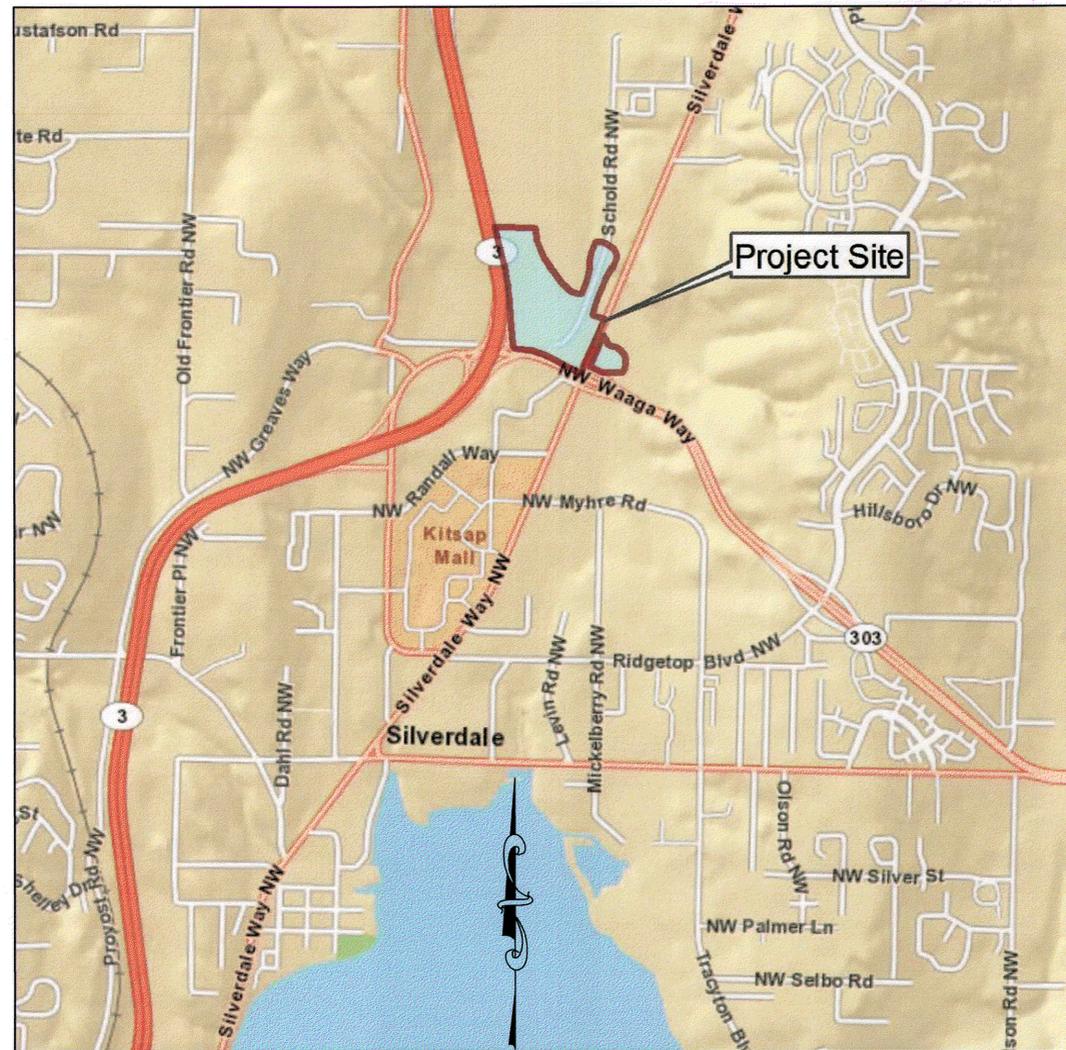


# KITSAP COUNTY SURFACE AND STORMWATER MANAGEMENT CLEAR CREEK FLOODPLAIN RESTORATION

SECTION 09, 16; TOWNSHIP 25 NORTH; R1 EAST; W.M.



PROJECT VICINITY

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER
2	GENERAL NOTES
3	CONTROL POINTS 1
4	CONTROL POINTS 2
5	LEGEND AND NOTES
6	EXISTING CONDITIONS-PROJECT SITE
7	PROPERTY AND EASEMENT BOUNDARY-NORTH
8	PROPERTY AND EASEMENT BOUNDARY-CENTRAL
9	PROPERTY AND EASEMENT BOUNDARY-SOUTH
10	TESC AND REMOVAL-WEST FORK AVULSION
11	TESC AND REMOVAL-NORTHERN WEST FORK
12	TESC AND REMOVAL-SOUTHERN WEST FORK
13	TESC AND REMOVAL-NORTHERN EAST FORK
14	TESC AND REMOVAL-SOUTHERN EAST FORK
15	TESC AND REMOVAL-CONFLUENCE
16	TESC AND REMOVAL-MAINSTEM WEST
17	TESC AND REMOVAL-MAINSTEM EAST
18	TESC AND REMOVAL-DISPOSAL AREA
19	TESC AND REMOVAL-DETAILS
20	GRADING PLAN-NORTHERN WEST FORK
21	GRADING PLAN-SOUTHERN WEST FORK
22	GRADING PLAN-NORTHERN EAST FORK
23	GRADING PLAN-SOUTHERN EAST FORK
24	GRADING PLAN-CONFLUENCE
25	GRADING PLAN-MAINSTEM WEST
26	GRADING PLAN-MAINSTEM EAST
27	GRADING PLAN-DISPOSAL AREA
28	PROPOSED CONDITIONS-PROJECT SITE
29	PROPOSED CONDITIONS-WEST FORK AVULSION
30	PROPOSED CONDITIONS-NORTHERN WEST FORK
31	PROPOSED CONDITIONS-SOUTHERN WEST FORK
32	PROPOSED CONDITIONS-NORTHERN EAST FORK
33	PROPOSED CONDITIONS-SOUTHERN EAST FORK
34	PROPOSED CONDITIONS-CONFLUENCE
35	PROPOSED CONDITIONS-MAINSTEM WEST
36	PROPOSED CONDITIONS-MAINSTEM EAST

37	PROPOSED CONDITIONS-DISPOSAL AREA
38	PROFILE-EAST FORK
39	PROFILE-WEST FORK
40	PROFILE-MAINSTEM
41	CROSS-SECTIONS-EAST FORK
42	CROSS-SECTIONS-WEST FORK
43	CROSS-SECTIONS-MAINSTEM
44	CREEK DETAILS 1
45	CREEK DETAILS 2
46	CREEK DETAILS 3
47	CREEK DETAILS 4
48	BRIDGE GENERAL NOTES AND TYPICAL SECTION
49	BRIDGE 1 PLAN AND ELEVATION
50	BRIDGE 2 PLAN AND ELEVATION
51	BRIDGE 3 PLAN AND ELEVATION
52	BRIDGE REINFORCEMENT DETAILS
53	BRIDGE MISCELLANEOUS DETAILS
54	BRIDGE STREAMBED DETAILS
55	BIKE TRAIL PLAN-EAST FORK
56	BIKE TRAIL PLAN-EAST FORK CONNECTION
57	BIKE TRAIL PLAN-MARKWICK
58	BIKE TRAIL PLAN-CIVIL DETAILS
59	BIKE TRAIL PLAN-DETAILS 2
60	LANDSCAPING PLAN-WEST FORK AVULSION
61	LANDSCAPING PLAN-NORTHERN WEST FORK
62	LANDSCAPING PLAN-SOUTHERN WEST FORK
63	LANDSCAPING PLAN-NORTHERN EAST FORK
64	LANDSCAPING PLAN-SOUTHERN EAST FORK
65	LANDSCAPING PLAN-CONFLUENCE
66	LANDSCAPING PLAN-MAINSTEM WEST
67	LANDSCAPING PLAN-MAINSTEM EAST
68	LANDSCAPING PLAN-DISPOSAL AREA
69	PLANTING SCHEDULE-LANDSCAPE 1
70	PLANTING SCHEDULE-LANDSCAPE 2
71	PLANTING SCHEDULE-LANDSCAPE 3
72	PLANTING SCHEDULE-LANDSCAPE 4
73	DETAILS AND NOTES-LANDSCAPE 5

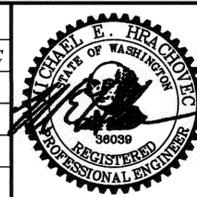


0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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PARTIAL FUNDING OF THIS PROJECT IS BEING PROVIDED BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY'S (ECOLOGY) STORMWATER GRANT PROGRAM.

CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 COVER  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
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 OF  
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Feb-01-2016 100% SUBMITTAL

**GENERAL NOTES**

1. THESE PLANS HAVE BEEN PREPARED FOR THE EXCLUSIVE USE OF KITSAP COUNTY, HEREAFTER REFERRED TO AS "OWNER".
2. NATURAL SYSTEMS DESIGN HEREAFTER REFERRED TO AS "ENGINEER" IS RESPONSIBLE FOR THE PREPARATION OF THESE ORIGINAL PLANS AND ASSOCIATED SPECIFICATIONS; AND WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGE, OR USE, OF THESE PLANS WHICH INCLUDES ALTERATION, DELETION, OR EDITING OF THIS DOCUMENT WITHOUT EXPLICIT WRITTEN PERMISSION FROM THE ENGINEER. ANY OTHER UNAUTHORIZED USE OF THIS DOCUMENT IS PROHIBITED.
3. MINOR MODIFICATIONS ARE EXPECTED TO SUIT JOB SITE DIMENSIONS OR CONDITIONS. SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. THE OWNER, ENGINEER AND APPROPRIATE REGULATORY AGENCIES SHALL BE NOTIFIED OF ANY OWNER-AUTHORIZED CHANGE RESULTING IN MORE THAN A 10% DESIGN CHANGE OF PROPOSED FOOTPRINT OR THAT SIGNIFICANTLY AFFECTS THE INTENDED BENEFIT OR FUNCTION OF A PROJECT ELEMENT.
4. THE LOCATION OF ALL FEATURES SHOWN IS APPROXIMATE.
5. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT AND SPECIFICATIONS.
6. ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF THE OWNER. IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD PLANS FOR CONSTRUCTION OF ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, CURRENT EDITION UNLESS NOTED OTHERWISE. ALL REFERENCES TO THE "STANDARD SPECIFICATIONS" SHALL MEAN THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS, CURRENT EDITION. CONSTRUCTION NOT SPECIFIED ON THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS OBLIGATED TO BE FAMILIAR WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS NOT DISCUSSED IN THE GENERAL NOTES. THE CONTRACT SPECIAL PROVISIONS SHALL SUPERSEDE THOSE OF THE STANDARD SPECIFICATIONS WHERE DISCREPANCIES OCCUR.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE OPENING OF BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK; AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, GROUNDWATER, THE EQUIPMENT AND FACILITIES NEEDED FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT THEMSELVES WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE THE CONTRACTOR AND SUBCONTRACTOR(S) FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK.
8. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE CONTRACT DOCUMENTS AND FOR ALL SUBMITTALS REQUIRED TO THE OWNER FOR REVIEW AND ACCEPTANCE.

**PERMIT NOTES**

1. EVERY REASONABLE EFFORT SHALL BE MADE TO CONDUCT THE ACTIVITIES SHOWN IN THESE PLANS, IN A MANNER THAT MINIMIZES THE ADVERSE IMPACT ON WATER QUALITY, FISH AND WILDLIFE, AND THE NATURAL ENVIRONMENT.
2. ALL WORK WILL BE IN COMPLIANCE WITH PERMIT CONDITIONS ISSUED BY PERTINENT REGULATORY AGENCIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE COPIES OF ALL PERMITS ON THE JOB SITE, UNDERSTAND AND COMPLY WITH ALL PERMIT CONDITIONS.
3. ALL WORK THAT DISTURBS THE SUBSTRATE, BANK, OR SHORE OF A WATERS OF THE STATE THAT CONTAINS FISH LIFE SHALL BE CONDUCTED ONLY DURING THE WORK PERIOD FOR THAT WATERBODY AS ALLOWED BY RELEVANT HYDRAULIC WORK PERMITS. THOSE PORTIONS OF THE PROJECT WORK THAT OCCUR OUTSIDE OR ABOVE THE ORDINARY HIGH WATER MARK (ABOVE THE USACE JURISDICTIONAL LINE) ARE NOT SUBJECT TO THE WORK PERIODS DESCRIBED ABOVE UNLESS SPECIFIED IN THE RELEVANT PERMITS.
4. ALL ACTIVITIES THAT INVOLVE WORK ADJACENT TO, OR WITHIN THE WETTED CHANNEL SHALL, AT ALL TIMES, REMAIN CONSISTENT WITH ALL APPLICABLE WATER QUALITY STANDARDS; EFFLUENT LIMITATION; AND STANDARDS OF PERFORMANCE, PROHIBITIONS, PRETREATMENT STANDARDS, AND MANAGEMENT PRACTICES ESTABLISHED PURSUANT TO THE CLEAN WATER ACT OR PURSUANT TO APPLICABLE STATE AND LOCAL LAW.
5. 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.
6. IF, DURING CONSTRUCTION, ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AND THE STATE OFFICE OF HISTORIC PRESERVATION AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY.

**SURVEY NOTES**

1. UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.
2. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO OWNER A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE OWNER, REFLECTING THE AS-CONSTRUCTED MODIFICATIONS.
3. ELEVATIONS SHOWN ON THE PLANS FOR PIPE INVERTS, TOPS OF BANKS, THALWEG, GRADE CONTROLS, ETC., ARE BASED UPON THE TOPOGRAPHIC INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL NECESSARY SURFACE ELEVATIONS IN THE FIELD AND NOTIFY THE OWNER OF ANY DISCREPANCIES, WHICH MIGHT AFFECT PROPER OPERATION OF THE NEW FACILITIES BEFORE BREAKING GROUND AND PRIOR TO FACILITY INSTALLATION. THE OWNER SHALL BE CONTACTED IN THE EVENT ELEVATIONS ARE INCORRECT SO THAT THE PROPER ADJUSTMENTS CAN BE MADE BY ENGINEER PRIOR TO THE INSTALLATION OF THE FACILITIES, AS SET FORTH IN THE SPECIAL PROVISIONS.
4. TOPOGRAPHY IS BASED ON SURVEY DATA RECORDED BY N.L. OLSON & ASSOC. AND IS REPRESENTATIVE OF 2012 CONDITIONS. THE SURVEY IS BASED ON HORIZONTAL NAD83 (1991 SUPERNET) WA STATE PLANE NORTH, AND VERTICAL NGVD 1929.

**EROSION, SEDIMENT CONTROL AND WATER MANAGEMENT NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.
2. A SEDIMENT AND EROSION CONTROL PLAN WILL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL BY OWNER AND/OR THE ENGINEER BEFORE ANY CONSTRUCTION MAY BEGIN. THE SEDIMENT AND EROSION CONTROL PLAN WILL IDENTIFY BEST MANAGEMENT PRACTICES TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
3. ACTIVITIES SHALL BE DESIGNED AND CONSTRUCTED TO AVOID AND MINIMIZE ADVERSE IMPACTS TO WATERS OF THE UNITED STATES TO THE MAXIMUM EXTENT PRACTICAL THROUGH THE USE OF PRACTICAL ALTERNATIVES. ALTERNATIVES THAT SHALL BE CONSIDERED INCLUDE THOSE THAT MINIMIZE THE NUMBER AND EXTENT OF IN-WATER WORK AND EQUIPMENT CROSSINGS OF WETTED CHANNELS.
4. AT NO TIME SHALL SEDIMENT-LADEN WATER BE DISCHARGED OR PUMPED DIRECTLY INTO THE SUBJECT RIVER, STREAM, OR WETLAND. WATER SHALL BE DISCHARGED IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN THE PROJECT PERMITS AND / OR SPECIFICATIONS.
5. IF HIGH WATER LEVEL CONDITIONS THAT CAUSE SILTATION OR EROSION ARE ENCOUNTERED DURING CONSTRUCTION, WORK SHALL STOP UNTIL THE WATER LEVEL SUBSIDES.
6. PERMIT CONDITIONS CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF EROSION AND TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED ON A FREQUENT BASIS BY THE PROJECT MANAGEMENT AND INSPECTION STAFF ON-SITE. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED CONCENTRATIONS AND/OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTAIN SEDIMENT ON-SITE.
7. CONTRACTOR SHALL LIMIT MACHINERY MOVEMENT TO CONSTRUCTION AREAS DEFINED ON SITE PLAN OR IDENTIFIED AS ACCEPTABLE BY THE ENGINEER OR OWNER.
8. ALL EXTERNAL GREASE AND OIL SHALL BE PRESSURE-WASHED OFF THE EQUIPMENT PRIOR TO TRANSPORT TO THE SITE.
9. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUID, SEDIMENTS, SEDIMENT-LADEN WATER, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE SUBJECT RIVER, STREAM, OR WETLAND.
10. THE CONTRACTOR SHALL HAVE AN EMERGENCY SPILL KIT ONSITE AT ALL TIMES.
11. NO TREES OR WETLAND VEGETATION SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE PLANS OR AS DIRECTLY SPECIFIED ON-SITE BY THE PROJECT MANAGEMENT STAFF. ALL TREES CONFLICTING WITH GRADING SHALL BE REMOVED. NO GRADING SHALL TAKE PLACE WITHIN THE DRIP LINE OF TREES NOT TO BE REMOVED UNLESS OTHERWISE APPROVED.
12. FOLLOWING CONSTRUCTION, SITE RESTORATION WILL INCLUDE ESTABLISHING LONG-TERM EROSION PROTECTION MEASURES. THESE MEASURES WILL INCLUDE PLANTINGS, EROSION CONTROL FABRIC, SEED, AND MULCH. EQUIPMENT AND EXCESS SUPPLIES WILL BE REMOVED AND THE WORK AREA WILL BE CLEANED. MAINTENANCE ACTIVITIES FOR THE NEWLY CONSTRUCTED RESTORATION PROJECTS ARE ANTICIPATED TO OCCUR PERIODICALLY.

**CONSTRUCTION NOTES**

1. CONTRACT DOCUMENTS REFER TO THESE PLANS.
2. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO COMPLETE ALL WORK AS INDICATED IN THE CONTRACT DOCUMENTS.
3. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 A.M. AND 6:30 P.M. UNLESS PRIOR APPROVAL IS RECEIVED FROM THE OWNER.
4. DEEPER PORTIONS OF FLOODPLAIN EXCAVATION MAY ENCOUNTER WET, GRAVELY SAND AND HIGH GROUNDWATER AND MAY REQUIRE EQUIPMENT MATS TO SUPPORT CONSTRUCTION EQUIPMENT. CONSOLIDATION OF THE GROUND SURFACE SHOULD BE EXPECTED. CONTRACTOR IS RESPONSIBLE FOR DETERMINING NEED FOR, DESIGNING, PROCURING, INSTALLING, USING AND REMOVING ANY EQUIPMENT MATS NEEDED TO ALLOW FOR EQUIPMENT OPERATION SUFFICIENT TO CONSTRUCT THE PROJECT.
5. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO PROCEEDING WITH THE WORK.
6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE BY THE OWNER OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
7. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
8. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THIS CONTRACT.
9. THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, ROADWAY, DRAINAGE WALLS, PRIVATE BRIDGE, CULVERTS, AND VEGETATION UNTIL SUCH ITEMS ARE TO BE DISTURBED OR REMOVED AS INDICATED ON THE CONTRACT DOCUMENTS.
10. THE CONTRACTOR SHALL KEEP THE JOB SITE CLEAN AND HAZARD FREE. CONTRACTOR SHALL DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH FOR THE DURATION OF THE WORK. UPON COMPLETION OF WORK, CONTRACTOR SHALL REMOVE ALL MATERIAL AND EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY.
11. NOTES AND DETAILS ON THE PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES HEREIN.
12. DIMENSIONS CALLOUTS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE PLANS.
13. THE PLANS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF ALL CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURES, WORKS, AND THE PUBLIC DURING CONSTRUCTION.
14. MATERIAL SHALL NOT BE STORED OUTSIDE OF IDENTIFIED STAGING AREAS. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.

**NOTES**

1. LOCATIONS AND QUANTITIES OF BYPASS PUMPS, BYPASS PIPING, SUMP PUMPS, SUMP PUMP PIPING, AND OTHER CSEC ELEMENTS ARE IDENTIFIED FOR CONCEPTUAL UNDERSTANDING ONLY. FINAL LOCATIONS AND QUANTITIES SHALL BE DETERMINED BY CONTRACTOR AND IDENTIFIED IN THE TESC PLAN AND IN THE INCLUDED STREAM BYPASS PLAN TO BE APPROVED BY COUNTY.
2. PUMP SCREENS AND FISH EXCLUSION NETS TO CONFORM TO WDFW PERMIT REQUIREMENTS.
3. PROTECT STREAM BYPASS FROM DAMAGE BY COVERING OR BURYING WHEREVER ROUTE INTERSECTS WITH CONSTRUCTION ACTIVITIES.
4. ALL AREAS WITHIN GRADING LIMIT LINE SHALL BE CLEARED AND GRUBBED. ALL AREAS NOT TO BE GRADED BUT WITHIN ALL PLANTING AREAS SHALL BE CLEARED AND GRUBBED OF INVASIVE PLANTS ONLY. INVASIVE PLANTS AND ROOTS SHALL BE DISPOSED OF OFFSITE. INVASIVE SPECIES INCLUDE BUT ARE NOT LIMITED TO: KNOTWEED SPECIES, HIMALAYAN BLACKBERRY, EVERGREEN BLACKBERRY, YELLOW FLAG IRIS, BITTERSWEET NIGHTSHADE, HEDGE BINDWEED (MORNING GLORY), BAMBOO, POLICEMAN'S HELMET, ENGLISH IVY, AND REED CANARY GRASS.
5. PROTECT EXISTING SEWER AND MAINTENANCE HOLES FROM DAMAGE.
6. APPROXIMATE CLEAR CREEK FLOWS.

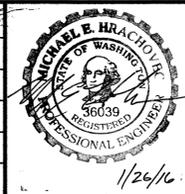
RECURRANCE INTERVAL	MAINSTEM FLOW (CFS)	WEST FORK FLOW (CFS)	EAST FORK FLOW (CFS)
BASE FLOW	8.8	4.5	3.8
2-YR	167	78	85
10-YR	296	140	151
100-YR	475	226	244

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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**CLEAR CREEK FLOODPLAIN RESTORATION GENERAL NOTES**

KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

Jan-26-2016 100% SUBMITTAL



LOG CONTROL POINT TABLE					
LCP-#	ELEVATION	NORTHING	EASTING	STA	STRUCTURE
LCP-1	55.1	249687.5	1183588.3		LCP-1
LCP-2	40.9	249025.6	1183986.6	33+24.80	BED LOG
LCP-3		249018.4	1183949.6	32+92.60	INSTREAM LOG
LCP-4		248955.4	1183984.3	32+23.53	INSTREAM LOG
LCP-5		248888.4	1183911.5	29+69.49	INSTREAM LOG
LCP-6		248866.2	1183985.6	28+89.61	INSTREAM LOG
LCP-7		248860.9	1184062.5	27+23.90	LOG COMPLEX
LCP-8		248838.6	1184033.3	26+81.96	INSTREAM LOG
LCP-9		248792.9	1184010.7	26+21.38	INSTREAM LOG
LCP-10		248745.8	1184037.6	25+51.78	INSTREAM LOG
LCP-11		248688.1	1184029.2	24+91.16	INSTREAM LOG
LCP-12		248645.1	1184050.9	24+32.07	INSTREAM LOG
LCP-13	34.4	248581.1	1184118.6	23+41.79	CORNER STRUCTURE A
LCP-14	35.3	248616.8	1184134.1	23+04.94	BED LOG
LCP-15		248625.9	1184138.2	22+98.58	OBSTRUCTION LOG
LCP-16	34.7	248667.3	1184169.7	22+47.85	CORNER STRUCTURE B
LCP-17	34.9	248647.4	1184224.5	21+92.71	CORNER LOG
LCP-18	34.2	248589.9	1184225.4	21+36.98	LOG COMPLEX
LCP-19	34.3	248542.7	1184220.7	20+90.84	CORNER STRUCTURE B
LCP-20		248541.8	1184178.9	20+53.77	OBSTRUCTION LOG
LCP-21		248481.9	1184169.8	19+94.71	LOG COMPLEX
LCP-22	33.8	248455.5	1184174.2	19+68.35	BED LOG
LCP-23	32.6	248421.9	1184185.9	19+36.97	CORNER STRUCTURE A
LCP-24		248462.6	1184237.0	18+76.58	LOG COMPLEX
LCP-25	32.1	248499.8	1184268.5	18+35.91	CORNER STRUCTURE A
LCP-26	32.9	248468.9	1184282.9	18+09.48	BED LOG
LCP-27	32.9	248462.0	1184284.9	18+04.62	BED LOG
LCP-28	32.9	248450.1	1184281.2	17+92.21	SPANNING LOG
LCP-29	32.9	248443.8	1184282.2	17+86.02	SPANNING LOG
LCP-30		248432.7	1184291.7	17+74.13	INSTREAM LOG
LCP-31		248370.5	1184262.6	17+07.44	LOG COMPLEX
LCP-32	32.4	248358.3	1184253.2	16+92.02	BED LOG
LCP-33	32.4	248344.8	1184247.4	16+81.05	CORNER STRUCTURE B
LCP-34	32.1	248320.6	1184288.1	16+35.23	SPANNING LOG
LCP-35	32.1	248316.7	1184293.3	16+28.77	SPANNING LOG
LCP-36	31.6	248292.4	1184310.6	15+98.29	SPANNING LOG
LCP-37	31.6	248286.4	1184310.6	15+92.52	SPANNING LOG
LCP-38	31.6	248280.4	1184310.2	15+86.40	SPANNING LOG
LCP-39	31.5	248263.0	1184309.9	15+73.15	CORNER LOG
LCP-40		248255.8	1184341.3	15+47.13	OBSTRUCTION LOG
LCP-41		248270.9	1184342.3	15+43.10	OBSTRUCTION LOG
LCP-42	31.3	248270.8	1184359.5	15+32.31	BED LOG
LCP-43	31.3	248267.5	1184366.7	15+24.76	BED LOG
LCP-44	31.3	248251.1	1184378.6	15+10.03	CORNER STRUCTURE B
LCP-45	31.3	248228.5	1184371.8	14+88.43	SPANNING LOG
LCP-46	31.3	248222.2	1184370.4	14+82.06	SPANNING LOG
LCP-47	31.3	248216.5	1184370.6	14+76.51	SPANNING LOG
LCP-48	31.2	248211.2	1184361.9	14+69.16	BED LOG
LCP-49	30.1	248184.0	1184360.2	14+48.34	CORNER STRUCTURE A
LCP-50A		247981.2	1184867.4	8+41.76	MAINSTEM ELJ
LCP-50B		247989.5	1184840.5		MAINSTEM ELJ
LCP-50C		247984.1	1184895.3		MAINSTEM ELJ
LCP-50D	28.9	247987.1	1184855.0		MAINSTEM ELJ
LCP-50E	29.0	247982.9	1184882.1		MAINSTEM ELJ

LOG CONTROL POINT TABLE					
LCP-#	ELEVATION	NORTHING	EASTING	STA	STRUCTURE
LCP-51A		247998.6	1184944.0	7+78.19	MAINSTEM ELJ
LCP-51B		247976.3	1184961.3		MAINSTEM ELJ
LCP-51C		248012.3	1184919.5		MAINSTEM ELJ
LCP-51D	28.6	247986.8	1184950.7		MAINSTEM ELJ
LCP-51E	28.7	248005.4	1184931.5		MAINSTEM ELJ
LCP-52A		247901.0	1184956.7	6+91.26	MAINSTEM ELJ
LCP-52B		247883.1	1184935.0		MAINSTEM ELJ
LCP-52C		247925.9	1184969.8		MAINSTEM ELJ
LCP-52D	28.4	247893.7	1184945.1		MAINSTEM ELJ
LCP-52E	28.5	247914.3	1184963.7		MAINSTEM ELJ
LCP-53A		247847.1	1184871.1	5+96.28	MAINSTEM ELJ
LCP-53B		247874.7	1184876.5		MAINSTEM ELJ
LCP-53C		247819.6	1184876.7		MAINSTEM ELJ
LCP-53D	27.0	247860.1	1184875.5		MAINSTEM ELJ
LCP-53E	28.0	247832.8	1184874.2		MAINSTEM ELJ
LCP-54A		247745.1	1184960.7	4+71.03	MAINSTEM ELJ
LCP-54B		247750.2	1184933.0		MAINSTEM ELJ
LCP-54C		247751.3	1184988.1		MAINSTEM ELJ
LCP-54D	27.0	247749.4	1184947.6		MAINSTEM ELJ
LCP-54E	27.6	247748.5	1184975.0		MAINSTEM ELJ
LCP-55A		247833.3	1185078.6	3+35.40	MAINSTEM ELJ
LCP-55B		247817.8	1185102.1		MAINSTEM ELJ
LCP-55C		247838.4	1185051.0		MAINSTEM ELJ
LCP-55D	27.1	247824.1	1185088.9		MAINSTEM ELJ
LCP-55E	27.1	247835.8	1185064.6		MAINSTEM ELJ
LCP-56A		247734.6	1185122.7	3+38.08	MAINSTEM ELJ
LCP-56B		247711.2	1185107.0		MAINSTEM ELJ
LCP-56C		247762.2	1185128.0		MAINSTEM ELJ
LCP-56D	26.8	247724.0	1185113.5		MAINSTEM ELJ
LCP-56E	26.9	247749.0	1185125.3		MAINSTEM ELJ
LCP-57A		247634.5	1185047.2	1+13.84	MAINSTEM ELJ
LCP-57B		247662.0	1185041.3		MAINSTEM ELJ
LCP-57C		247611.5	1185063.4		MAINSTEM ELJ
LCP-57D	26.4	247648.0	1185046.4		MAINSTEM ELJ
LCP-57E	26.4	247622.0	1185056.4		MAINSTEM ELJ
LCP-58		249184.0	1184817.2	113+36.33	OBSTRUCTION LOG
LCP-59		249167.9	1184812.8	113+24.60	OBSTRUCTION LOG
LCP-60	34.4	249161.9	1184820.4	113+14.57	SPANNING LOG
LCP-61	34.4	249157.5	1184827.8	113+07.90	BED LOG
LCP-62		249112.4	1184828.6	112+63.84	LOG COMPLEX
LCP-63	34.4	249054.0	1184857.5	111+99.55	CORNER STRUCTURE B
LCP-64		249008.4	1184815.3	111+40.57	OBSTRUCTION LOG
LCP-65		249018.8	1184802.4	111+31.19	OBSTRUCTION LOG
LCP-66	34.2	249017.2	1184793.5	111+22.0	BED LOG
LCP-67		248953.1	1184763.9	110+54.62	LOG COMPLEX
LCP-68		248889.9	1184769.7	109+91.01	INSTREAM LOG
LCP-69	33.8	248873.1	1184749.9	109+66.52	SPANNING LOG
LCP-70	33.8	248870.6	1184741.6	109+58.55	SPANNING LOG
LCP-71	33.8	248870.4	1184732.9	109+48.83	OBSTRUCTION LOG
LCP-72	33.6	248846.0	1184698.7	109+07.17	CORNER STRUCTURE B
LCP-73		248774.7	1184729.1	108+30.68	LOG COMPLEX
LCP-74	33.6	248735.0	1184739.1	107+91.57	CORNER STRUCTURE B
LCP-75	33.4	248722.7	1184721.2	107+70.96	BED LOG

LOG CONTROL POINT TABLE					
LCP-#	ELEVATION	NORTHING	EASTING	STA	STRUCTURE
LCP-76		248710.9	1184707.6	107+52.94	OBSTRUCTION LOG
LCP-77		248642.6	1184682.9	106+81.54	LOG COMPLEX
LCP-78		248593.4	1184666.1	106+25.74	INSTREAM LOG
LCP-79	32.8	248573.5	1184608.6	105+66.39	CORNER STRUCTURE B
LCP-80		248510.5	1184616.2	105+03.02	OBSTRUCTION LOG
LCP-81		248495.3	1184621.9	104+86.35	INSTREAM LOG
LCP-82		248478.7	1184604.8	104+65.52	OBSTRUCTION LOG
LCP-83	32.7	248441.0	1184567.6	104+06.64	CORNER STRUCTURE B
LCP-84		248443.9	1184459.9	102+83.85	LOG COMPLEX
LCP-85		248427.9	1184417.3	102+36.37	INSTREAM LOG
LCP-86		248438.7	1184409.4	102+25.07	OBSTRUCTION LOG
LCP-87		248439.7	1184404.9	102+20.61	OBSTRUCTION LOG
LCP-88	31.2	248431.7	1184336.7	101+55.37	CORNER STRUCTURE B
LCP-89	32.0	248404.4	1184328.9	101+32.16	BED LOG
LCP-90	32.0	248401.0	1184328.4	101+26.95	BED LOG
LCP-91		248385.0	1184327.9	101+11.16	OBSTRUCTION LOG
LCP-92		248378.4	1184329.2	101+04.95	SPANNING LOG
LCP-93		248369.7	1184325.0	100+97.33	INSTREAM LOG
LCP-94	30.8	248323.1	1184348.9	100+54.07	CORNER STRUCTURE A

SURVEY CONTROL POINTS				
POINT#	DESCRIPTION	ELEVATION	NORTHING	EASTING
27	MAG	96.69	248482.64	1182243.55
40	MAG	88.37	247427.57	1182199.71
50	MAG	86.94	247906.74	1183675.58
51	MAG	32.67	247387.02	1184495.78
52	MAG	36.10	248113.69	1184791.40
54	MAG	32.71	247937.33	1185002.01
63	MAG	61.96	249181.79	1185038.53
64	MAG	50.65	249378.95	1184927.70
66	MAG	41.21	249032.01	1184796.49
67	MAG	41.08	248770.27	1184699.00
70	MAG	40.45	248114.17	1184357.50
71	MAG	37.67	248095.01	1184232.48
72	MAG	37.43	247963.43	1184378.89
73	MAG	38.37	247908.64	1184501.72
74	MAG	34.42	247834.09	1184676.02
80	MAG	41.04	248607.50	1184377.05
81	MAG	45.47	249055.65	1184166.82
82	MAG	46.98	249258.48	1183999.72
83	MAG	48.25	249398.96	1183965.47
84	MAG	49.75	249554.01	1183943.88
97	MAG	69.64	247886.39	1184244.10
98	MAG	69.44	248664.52	1183667.33
180	PK TBM 1540-70B	34.61	247877.71	1184688.45
186	TBM 1540-63	57.66	247721.27	1184537.80

PROJECT: KITSAP COUNTY CLEAR CREEK FLOODPLAIN RESTORATION CONTROL POINTS  
 DRAWING: CONTROL POINTS 2  
 DATE: 02/14/16  
 DWG:



P.O. Box 15609  
 Seattle, WA 98115

REVISIONS		
No.	BY	DATE

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.: NA
DATE: 01/20/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 CONTROL POINTS  
 2  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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 73

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NOTES

1. CONSTRUCTION SEQUENCE AND BMPs: CONSTRUCTION SEQUENCE AND SITE-SPECIFIC SWPPP TO BE DEVELOPED BY CONTRACTOR, REVIEWED BY OWNER AND PERMITTING AGENCIES AND MODIFIED AS NEEDED TO SATISFY OWNER AND PERMITTING AGENCIES. THE FOLLOWING SEQUENCE OUTLINES A POTENTIAL CONSTRUCTION SEQUENCE AND IDENTIFIES ASSOCIATED BMPs TO ACHIEVE A MINIMUM POTENTIAL LEVEL OF EFFORT THAT MAY BE ACCEPTABLE. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF BMPs TO ENSURE COMPLIANCE WITH PERMITS. ADDITIONAL BMPs BEYOND THOSE LISTED HERE MAY BE REQUIRED.

CONSTRUCTION ELEMENT	BMPs
STAKE OUT CONSTRUCTION LIMITS	CONSTRUCTION STAKING AND FLAGGING
INSTALL CONSTRUCTION ENTRANCES, TRAIL CLOSURES AND CONSTRUCTION FENCING, TREE PROTECTION, IDENTIFY MATERIAL STAGING AREAS	2 CONSTRUCTION ENTRANCES WITH PORTABLE TIRE WASH UNITS, ORANGE CONSTRUCTION FENCING ALONG PERIMETERS AND TREES TO BE PROTECTED, FOUR TRAIL CLOSURES.
INSTALL SILT FENCE ALONG DOWNSLOPE PERIMETERS OF AREAS TO BE GRADED ALONG PORTIONS CONSTRUCTION LIMIT AS SHOWN	INSTALL SILT FENCE AS PERIMETER PROTECTION BETWEEN EDGE OF EXISTING STREAM CHANNEL AND FLOODPLAIN GRADING
REMOVE FENCING, OVERHEAD POWER LINES AND POLES, CULVERTS AS SHOWN. REMOVE TRASH AND DEBRIS ENCOUNTERED DURING CLEAR AND GRUB AND/OR EXCAVATION	DISPOSE OF WASTE MATERIAL IN LEGAL DISPOSAL SITE, MAINTAINING CONSTRUCTION ENTRANCES TO ENSURE NO OFF-SITE TRACKING OF SOIL.
CLEAR TREES SHOWN TO BE REMOVED	STOCKPILE TREES LARGER THAN 12" DBH FOR INCORPORATION INTO LOG STRUCTURES, CHIP SMALLER TREES AND STOCKPILE ARBORIST WOOD CHIP MULCH TO BE APPLIED LATER
MONITOR WATER QUALITY AND SOIL EROSION/SEDIMENTATION CONDITIONS CONTINUALLY ON SITE WITHIN THE PROJECT AREA	IF TURBIDITY OCCURS WITHIN CLEAR CREEK WHICH RESULTS FROM EROSION OF SOILS WITHIN PROJECT SITE, IDENTIFY SOURCE OF SOIL EROSION AND STABILIZE SOILS TO ELIMINATE EROSION AND TRANSPORT OF SEDIMENT OFF-SITE. STOP WORK IN THE AREA ASSOCIATED WITH THE EROSION UNTIL SOILS ARE STABILIZED. MAINTAIN CONSTRUCTION ENTRANCES AND TIRE WASHES AND CLEAN VEHICLES TO ENSURE NO MATERIAL IS TRACKED OFF-SITE AND/OR ONTO SILVERDALE WAY. IF TRACKING OCCURS, SWEEP OR VACUUM MATERIAL OFF ROADWAYS - WASHING OF ROADWAYS IS NOT PERMITTED.
AVULSION AREA - GRADE STREAM CHANNEL AND INSTALL LOGS, INSTALL COIR LOGS AND REMOVE CHANNEL-BLOCKING FENCE AND DEBRIS.	INSTALL FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR. STABILIZE SOILS WHEN COMPLETE WITH GRASS SEED AND STRAW.
MAINSTEM - CLEAR INVASIVE PLANTS, GRADE FLOODPLAIN AREA, HAUL CUT TO DISPOSAL AREA, CONSTRUCT PORTIONS OF PROPOSED MAIN STEM AS POSSIBLE WITH FLOW IN EXISTING CHANNEL, THEN ACTIVATE BYPASS PUMPS AND COMPLETE CONSTRUCTION OF PROPOSED CHANNEL AND FLOODPLAIN IN DRY CONDITIONS, REMOVE ASPHALT, INSTALL BRIDGE 3, TRAIL AND ROADWAY.	LIMIT TOTAL AREA OF BARE SOILS TO 5 ACRES IN DRY MONTHS (MAY - SEPT) AND 1 ACRE IN WET MONTHS (OCT - APR). COMPACT FILL AS SPECIFIED, MAINTAIN VEGETATIVE BUFFER BETWEEN GRADING AREA AND EXISTING CHANNEL. USE TRUCK WASH AND TRUCK BRUSH-DOWNS TO ENSURE NO SOIL IS TRACKED ONTO ROADWAYS. HAUL ASPHALT TO COUNTY ASPHALT RECYCLING FACILITY AS DIRECTED. INSTALL MAINSTEM FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR. INSTALL COIR FABRIC ALONG BOTH BANKS OF NEWLY GRADED CHANNEL. COVER FLOODPLAIN CUT AND FILL AREAS WITH COARSE COMPOST AND ARBORIST WOOD CHIP MULCH OR HYDROSEED AS SPECIFIED AS FINAL GRADE IS ACHIEVED. ENSURE NO BARE SOIL IS VISIBLE AT COMPLETION OF MULCH APPLICATION.
WEST FORK - CLEAR INVASIVE PLANTS, GRADE FLOODPLAIN AREA, HAUL CUT TO DISPOSAL AREA, HAUL IN LOGS FROM MAINSTEM AREA, CONSTRUCT PROPOSED WEST FORK AND CONFLUENCE CHANNEL IN DRY CONDITIONS, INSTALL BRIDGE 1.	LIMIT TOTAL AREA OF BARE SOILS TO 5 ACRES IN DRY MONTHS (MAY - SEPT) AND 1 ACRE IN WET MONTHS (OCT - APR). COMPACT FILL AS SPECIFIED, MAINTAIN 50 FT LONG PLUG OF SOIL BETWEEN EXISTING CHANNEL AND PROPOSED CHANNEL, MAINTAIN VEGETATIVE BUFFER BETWEEN GRADING AREA AND EXISTING CHANNEL. USE TRUCK WASH AND TRUCK BRUSH-DOWNS TO ENSURE NO SOIL IS TRACKED ONTO ROADWAYS. COVER FLOODPLAIN CUT AND FILL AREAS WITH COARSE COMPOST AND ARBORIST WOOD CHIP MULCH OR HYDROSEED AS SPECIFIED AS FINAL GRADE IS ACHIEVED. ENSURE NO BARE SOIL IS VISIBLE AT COMPLETION OF MULCH APPLICATION.
EAST FORK - CLEAR INVASIVE PLANTS, REMOVE ASPHALT AND ROAD FILL, GRADE FLOODPLAIN AREA, HAUL CUT TO DISPOSAL AREA, HAUL IN LOGS FROM MAINSTEM AREA, CONSTRUCT PROPOSED EAST FORK AND TIE INTO CONFLUENCE CHANNEL IN DRY CONDITIONS, INSTALL BRIDGE 2 AND TRAIL TO DOG PARK INCLUDING TRAIL PRISM AND MINI-CRIBLOCK STRUCTURES.	LIMIT TOTAL AREA OF BARE SOILS TO 5 ACRES IN DRY MONTHS (MAY - SEPT) AND 1 ACRES IN WET MONTHS (OCT - APR). COMPACT FILL AS SPECIFIED. HAUL ASPHALT TO COUNTY ASPHALT RECYCLING FACILITY AS DIRECTED. USE TRUCK WASH AND TRUCK BRUSH-DOWNS TO ENSURE NO SOIL IS TRACKED ONTO ROADWAYS. INSTALL EAST FORK FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR. COVER FLOODPLAIN CUT AND FILL AREAS WITH COARSE COMPOST AND ARBORIST WOOD CHIP MULCH OR HYDROSEED AS SPECIFIED AS FINAL GRADE IS ACHIEVED. ENSURE NO BARE SOIL IS VISIBLE AT COMPLETION OF MULCH APPLICATION. PAVE FINAL TRAIL SURFACES.
WEST FORK - REMOVE SOIL PLUG AND CONSTRUCT FINAL 50 FT OF CHANNEL TO TRANSFER FLOW INTO PROPOSED CHANNEL, INSTALL LOGS IN UPSTREAM SEGMENT OF EXISTING WEST FORK CHANNEL.	INSTALL WEST FORK FISH SCREEN, PERFORM FISH REMOVAL, INSTALL COFFERDAM, STREAM BYPASS, DEWATERING SUMP AND ENERGY DISSIPATOR.

