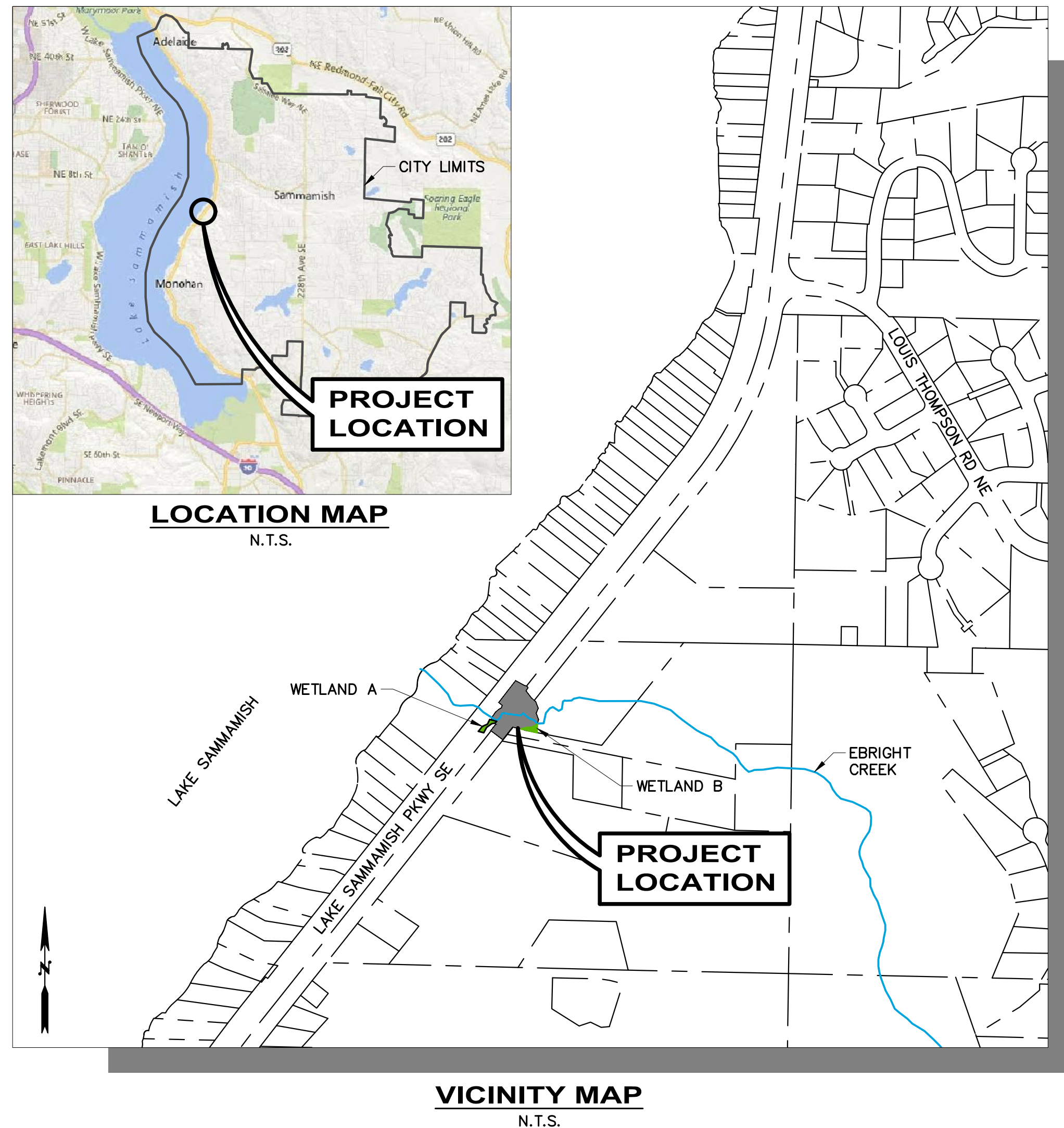


# CITY OF SAMMAMISH

## EBRIGHT CREEK FISH PASSAGE



### UTILITY COORDINATION CONTACTS:

#### UTILITIES:

EASTSIDE FIRE & RESCUE (425)392-3433  
 SAMMAMISH PLATEAU WATER (425)392-6256  
 COMCAST (425)263-5353  
 FRONTIER (425)261-6342  
 PUGET SOUND ENERGY (GAS) (425)449-7410  
 PUGET SOUND ENERGY (POWER) (425)457-4524  
 CENTURY LINK (206)461-1402  
 ZAYO (FIBER) (253) 441-0653  
 VERIZON (FIBER)

#### CITY OF SAMMAMISH:

PROJECT MANAGER  
 STEPHANIE SULLIVAN, PE, M. ASCE (425)295-0560

MAYOR  
 KAREN MORAN (425) 295-0500

DEPUTY MAYOR  
 CHRISTIE MALCHOW (425) 295-0500

INTERIM CITY MANAGER  
 DAVID RUDAT (425) 295-0500

ACTING PUBLIC WORKS DIRECTOR  
 CHERYL PASTON (425) 295-0572

CITY ENGINEER  
 ANDREW ZAGARS (425) 295-0561

#### RECOMMENDED FOR APPROVAL:

PROJECT ENGINEER (STEPHANIE SULLIVAN)  
 APPROVED BY:

CITY ENGINEER (ANDREW ZAGARS) PUBLIC WORKS DIRECTOR (CHERYL PASTON)

### SURVEYOR:

DUANE HARTMAN & ASSOCIATES, INC.  
 16928 WOODINVILLE-REDMOND ROAD, B-107  
 WOODINVILLE, WASHINGTON 98072

(425)483-4650

### ENGINEERING:

OSBORN CONSULTING, INC.  
 LAURA RUPPERT, PE  
 1800 112TH AVE. NE, SUITE 220E  
 BELLEVUE, WA 98004  
 (425) 451-4009

### DATUM:

HORIZONTAL DATUM: WASHINGTON STATE  
 COORDINATE SYSTEM, NORTH ZONE NAD83(91),  
 US FEET UTILIZING RTK GPS FIELD PROCEDURES  
 WITH A COMBINED SCALE FACTOR OF (SC)  
 0.999996835. EXTENDED TO SITE FROM WSDOT  
 CONTROL POINT #38611.

VERTICAL DATUM: NORTH AMERICAN VERTICAL  
 DATUM 1988 (NAVD88), US FEET. AS EXTENDED  
 TO THE SITE VIA TRIMBLE RTKGPS TECHNIQUES.

### SHEET INDEX

SHEET #	SHEET TITLE
1	COVER SHEET, VICINITY MAP, AND SHEET INDEX
2	LEGEND, GENERAL NOTES, AND ABBREVIATIONS
3	EXISTING SURVEY CONDITIONS
4	SURVEY CONTROL, EASEMENT PLAN, AND CONSTRUCTION STAKEOUT
5	DETOUR PLAN
6	TESC AND DEMO PLAN
7	TESC DETAILS
8	STREAM BYPASS PLAN
9	STREAM BYPASS DETAILS
10	CULVERT AND WINGWALL LAYOUT
11	STRUCTURAL NOTES AND DETAILS
12	STREAM CHANNEL GRADING PLAN AND PROFILE
13	STREAM CHANNEL TYPICAL SECTIONS AND DETAILS 1
14	STREAM CHANNEL TYPICAL SECTIONS AND DETAILS 2
15	ROADWAY PLAN AND PROFILE
16	GUARDRAIL AND CHANNELIZATION PLAN
17	CIVIL DETAILS
18	UTILITY DETAILS
19	WATER UTILITY RELOCATION
20	SEWER UTILITY RELOCATION
21	STREAM RESTORATION PLAN
22	STREAM RESTORATION PLANT SCHEDULE
23	STREAM RESTORATION PLANTING DETAILS



750 Sixth Street South  
 Kirkland WA 98033  
 p 425.822.5242  
 www.watershedco.com  
 Science & Design



David Consulting Group, Inc.  
 9706 4th Ave NE, Suite 300  
 www.dogengr.com

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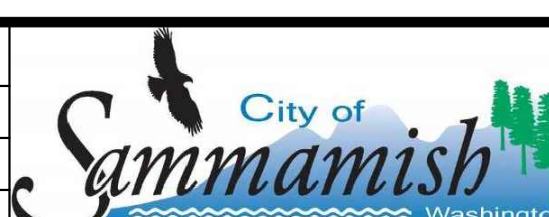


DESIGNED BY  
 MW  
 DRAWN BY  
 JJ  
 CHECKED BY  
 LR

**OSBORN CONSULTING INCORPORATED**

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801 228TH AVE SE  
 SAMMAMISH, WA 98075

**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 COVER SHEET, VICINITY MAP, AND SHEET INDEX

JOB# / DWG	DATE
10-190038	07/06/2020
SCALE	SHEET
H: N/A v: N/A	1 of 23

FILE NAME: C:\PW\_LOC\WORKINGDIR\OSBORNCONSULTING--PW.BENTLEY.COM\_OSBORNCONSULTING--PW-01\MAGGIE WILBANKS, EIT\DWG07813\10-190038\_CVR.DWG  
 PLOT TIME: 7/6/2020 3:12 PM  
 USER NAME: MAGGIE WILBANKS, EIT



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 PLOT TIME: 7/6/2020 3:12 PM  
 USER NAME: MAGGIE WILBANKS, EIT

**LEGEND:**

EXISTING

POWER POLE	
CONIFER TREE	
DECIDUOUS TREE	
DHA SURVEY CONTROL	
GUY ANCHOR	
VALVE	
WATER METER	
POWER VAULT	
FIRE HYDRANT	
LIGHT POLE	
CULVERT	
CONCRETE BOLLARD	
MAIL BOX	
GAS VALVE	
OHW/WETLAND FLAG	
BFW FLAG	
SITE BENCHMARK	
STAFF GAUGE	
ASPHALT ROAD	
UNDERGROUND SEWER LINE	
WATER LINE	
UNDERGROUND GAS LINE	
OVERHEAD POWER AND TELEPHONE LINE	
OVERHEAD POWER LINE	
GRAVEL ROAD	
FENCE LINE	

**SUGGESTED CONSTRUCTION SEQUENCE:**

- IT IS RECOMMENDED THAT THE CONTRACTOR BEGIN BY PERFORMING SITE PREPARATION AND INSTALLATION OF TESC MEASURES.
- CONTRACTOR SHALL MAINTAIN ACCESS TO THE KING COUNTY TRAIL AND PRIVATE RESIDENTIAL PROPERTIES THROUGHOUT CONSTRUCTION.
- TEMPORARY STREAM BYPASS SYSTEM AND FISH EXCLUSION SHALL BE COMPLETED BEFORE PERFORMING WORK TO RELOCATE EXISTING UTILITIES, INSTALL PRECAST CONCRETE CULVERT AND ASSOCIATED WINGWALLS, AND PERFORM CHANNEL GRADING.
- CONTRACTOR SHALL NOTIFY CITY OF SAMMAMISH THREE (3) WEEKS PRIOR TO LANE CLOSURES ALONG EAST LAKE SAMMAMISH PARKWAY.
- UPON COMPLETION OF WORK ALL STREAM BYPASS AND TEMPORARY EROSION CONTROL MEASURES, MATERIALS AND EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND THE SITE SHALL BE RESTORED TO THE PREVIOUS CONDITION.
- PLANTING AND SEEDING SHALL BE PERFORMED ACCORDING TO THE STREAM RESTORATION PLAN AND DETAILS.

**ABBREVIATIONS:**

ADT	AVERAGE DAILY TRAFFIC
AIR VAC	AIR AND VACUUM RELIEF VALVE ASSEMBLY
APPROX.	APPROXIMATE, APPROXIMATELY
BMP	BEST MANAGEMENT PRACTICE
BW	BOTTOM OF WALL
CFS	CUBIC FEET PER SECOND
CHNL	CHANNEL
CL	CENTERLINE
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CTR	CENTER
CY	CUBIC YARDS
DI	DUCTILE IRON
DIA	DIAMETER
E	EAST, EASTING
ELEV	ELEVATION
FLEX	FLEXIBLE
FT	FOOT, FEET
GV	GATE VALVE
HB	HORIZONTAL BEND
HDPE	HIGH-DENSITY POLYETHYLENE
HPA	HYDRAULIC APPROVAL
HVF	HIGH VISIBILITY FENCE
IE	INVERT ELEVATION
LCL	LOCAL LOW POINT
MAX	MAXIMUM
MJ	MECHANICAL JOINT
MPH	MILES PER HOUR
MON	MONUMENT
N	NORTH, NORTHING
N.T.S.	NOT TO SCALE
OHWM	ORDINARY HIGH WATER MARK
PVC	POLYVINYL CHLORIDE
RJ	RESTRAINED JOINT
ROW	RIGHT OF WAY
RXR	RAILROAD
S	SOUTH
SF	SQUARE FEET
STA.	STATION
SSMH	SANITARY SEWER MANHOLE
TBM	TEMPORARY BENCHMARK
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
VB	VERTICAL BEND
W	WEST
WM	WATER MAIN
WRG	WEDGE RESTRAINT GLAND
XFMR	TRANSFORMER

EXISTING ABBREVIATIONS

WV	WATER VALVE
PRD	PER RECORD DRAWING
CONC	CONCRETE
PP/UG	POWER POLE W/ UNDERGROUND
CAB	CABINET
RCC	REBAR/ CONTROL CAP

TREES

A	ALDER
F	FIR
W	WILLOW
C	CEDAR
DEC	DECIDUOUS
CON	CONIFER
HEM	HEMLOCK
CWD	COTTONWOOD

**PROJECT GENERAL NOTES:**

- PROTECTION OF THE ENVIRONMENT:** NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATER, OR ALLOW PARTICULATE EMISSIONS TO ENTER THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL FROM THE WASHINGTON STATE DEPARTMENT OF ECOLOGY.
- CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

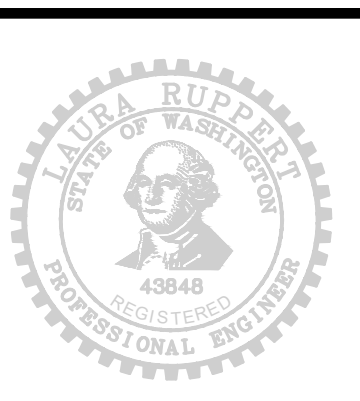
**TESC GENERAL NOTES:**

- TESC MEASURES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL FIELD LOCATE TO ACCOMMODATE SITE CONDITIONS AND WORK SCHEDULE.
- THE TEMPORARY EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH THE PLANS AND AS DIRECTED BY THE ENGINEER. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING ARE COMPLETED, AND SITE IS STABILIZED. SEDIMENT LADEN WATER SHALL NOT ENTER THE NATURAL DRAINAGE SYSTEMS.
- TEMPORARY SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED WATTLES, END RUNS, AND UNDER-CUTTING BENEATH WATTLES. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- ALL VEGETATION WITHIN CLEARING AND GRUBBING LIMITS SHALL BE REMOVED UNLESS NOTED OTHERWISE. ALL VEGETATION OUTSIDE DESIGNATED LIMITS SHALL REMAIN UNDISTURBED.
- ALL CRITICAL AREA BUFFERS SHALL BE STAKED PRIOR TO CONSTRUCTION. LIMITS OF DISTURBANCE TO BE STAKED. ANY DISTURBANCE INSIDE CRITICAL AREA BUFFER SHALL BE RESTORED PER PLANTING SHEET 21.
- THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF SAMMAMISH TO NOTIFY, FACILITATE AND MAINTAIN ACCESS TO ACCOMMODATE WORK OUTSIDE OF THE RIGHT-OF-WAY WITH PROPERTY OWNERS.
- ALL STOCKPILES ARE TO BE LOCATED IN SAFE AREAS AND PROTECTED FROM EROSION BY MECHANICAL OR VEGETATIVE MEANS.
- ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY SEEDING, MULCHING, MATTING OR PLASTIC COVERING. FROM OCT. 1 TO APRIL 30, NO SOILS SHALL REMAIN UNSTABILIZED FOR MORE THAN 2 DAYS. FROM MAY 1 TO SEPT. 30, NO SOILS SHALL REMAIN UNSTABILIZED FOR MORE THAN 7 DAYS.
- ALL PROPERTIES ADJACENT TO THE PROJECT SHALL BE PROTECTED FROM SEDIMENT DEPOSIT.
- ALL POLLUTANTS OTHER THAN SEDIMENTS THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORM WATER. SEE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, 2019, VOLUME II CHAPTER 2.
- SEDIMENTS TRANSPORTED ONTO A ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- REMOVE TESC AND RETURN EROSION CONTROL AREAS TO ORIGINAL GROUND CONDITIONS UPON COMPLETION.

**GENERAL SITE PLAN NOTES:**

- ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH PERMIT CONDITIONS, THE SAMMAMISH MUNICIPAL CODE (SMC), THE SAMMAMISH PUBLIC WORKS STANDARDS (PWS) AND THE CONDITIONS OF APPROVAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION OR DEVIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE CITY OF SAMMAMISH.
- THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THE CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW CHECKLIST. ANY DEVIATION FROM ADOPTED STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY IN WRITING PRIOR TO CONSTRUCTION.
- APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL OF UTILITIES NOT OWNED BY THE CITY (E.G. DOMESTIC WATER CONVEYANCE, SEWER CONVEYANCE, GAS, ELECTRICAL, ETC.).
- PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN THE CITY OF SAMMAMISH, THE APPLICANT(S), AND THE APPLICANT'S CONSTRUCTION REPRESENTATIVE.
- A COPY OF THESE APPROVED PLANS SHALL BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- CONSTRUCTION HOURS ARE 7:00 AM TO 8:00 PM MONDAY THROUGH FRIDAY AND 9:00 AM TO 6:00 PM ON SATURDAYS. WORK IS NOT ALLOWED ON SUNDAYS AND SOME HOLIDAYS IN ACCORDANCE WITH SMC 16.05.030.
- IT SHALL BE THE APPLICANT'S/CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY CONSTRUCTION EASEMENTS BEFORE INITIATING ANY OFF-SITE WORK.
- DEWATERING (GROUNDWATER) SYSTEM CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT WSDOT STANDARD SPECIFICATIONS.
- OPEN CUTTING OF ROADWAYS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY AND NOTED ON THESE APPROVED PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. MANUAL OR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY. WORK IN RIGHT-OF-WAY IS NOT AUTHORIZED UNTIL A TRAFFIC CONTROL PLAN IS APPROVED BY THE CITY.
- ANY CHANGES TO THE APPROVED PLANS MUST BE SUBMITTED TO THE CITY IN WRITING. NO CONSTRUCTION ON THESE CHANGES SHALL BEGIN UNTIL APPROVED BY THE CITY.
- PER RCW SECTION 19.122, CALL 811 BETWEEN TEN (10) AND TWO (2) BUSINESS DAYS BEFORE BEGINNING EXCAVATION WHERE ANY UNDERGROUND UTILITIES MAY BE LOCATED. FAILURE TO DO SO COULD MEAN BEARING SUBSTANTIAL REPAIR COSTS.
- APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UTILITY LOCATIONS WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY PUBLIC WORKS CONSTRUCTION INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE CITY OF SAMMAMISH PUBLIC WORKS DEPARTMENT PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT UTILITY LOCATES ARE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
- ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE PUBLIC WORKS CONSTRUCTION INSPECTOR BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECT'S PERFORMANCE BOND.
- ALL LANDSCAPED AREAS OF THE PROJECT SHALL INCLUDE A MINIMUM OF 8-INCHES OF COMPOSTED SOIL AMENDMENT ATOP A MINIMUM OF 4-INCHES SCARIFIED SOIL.
- NO FINAL CUT OR FILL SLOPE SHALL EXCEED SLOPES OF TWO (2) HORIZONTAL TO ONE (1) VERTICAL WITHOUT STABILIZATION BY ROCKERY OR BY A STRUCTURAL RETAINING WALL, UNLESS DESIGNED AND COMPLETED UNDER THE SUPERVISION OF A LICENSED GEOTECHNICAL ENGINEER.
- THESE PLANS ARE APPROVED FOR STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. STRUCTURES SUCH AS BRIDGES, VAULTS, AND RETAINING WALLS REQUIRE ADDITIONAL PERMITS FROM THE CITY PRIOR TO CONSTRUCTION.
- NO MATERIALS OR EQUIPMENT SHALL BE PLACED OR STORED ON PUBLIC RIGHT-OF-WAY AT ANY TIME.
- ANY CONSTRUCTION RESULTING IN A NEED FOR TRAFFIC CONTROL WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A RIGHT-OF-WAY PERMIT APPROVED BY THE CITY.
- CONSTRUCTION NOISE SHALL BE LIMITED TO THE CONSTRUCTION HOURS AS STATED IN SMC 16.05.030.