TESC/REMOVAL LEGEND:

	REMOVE STRUCTURE/PAVEMENT		DEWATERING DISCHARGE
	REMOVE TREE		CONSTRUCTION EASEMENT
	TREE TO BE PROTECTED		ORANGE CONSTRUCTION FENCE
	LIMIT OF CONSTRUCTION/ CLEARING LIMIT		STREAM BYPASS
	LIMIT OF GRADING		SILT FENCE
	DELINEATED WETLAND BOUNDARY		STREAM BYPASS PUMP
	ORDINARY HIGH WATER MARK-PROPOSED		TIRE WASH
	ORDINARY HIGH WATER MARK-EXISTING		CONSTRUCTION ENTRANCE
	PROJECT BOUNDARY		TRAIL CLOSURE
	PROPOSED MAJOR CONTOUR (5' INTERVALS)		STAGING AREA
	PROPOSED MINOR CONTOUR (1' INTERVALS)		CONSTRUCTION ACCESS
	EXISTING MAJOR CONTOUR (5' INTERVALS)		DEWATERING SUMP
	EXISTING MINOR CONTOUR (1' INTERVALS)		SETTLING TANK
	EXISTING PAVED SURFACE		SOIL TEST PIT LOCATION
	NEW PAVED SURFACE		SHORT TERM STREAM BYPASS PUMP INTAKE
	RETAINING WALL ALONG TRAIL		SPLIT RAIL FENCE
	EXISTING CREEK (C/L IS APPROX.)		FLOODPLAIN CONTROL POINT
	EXISTING CHAIN LINK FENCE		STREAM CENTERLINE CONTROL POINT
	EXISTING BARBED WIRE FENCE		SURVEY CONTROL POINT
	EXISTING GUARD RAIL		STREAM CONSTRUCTION CENTERLINE
	EXISTING DITCH		STREAM THALWEG
	EXISTING UTILITIES POLE & GUY ANCHOR		
	EXISTING TRAFFIC SIGNAL		
	EXISTING POWER VAULT		
	EXISTING ELECTRICAL JUNCTION BOX		
	EXISTING TELEPHONE RISER		
	EXISTING WATER VALVE		
	EXISTING WATER METER		
	WETLAND FLAG NUMBER		
	WETLAND SOIL BORING / TEST PIT		
	BOLLARDS IN CONCRETE		
	OVERHEAD UTILITIES LINE		
	APPROX. LOCATION WATER LINE		
	APPROX. LOCATION GAS LINE		
	APPROX. LOCATION TELEPHONE LINE		
	TREE LINE		

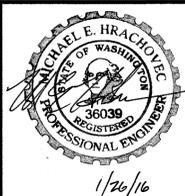
PROJECT: WASH CO CLEAR CREEK FLOODPLAIN RESTORATION; CURRENT LEGEND AND NOTES.DWG; 5 LEGEND AND NOTES; 1/20/16 12:24 PM; GARY

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/20/16



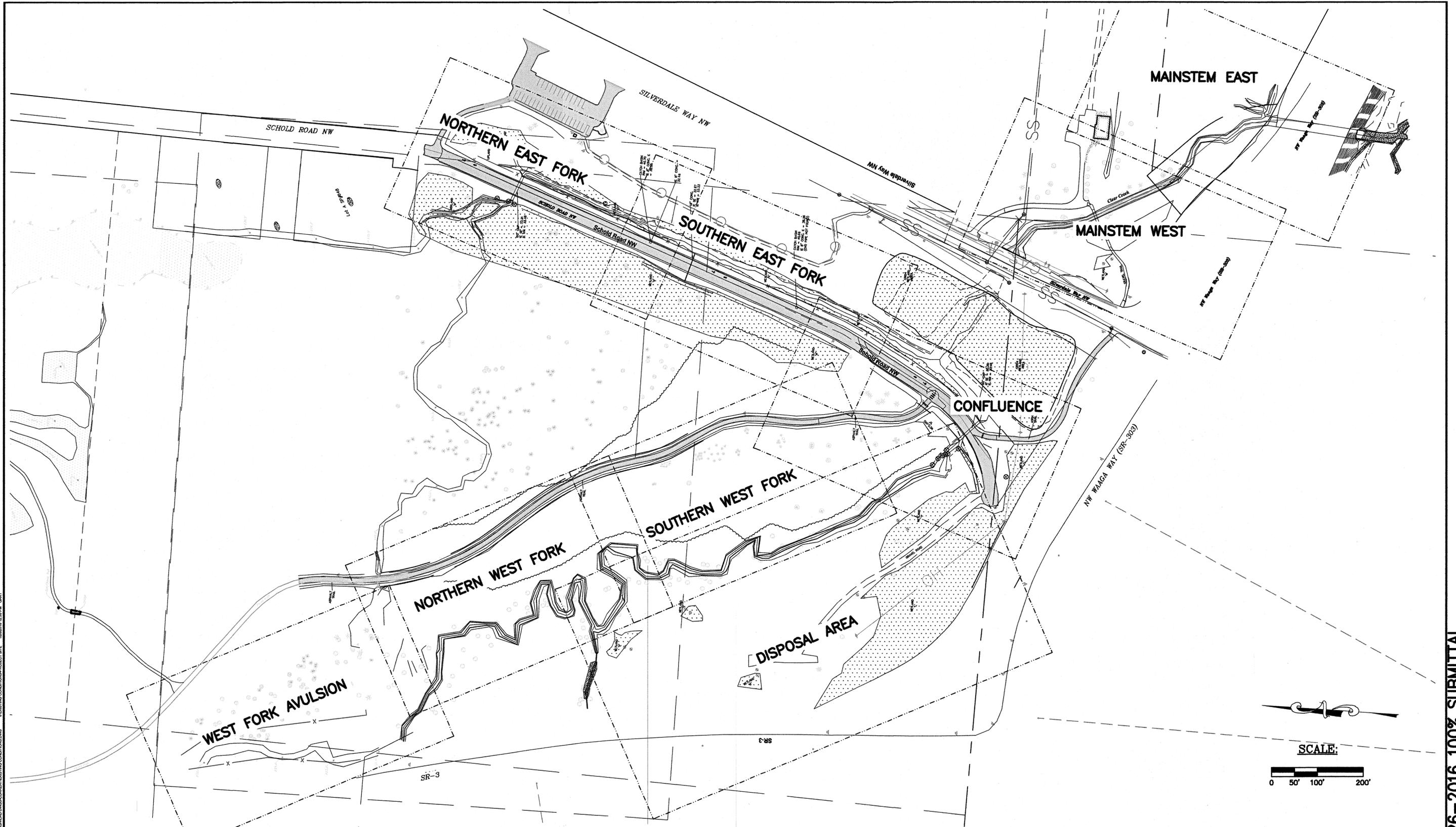
**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 LEGENDS AND ABBREVIATIONS**

KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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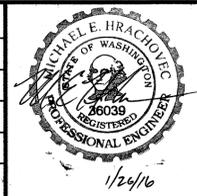
PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION DIVISION: ENVIRONMENTAL ENGINEERING DATE: 1/24/16 12:58 PM GARY

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/24/16



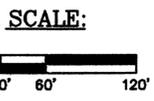
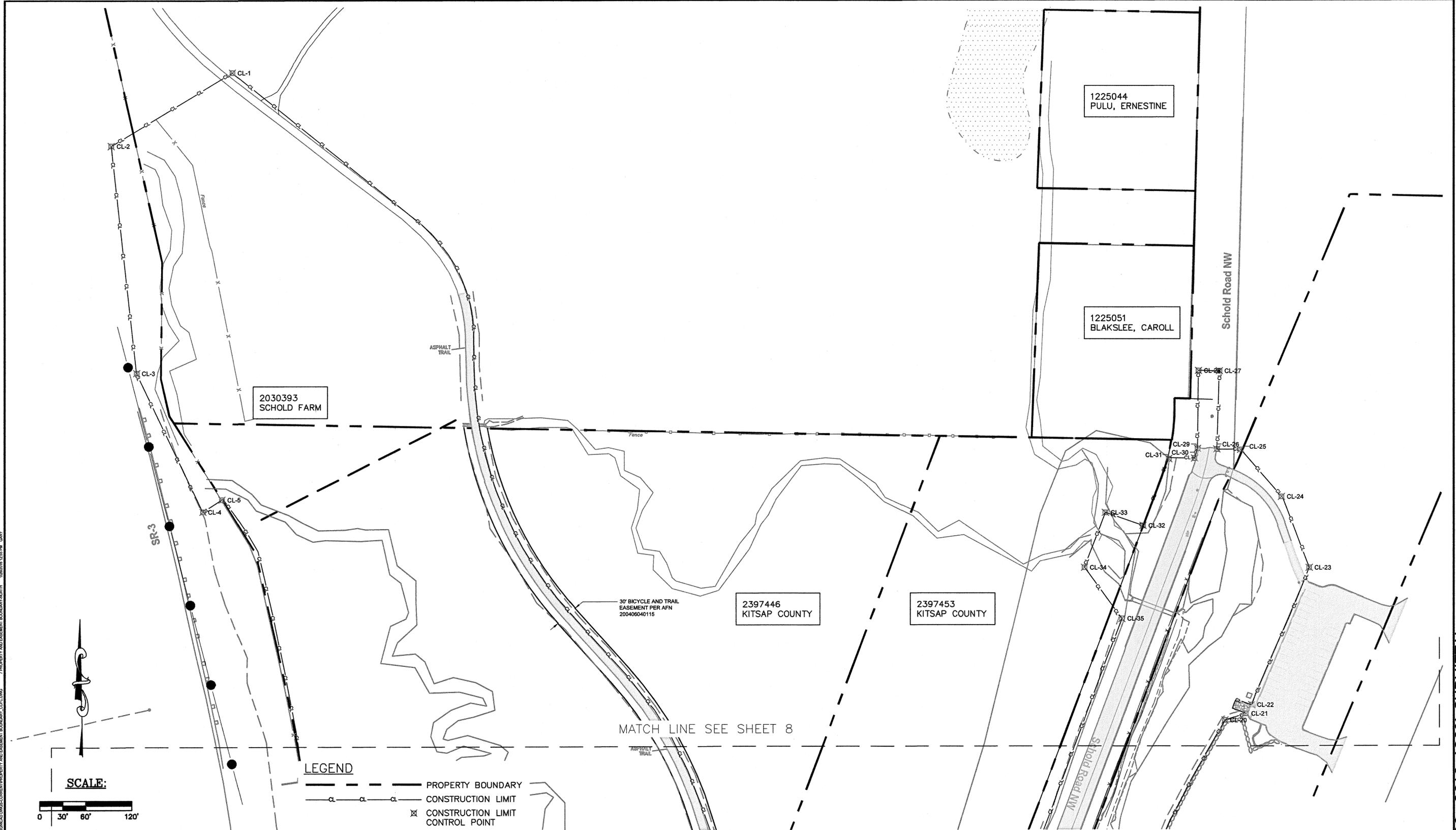
**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 EXISTING CONDITIONS -  
 PROJECT SITE  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION PROPERTY AND EASEMENT BOUNDARY - NORTH 1/26/16 12:55 PM GARY



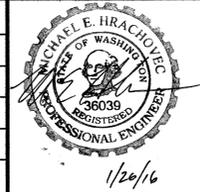
**LEGEND**

	PROPERTY BOUNDARY
	CONSTRUCTION LIMIT
	CONSTRUCTION LIMIT CONTROL POINT

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



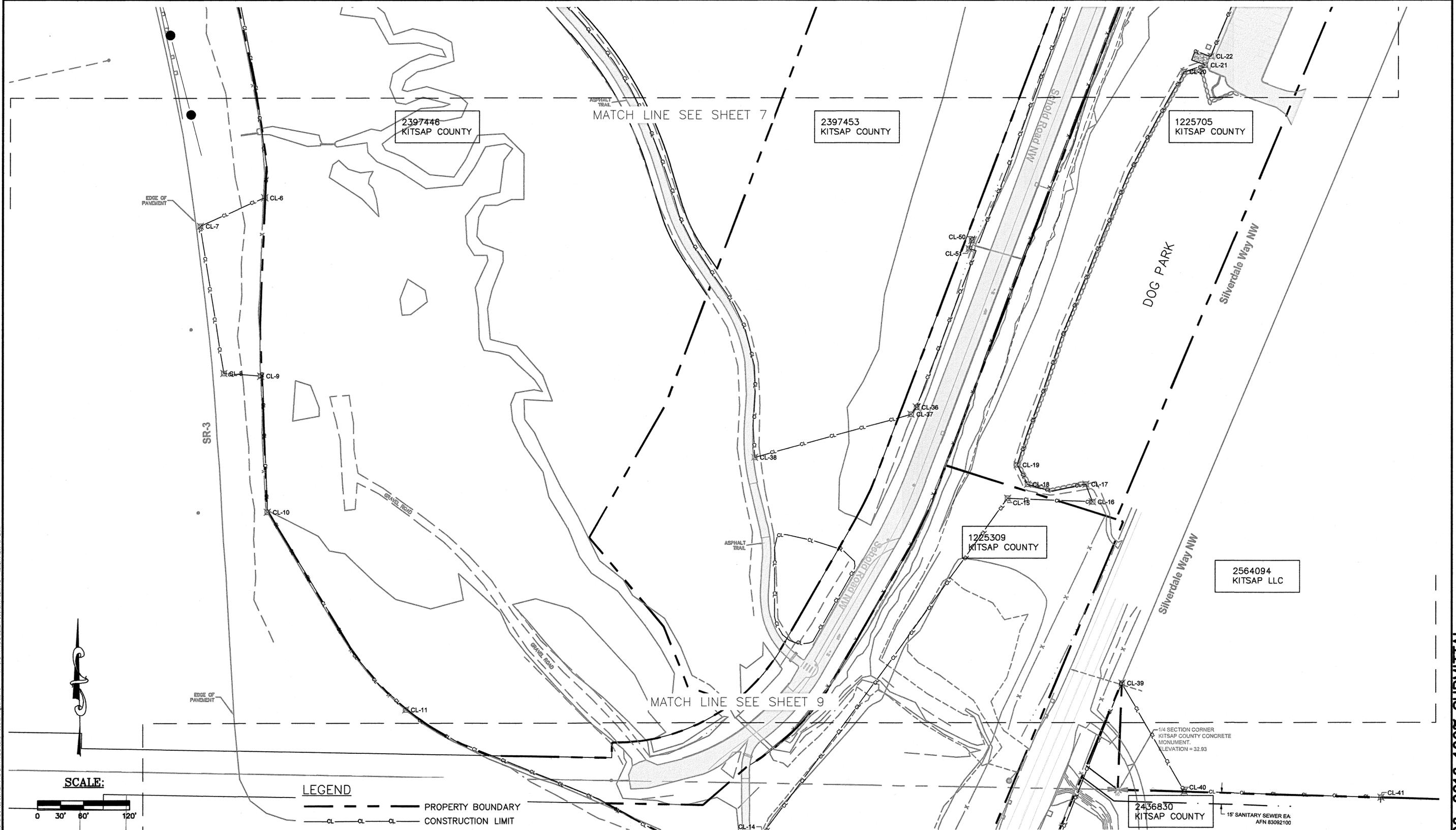
**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPERTY AND EASEMENT  
 BOUNDARY-NORTH**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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N:\PROJECTS\KITSAP COOKER CREEK FLOODPLAIN RESTORATION\PROPERTY AND EASEMENT BOUNDARY-CENTRAL\_10/26/16 12:55 PM.dwg 8 PROPERTY AND EASEMENT BOUNDARY-CENTRAL\_10/26/16 12:55 PM.dwg



**SCALE:**



**LEGEND**

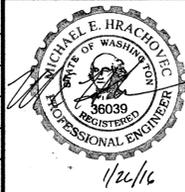
- PROPERTY BOUNDARY
- CONSTRUCTION LIMIT

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 01/26/16

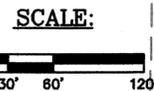
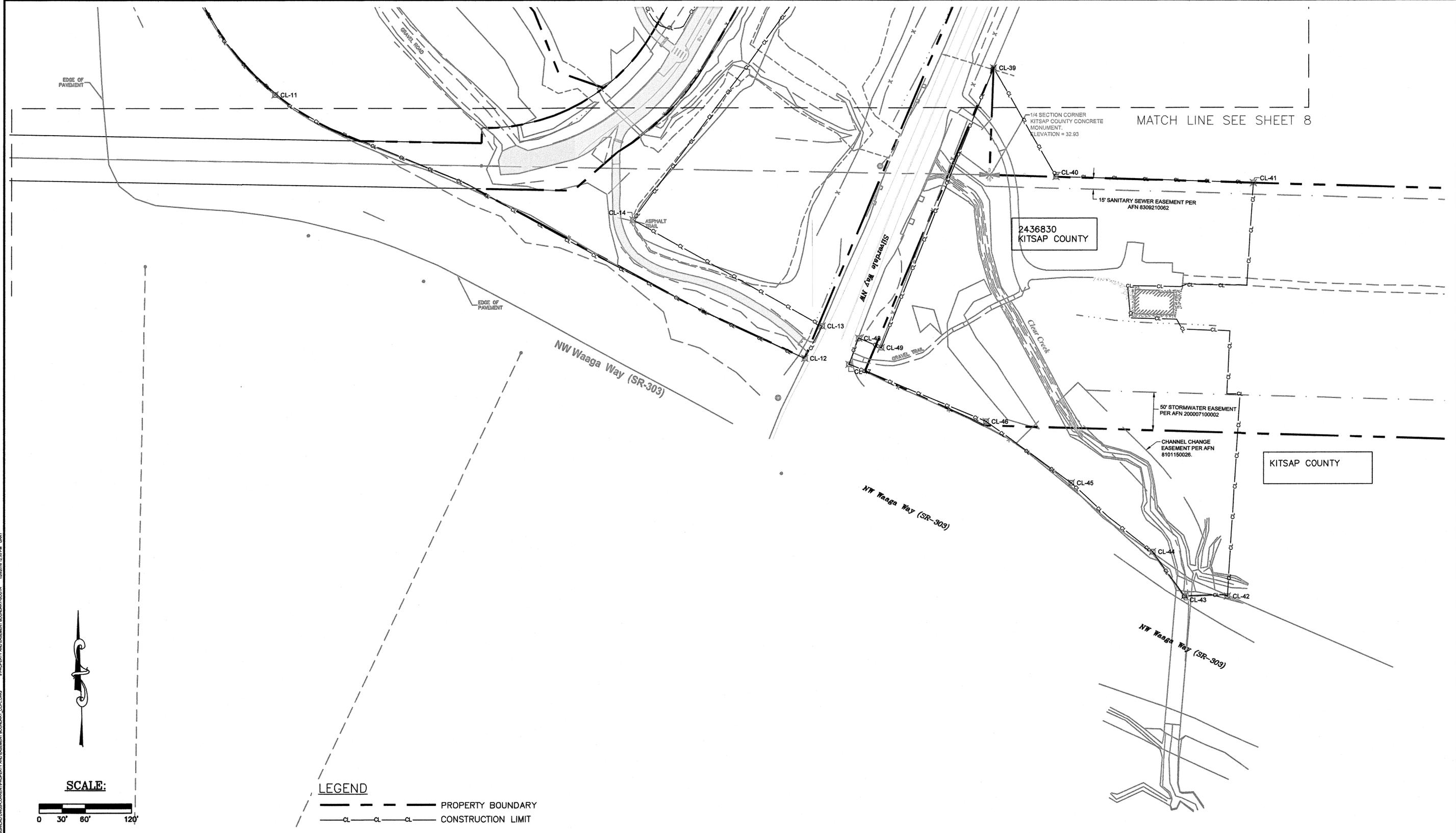


**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL:(360) 337-5777 FAX:(360) 337-4887

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPERTY AND EASEMENT  
 BOUNDARY-CENTRAL**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 8  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



**LEGEND**

--- PROPERTY BOUNDARY

— — — — — CONSTRUCTION LIMIT

N:\PROJECTS\16\CLEAR CREEK FLOODPLAIN RESTORATION\DWG\CURRENT\PROPERTY AND EASEMENT BOUNDARY SOUTH.dwg 12/08/16 12:55 PM JARY

P.O. Box 15609
   
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 01/26/16

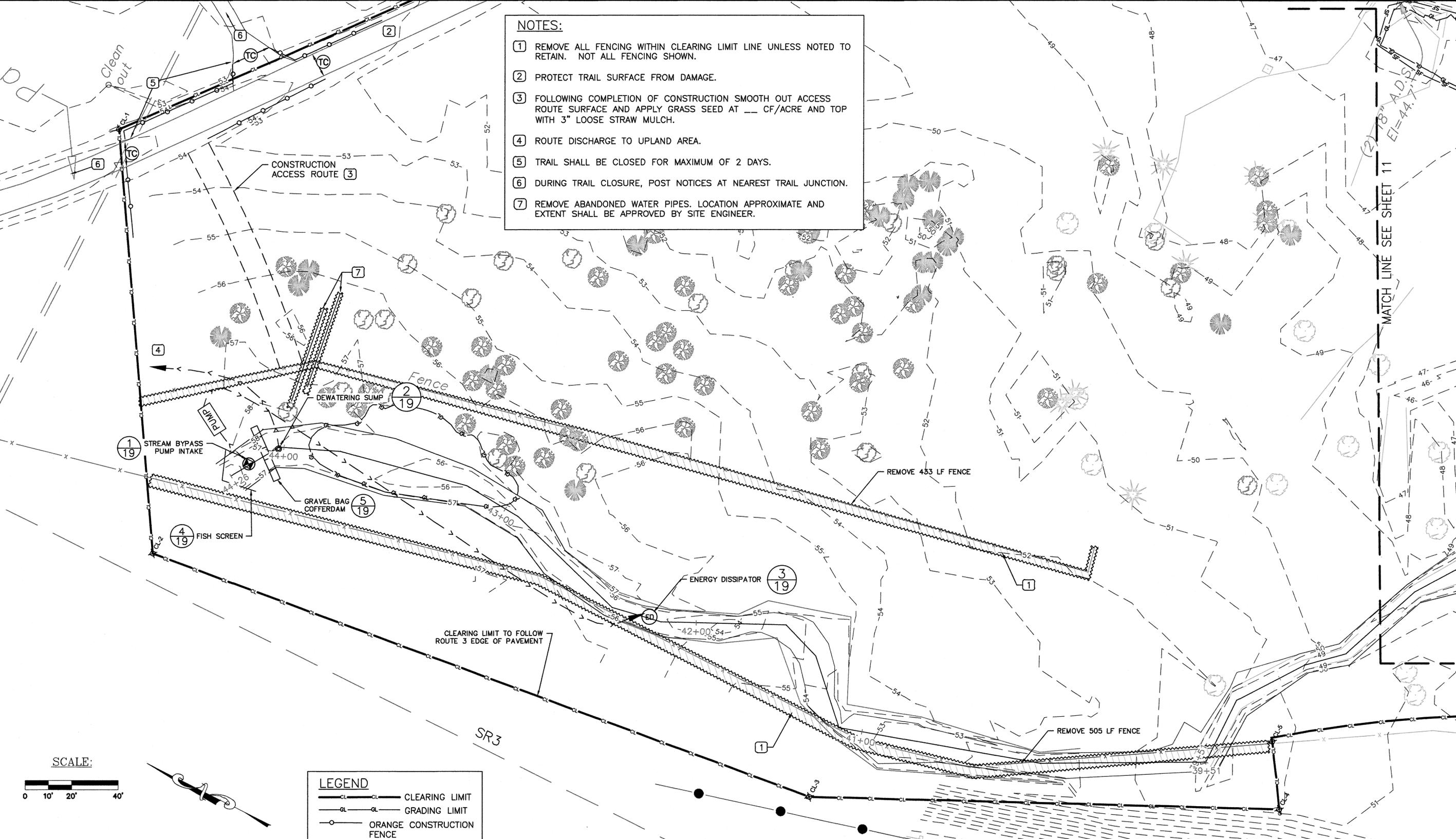


**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPERTY AND EASEMENT  
 BOUNDARY—SOUTH**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 9  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION AND REMOVAL DWS-CURRENT/TESS AND REMOVAL WEST FORK AVULSION 1/26/2016 12:26 PM GARY

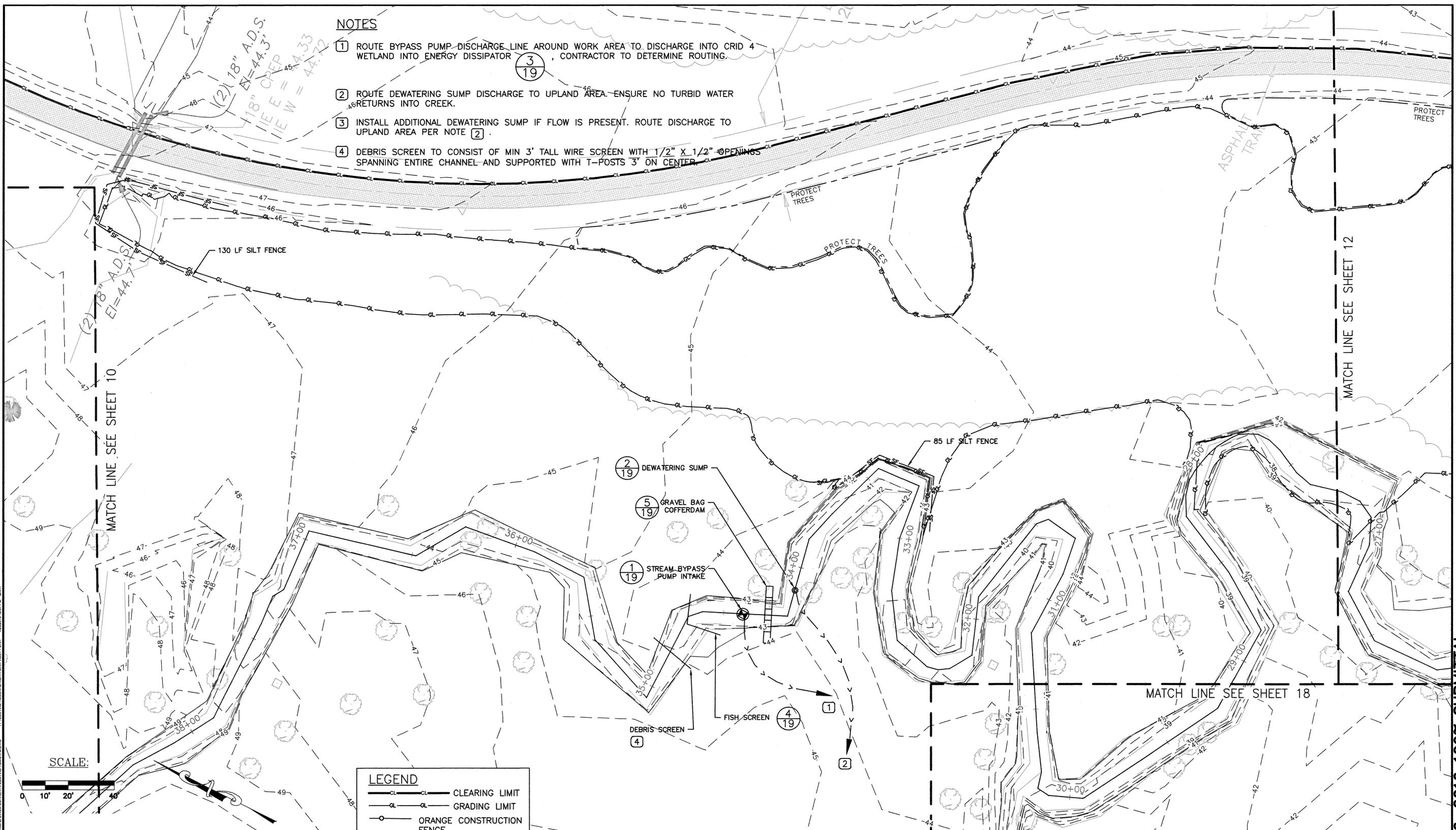
MATCH LINE SEE SHEET 11

Jan-26-2016 100% SUBMITTAL

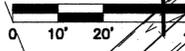
SHEET  
10  
OF  
73

**NOTES**

- 1 ROUTE BYPASS PUMP DISCHARGE LINE AROUND WORK AREA TO DISCHARGE INTO CRID 4 WETLAND INTO ENERGY DISSIPATOR (3/19), CONTRACTOR TO DETERMINE ROUTING.
- 2 ROUTE DEWATERING SUMP DISCHARGE TO UPLAND AREA. ENSURE NO TURBID WATER RETURNS INTO CREEK.
- 3 INSTALL ADDITIONAL DEWATERING SUMP IF FLOW IS PRESENT. ROUTE DISCHARGE TO UPLAND AREA PER NOTE 2.
- 4 DEBRIS SCREEN TO CONSIST OF MIN 3' TALL WIRE SCREEN WITH 1/2" X 1/2" OPENINGS SPANNING ENTIRE CHANNEL AND SUPPORTED WITH T-POSTS 3' ON CENTER.



SCALE:



**LEGEND**

- CLEARING LIMIT
- - - GRADING LIMIT
- ORANGE CONSTRUCTION FENCE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**

P.O. Box 15609  
Seattle, WA 98115

**REVISIONS**

No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON

DESIGNED: M. HRACHOVEC

DRAWN: K. ANDREWS

CHECKED: T. ABBE

CRP No.: N/A

DATE: 01/26/16



**KITSAP COUNTY**

DEPT. OF PUBLIC WORKS

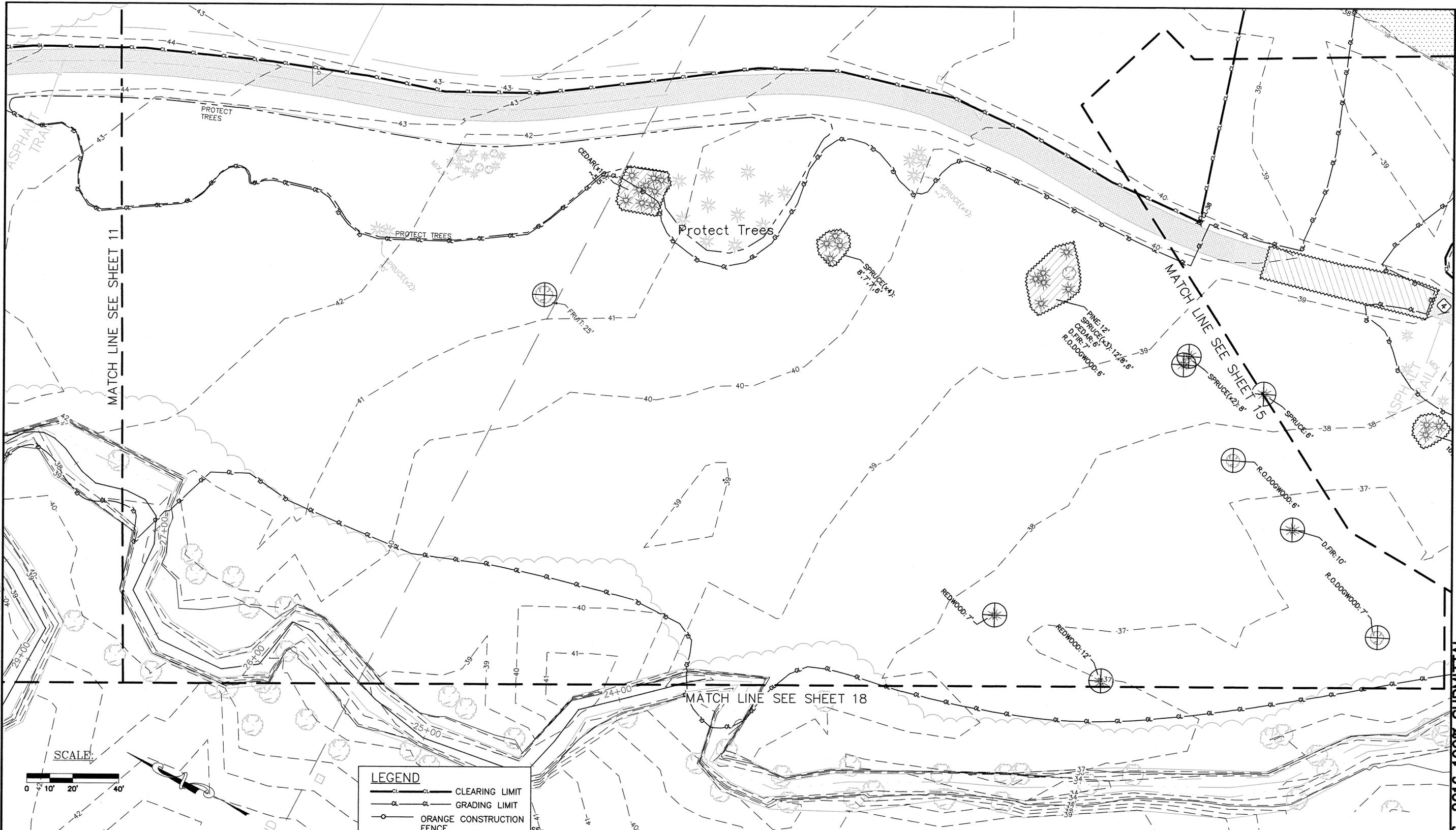
614 DIVISION STREET MS-26  
PORT ORCHARD, WA 98366  
TEL:(360) 337-5777 FAX:(360) 337-4867

**CLEAR CREEK  
FLOODPLAIN RESTORATION  
TESC AND REMOVAL  
NORTHERN WEST FORK**

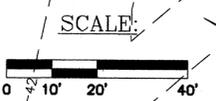
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
11  
OF  
73

Jan-26-2016 100% SUBMITTAL



12 TESC AND REMOVAL SOUTHERN WEST FORK 10/20/16 12:28 PM GARY  
 13 TESC AND REMOVAL SOUTHERN WEST FORK 10/20/16 12:28 PM GARY  
 14 TESC AND REMOVAL SOUTHERN WEST FORK 10/20/16 12:28 PM GARY  
 15 TESC AND REMOVAL SOUTHERN WEST FORK 10/20/16 12:28 PM GARY  
 16 TESC AND REMOVAL SOUTHERN WEST FORK 10/20/16 12:28 PM GARY  
 17 TESC AND REMOVAL SOUTHERN WEST FORK 10/20/16 12:28 PM GARY  
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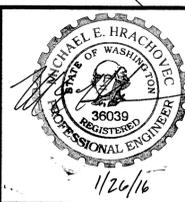
LEGEND	
	CLEARING LIMIT
	GRADING LIMIT
	ORANGE CONSTRUCTION FENCE

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 01/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

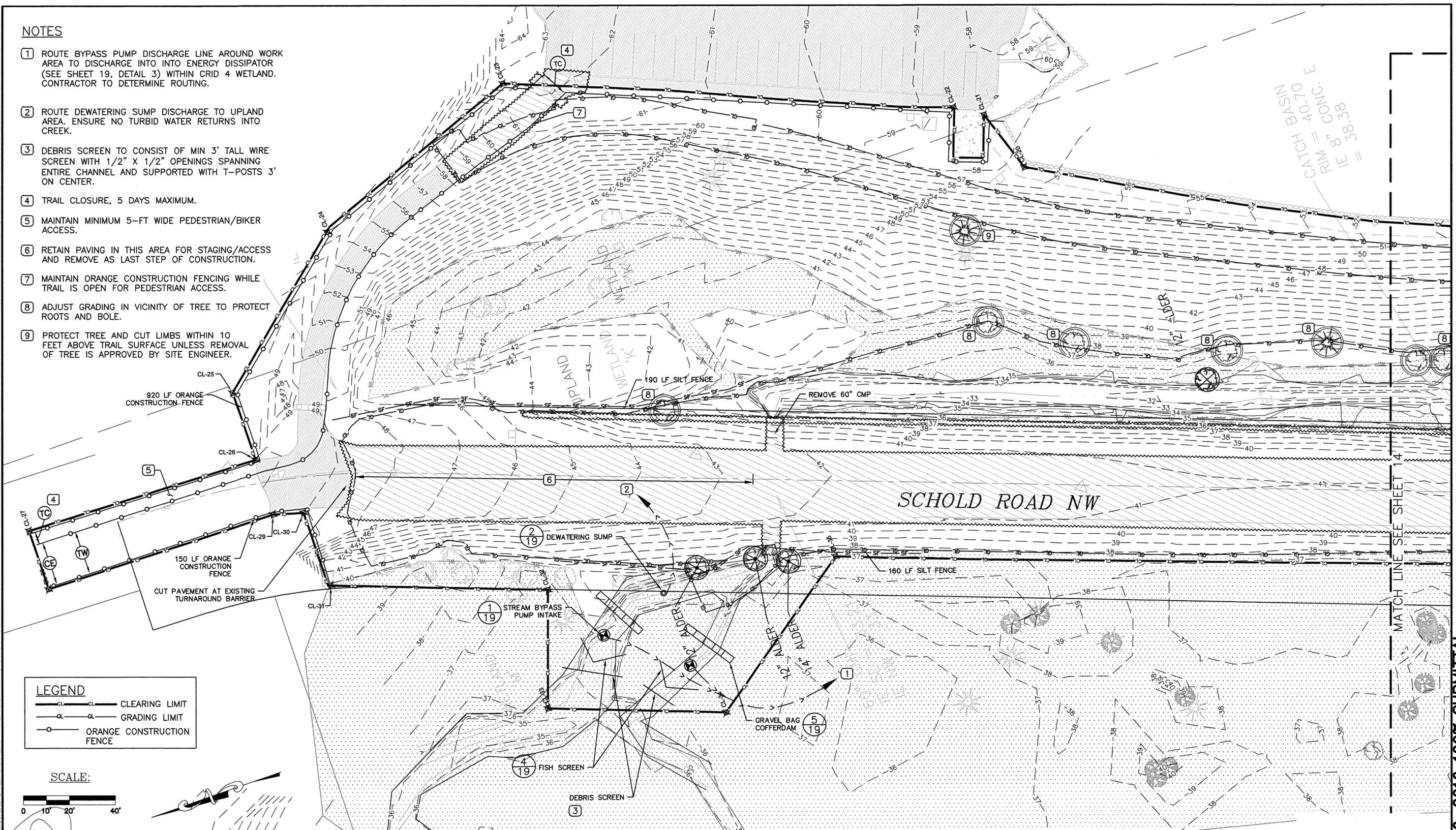
**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 TESC AND REMOVAL  
 SOUTHERN WEST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 12  
 OF  
 73

Jan-26-2016 100% SUBMITAL

**NOTES**

- 1 ROUTE BYPASS PUMP DISCHARGE LINE AROUND WORK AREA TO DISCHARGE INTO ENERGY DISSIPATOR (SEE SHEET 19, DETAIL 3) WITHIN CRID 4 WETLAND. CONTRACTOR TO DETERMINE ROUTING.
- 2 ROUTE DEWATERING SUMP DISCHARGE TO UPLAND AREA. ENSURE NO TURBID WATER RETURNS INTO CREEK.
- 3 DEBRIS SCREEN TO CONSIST OF MIN 3' TALL WIRE SCREEN WITH 1/2" X 1/2" OPENINGS SPANNING ENTIRE CHANNEL AND SUPPORTED WITH T-POSTS 3' ON CENTER.
- 4 TRAIL CLOSURE, 5 DAYS MAXIMUM.
- 5 MAINTAIN MINIMUM 5-FT WIDE PEDESTRIAN/BIKER ACCESS.
- 6 RETAIN PAVING IN THIS AREA FOR STAGING/ACCESS AND REMOVE AS LAST STEP OF CONSTRUCTION.
- 7 MAINTAIN ORANGE CONSTRUCTION FENCING WHILE TRAIL IS OPEN FOR PEDESTRIAN ACCESS.
- 8 ADJUST GRADING IN VICINITY OF TREE TO PROTECT ROOTS AND BOLE.
- 9 PROTECT TREE AND CUT LIMBS WITHIN 10 FEET ABOVE TRAIL SURFACE UNLESS REMOVAL OF TREE IS APPROVED BY SITE ENGINEER.



**LEGEND**

- CL — CLEARING LIMIT
- GL — GRADING LIMIT
- OF — ORANGE CONSTRUCTION FENCE

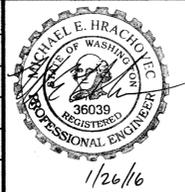
**SCALE:**

**Natural Systems Design**

P.O. Box 15609  
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 TESC AND REMOVAL  
 NORTHERN EAST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 13  
 OF  
 73

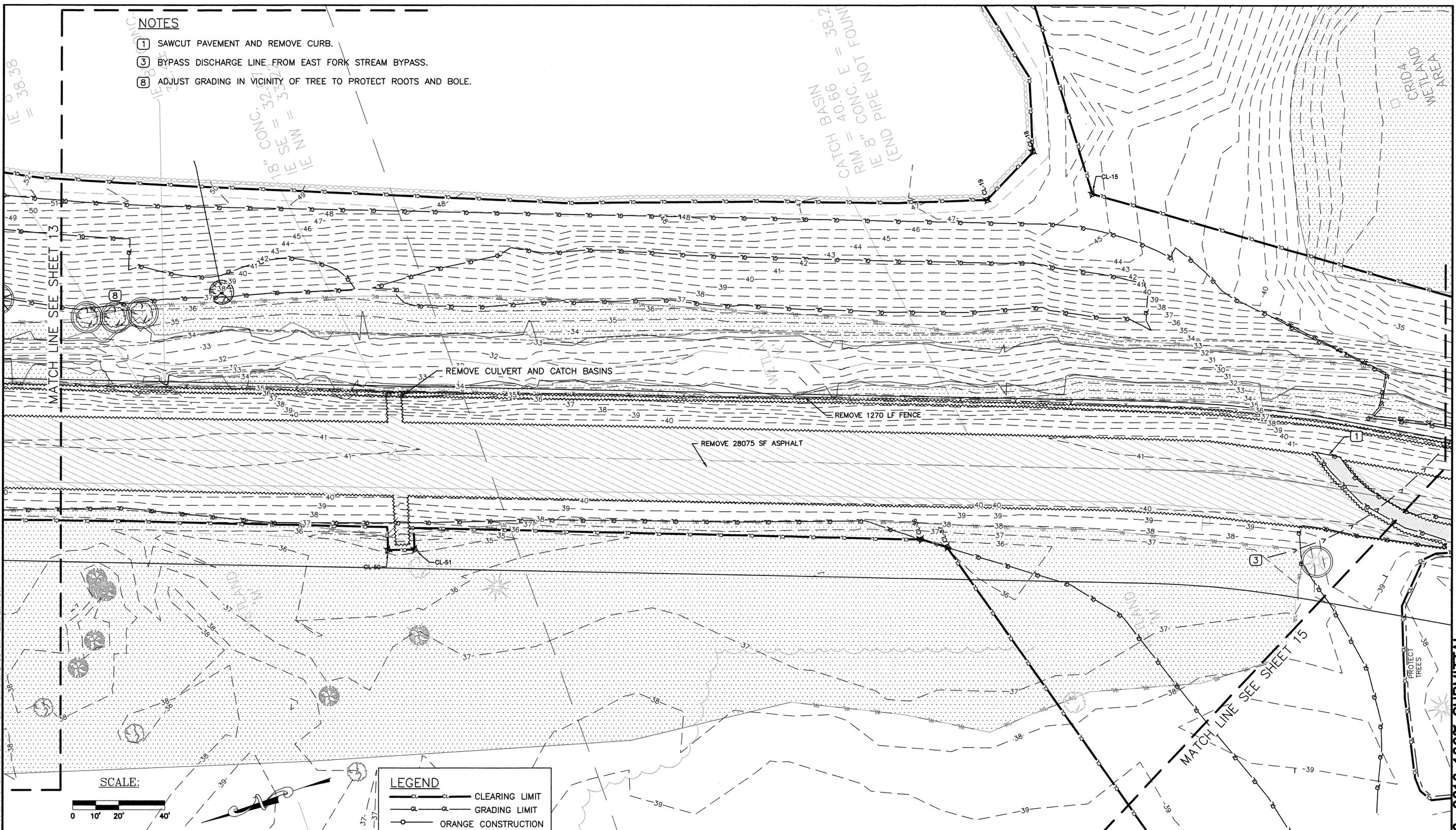
Jan-26-2016 100% SUBMITTAL

PROJECT: KITSAP COUNTY CLEAR CREEK FLOODPLAIN RESTORATION TESC AND REMOVAL WORKS; DATE: 01/26/16 12:28 PM; GARY

**NOTES**

- 1 SAWCUT PAVEMENT AND REMOVE CURB.
- 3 BYPASS DISCHARGE LINE FROM EAST FORK STREAM BYPASS.
- 8 ADJUST GRADING IN VICINITY OF TREE TO PROTECT ROOTS AND BOLE.

8" CONC. RIM = 4.0' CONG. E = 2.83' CATCH BASIN (END EI PIPE NOT FOUND)



MATCH LINE SEE SHEET 13

MATCH LINE SEE SHEET 15

**SCALE:**



**LEGEND**

- CL — CLEARING LIMIT
- GL — GRADING LIMIT
- — ORANGE CONSTRUCTION FENCE

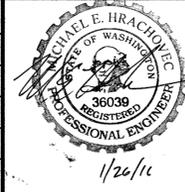
N:\PROJECTS\TSP COOLBAR CREEK FLOODPLAIN RESTORATION\DWG\CURRENT\TESC AND REMOVAL\DWG 1202014 12:28 PM GARY

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 2/25/14



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

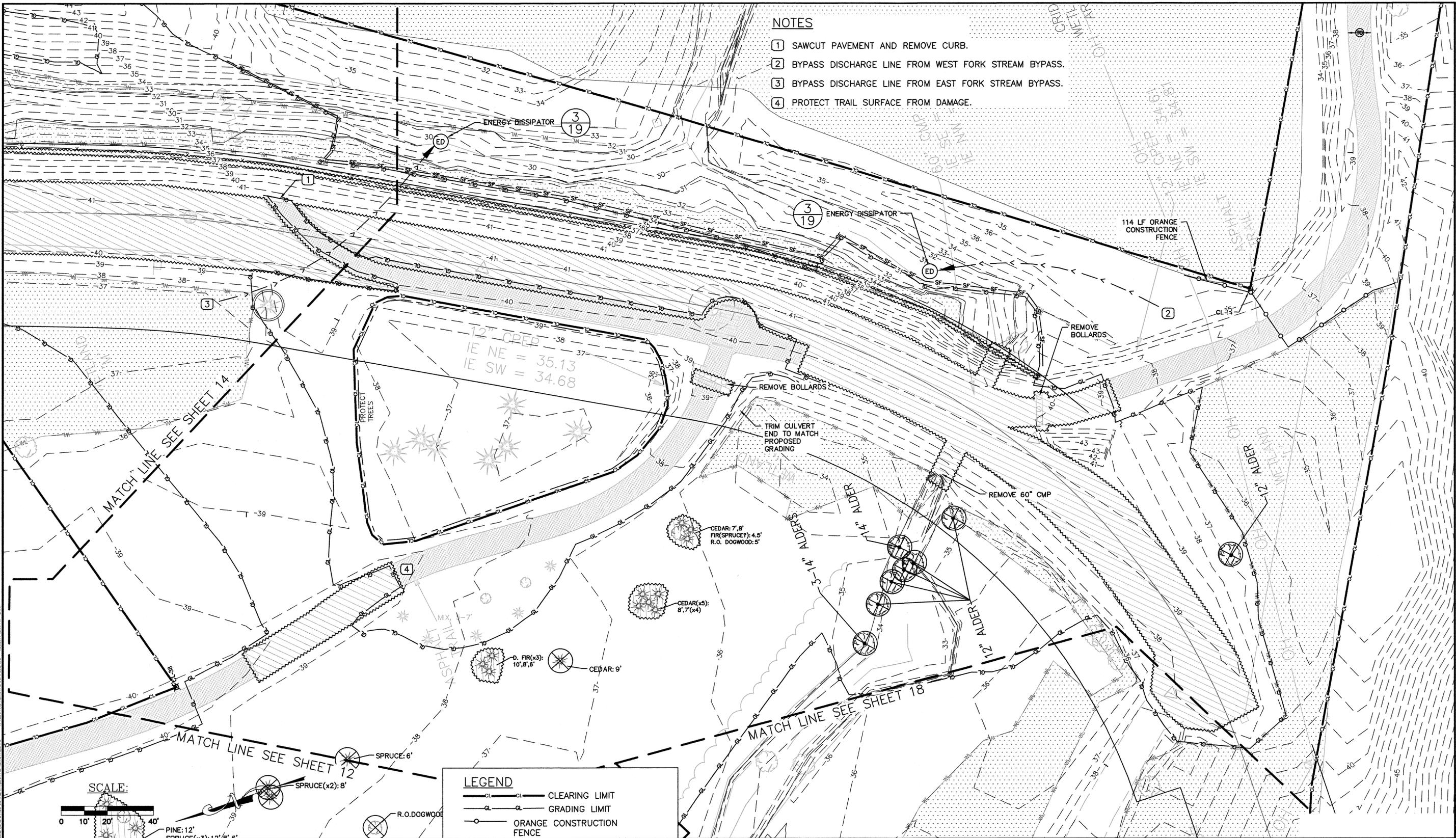
**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 TESC AND REMOVAL  
 SOUTHERN EAST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 14  
 OF  
 73

Jan-26-2016 100% SUBMITTAL

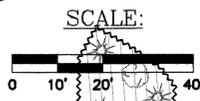
**NOTES**

- ① SAWCUT PAVEMENT AND REMOVE CURB.
- ② BYPASS DISCHARGE LINE FROM WEST FORK STREAM BYPASS.
- ③ BYPASS DISCHARGE LINE FROM EAST FORK STREAM BYPASS.
- ④ PROTECT TRAIL SURFACE FROM DAMAGE.



**LEGEND**

- CL — CLEARING LIMIT
- GL — GRADING LIMIT
- — ORANGE CONSTRUCTION FENCE



**REVISIONS**

No.	BY	DATE	DESCRIPTION

SURVEYED: N. L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 1/26/16



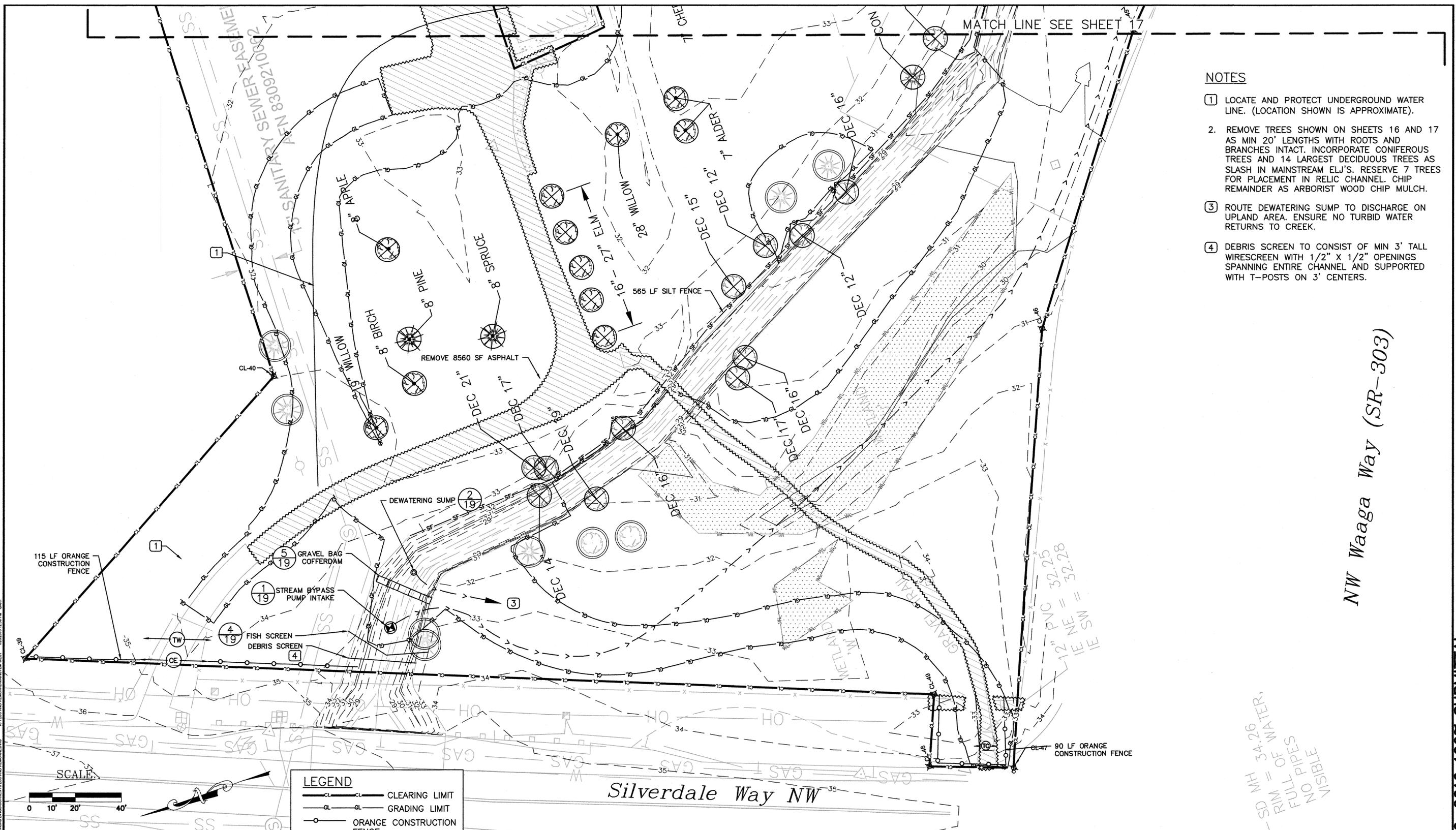
**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 TESC AND REMOVAL  
 CONFLUENCE**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 15  
 OF  
 73

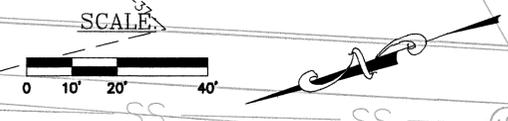
Jan-26-2016 100% SUBMITTAL





- NOTES**
- 1 LOCATE AND PROTECT UNDERGROUND WATER LINE. (LOCATION SHOWN IS APPROXIMATE).
  2. REMOVE TREES SHOWN ON SHEETS 16 AND 17 AS MIN 20' LENGTHS WITH ROOTS AND BRANCHES INTACT. INCORPORATE CONIFEROUS TREES AND 14 LARGEST DECIDUOUS TREES AS SLASH IN MAINSTREAM ELJ'S. RESERVE 7 TREES FOR PLACEMENT IN RELIC CHANNEL. CHIP REMAINDER AS ARBORIST WOOD CHIP MULCH.
  - 3 ROUTE DEWATERING SUMP TO DISCHARGE ON UPLAND AREA. ENSURE NO TURBID WATER RETURNS TO CREEK.
  - 4 DEBRIS SCREEN TO CONSIST OF MIN 3' TALL WIRESCREEN WITH 1/2" X 1/2" OPENINGS SPANNING ENTIRE CHANNEL AND SUPPORTED WITH T-POSTS ON 3' CENTERS.

NW Waaga Way (SR-303)



**LEGEND**

— CL —	CLEARING LIMIT
— GL —	GRADING LIMIT
— OF —	ORANGE CONSTRUCTION FENCE

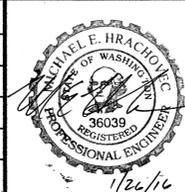
SS MH = 34.26  
RIM OF WATER,  
FULT OF PIPES  
NO PIPES  
VISIBLE

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: NA  
DATE: 02/26/16



**KITSAP COUNTY**  
DEPT. OF PUBLIC WORKS  
614 DIVISION STREET MS-26  
PORT ORCHARD, WA 98366  
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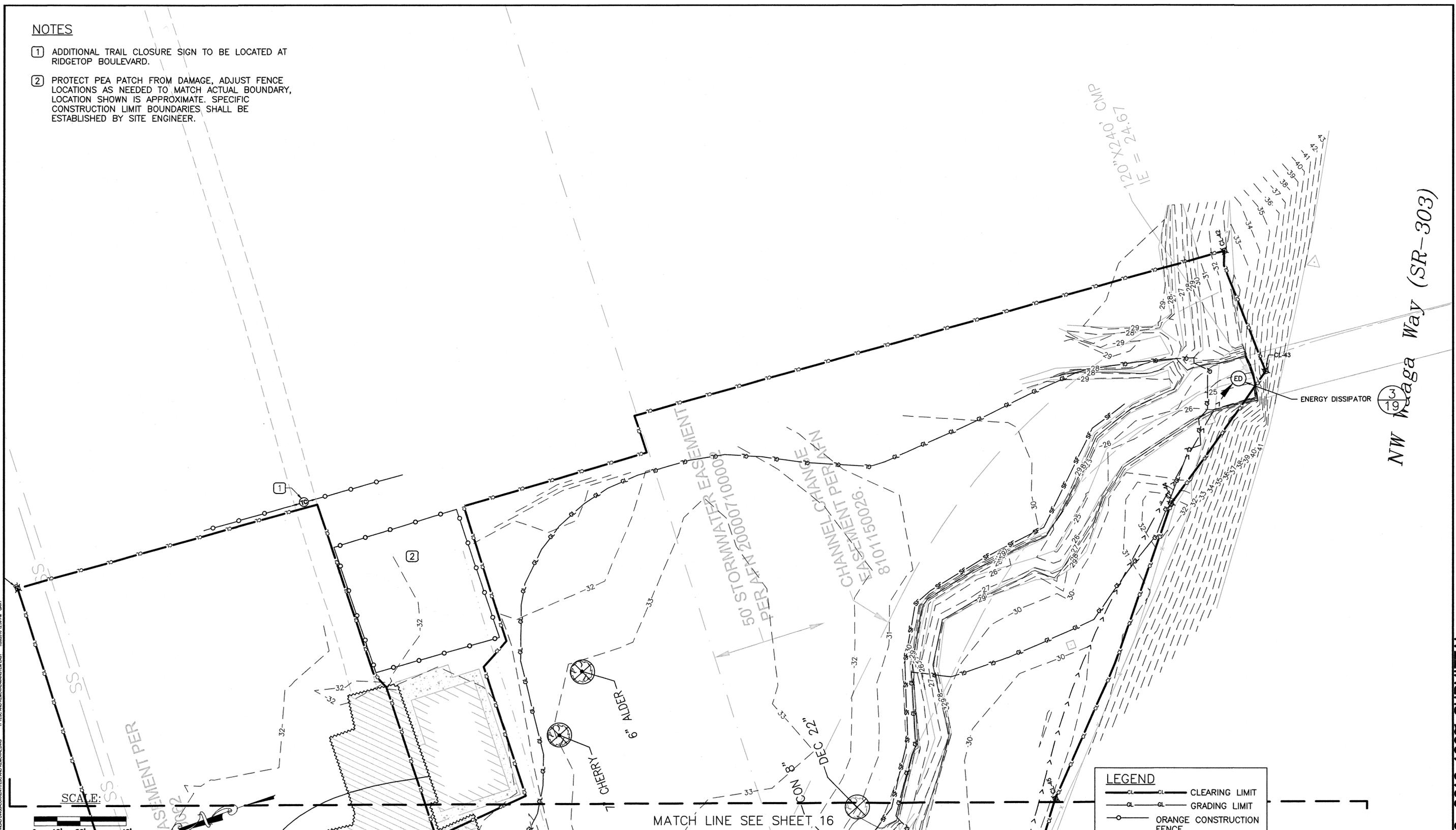
**CLEAR CREEK  
FLOODPLAIN RESTORATION  
TESC AND REMOVAL  
MAINSTEM WEST**  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
16  
OF  
73

Jan-26-2016 100% SUBMITTAL

**NOTES**

- 1 ADDITIONAL TRAIL CLOSURE SIGN TO BE LOCATED AT RIDGETOP BOULEVARD.
- 2 PROTECT PEA PATCH FROM DAMAGE, ADJUST FENCE LOCATIONS AS NEEDED TO MATCH ACTUAL BOUNDARY, LOCATION SHOWN IS APPROXIMATE. SPECIFIC CONSTRUCTION LIMIT BOUNDARIES SHALL BE ESTABLISHED BY SITE ENGINEER.