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DESIGNED BY  
MW  
DRAWN BY  
JJ  
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LR

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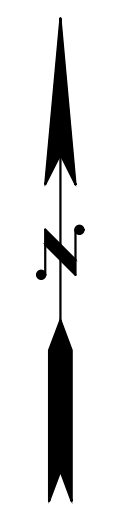
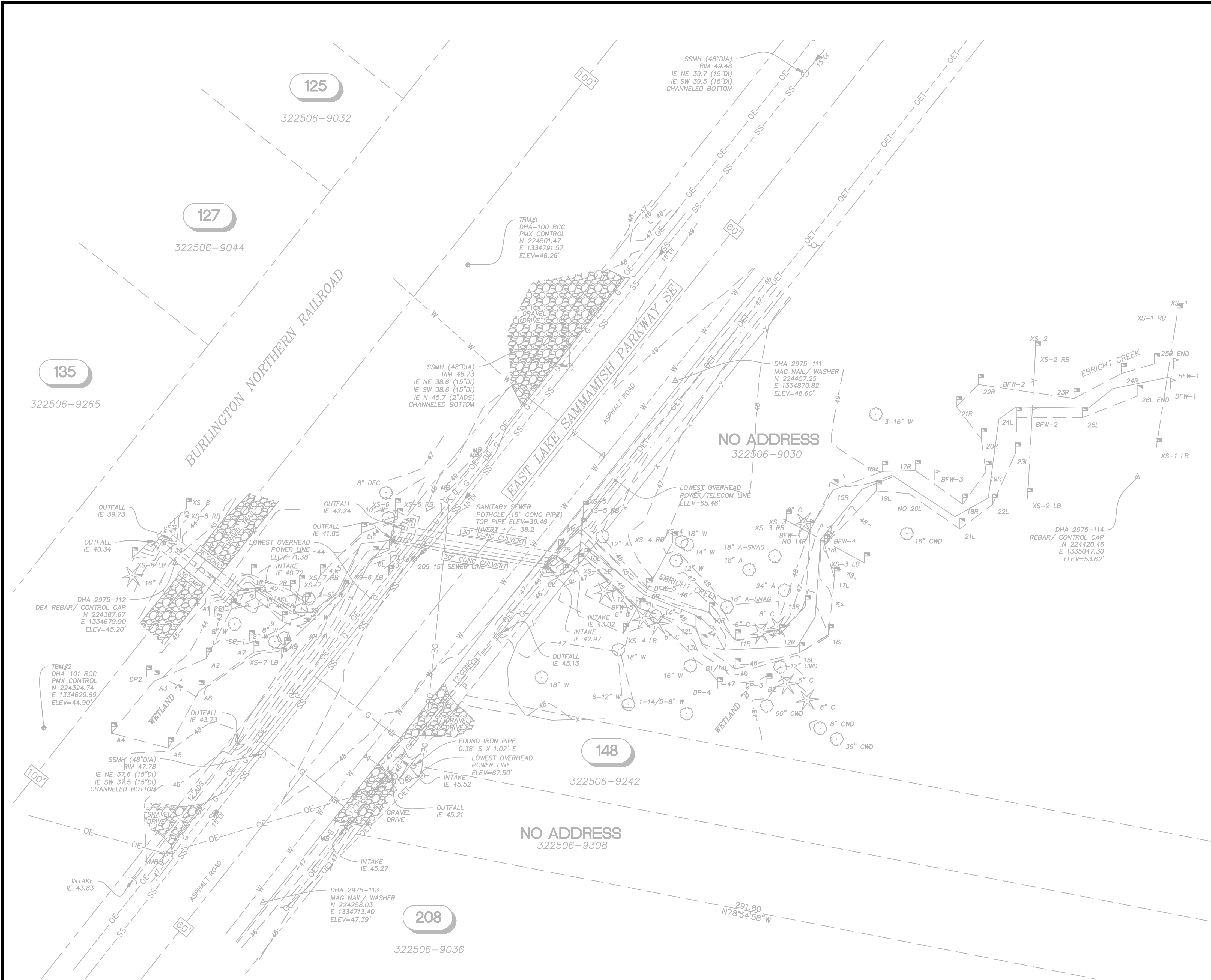
**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH

LEGEND, GENERAL NOTES, AND ABBREVIATIONS

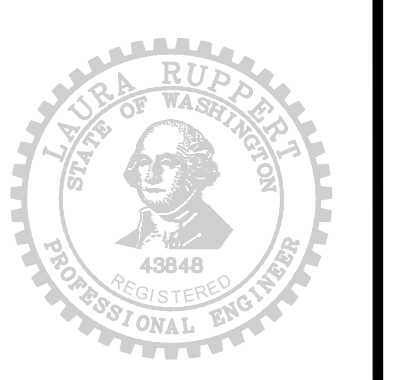
JOB# / DWG: 10-190038  
 DATE: 07/06/2020  
 SCALE: H: N/A V: N/A  
 SHEET: 2 of 23



FILE NAME: C:\PW\_LOC\WORKINGDIR\OSBORNCONSULTING-PW-BENTLEY.COM\OSBORNCONSULTING-PW-01\MAGGIE WILBANKS, EIT\MS07813\SURVEY CONTROL, EASEMENT PLAN, AND CONSTRUCTION STAKEOUT.DWG  
 PLOT TIME: 7/6/2020 3:12 PM  
 USER NAME: MAGGIE WILBANKS, EIT



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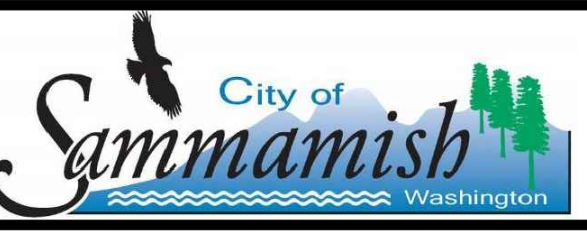
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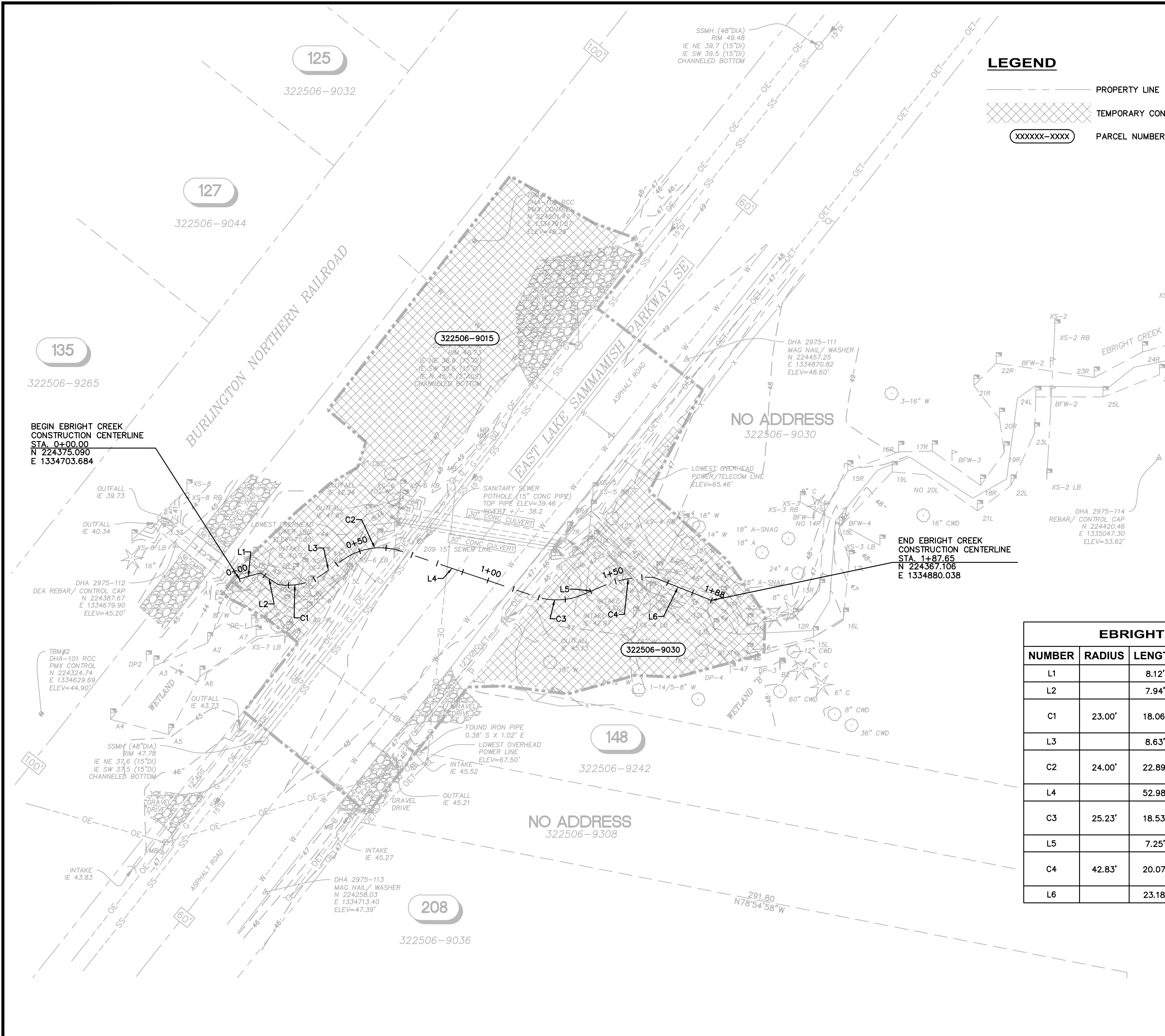
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**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
EXISTING SURVEY CONDITIONS

JOB# / DWG	10-190038	DATE	07/06/2020
SCALE	H: 1"=20' V: N/A	SHEET	3 of 23



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 PLOT TIME: 7/6/2020 3:48 PM  
 USER NAME: MAGGIE WILBANKS, EIT



**SURVEY CONTROL GENERAL NOTES:**

**BENCHMARK:**  
 WSDOT 38617 - CONCRETE MONUMENT WITH 2" BRASS CAP, DOWN 0.5' IN CASE AT CUL-DE-SAC MONUMENT IN 210TH PLACE.  
 NAVD88 ELEVATION = 362.109'.  
**TBM#1**  
 EXISTING REBAR AND CONTROL CAP "PMX 1042" LOCATED ON EAST SIDE OF EAST LAKE SAMMAMISH TRAIL, 75'± EAST OF HOUSE #125.  
 NAVD88 ELEVATION = 46.26'.  
**TBM#2**  
 EXISTING REBAR AND CONTROL PMX CAP LOCATED ON THE WEST SIDE OF EAST LAKE SAMMAMISH TRAIL, 240'± SOUTHERLY FROM TBM#1.  
 NAVD88 ELEVATION = 44.90'.  
**CONTOUR INTERVAL:** (1') ONE FOOT CONTOURS  
**INSTRUMENT USED:** THE PRIMARY MEASUREMENT EQUIPMENT UTILIZED IN THE PERFORMANCE OF THIS SURVEY WAS A LEICA MS-60 ELECTRONIC TOTAL STATION, SN# 624750.  
**UTILITIES MAPPING:**  
 ALL EXISTING UTILITIES SHOWN HEREIN ARE TO BE VERIFIED HORIZONTALLY AND VERTICALLY PRIOR TO ANY CONSTRUCTION. ALL EXISTING FEATURES INCLUDING BURIED UTILITIES ARE SHOWN AS INDICATED BY RECORD LOCATION OR FIELD TIED AS A RESULT OF A UTILITY PAINT-OUT DURING THE COURSE OF THE FIELD SURVEY. DUANE HARTMAN & ASSOCIATES, INC. (DHA) ASSUMES NO LIABILITY FOR THE ACCURACY OF THE RECORD INFORMATION AND/OR THE UTILITY PAINT-OUT. FOR THE FINAL LOCATION OF THE EXISTING UTILITIES IN AREAS CRITICAL TO CONSTRUCTION, CONTACT THE UTILITY OWNER/AGENCY AND UTILITIES UNDERGROUND CENTER (800/424-5555).  
**TOPOGRAPHIC MAPPING:**  
 THE MAP SHOWN HEREON IS THE RESULT OF A TOPOGRAPHIC SURVEY BY DUANE HARTMAN ASSOCIATES, INC. (DHA) COMPLETED ON DECEMBER 20, 2019. DHA ASSUMES NO LIABILITY, BEYOND SAID DATE, FOR ANY FUTURE SURFACE FEATURE MODIFICATIONS OR CONSTRUCTION ACTIVITIES THAT MAY OCCUR WITHIN OR ADJOINING THE PERIMETER OF THIS SURVEY. CONTACT DHA (425/483-5355) FOR SITE UPDATES AND VERIFICATIONS.  
**PROPERTY AND RIGHT OF WAY LINES:**  
 LINES OF OWNERSHIP SHOWN HEREON ARE BASED UPON KING COUNTY SECTION BREAKDOWN MONUMENT POSITIONS EXPRESSED IN NAD83(1991) HORIZONTAL COORDINATES.  
 RECORD OF SURVEY RECORDED UNDER KING COUNTY RECORDING NUMBER 20000605900017 WAS REFERENCED AND TIED TO THE KING COUNTY SECTION BREAKDOWN AND SHOWN HEREON.  
 PROPERTY/RIGHT OF WAY LINES AND CORNERS SHOWN HEREON REPORTED TO A HORIZONTAL ACCURACY OF ±1.0'.

**LEGEND**

- PROPERTY LINE
- TEMPORARY CONSTRUCTION EASEMENT
- PARCEL NUMBER

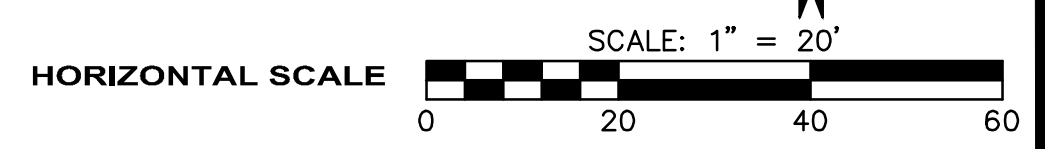
**OWNERSHIP TABLE**

KING COUNTY PARCEL NO.	PROPERTY OWNER	TOTAL AREA (SF)*	PERMANENT SLOPE EASEMENT (SF)	PARCEL REMAINDER (SF)		TEMPORARY CONSTRUCTION EASEMENT (SF)
				LT.	RT.	
322506-9015	KING COUNTY PARKS	600,692	-	600,692	-	7,516
322506-9030	PEREYRA	156,758	-	-	156,758	4,946

\* ALL TOTAL PARCEL AREAS CALCULATED FROM KING COUNTY PARCEL MAP UNLESS NOTED OTHERWISE.

**EBRIGHT CREEK CONSTRUCTION CENTERLINE**

NUMBER	RADIUS	LENGTH	LINE/CHORD DIRECTION	DELTA	PC	PT
L1		8.12'	N73° 37' 42.93"E			
L2		7.94'	S56° 41' 39.99"E			
C1	23.00'	18.06'	N76° 28' 31.41"E	44°59'44"	N: 224373.020 E: 1334718.107 STA: 0+16.06	N: 224377.136 E: 1334735.221 STA: 0+34.12
L3		8.63'	N53° 58' 39.52"E			
C2	24.00'	22.89'	N81° 18' 09.93"E	54°39'01"	N: 224382.210 E: 1334742.199 STA: 0+42.75	N: 224385.542 E: 1334763.979 STA: 0+65.64
L4		52.98'	S71° 22' 19.66"E			
C3	25.23'	18.53'	N87° 35' 24.56"E	42°04'32"	N: 224368.618 E: 1334814.185 STA: 1+18.62	N: 224369.380 E: 1334832.287 STA: 1+37.15
L5		7.25'	N66° 33' 08.78"E			
C4	42.83'	20.07'	N79° 58' 38.42"E	26°50'59"	N: 224372.266 E: 1334838.939 STA: 1+44.40	N: 224375.726 E: 1334858.522 STA: 1+64.47
L6		23.18'	S68° 10' 01.18"E			



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 MW  
 DRAWN BY  
 JJ  
 CHECKED BY  
 LR

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**City of Sammamish**  
 801 228TH AVE SE  
 SAMMAMISH, WA 98075

**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 SURVEY CONTROL, EASEMENT PLAN, AND  
 CONSTRUCTION STAKEOUT

JOB# / DWG  
 10-190038

DATE  
 07/06/2020

SCALE  
 H: 1"=20' V: N/A

SHEET  
 4 of 23



FILE NAME: C:\PWORKINGDIR\OSBORNCONSULTING-PW-BENTLEY.COM\OSBORNCONSULTING-PW-01\KEITH ROGERS\DM15578\_V\_P\_10-190038\_DETOUTR.DWG  
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 USER NAME: KEITH ROGERS

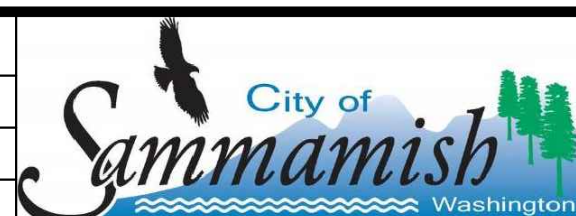


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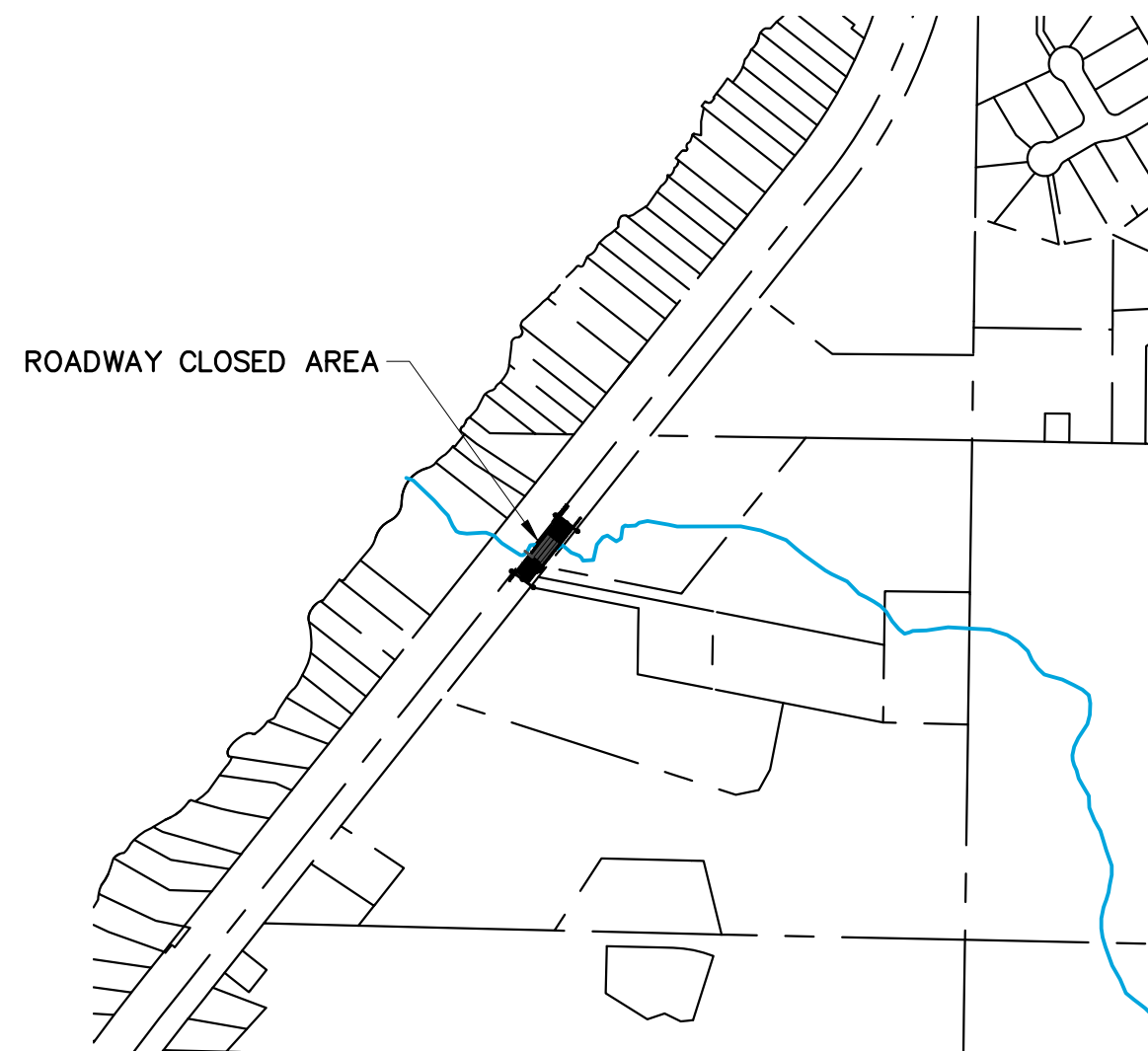
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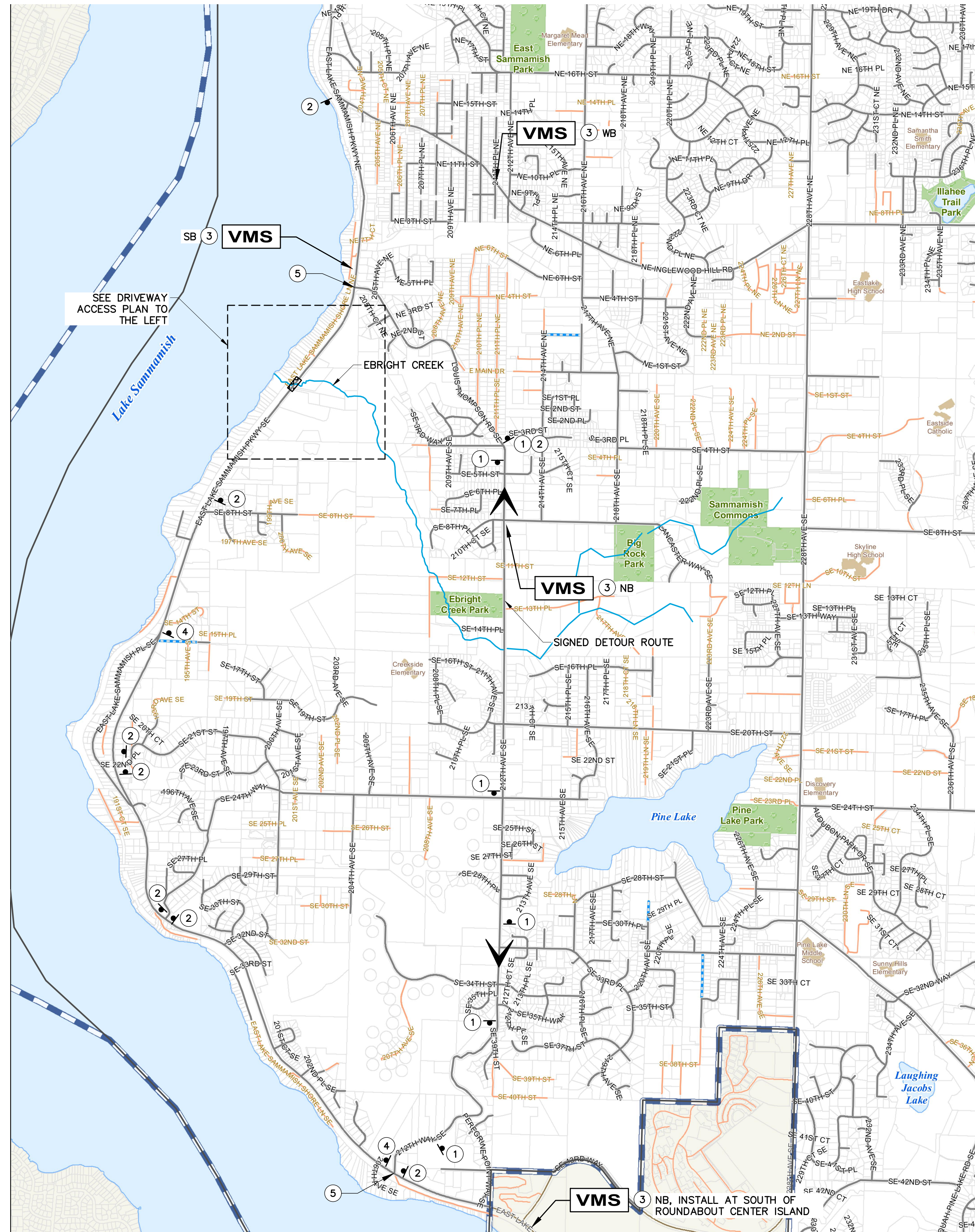
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**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 DETOUR PLAN