17 TESC AND REMOVAL MAINSTEM EAST 12/20/16 12:28 PM GARY



LEGEND	
—○—	CLEARING LIMIT
—○—	GRADING LIMIT
—○—	ORANGE CONSTRUCTION FENCE

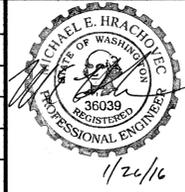
MATCH LINE SEE SHEET 16

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 2/26/16



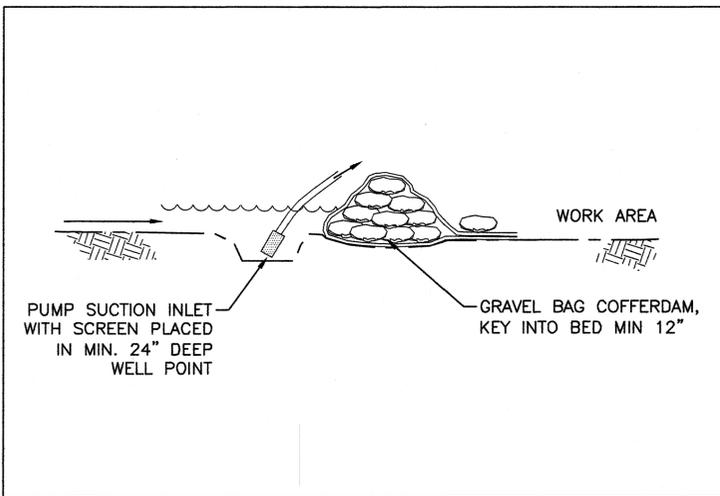
**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 TESC AND REMOVAL  
 MAINSTEM EAST**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

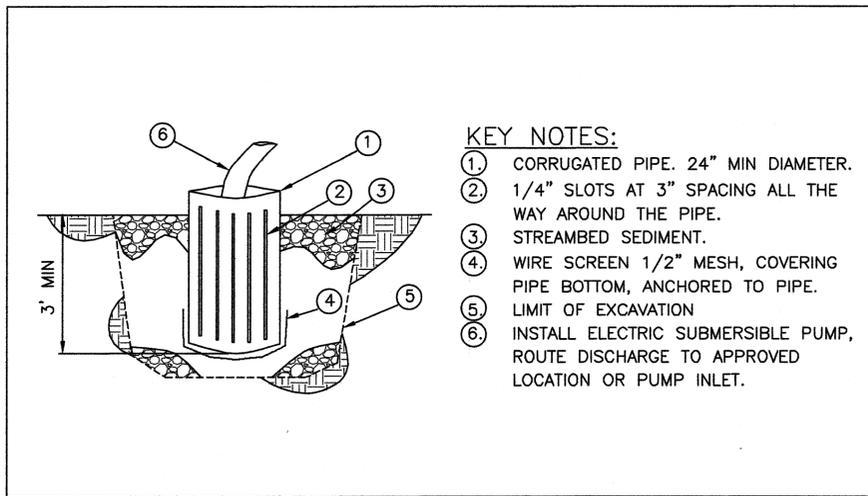
SHEET  
 17  
 OF  
 73

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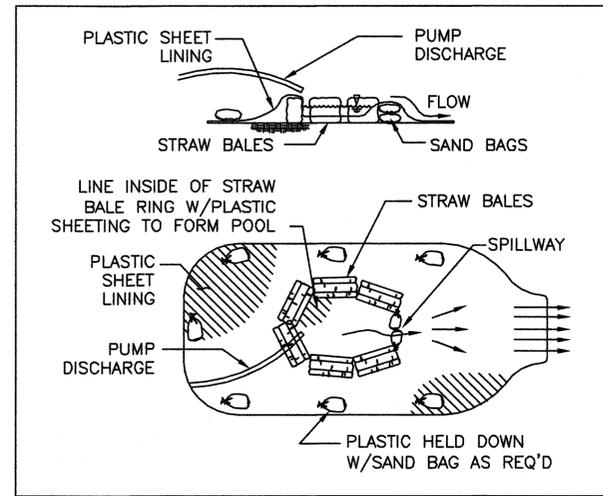




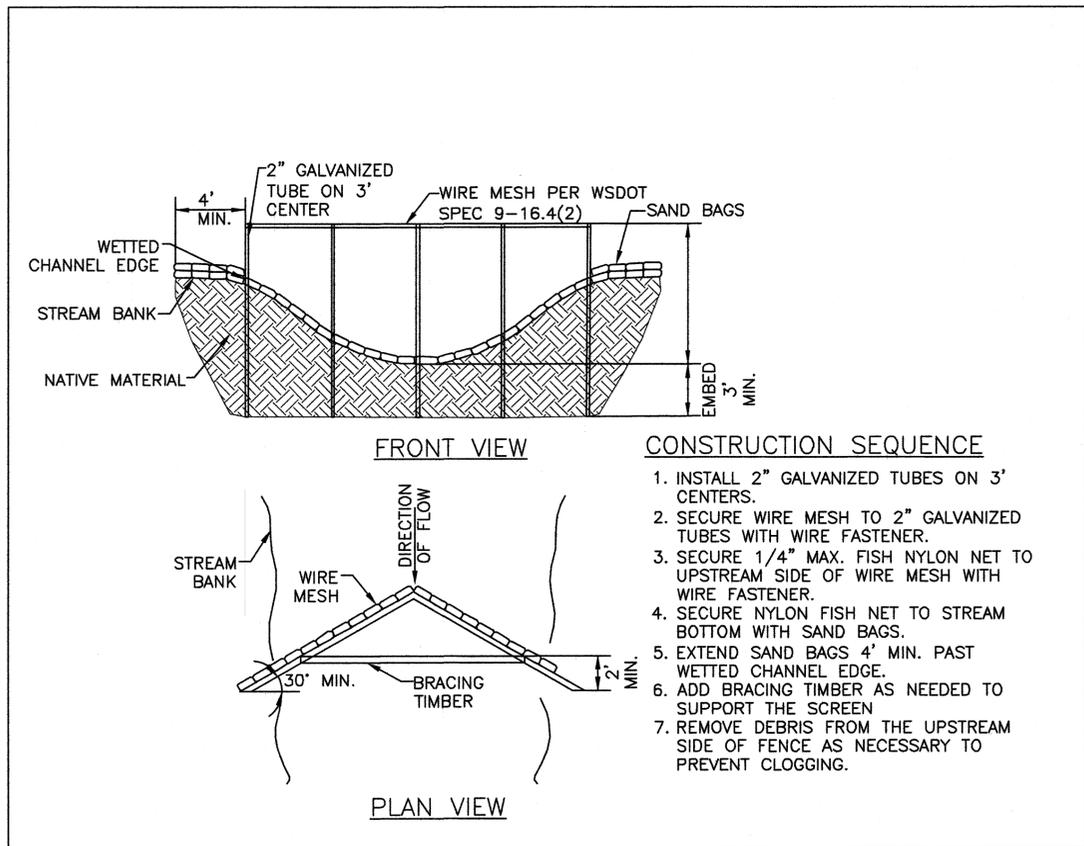
**STREAM BYPASS PUMP INTAKE** (1/19)  
NOT TO SCALE



**DEWATERING SUMP** (2/19)  
NOT TO SCALE

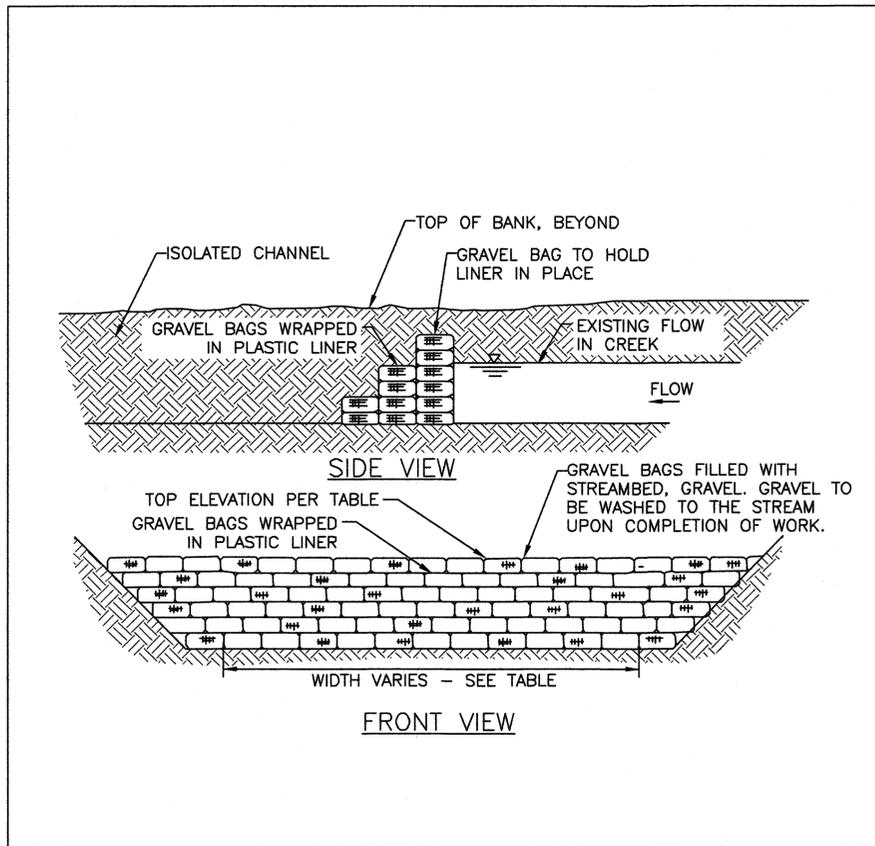


**ENERGY DISSIPATOR** (3/19)  
NOT TO SCALE



**FISH SCREEN** (4/19)  
NOT TO SCALE

- CONSTRUCTION SEQUENCE**
1. INSTALL 2" GALVANIZED TUBES ON 3' CENTERS.
  2. SECURE WIRE MESH TO 2" GALVANIZED TUBES WITH WIRE FASTENER.
  3. SECURE 1/4" MAX. FISH NYLON NET TO UPSTREAM SIDE OF WIRE MESH WITH WIRE FASTENER.
  4. SECURE NYLON FISH NET TO STREAM BOTTOM WITH SAND BAGS.
  5. EXTEND SAND BAGS 4' MIN. PAST WETTED CHANNEL EDGE.
  6. ADD BRACING TIMBER AS NEEDED TO SUPPORT THE SCREEN.
  7. REMOVE DEBRIS FROM THE UPSTREAM SIDE OF FENCE AS NECESSARY TO PREVENT CLOGGING.



**GRAVEL BAG COFFERDAM** (5/19)  
NOT TO SCALE

**Natural Systems Design**  
P.O. Box 15609  
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: NA  
DATE: 01/26/16



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DEPT. OF PUBLIC WORKS  
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PORT ORCHARD, WA 98366  
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**CLEAR CREEK  
FLOODPLAIN RESTORATION  
TESC AND REMOVAL-  
DETAILS**  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
19  
OF  
73

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20. GRADING PLAN FOR NORTHERN WEST FORK, 1/26/16, 10:00 AM, GARY


  
 P.O. Box 15609
   
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
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CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 GRADING  
 NORTHERN WEST FORK  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 20  
 OF  
 73

Jan-26-2016 100% SUBMITTAL

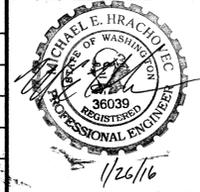


SCALE:  
0 10' 20' 40'

**Natural Systems Design**  
P.O. Box 15609  
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: NA  
DATE: 02/26/16

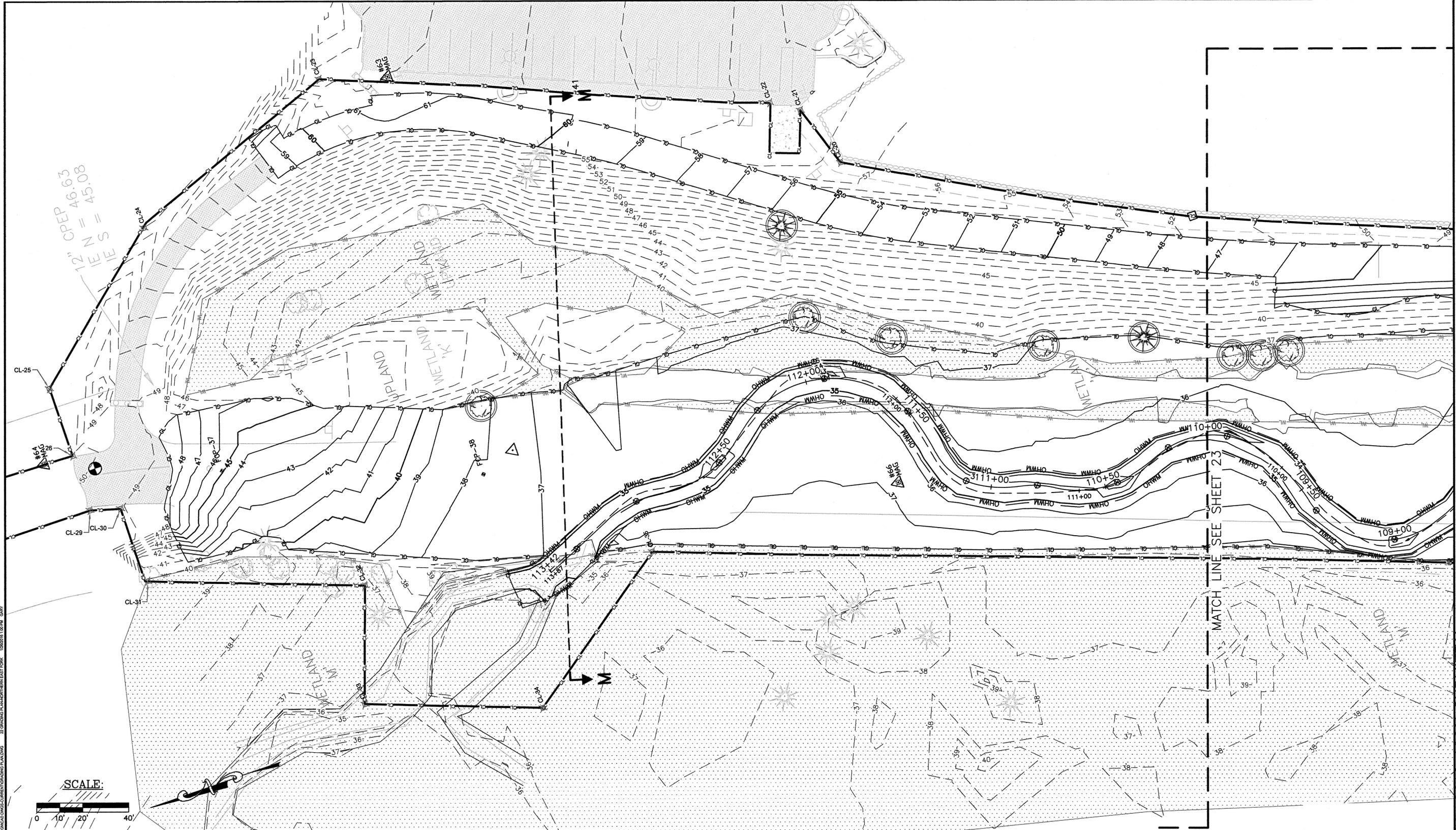


**KITSAP COUNTY**  
DEPT. OF PUBLIC WORKS  
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PORT ORCHARD, WA 98366  
TEL: (360) 337-5777 FAX: (360) 337-4867

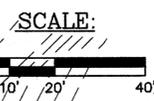
**CLEAR CREEK  
FLOODPLAIN RESTORATION  
GRADING  
SOUTHERN WEST FORK**  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
21  
OF  
73

Jan-26-2016 100% SUBMITTAL



12" CPEP  
 IE N = 46.63  
 IE S = 45.08

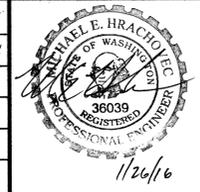


MATCH LINE SEE SHEET 23

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



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 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 GRADING  
 NORTHERN EAST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 18, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

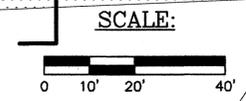
SHEET  
 22  
 OF  
 73

Jan-26-2016 100% SUBMITTAL

DOG PARK

CRIDA METLAND AREA

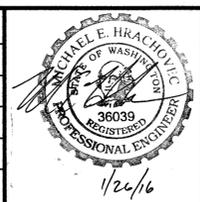
W. METLAND



REVISIONS

No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 2/22/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
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 TEL:(360) 337-5777 FAX:(360) 337-4867

CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 GRADING  
 SOUTHERN EAST FORK  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

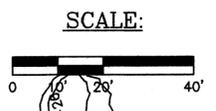
SHEET  
 23  
 OF  
 73

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N:\PROJECTS\KITSAP CLEAR CREEK FLOODPLAIN RESTORATION DIVISION\GRADING PLAN.DWG 2/22/2016 10:00 AM GWY



PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION PLAN/DWG. 24 GRADING PLAN/CONFLUENCE 1/26/16 1:30 PM GARY

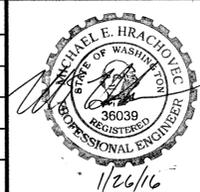


1 IF THIS BAR DOES NOT MEASURE 1" THEN  
 DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 2/26/16

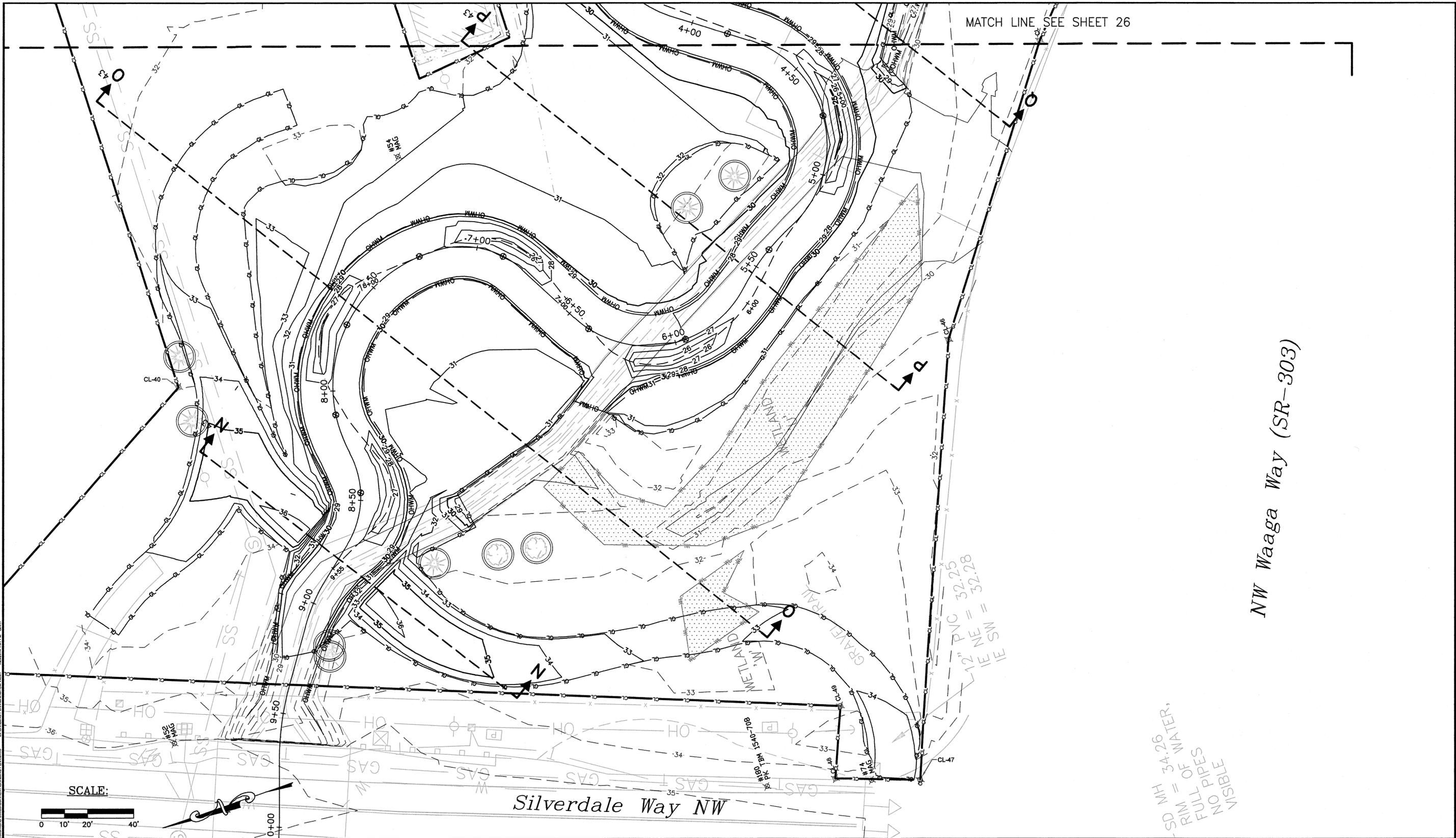


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 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 GRADING  
 CONFLUENCE**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 24  
 OF  
 73

Jan-26-2016 100% SUBMITTAL

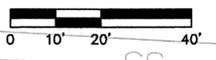


MATCH LINE SEE SHEET 26

NW Waaga Way (SR-303)

Silverdale Way NW

SCALE:



SD MH 34.26  
RIM OF WATER,  
FULL PIPES  
NO PIPES  
VISIBLE

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

REVISIONS

No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: N/A  
DATE: 2/2/16



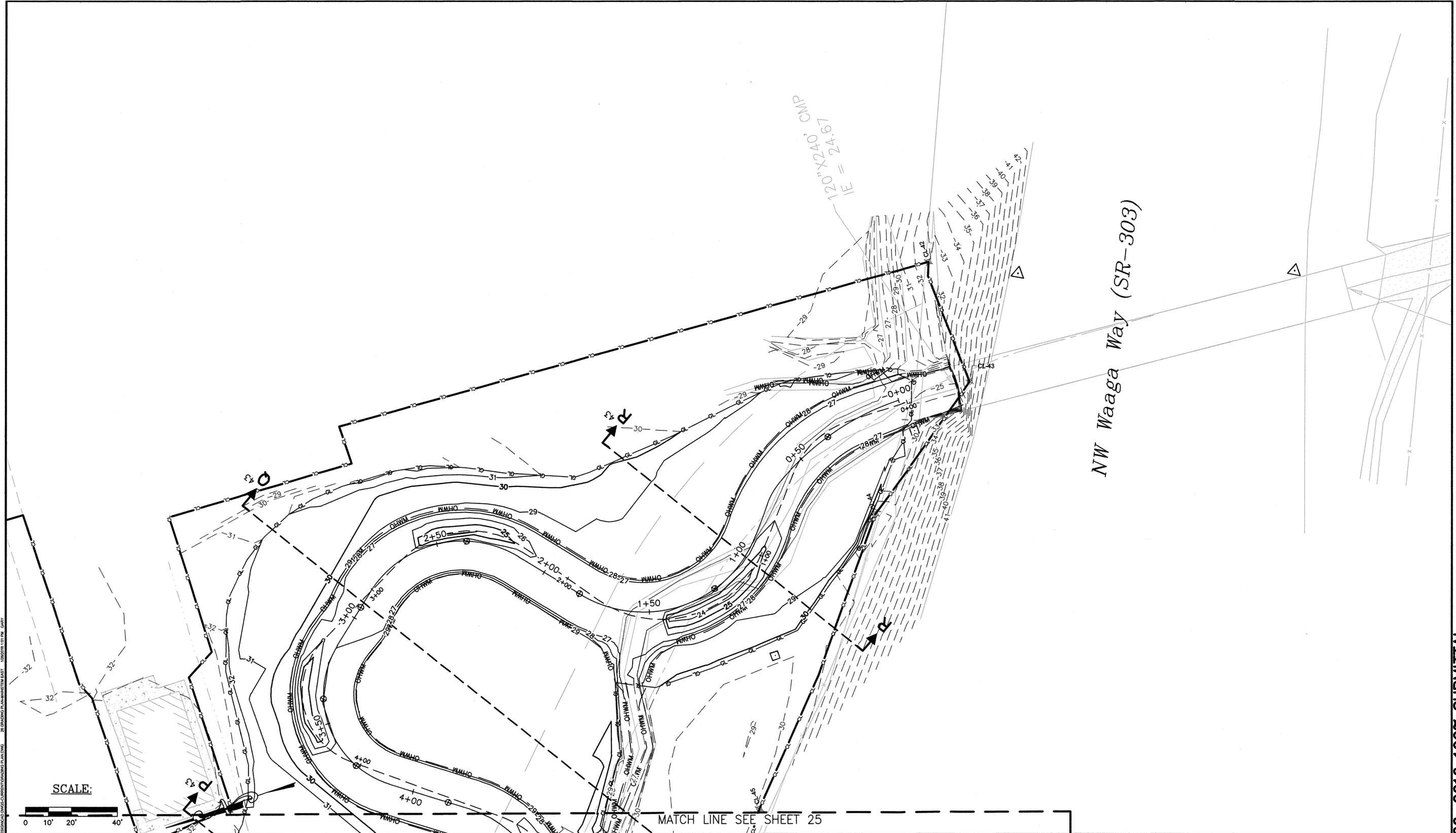
**KITSAP COUNTY**  
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614 DIVISION STREET MS-26  
PORT ORCHARD, WA 98366  
TEL: (360) 337-5777 FAX: (360) 337-4887

CLEAR CREEK  
FLOODPLAIN RESTORATION  
GRADING  
MAINSTEM WEST  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
25  
OF  
73

Jan-26-2016 100% SUBMITTAL

25 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 26 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 27 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 28 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 29 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 30 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 31 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 32 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 33 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 34 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY  
 35 CONTAINS BY MAINSTEM WEST 1/20/16 10:14 AM GARY



PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION MAINSTEM EAST 1/26/16 1:02:27 PM GARY  
 28 GRADING PLAN MAINSTEM EAST 1/26/16 1:02:27 PM GARY

SCALE:



MATCH LINE SEE SHEET 25

NW Waaga Way (SR-303)



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N. L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 6/1/26/16

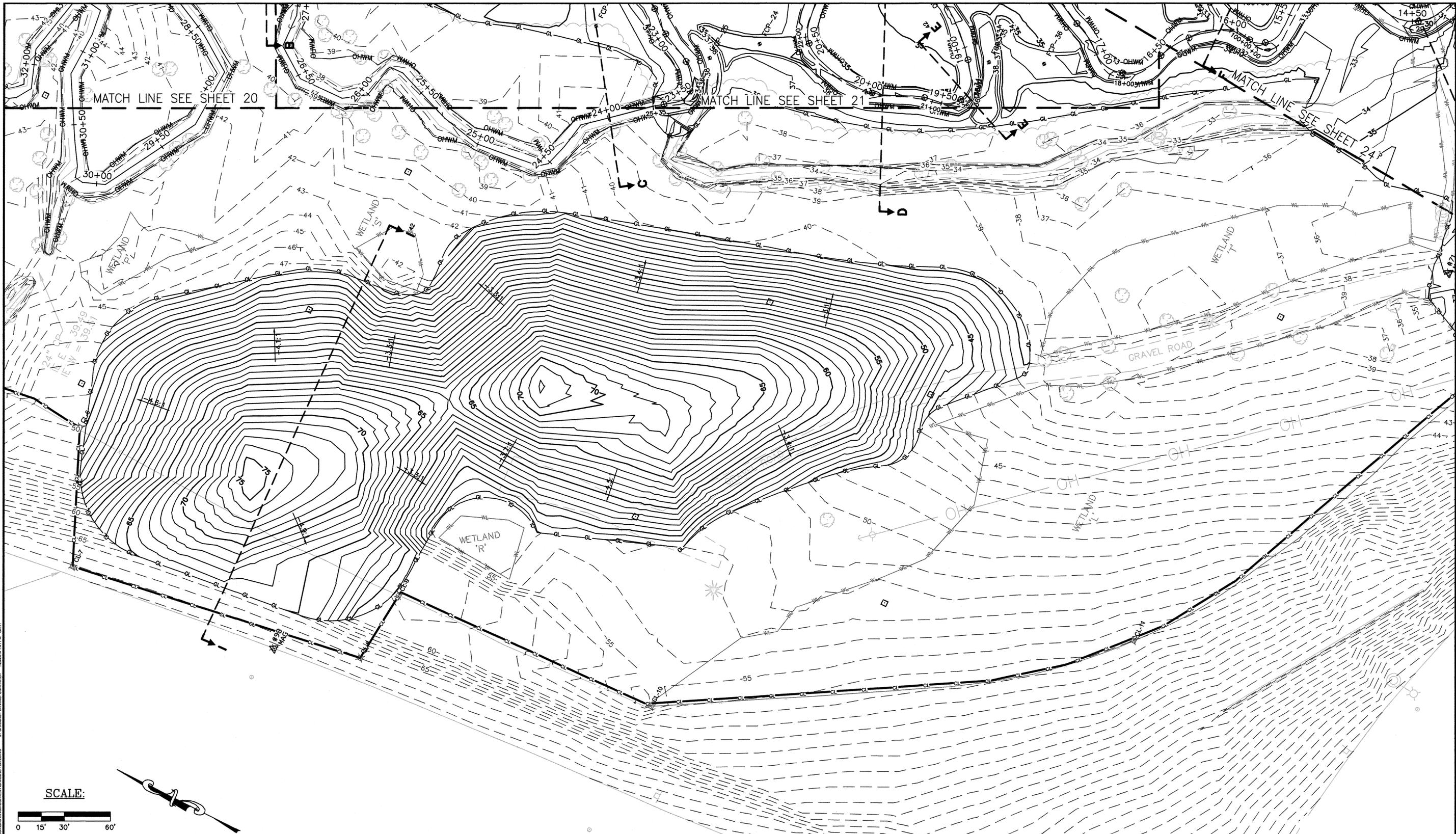


**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 GRADING  
 MAINSTEM EAST  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

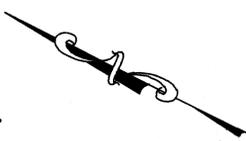
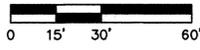
SHEET  
 26  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



MICROFILMED BY CONSERVATION SERVICES, INC. FOR THE NATIONAL ARCHIVES. 27 JANUARY 1987. 10:00 AM. 100% SUBMITTAL

SCALE:



0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



P.O. Box 15609  
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 2/26/16

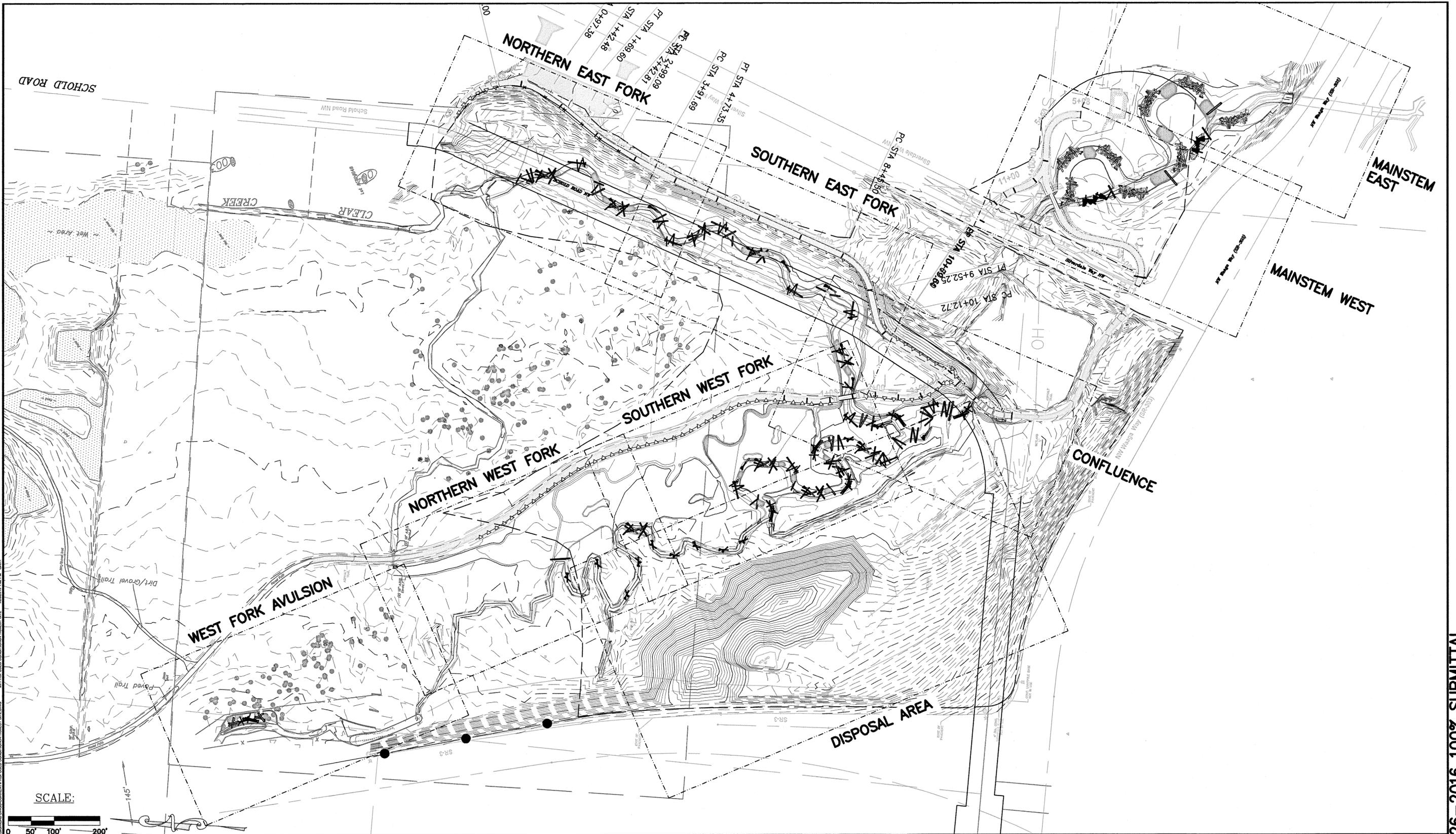


**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
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CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 GRADING  
 DISPOSAL AREA  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 18, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 27  
 OF  
 73

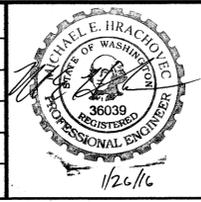
Jan-26-2016 100% SUBMITTAL




  
 P.O. Box 15609  
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REVISIONS		
No.	BY	DATE

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16

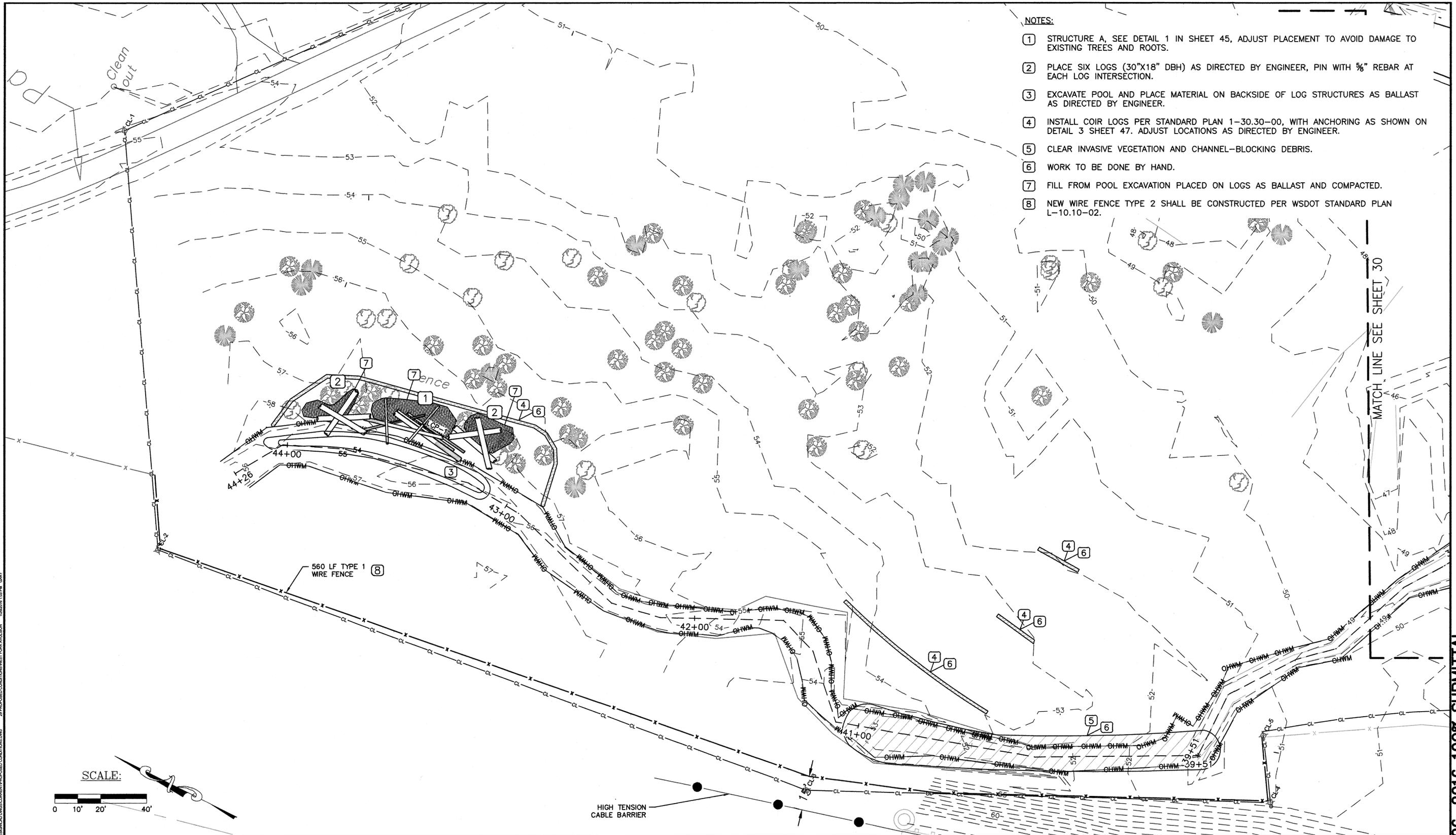



  
**KITSAP COUNTY**  
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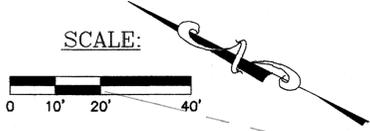
CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 PROJECT SITE  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 28  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



- NOTES:**
- ① STRUCTURE A, SEE DETAIL 1 IN SHEET 45, ADJUST PLACEMENT TO AVOID DAMAGE TO EXISTING TREES AND ROOTS.
  - ② PLACE SIX LOGS (30"x18" DBH) AS DIRECTED BY ENGINEER, PIN WITH 5/8" REBAR AT EACH LOG INTERSECTION.
  - ③ EXCAVATE POOL AND PLACE MATERIAL ON BACKSIDE OF LOG STRUCTURES AS BALLAST AS DIRECTED BY ENGINEER.
  - ④ INSTALL COIR LOGS PER STANDARD PLAN 1-30.30-00, WITH ANCHORING AS SHOWN ON DETAIL 3 SHEET 47. ADJUST LOCATIONS AS DIRECTED BY ENGINEER.
  - ⑤ CLEAR INVASIVE VEGETATION AND CHANNEL-BLOCKING DEBRIS.
  - ⑥ WORK TO BE DONE BY HAND.
  - ⑦ FILL FROM POOL EXCAVATION PLACED ON LOGS AS BALLAST AND COMPACTED.
  - ⑧ NEW WIRE FENCE TYPE 2 SHALL BE CONSTRUCTED PER WSDOT STANDARD PLAN L-10.10-02.



PROJECT: WEST FORK CLEAR CREEK FLOODPLAIN RESTORATION; DRAWING: PROPOSED CONDITIONS; DATE: 1/26/16; 10:29:15 AM; GARY

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
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 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS—  
 WEST FORK AVULSION**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 29  
 OF  
 73

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**NOTES:**

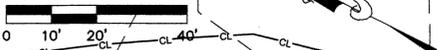
- 1 CORNER STRUCTURE A 1  
45
- 2 CORNER STRUCTURE B 2  
45
- 3 CORNER LOG 3  
45
- 4 OBSTRUCTION LOG 4  
45
- 5 BED LOG 1  
44
- 6 SPANNING LOG 2  
44
- 7 LOG COMPLEX 3  
44
- 8 INSTREAM LOG PLACEMENT 4  
47
- 9 MAINSTEM ELJ 1  
46 2  
46

MATCH LINE SEE SHEET 29

MATCH LINE SEE SHEET 37

MATCH LINE SEE SHEET 31

SCALE:



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**REVISIONS**

No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



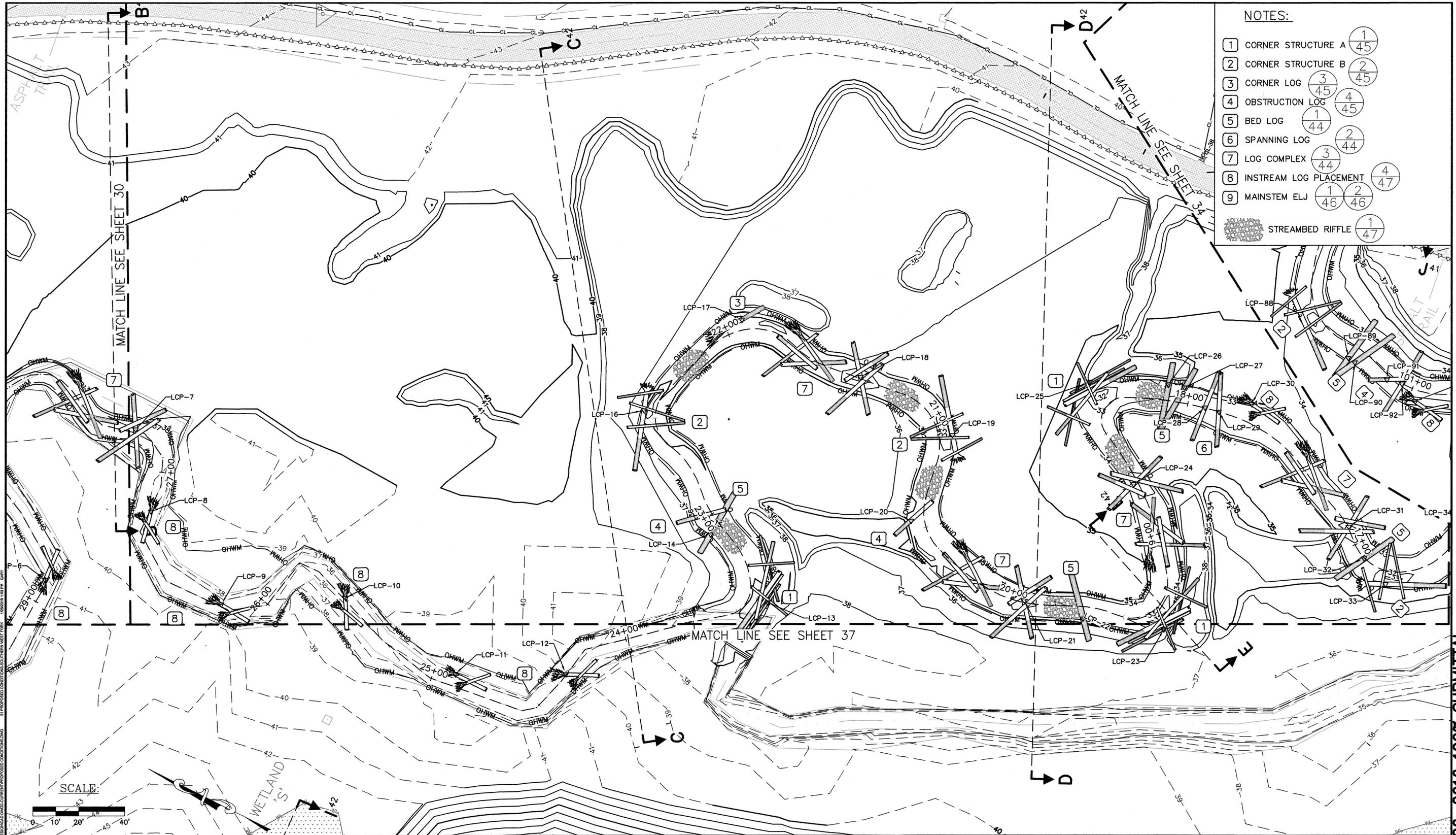
**KITSAP COUNTY**  
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 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 NORTHERN WEST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 30  
 OF  
 73

Jan-26-2016 100% SUBMITTAL

PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION, NORTHERN WEST FORK, PORT ORCHARD, WA. DATE: 01/26/16. DRAWN BY: K. ANDREWS. CHECKED BY: T. ABBE. SCALE: AS SHOWN. SHEET: 30 OF 73.