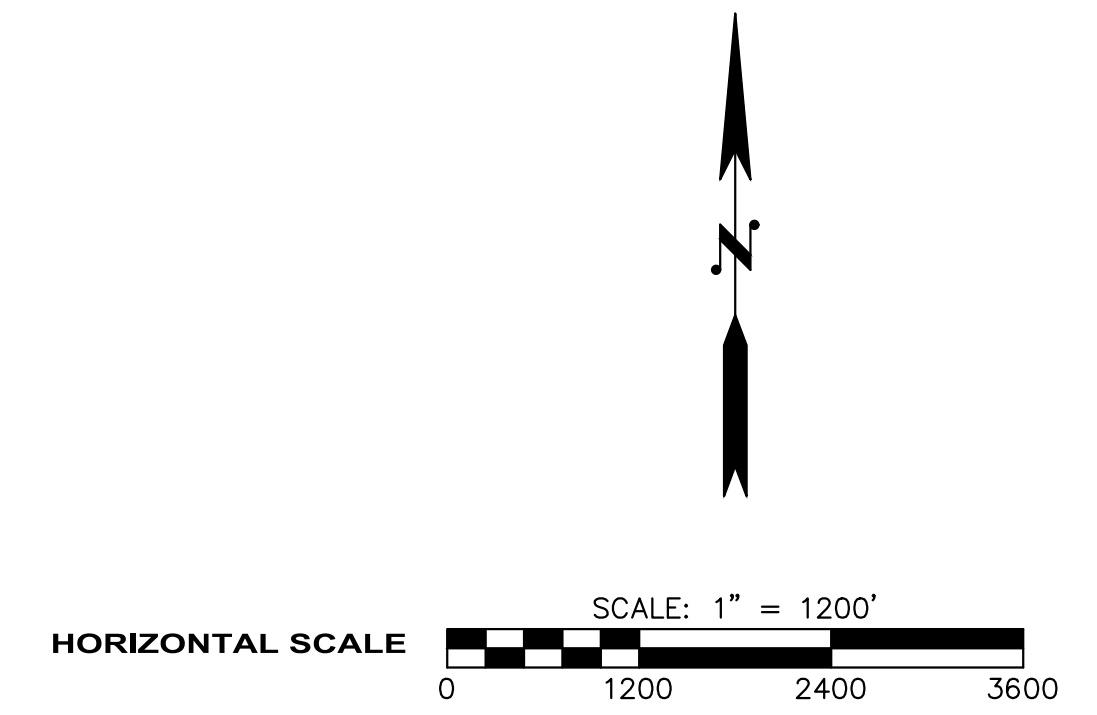
JOB# / DWG 10-190038	DATE 07/06/2020
SCALE H: AS SHOWN v:	SHEET 5 of 23



**DRIVEWAY ACCESS PLAN**  
 SCALE: 1"=500'



**DETOUR PLAN**



**GENERAL NOTES:**

- SIGN POSITIONS SHOWN ARE NOT TO SCALE.
- SEE WASHINGTON STATE "SIGN FABRICATION MANUAL" FOR CODE REFERENCES.
- VMS BOARD TO BE INSTALLED 2 WEEKS PRIOR TO START OF CONSTRUCTION WORK AT SITE AND MESSAGE CHANGED 2 WEEKS PRIOR TO ELSP ROAD CLOSURE.
- EXISTING MARKINGS IN CONFLICT WITH THE PROPOSED CHANNELIZATION IN TRAFFIC PLAN SHALL BE REMOVED.

**CONSTRUCTION NOTES:**

- INSTALL M4-9 "DETOUR" (UP) WITH D3-101 "E LAKE SAMMAMISH PKWY NE"
- INSTALL R11-3 (MODIFIED) "E LAKE SAMMAMISH PKWY NE CLOSED AT LOUIS THOMPSON RD NE (DATE) TO (DATE) ALTERNATE ROUTE ADVISED". INSTALL TWO WEEKS PRIOR TO CLOSURE AND REMOVE IMMEDIATELY AFTER ROAD IS OPEN TO TRAFFIC
- PROVIDE VARIABLE MESSAGE SIGN (VMS) CHANGE MESSAGE ON VMS AS DIRECTED BY THE CITY. LOCATION TO BE AS DIRECTED BY THE CITY
- INSTALL R11-4 "ROAD CLOSED TO THRU TRAFFIC" WITH "LOCAL TRAFFIC ONLY"
- TRAFFIC CONTROL PLAN SHALL BE PROVIDED BY THE CONTRACTOR

**LEGEND:**

- ROAD/LANE CLOSED AHEAD
- SIGNED DETOUR ROUTE
- TYPE III BARRICADE
- VARIABLE MESSAGE SIGN
- TEMPORARY SIGN LOCATION
- EBRIGHT CREEK

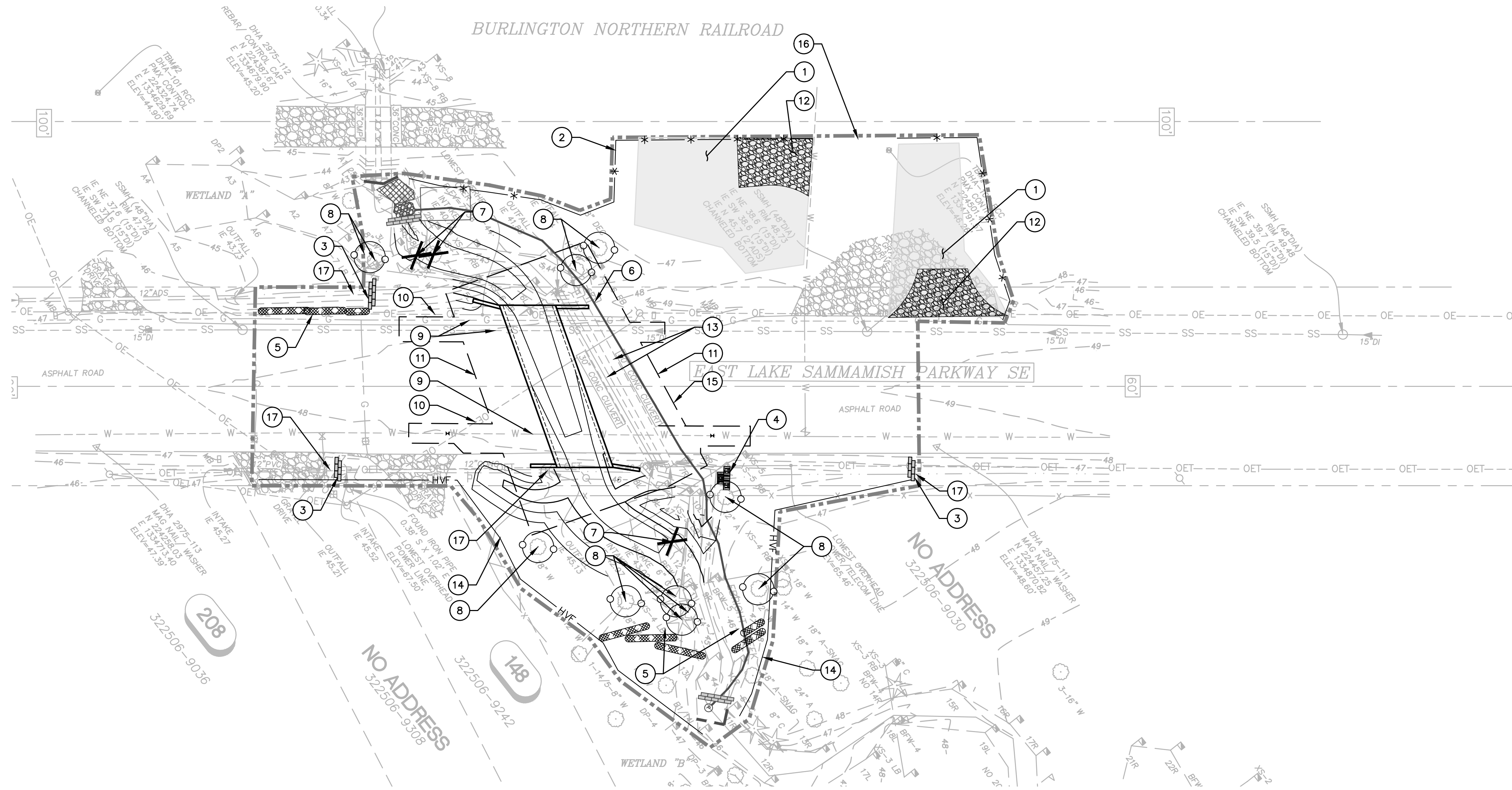


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**LEGEND**

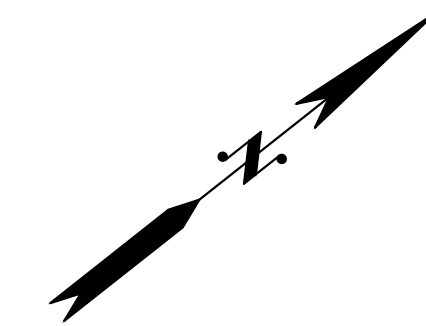
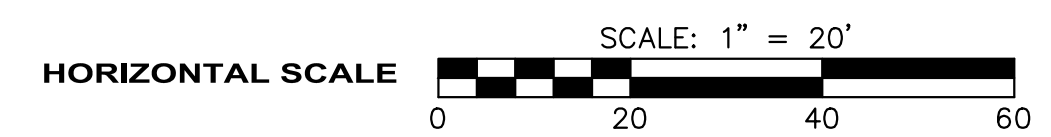
- CONSTRUCTION LIMITS
- \*-\* HIGH VISIBILITY SILT FENCE
- TREE PROTECTION FENCE
- HVF- HIGH VISIBILITY FENCE
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- ▧ TEMPORARY STRAW BALE DAM
- ▩ TEMPORARY GRAVEL BAG BERM
- X REMOVE TREE
- ▨ STRAW WATTLE/COMPOST SOCK

**GENERAL NOTES:**

1. TESC MEASURES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL FIELD LOCATE TO ACCOMMODATE SITE CONDITIONS AND WORK SCHEDULE.
2. PROTECT ALL EXISTING FEATURES AND VEGETATION NOT CALLED TO BE REMOVED.
3. SEE SHEET 2 FOR EROSION AND SEDIMENT CONTROL NOTES.

**# TESC AND DEMOLITION NOTES:**

- 1 POTENTIAL CONSTRUCTION STAGING AREA. LOCATION SHALL BE FIELD LOCATED AND APPROVED BY ENGINEER. TEMPORARY CONSTRUCTION EASEMENTS REQUIRED.
- 2 INSTALL HIGH VISIBILITY SILT FENCE PER WSDOT STD. PLAN I-30.17-01.
- 3 INSTALL TEMPORARY GRAVEL BAG BERM. 3  
7
- 4 INSTALL TEMPORARY STRAW BALE DAM. 1  
7
- 5 INSTALL STRAW WATTLE PER WSDOT STD PLAN I-30.30-02, OR COMPOST STOCK PER STD PLAN I-30.40-02.
- 6 TEMPORARY STREAM BYPASS. SEE PLAN ON SHEET 8.
- 7 REMOVE EXISTING TREE. TREE TO BE USED IN LOG STRUCTURE CONSTRUCTION FOR STREAM RESTORATION AS APPROPRIATE PER SPECIAL PROVISIONS. SEE SHEETS 21-23 FOR RESTORATION PLANTING.
- 8 PROTECT EXISTING TREE WITHIN WORK AREA IN ACCORDANCE WITH SMC 21A.37. 2  
7
- 9 EXISTING UTILITY TO BE RELOCATED/ADJUSTED, SEE SHEETS 19-20 FOR DETAILS.
- 10 PROTECT EXISTING UTILITY DURING CONSTRUCTION.
- 11 SAWCUT AND REMOVE EXISTING PAVEMENT, INCLUDING HMA PAVEMENT AND CONC. PANEL UNDERNEATH.
- 12 INSTALL STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STD PLAN I-80.10-02.
- 13 REMOVE EXISTING CULVERTS, 30-IN DIAMETER, 60-FT LENGTH.
- 14 INSTALL HIGH VISIBILITY FENCE PER WSDOT STD I-10.10-01.
- 15 EXTENTS OF EXCAVATION FOR CULVERT REMOVAL AND INSTALLATION.
- 16 MAINTAIN RESIDENTIAL ACCESS.
- 17 COLLECT RUNOFF AND ROUTE AROUND WORK AREA.



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**EBRIGHT CREEK FISH PASSAGE**

CITY OF SAMMAMISH  
 TESC AND DEMO PLAN

JOB# / DWG  
 10-190038

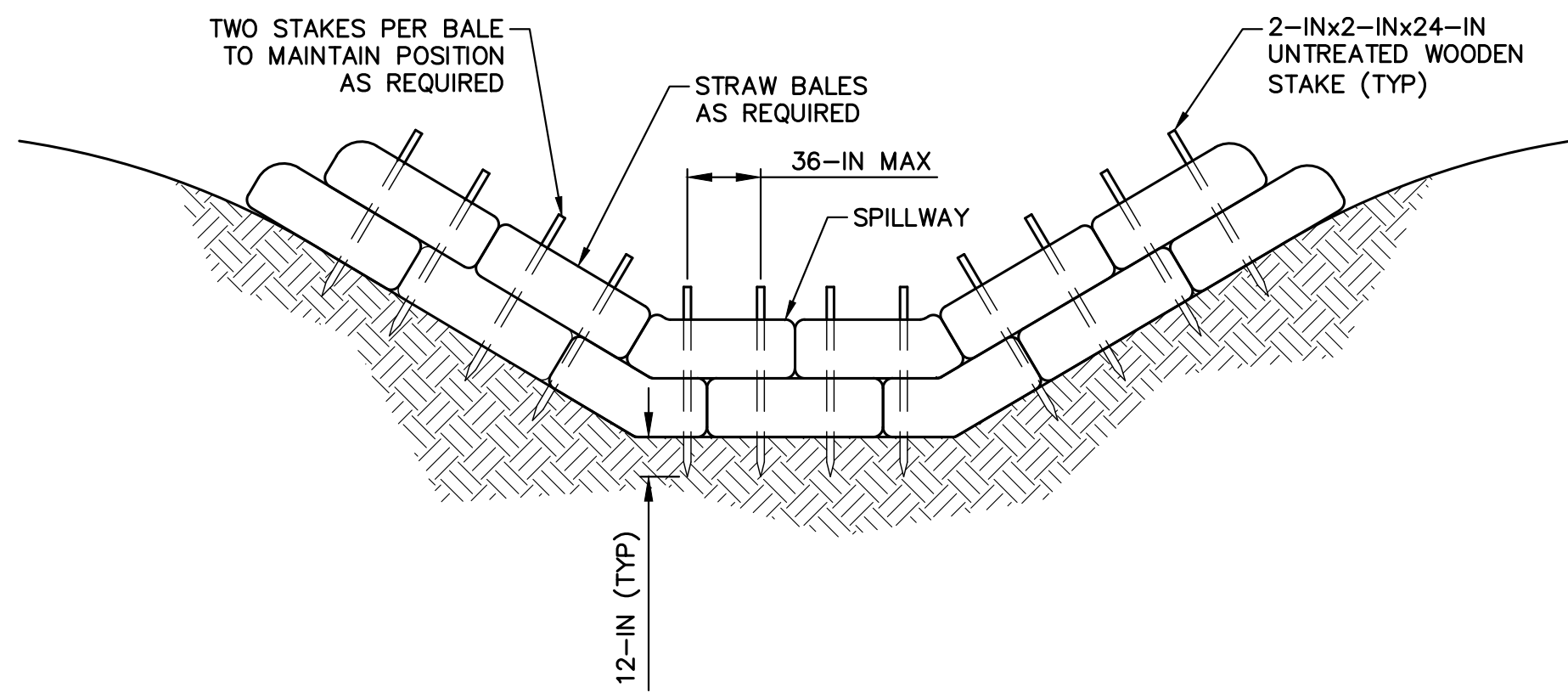
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DATE  
 07/06/2020

SHEET  
 6 of 23



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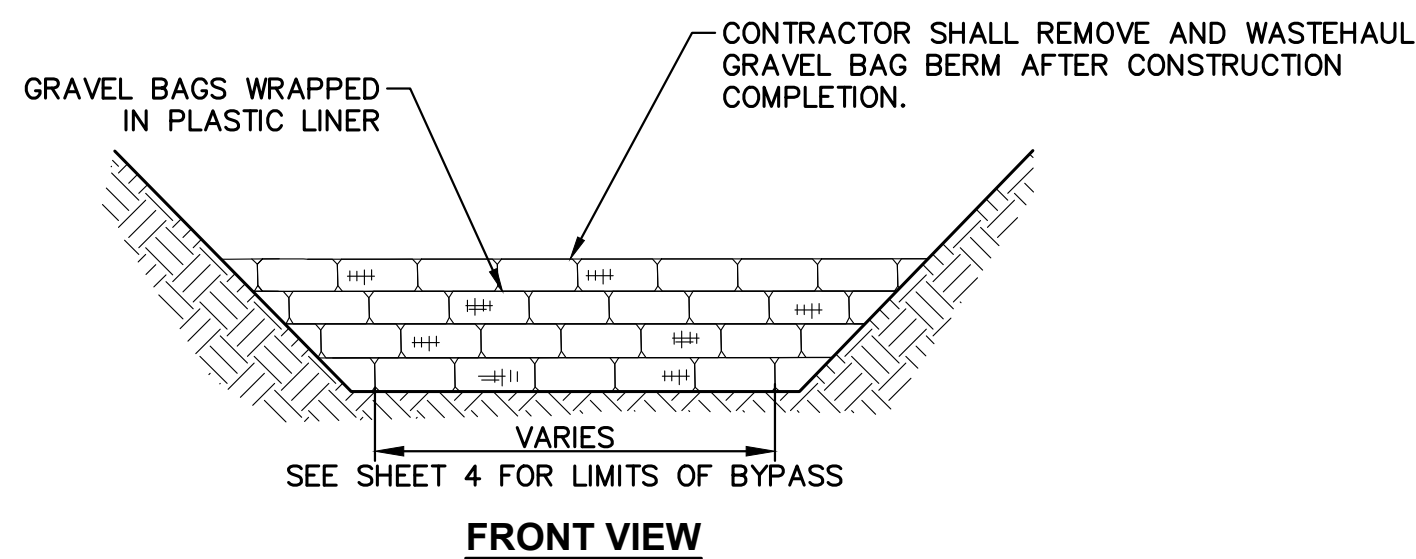
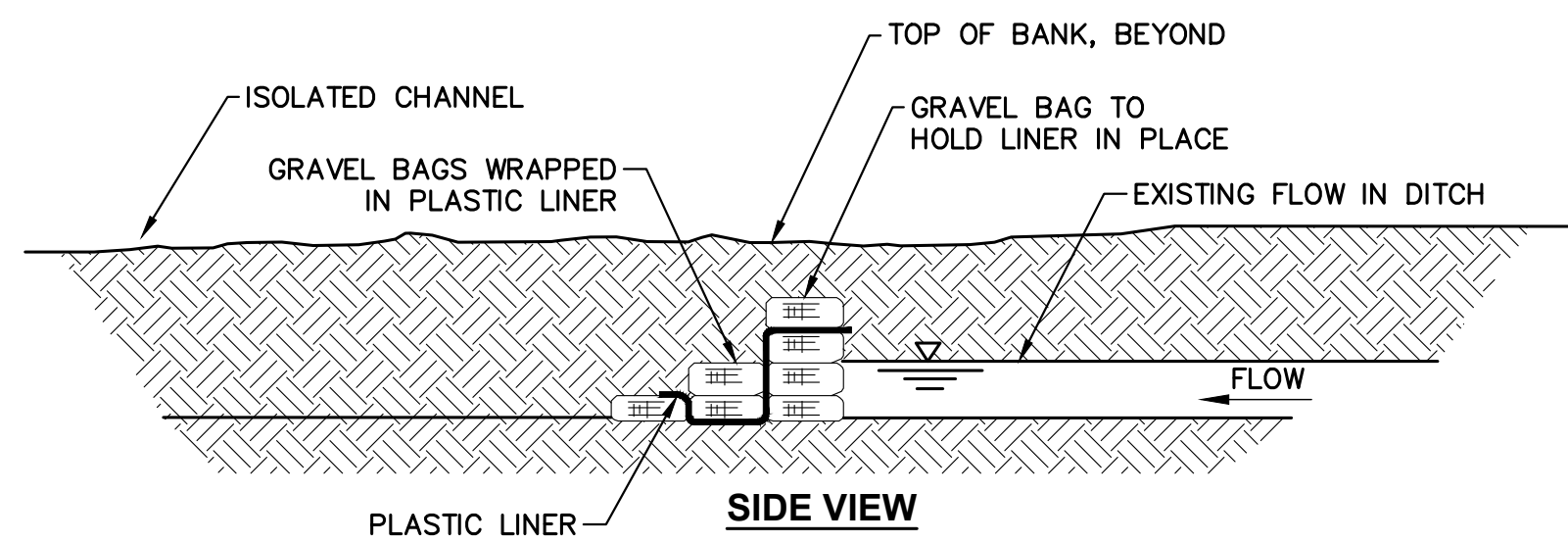
**NOTES:**

- WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
- STRAW BALE DAMS TO BE LOCATED AT THE BOTTOM OF EXISTING DITCH AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.