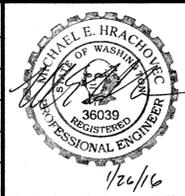


- NOTES:**
- ① CORNER STRUCTURE A ①  
45
  - ② CORNER STRUCTURE B ②  
45
  - ③ CORNER LOG ③  
45
  - ④ OBSTRUCTION LOG ④  
45
  - ⑤ BED LOG ⑤  
44
  - ⑥ SPANNING LOG ⑥  
44
  - ⑦ LOG COMPLEX ⑦  
44
  - ⑧ INSTREAM LOG PLACEMENT ⑧  
47
  - ⑨ MAINSTEM ELJ ⑨  
46
  - STREAMBED RIFFLE ①  
47

**Natural Systems Design**  
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 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 01/26/16

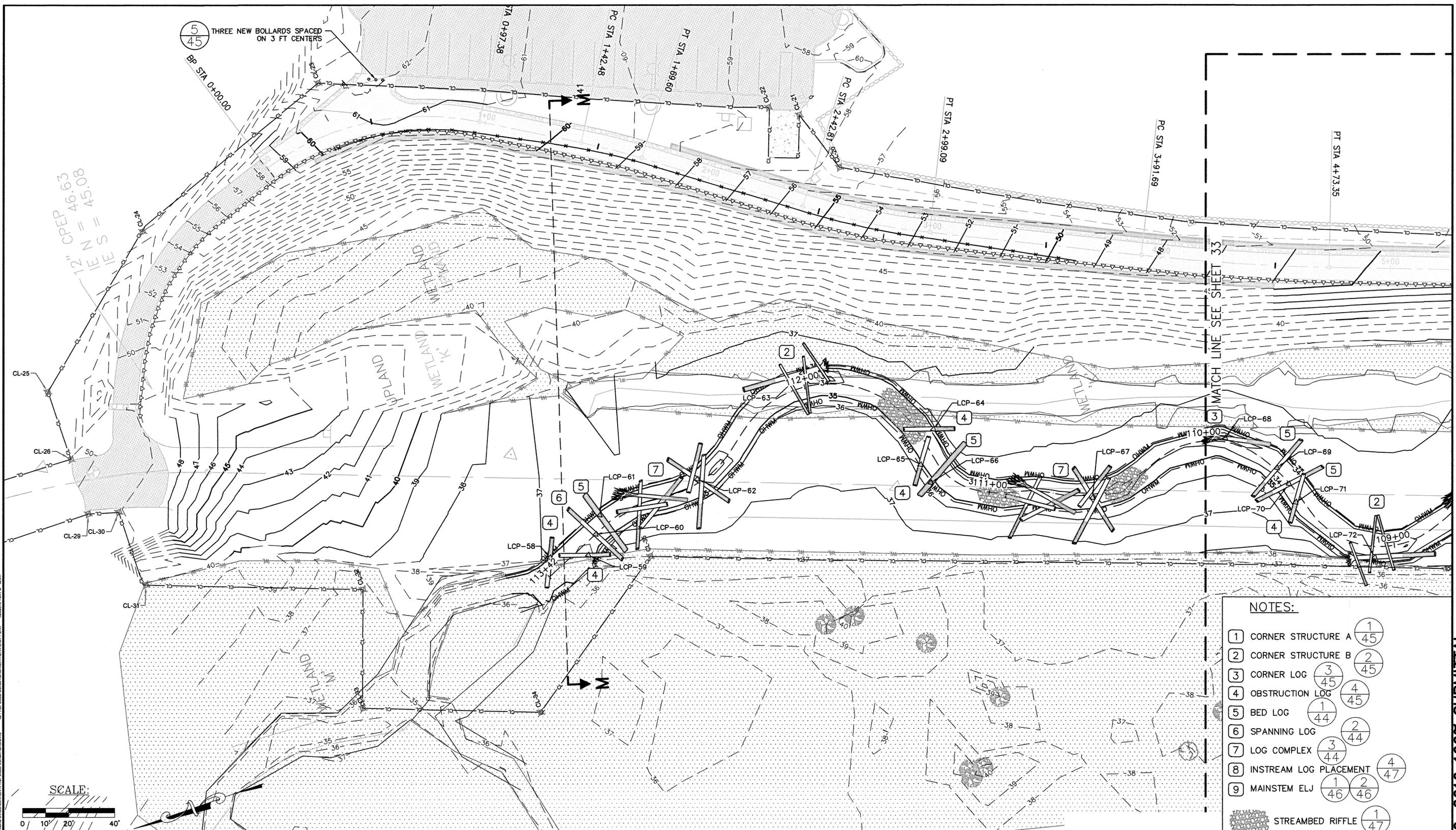


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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 SOUTHERN WEST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 31  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



5  
45  
THREE NEW BOLLARDS SPACED ON 3 FT CENTERS

12" CPEP  
E I E N = 46.63  
S = 45.08

**NOTES:**

- 1 CORNER STRUCTURE A 1  
45
- 2 CORNER STRUCTURE B 2  
45
- 3 CORNER LOG 3  
45
- 4 OBSTRUCTION LOG 1  
45
- 5 BED LOG 1  
44
- 6 SPANNING LOG 3  
44
- 7 LOG COMPLEX 3  
44
- 8 INSTREAM LOG PLACEMENT 4  
47
- 9 MAINSTEM ELJ 1  
46 2  
46
- STREAMBED RIFFLE 1  
47

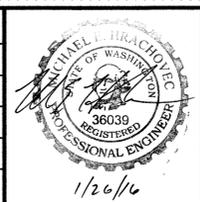


**Natural Systems Design**

P.O. Box 15609  
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

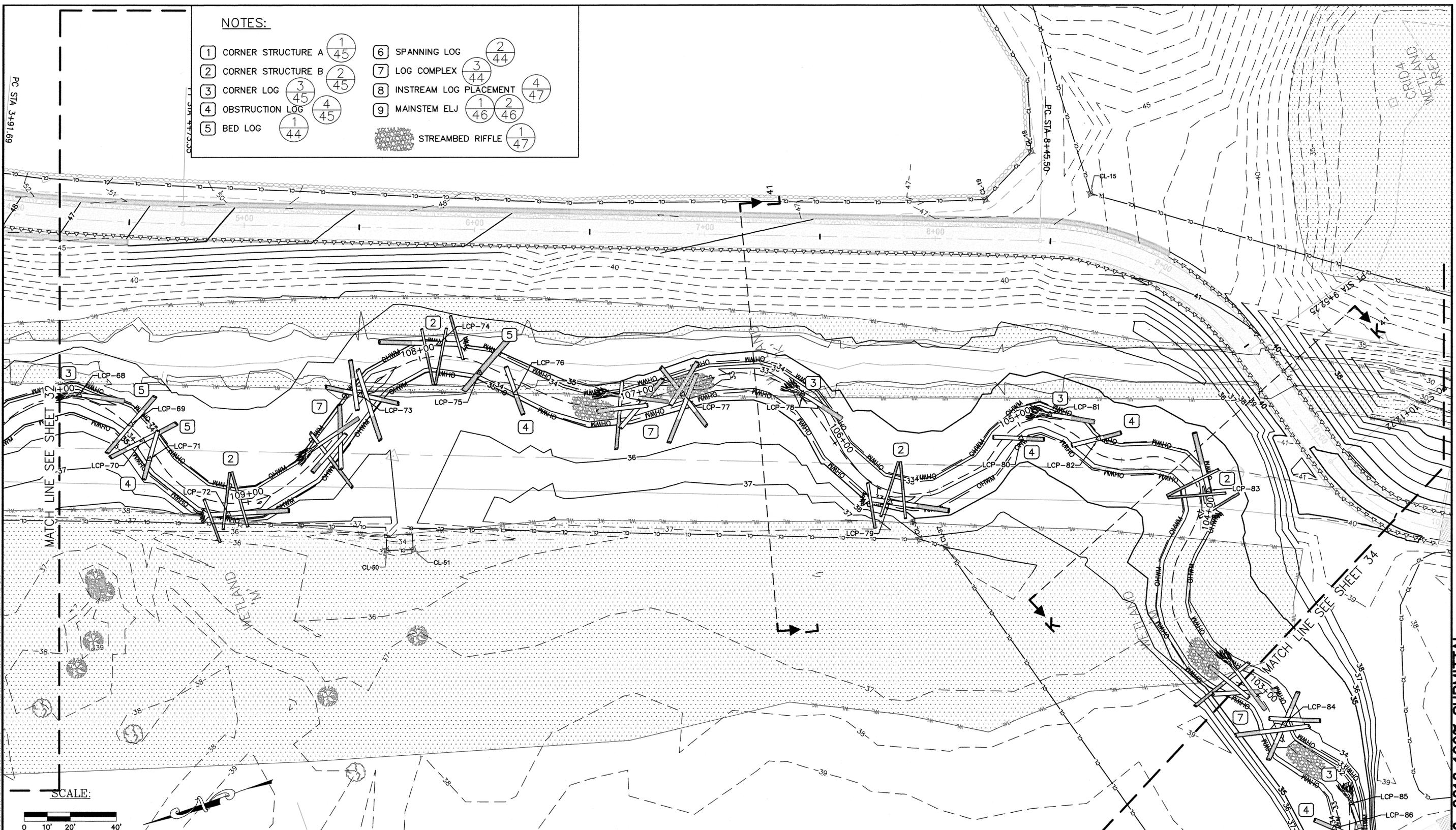
**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 NORTHERN EAST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 32  
 OF  
 73

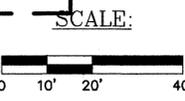
Jan-26-2016 100% SUBMITTAL

NOTES:

- 1 CORNER STRUCTURE A 1/45
- 2 CORNER STRUCTURE B 2/45
- 3 CORNER LOG 3/45
- 4 OBSTRUCTION LOG 4/45
- 5 BED LOG 1/44
- 6 SPANNING LOG 2/44
- 7 LOG COMPLEX 3/44
- 8 INSTREAM LOG PLACEMENT 4/47
- 9 MAINSTEM ELJ 1/46 2/46
- STREAMBED RIFFLE 1/47



33 PROPOSED CONDITIONS-SOUTHERN EAST FORK 1/26/2016 1:04 PM GARY  
 34 PROPOSED CONDITIONS-SOUTHERN EAST FORK 1/26/2016 1:04 PM GARY  
 35 PROPOSED CONDITIONS-SOUTHERN EAST FORK 1/26/2016 1:04 PM GARY  
 36 PROPOSED CONDITIONS-SOUTHERN EAST FORK 1/26/2016 1:04 PM GARY  
 37 PROPOSED CONDITIONS-SOUTHERN EAST FORK 1/26/2016 1:04 PM GARY  
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 39 PROPOSED CONDITIONS-SOUTHERN EAST FORK 1/26/2016 1:04 PM GARY

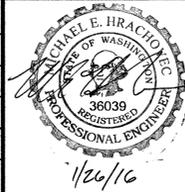


IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



**KITSAP COUNTY**  
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 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 SOUTHERN EAST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

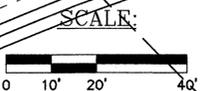
SHEET  
 33  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



**NOTES:**

- 1 CORNER STRUCTURE A  $\frac{1}{45}$
- 2 CORNER STRUCTURE B  $\frac{2}{45}$
- 3 CORNER LOG  $\frac{3}{45}$
- 4 OBSTRUCTION LOG  $\frac{4}{45}$
- 5 BED LOG  $\frac{1}{44}$
- 6 SPANNING LOG  $\frac{2}{44}$
- 7 LOG COMPLEX  $\frac{3}{44}$
- 8 INSTREAM LOG PLACEMENT  $\frac{4}{47}$
- 9 MAINSTEM ELJ  $\frac{1}{46}$   $\frac{2}{46}$
- STREAMBED RIFFLE  $\frac{1}{47}$

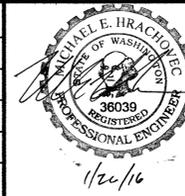


IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 01/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 CONFLUENCE**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 34  
 OF  
 73

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NOTES:

- 1 CORNER STRUCTURE A 1  
45
- 2 CORNER STRUCTURE B 2  
45
- 3 CORNER LOG 3  
45
- 4 OBSTRUCTION LOG 4  
45
- 5 BED LOG 1  
44
- 6 SPANNING LOG 2  
44
- 7 LOG COMPLEX 3  
44
- 8 INSTREAM LOG PLACEMENT 4  
47
- 9 MAINSTEM ELJ 1  
46 2  
46
- STREAMBED RIFFLE 1  
47
- 10 INSTALL 3 SALVAGED TREE TOPS WITH LIMBS MIN. 25' LONG IN ABANDONED CHANNEL. DIG TRENCH AND BURY MIN. 10' OF TRUNK IN BANK WITH MIN. 3' COMPACTED FILL ON TOP OF TRUNK. ORIENT AS DIRECTED BY ENGINEER.
- 11 LOG LENGTH TO BE 40' MIN.

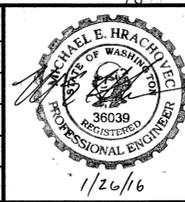


PROJECT: WATERSHED CLEAR CREEK FLOODPLAIN RESTORATION; DRAWING: PROPOSED CONDITIONS MAINSTEM EAST; DATE: 1/26/16 10:00 AM; GARY



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 01/26/16



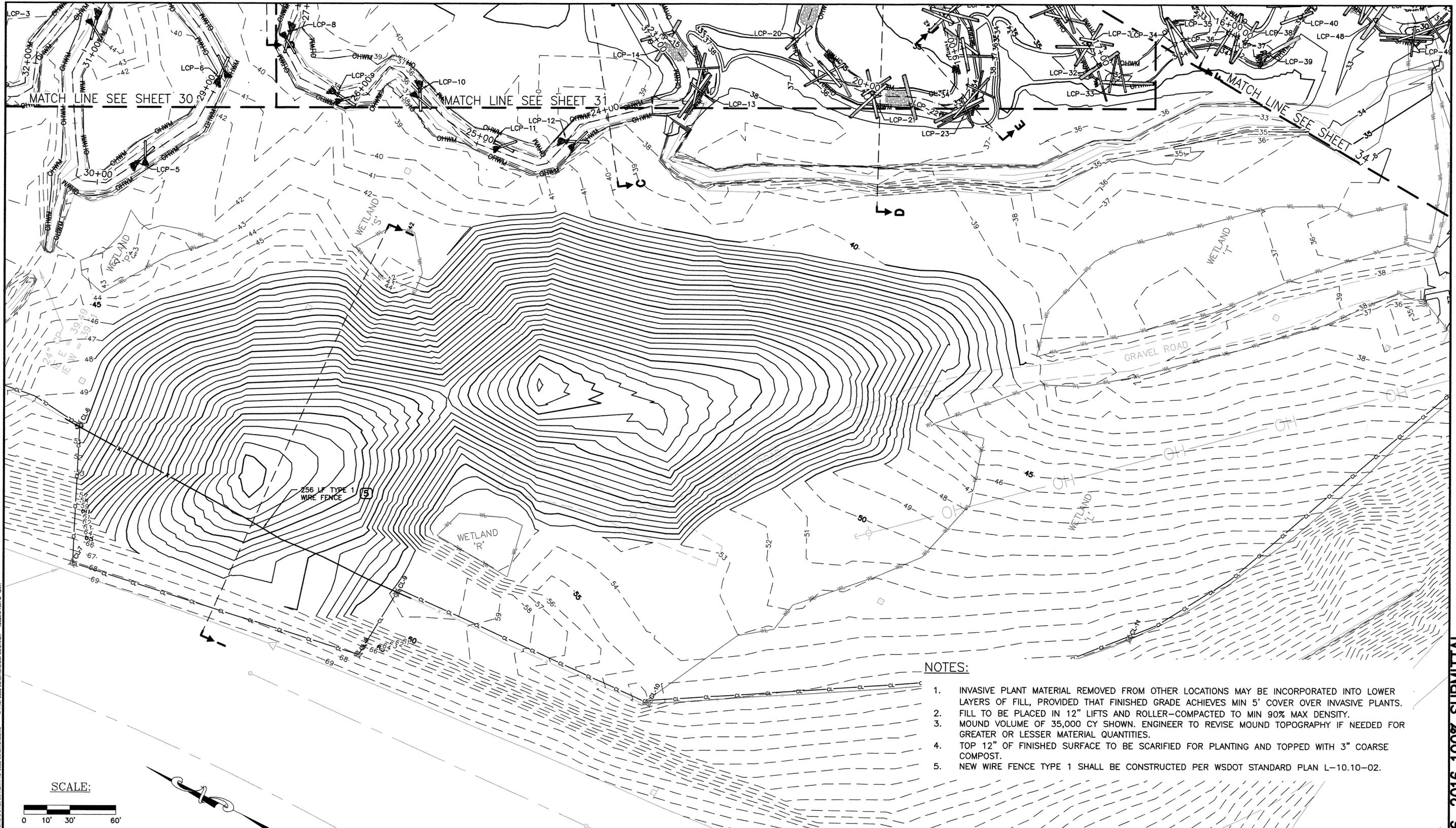
**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98386  
 TEL: (360) 337-5777 FAX: (360) 337-4867

CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 MAINSTEM EAST  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 36  
 OF  
 73

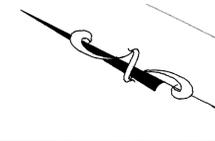
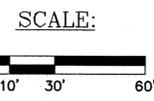
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**NOTES:**

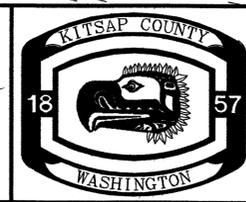
1. INVASIVE PLANT MATERIAL REMOVED FROM OTHER LOCATIONS MAY BE INCORPORATED INTO LOWER LAYERS OF FILL, PROVIDED THAT FINISHED GRADE ACHIEVES MIN 5' COVER OVER INVASIVE PLANTS.
2. FILL TO BE PLACED IN 12" LIFTS AND ROLLER-COMPACTED TO MIN 90% MAX DENSITY.
3. MOUND VOLUME OF 35,000 CY SHOWN. ENGINEER TO REVISE MOUND TOPOGRAPHY IF NEEDED FOR GREATER OR LESSER MATERIAL QUANTITIES.
4. TOP 12" OF FINISHED SURFACE TO BE SCARIFIED FOR PLANTING AND TOPPED WITH 3" COARSE COMPOST.
5. NEW WIRE FENCE TYPE 1 SHALL BE CONSTRUCTED PER WSDOT STANDARD PLAN L-10.10-02.



**Natural Systems Design**  
 P.O. Box 15609  
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REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: A/A  
 DATE: 01/26/16

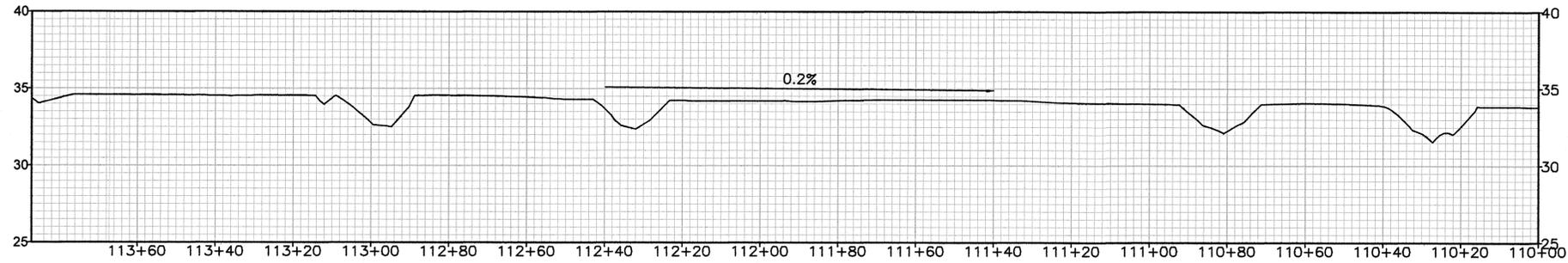


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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PROPOSED CONDITIONS  
 DISPOSAL AREA**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

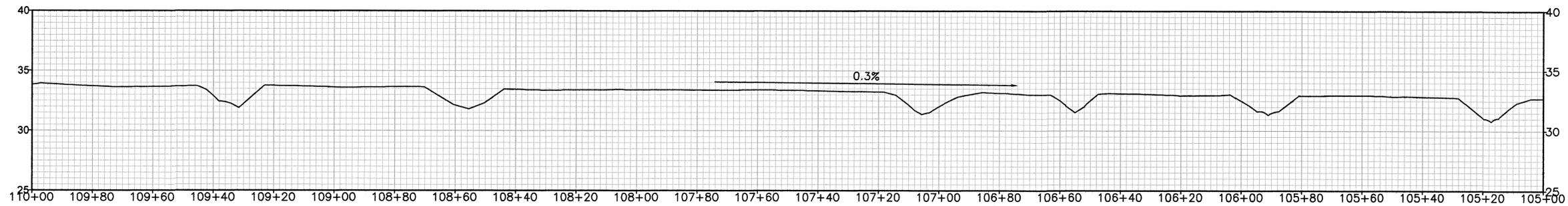
SHEET  
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 OF  
 73

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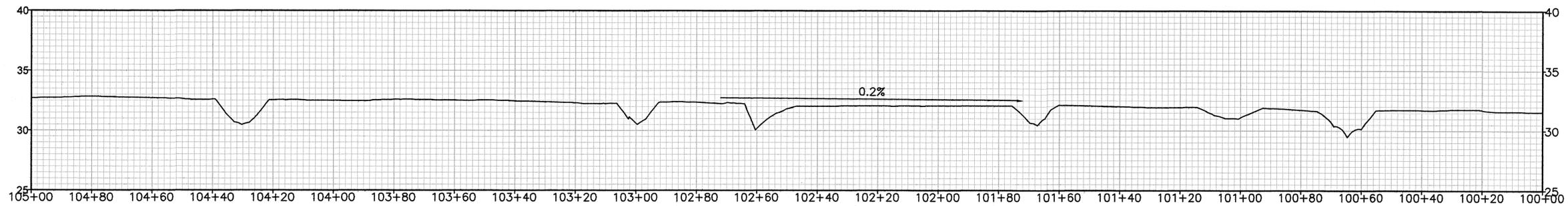
STREAM THALWEG PROFILE - EAST FORK

SCALE: H: 1" = 20' V: 1" = 5'



STREAM THALWEG PROFILE - EAST FORK

SCALE: H: 1" = 20' V: 1" = 5'

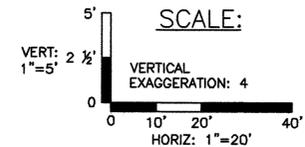


STREAM THALWEG PROFILE - EAST FORK

SCALE: H: 1" = 20' V: 1" = 5'

NOTES:

- THE ELEVATIONS SHOWN IN THE THALWEG PROFILE ARE NOT TO BE USED FOR THE STREAM CONSTRUCTION CENTERLINE. CONTROL POINTS FOR STREAM CONSTRUCTION CENTERLINE, TOP OF BANK AND THALWEG ARE ON SHEET 3.

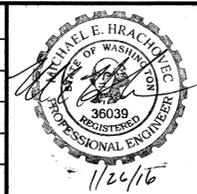


0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.: NA
DATE: 01/24/16



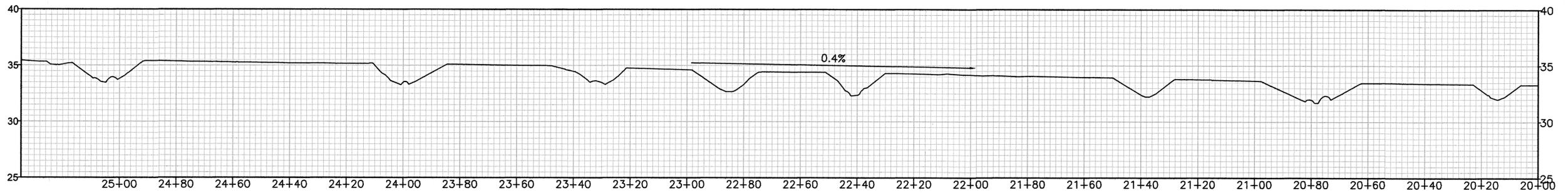
**KITSAP COUNTY**  
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CLEAR CREEK  
FLOODPLAIN RESTORATION  
PROFILE  
EAST FORK  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

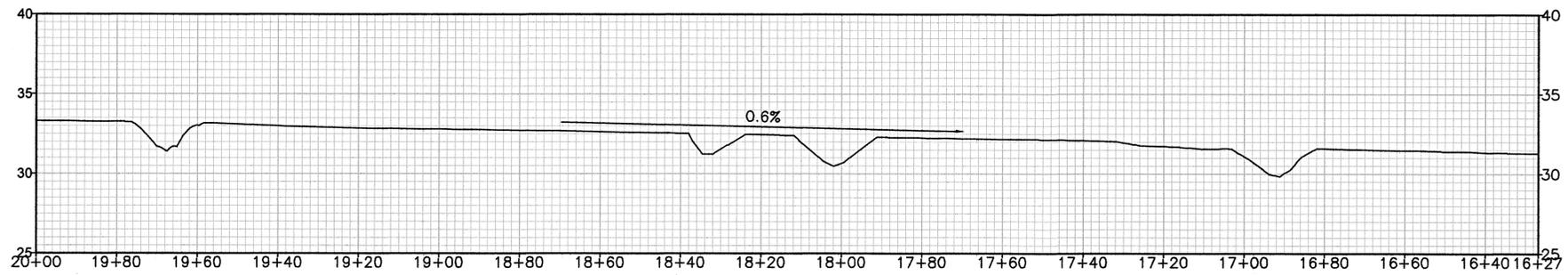
SHEET  
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OF  
73

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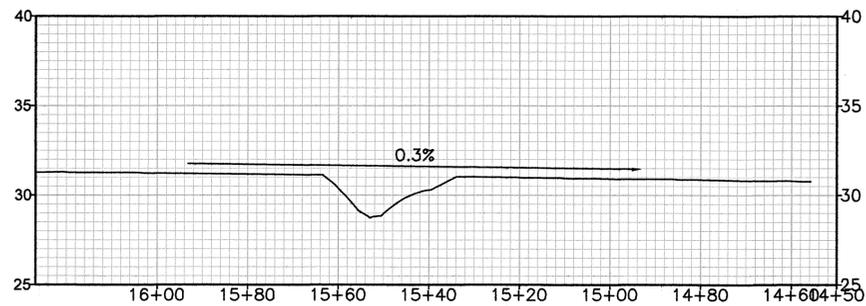
I:\PROJECTS\KITSAP CO\CLEAR CREEK FLOODPLAIN RESTORATION\DWG\CURRENT\PROFILES.DWG 38 PROFILE EAST FORK 1/26/2016 1:08 PM GARY



**STREAM THALWEG PROFILE - WEST FORK**  
SCALE: H: 1" = 20' V: 1" = 5'



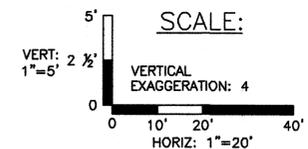
**STREAM THALWEG PROFILE - WEST FORK**  
SCALE: H: 1" = 20' V: 1" = 5'



**STREAM THALWEG PROFILE - WEST FORK**  
SCALE: H: 1" = 20' V: 1" = 5'

**NOTES:**

- THE ELEVATIONS SHOWN IN THE THALWEG PROFILE ARE NOT TO BE USED FOR THE STREAM CONSTRUCTION CENTERLINE. CONTROL POINTS FOR STREAM CONSTRUCTION CENTERLINE, TOP OF BANK AND THALWEG ARE ON SHEET 3.

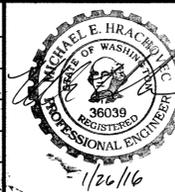


0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: NR  
DATE: 01/26/16

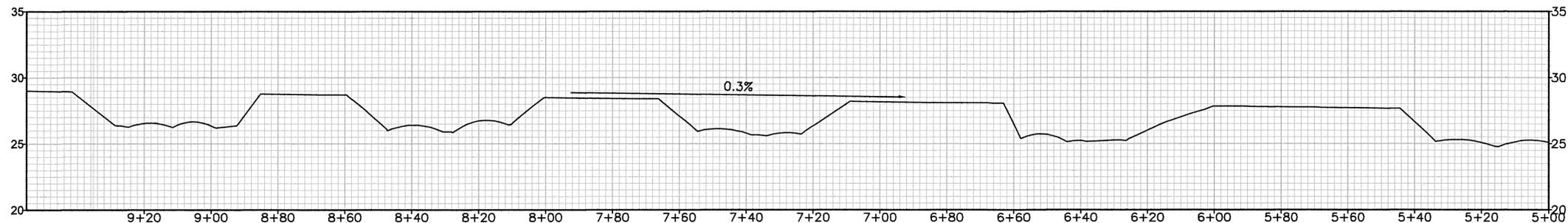


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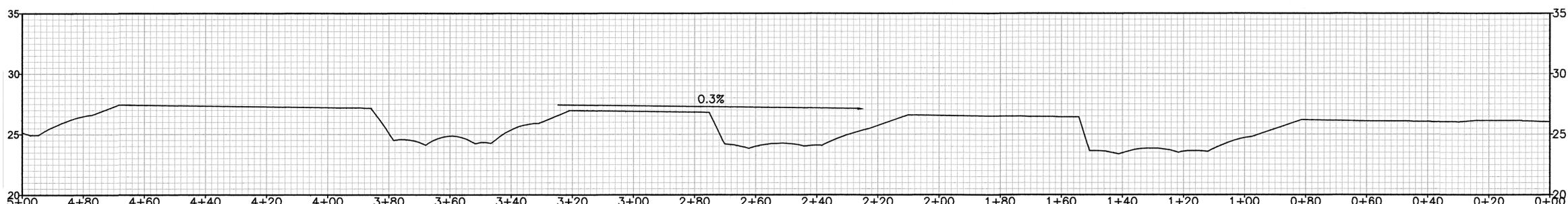
**CLEAR CREEK  
FLOODPLAIN RESTORATION  
PROFILE  
WEST FORK**  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
39  
OF  
73

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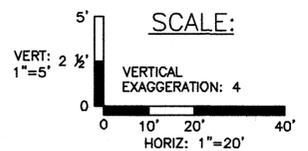
STREAM THALWEG PROFILE — MAIN STEM  
SCALE: H: 1" = 20' V: 1" = 5'



STREAM THALWEG PROFILE — MAIN STEM  
SCALE: H: 1" = 20' V: 1" = 5'

NOTES:

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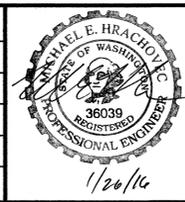


0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: NA  
DATE: 2/26/16



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DEPT. OF PUBLIC WORKS  
614 DIVISION STREET MS-26  
PORT ORCHARD, WA 98366  
TEL:(360) 337-5777 FAX:(360) 337-4867

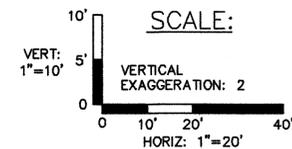
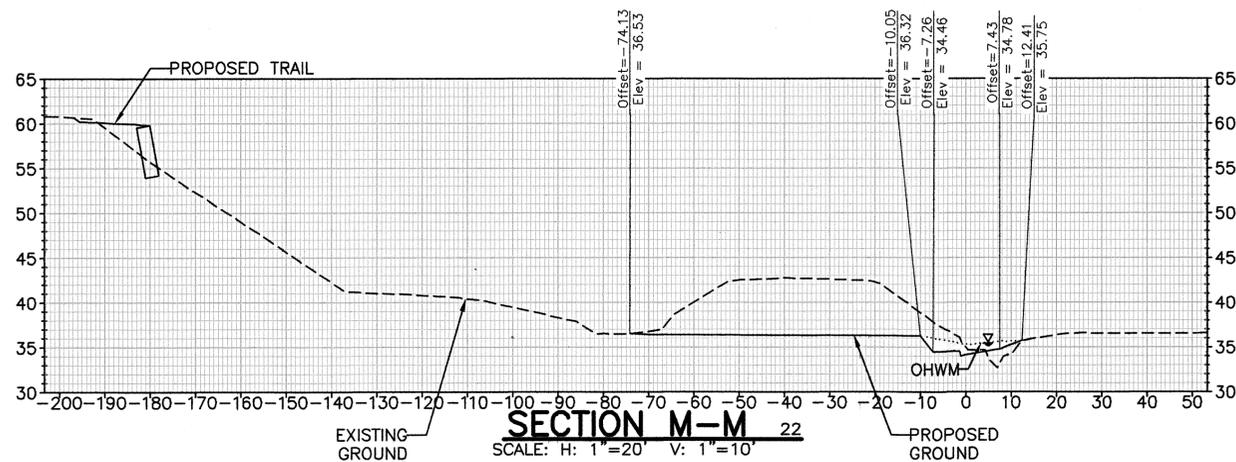
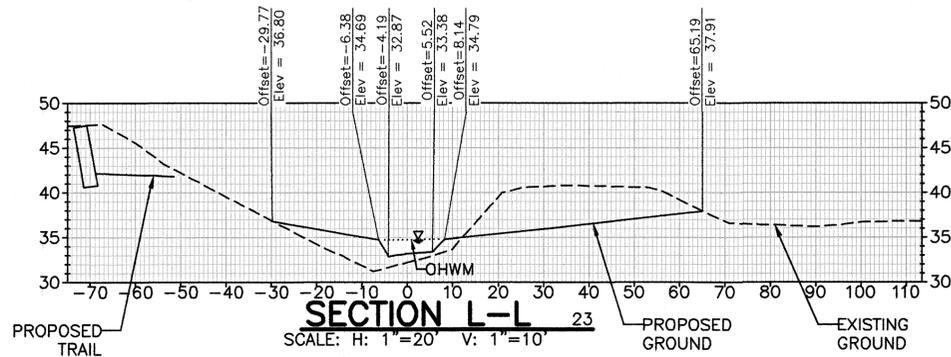
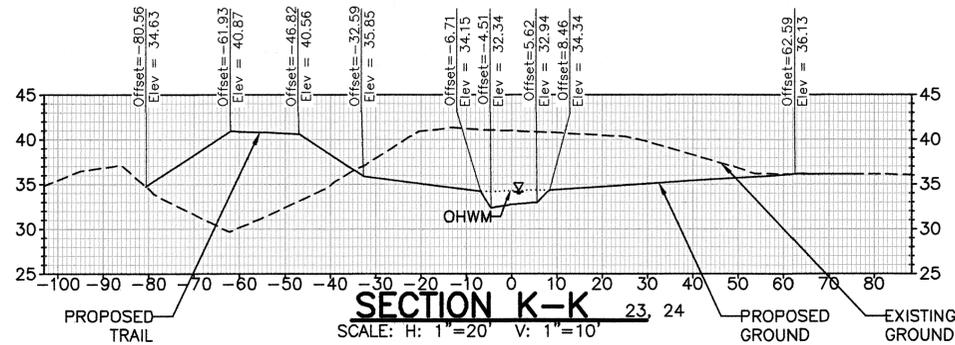
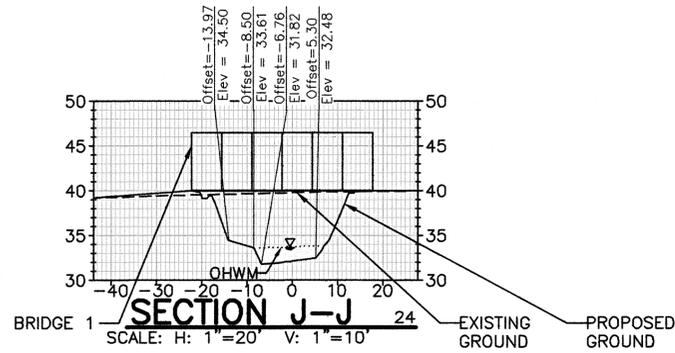
CLEAR CREEK  
FLOODPLAIN RESTORATION  
PROFILE  
MAINSTEM  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
40  
OF  
73

N:\PROJECTS\KITSAP COULDER CREEK FLOODPLAIN RESTORATION\DRAWINGS\PROFILES\040 PROFILE MAINSTEM 12/20/15 1:08 PM GARY

Jan-26-2016 100% SUBMITTAL

N:\PROJECTS\KITSAP COULAS CREEK FLOODPLAIN RESTORATION\DWG\CURRENT\CROSS-SECTIONAL.DWG 41 CROSS-SECTIONS-EAST FORK 1/20/16 1:14 PM GARY



0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



P.O. Box 15609  
Seattle, WA 98115

REVISIONS		
No.	BY	DATE

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: NA  
DATE: 01/26/16



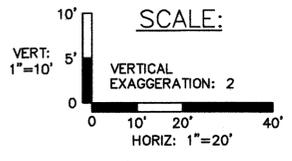
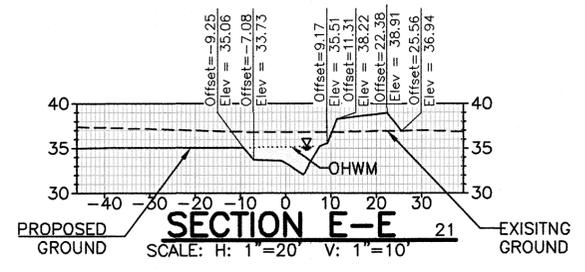
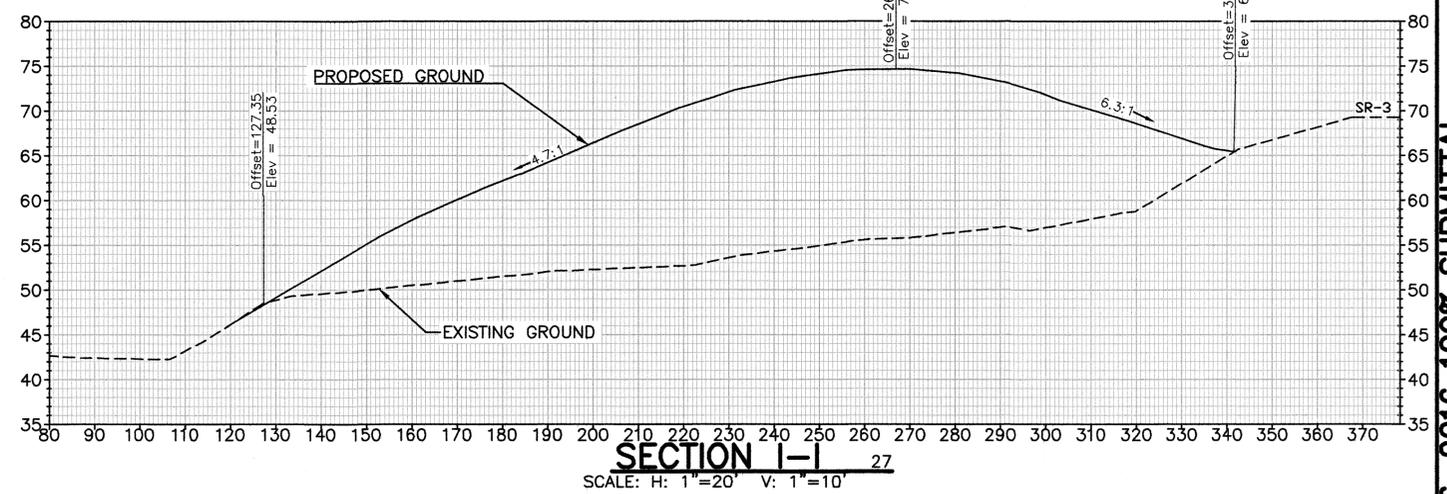
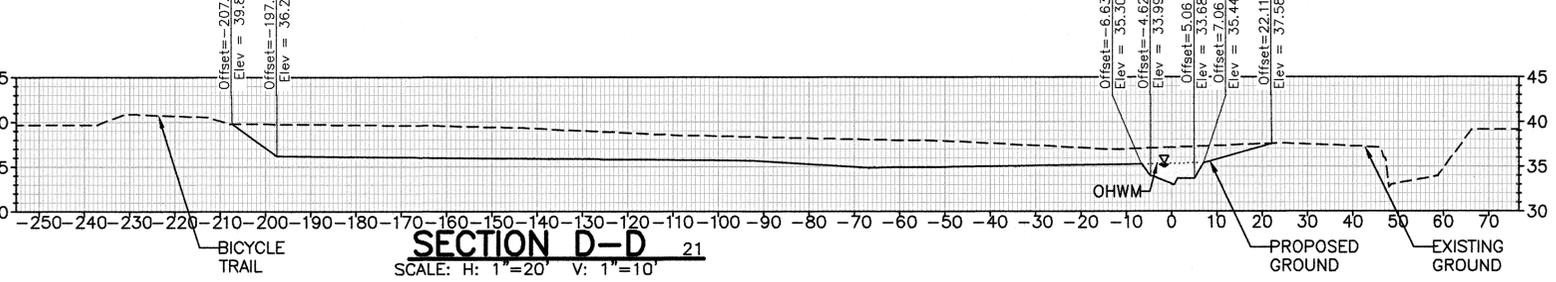
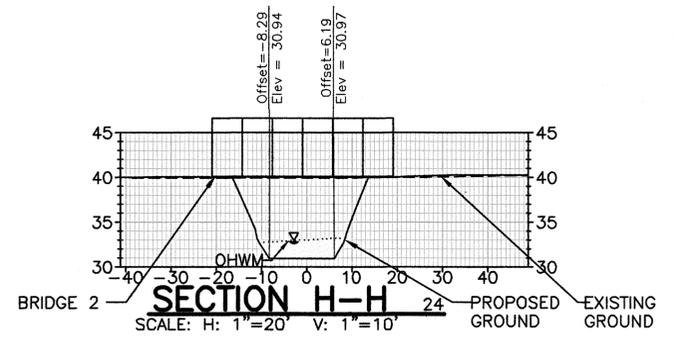
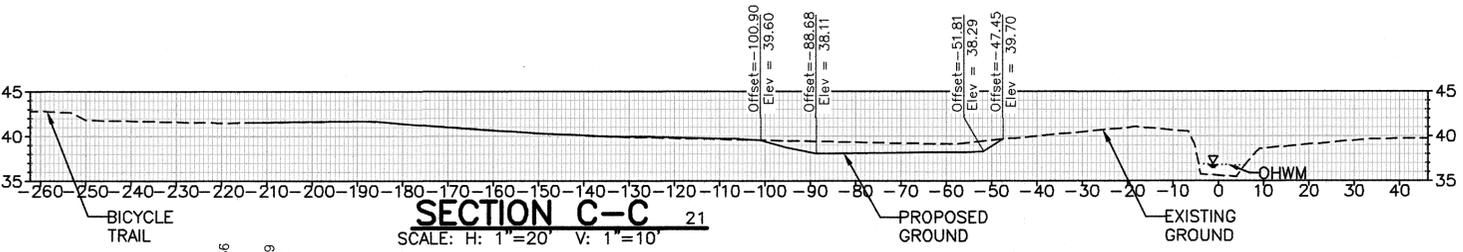
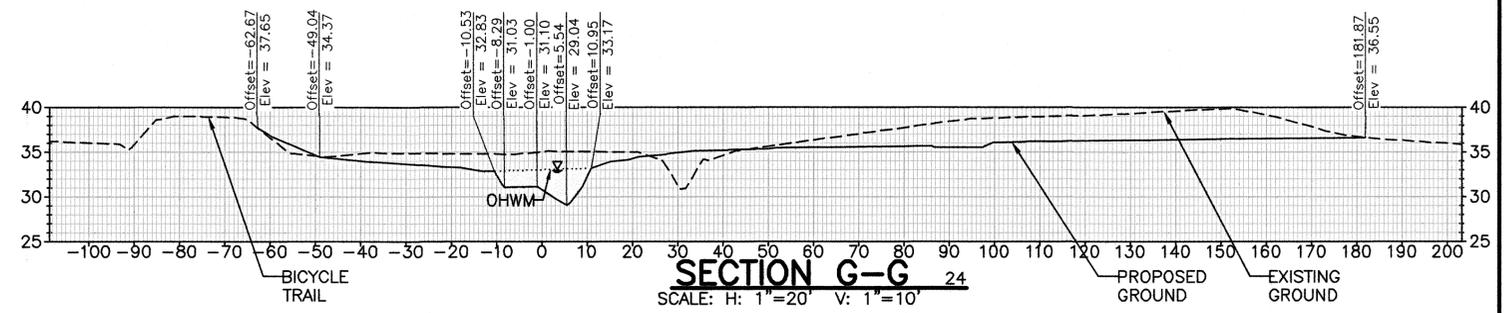
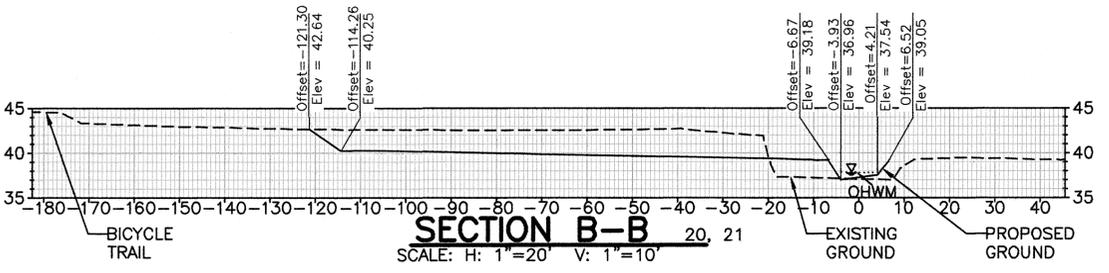
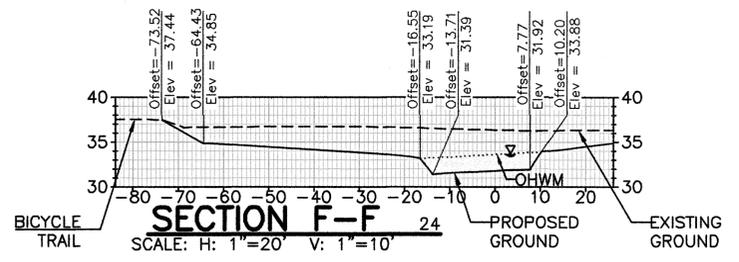
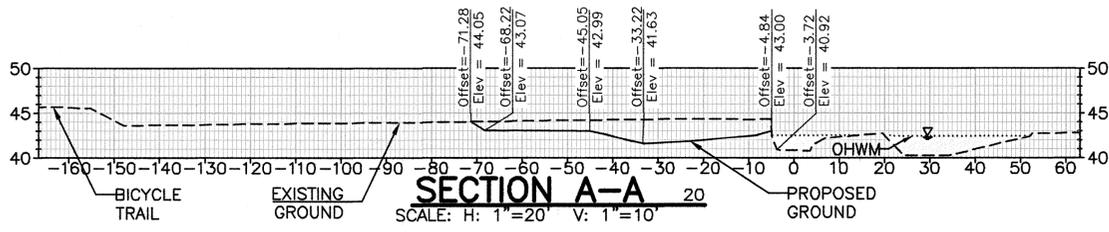
**KITSAP COUNTY**  
DEPT. OF PUBLIC WORKS  
614 DIVISION STREET MS-26  
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CLEAR CREEK  
FLOODPLAIN RESTORATION  
CROSS-SECTIONS  
EAST FORK  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 18, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
41  
OF  
73

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N:\PROJECTS\2016\CLEAR CREEK FLOODPLAIN RESTORATION\DWG\CROSS-SECTIONS\WEST FORK\_1/26/16.DWG 42 CROSS-SECTIONS-14-PM.GRY 1/26/16 14:49

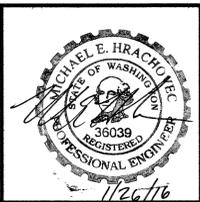


0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/26/16



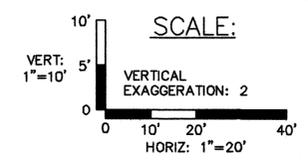
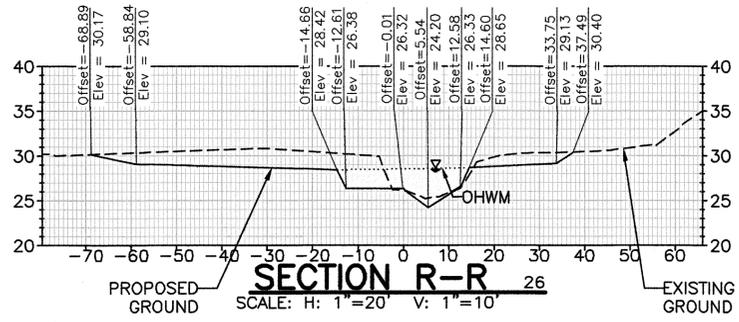
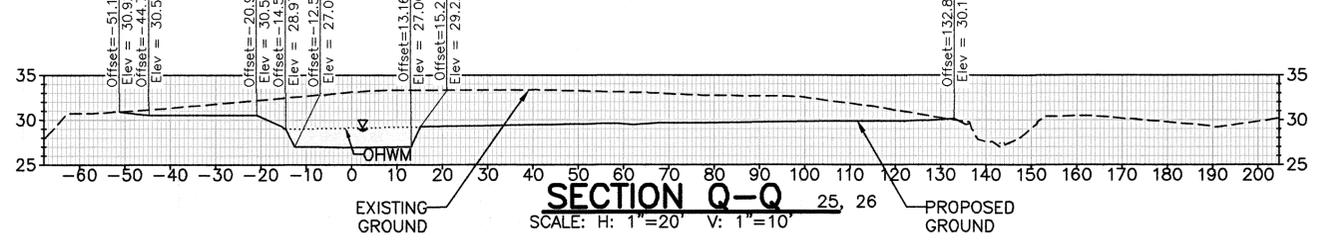
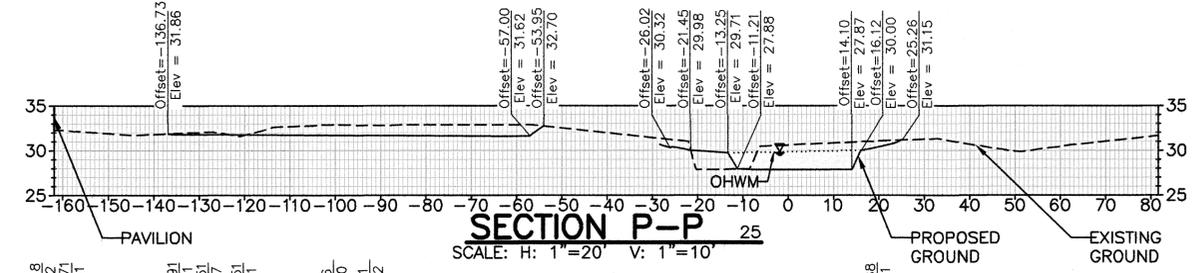
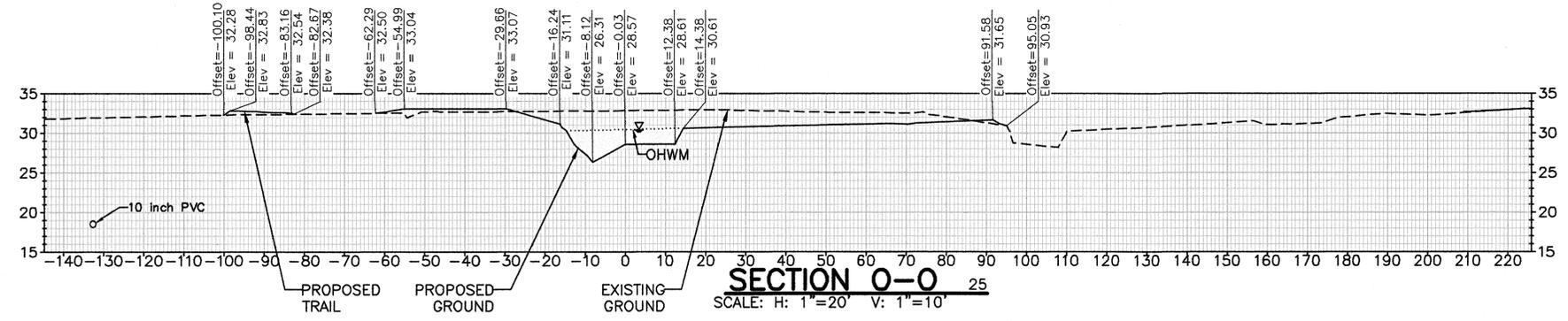
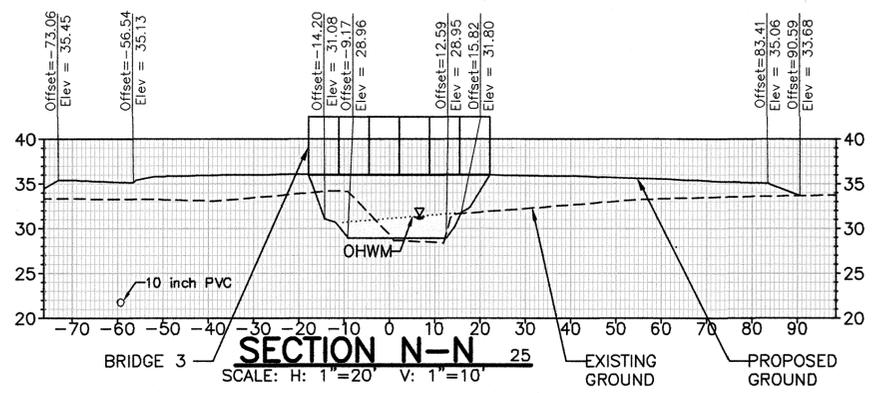
**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 CROSS-SECTIONS  
 WEST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 42  
 OF  
 73

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N:\PROJECTS\WATER COCLEAR CREEK FLOODPLAIN RESTORATION\DRAWINGS\CROSS-SECTIONS\MAINSTEM 1/26/16 1:14 PM GARY 43 CROSS-SECTIONS-MAINSTEM 1/26/16 1:14 PM GARY

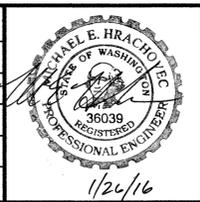


0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 1/26/16

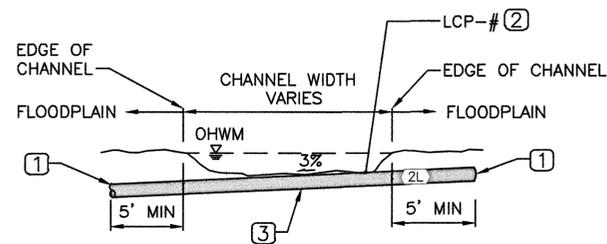


**KITSAP COUNTY**  
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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 CROSS-SECTIONS  
 MAINSTEM**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 43  
 OF  
 73

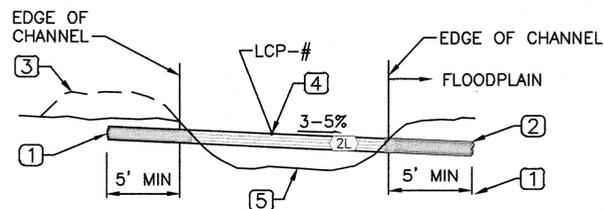
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**NOTES**

- ① BURY MIN 5' LOG END BEYOND EDGE OF CHANNEL BOTH SIDES. MIN LOG LENGTH OF 30'.
- ② LOG EL MEASURED AT HIGHEST POINT IN CHANNEL AT LOCATION SHOWN IN PLAN VIEW. LOG TO BE FULLY BURIED IN CHANNEL AND TO BE SLOPED AS SHOWN.
- ③ LOG DIAMETER TO BE 18" MIN, LENGTH TO BE MIN 10' LONGER THAN BANKFULL WIDTH. 45' MAX LENGTH.