1  
6

**TEMPORARY STRAW BALE DAM**

N.T.S.



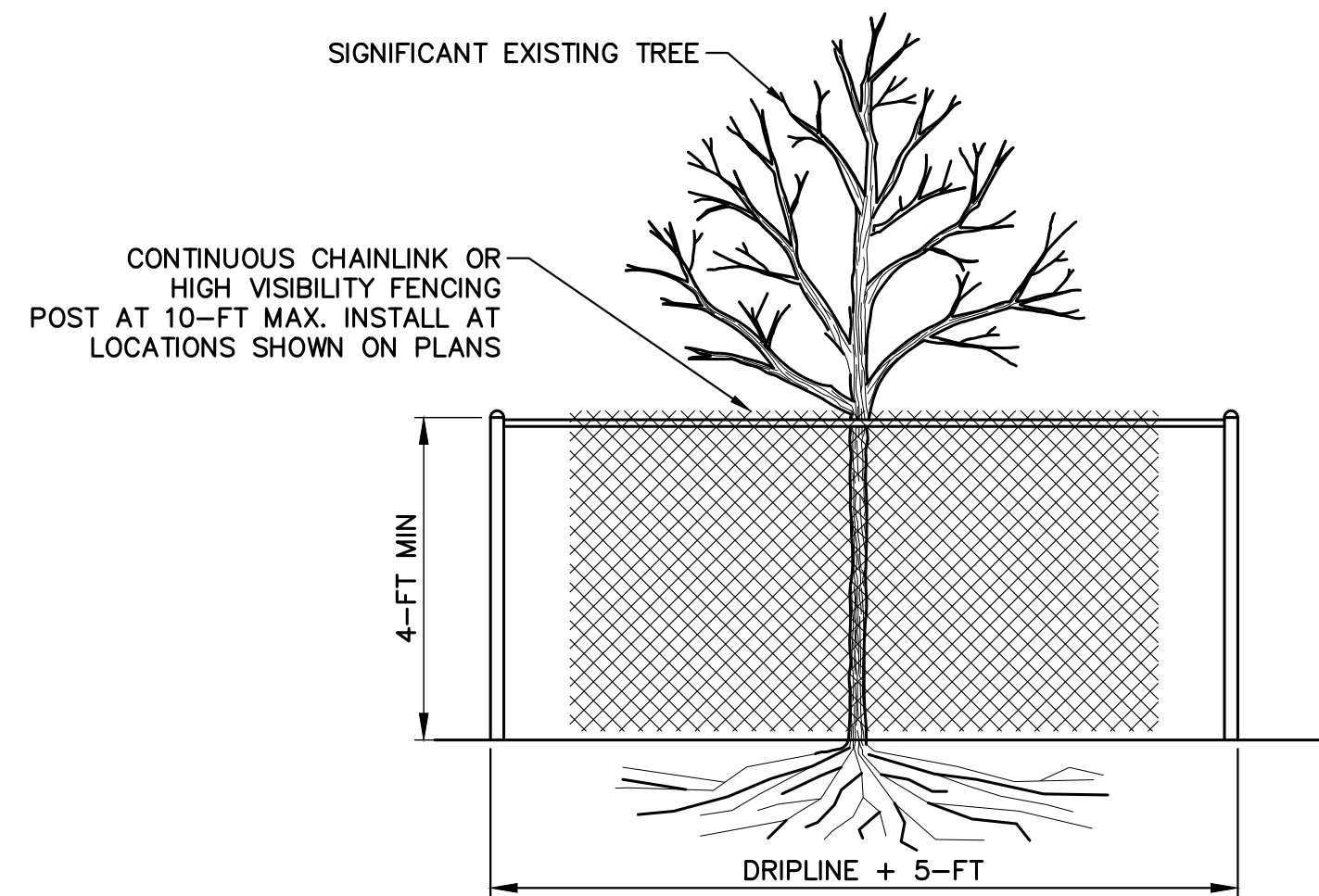
**NOTES:**

- GRAVEL BAGS SHALL BE FILLED WITH ROUNDED PEA GRAVEL OR CLEAN SAND; NO ANGULAR OR CRUSHED MATERIALS MAY BE USED. GRAVEL BAGS SHALL BE WASTEHAULED AFTER REMOVAL OF BERM.

3  
6

**GRAVEL BAG BERM DETAIL**

N.T.S.



**NOTES:**

- MINIMUM FOUR (4) FOOT HIGH TEMPORARY FENCING SHALL BE INSTALLED FIVE (5) FEET BEYOND THE DRIPLINE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL FENCE POSTS USING PIER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.
- TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND COVERED WITH SOIL AS SOON AS POSSIBLE.
- NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.

2  
6

**TREE PROTECTION FENCE DETAIL**

N.T.S.

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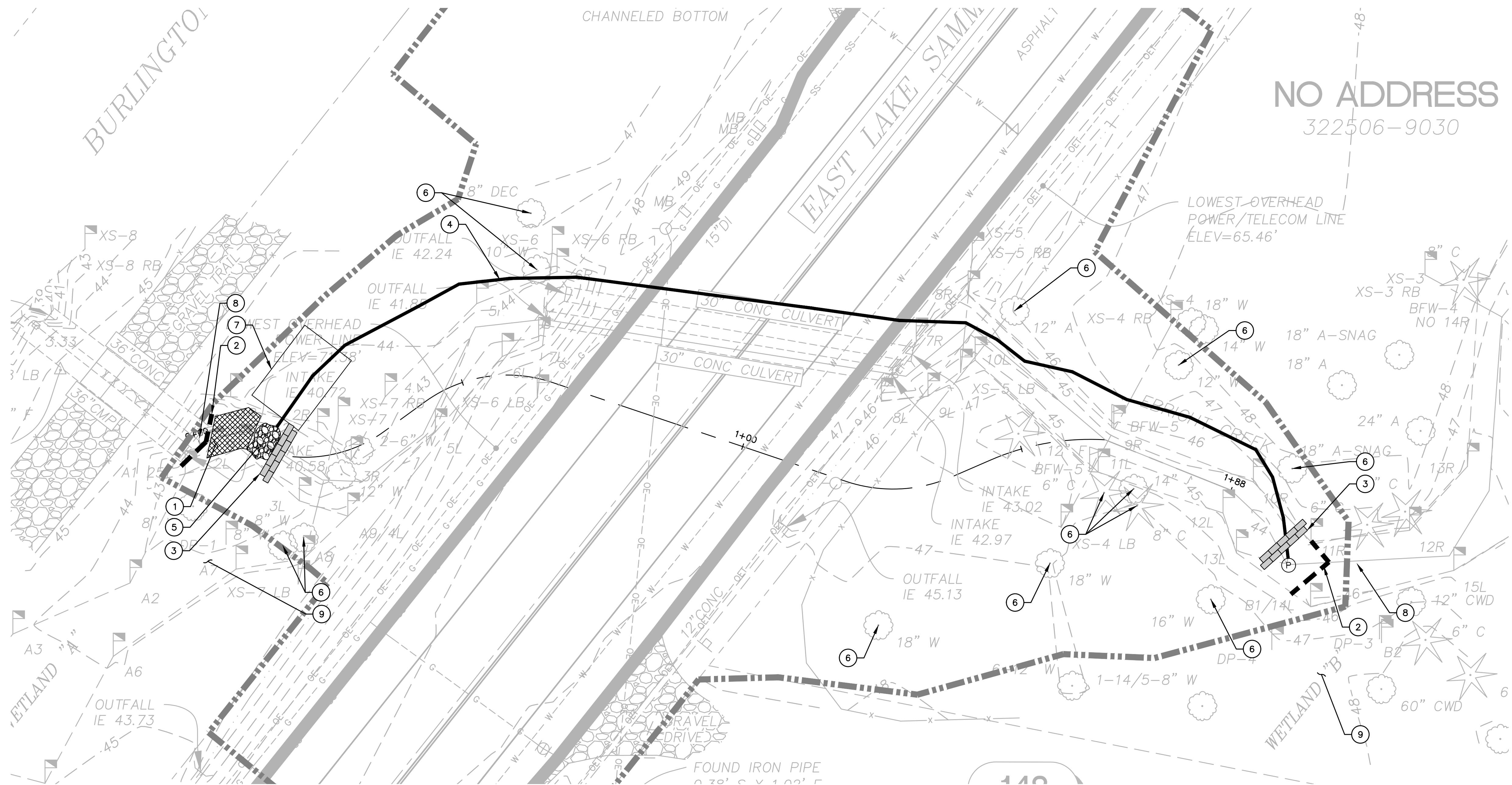
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**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 TESC DETAILS

JOB# / DWG	10-190038	DATE	07/06/2020
SCALE	H: N/A v: N/A	SHEET	7 of 23



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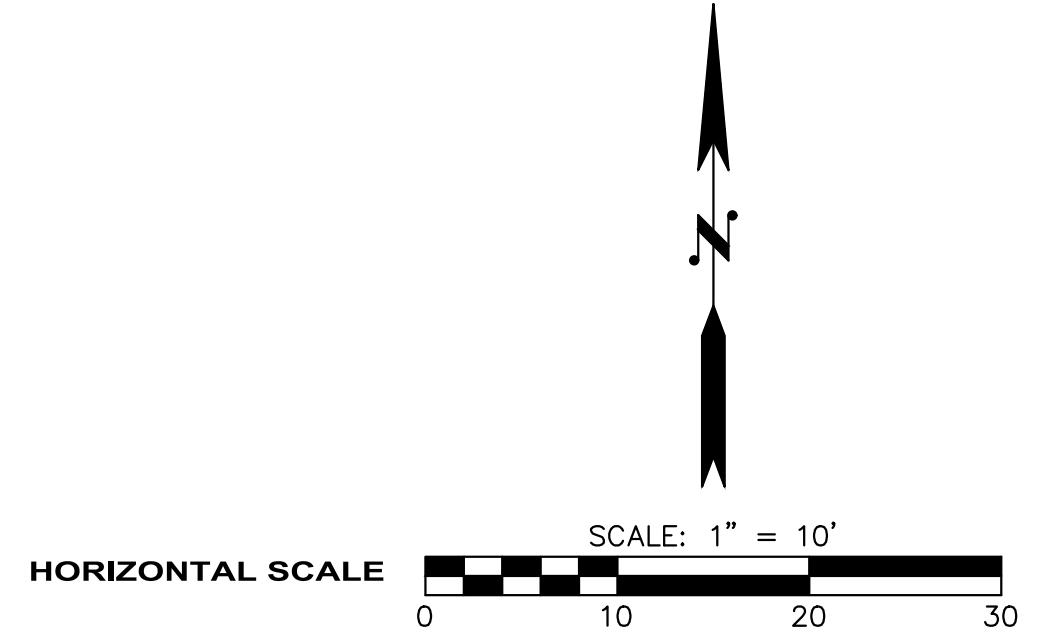
- LEGEND:**
- FISH SCREEN
  - BYPASS PUMP
  - BYPASS PIPING
  - GRAVEL BAG BERM
  - RIPRAP MAT
  - SEDIMENT MAT

**TEMPORARY STREAM BYPASS  
 GENERAL NOTES:**

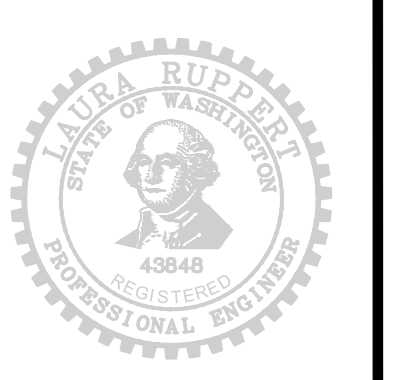
1. THE CONTRACTOR SHALL SUBMIT THE TEMPORARY BYPASS AND FISH EXCLUSION SYSTEM PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL. THE TEMPORARY BYPASS SYSTEM SHOWN ON PLAN IS SUGGESTED ONLY.
2. THE TEMPORARY BYPASS AND FISH EXCLUSION SYSTEM AND PLAN SHALL MEET ALL PERMIT REQUIREMENTS. CONTRACTOR SHALL REMOVE ALL TEMPORARY BYPASS MEASURES AFTER COMPLETION OF PROJECT.
3. THE TEMPORARY STREAM BYPASS SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTION.
4. FISH EXCLUSION AND FISH REMOVAL SHALL BE PERFORMED BEFORE IN-WATER WORK IN ACCORDANCE WITH THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE HPA.
5. CONTRACTOR SHALL REMOVE AND WASTEHAUL EXISTING GRAVEL BAG BERM AFTER STREAM FLOWS HAVE BEEN RELOCATED INTO THE NEW CHANNEL.
6. NO GROUND DISTURBANCE (MECHANICAL EQUIPMENT) SHALL OCCUR OUTSIDE OF THE CLEARING AND GRADING LIMITS.
7. CONTRACTOR SHALL RETAIN ANY LARGE WOODY MATERIAL INSIDE THE CHANNEL REMOVED FOR CONSTRUCTION (DEFINED AS TREES OR TREE PARTS LARGER THAN 4-IN IN DIAMETER AND LONGER THAN 6-FT) AND REPLACE BELOW OHWM PRIOR TO COMPLETION OF THE PROJECT.

**# TEMPORARY STREAM BYPASS  
 CONSTRUCTION NOTES:**

1. INSTALL SEDIMENT MAT. 2/9
2. INSTALL FISH SCREEN. 1/9
3. INSTALL GRAVEL BAG BERM. 4/9
4. INSTALL BYPASS PIPE. CONTRACTOR TO SIZE BYPASS PIPE. INSTALL GRAVEL BAGS ON/AROUND PIPE INLET TO STABILIZE. 4/9
5. INSTALL TEMPORARY RIPRAP MAT TO PREVENT EROSION AT BYPASS OUTFALL. ALL RIPRAP SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE. 4/9
6. EXISTING TREE/VEGETATION TO REMAIN. TREE LIMBS MAY BE TRIMMED WITH APPROVAL FROM THE CITY'S ARBORIST. PROTECT DURING CONSTRUCTION. 2/7
7. FILTER BAG FOR DEWATERING AND SEDIMENT REMOVAL. 3/9
8. TURBIDITY MONITORING STATION. SEE CONTRACT SPECIFICATIONS FOR MONITORING REQUIREMENTS.
9. CONTRACTOR ACCESS TO PERFORM IN-STREAM WORK DOWNSTREAM OF CULVERT SHALL BE WITHIN THE STREAM CHANNEL. DISTURBANCE TO WETLAND "A" SHALL BE MINIMIZED TO THE EXTENT FEASIBLE. CONTRACTOR ACCESS TO PERFORM IN-STREAM WORK UPSTREAM OF CULVERT SHALL CAUSE NO DISTURBANCE TO WETLAND "B".



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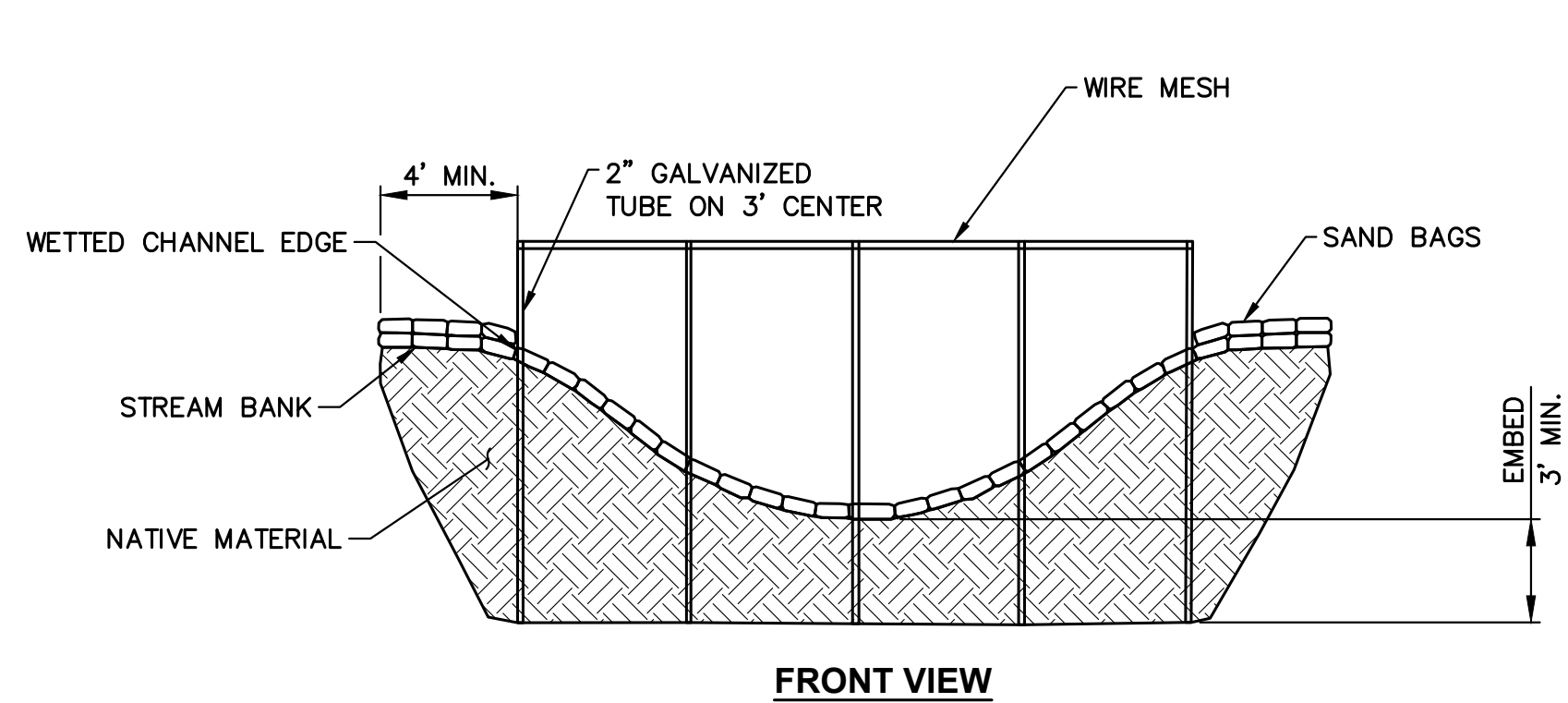


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DESIGNED BY MW DRAWN BY JJ CHECKED BY LR	OSBORN CONSULTING INCORPORATED	<b>Osborn Consulting, Inc.</b> Bellevue   Seattle   Spokane www.osbornconsulting.com		City of <b>Sammamish</b> Washington	801 228TH AVE SE SAMMAMISH, WA 98075	<b>EBRIGHT CREEK FISH PASSAGE</b> CITY OF SAMMAMISH STREAM BYPASS PLAN	JOB# / DWG 10-190038	DATE 07/06/2020
						SCALE H: 1"=10' V: N/A	SHEET 8 of 23	