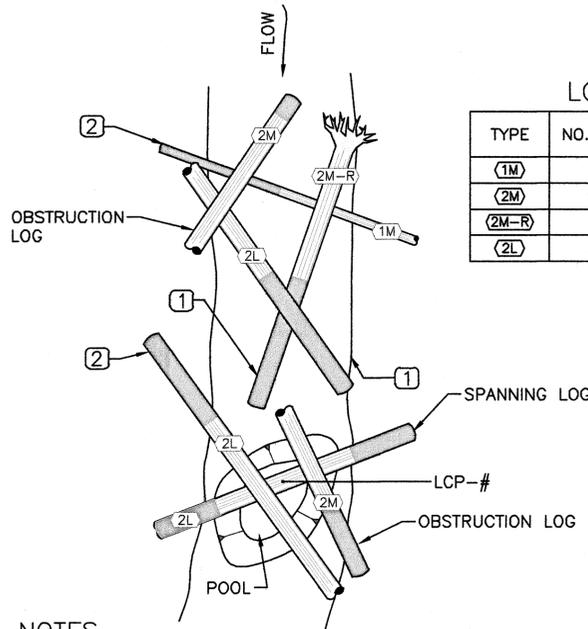
**BED LOG SECTION VIEW (TYP)** ①  
SCALE: 1"=10' 44



**NOTES**

- ① BURY MIN 5' LOG END BEYOND EDGE OF CHANNEL BOTH SIDES.
- ② LOG TO BE BURIED AT LEAST 2' BELOW FLOODPLAIN GRADING ON DEEPEST POINT OF BURIAL.
- ③ ON HIGH SIDE OF LOG ADD A 5' WIDE X 6' LONG PAD OF SOIL ABOVE FLOODPLAIN GRADING EL. ADD SUFFICIENT AMOUNT OF TOPSOIL SUCH THAT THE COMPACTED PAD TOP EL IS AT LEAST 2' ABOVE THE TOP OF LOG.
- ④ SLOPE LOG AT APPROX 3%-5%. LOG DIAMETER TO BE 12"-24", LENGTH TO BE MIN 10' LONGER THAN BANKFUL CHANNEL WIDTH (APPROX. 25'-30').
- ⑤ EXCAVATE POOL BELOW LOG AT A DEPTH EQUIVALENT TO DIAMETER OF LOG ABOVE. GRADE AT 2:1 (H:V) UPSTREAM AND DOWNSTREAM OF LOG.

**SPANING LOG SECTION VIEW (TYP)** ②  
SCALE: 1"=10' 44



**LOG SCHEDULE**

TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
(1M)	1	12-18	20-30
(2M)	2	18-28	20-30
(2M-R)	1	18-28	20-30
(2L)	3	18-28	>30

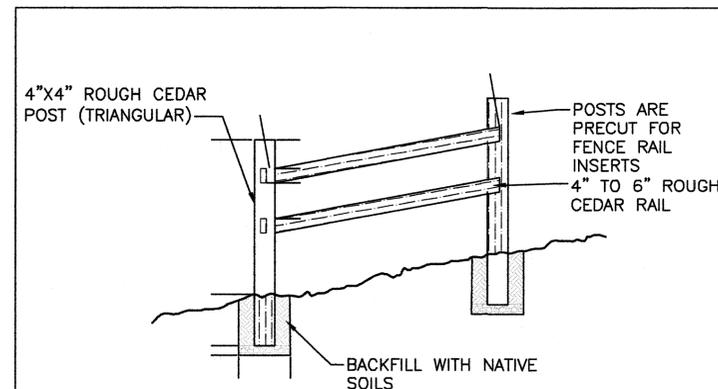
**NOTES**

- ① BURY MIN 10' OF LOG AT LEAST 5' BELOW CHANNEL THALWEG EL AS MEASURED AT DEEPEST POINT OF BURIAL.
- ② BURY MIN 10' OF LOG AT LEAST 5' BELOW FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.

**LOG COMPLEX PLAN VIEW (TYP)** ③  
SCALE: 1"=10' 44



**LOG COMPLEX ISOMETRIC VIEW (TYP)** ⑤  
SCALE: NTS 44



**NOTES:**

- 1. POSTS AND RAILINGS ARE PRECUT FOR ASSEMBLY.
- 2. FENCE AND POSTS ARE TO BE UNTREATED CEDAR MATERIALS.
- 3. FENCES SHALL BE PLACED AT THE APPROVED BUFFER EDGE OR AS DIRECTED BY THE ENGINEER.

**SPLIT RAIL FENCE** ④  
SCALE: 1" = 20' 44

**LOG TYPES**

TYPE	LOG DIA. (IN)	LENGTH (FT)
(1S)	<18	<20
(1M)	<18	20-30
(1L)	<18	>30
(2S)	18-28	<20
(2M)	18-28	20-30
(2L)	18-28	>30
(3S)	>28	<20
(3M)	>28	20-30
(3L)	>28	>30

\* LOG TYPE DESIGNATORS ARE APPENDED WITH "-R" IF THE LOG INCLUDES A ROOT WAD. EXAMPLE: 2L LOG WITH A ROOT WAD = (2L-R)

PROJECT: KITSAP COUNTY CLEAR CREEK FLOODPLAIN RESTORATION DIVISION: CLEAR CREEK LOGS 44 CREEK DETAIL 1 1/26/2016 11:59 AM GARY

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
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CRP No.: N/A  
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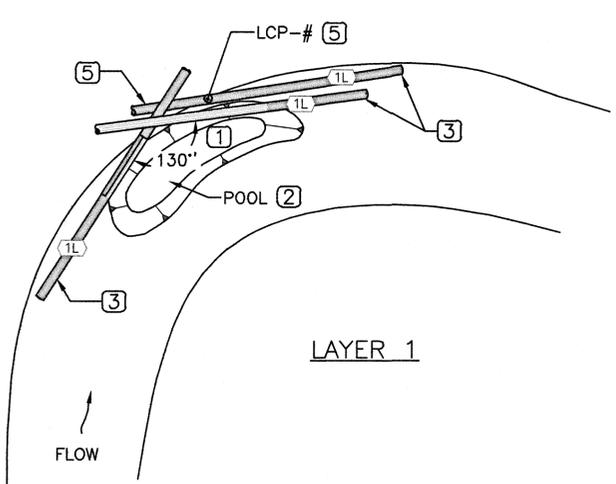


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CLEAR CREEK  
FLOODPLAIN RESTORATION  
DETAILS-  
CLEAR CREEK 1  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

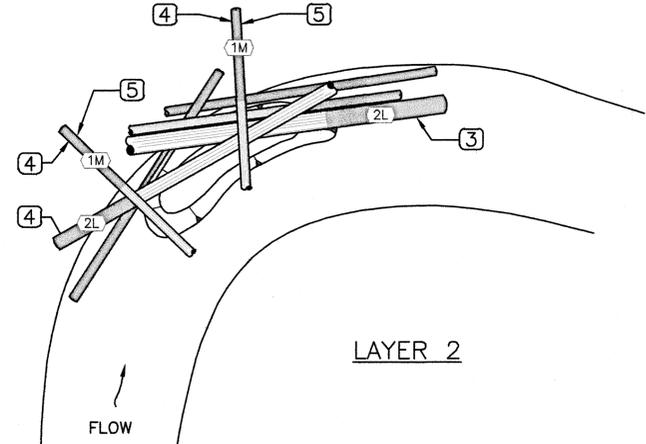
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44  
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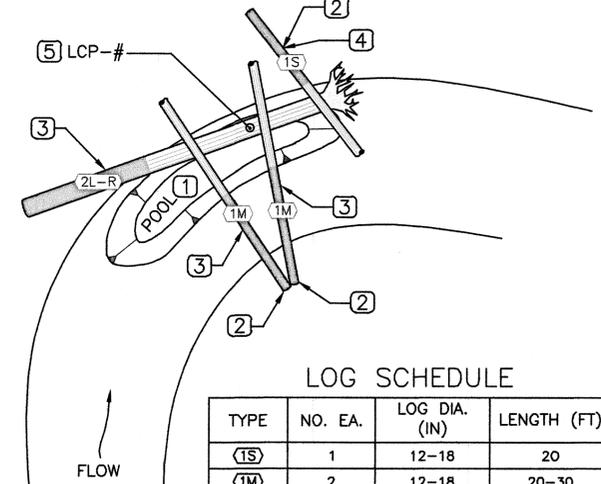


**LOG SCHEDULE**

TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
(1L)	3	12-18	>30
(2L)	2	18-28	>30
(1M)	2	12-18	20-30



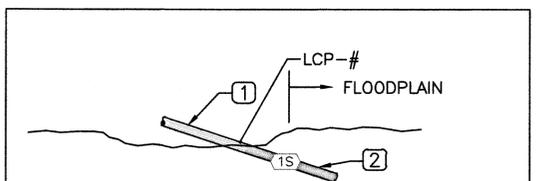
- NOTES**
- ANGLE TO VARY FROM 100° - 150°. ADJUST AS DIRECTED BY ENGINEER.
  - SEE PROFILE FOR POOL GRADING ELEVATIONS.
  - LOG BURIED MIN 3' BELOW ADJACENT CHANNEL CHANNEL PROFILE EL AS MEASURED AT DEEPEST POINT OF BURIAL. 15' OF LOG IS TO BE BURIED.
  - BURY MIN 10' OF LOG.
  - LOG BURIED MIN 5' BELOW SURROUNDING FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.
  - LOGS WITH ROOTWADS MAY BE UTILIZED IN PLACE OF LOGS WITHOUT ROOTWADS.



**LOG SCHEDULE**

TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
(1S)	1	12-18	20
(1M)	2	12-18	20-30
(2L-R)	1	18-28	>30

- NOTES**
- SEE PROFILE FOR POOL GRADING EL'S.
  - LOG BURIED MIN 5' BELOW SURROUNDING FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.
  - BURY MIN 15' OF LOG.
  - BURY MIN 10' OF LOG.
  - STRUCTURE CONTROL POINT EL TO MATCH ADJACENT TOP OF BANK.

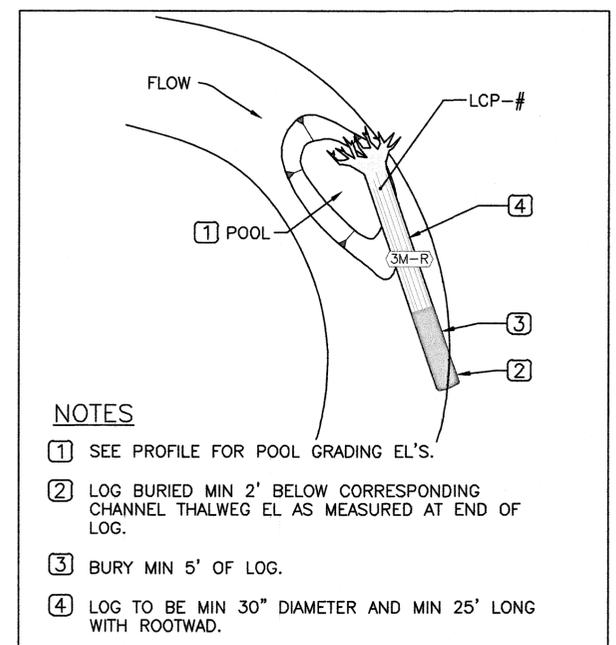


- NOTES**
- LOG TO BE 8"-18" DIAMETER AND 15'-25' LONG.
  - BURY MIN 5' LOG LENGTH. BURY MIN 5' OF LOG BELOW SURROUNDING FLOODPLAIN EL AS MEASURED AT DEEPEST POINT OF BURIAL.

**CORNER STRUCTURE A** (1/45)  
SCALE: 1"=10'

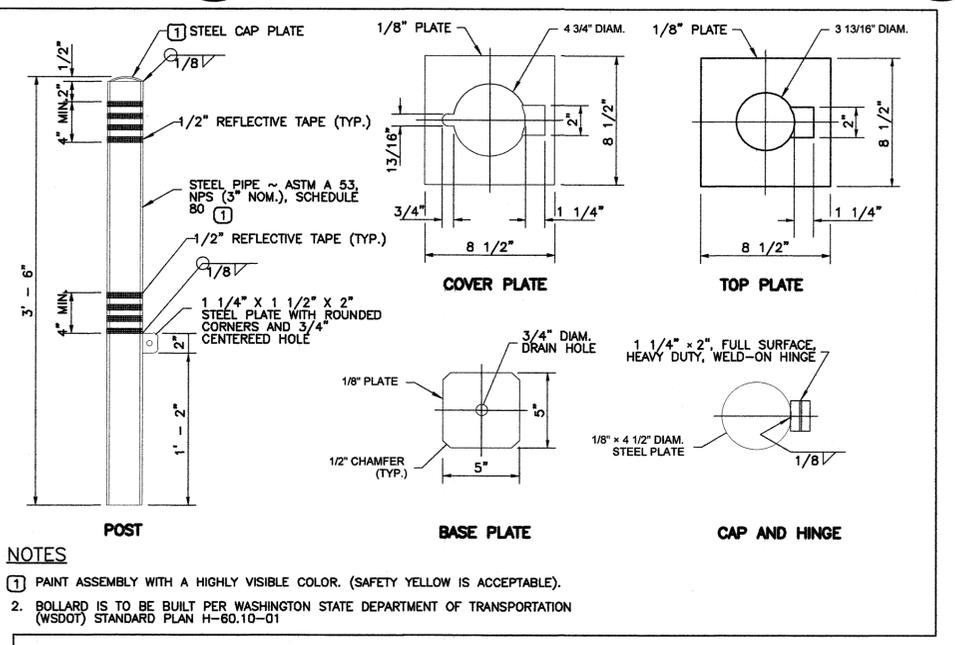
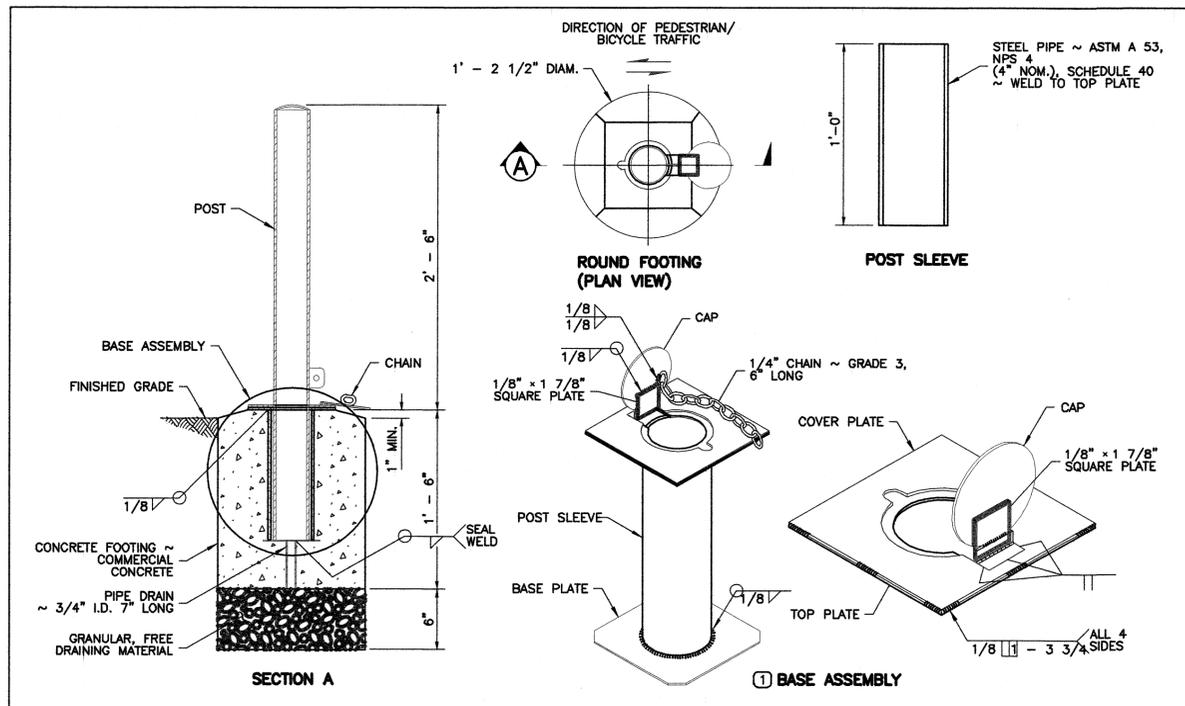
**CORNER STRUCTURE B** (2/45)  
SCALE: 1"=10'

**OBSTRUCTION LOG SECTION VIEW** (4/45)  
SCALE: 1"=10'



- NOTES**
- SEE PROFILE FOR POOL GRADING EL'S.
  - LOG BURIED MIN 2' BELOW CORRESPONDING CHANNEL THALWEG EL AS MEASURED AT END OF LOG.
  - BURY MIN 5' OF LOG.
  - LOG TO BE MIN 30" DIAMETER AND MIN 25' LONG WITH ROOTWAD.

**CORNER LOG (PLAN VIEW)** (3/45)  
SCALE: 1"=10'



- NOTES**
- PAINT ASSEMBLY WITH A HIGHLY VISIBLE COLOR. (SAFETY YELLOW IS ACCEPTABLE).
  - BOLLARD IS TO BE BUILT PER WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD PLAN H-60.10-01

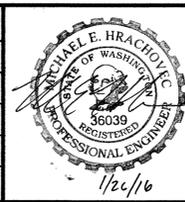
**BOLLARD TYPE 1** (5/45)  
NOT TO SCALE

**Natural Systems Design**  
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**REVISIONS**

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DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: N/A  
DATE: 01/26/16

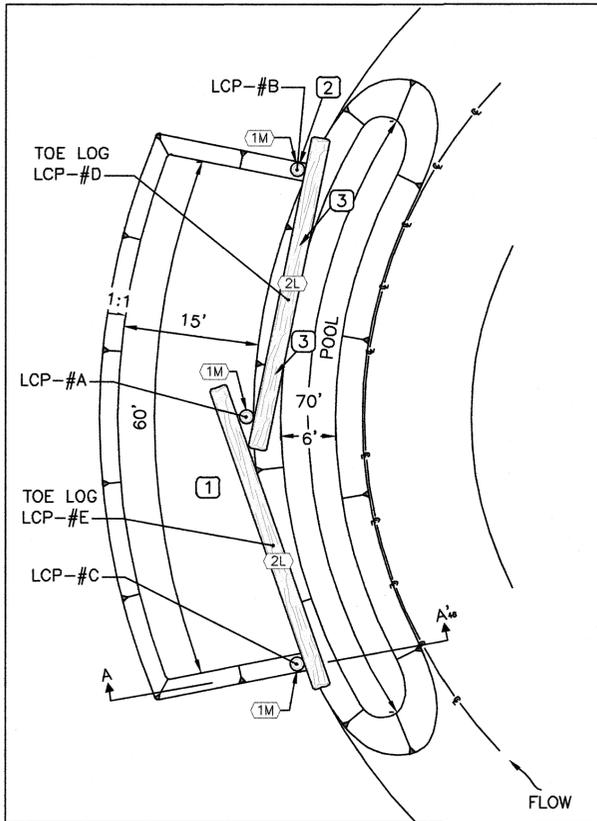


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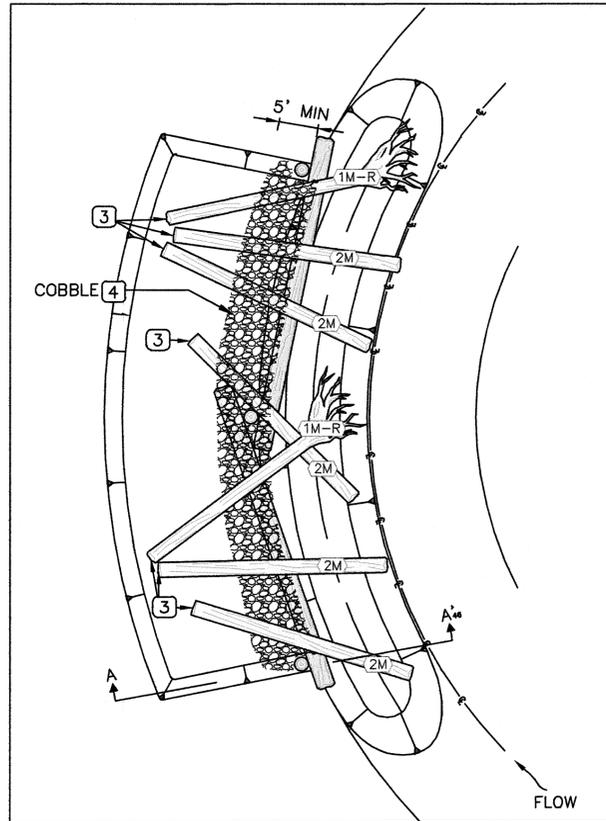
**CLEAR CREEK FLOODPLAIN RESTORATION**  
DETAILS - CLEAR CREEK 2  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 45 OF 73

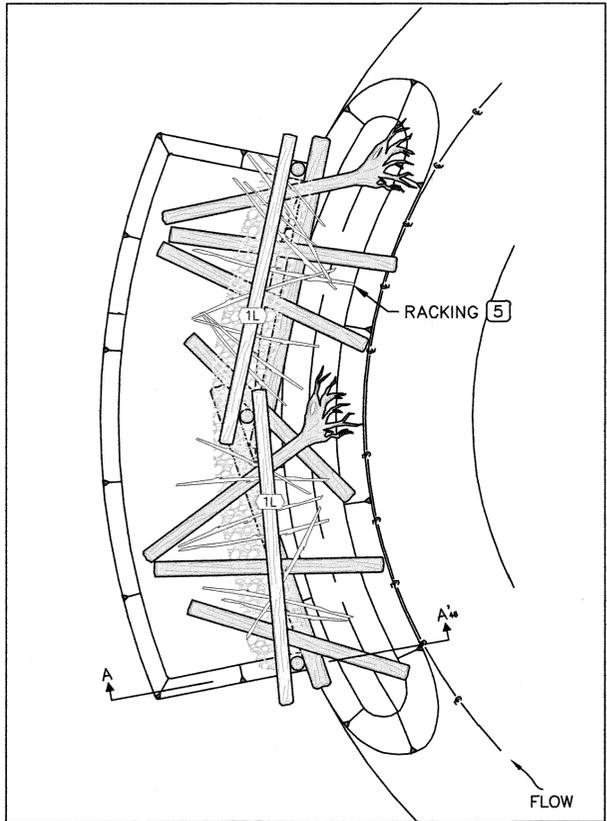
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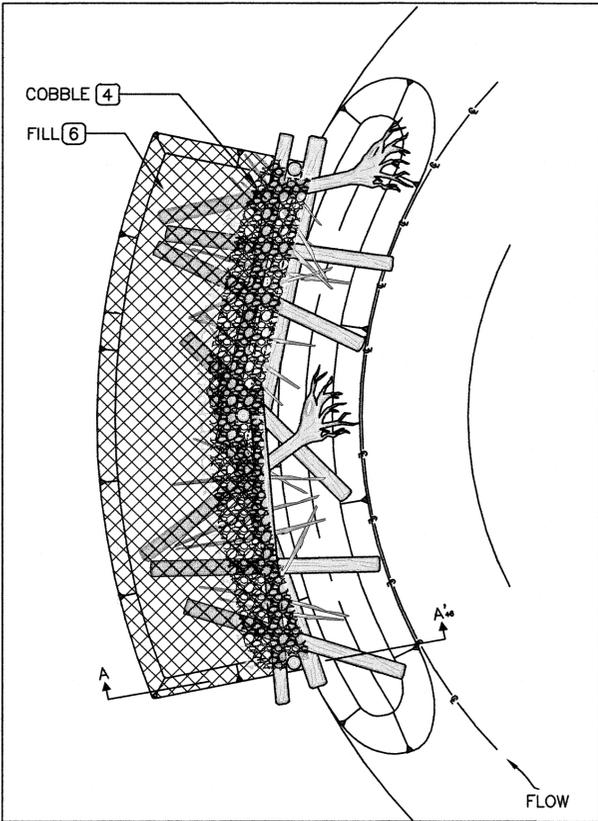
LAYER 1



LAYER 2



LAYER 3



LAYER 4

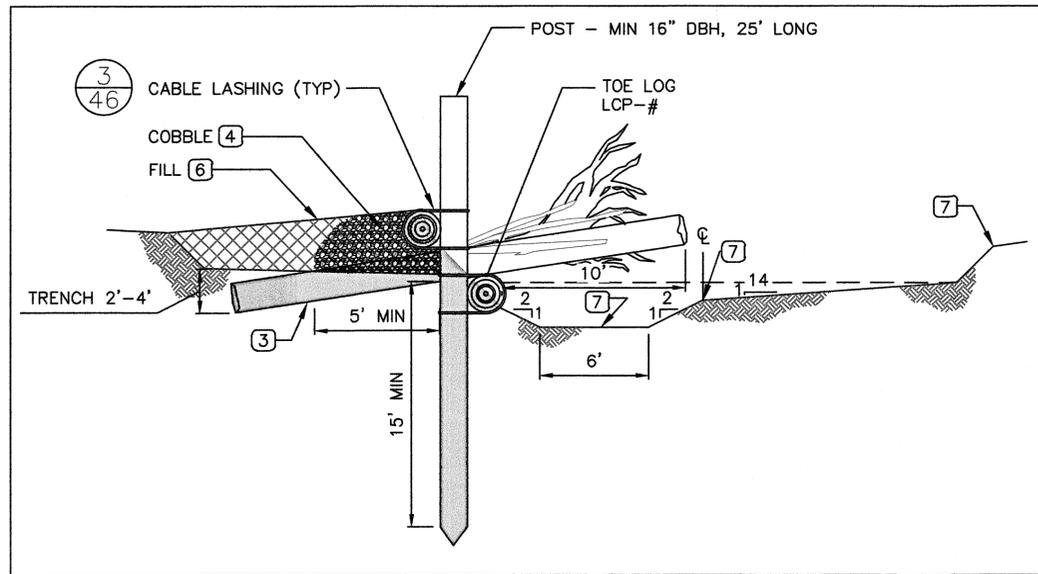
LOG SCHEDULE

TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)
(2L)	2	18-28	>30
(1M)*	3	12-18	20-30
(1M-R)	2	12-18	20-30
(2M)	5	18-28	20-30
(1L)	2	12-18	>30

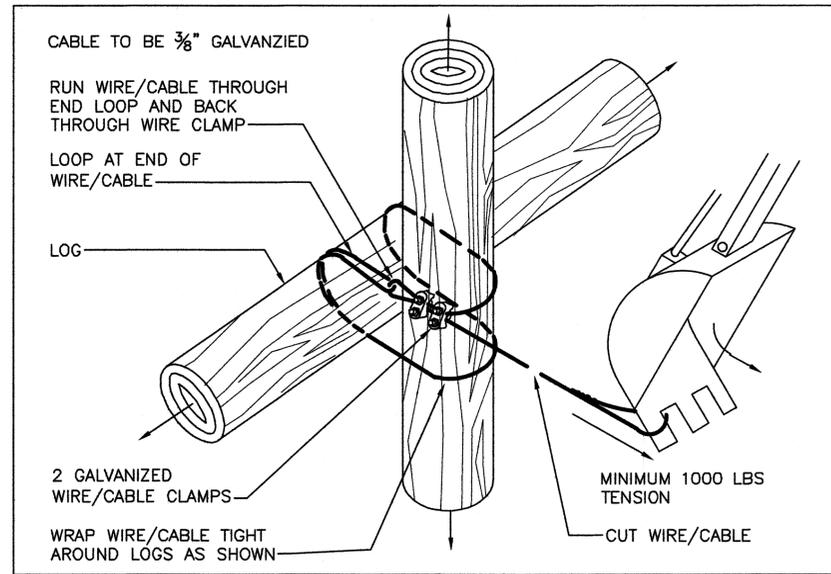
\* POSTS SHOWN AS 1-M SHALL BE MIN 16" DIA., 25' LONG.

**MAINSTEM FLJ1** 1  
SCALE: 1"=10'

- NOTES:**
- 1 GRADING EL TO MATCH CONTROL OF TOE LOG
  - 2 INSTALL POSTS PRIOR TO TOE LOG INSTALL
  - 3 TRENCH INDIVIDUAL LOGS INTO SOIL AS DIRECTED BY ENGINEER
  - 4 PLACE COBBLE BETWEEN LOGS, LEVEL WITH TOP OF LOGS AND COMPACT WITH HOE PACK TO DRIVE COBBLE INTO VOIDS BETWEEN LOGS.
  - 5 RACKING TO CONSIST OF MIN 2 TREES (4-6 SEGMENTS EACH >20' LONG WITH ROOTS AND BRANCHES) SALVAGED THROUGH SITE CLEARING. ENGINEER TO SELECT SEGMENTS TO BE USED AND PLACEMENT RACKING SHOWN AS SMALL MATERIAL FOR GRAPHICAL CLARITY ONLY. ACTUAL RACKING SHALL BE 8"-24" DBH, 20'-30' LONG WITH BRANCHES AND ROOTS.
  - 6 FILL TO BE RE-USED MATERIAL CUT FROM SITE. SELECT FILL WITH LOW ORGANIC CONTENT, INSTALL AND COMPACT IN 12" LAYERS TO MIN 90% MAX DENSITY USING HOE PACK UNIT. TOP OF FILL OVER STRUCTURE WILL BE 1'-3' ABOVE GRADE SHOWN ON GRADING PLAN.
  - 7 SEE CONTROL DATA FOR GRADING EL'S, SHEET 3.



**ELJ SECTION A-A'** 2  
SCALE: 1"=5'

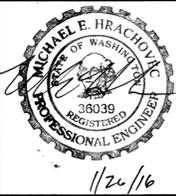


**LASHING DETAIL** 3  
SCALE: 1"=2'

**Natural Systems Design**  
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Seattle, WA 98115

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No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
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DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: N/A  
DATE: 01/26/16



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CLEAR CREEK  
FLOODPLAIN RESTORATION  
DETAILS -  
CLEAR CREEK 3  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
46  
OF  
73

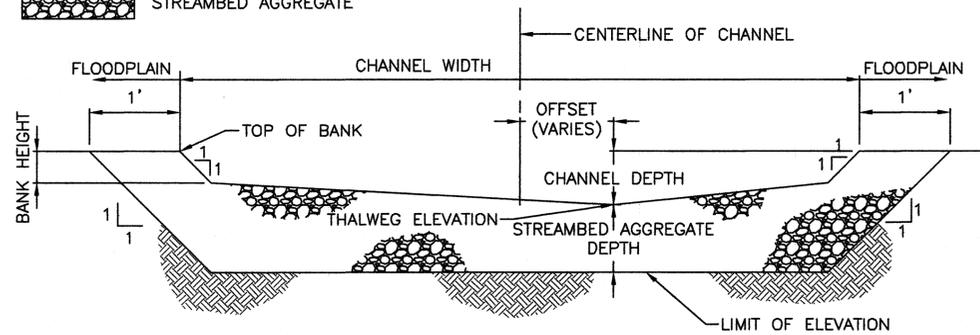
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**LEGEND**

- FINISHED CHANNEL
- ▨ NATIVE SOIL
- ▩ STREAMBED AGGREGATE

**NOTES:**

1. OVER-EXCAVATE CHANNEL TO PLACE STREAMBED AGGREGATE TO ACHIEVE PROPOSED FINISH GRADE AND DESIGN PARAMETERS.

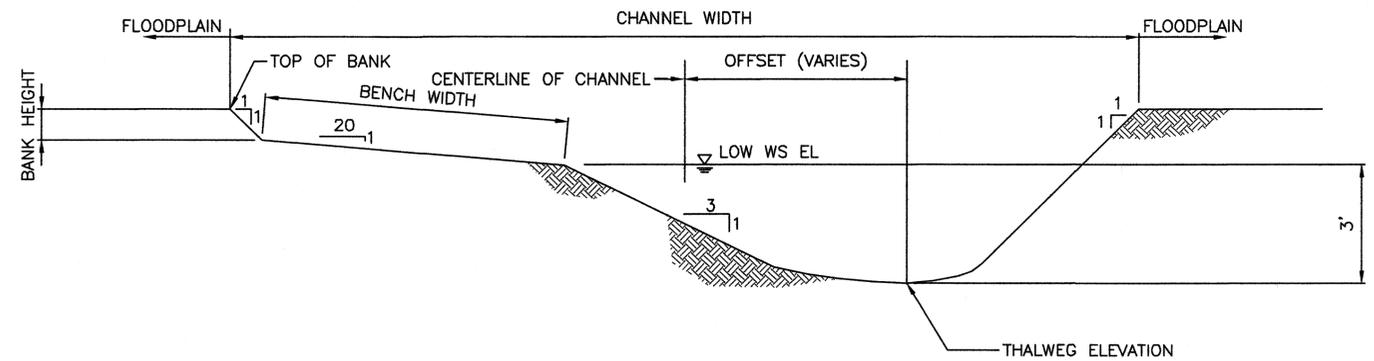


DESIGN PARAMETERS	W. FORK	E. FORK	MAIN STEM
CHANNEL WIDTH (FT)	15.0 ±2'	15.0 ±2'	21.0 ±2'
CHANNEL DEPTH (FT)	1.9	1.8	2.2
BANK HEIGHT (FT)	1.6	1.5	1.8
STREAMBED AGGREGATE DEPTH (FT)	1.0	1.0	1.0
RIFFLE LENGTH (FT)	15	15	40

**STREAMBED RIFFLE CROSS SECTION (TYP)** 1  
47  
SCALE: NTS

**LEGEND**

- FINISHED CHANNEL
- ▨ NATIVE SOIL



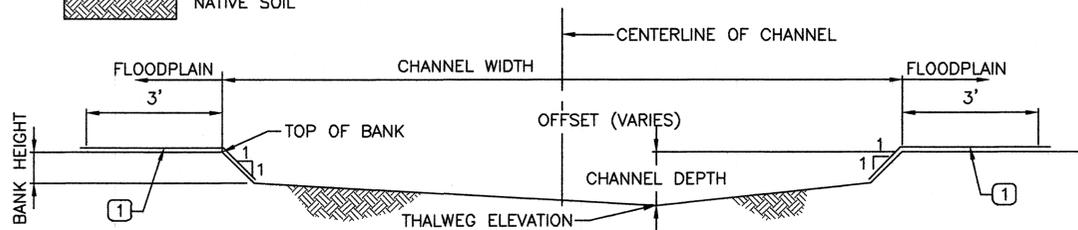
DESIGN PARAMETERS	W. FORK	E. FORK	MAIN STEM
CHANNEL WIDTH (FT)	18 ±2'	18 ±2'	25 ±2'
BENCH WIDTH (FT)	6	6	9
BANK HEIGHT (FT)	1.6	1.5	1.8

**CORNER POOL CROSS SECTION GRADING (TYP)** 2  
47  
SCALE: NTS

**LEGEND**

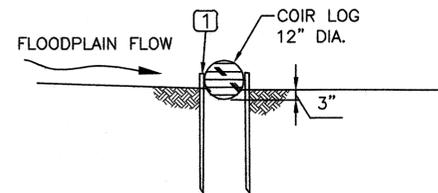
- FINISHED CHANNEL
- ▨ NATIVE SOIL

1 COIR FABRIC INSTALLED LENGTHWISE ALONG STREAMBANK PER WSDOT STANDARD PLAN 1-60.20-01



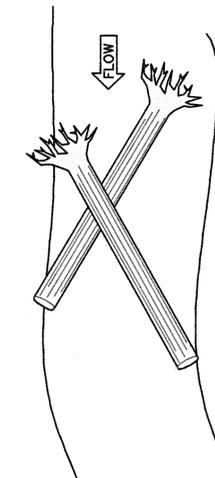
DESIGN PARAMETERS	W. FORK	E. FORK	MAIN STEM
CHANNEL WIDTH (FT)	15.0 ±2'	15.0 ±2'	21.0 ±2'
CHANNEL DEPTH (FT)	1.9	1.8	2.2
BANK HEIGHT (FT)	1.6	1.5	1.8

**STANDARD CHANNEL CROSS-SECTION (TYP)** 5  
47  
SCALE: NTS



**COIR LOG NOTES:**  
1 WOOD STAKES, 30" X 2" X 1", INSTALLED ON BOTH SIDES AT 24" SPACING, TIE DOWN TOGETHER OVER COIR LOG WITH 3/16" TWINE.

**COIR LOG ANCHORING DETAIL (TYP)** 3  
47  
SCALE: NTS



**NOTES**  
1. LOGS SHALL BE PLACED BY HAND WHERE MACHINE ACCESS WOULD DAMAGE EXISTING VEGETATION  
2. SPECIFIC PLACEMENT TO BE GUIDED BY ENGINEER

**LOG SCHEDULE**

TYPE	NO. EA.	LOG DIA. (IN)	LENGTH (FT)	ROOTWAD
1M-R	2	12-18	20-30	Y

**INSTREAM LOG PLACEMENT** 4  
47  
SCALE: NTS

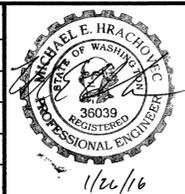
0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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CHECKED: T. ABBE	
CRP No.: NA	
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**CLEAR CREEK FLOODPLAIN RESTORATION DETAILS - CLEAR CREEK 4**  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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OF  
73

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# BRIDGE SPECIFICATIONS

SEE THE CONTRACT FOR THE FULL BRIDGE DESIGN AND FABRICATION REQUIREMENTS.

## QUALIFIED SUPPLIER

ALL SUPPLIERS MUST HAVE AT LEAST 5 YEARS EXPERIENCE IN FABRICATING THIS TYPE OF STRUCTURE, AND BE APPROVED BY THE ENGINEER. THE ABUTMENT WAS LAID OUT TO ACCEPT A GENERIC HALF-THROUGH TRUSS. THE LAYOUT OF THE BEARING PEDESTALS AND ANCHOR & BOLTS MUST BE VERIFIED PRIOR TO CONSTRUCTION.

## GENERAL FEATURES OF DESIGN

BRIDGE LENGTH SHALL BE FABRICATED TO FIT THE ABUTMENTS SHOWN. THE BRIDGE WIDTH SHALL BE 15'-0" FROM THE INSIDE OF THE STRUCTURAL ELEMENTS AT DECK LEVEL. THE BRIDGE SYSTEM TYPE SHALL BE DESIGNED AS A HALF-THROUGH TRUSS. THE TOP OF THE TOP CHORD SHALL NOT BE LESS THAN 54 INCHES ABOVE THE DECK, MEASURED FROM THE HIGH POINT OF THE DECK SURFACE. THE VERTICAL BRIDGE CAMBER DIMENSION AT MIDSPAN SHALL BE EQUAL TO 100% OF THE FULL DEAD LOAD DEFLECTION PLUS 1% OF THE FULL LENGTH OF THE BRIDGE. HORIZONTAL SAFETY RAIL SHALL BE SPACED TO PREVENT A 6 INCH SPHERE FROM PASSING THROUGH IT, AND DESIGNED FOR A 50 PLF DISTRIBUTED AND 200 LB POINT LOAD PER AASHTO 13.8.2. THE SAFETY RAILS SHALL BE PLACED ON THE STRUCTURE TO A MINIMUM HEIGHT OF 3'-2". THE MAXIMUM VERTICAL LIVE LOAD DEFLECTION SHALL BE L/500 AND THE MAXIMUM HORIZONTAL DEFLECTION SHALL BE L/400.

## ENGINEERING / LOADS

THE BRIDGE SHALL BE DESIGNED FOR ITS OWN SELF WEIGHT, A PEDESTRIAN LIVE LOAD OF 90 PSF, AN AASHTO H10 TRUCK (10 TONS) AND WIND LOAD PER THE SPECIAL PROVISIONS. ALL WELDS SHALL MEET ANSI/AWS STANDARDS. ALL WELDS SHALL MEET THE REQUIREMENTS OF AWS D1.1

## MATERIALS

THE STRUCTURAL ELEMENTS SHALL BE CONSTRUCTED WITH STRUCTURAL STEEL MEETING THE REQUIREMENTS OF ASTM A709 50W WEATHERING STEEL. CONCRETE IN THE DECK SHALL BE CLASS 4000D.

## SUBMITTALS

PRIOR TO FABRICATION, SHOP DRAWINGS THAT ARE UNIQUE TO THE PROJECT, AS WELL AS STRUCTURAL CALCULATIONS AND ERECTION PROCEDURES STAMPED BY AN ENGINEER REGISTERED IN WASHINGTON STATE, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

# FOOTING SPECIFICATIONS

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 6TH EDITION AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL 2014. THE STRUCTURAL ELEMENTS ARE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS FOR LOAD AND RESISTANCE FACTOR DESIGN. SEISMIC DESIGN OF THIS STRUCTURE HAS BEEN DONE USING PGA=0.440 AND SITE CLASS D.

ALL WORK SHALL CONFORM TO THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) CURRENT STANDARD PLANS AND STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION 2014, AND THE KITSAP COUNTY STANDARDS UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS.

THE CONCRETE IN THE FOOTINGS SHALL BE CLASS 4000 WITH AIR. THE ANCHOR BOLTS SHALL BE ASTM A307 AND GALVANIZED ACCORDING TO ASTM A123. FALSEWORK SHALL BE CAREFULLY RELEASED TO PREVENT IMPACT OR UNDUE STRESS IN THE STRUCTURE. UNLESS OTHERWISE SHOWN IN THE PLANS, THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2 1/2 INCHES AT THE TOP OF THE ABUTMENT WALL, 3 INCHES FOR CONCRETE CAST AGAINST EARTH, 2 INCHES FOR CONCRETE FORMED AND BACKFILLED, AND 2 INCHES AT ALL OTHER LOCATIONS. USE A 3/4 INCH CHAMFER AT ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.

ALL REINFORCING BARS SHALL BE AASHTO M-31 GRADE 60 EPOXY COATED UNLESS OTHERWISE NOTED. NUMBER AND LENGTH OF BARS TO BE VERIFIED BY CONTRACTOR.

IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND THE EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS FOR RESOLUTION OF ANY DISCREPANCIES.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ANY AND ALL UTILITIES IN THE AREA AND FIELD VERIFY THESE LOCATIONS PRIOR TO CONSTRUCTION. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS: 1-800-424-5555. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER PROMPTLY IN ORDER TO RESOLVE ANY CONFLICTS.

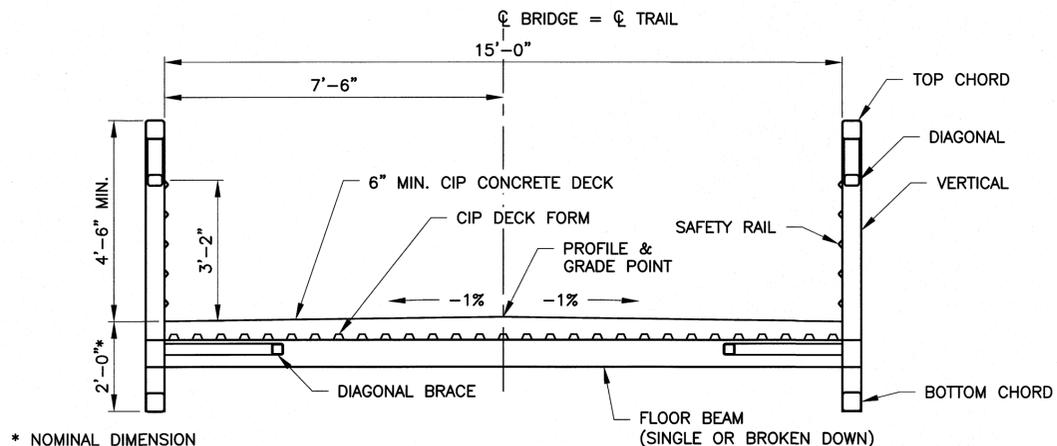
THE CONTRACTOR SHALL NOTIFY THE COUNTY 96 HOURS IN ADVANCE OF ANY WORK REQUIRING DE-ENERGIZING OF ANY POWER OR UTILITIES. SEE SPECIAL PROVISIONS 1-07.17(4) FOR CONTACT NUMBERS

THE TEMPORARY EROSION/SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED PRIOR TO STARTING ANY EARTHWORK.

THE CONTRACTOR MAY BACKFILL THE ABUTMENTS BEFORE BRIDGE STRUCTURE PLACEMENT.

CALCIUM CHLORIDE SHALL NOT BE USED AS A CONCRETE ADMIXTURE.

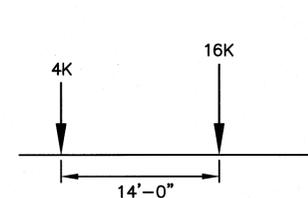
DRAWINGS ARE NOT TO BE SCALED FOR INFORMATION. CONTACT ENGINEER FOR ANY DIMENSIONAL INFORMATION NOT SHOWN.



\* NOMINAL DIMENSION  
VERIFY WITH  
BRIDGE MANUFACTURER

## TYPICAL BRIDGE SECTION

Scale: 1/2" = 1'-0"



AASHTO H-10 TRUCK  
TOTAL WEIGHT = 10 TONS  
WEIGHTS SHOWN AS KIPS PER AXLE

THE BRIDGE SHALL ALSO BE  
DESIGNED FOR A 90 PSF  
PEDESTRIAN LIVE LOAD

DESIGN IN ACCORDANCE WITH THE  
AASHTO LRFD PEDESTRIAN BRIDGE  
DESIGN SPECIFICATIONS

## BRIDGE LOADING: AASHTO H-10

Scale: NTS

D:\SHEARER\DESIGN\0183 CLEAR CREEK FLOOD PLANNING\0183 BRIDGE PLANS.CDR P&E.DWG. BRIDGE GENERAL NOTES AND TYPICAL SECTION. 6/7/2015 12:16 PM JOSHUA

**SHEARER DESIGN L.L.C.**

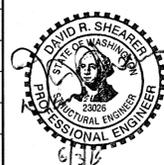
Bridge Design, Construction Engineering, Infrastructure Aesthetics

3613 Phinney Ave N. # B (206) 781-7830  
Seattle WA 98103 www.shearerdesign.net

### REVISIONS

No.	BY	DATE	DESCRIPTION

SURVEYED:  
DESIGNED: RPD  
DRAWN: RPD  
CHECKED: DRS  
CRP No.  
DATE: 6/3/2015



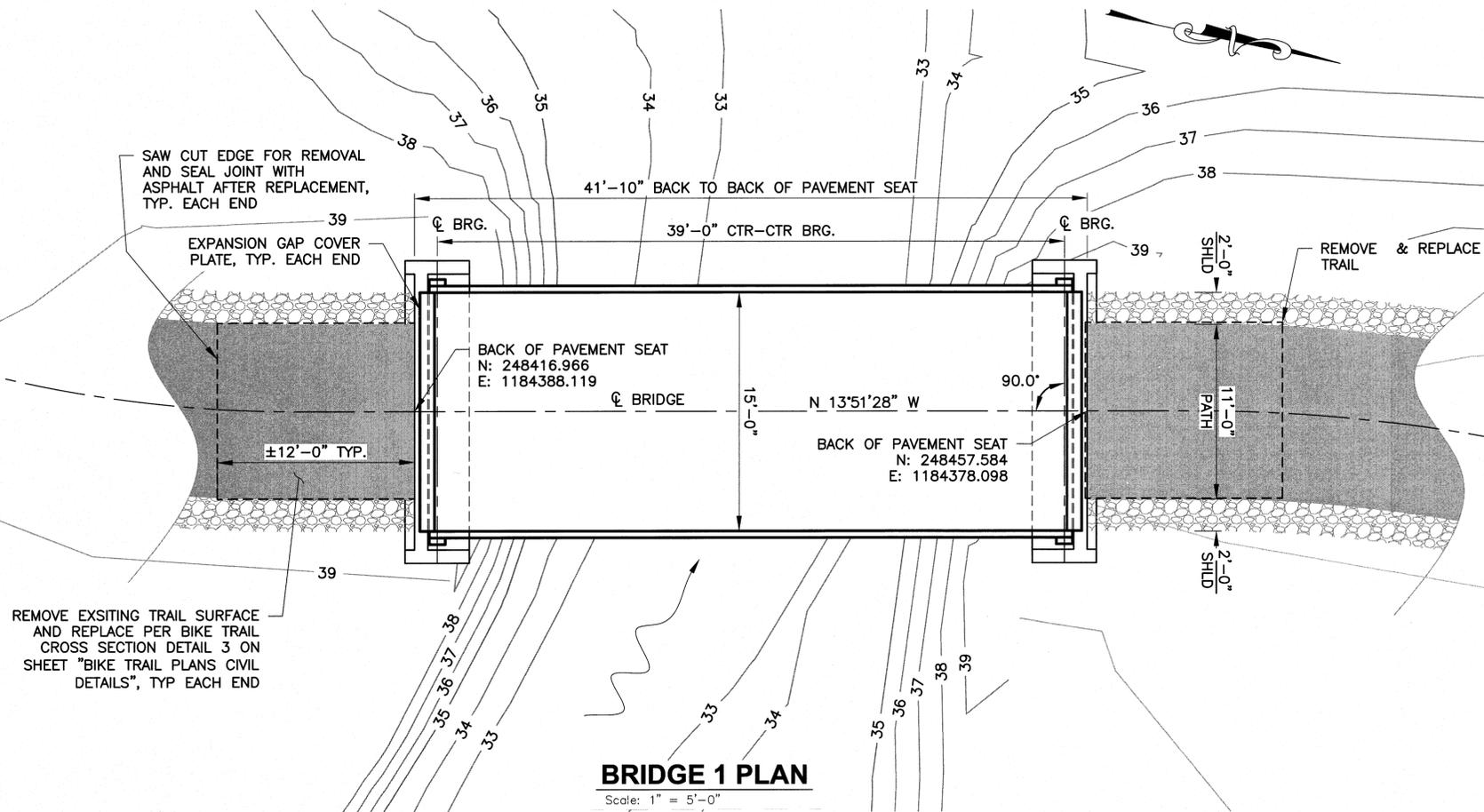
**KITSAP COUNTY**  
DEPT. OF PUBLIC WORKS  
614 DIVISION STREET MS-26  
PORT ORCHARD, WA 98366  
TEL:(360) 337-5777 FAX:(360) 337-4867

CLEAR CREEK  
FLOODPLAIN RESTORATION  
BRIDGE GENERAL NOTES  
AND TYPICAL SECTION

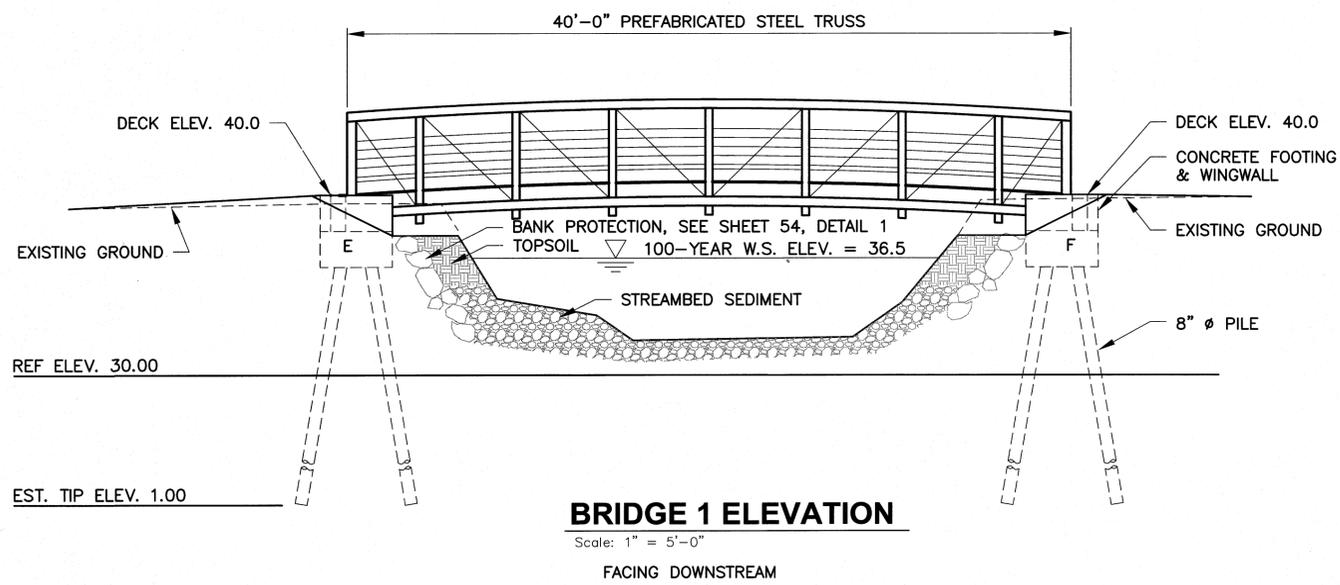
KITSAP COUNTY, WASHINGTON  
SECTION 9.16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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48  
OF  
73

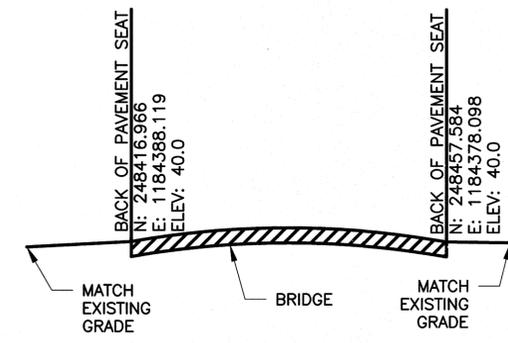
SHEARER DESIGN L.L.C. CLEAR CREEK FLOOD PLAIN WORKS BRIDGE PLANS CTR. PAGES BRIDGE 1 PLAN AND ELEVATION 6/3/2015 12:15 PM JOSHUA



**BRIDGE 1 PLAN**  
Scale: 1" = 5'-0"



**BRIDGE 1 ELEVATION**  
Scale: 1" = 5'-0"  
FACING DOWNSTREAM



**CENTERLINE PROFILE**  
Scale: 1" = 1'-0"

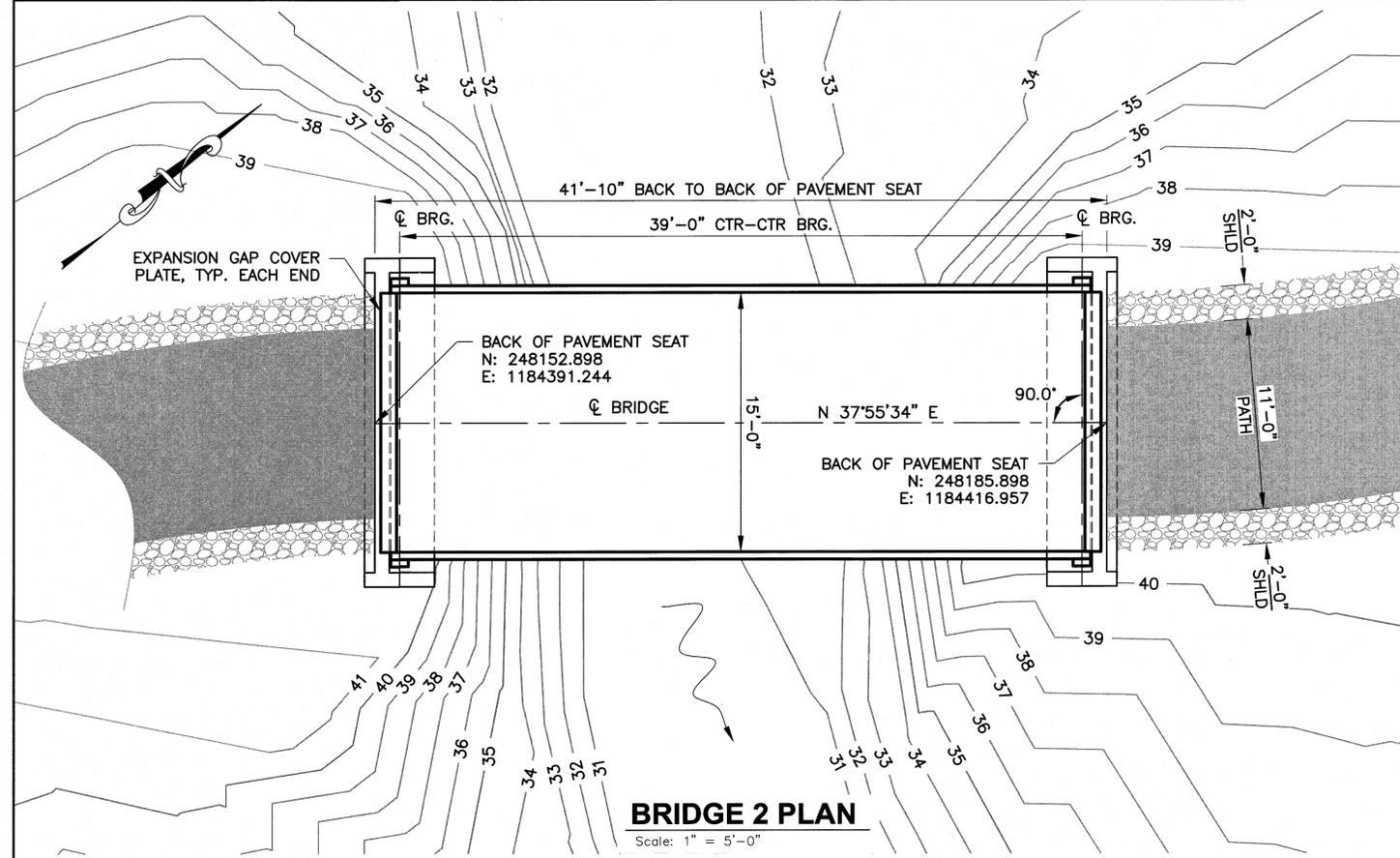
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Bridge Design, Construction Engineering, Infrastructure Aesthetics  
3613 Phinney Ave N. # B Seattle WA 98103 (206) 781-7830 WWW.SHEARERDESIGN.NET

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No.	BY	DATE	DESCRIPTION

SURVEYED:      DESIGNED: RPD  
DRAWN: RPD  
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CRP No.  
DATE: 6/3/2015

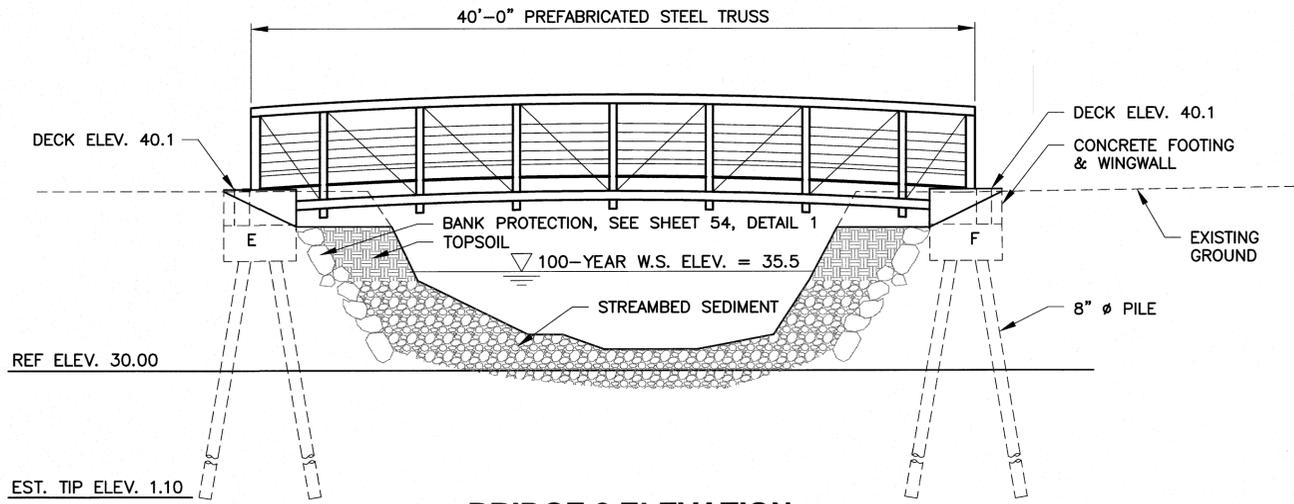
**KITSAP COUNTY**  
DEPT. OF PUBLIC WORKS  
614 DIVISION STREET MS-26  
PORT ORCHARD, WA 98366  
TEL: (360) 337-5777 FAX: (360) 337-4867

CLEAR CREEK  
FLOODPLAIN RESTORATION  
**BRIDGE 1**  
PLAN AND ELEVATION  
KITSAP COUNTY, WASHINGTON  
SECTION 9, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.



**BRIDGE 2 PLAN**

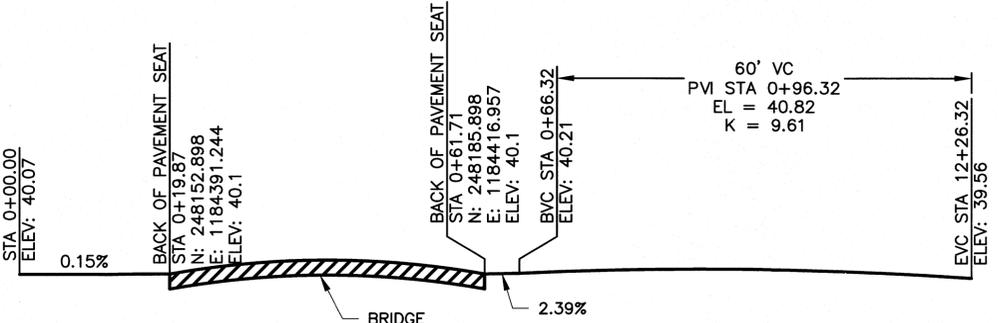
Scale: 1" = 5'-0"



**BRIDGE 2 ELEVATION**

Scale: 1" = 5'-0"

FACING UPSTREAM



**CENTERLINE PROFILE**

Scale: 1" = 1'-0"

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SURVEYED:  
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 CHECKED: DRS  
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 DATE: 6/3/2015

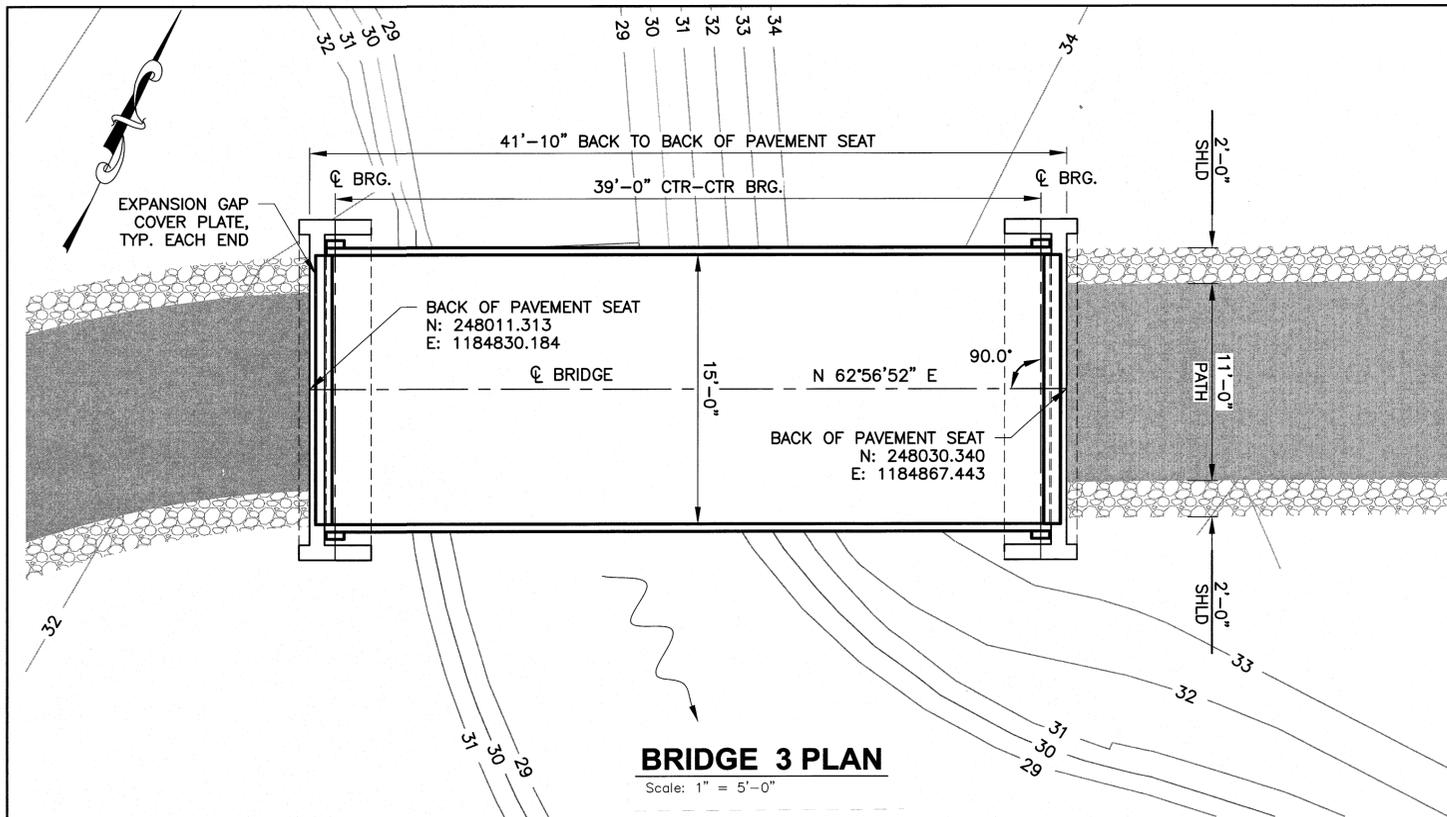


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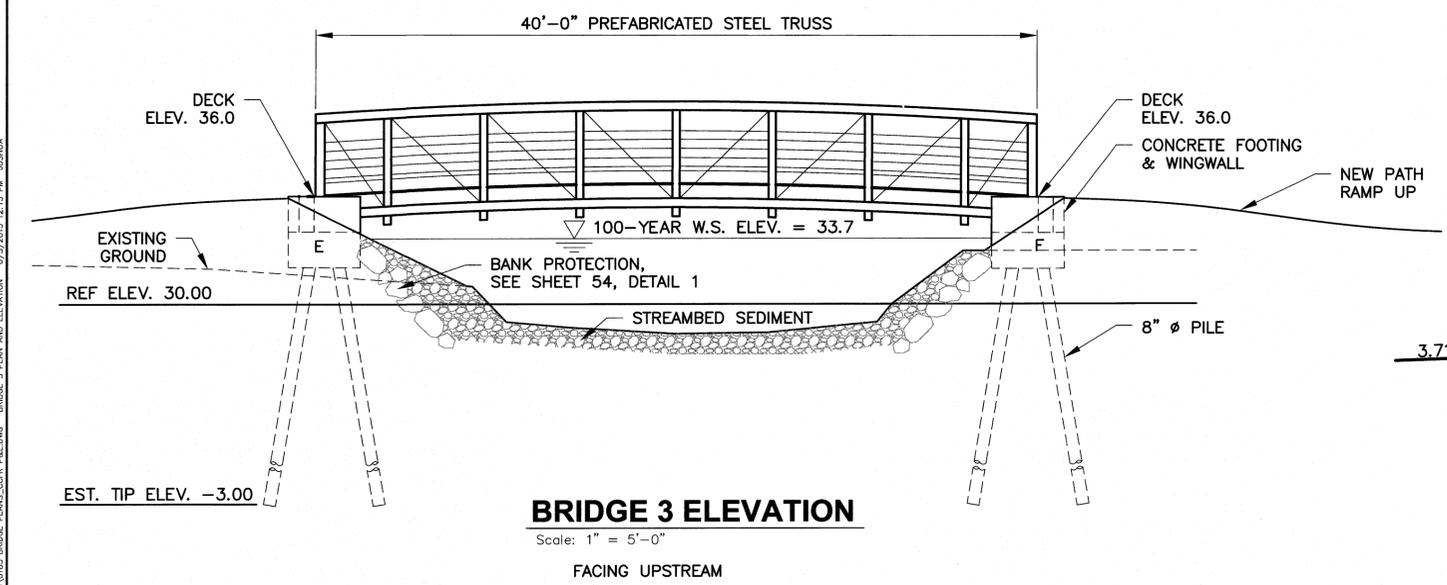
CLEAR CREEK  
 FLOODPLAIN RESTORATION  
**BRIDGE 2**  
 PLAN AND ELEVATION  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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 OF  
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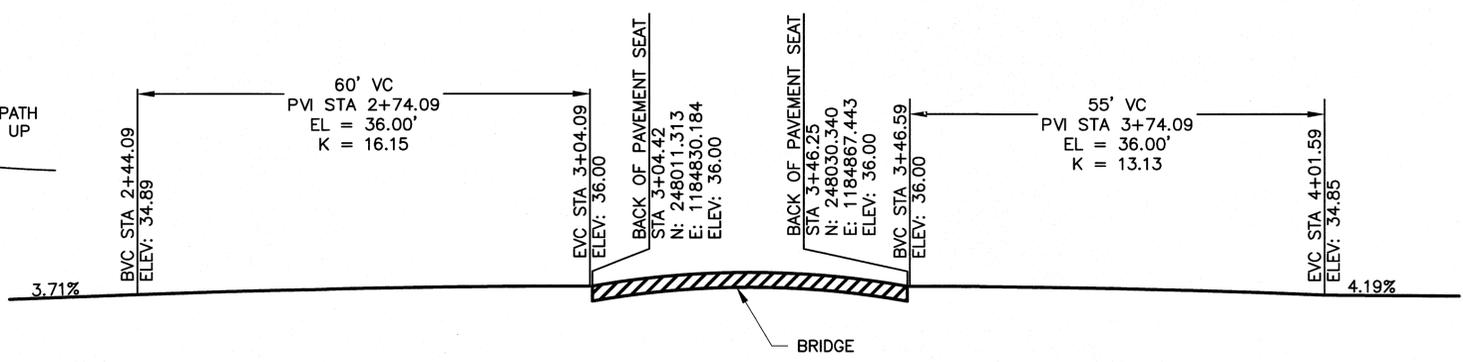
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**BRIDGE 3 PLAN**  
Scale: 1" = 5'-0"



**BRIDGE 3 ELEVATION**  
Scale: 1" = 5'-0"  
FACING UPSTREAM



**CENTERLINE PROFILE**  
Scale: 1" = 1'-0"

SHEARERDESIGN\JOBS\0185 CLEAR CREEK FLOOD PLANNING\0185 BRIDGE PLANS\0185 BRIDGE PLANS.CTRR.PAE.DWG. BRIDGE 3 PLAN AND ELEVATION. 6/2/2015 12:15 PM JOSUA

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REVISIONS			
No.	BY	DATE	DESCRIPTION

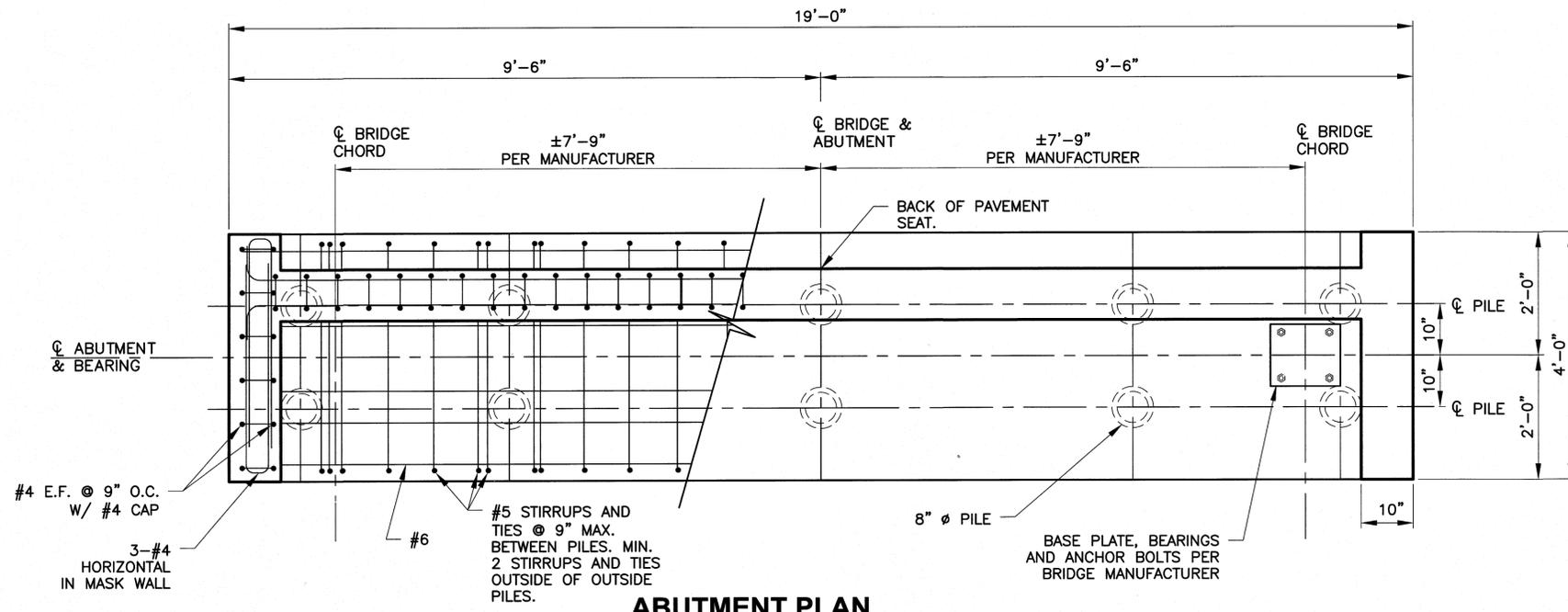
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 CHECKED: DRS  
 CRP No.  
 DATE: 6/3/2015



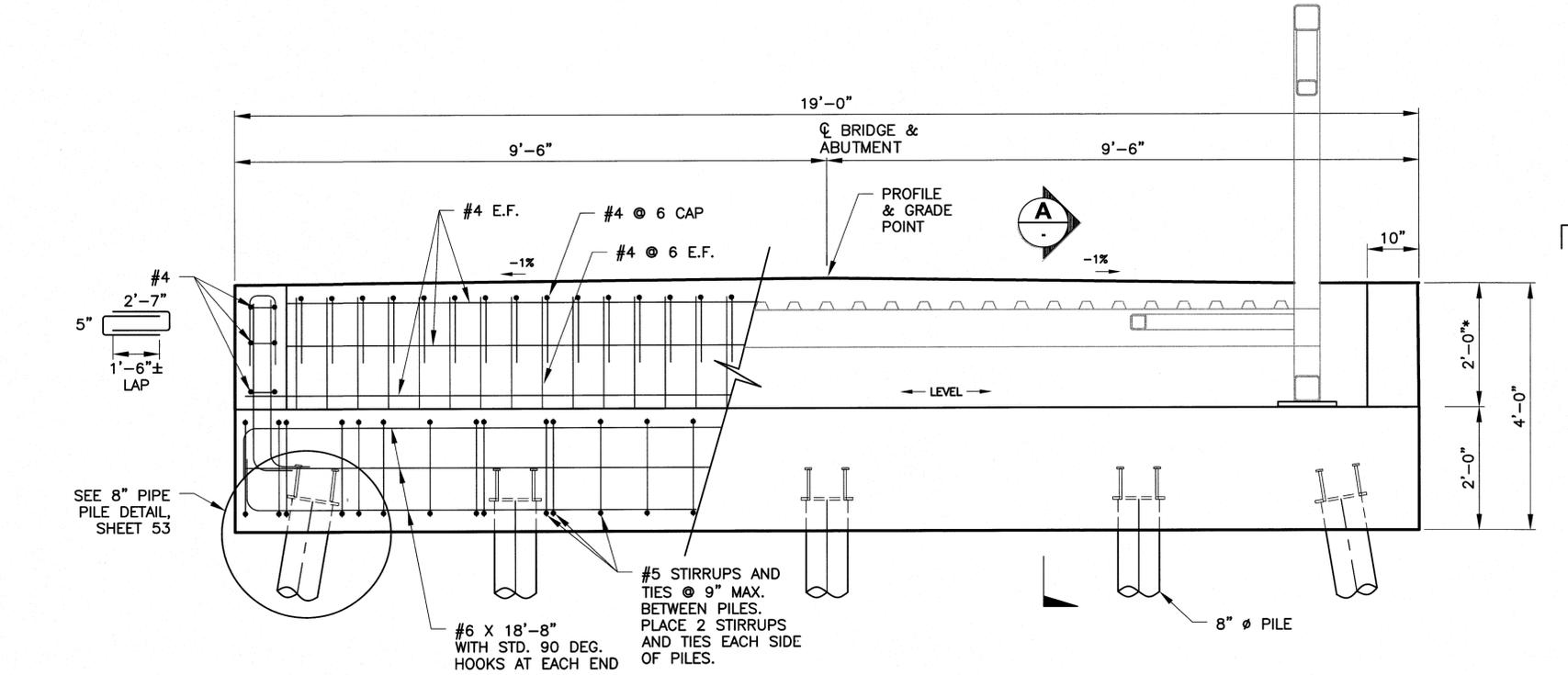
**KITSAP COUNTY**  
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CLEAR CREEK  
 FLOODPLAIN RESTORATION  
**BRIDGE 3**  
 PLAN AND ELEVATION  
 KITSAP COUNTY, WASHINGTON  
 SECTION 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

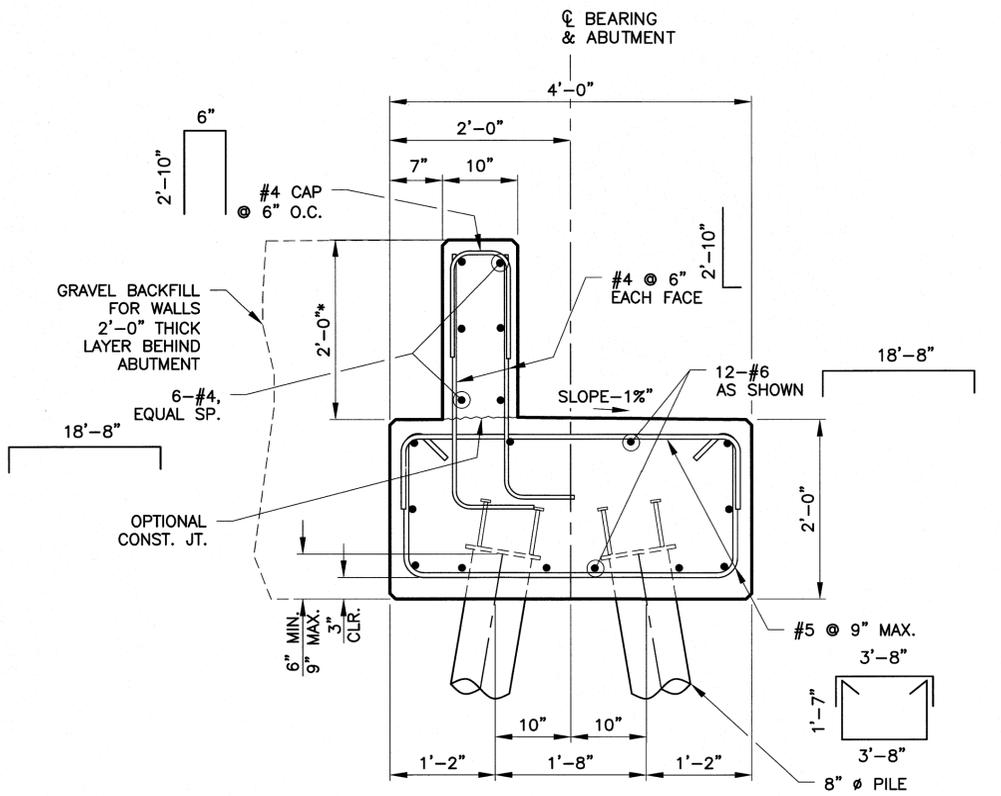
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 73



**ABUTMENT PLAN**  
 Scale: 3/4" = 1'-0"  
 ALL REINFORCEMENT NOT SHOWN FOR CLARITY



**ABUTMENT ELEVATION**  
 Scale: 3/4" = 1'-0"



**TYPICAL SECTION A**  
 Scale: 1" = 1'-0"

NOTE:  
 ALL REINFORCEMENT HOOKS SHOWN SHALL BE STANDARD HOOKS.  
 \* HEIGHT OF BACKWALL VARIES TO MATCH TRUSS MANUFACTURER'S DETAILS FOR DECK TO BEARING HEIGHT.

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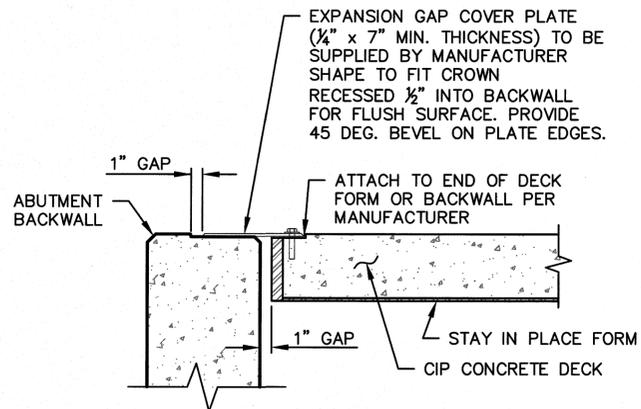
SURVEYED:  
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 DRAWN: RPD  
 CHECKED: DRS  
 CRP No.  
 DATE: 6/3/2015



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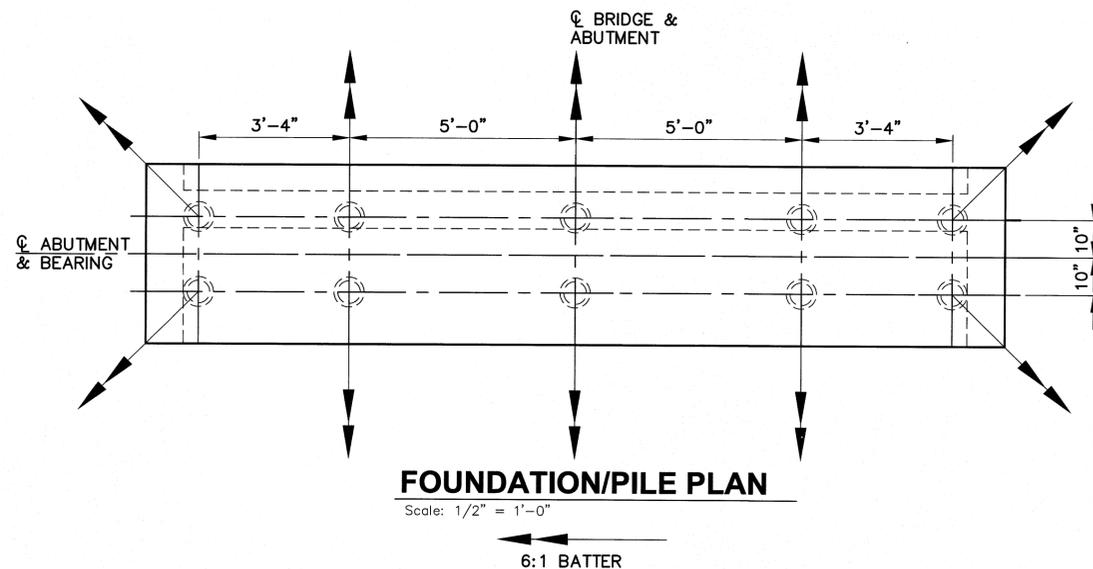
CLEAR CREEK  
 FLOODPLAIN RESTORATION  
**BRIDGE REINFORCEMENT DETAILS**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9.16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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 OF  
 73



**COVER PLATE DETAIL**

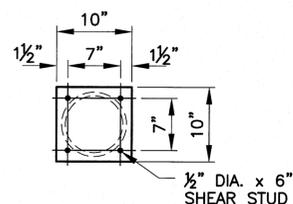
Scale: 1-1/2" = 1'-0"



**FOUNDATION/PILE PLAN**

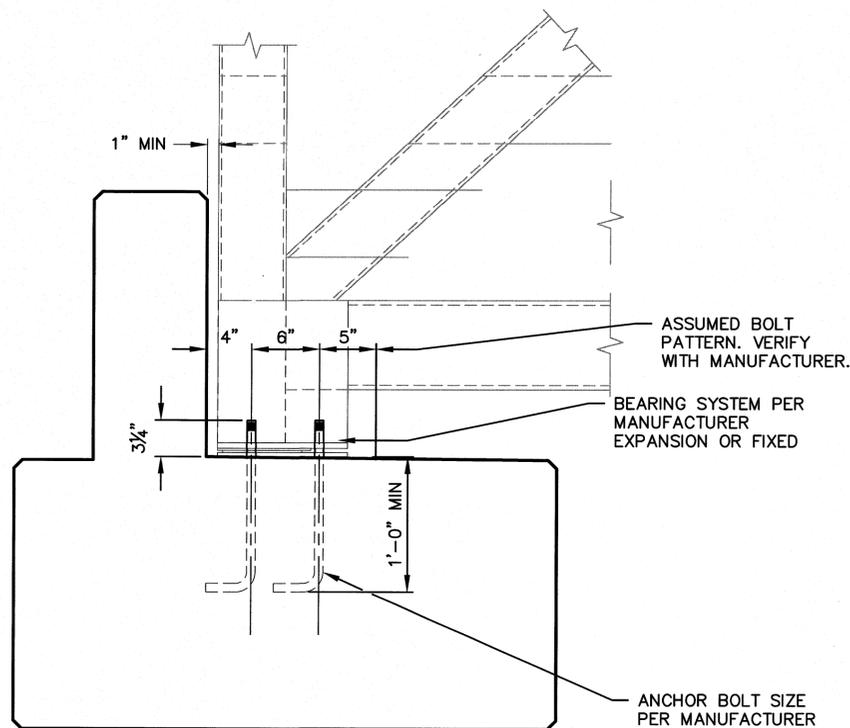
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6:1 BATTER



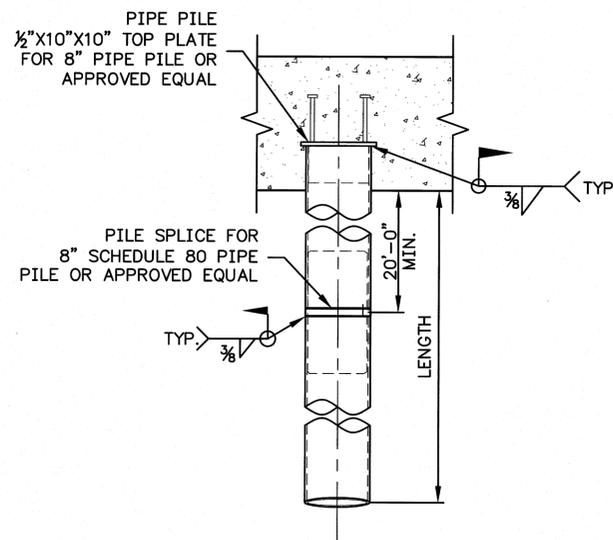
**10" TOP PLATE**

Scale: 1" = 1'-0"



**BRIDGE BEARING DETAIL**

Scale: 1-1/2" = 1'-0"



**8" PIPE PILE DETAIL**

Scale: 1" = 1'-0"

PILE SPECIFICATIONS						
	SERVICE PILE LOADS (TONS)	MINIMUM LENGTH (FT.) BELOW CAP	ESTIMATED LENGTH (FT.)	STRENGTH 1 LOAD (TONS)	ULTIMATE LOAD (TONS)	PILE SIZE
BRIDGE 1	7.5	30.0	35.75	11.0	22.0	8"φ X 0.500
BRIDGE 2	7.5	30.0	35.75	11.0	22.0	8"φ X 0.500
BRIDGE 3	7.5	30.0	35.75	11.0	22.0	8"φ X 0.500

NOTE: ESTIMATED PILE LENGTHS ARE PER PILE

S:\SHEARER\DESIGN\013 CLEAR CREEK FLOOD PLANNING\013 BRIDGE PLANS\CIP BEARING.DWG BRIDGE MISCELLANEOUS DETAILS 6/2/2015 12:13 PM JOSUHA

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REVISIONS			
No.	BY	DATE	DESCRIPTION

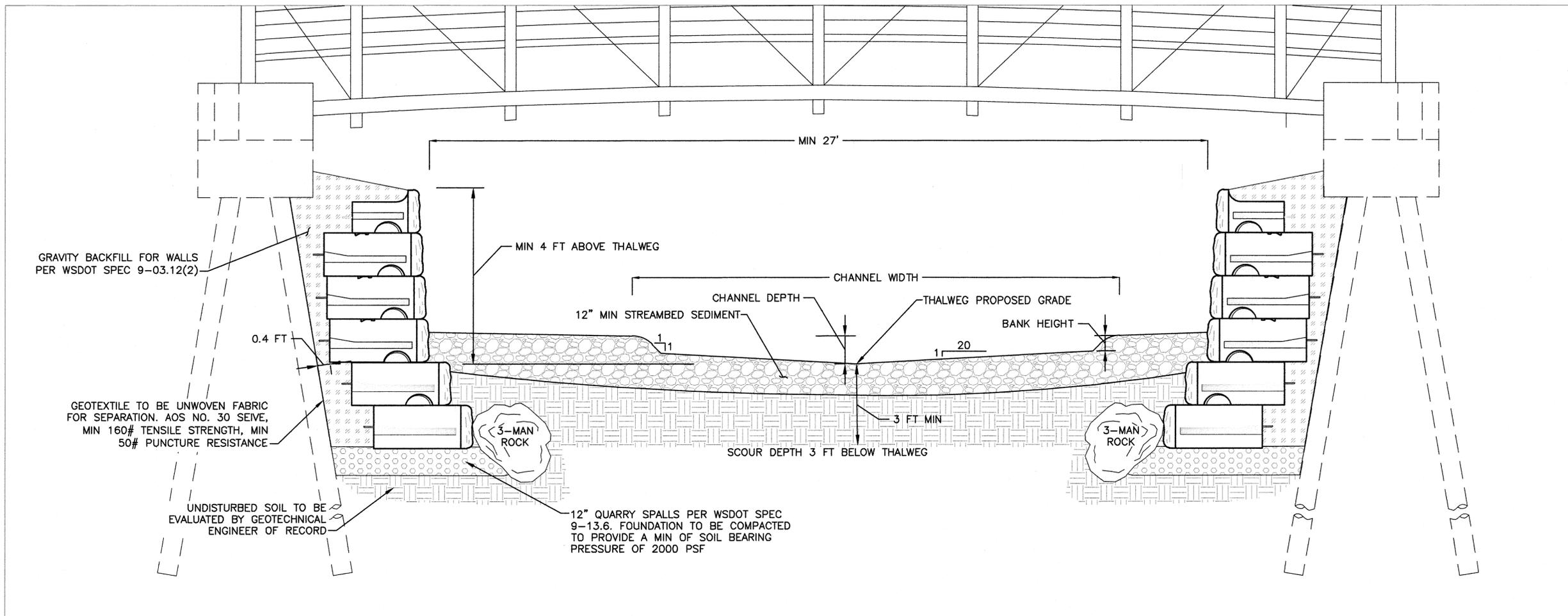
SURVEYED:  
 DESIGNED: RPD  
 DRAWN: RPD  
 CHECKED: DRS  
 CRP No.  
 DATE: 6/3/2015



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CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 BRIDGE  
 MISCELLANEOUS DETAILS  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9.16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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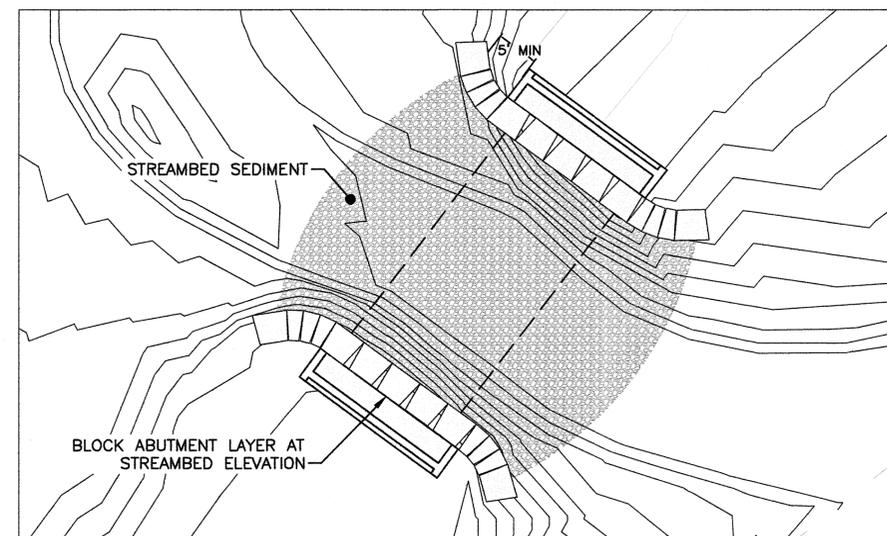


**BRIDGE STREAMBED DETAILS (TYPICAL)** 1/49

CROSS SECTION - SCALE: 1" = 2'

**NOTES**

1. GRAVITY WALL BLOCK SHALL BE REDI-ROCK, 41" SERIES BLOCKS OR APPROVED EQUAL, INSTALLED PER MANUFACTURER'S STANDARD SPECIFICATIONS
2. HALF-MIDDLE AND HALF-BOTTOM BLOCKS TO BE INSTALLED AT CORNERS TO ACHIEVE SPECIFIED ALIGNMENT AS IN PLAN VIEW.
3. BOTTOM BLOCK TO BE PLACED AT BOTTOM LAYER AND TOP BLOCK TO BE PLACED AS TOP LAYER AS SHOWN.



**BRIDGE STREAMBED PLAN VIEW (TYPICAL)**

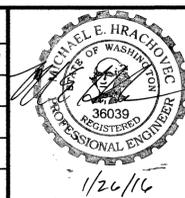
SCALE: 1" = 10'

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED:
DESIGNED: M. HRACHOVEC
DRAWN: K. ANDREWS
CHECKED: T. ABBE
CRP No.: NA
DATE: 1/26/16



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TEL:(360) 337-5777 FAX:(360) 337-4887

**CLEAR CREEK  
FLOODPLAIN RESTORATION  
BRIDGE STREAMBED  
DETAILS**  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
54  
OF  
73

Jan-26-2016 100% SUBMITTAL

**NOTES**

- SEE GRADING PLANS FOR CONTOURS FROM EDGE OF TRAIL SHOULDER TO MATCH EXISTING LOCATION.
- INSTALL SIGN ON 4x4 POST PER WSDOT STANDARD PLAN 9-22.10-02. SIGN MOUNTING HEIGHT IS 7' FROM FINISHED GRADE TO BOTTOM OF SIGN.

**LEGEND**

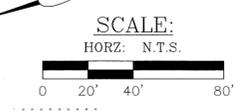
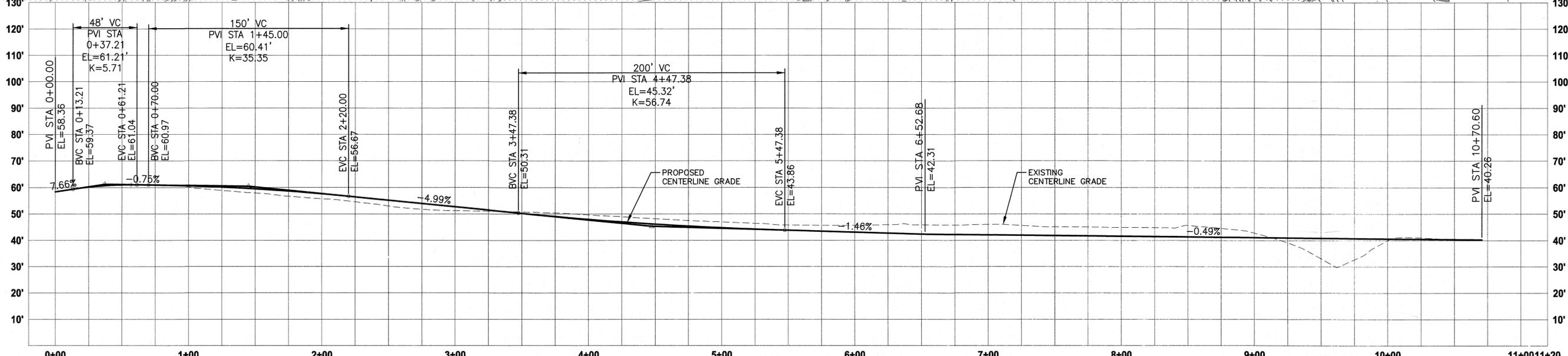
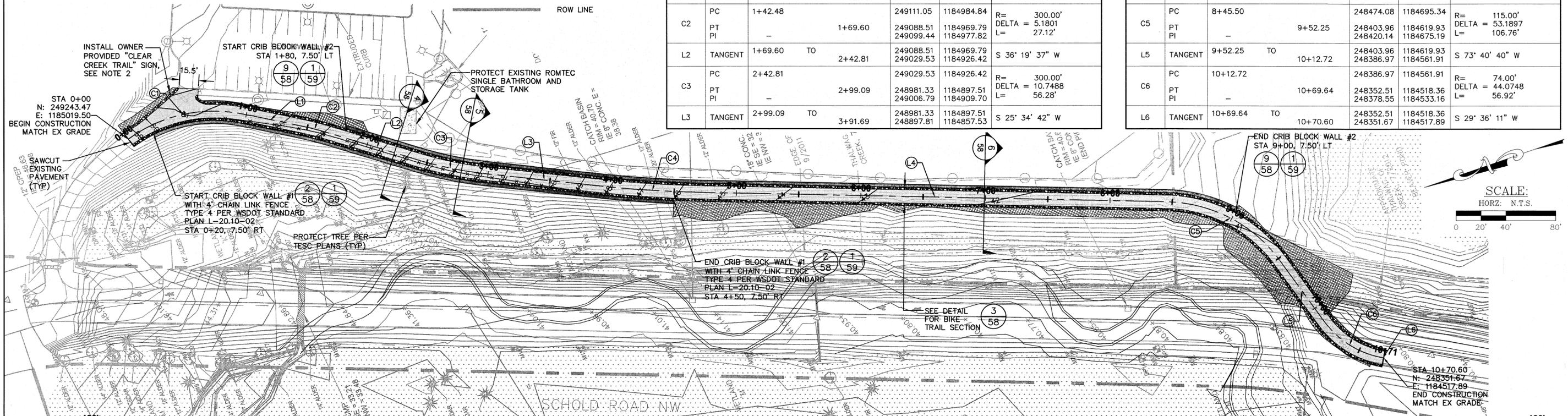
- ASPHALT PAVEMENT
- TRAIL SHOULDER
- FILL AREA, SEE NOTE 1
- CRIB BLOCK WALL (1/59)
- SAWCUT LINE
- ROW LINE

**East Fork Alt-A CENTERLINE LAYOUT DATA**

NUMBER	DESC	BEGIN STATION	END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
C1	PC	0+00.00		249243.47	1185019.50	R= 115.00' DELTA = 48.5184 L= 97.38'
	PT		0+97.38	249149.65	1185008.17	
	PI			249194.00	1185034.97	
L1	TANGENT	0+97.38	TO 1+42.48	249149.65	1185008.17	S 31° 08' 49" W
				249111.05	1184984.84	
C2	PC	1+42.48		249111.05	1184984.84	R= 300.00' DELTA = 5.1801 L= 27.12'
	PT		1+69.60	249088.51	1184969.79	
	PI			249099.44	1184977.82	
L2	TANGENT	1+69.60	TO 2+42.81	249088.51	1184969.79	S 36° 19' 37" W
				249029.53	1184926.42	
C3	PC	2+42.81		249029.53	1184926.42	R= 300.00' DELTA = 10.7488 L= 56.28'
	PT		2+99.09	248981.33	1184897.51	
	PI			249006.79	1184909.70	
L3	TANGENT	2+99.09	TO 3+91.69	248981.33	1184897.51	S 25° 34' 42" W
				248897.81	1184857.53	

**East Fork Alt-A CENTERLINE LAYOUT DATA**

NUMBER	DESC	BEGIN STATION	END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
C4	PC	3+91.69		248897.81	1184857.53	R= 919.22' DELTA = 5.0901 L= 81.66'
	PT		4+73.35	248822.68	1184825.59	
	PI			248860.96	1184839.89	
L4	TANGENT	4+73.35	TO 8+45.50	248822.68	1184825.59	S 20° 29' 17" W
				248474.08	1184695.34	
C5	PC	8+45.50		248474.08	1184695.34	R= 115.00' DELTA = 53.1897 L= 106.76'
	PT		9+52.25	248403.96	1184619.93	
	PI			248420.14	1184675.19	
L5	TANGENT	9+52.25	TO 10+12.72	248403.96	1184619.93	S 73° 40' 40" W
				248386.97	1184561.91	
C6	PC	10+12.72		248386.97	1184561.91	R= 74.00' DELTA = 44.0748 L= 56.92'
	PT		10+69.64	248352.51	1184518.36	
	PI			248378.55	1184533.16	
L6	TANGENT	10+69.64	TO 10+70.60	248352.51	1184518.36	S 29° 36' 11" W
				248351.67	1184517.89	



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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**PLEASE CALL 811  
3 Working Days  
BEFORE YOU DIG**

MARK DUANE DAVIES  
PROFESSIONAL ENGINEER

THOMAS R. VON SCHRÖDER  
PROFESSIONAL ENGINEER

QA/QC REVIEWER

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: VH/NP  
 DRAWN: KA  
 CHECKED: TVS  
 CRP No.: -  
 DATE: 11/20/2014

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 1005 SECOND AVE SUITE 200  
 SEATTLE, WA 98101  
 T 206.223.0326  
 F 206.223.0125  
 www.svrdesign.com

**KITSAP COUNTY**

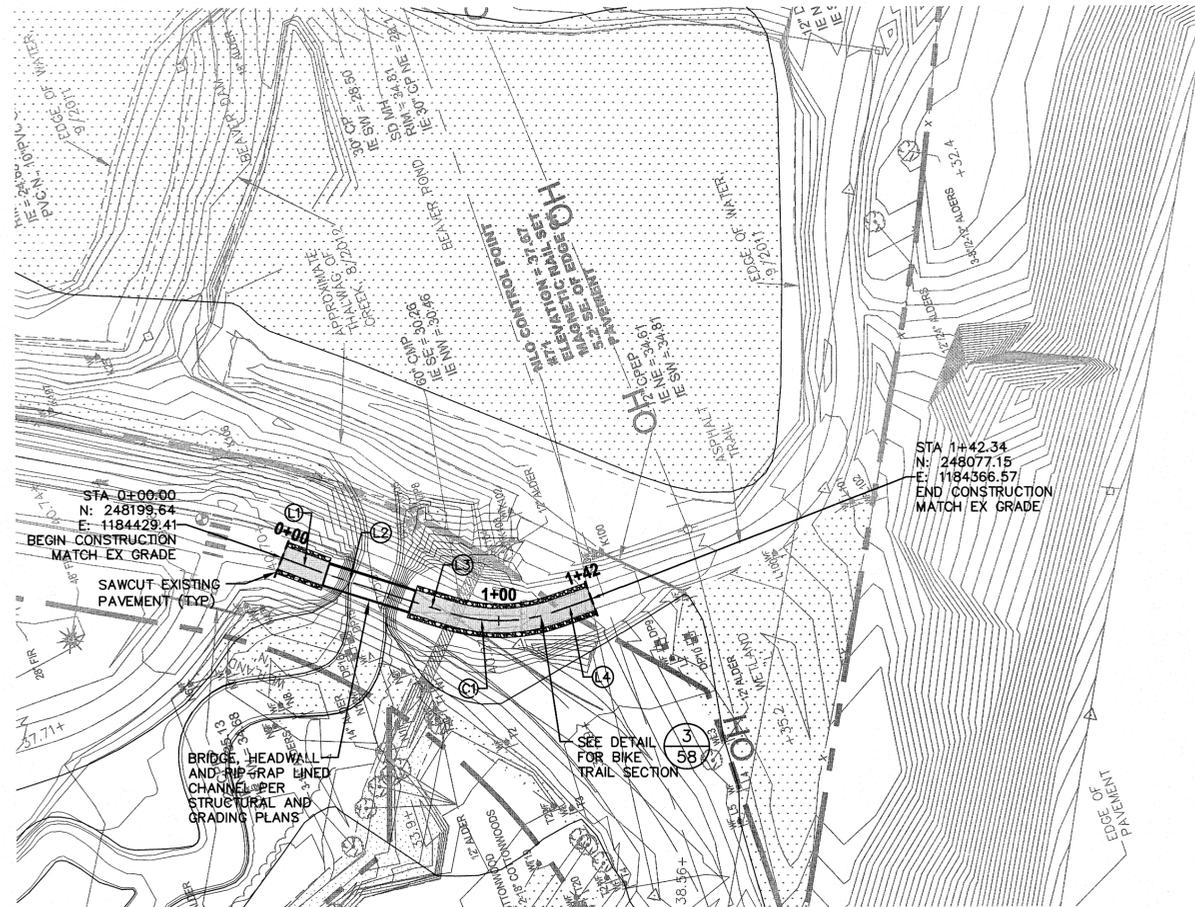
**KITSAP COUNTY**  
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 PORT ORCHARD, WA 98366  
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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 BIKE TRAIL PLAN  
 EAST FORK**

KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16 TOWNSHIP 25 NORTH RANGE 1 EAST FM

SHEET  
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OF  
73

**Jun-04-2015 100% SUBMITTAL**



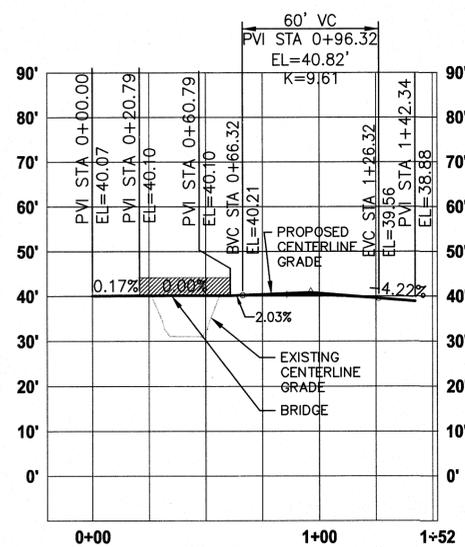
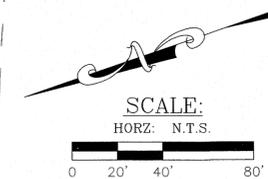
East Fork Connection CENTERLINE LAYOUT DATA						
NUMBER	DESC	BEGIN STATION	END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
L1	TANGENT	0+00.00 TO	0+20.79	248199.64 248183.78	1184429.41 1184415.97	S 40° 17' 10" W
L2	TANGENT	0+20.79 TO	0+60.79	248183.78 248151.99	1184415.97 1184391.69	S 37° 22' 20" W
L3	TANGENT	0+60.79 TO	0+77.83	248151.99 248138.39	1184391.69 1184381.41	S 37° 03' 32" W
C1	PC	0+77.83		248138.39	1184381.41	R= 74.00'
	PT		1+26.15	248093.34	1184366.47	DELTA = 37.4074
	PI			248118.40	1184366.32	L= 48.31'
L4	TANGENT	1+26.15 TO	1+42.34	248093.34 248077.15	1184366.47 1184366.57	S 0° 20' 55" E

**LEGEND**

- ASPHALT PAVEMENT
- TRAIL SHOULDER
- FILL AREA, SEE NOTE 1
- CRIB BLOCK WALL
- SAWCUT LINE
- ROW LINE

**NOTES**

- SEE GRADING PLANS FOR CONTOURS FROM EDGE OF TRAIL SHOULDER TO MATCH EXISTING LOCATION.