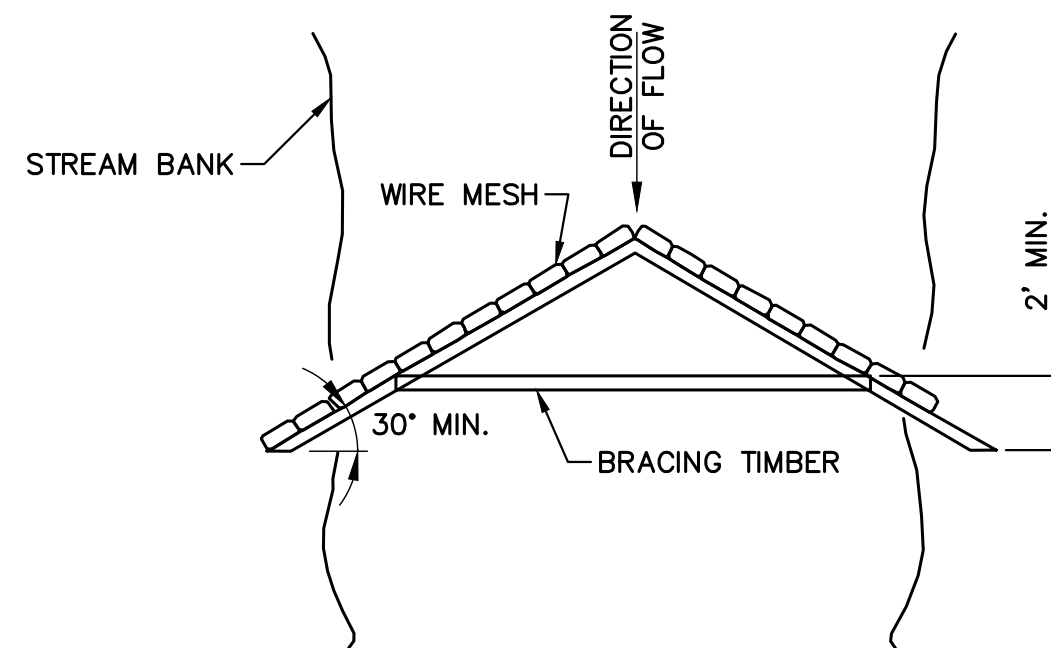
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 USER NAME: MAGGIE WILBANKS, EIT



**FRONT VIEW**

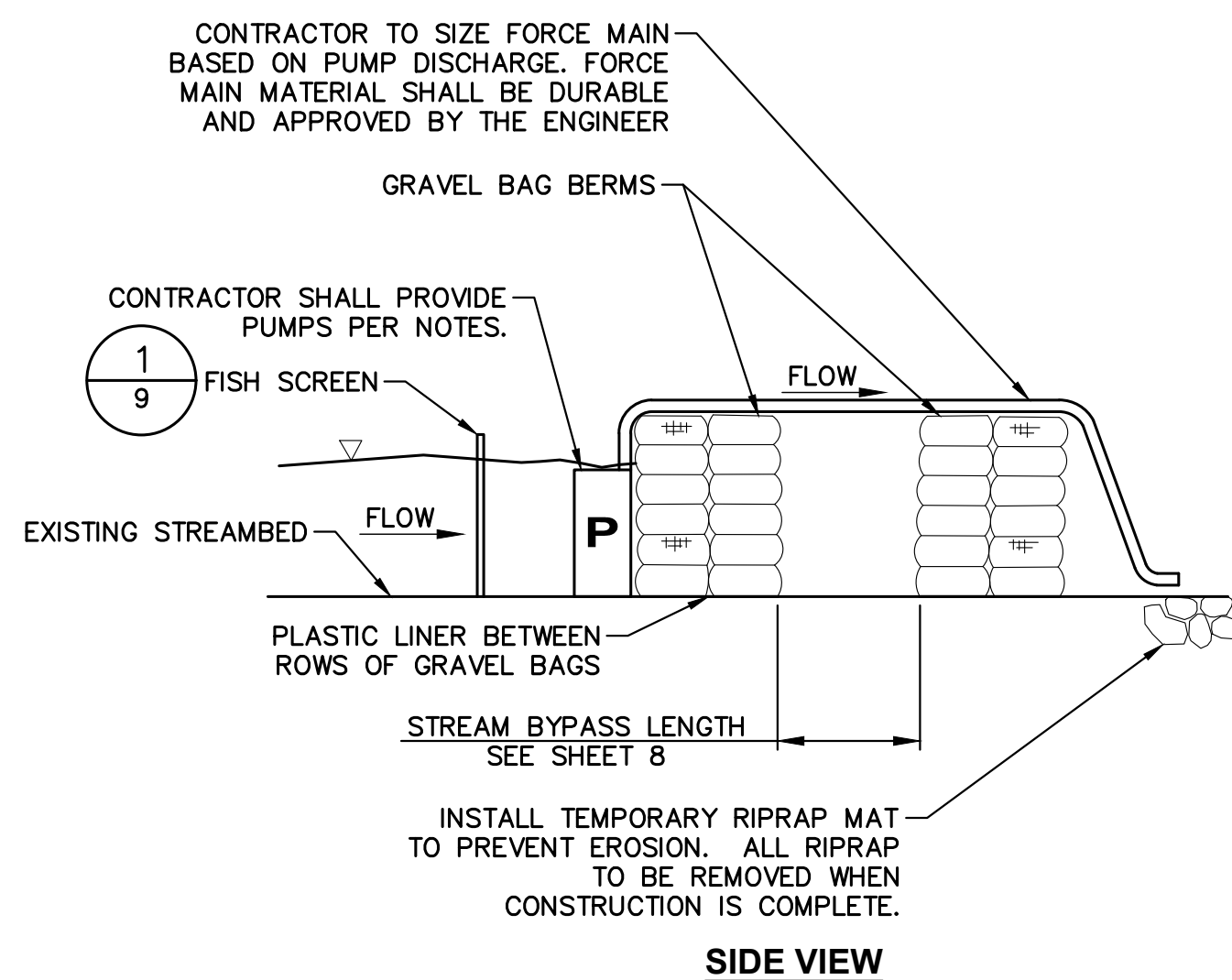
**CONSTRUCTION SEQUENCE**

1. INSTALL 2" GALVANIZED TUBES ON 3' CENTERS.
2. SECURE WIRE MESH TO 2" GALVANIZED TUBES WITH WIRE FASTENER. MESH SHALL BE WOVEN WIRE WITH WITH A MAXIMUM OPENING OF 0.087 INCHES.
3. EXTEND SAND BAGS 4' MIN. INTO STREAM BANKS.
4. ADD BRACING TIMBER AS NEEDED TO SUPPORT THE SCREEN
5. REMOVAL OF DEBRIS FROM THE UPSTREAM SIDE OF THE FENCE IS NECESSARY OTHERWISE THE SCREEN WILL BECOME CLOGGED AND WATER MAY TOPPLE OR BREACH THE SCREEN.
6. NO WORK IS ALLOWED IN THE WETLAND.

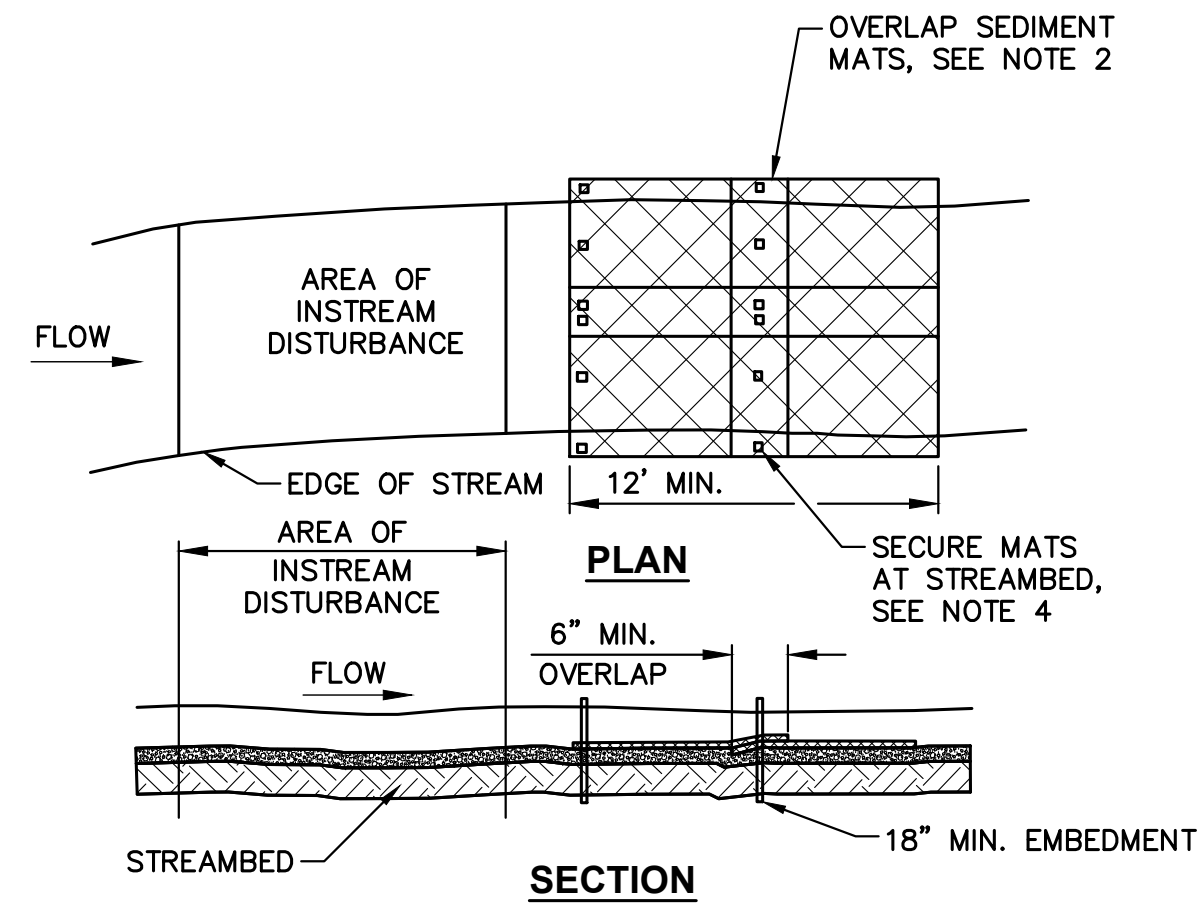


**PLAN VIEW**

**1** / **8** **FISH SCREEN DETAIL**  
N.T.S.



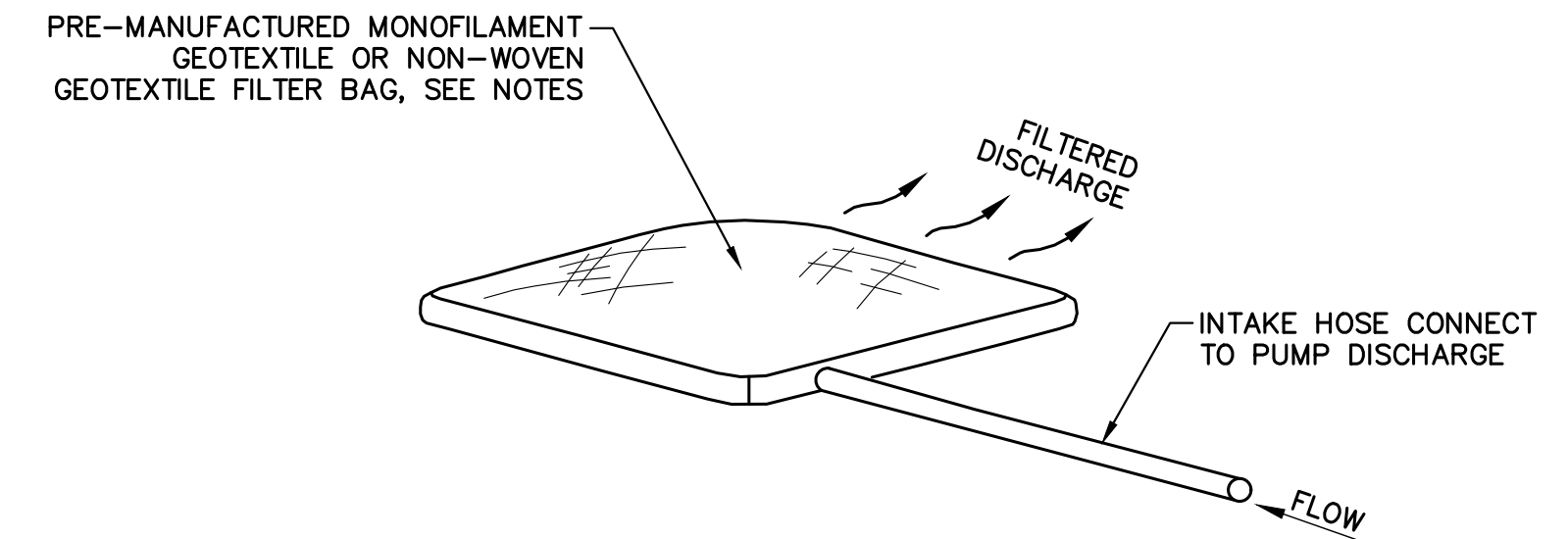
**4** / **8** **TEMPORARY STREAM BYPASS DETAIL**  
N.T.S.



**NOTES:**

1. INSTALL MATS FLAT ON THE STREAM BOTTOM AT DOWNSTREAM EDGE OF DISTURBED AREA IMMEDIATELY PRIOR TO INSTREAM DISTURBANCE AND REMOVE IMMEDIATELY AFTER INSTREAM ACTIVITIES ARE COMPLETED.
2. OVERLAP THE TRAILING EDGE OF UPSTREAM MATS OVER THE LEADING EDGE OF DOWNSTREAM MATS BY AT LEAST 6". OVERLAP SIDES A MINIMUM OF 6".
3. HOLD THE LEADING EDGE OF THE MATS TIGHTLY TO STREAMBED CONTOURS WITH ROCKS OR OTHER WEIGHTS.
4. SECURE UPSTREAM CORNERS AND CENTERS OF MATS IN THE STREAMBED WITH 2" X 2" LONG WOOD STAKES.
5. IF STREAM VELOCITY IS HIGH, ENGINEER MAY REQUIRE ADDITIONAL LENGTH OF SEDIMENT MAT.

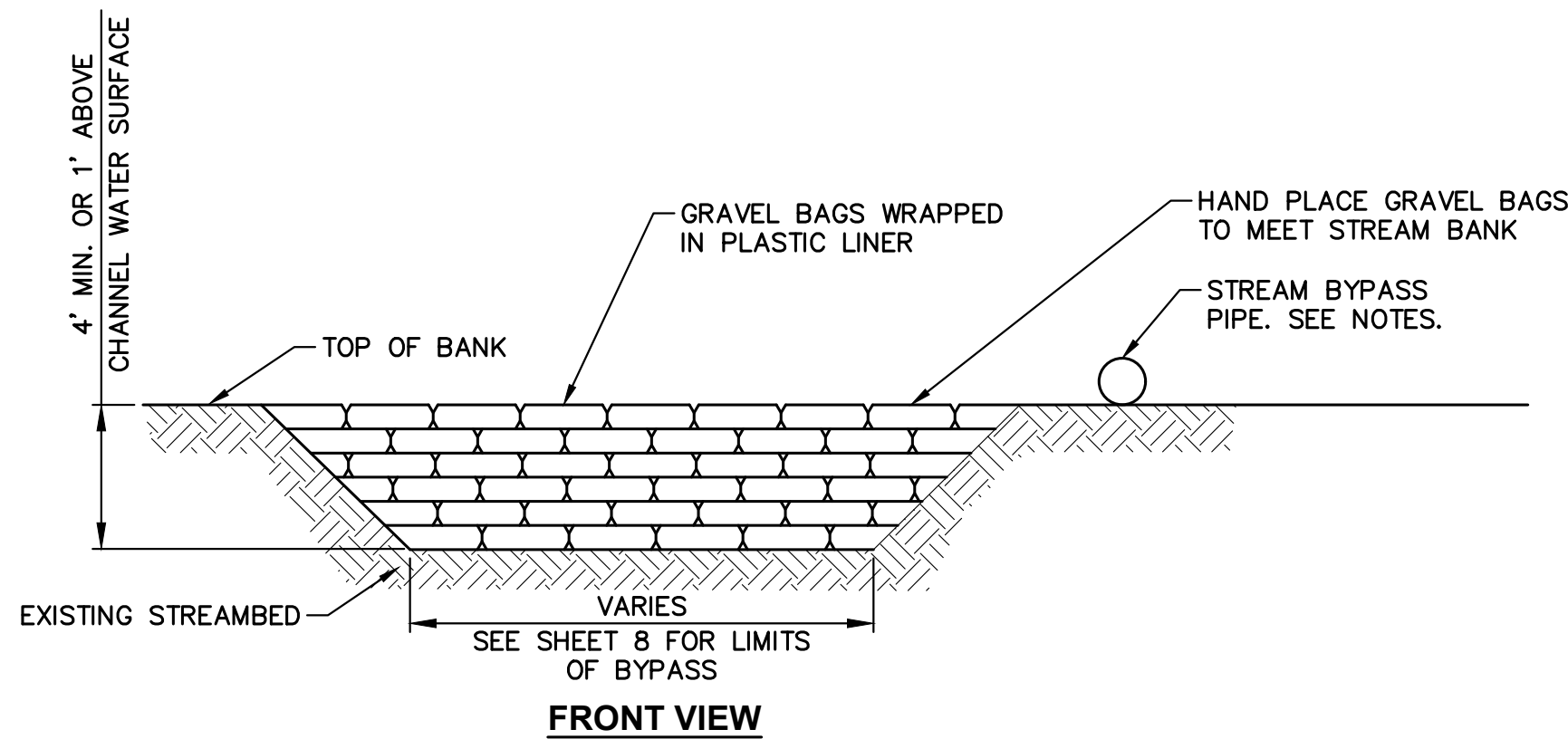
**2** / **8** **SEDIMENT MAT DETAIL**  
N.T.S.



**NOTES:**

1. FILTER BAG SHALL BE MINIMUM 10' X 15' AND REPLACED AS NEEDED TO ACCOMMODATE ACTUAL SEDIMENT LOAD CONDITIONS (I.E. VOLUME, TYPE OF SEDIMENT, ETC.)
2. DRAIN FILTER BAG TO APPROVED (GRASSY, UPLAND) RECEIVING AREA, MONITOR SYSTEM FREQUENTLY TO VERIFY ADEQUATE PERFORMANCE AND CONDITION OF FACILITIES.

**3** / **8** **FILTER BAG DETAIL**  
N.T.S.



**NOTES:**

1. TYPICAL 2-YR STORM IS 22.6 CFS.
2. CONTRACTOR SHALL HAVE ON SITE, EMERGENCY BYPASS PIPE, PUMPS, GENERATOR, AND APPURTENANCES IN THE EVENT OF HIGH FLOWS. EMERGENCY BYPASS PUMP INTAKE SHALL BE SCREENED TO PREVENT FISH FROM ENTERING BYPASS SYSTEM. SEE THE CONTRACT PROVISIONS AND THE HPA FOR ADDITIONAL INFORMATION ON TEMPORARY STREAM BYPASS.
3. GRAVEL BAGS SHALL BE FILLED WITH ROUNDED PEA GRAVEL OR CLEAN SAND; NO ANGULAR OR CRUSHED MATERIALS MAY BE USED. GRAVEL BAGS SHALL BE WASTEHAULED AFTER REMOVAL OF BYPASS.