**PLEASE CALL 811  
3 Working Days  
BEFORE YOU DIG**

G:\VICTOR\CC\COURTNEY\CC-SHEET 56-EAST FORK CONNECTION.DWG 56 EAST FORK CONNECTION 6/4/2015 9:18 AM KYLEA

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



QA/QC REVIEWER

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: VH/NP  
 DRAWN: KA  
 CHECKED: TVS  
 CRP No.:  
 DATE: 11/20/2014



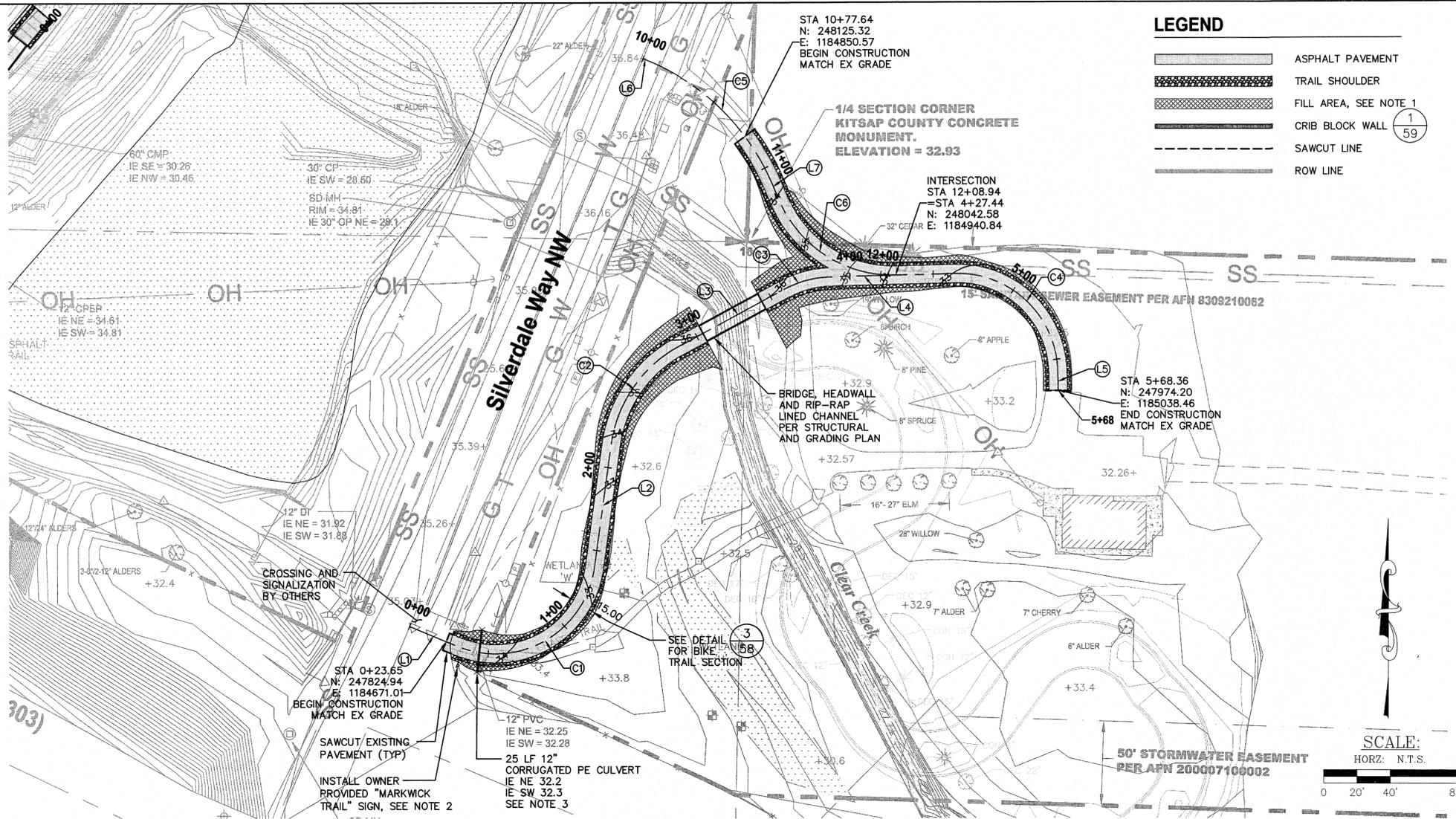
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 PORT ORCHARD, WA 98366  
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*CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 BIKE TRAIL PLAN  
 EAST FORK CONNECTION*

KITSAP COUNTY, WASHINGTON  
 APPROX. 9, 16 18 25 28 31 34 37 40 43 46 49 52 55 58 61 64 67 70 73 76 79 82 85 88 91 94 97 100

SHEET  
56  
OF  
73

**Jun-04-2015 100% SUBMITTAL**



**LEGEND**

- ASPHALT PAVEMENT
- TRAIL SHOULDER
- FILL AREA, SEE NOTE 1
- CRIB BLOCK WALL
- SAWCUT LINE
- ROW LINE

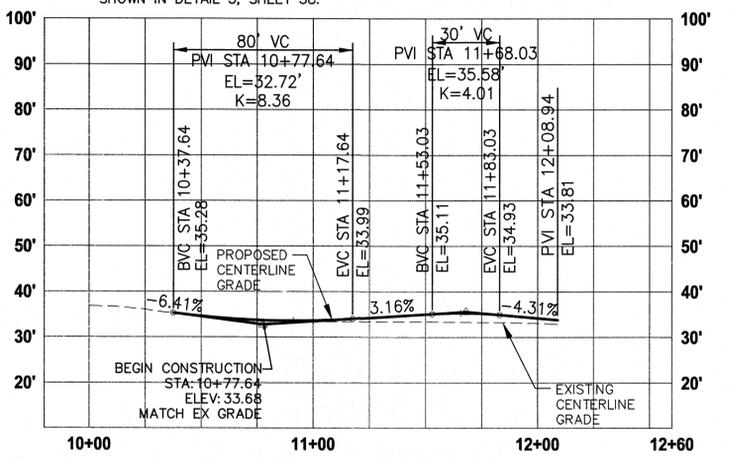
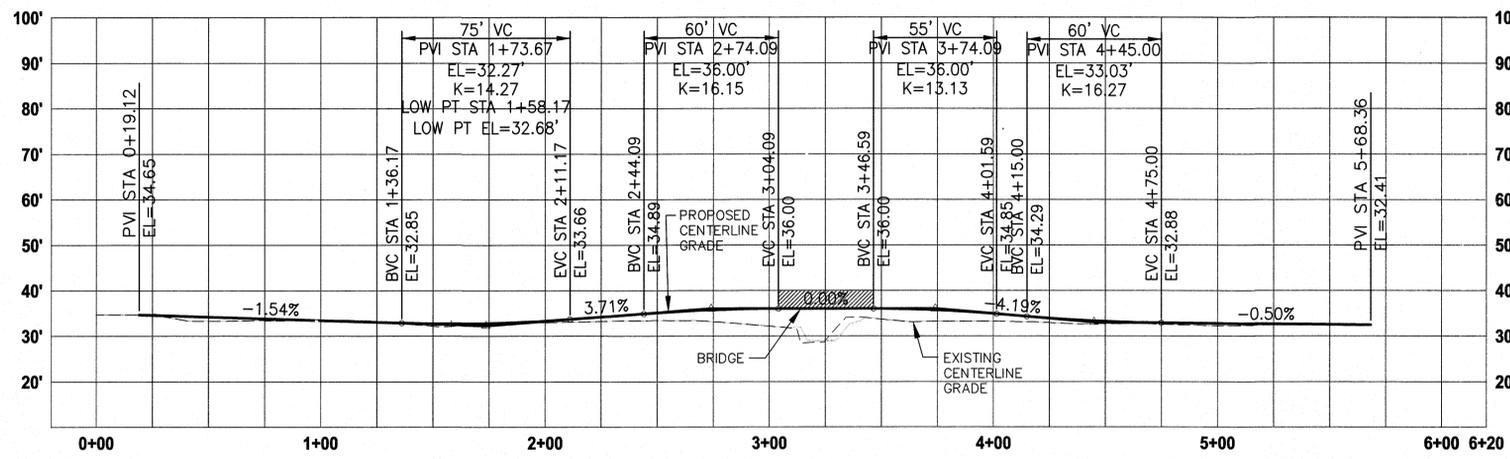
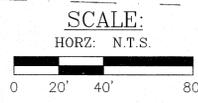
**Markwick CENTERLINE LAYOUT DATA**

NUMBER	DESC	BEGIN STATION	END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
L1	TANGENT	0+00.00	TO 0+30.77	247834.02 247822.21	1184649.18 1184677.59	S 67° 25' 12" E
C1	PC PT PI	0+30.77	1+40.43	247822.21	1184677.59	R= 60.00' DELTA = 104.7205 L= 109.66'
L2	TANGENT	1+40.43	TO 2+13.89	247869.40 247792.33	1184760.06 1184749.42	N 7° 51' 34" E
C2	PC PT PI	2+13.89	2+87.32	247942.17	1184770.11	R= 78.00' DELTA = 53.9384 L= 73.43'
L3	TANGENT	2+87.32	TO 3+59.80	248000.24 247981.49	1184810.51 1184775.53	N 61° 47' 52" E
C3	PC PT PI	3+59.80	3+87.86	248034.50	1184874.40	R= 60.00' DELTA = 26.7883 L= 28.05'
L4	TANGENT	3+87.86	TO 4+63.34	248041.61 248043.47	1184901.27 1184976.73	N 88° 35' 10" E
C4	PC PT PI	4+63.34	5+57.59	248041.61 248044.95	1184901.27 1185036.71	R= 60.00' DELTA = 90.0000 L= 94.25'
L5	TANGENT	5+57.59	TO 5+68.36	247984.97 248044.95	1185038.19 1185038.19	S 1° 24' 50" E

**Road onto Markwick CENTERLINE LAYOUT DATA**

NUMBER	DESC	BEGIN STATION	END STATION	NORTHING	EASTING	TANGENT OR CURVE DATA
L6	TANGENT	10+00.00	TO 10+02.61	248171.90 248170.90	1184789.69 1184792.10	S 67° 25' 12" E
C5	PC PT PI	10+02.61	11+11.14	248170.90	1184792.10	R= 140.00' DELTA = 44.4149 L= 108.53'
L7	TANGENT	11+11.14	TO 11+20.59	248096.34 248087.64	1184867.21 1184870.90	S 23° 00' 18" E
C6	PC PT PI	11+20.59	12+08.94	248087.64	1184870.90	R= 74.00' DELTA = 68.4087 L= 88.35'

- NOTES**
- SEE GRADING PLANS FOR CONTOURS FROM EDGE OF TRAIL SHOULDER TO MATCH EXISTING LOCATION.
  - INSTALL SIGN ON 4x4 POST PER WSDOT STANDARD PLAN 9-22.10-02. SIGN MOUNTING HEIGHT IS 7' FROM FINISHED GRADE TO BOTTOM OF SIGN.
  - BEVEL CULVERT PIPE END AND INSTALL QUARRY SPALLS PER KITSAP COUNTY ROAD STANDARD FIGURE 4-1.
  - PRIOR TO CONSTRUCTION OF THE BIKE TRAIL, PLACE A LAYER OF CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION OVER THE PREPARED SUBGRADE AS SHOWN IN DETAIL 3, SHEET 58.



**PLEASE CALL 811  
3 Working Days  
BEFORE YOU DIG**

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**REVISIONS**

No.	BY	DATE	DESCRIPTION
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

SURVEYED: N.L. OLSON  
DESIGNED: VH/NP  
DRAWN: KA  
CHECKED: TVS  
CRP No.: -  
DATE: 11/20/2014



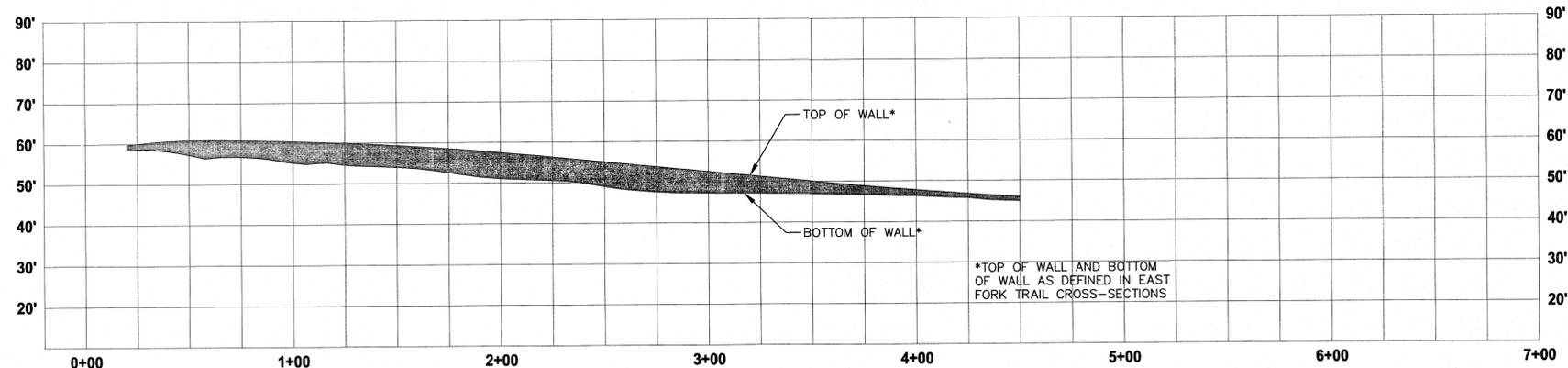
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**CLEAR CREEK  
FLOODPLAIN RESTORATION  
BIKE TRAIL PLAN  
MARKWICK**  
KITSAP COUNTY, WASHINGTON  
9, 16 25 1

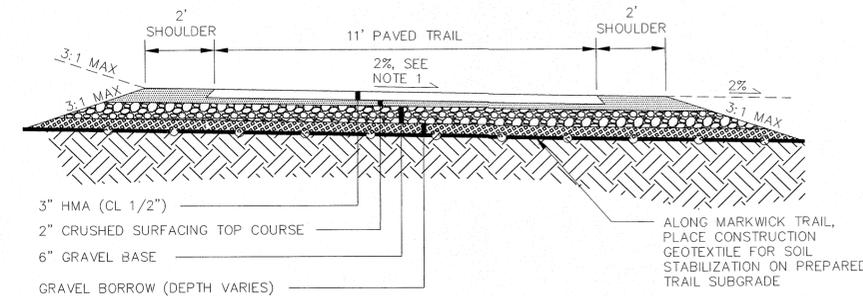
SHEET  
57  
OF  
73

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G:\LIC\VIDE.CC\CURRENT\CC-SHEET 57-MARKWICK SOUTH 5/4/2015 9:19 AM ACXEA

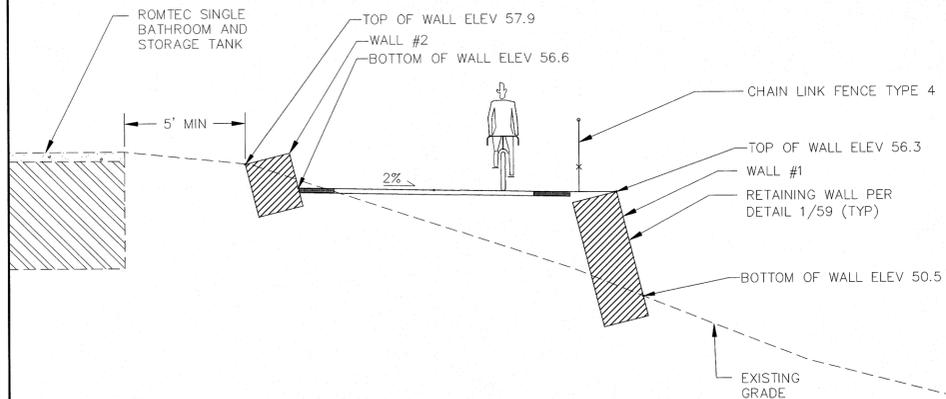


WALL 1 PROFILE  
HORIZONTAL: 1"=40'  
VERTICAL: 1"=20'

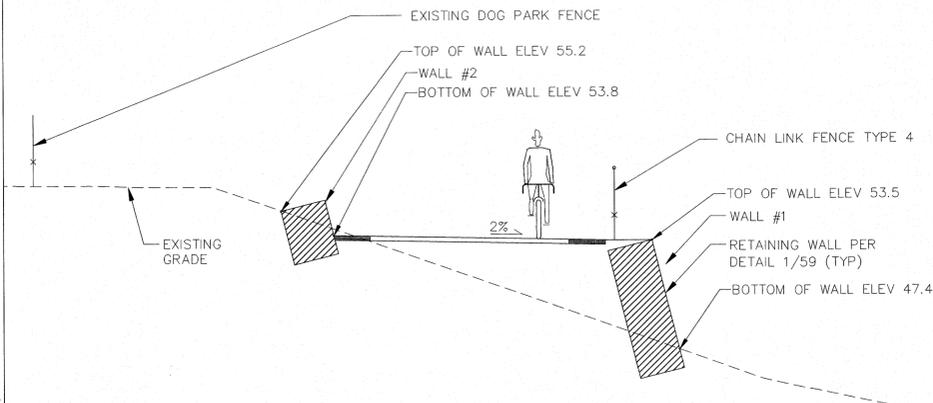


NOTE:  
1. DIRECTION OF TRAIL CROSS SLOPE PER CONTOURS SHOWN ON THE PLANS

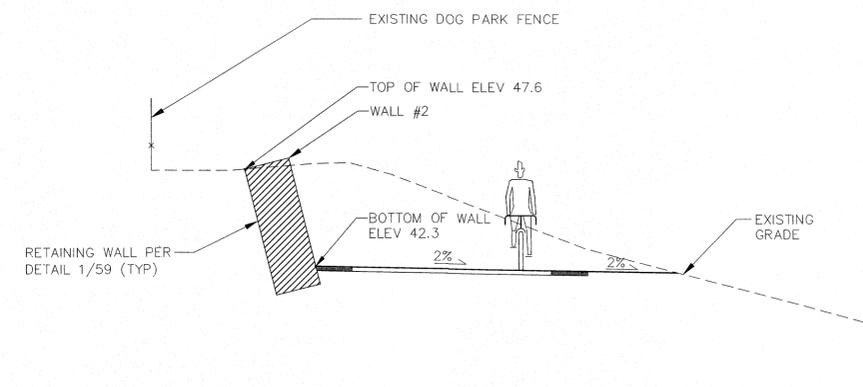
BIKE TRAIL CROSS-SECTION  
NTS



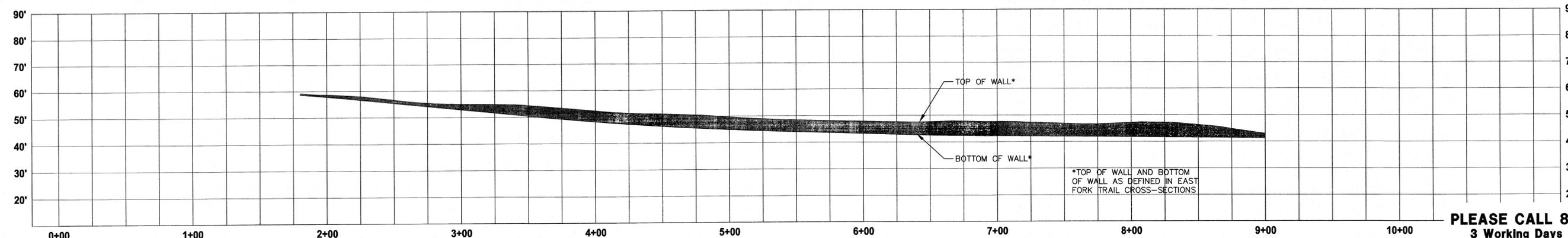
EAST FORK TRAIL CROSS-SECTION AT STA 2+25  
NTS



EAST FORK TRAIL CROSS-SECTION AT STA 2+80  
NTS



EAST FORK TRAIL CROSS-SECTION AT STA 7+00  
NTS



WALL 2 PROFILE  
HORIZONTAL: 1"=40'  
VERTICAL: 1"=20'

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BEFORE YOU DIG

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REVISIONS			
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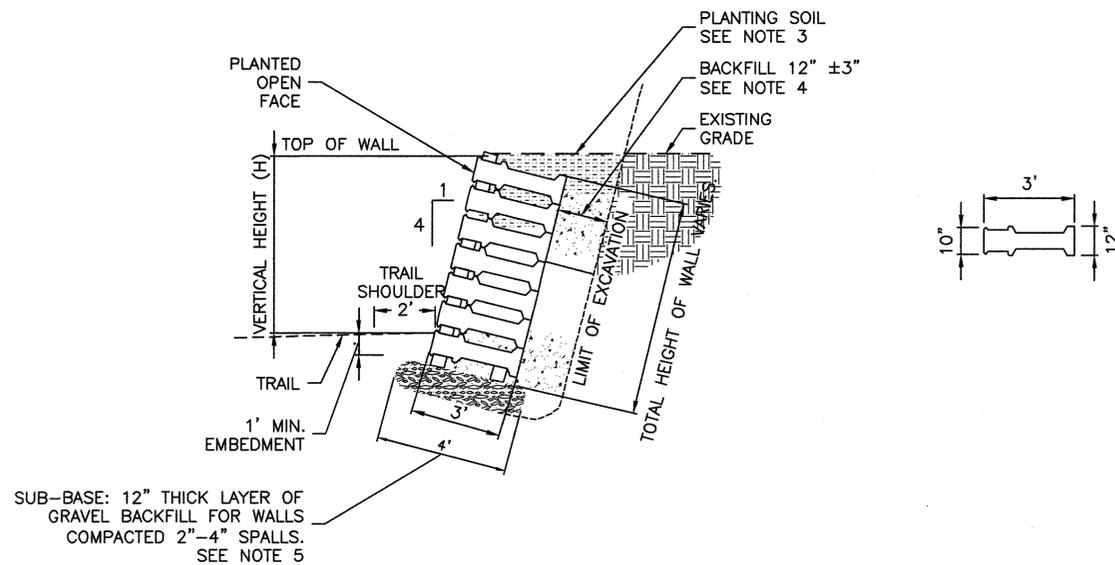


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CLEAR CREEK  
FLOODPLAIN RESTORATION  
BIKE TRAIL PLAN  
CIVIL DETAILS  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16 DRAWING 25

SHEET  
58  
OF  
73

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**NOTES**

1. INSTALL MINI CRIBLOCK™ PER MANUFACTURER'S REQUIREMENTS.
2. TOP AND BOTTOM ELEVATIONS VARY ALONG TRAIL. NUMBER OF LAYERS TO VARY.
3. MINI CRIBLOCK STRUCTURE SHALL BE FILLED WITH PLANTING SOIL CONSISTING OF 20% FINE COMPOST BLENDED UNIFORMLY WITH 80% TOPSOIL TYPE B. PLANTS SHALL BE INSTALLED IN CRIBBLOCK AS CONSTRUCTED AND BACKFILLED IN APPROX. 1' LIFTS. SOILS TO BE COMPACTED TO FIRM AND UNYIELDING CONDITION AS APPROVED BY ENGINEER. EACH PLANT SHALL PROTRUDE FROM THE OPEN FACE, SHALL BE THOROUGHLY WATERED WHEN INSTALLED, AND SHALL NOT BE DIRECTLY COMPACTED. SEE SPECS SECTION 6-20.
4. BACKFILL SHALL CONSIST OF GRAVEL BACKFILL FOR WALLS COMPACTED TO 90% ASTM D 1557 (MODIFIED PROCTOR).
5. SUB-BASE SHALL CONSIST OF MINIMUM 12" LAYER OF 2-4" SPALLS COMPACTED TO FIRM AND UNYIELDING CONDITION. THE SUB-BASE MAY BE LEVELLED WITH UP TO 2" OF GRAVEL BACKFILL FOR WALLS AS NEEDED TO PROVIDE A SMOOTH, LEVEL FOUNDATION. SOIL SUBGRADE SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO PLACING THE SPALLS AND WALL ELEMENTS.
6. WALL INSTALLATION SHALL BE OBSERVED PERIODICALLY BY THE GEOTECHNICAL ENGINEER OF RECORD AS DIRECTED BY THE ENGINEER TO VERIFY PROPER CONSTRUCTION INCLUDING MAINTAINING THE WALL BATTER (4 VERTICAL TO 1 HORIZONTAL).
7. TEMPORARY SHORING, IF NEEDED, TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

**TYP RETAINING WALL STRUCTURE (MINI CRIBBLOCK) 1/59**  
SCALE: 1" = 3'

2850 sq. ft Criblock Wall	Species Name	Common Name	% of area to be planted	sq ft of area to be planted (sq. ft)	QTY	SIZE	AVG SPACING	NOTES
	Achillea millefolium	yarrow	10	285	0.44	647 bareroot seedling	8" OC	plant in groups of 5-7 clustered
	Anaphalis margaritacea	pearly everlasting	10	285	0.44	647 bareroot seedling	8" OC	plant in groups of 5-7 clustered
	Antennaria microphylla	rosy pussy-toes	10	285	0.25	1140 bareroot seedling	6" OC	plant in groups of 5-7 clustered
	Arctostaphylos uva-ursi	kinnikinnick	10	285	1	285 4" POT	12" OC	plant in groups of 5-7 clustered
	Erigeron speciosus	showy fleabane	8	228	0.25	912 bareroot seedling	6" OC	plant in groups of 5-7 clustered
	Eriophyllum lanatum	Oregon sunshine	10	285	0.44	647 bareroot seedling	8" OC	plant in groups of 5-7 clustered
	Fragaria vesca	woodland strawberry	10	285	1	285 bareroot seedling	12" OC	plant in groups of 5-7 clustered
	Pityrogramma triangularis*	goldenback fern	2	57	1	57 4" POT or 1 GAL	12" OC	plant in groups of 2-3 clustered
	Polystichum munitum	sword fern	2	57	1	57 4" POT or 1 GAL	12" OC	plant in groups of 2-3 clustered
	Sedum divergens	spreading stonecrop	10	285	0.25	1140 bareroot seedling	6" OC	plant in groups of 5-7 clustered
	Sedum oreganum	Oregon stonecrop	10	285	0.25	1140 bareroot seedling	6" OC	plant in groups of 5-7 clustered
	Sedum spathulifolium	broad-leaved stonecrop	10	285	0.25	1140 bareroot seedling	6" OC	plant in groups of 5-7 clustered
		<b>SUBTOTAL</b>	<b>102</b>	<b>2907</b>		<b>8,097</b>		

\* Can substitute Dryopteris expansa or Dryopteris arguta if P. triangularis not available

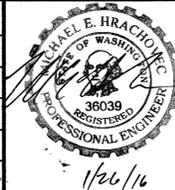
**CRIBBLOCK PLANTING PLAN**

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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No.	BY	DATE	DESCRIPTION	DESIGNED: M. HRACHOVEC
				DRAWN: K. ANDREWS
				CHECKED: T. ABBE
				CRP No.: NA
				DATE: 01/26/16

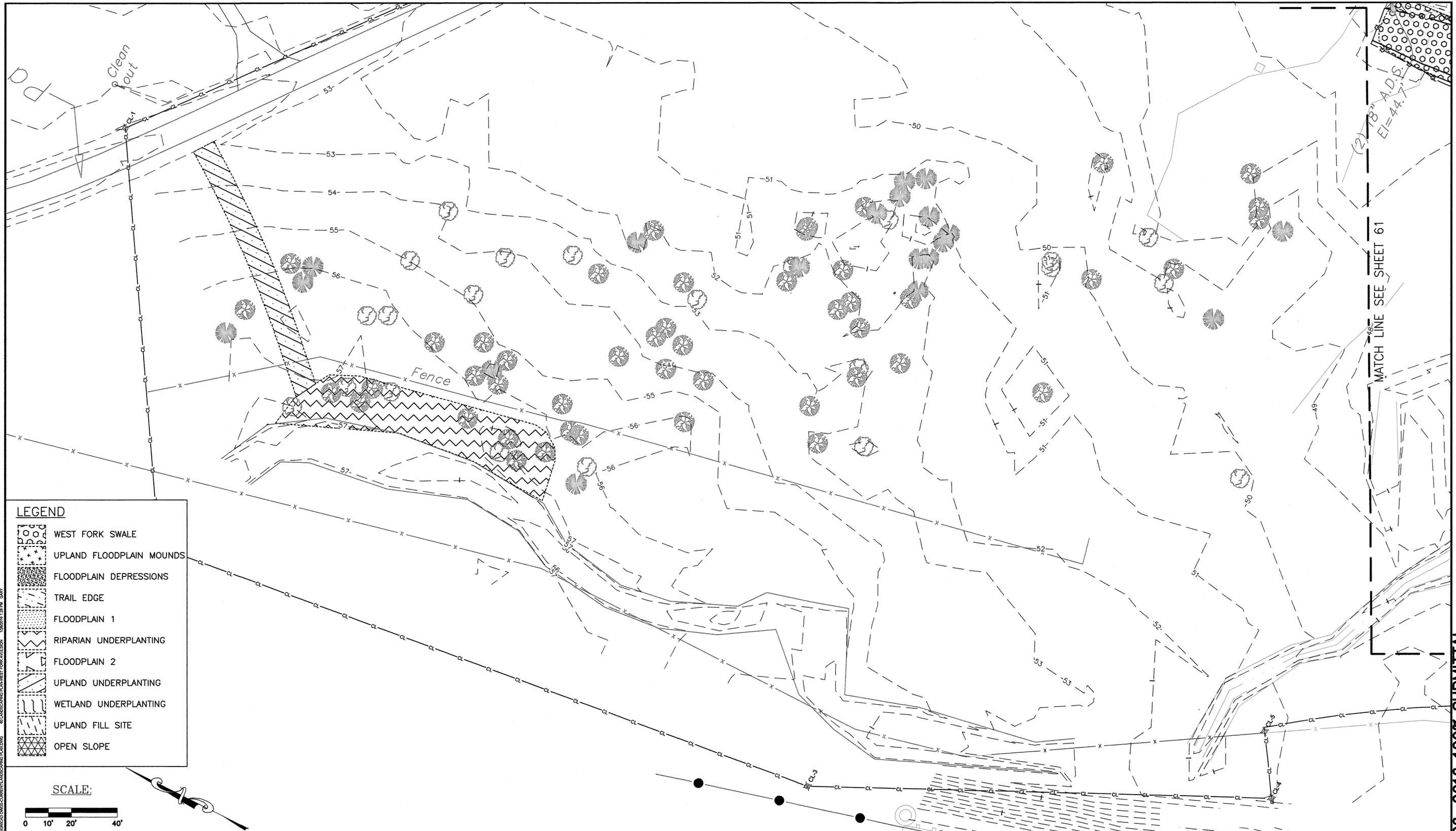


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CLEAR CREEK  
FLOODPLAIN RESTORATION  
BIKE TRAIL PLAN  
DETAILS 2  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
59  
OF  
73

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**LEGEND**

	WEST FORK SWALE
	UPLAND FLOODPLAIN MOUNDS
	FLOODPLAIN DEPRESSIONS
	TRAIL EDGE
	FLOODPLAIN 1
	RIPARIAN UNDERPLANTING
	FLOODPLAIN 2
	UPLAND UNDERPLANTING
	WETLAND UNDERPLANTING
	UPLAND FILL SITE
	OPEN SLOPE

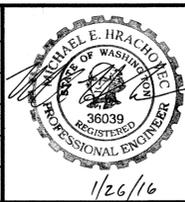
N:\PROJECTS\WEST FORK AVULSION\LANDSCAPING\LANDSCAPING PLAN.DWG 1/26/16 1:28 PM GARY

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 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
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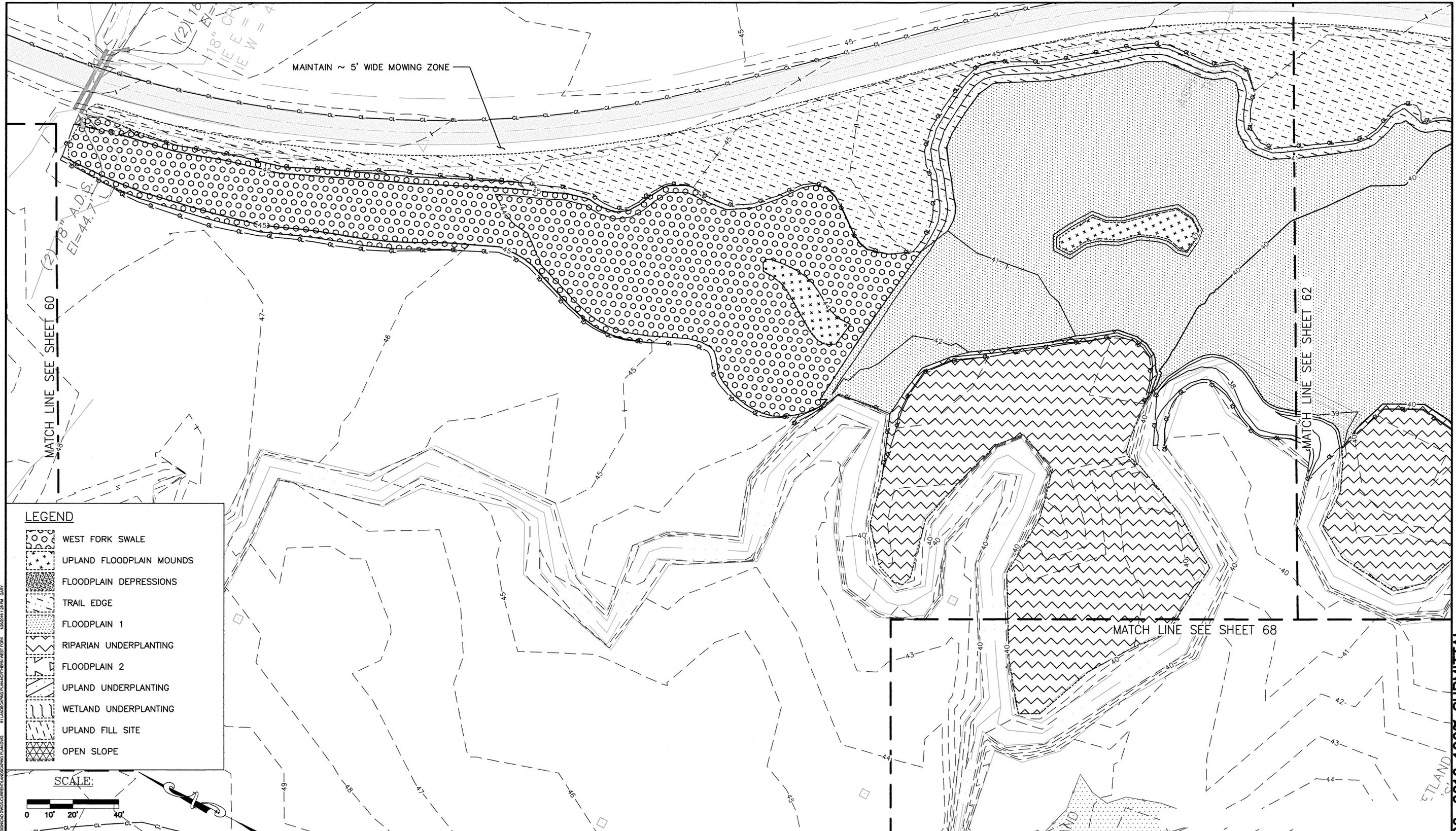


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**CLEAR CREEK  
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 LANDSCAPING PLAN -  
 WEST FORK AVULSION**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

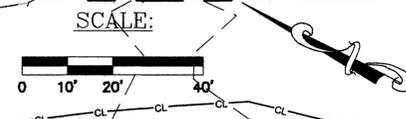
SHEET  
 60  
 OF  
 73

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**LEGEND**

	WEST FORK SWALE
	UPLAND FLOODPLAIN MOUNDS
	FLOODPLAIN DEPRESSIONS
	TRAIL EDGE
	FLOODPLAIN 1
	RIPARIAN UNDERPLANTING
	FLOODPLAIN 2
	UPLAND UNDERPLANTING
	WETLAND UNDERPLANTING
	UPLAND FILL SITE
	OPEN SLOPE

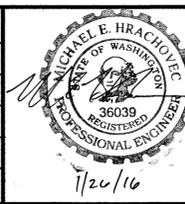


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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 LANDSCAPING PLAN  
 NORTHERN WEST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
**61**  
 OF  
**73**

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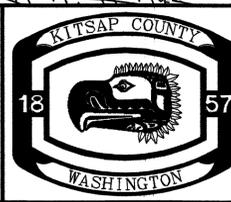
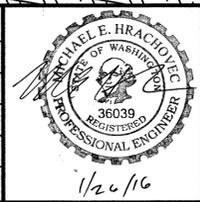
**LEGEND**

- WEST FORK SWALE
- UPLAND FLOODPLAIN MOUNDS
- FLOODPLAIN DEPRESSIONS
- TRAIL EDGE
- FLOODPLAIN 1
- RIPARIAN UNDERPLANTING
- FLOODPLAIN 2
- UPLAND UNDERPLANTING
- WETLAND UNDERPLANTING
- UPLAND FILL SITE
- OPEN SLOPE

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 CRP No.: NA  
 DATE: 1/20/16



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**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 LANDSCAPING PLAN  
 SOUTHERN WEST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

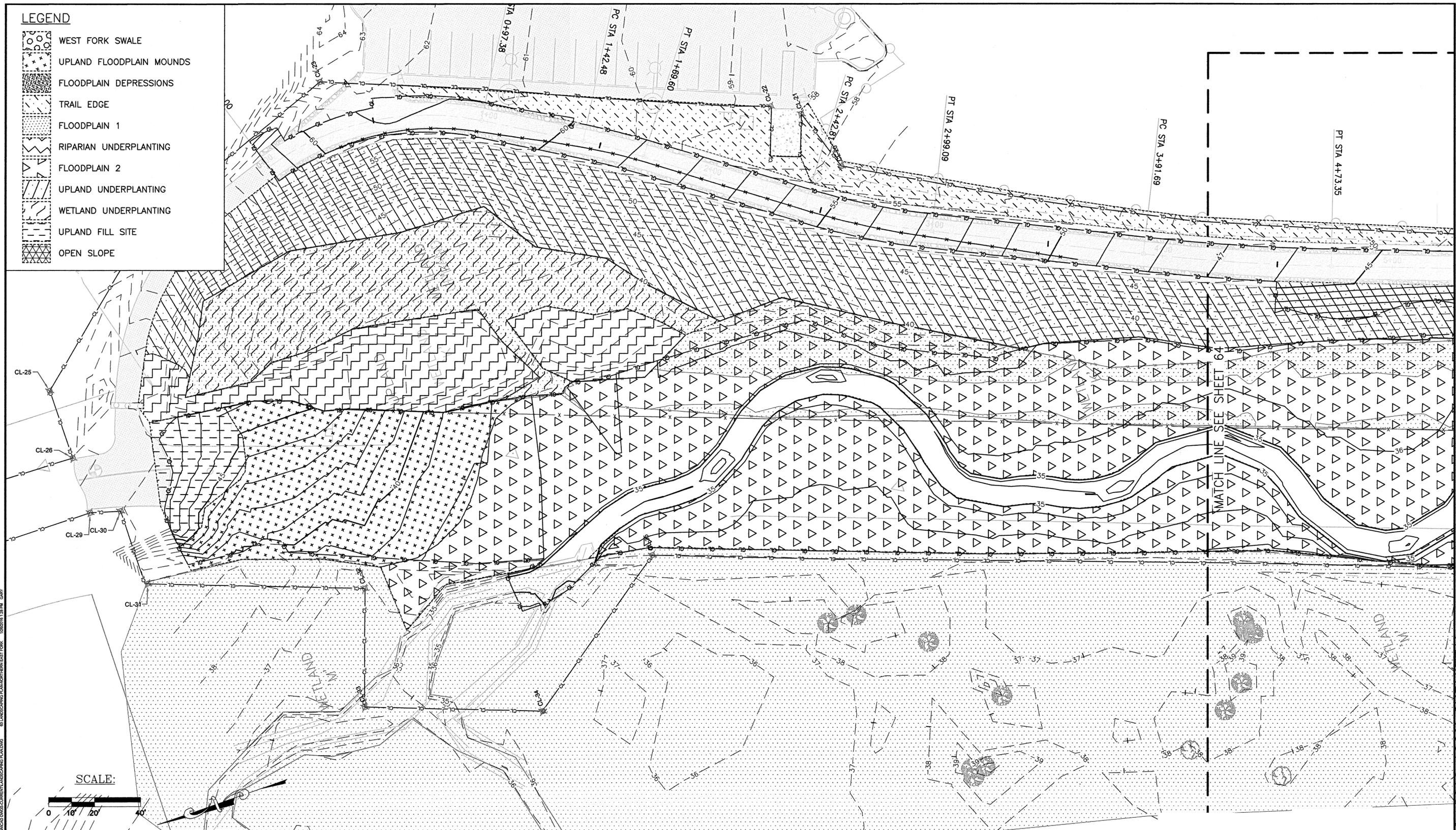
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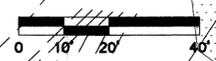
PROJECT: SOUTHERN WEST FORK CLEAR CREEK FLOODPLAIN RESTORATION LANDSCAPING PLAN; DATE: 1/20/16 1:28 PM; GARY

**LEGEND**

-  WEST FORK SWALE
-  UPLAND FLOODPLAIN MOUNDS
-  FLOODPLAIN DEPRESSIONS
-  TRAIL EDGE
-  FLOODPLAIN 1
-  RIPARIAN UNDERPLANTING
-  FLOODPLAIN 2
-  UPLAND UNDERPLANTING
-  WETLAND UNDERPLANTING
-  UPLAND FILL SITE
-  OPEN SLOPE



SCALE:

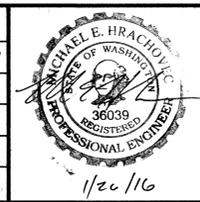


0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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No.	BY	DATE	DESCRIPTION

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 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
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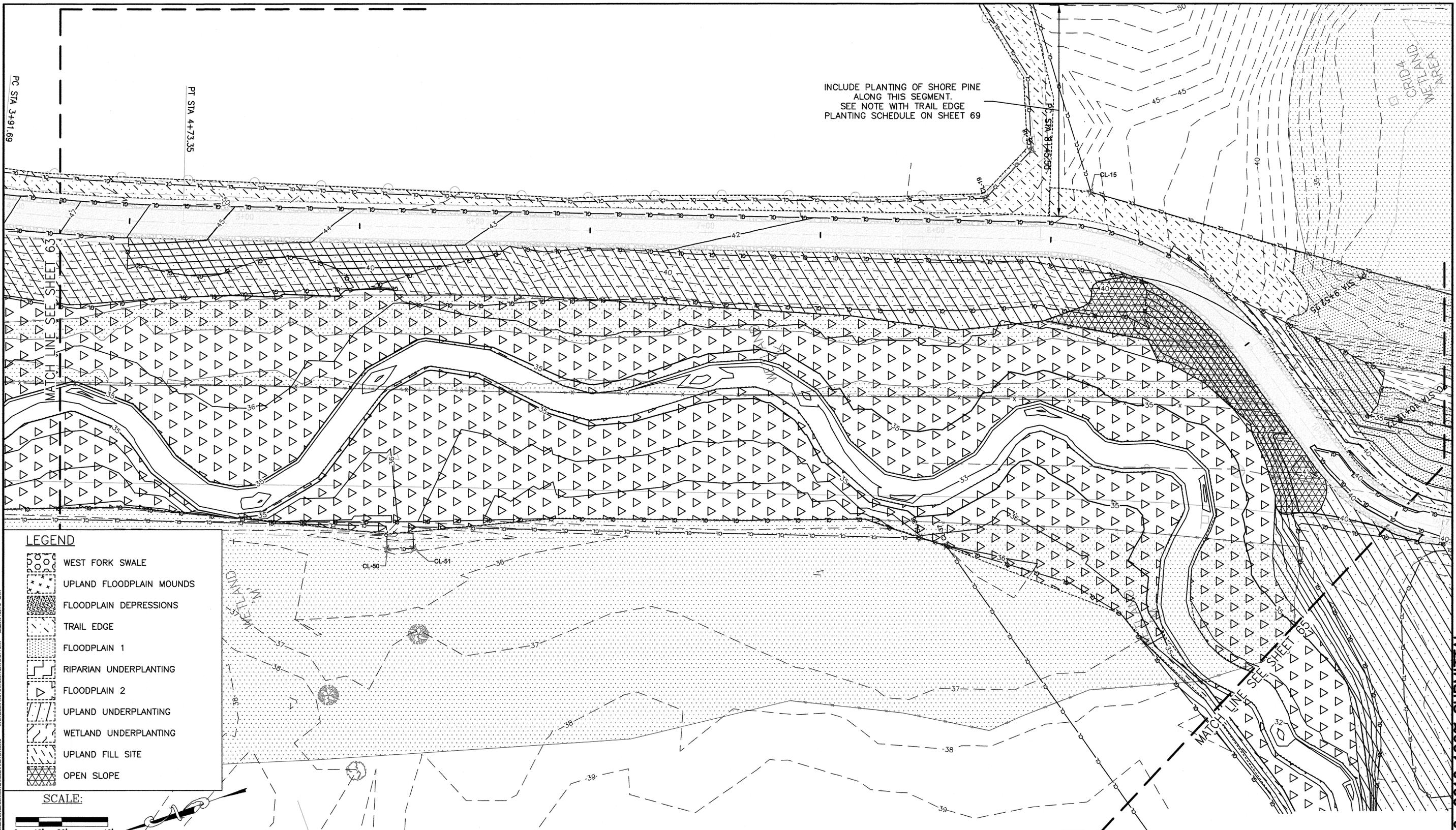