**TEMPORARY STREAM BYPASS DETAIL**  
N.T.S.

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 DRAWN BY: JJ  
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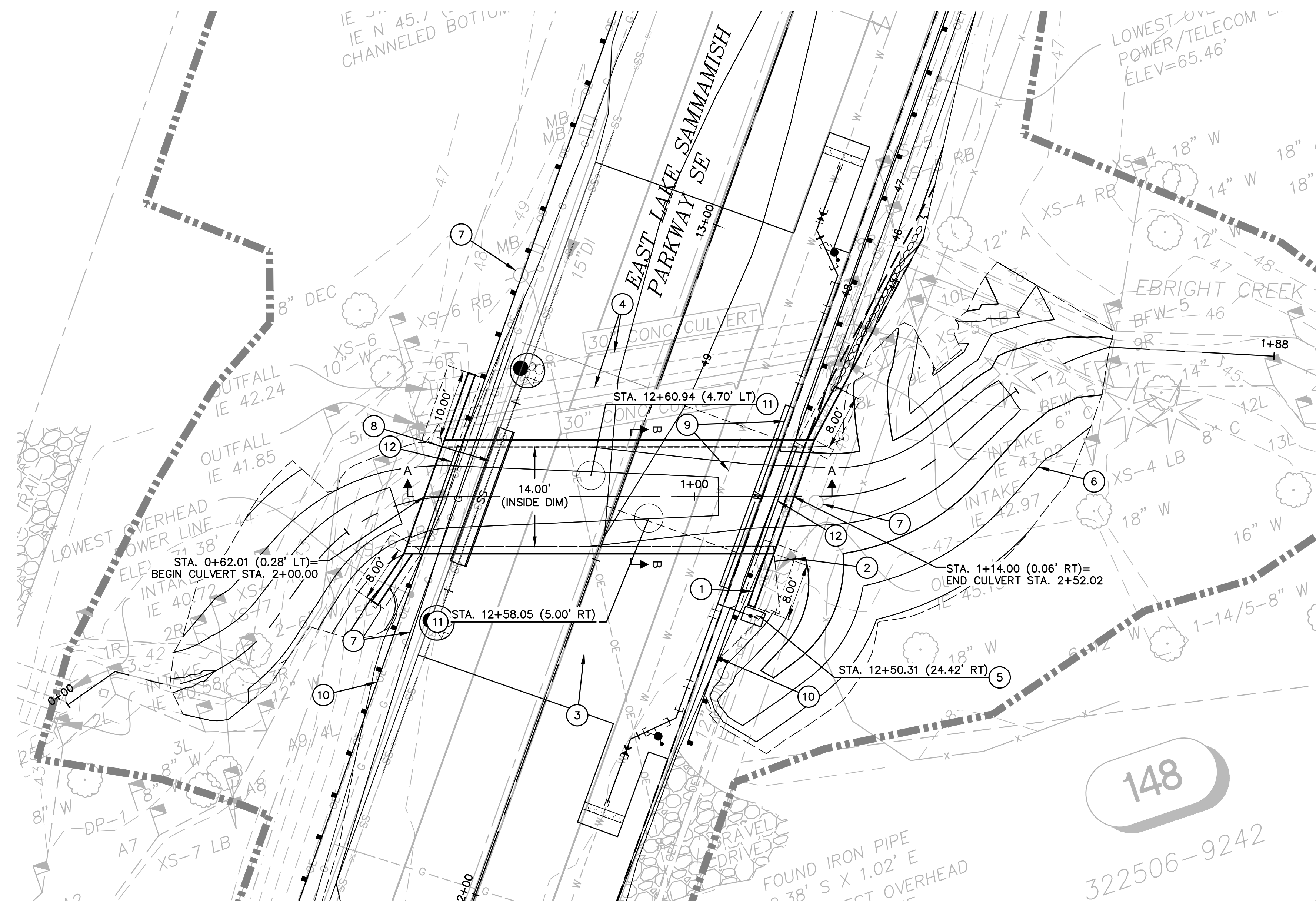
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**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 STREAM BYPASS DETAILS

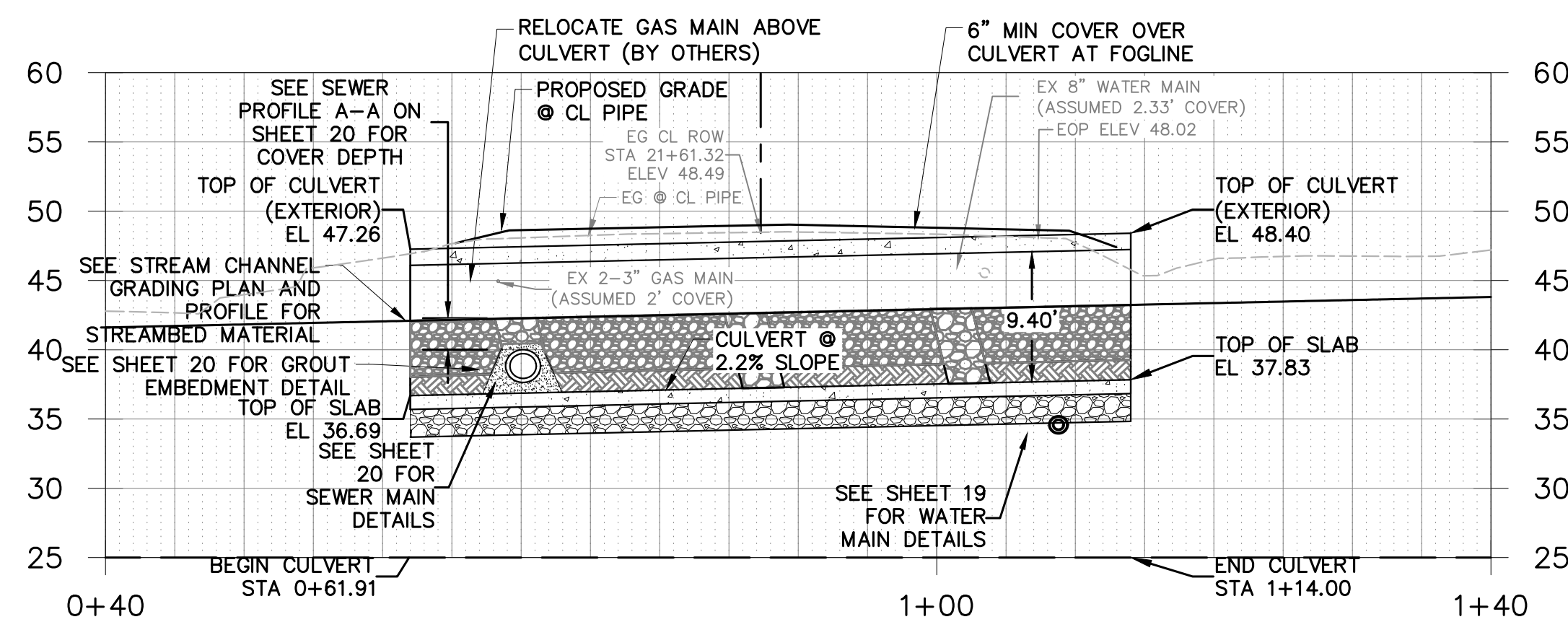
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SCALE H: N/A v: N/A	SHEET 9 of 23



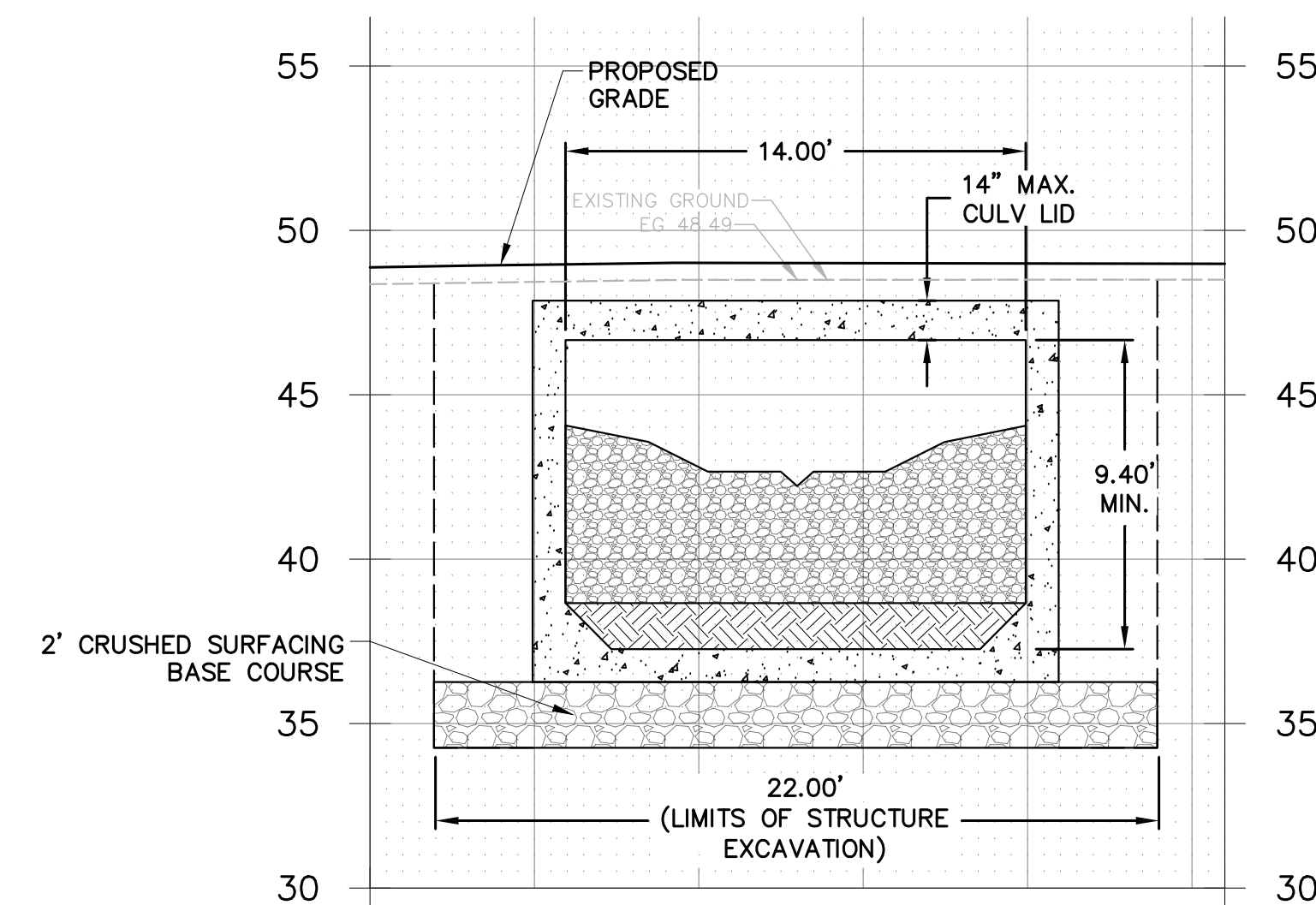
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 USER NAME: KEITH ROGERS



**CULVERT PLAN**

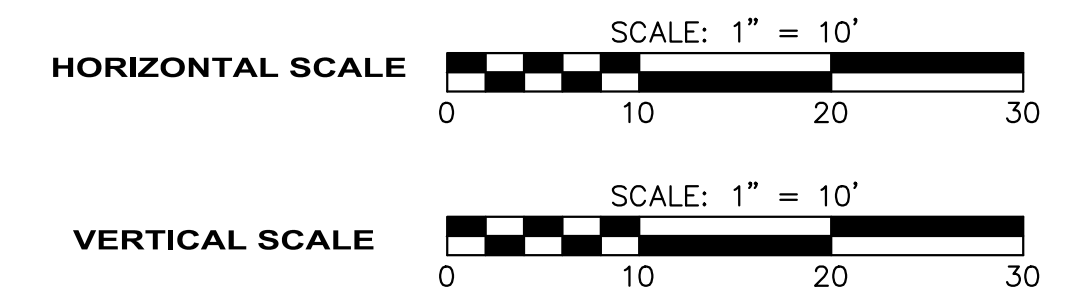


**A-A CULVERT PROFILE**  
SCALE: 1"=10'



**B-B CULVERT INSTALLATION**  
SCALE: 1"=5'

**60% SUBMITTAL**



**GENERAL NOTES:**

1. TESC MEASURES, DEWATERING SYSTEM, AND TEMPORARY BYPASS AND ISOLATION SYSTEM SHALL BE INSTALLED PRIOR TO EXCAVATION.

**CONSTRUCTION NOTES:**

- 1 APPROXIMATE LOCATION OF WINGWALL (TYP)
- 2 APPROXIMATE LOCATION OF WINGWALL FOOTING (TYP)
- 3 APPROXIMATE EXCAVATION EXTENTS
- 4 EXISTING CULVERTS TO BE REMOVED. SEE SHEET 6 TESC AND DEMO PLAN
- 5 CUT EXISTING CULVERT AND INSTALL SPLASH PAD
- 6 PROPOSED CONTOUR (TYP)
- 7 EX UTILITY TO BE REPLACED BY OTHERS
- 8 REMOVE AND REPLACE EXISTING 15" SANITARY SEWER. SEE SHEET 20 FOR DETAILS
- 9 REMOVE AND RELOCATE EXISTING 8" WATER MAIN. SEE SHEET 19 FOR DETAILS
- 10 NEW GUARDRAIL
- 11 MAINTENANCE HOLE ACCESS LID
- 12 EXTRUDED CURB (TYP)



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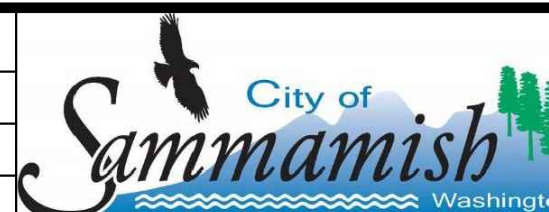


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**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 CULVERT AND WINGWALL LAYOUT

JOB # / DWG	10-190038	DATE	07/06/2020
SCALE	H: 1"=10' v: AS SHOWN	SHEET	10 of 23



**DESIGN CRITERIA**

CONTRACTOR TO DESIGN PRECAST CONCRETE CULVERT AND WINGWALLS

CODE: AASHTO BRIDGE DESIGN SPECIFICATION—LATEST EDITION

LOADING: TRAFFIC: HL-93  
SOIL: 130 PCF LATERAL PER FIGURE

DEFLECTION LIMIT: L/240

**GENERAL CONDITIONS**

1. THE CONTRACTOR SHALL VERIFY AND REVIEW ALL ITEMS WITHIN THE DRAWINGS PRIOR TO PROCEEDING WITH THE WORK. NOTIFY THE ENGINEER/ARCHITECT IMMEDIATELY WITH ANY DISCREPANCIES.
2. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
3. DIMENSIONS ARE NOT TO BE SCALED FROM THE PLANS, SECTIONS, OR DETAILS WITHIN THE DRAWINGS.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE, AND PROCEDURES.
5. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE REFERENCED BUILDING AND ALL OTHER REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK.
6. SPECIFIC NOTES AND DETAILS IN THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND SPECIFICATIONS.
7. NOTIFY THE ENGINEER OF ALL CHANGES MADE IN THE FIELD PRIOR TO INSTALLATION.

**CONCRETE**

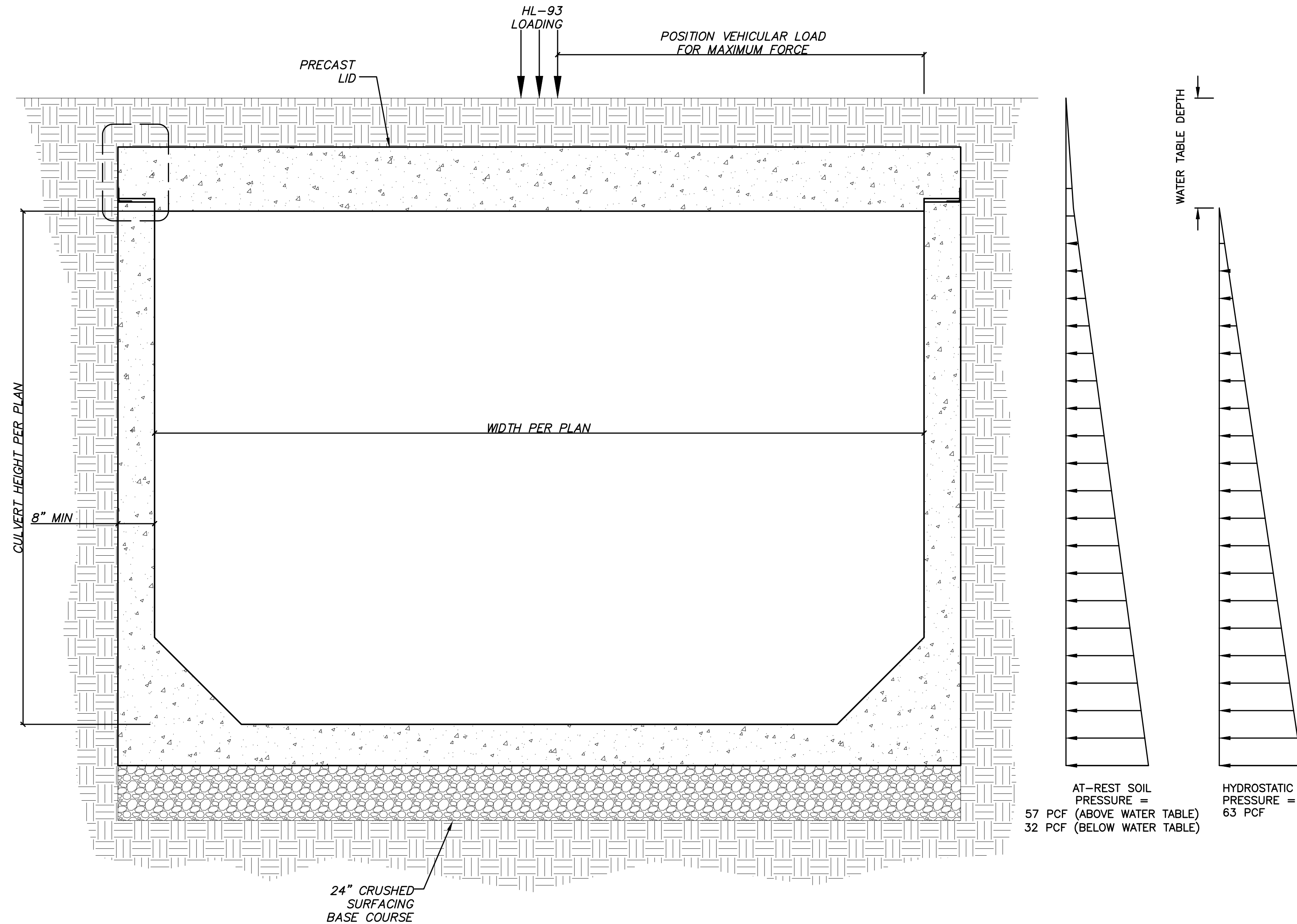
1. REFERENCE STANDARDS: ACI-301 AND ACI-318.
2. MINIMUM CONCRETE STRENGTH AT 28 DAYS: 4,000 PSI

**REINFORCING STEEL**

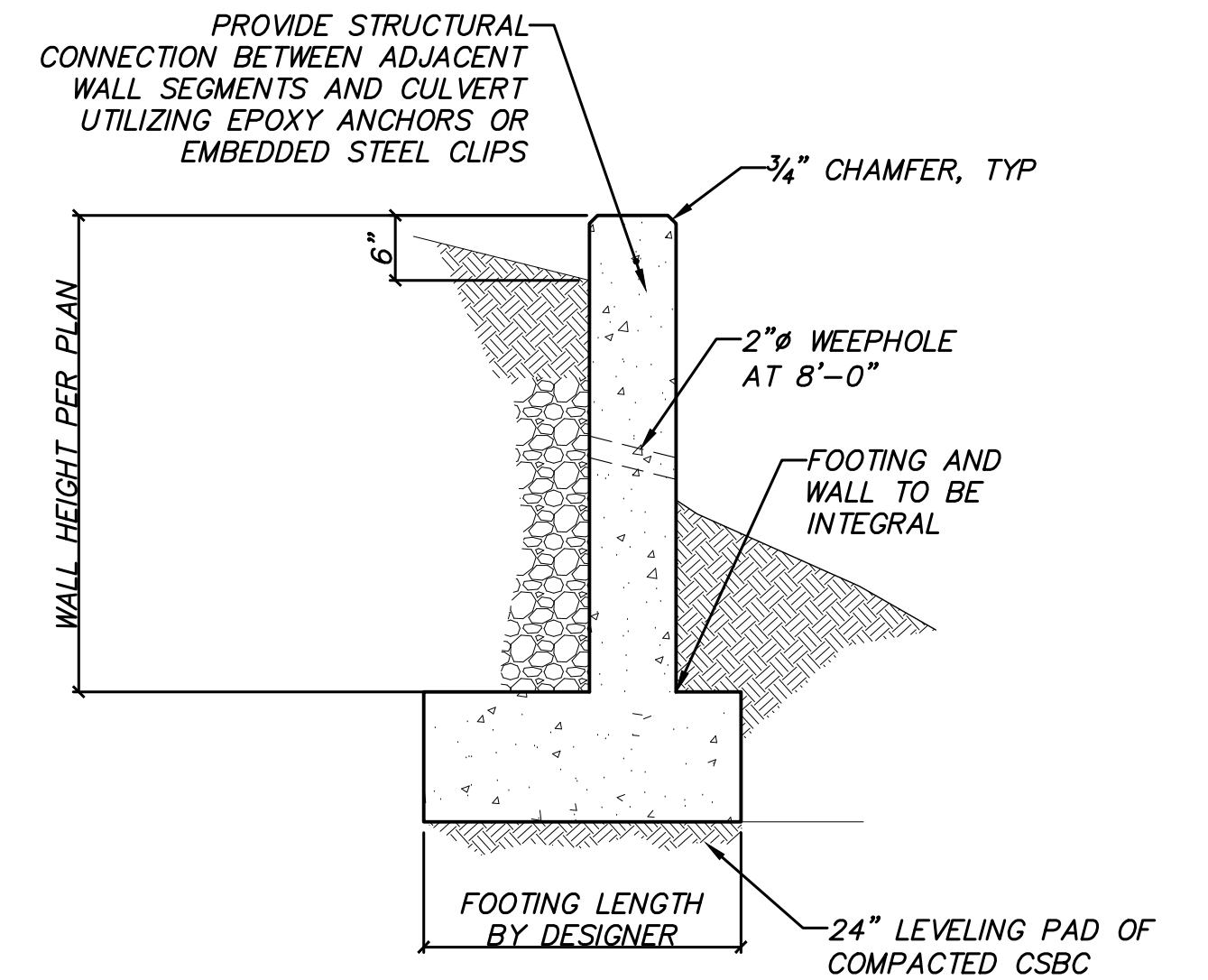
1. REFERENCE STANDARDS: ACI "DETAIL MANUAL" AND CRSI MANUAL OF STANDARD PRACTICE.
2. ALL REINFORCING TO BE GALVANIZED
3. MATERIALS:  
A. REINFORCING STEEL: ASTM A615, GRADE 60 FOR #5 AND LARGER

**SHOP DRAWINGS AND SUBMITTALS**

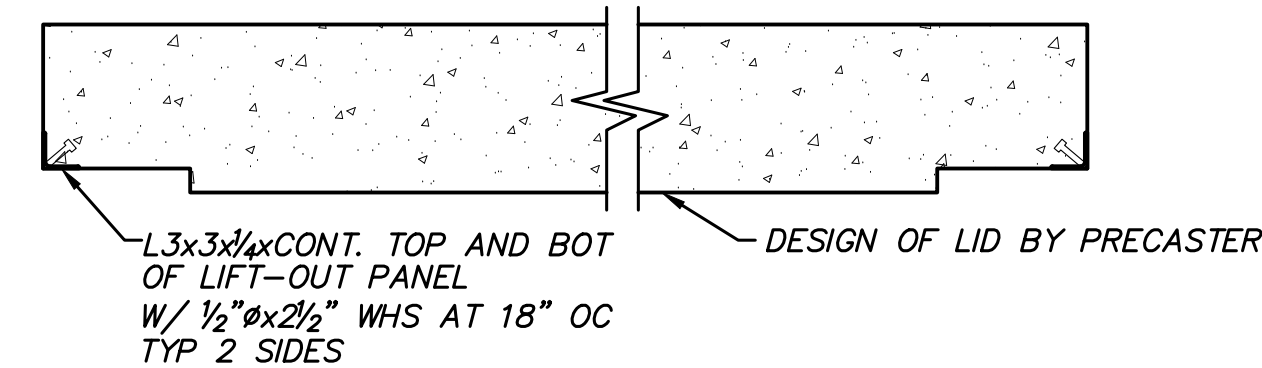
1. SUBMIT LAYOUT DRAWINGS IN PDF FORMAT FOR REVIEW OF:  
A. CULVERT DESIGN  
B. REINFORCING STEEL
2. SUBMIT SPECIFICATIONS IN PDF FORMAT FOR REVIEW OF:  
A. CONCRETE DESIGN MIX  
B. CONCRETE INSERTS



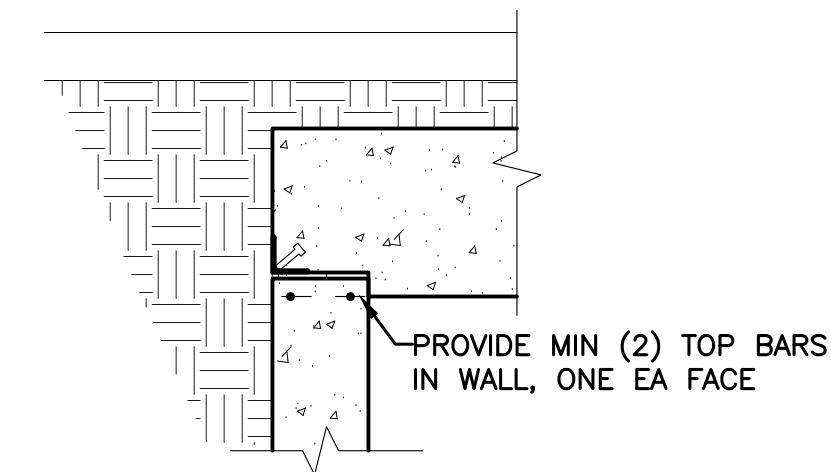
**PRECAST CULVERT LOADING CRITERIA**



**PRECAST WINGWALL**



**PRECAST CULVERT LID**



**CULVERT DETAIL**



Know what's below.  
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60% SUBMITTAL

FILE NAME: C:\PWORKINGDIR\OSBORNCONSULTING-PW-01\KEITH ROGERS\DM151578\_V\_P\_10-190038\_STRUC\_DETAILS.DWG  
PLOT TIME: 7/6/2020 4:41 PM  
USER NAME: KEITH ROGERS



DESIGNED BY JL  
DRAWN BY MH  
CHECKED BY TB  
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NO.	DATE	REVISION	BY

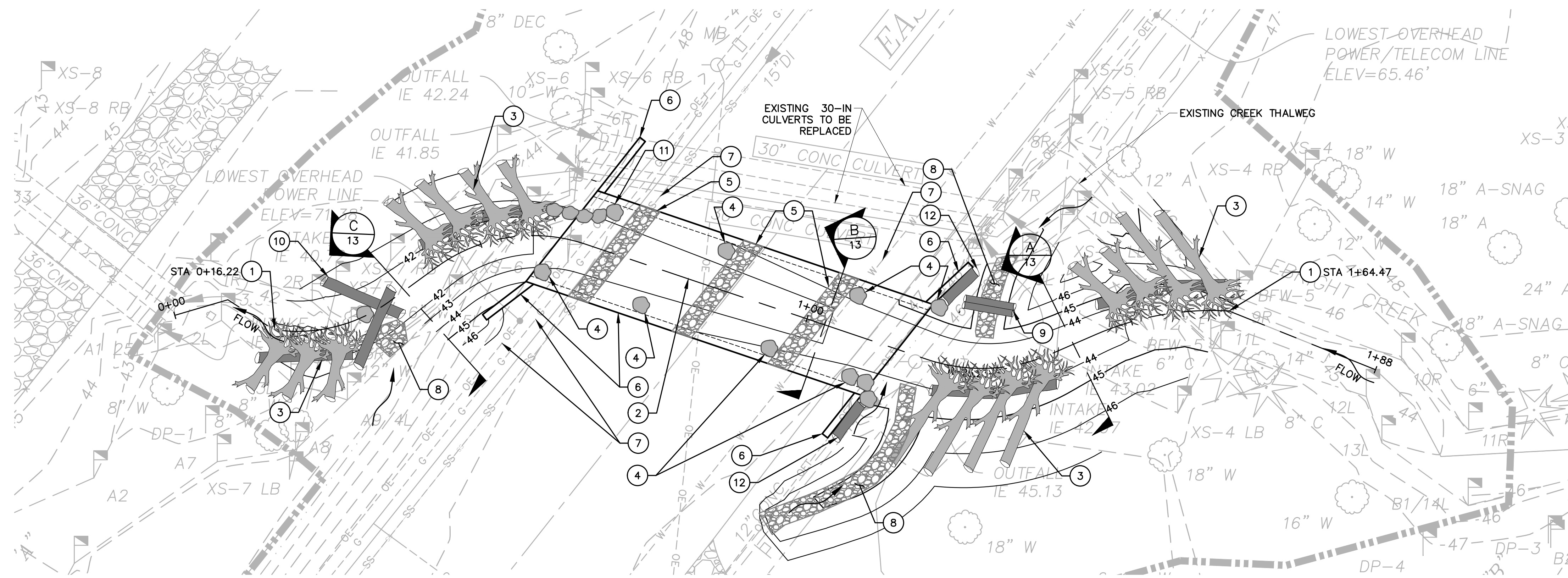


**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
STRUCTURAL NOTES AND DETAILS

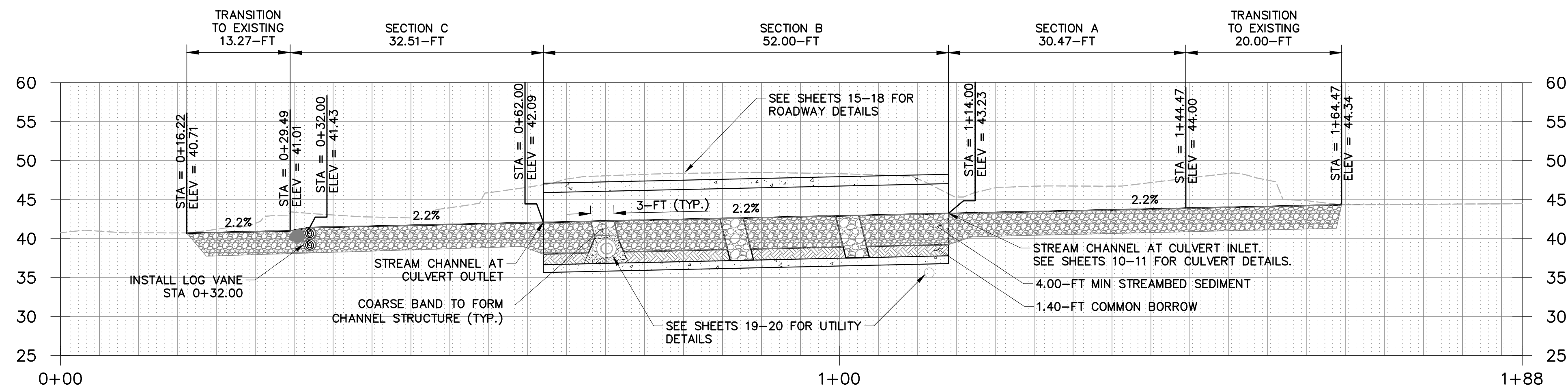
JOB# / DWG	DATE
10-190038	07/06/2020
SCALE	SHEET
H: AS SHOWN v:	11 of 23



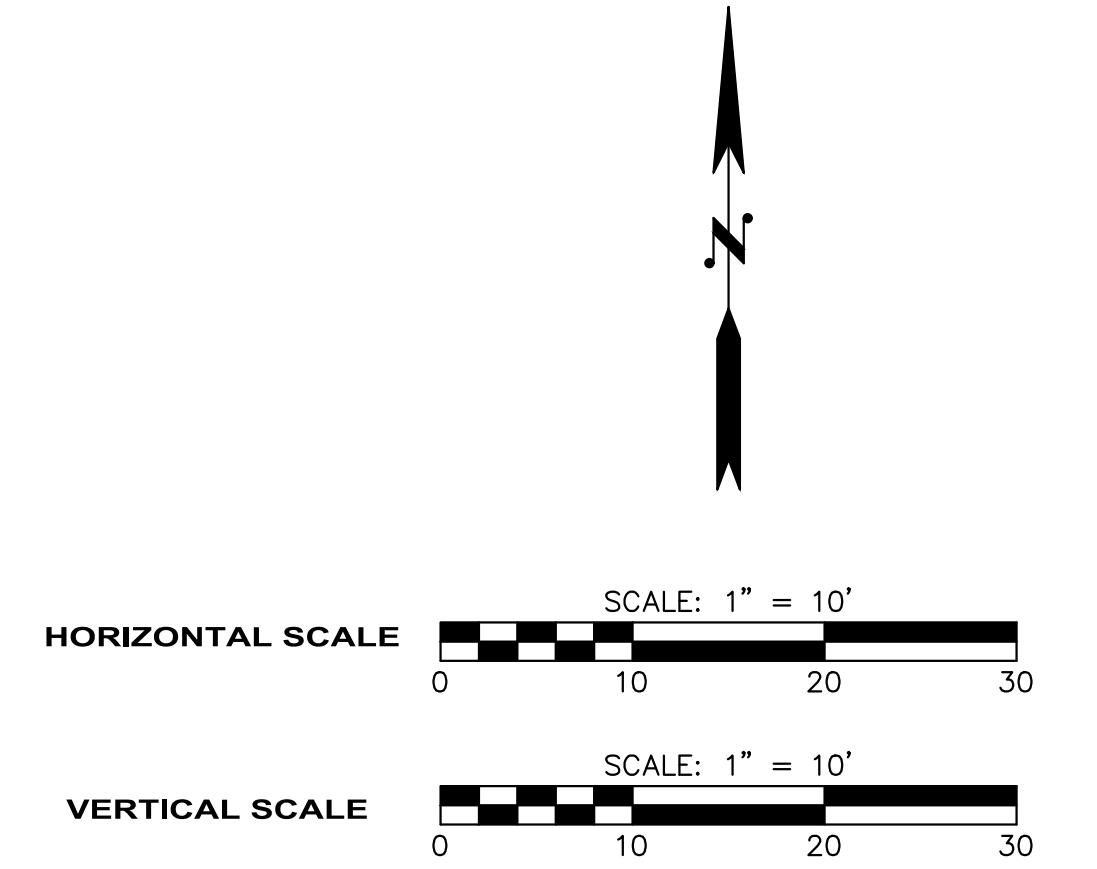
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 PLOT TIME: 7/6/2020 3:15 PM  
 USER NAME: MAGGIE WILBANKS, EIT



**PLAN VIEW**



**PROFILE VIEW**



**GENERAL NOTES:**

1. LOCATION OF LOG STRUCTURES AND BOULDERS SHOWN IN PLAN VIEW ARE APPROXIMATE. LOG STRUCTURES AND BOULDERS ARE TO BE INSTALLED AS SPECIFIED BY ENGINEER IN THE FIELD.

**CONSTRUCTION NOTES:**

1. TIE IN TO EXISTING EBRIGHT CREEK CENTERLINE.
2. CONSTRUCT STREAM CHANNEL ALIGNMENT AND PROFILE AS SHOWN ON THIS SHEET AND TYPICAL CROSS-SECTION PER DETAILS ON SHEET 13.
3. INSTALL LARGE WOODY MATERIAL BANK PROTECTION. 3/14
4. INSTALL HABITAT BOULDERS.
5. INSTALL COARSE BANDS PER THE SPECIAL PROVISIONS TO MAINTAIN CHANNEL STRUCTURE WITH 22-FT MAXIMUM SPACING.
6. INSTALL CULVERT AND WING WALLS SEE SHEETS 10-11.
7. SEE SHEETS 19-20 FOR UTILITY IMPROVEMENTS.
8. INSTALL 6-IN STREAMBED COBBLES ALONG DITCHES CONNECTING TO CREEK PER THE SPECIAL PROVISIONS.
9. INSTALL DROP LOG. 2/14
10. INSTALL LOG VANE. 1/14
11. INSTALL BOULDER TOE PROTECTION. 4/14
12. INSTALL LOG TOE (18-IN DIAM.) ALONG WINGWALL.

60% SUBMITTAL



DESIGNED BY: MW  
 DRAWN BY: JJ  
 CHECKED BY: LR

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**City of Sammamish**  
 Washington

801 228TH AVE SE  
 SAMMAMISH, WA 98075

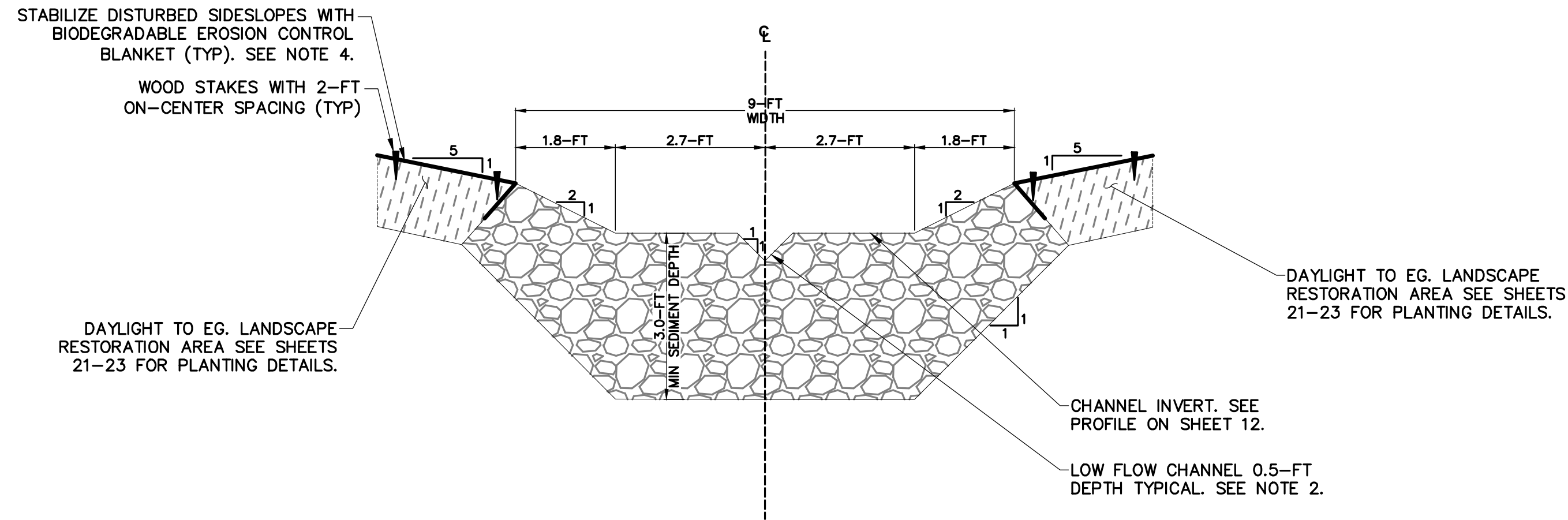
**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 STREAM CHANNEL GRADING PLAN AND PROFILE

JOB# / DWG: 10-190038  
 SCALE: H: 1"=10' V: 1"=10'

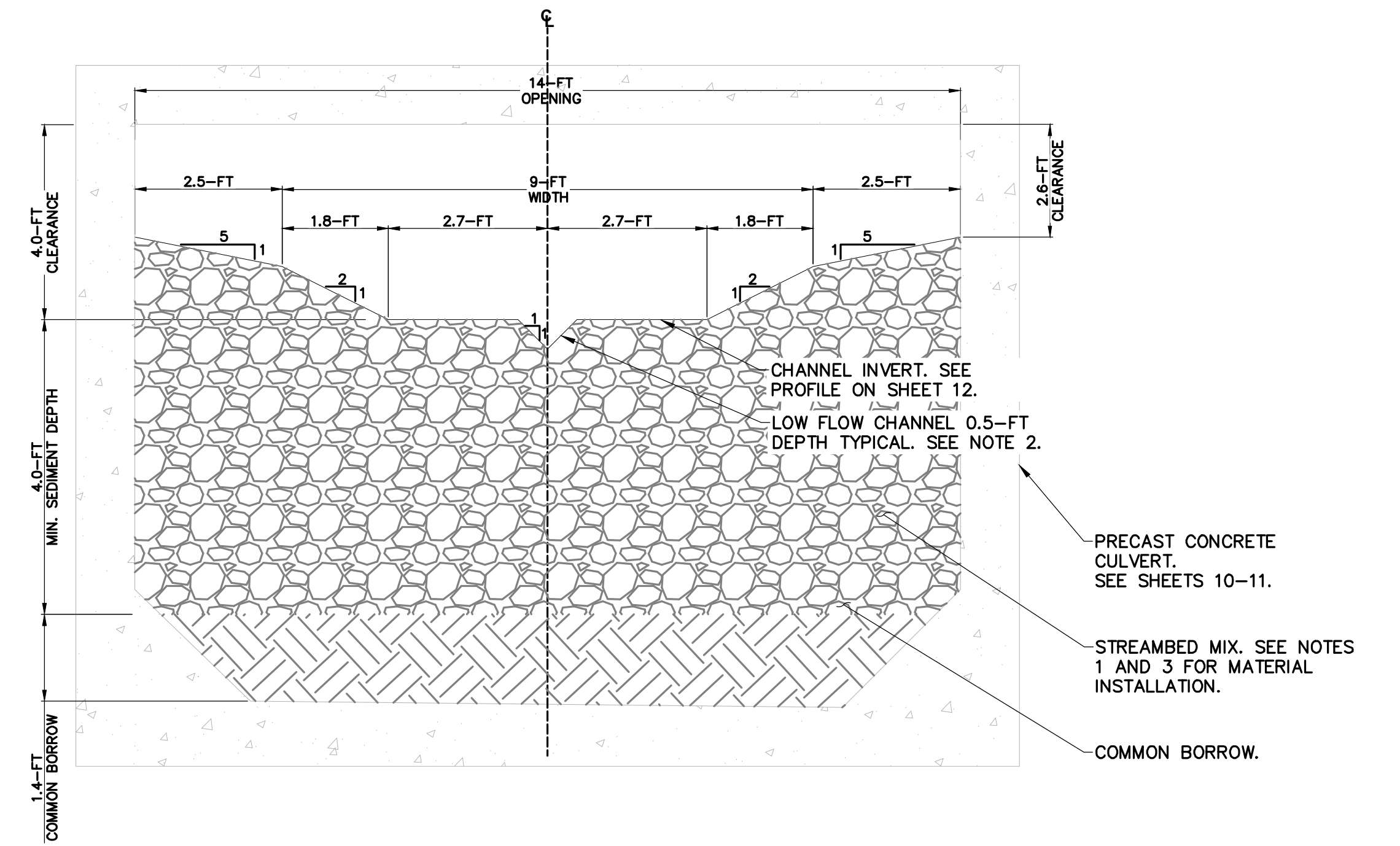
DATE: 07/06/2020  
 SHEET: 12 of 23



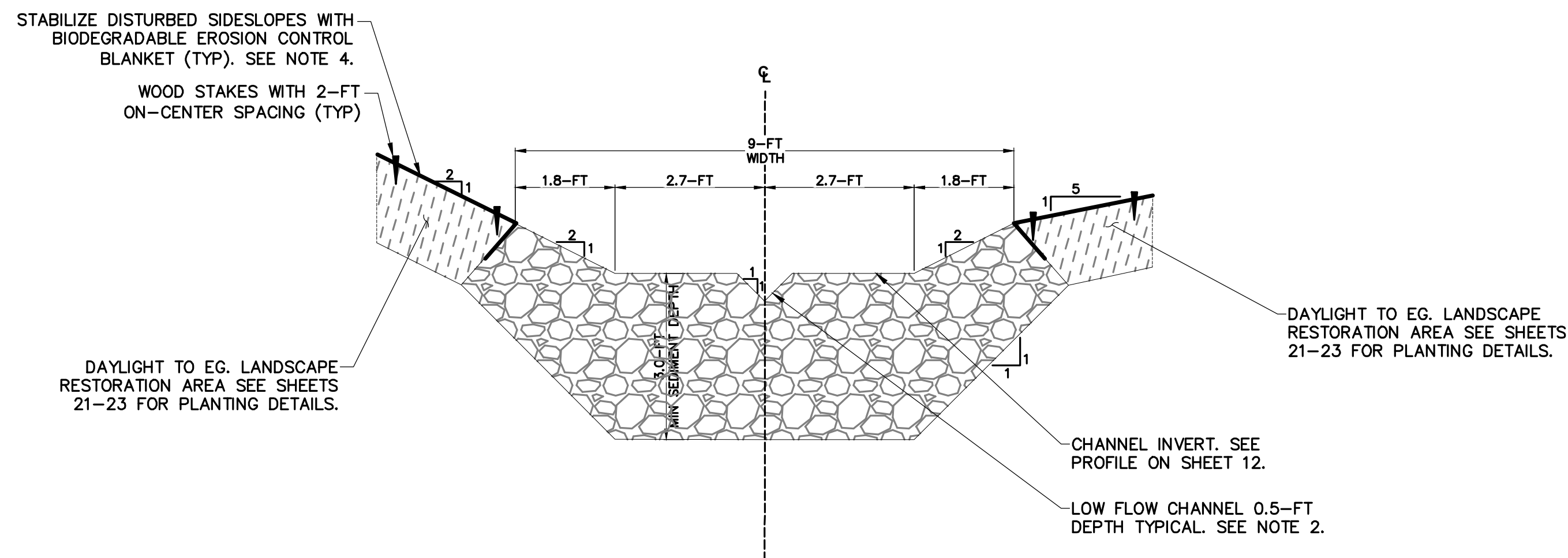
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 PLOT TIME: 7/6/2020 3:32 PM  
 USER NAME: MAGGIE WILBANKS, EIT



**A UPSTREAM CHANNEL DETAIL**  
 12 N.T.S.



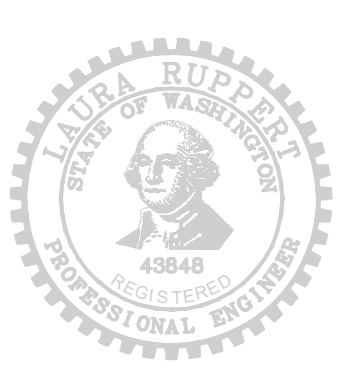
**B CULVERT SECTION DETAIL**  
 12 N.T.S.