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**CLEAR CREEK  
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 LANDSCAPING PLAN  
 NORTHERN EAST FORK**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 63  
 OF  
 73

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**LEGEND**

-  WEST FORK SWALE
-  UPLAND FLOODPLAIN MOUNDS
-  FLOODPLAIN DEPRESSIONS
-  TRAIL EDGE
-  FLOODPLAIN 1
-  RIPARIAN UNDERPLANTING
-  FLOODPLAIN 2
-  UPLAND UNDERPLANTING
-  WETLAND UNDERPLANTING
-  UPLAND FILL SITE
-  OPEN SLOPE

**SCALE:**



0 10 20 40  
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**CLEAR CREEK  
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 LANDSCAPING PLAN  
 SOUTHERN EAST FORK**  
 KITSAP COUNTY, WASHINGTON

SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

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 64  
 OF  
 73

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PROJECT: WETLAND COCLEAR CREEK FLOODPLAIN RESTORATION LANDSCAPING PLAN DATE: 1/26/16 12:10 PM GARY



**LEGEND**

	WEST FORK SWALE
	UPLAND FLOODPLAIN MOUNDS
	FLOODPLAIN DEPRESSIONS
	TRAIL EDGE
	FLOODPLAIN 1
	RIPARIAN UNDERPLANTING
	FLOODPLAIN 2
	UPLAND UNDERPLANTING
	WETLAND UNDERPLANTING
	UPLAND FILL SITE
	OPEN SLOPE

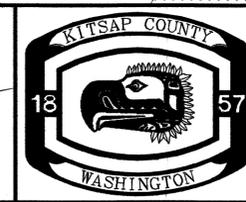
PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION LANDSCAPING PLAN DWG. © LANDSCAPING PLAN DWG. 1/20/16 1:28 PM DAY

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



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No.	BY	DATE	DESCRIPTION

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 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
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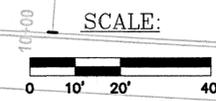


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 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 LANDSCAPING PLAN  
 CONFLUENCE**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 65 OF 73

Jan-26-2016 100% SUBMITTAL



**LEGEND**

	WEST FORK SWALE
	UPLAND FLOODPLAIN MOUNDS
	FLOODPLAIN DEPRESSIONS
	TRAIL EDGE
	FLOODPLAIN 1
	RIPARIAN UNDERPLANTING
	FLOODPLAIN 2
	UPLAND UNDERPLANTING
	WETLAND UNDERPLANTING
	UPLAND FILL SITE
	OPEN SLOPE

MH 34.26  
 W = OF WATER,  
 ALL PIPES  
 VISIBLE

1/2" PVC 32.25  
 1/2" ME = 32.28  
 IE MS IE

Waaga Way (SR-303)

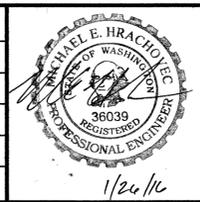
Silverdale Way NW

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

**Natural Systems Design**  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS		
No.	BY	DATE

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 1/24/16

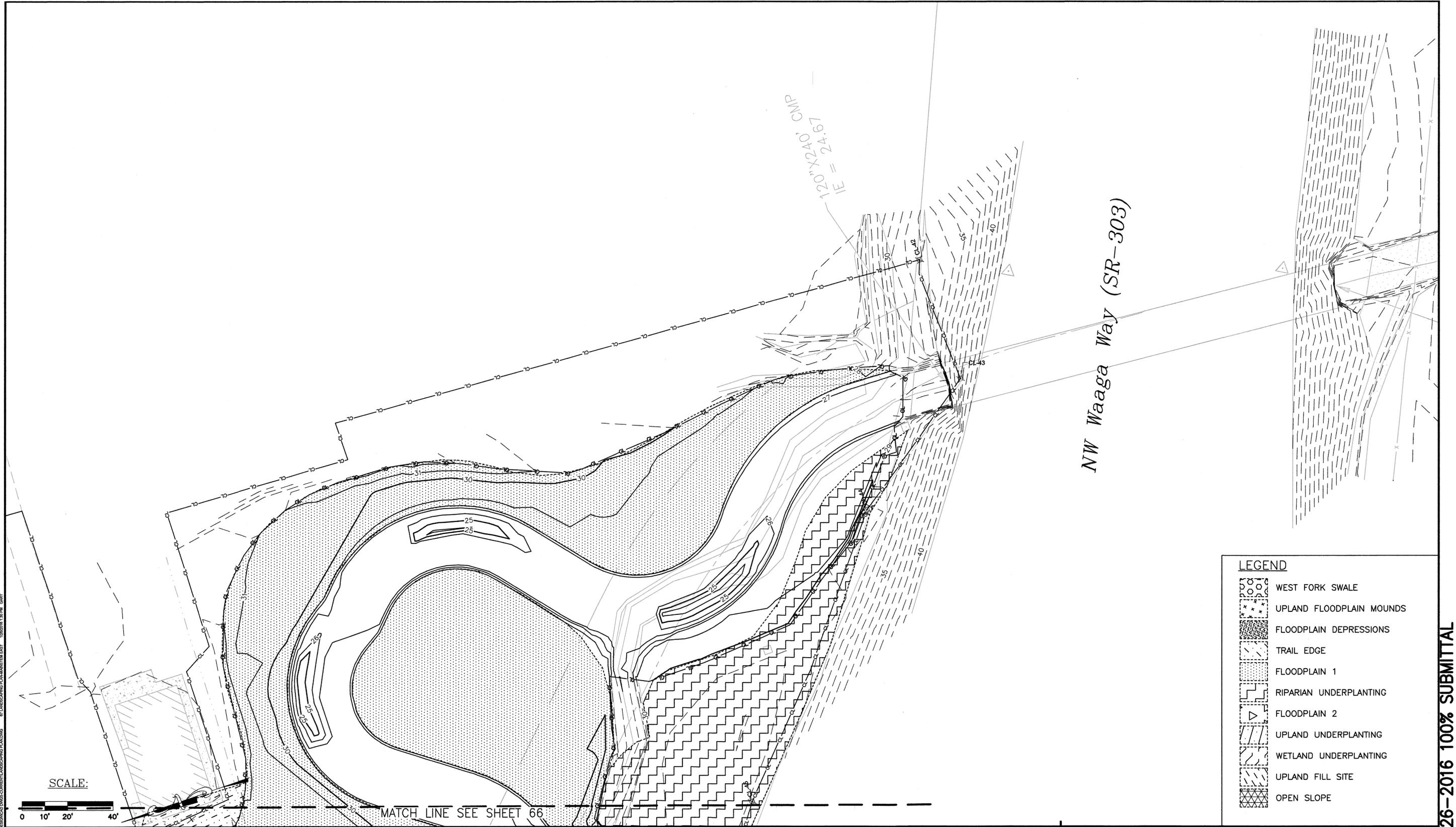


**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL:(360) 337-5777 FAX:(360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 LANDSCAPE PLAN  
 MAINSTEM WEST**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

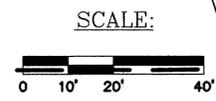
SHEET  
 66  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



**LEGEND**

-  WEST FORK SWALE
-  UPLAND FLOODPLAIN MOUNDS
-  FLOODPLAIN DEPRESSIONS
-  TRAIL EDGE
-  FLOODPLAIN 1
-  RIPARIAN UNDERPLANTING
-  FLOODPLAIN 2
-  UPLAND UNDERPLANTING
-  WETLAND UNDERPLANTING
-  UPLAND FILL SITE
-  OPEN SLOPE



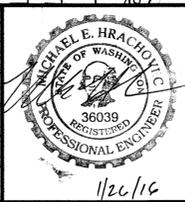
MATCH LINE SEE SHEET 66

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 12/20/16

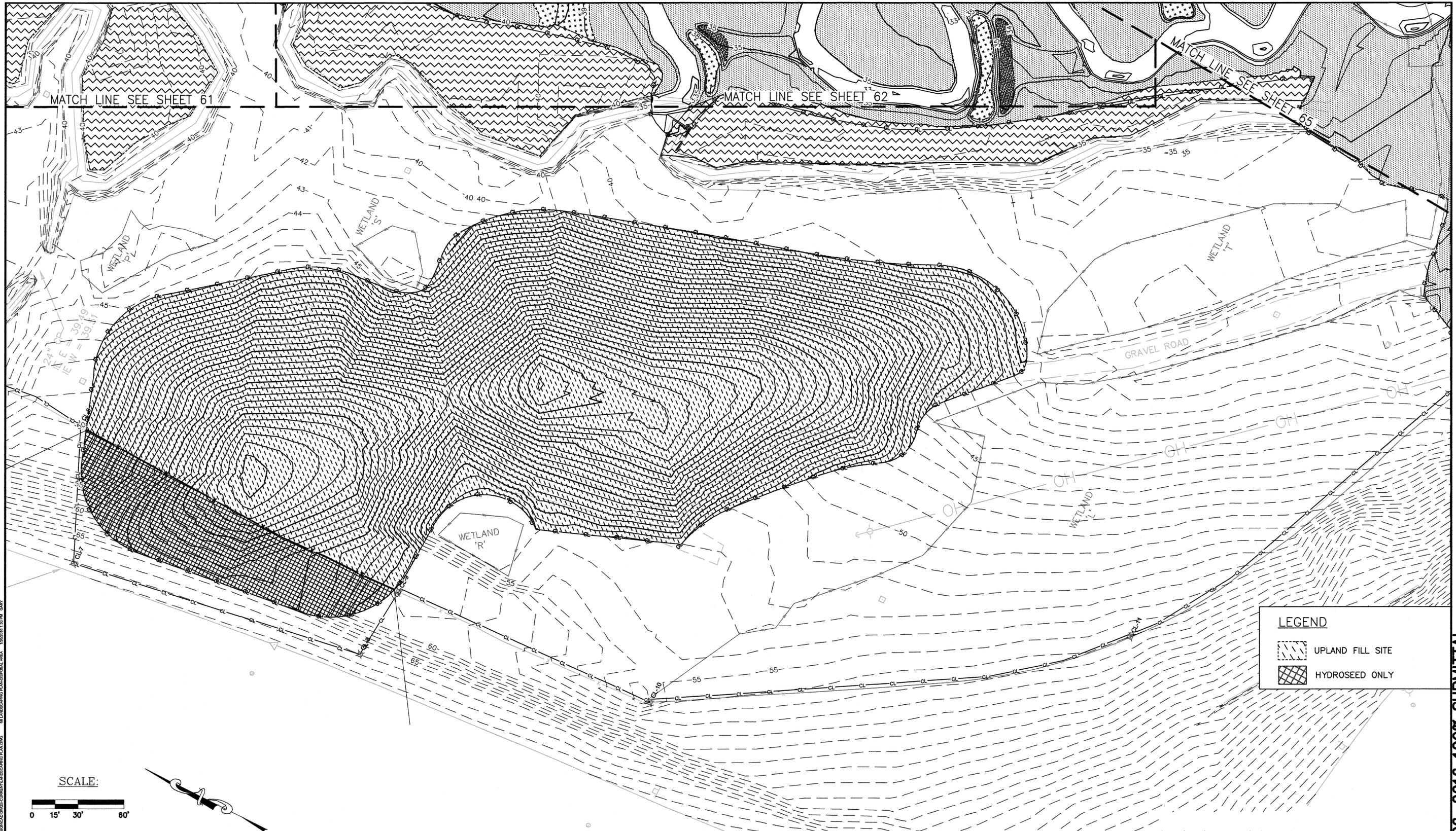


**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 LANDSCAPING PLAN  
 MAINSTEM SOUTH**  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

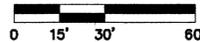
SHEET  
 67  
 OF  
 73

Jan-26-2016 100% SUBMITTAL



PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION DIVISION LANDSCAPING PLAN DWG. 1/20/16 10:30 AM GARY  
 88 LANDSCAPING PLANS/DESIGN AREA

SCALE:



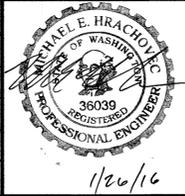
LEGEND	
	UPLAND FILL SITE
	HYDROSEED ONLY

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
 DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: N/A  
 DATE: 01/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
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CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 LANDSCAPING PLAN  
 DISPOSAL AREA  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
 68  
 OF  
 73

Jan-26-2016 100% SUBMITTAL

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	QTY. LBS. PLS.
WEST FORK SWALE SQ FT 15,829	GROUND		WETLAND SEED MIX	LBS PLS (SEED)		100	15,829		3.6
					<b>SUBTOTAL</b>	<b>100</b>	<b>15,829</b>		<b>3.6 LBS PLS</b>
									<b>Total Seed 3.6 lbs</b>

SEEDING RATE (LBS OF PLS/ACRE) 10  
Assumes seeding rate of 10 LBS PLS/Acre to be verified with seed supplier

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL
UPLAND FLOODPLAIN MOUNDS SQ FT 15,099	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	45	6,795	64	106	21	127
		POPULUS BALSAMIFERA	BLACK COTTONWOOD	BARE ROOT	12	20	3,020	144	21	4	25
		PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	10	35	5,285	100	53	11	63
		<b>SUBTOTAL</b>	<b>100</b>	<b>15,099</b>		<b>180</b>	<b>36</b>	<b>216 TREES</b>			

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL
SHRUB		HOLODISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	20	3,020	25	121	24	145
		MAHONIA AQUILIFOLIUM	TALL OREGON GRAPE	BARE ROOT	4	10	1,510	16	94	19	113
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	35	5,285	9	587	117	705
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	35	5,285	9	587	117	705
		<b>SUBTOTAL</b>	<b>100</b>	<b>15,099</b>		<b>1,390</b>	<b>278</b>	<b>1,667 SHRUBS</b>			

\* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps between clusters.  
\*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL
TRAIL EDGE SQ FT 59,778	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	15	8,967	64	140	28	168
		PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	8	30	17,933	64	280	56	336
		<b>SUBTOTAL</b>	<b>45</b>	<b>26,900</b>		<b>420</b>	<b>84</b>	<b>504 TREES</b>			

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL
SHRUB		AMELANCHIER ALNIFOLIA	SERVICEBERRY	BARE ROOT	5	10	5,978	25	239	48	287
		HOLODISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	15	8,967	25	359	72	430
		MAHONIA AQUILIFOLIUM	TALL OREGON GRAPE	BARE ROOT	4	5	2,989	16	187	37	224
		RIBES SANGUINEUM	RED FLOWERING CURRANT	BARE ROOT	5	10	5,978	25	239	48	287
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	30	17,933	9	1,993	399	2,391
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	30	17,933	9	1,993	399	2,391
<b>SUBTOTAL</b>	<b>100</b>	<b>59,778</b>		<b>5,009</b>	<b>1,002</b>	<b>6,011 SHRUBS</b>					

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL
DOG PARK PERIMETER		PINUS CONTORTA v. CONTORTA	SHORE PINE***	BARE ROOT	8	40	1,687	64	26	5	32
<b>SUBTOTAL</b>					<b>8</b>	<b>40</b>	<b>1,687</b>	<b>64</b>	<b>26</b>	<b>5</b>	<b>32</b>
											<b>Total Plants 6,547 TREES</b>

\* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps  
\*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.  
\*\*\* Shore pine to be planted ONLY in reveg area along dog park perimeter (not adjacent to floodplain areas) as indicated on Sheet 64

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL
OPEN SLOPE SQ FT 4,498	SHRUB	AMELANCHIER ALNIFOLIA	SERVICEBERRY	BARE ROOT	4	10	450	16	28	6	34
		HOLODISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	5	225	25	9	2	11
		RIBES SANGUINEUM	RED FLOWERING CURRANT	BARE ROOT	5	10	450	25	18	4	22
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	30	1,349	9	150	30	180
		RUBUS PARVIFLORUS	THIMBLEBERRY	BARE ROOT	4	15	675	16	42	8	51
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	30	1,349	9	150	30	180
<b>SUBTOTAL</b>	<b>100</b>	<b>4,498</b>		<b>397</b>	<b>79</b>	<b>477 SHRUBS</b>					
											<b>Total Plants 477</b>

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\*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

Species	Common Name	Application Rate
(PLS pounds per acre)		
<b>Wetland Seed Mix - West Fork Swale, Floodplain 1, Floodplain 2 Plant Communities</b>		
Agrostis exarata	Bentgrass	4.0 - 12.0
Alopecurus geniculatus	Water Foxtail	2.0 - 8.0
Deschampsia cespitosa	Tufted Hairgrass	8.0 - 16.0
Elymus glaucus	Blue Wildrye	8.0 - 20.0
Glyceria occidentalis	Reed Mannagrass	6.0 - 10.0
Lupinus rivularis	Streambank Lupine	8.0 - 20.0
<b>Total wetland seed (lbs PLS)</b>		<b>62</b>
<b>Upland Seed Mix - Upland Fill Site Plant Community</b>		
Achillea millefolium	Yarrow	1.5 - 3.5
Anaphalis margaritacea	Pearly Everlasting	5 - 7.5
Elymus glaucus	Blue Wildrye	15 - 35
Danthonia californica	California Oatgrass	3.5 - 18
Festuca roemerii	Roemer's Fescue	60 - 80
Prunella vulgaris	Heal-all	3.5 - 11.0
Deschampsia elongata	Slender Hairgrass	3.5 - 11.0
Solidago canadensis	Canada Goldenrod	2 - 5
<b>Total upland seed (lbs PLS)</b>		<b>96</b>

NOTE: ALL SEED MIXES SHALL INCLUDE AN ORGANIC TACKIFIER DEFINED IN WSDOT SPEC 9-14.4(7)A AND APPLIED PER WSDOT SPEC 8-01.3(2)E.

PROJECT TOTALS	
TOTAL TREES/SHRUBS	66,542
TOTAL EMERGENT PLUGS	13,652
<b>TOTAL</b>	

PLANTING PREPARATION SUMMARY (IN ORDER)			
	1	2	3
LOCATION	COMPOST (DEPTH IN INCHES)	MULCH (DEPTH IN INCHES)	HYDROSEED
WEST FORK SWALE	3	-	WETLAND MIX
UPLAND FLOODPLAIN MOUNDS	3	4	-
TRAIL EDGE	3	4	-
OPEN SLOPE	3	4	-
UPLAND UNDERPLANTING	0	*PER PLANT	-
RIPARIAN UNDERPLANTING	0	*PER PLANT	-
UPLAND FILL (INSIDE RIGHT OF WAY FENCE)	3	4	-
UPLAND FILL (OUTSIDE RIGHT OF WAY FENCE)	3	-	UPLAND MIX
WETLAND UNDERPLANTING	0	*PER PLANT	-
FLOODPLAIN DEPRESSIONS	3	4	-
FLOODPLAIN 1	3	-	WETLAND MIX
FLOODPLAIN 2	3	-	WETLAND MIX

\* APPLY 4" OF MULCH IN A 1.5' RADIUS PER PLANT

Natural Systems Design  
P.O. Box 15609  
Seattle, WA 98115

REVISIONS			
No.	BY	DATE	DESCRIPTION

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: N/A  
DATE: 01/26/16

**KITSAP COUNTY**  
DEPT. OF PUBLIC WORKS  
614 DIVISION STREET MS-26  
PORT ORCHARD, WA 98366  
TEL:(360) 337-5777 FAX:(360) 337-4867

**CLEAR CREEK  
FLOODPLAIN RESTORATION  
PLANTING SCHEDULE-  
LANDSCAPE 1**

KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
69  
OF  
73

Jan-26-2016 100% SUBMITTAL

PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION; DRAWING: PLANTING SCHEDULE LANDSCAPE 1; DATE: 01/26/16; 1:31 PM; GUY

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL
UPLAND UNDERPLANTING SQ FT 48,247	TREE	CORNUS NUTTALLII	WESTERN FLOWERING DOGWOOD	BARE ROOT	15	15	7,237	225	32	6	39
		THUJA PLICATA	WESTERN RED CEDAR	BARE ROOT	12	30	14,474	144	101	20	121
		PSEUDOTSUGA HETEROPHYLLA	WESTERN HEMLOCK	BARE ROOT	12	45	21,711	144	151	30	181
		<b>SUBTOTAL</b>				<b>90</b>		<b>43,422</b>		<b>283</b>	<b>57</b>
SHRUB		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	25	12,062	9	1,340	268	1,608
		OEMLARIA CERASIFORMIS	OSOBERRY	BARE ROOT	4	25	12,062	16	754	151	905
		RUBUS PARVIFLORUS	THIMBLEBERRY	BARE ROOT	3	15	7,237	9	804	161	965
		MAHONIA NERVOSA	LOW OREGON GRAPE	BARE ROOT	1	5	2,412	1	2,412	482	2,895
		<b>SUBTOTAL</b>				<b>65</b>		<b>31,361</b>		<b>5,311</b>	<b>1,062</b>
GROUND		POLYSTICHUM MUNITUM	SWORD FERN	4" POT	1.5	5	2,412	2	1,072	214	1,287
<b>SUBTOTAL</b>					<b>5</b>		<b>2,412</b>		<b>1,072</b>	<b>214</b>	<b>1,287 GROUNDCOVERS</b>
<b>Total Plants 7,999</b>											

\* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps between clusters.  
 \*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	
RIPARIAN UNDERPLANTING SQ FT 100,716	TREE	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	8	30	30,215	64	472	94	567	
		THUJA PLICATA	WESTERN RED CEDAR	BARE ROOT	8	30	30,215	64	472	94	567	
		<b>SUBTOTAL</b>				<b>60</b>		<b>60,430</b>		<b>944</b>	<b>189</b>	<b>1,133 TREES</b>
SHRUB		ACER CIRCINATUM	VINE MAPLE	BARE ROOT	5	20	20,143	25	806	161	967	
		CORYLUS CORNUTA	BEAKED HAZELNUT	BARE ROOT	5	10	10,072	25	403	81	483	
		OEMLARIA CERASIFORMIS	OSOBERRY	BARE ROOT	4	20	20,143	16	1,259	252	1,511	
		RHAMNUS PURSHIANA	CASCARA	BARE ROOT	10	10	10,072	100	101	20	121	
		RIBES SANGUINEUM	RED FLOWERING CURRANT	BARE ROOT	5	6	6,043	25	242	48	290	
		RUBUS SPECTABILIS	SALMONBERRY	BARE ROOT	4	32	32,229	16	2,014	403	2,417	
		SAMBUCUS RACEMOSA	RED ELDERBERRY	BARE ROOT	10	5	5,036	100	50	10	60	
		<b>SUBTOTAL</b>				<b>103</b>		<b>103,737</b>		<b>4,875</b>	<b>975</b>	<b>5,850 SHRUBS</b>
		GROUND		POLYSTICHUM MUNITUM	SWORD FERN	4" POT	1.5	5	5,036	2	2,238	
<b>SUBTOTAL</b>					<b>5</b>		<b>5,036</b>		<b>2,238</b>	<b>0</b>	<b>2,238 GROUNDCOVERS</b>	
<b>Total Plants 9,221</b>												

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 \*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL
UPLAND FILL SITE SQ FT 95,669	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	10	40	38,268	100	383	77	459
		ABIES GRANDIS	GRAND FIR	BARE ROOT	10	20	19,134	100	191	38	230
		PSEUDOTSUGA MENZIESII	DOUGLAS FIR	BARE ROOT	10	30	28,701	100	287	57	344
		<b>SUBTOTAL</b>				<b>90</b>		<b>86,102</b>		<b>861</b>	<b>172</b>
SHRUB		CEANOTHUS VELUTINUS	SNOWBRUSH	BARE ROOT	5	20	19,134	25	765	153	918
		SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	25	23,917	9	2,657	531	3,189
		ROSA NUTKANA	NOOTKA ROSE	BARE ROOT	3	25	23,917	9	2,657	531	3,189
		HOLIDISCUS DISCOLOR	OCEANSPRAY	BARE ROOT	5	15	14,350	25	574	115	689
		RUBUS PARVIFLORUS	THIMBLEBERRY	BARE ROOT	4	15	14,350	16	897	179	1,076
		<b>SUBTOTAL</b>				<b>100</b>		<b>95,669</b>		<b>7,551</b>	<b>1,510</b>
<b>Total Plants 10,095</b>											
GROUND		HYDROSEED		105 PLS LBS		100	95,669		95.8	0	96
<b>SUBTOTAL</b>					<b>100</b>		<b>95,669</b>				<b>95.8 LBS PLS</b>
<b>Total Seed (lbs) 95.8</b>											

SEEDING RATE (LBS OF PLS/ACRE) 43.6  
 Assumes seeding rate of 43.6 LBS PLS/Acre to be verified with seed supplier

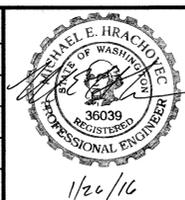
\* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps between clusters. Planting should consist of clusters of shrubs clumped tightly around clusters of trees to create dense plant groups that are easy to mulch and mow around.  
 \*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



P.O. Box 15609  
Seattle, WA 98115

REVISIONS			SURVEYED: N.L. OLSON
No.	BY	DATE	DESCRIPTION
			DESIGNED: M. HRACHOVEC
			DRAWN: K. ANDREWS
			CHECKED: T. ABBE
			CRP No.: NA
			DATE: 01/26/16




**KITSAP COUNTY**  
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CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PLANTING SCHEDULE-  
 LANDSCAPE 2  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
70  
OF  
73

Jan-26-2016 100% SUBMITTAL

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT.)	PLANTS PER HOLE	BASE QTY	MORTALITY BUFFER ADDITION**	TOTAL	
WETLAND UNDERPLANTING SQ FT 7,992	TREE	<i>THUJA PLICATA</i>	WESTERN RED CEDAR	BARE ROOT	8	80	6,394	64		100	20	120	
		<b>SUBTOTAL</b>					<b>80</b>	<b>6,394</b>			<b>100</b>	<b>20</b>	<b>120 TREES</b>
	SHRUB	<i>CORNUS SERICEA</i>	RED-TWIG DOGWOOD	BARE ROOT	4	15	1,199	16			75	15	90
		<i>LONICERA INVOLUCRATA</i>	BLACK TWINBERRY	BARE ROOT	5	15	1,199	25			48	10	58
		<i>MALUS FUSCA</i>	WESTERN CRABAPPLE	BARE ROOT	6	5	400	36			11	2	13
		<i>RUBUS SPECTABILIS</i>	SALMONBERRY	BARE ROOT	4	25	1,998	16			125	25	150
		<i>RHAMNUS PURSHIANA</i>	CASCARA	BARE ROOT	12	15	1,199	144			8	2	10
	<b>SUBTOTAL</b>					<b>75</b>	<b>5,994</b>			<b>267</b>	<b>53</b>	<b>321 SHRUBS</b>	
	GROUND	<i>ATHYRIUM FILIX-FEMINA</i>	LADY FERN	4" POT	3	10	799	9			89	18	107
		<i>CAREX OBNUPTA***</i>	SLOUGH SEDGE	BARE ROOT/PLUG	1.5	15	1,199	2	3	1,598		320	1,918
		<i>LYSICHITON AMERICANUM***</i>	SKUNK CABBAGE	BARE ROOT/PLUG	2	15	1,199	4	3	899		180	1,079
		<i>SCIRPUS MICROCARPUS***</i>	SMALL-FRUITED BULRUSH	BARE ROOT/PLUG	1.5	5	400	2	3	533		107	639
	<b>SUBTOTAL</b>					<b>45</b>	<b>3,596</b>			<b>3,119</b>	<b>624</b>	<b>3,743 GROUNDCOVERS</b>	
<b>Total Plants 4,183</b>													

\* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters of 3-10 plants with gaps between clusters.  
 \*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.  
 \*\*\* Indicates species that is to be planted 3 bare root plants per planting hole

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT.)	PLANTS PER HOLE	BASE QTY.	MORTALITY BUFFER ADDITION**	TOTAL
FLOODPLAIN DEPRESSIONS SQ FT 844	GROUND	<i>ATHYRIUM FILIX-FEMINA</i>	LADY FERN	4" POT	2	15	127	4		32	6	38
		<i>CAREX STIPATA***</i>	SAWBEAK SEDGE	BARE ROOT/PLUG	1.5	10	84	2	3	113	23	135
		<i>GLYCERIA BOREALIS***</i>	NORTHERN MANNAGRASS	BARE ROOT/PLUG	1.5	10	84	2	3	113	23	135
		<i>JUNCUS TENUIIS***</i>	SLENDER RUSH	BARE ROOT/PLUG	2	15	127	4	3	95	19	114
		<i>SCIRPUS ACUTUS***</i>	HARDSTEM BULRUSH	BARE ROOT/PLUG	1.5	15	127	2	3	169	34	203
		<i>SCIRPUS ATROCINCTUS***</i>	WOOLGRASS	BARE ROOT/PLUG	1.5	10	84	2	3	113	23	135
		<i>SCIRPUS MICROCARPUS***</i>	SMALL-FRUITED BULRUSH	BARE ROOT/PLUG	1.5	25	211	2	3	281	56	338
		<b>SUBTOTAL</b>					<b>100</b>	<b>844</b>			<b>914</b>	<b>183</b>
<b>Total Plants 1,097</b>												

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 \*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.  
 \*\*\* Indicates species that is to be planted 3 bare root plants per planting hole

N:\PROJECTS\WAP COCLEAR CREEK FLOODPLAIN RESTORATION\DWG\CURRENT\DWG\LANDSCAPE\DWG 71 PLANTING SCHEDULE\LANDSCAPE 3 1/26/16 1:31 PM GARY

0 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.



P.O. Box 15609  
Seattle, WA 98115

REVISIONS			SURVEYED: N.L. OLSON
No.	BY	DATE	DESCRIPTION

DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 1/26/16



**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL: (360) 337-5777 FAX: (360) 337-4867

CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PLANTING SCHEDULE—  
 LANDSCAPE 3  
 KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET  
71  
OF  
73

Jan-26-2016 100% SUBMITTAL

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	NOTES
<b>FLOODPLAIN 1</b> SQ FT 194,241	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	20	38,848	64	607	121	728	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		PICEA SITCHENSIS	SITKA SPRUCE	BARE ROOT	10	10	19,424	100	194	39	233	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		POPULUS BALSAMIFERA	BLACK COTTONWOOD	BARE ROOT	8	15	29,136	64	455	91	546	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		SALIX LUCIDA	PACIFIC WILLOW	BARE ROOT	4	15	29,136	16	1,821	364	2,185	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		SALIX LUCIDA	PACIFIC WILLOW	LIVE STAKE	3	15	29,136	9	3,237	647	3,885	See Detail 6, Sheet 72. Plant in clumps of 10-20.
		<b>SUBTOTAL</b>			<b>75</b>	<b>145,681</b>		<b>6,315</b>	<b>1,263</b>	<b>7,578</b>	<b>TREES</b>	
SHRUB	CORNUS SERICEA	RED-TWIG DOGWOOD	LIVE STAKE	3	5	9,712	9	1,079	216	1,295	See Detail 6, Sheet 72. Plant in clumps of 10-20.	
	CORNUS SERICEA	RED-TWIG DOGWOOD	BARE ROOT	4	5	9,712	16	607	121	728	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
	See Detail 5, Sheet 69. Plant in clumps of 8-10.	BLACK TWINBERRY	BARE ROOT	5	15	29,136	25	1,165	233	1,399	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
	MALUS FUSCA	WESTERN CRABAPPLE	BARE ROOT	6	5	9,712	36	270	54	324	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
	ROSA PISOCARPA	PEA-FRUITED ROSE	BARE ROOT	3	10	19,424	9	2,158	432	2,590	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
	SALIX SCOULERIANA	SCOULER'S WILLOW	LIVE STAKE	3	7	13,597	9	1,511	302	1,813	See Detail 6, Sheet 72. Plant in clumps of 10-20.	
	SALIX SCOULERIANA	SCOULER'S WILLOW	BARE ROOT	4	8	15,539	16	971	194	1,165	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
	SALIX SITCHENSIS	SITKA WILLOW	LIVE STAKE	3	8	15,539	9	1,727	345	2,072	See Detail 6, Sheet 72. Plant in clumps of 10-20.	
	SALIX SITCHENSIS	SITKA WILLOW	BARE ROOT	4	7	13,597	16	850	170	1,020	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
	SPIRAEA DOUGLASII	HARDHACK	BARE ROOT	4	20	38,848	16	2,428	486	2,914	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
	SYMPHORICARPOS ALBUS	SNOWBERRY	BARE ROOT	3	10	19,424	9	2,158	432	2,590	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
			<b>SUBTOTAL</b>			<b>100</b>	<b>194,241</b>		<b>14,924</b>	<b>2,985</b>	<b>17,909</b>	<b>SHRUBS</b>
<b>Total Plants 25,487</b>												

GROUND	WETLAND SEED MIX	PLS LBS (SEED)		100	194,241		44.6	0	45
			<b>SUBTOTAL</b>	<b>100</b>	<b>194,241</b>		<b>45</b>	<b>0</b>	<b>44.6 PLS LBS</b>

SEEDING RATE (LBS OF PLS/ACRE): 10  
 Assumes seeding rate of 10 LBS PLS/Acre to be verified with seed supplier  
 Put something here. **Total Seed 44.6 lbs**

\* AVERAGE SPACING is intended as a general guideline. Ideally plants of like species should be grouped more tightly in clusters with gaps between clusters.  
 \*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.

LOCATION	LAYER	SPECIES	COMMON NAME	SIZE	AVG. SPACING (FEET)*	% OF PLANTING AREA	SQ. FT. TO PLANT	AREA PER PLANT (SQ. FT)	PLANTS PER HOLE	BASE QTY	MORTALITY BUFFER ADDITION **	TOTAL	NOTES
<b>FLOODPLAIN 2</b> SQ FT 73,770	TREE	ALNUS RUBRA	RED ALDER	BARE ROOT	8	30	22,131	64	346			346	See Detail 5, Sheet 72. Plant in clumps of 8-10.
		PICEA SITCHENSIS	SITKA SPRUCE	BARE ROOT	10	15	11,066	100	111	22	133	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
		POPULUS BALSAMIFERA	BLACK COTTONWOOD	BARE ROOT	8	10	7,377	64	115	23	138	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
		SALIX LUCIDA	PACIFIC WILLOW	BARE ROOT	4	10	7,377	16	461	92	553	See Detail 5, Sheet 72. Plant in clumps of 8-10.	
		SALIX LUCIDA	PACIFIC WILLOW	LIVE STAKE	3	10	7,377	9	820	164	984	See Detail 6, Sheet 72. Plant in clumps of 10-20.	
		<b>SUBTOTAL</b>			<b>75</b>	<b>55,328</b>		<b>1,852</b>	<b>301</b>	<b>2,154</b>	<b>TREES</b>		
SHRUB	CORNUS SERICEA	RED-TWIG DOGWOOD	LIVE STAKE	3	15	11,066	9	1,230	246	1,475	See Detail 6, Sheet 72. Plant in clumps of 10-20.		
	CORNUS SERICEA	RED-TWIG DOGWOOD	BARE ROOT	4	15	11,066	16	692	138	830	See Detail 5, Sheet 72. Plant in clumps of 8-10.		
	LONICERA INVOLUCRATA	BLACK TWINBERRY	BARE ROOT	5	10	7,377	25	295	59	354	See Detail 5, Sheet 72. Plant in clumps of 8-10.		
	MALUS FUSCA	WESTERN CRABAPPLE	BARE ROOT	6	10	7,377	36	205	41	246	See Detail 5, Sheet 72. Plant in clumps of 8-10.		
	SALIX SITCHENSIS	SITKA WILLOW	LIVE STAKE	3	15	11,066	9	1,230	246	1,475	See Detail x, Sheet 72. Plant in clumps of 10-20.		
	SALIX SITCHENSIS	SITKA WILLOW	BARE ROOT	4	15	11,066	16	692	138	830	See Detail 5, Sheet 72. Plant in clumps of 8-10.		
	SPIRAEA DOUGLASII	HARDHACK	BARE ROOT	4	10	7,377	16	461	92	553	See Detail 5, Sheet 72. Plant in clumps of 8-10.		
			<b>SUBTOTAL</b>			<b>90</b>	<b>66,393</b>		<b>4,803</b>	<b>961</b>	<b>5,764</b>	<b>SHRUBS</b>	
GROUND	ATHYRIUM FILIX-FEMINA	LADY FERN	4" POT	3	5	3,689	9	410	82	492	See Detail 3, Sheet 72. Plant in clumps of 8-10.		
	CAREX OBNUPTA***	SLOUGH SEDGE	BARE ROOT/PLUG	1.5	1	738	2	3	984	197	1,180	See Detail 4, Sheet 72.	
	JUNCUS ENSIFOLIUS***	DAGGER LEAF RUSH	BARE ROOT/PLUG	1.5	1	738	2	3	984	197	1,180	See Detail 4, Sheet 72.	
	LYSICHITON AMERICANUM***	SKUNK CABBAGE	BARE ROOT/PLUG	2	1	738	4	3	553	111	664	See Detail 4, Sheet 72.	
	SCIRPUS MICROCARPUS***	SMALL-FRUITED BULRUSH	BARE ROOT/PLUG	1.5	1.5	1,107	2	3	1,475	295	1,770	See Detail 4, Sheet 72.	
		<b>SUBTOTAL</b>			<b>9.5</b>	<b>7,008</b>		<b>4,406</b>	<b>881</b>	<b>5,287</b>	<b>GROUNDCOVERS</b>		
<b>Total Plants 13,205</b>													

SEED	WETLAND SEED MIX	PLS LBS (SEED)		100	73,770		16.9	0	17
			<b>SUBTOTAL</b>	<b>100</b>	<b>73,770</b>		<b>17</b>	<b>0</b>	<b>16.9 PLS LBS</b>

SEEDING RATE (LBS OF PLS/ACRE): 10  
 Assumes seeding rate of 10 LBS PLS/Acre to be verified with seed supplier  
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 \*\* 20% quantity increase to compensate for expected bare root mortality and still achieve desired plant density.  
 \*\*\* Indicates species that is to be planted 3 bare root plants per planting hole

Natural Systems Design  
 P.O. Box 15609  
 Seattle, WA 98115

REVISIONS			SURVEYED: N.L. OLSON
No.	BY	DATE	DESCRIPTION

DESIGNED: M. HRACHOVEC  
 DRAWN: K. ANDREWS  
 CHECKED: T. ABBE  
 CRP No.: NA  
 DATE: 01/20/16

**KITSAP COUNTY**  
 DEPT. OF PUBLIC WORKS  
 614 DIVISION STREET MS-26  
 PORT ORCHARD, WA 98366  
 TEL:(360) 337-5777 FAX:(360) 337-4867

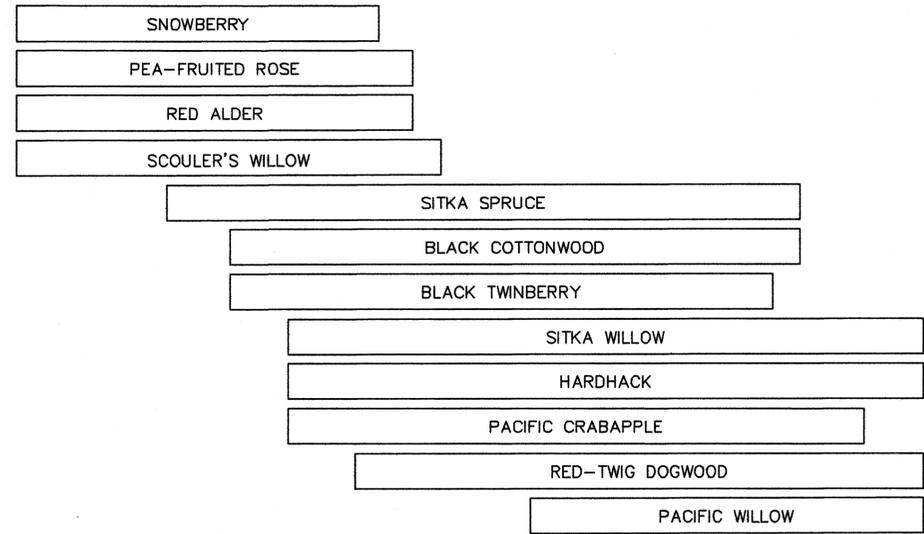
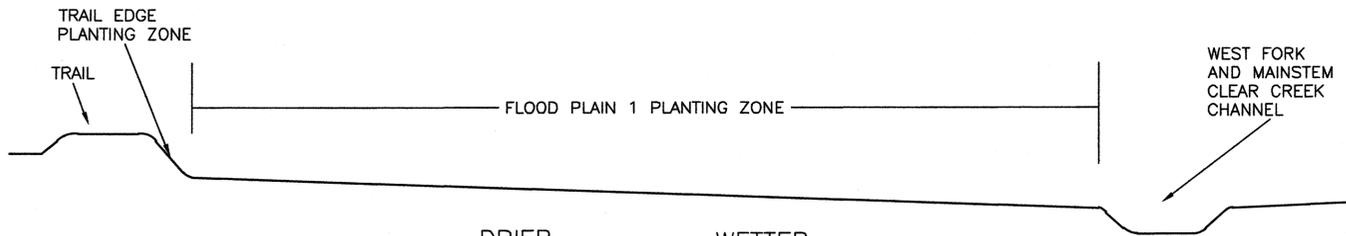
**CLEAR CREEK  
 FLOODPLAIN RESTORATION  
 PLANTING SCHEDULE -  
 LANDSCAPE 4**

KITSAP COUNTY, WASHINGTON  
 SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

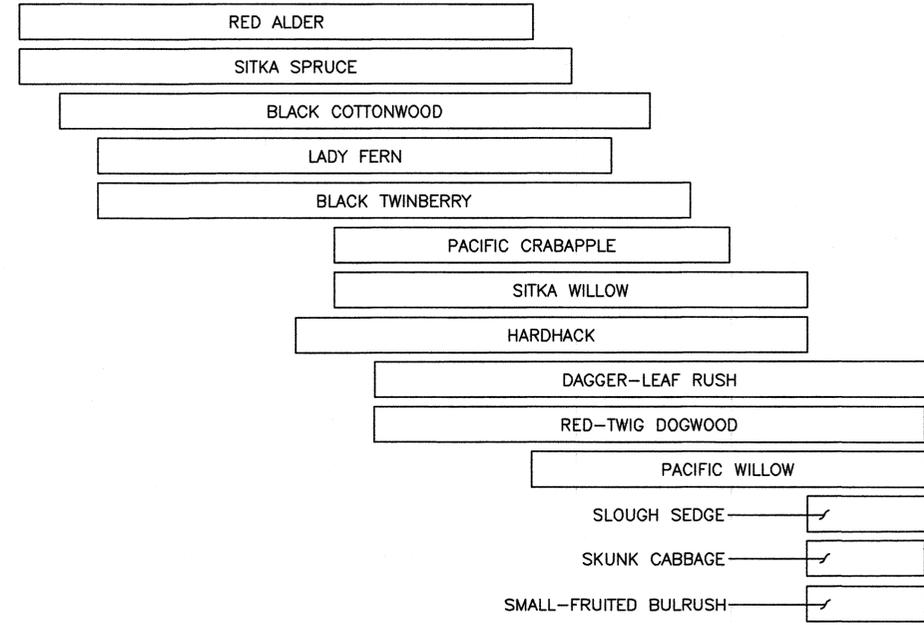
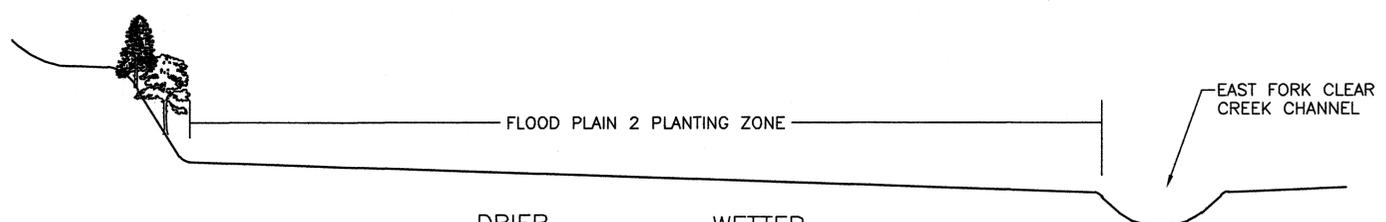
SHEET  
72  
OF  
73

PROJECT: CLEAR CREEK FLOODPLAIN RESTORATION; CURRENT TITLE: NOTES AND NOTES LANDSCAPE 4; 02/09/2016 1:31 PM; GARY

Jan-26-2016 100% SUBMITTAL

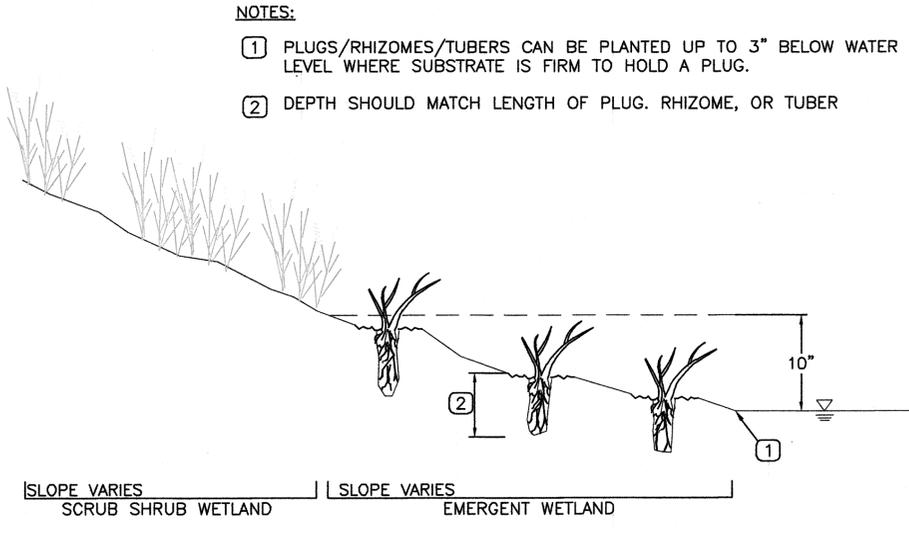
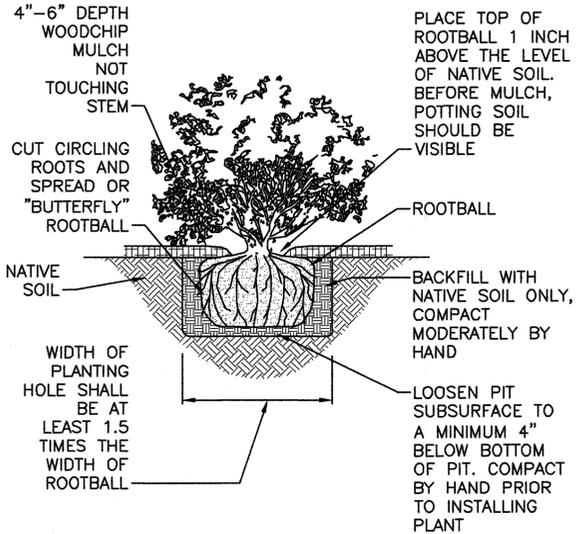


**FLOOD PLAIN 1 SPECIES DISTRIBUTION ON MOISTURE CONTENT** (1) 73  
SCALE: NTS



(FOLLOW SAME SPECIES DISTRIBUTION ON OPPOSITE BANK)

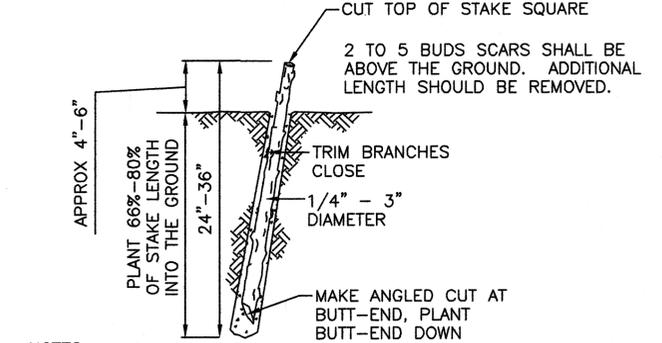
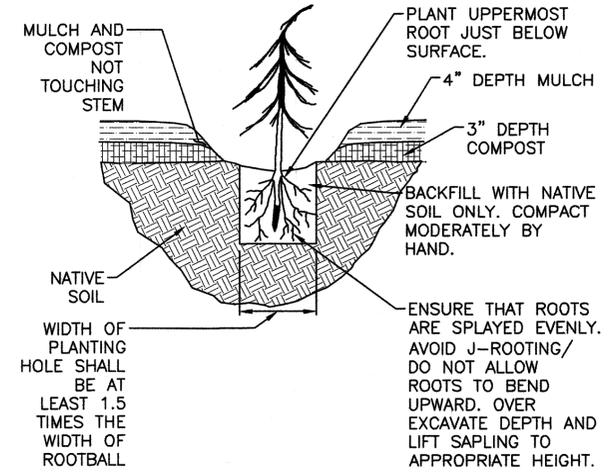
**FLOOD PLAIN 2 SPECIES DISTRIBUTION ON MOISTURE CONTENT** (2) 73  
SCALE: NTS



- NOTES:**
- PLUGS/RHIZOMES/TUBERS CAN BE PLANTED UP TO 3" BELOW WATER LEVEL WHERE SUBSTRATE IS FIRM TO HOLD A PLUG.
  - DEPTH SHOULD MATCH LENGTH OF PLUG, RHIZOME, OR TUBER

**CONTAINER PLANTING DETAIL** (3) 73  
SCALE: NTS

**EMERGENT PLUG PLANTING DETAIL** (4) 73  
SCALE: NTS



- NOTES:**
- USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
  - MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION. USE A PILOT BAR IN FIRM SOILS.
  - TAMP THE SOIL AROUND THE STAKE.
  - ADAPTED FROM SALIX APPLIED EARTHCARE, 1994.

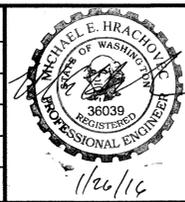
**TREE AND SHRUB BARE-ROOT PLANTING DETAIL** (5) 73  
SCALE: NTS

**LIVE STAKE** (6) 73  
SCALE: NTS

**Natural Systems Design**  
P.O. Box 15609  
Seattle, WA 98115

REVISIONS		
No.	BY	DATE

SURVEYED: N.L. OLSON  
DESIGNED: M. HRACHOVEC  
DRAWN: K. ANDREWS  
CHECKED: T. ABBE  
CRP No.: NA  
DATE: 01/25/16



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**CLEAR CREEK FLOODPLAIN RESTORATION DETAILS AND NOTES - LANDSCAPE 2**  
KITSAP COUNTY, WASHINGTON  
SECTION 9, 16, TOWNSHIP 25 NORTH, RANGE 1 EAST, W.M.

SHEET 73 OF 73

Jan-26-2016 100% SUBMITTAL