**C DOWNSTREAM CHANNEL DETAIL**  
 12 N.T.S.

**NOTES:**

1. STREAMBED MIX PER SPECIAL PROVISIONS.
2. LOCATE LOW FLOW CHANNEL AT CENTER OF CHANNEL IN TANGENT SECTIONS AND AT A 1-FT OFFSET ON THE OUTSIDE OF BENDS WITH A SMOOTH TRANSITION.
3. INSTALL ALTERNATING BOULDERS ALONG CULVERT WALLS PER SHEET 12.
4. EROSION CONTROL BLANKET SHALL NOT EXTEND INTO WETLAND AREAS.



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DESIGNED BY: MW  
 DRAWN BY: JJ  
 CHECKED BY: LR

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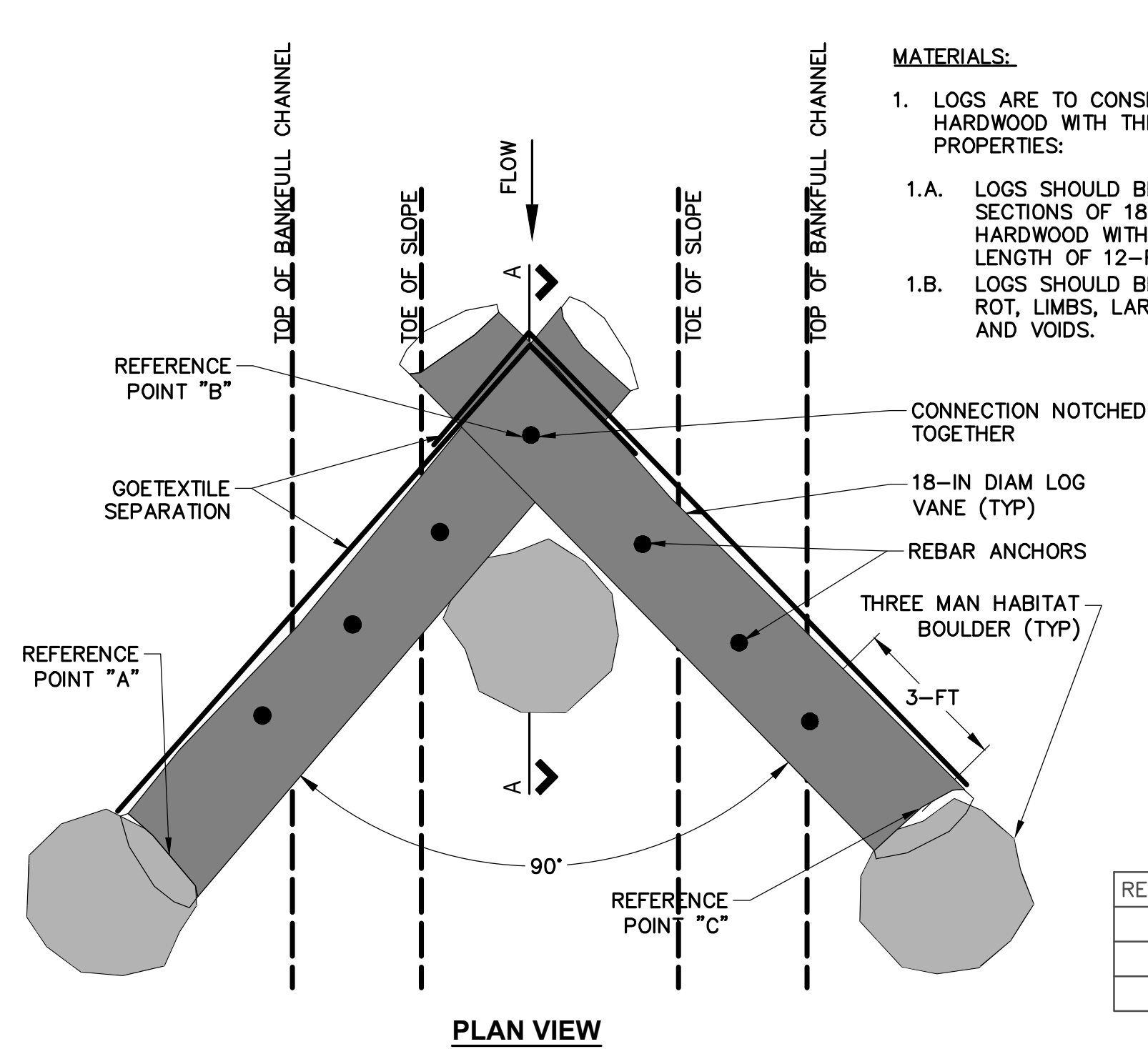
City of Sammamish  
 801 228TH AVE SE  
 SAMMAMISH, WA 98075

**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 STREAM CHANNEL TYPICAL SECTIONS AND DETAILS 1

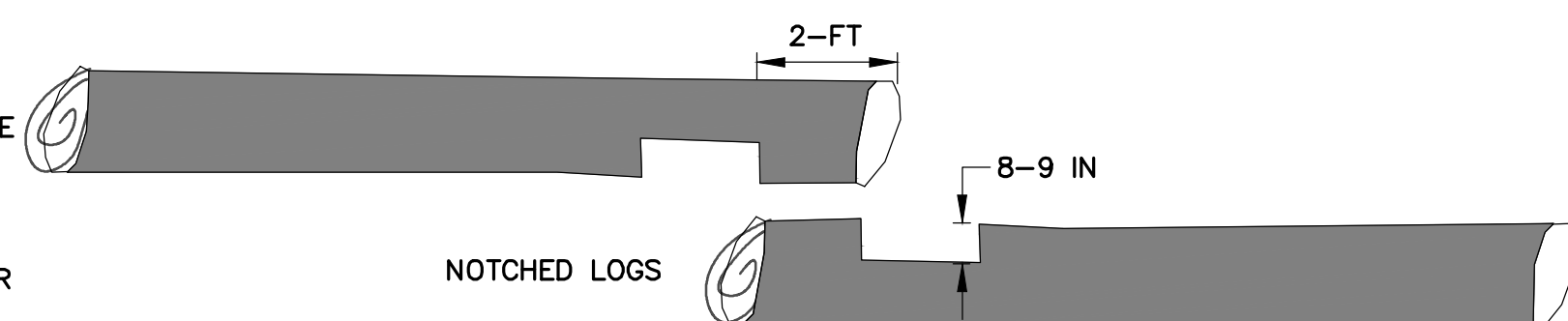
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SCALE	H: N/A V: N/A	SHEET	13 of 23



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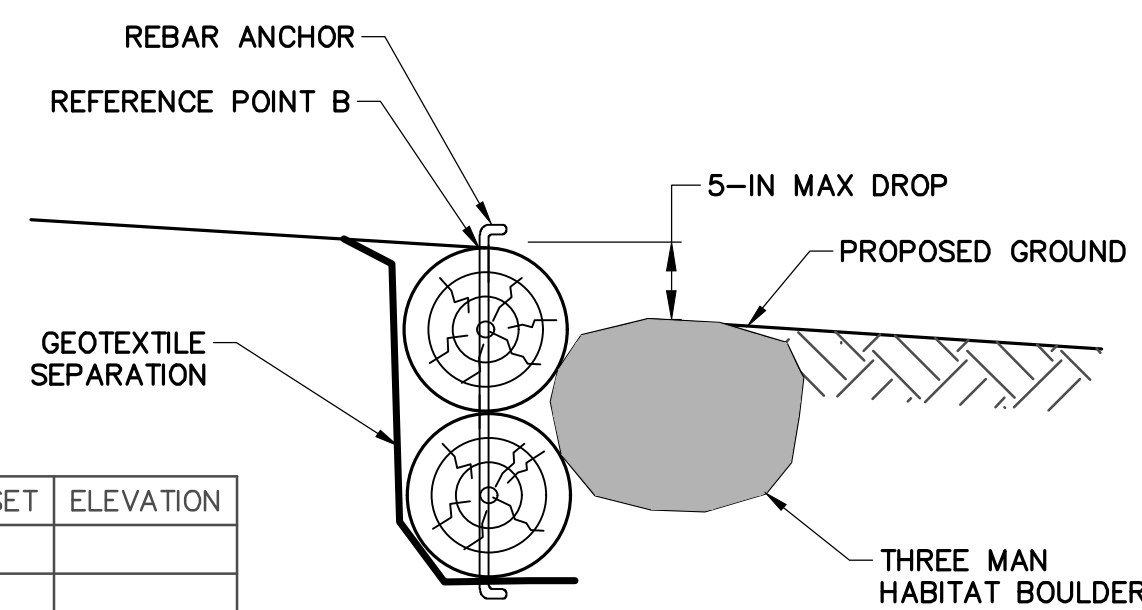


REF. PT.	STATION	OFFSET	ELEVATION
A			
B			
C			

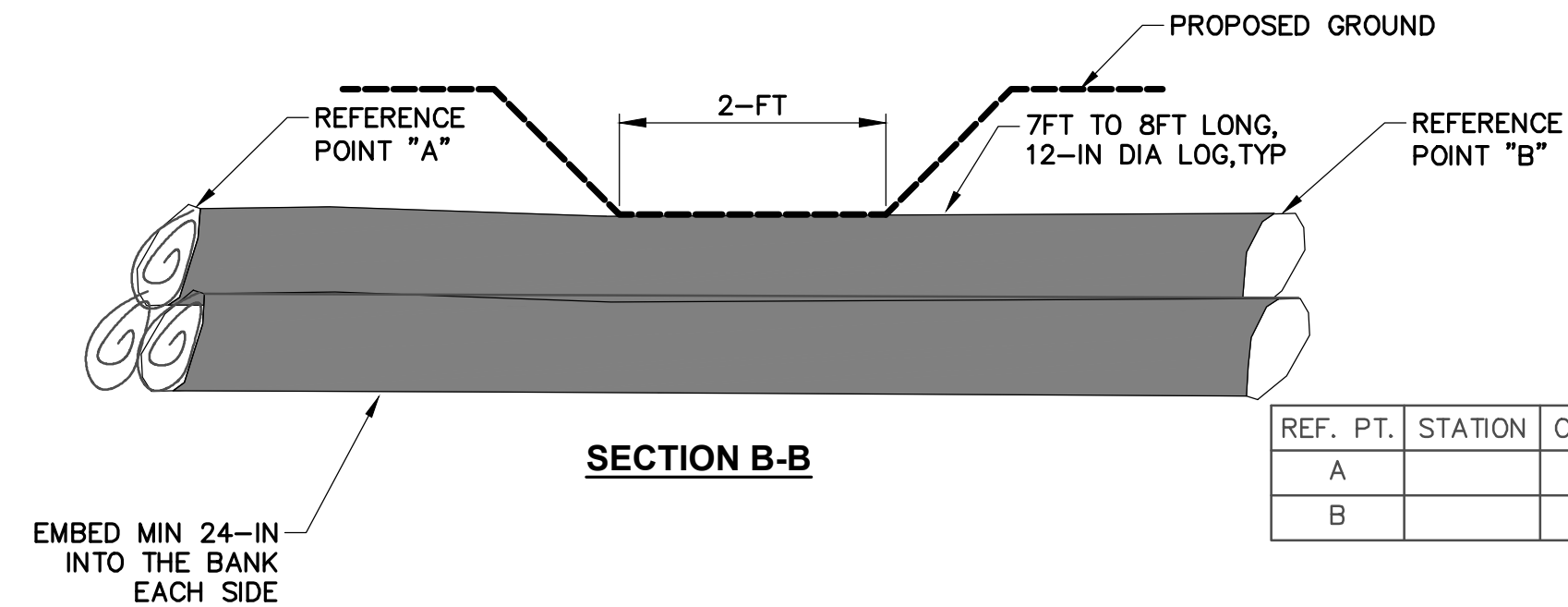


**LOG CONNECTION DETAIL**

- NOTES:**
1. NOTCH CANNOT EXCEED 50% OF LOG DIAMETER.
  2. NOTCH WIDTH WILL BE DETERMINED BY SIZE OF ADJACENT LOG.
  3. NOTCH SHALL BE FLUSH WITH THE ADJACENT LOG. THERE SHOULD BE NO GAP BETWEEN THE LOGS.



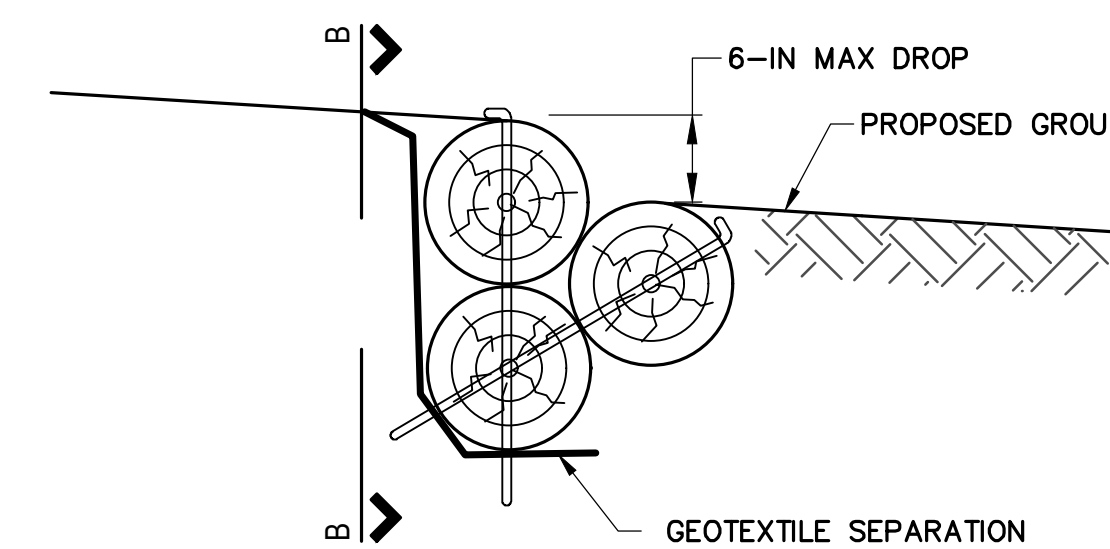
**SECTION A-A**



**SECTION B-B**

REF. PT.	STATION	OFFSET	ELEVATION
A			
B			

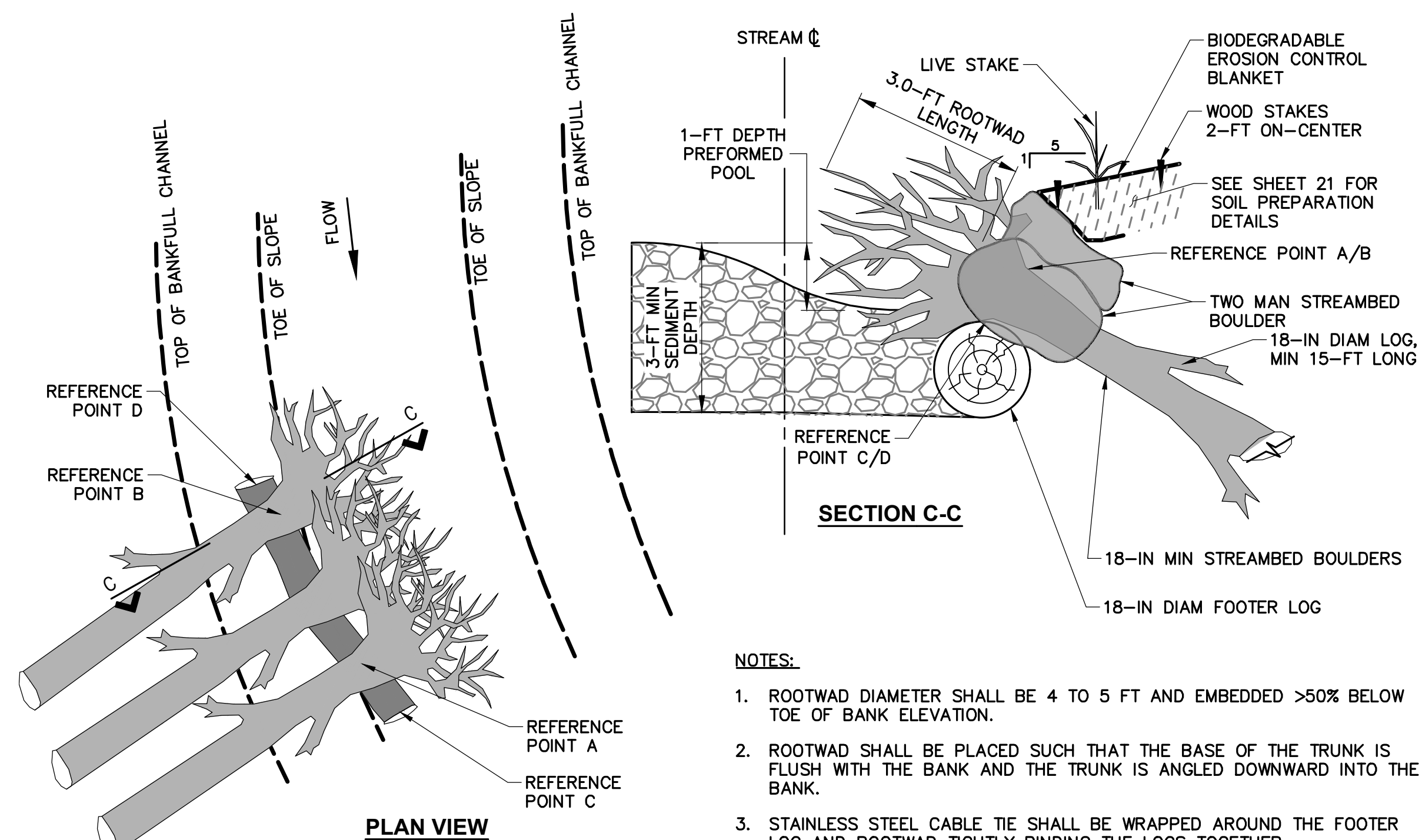
- NOTES:**
1. LOG STEPS ARE TO BE CONSTRUCTED USING THREE LOGS.
  2. LOGS ARE TO BE CONNECTED WITH REBAR, REBAR SHALL BE BENT TO 90° AT THE TOP END.
  3. GEOTEXTILE SEPARATION IS TO BE AFFIXED TO THE BOTTOM AND BENEATH THE TOP AND FOOTER LOG USING A MINIMUM OF 24-IN EXTENSION IN FRONT OF THE LOGS.
  4. ALL LOGS ARE TO BE EMBEDDED A MINIMUM OF 24-IN INTO EACH BANK OF THE CHANNEL.



**ELEVATION**

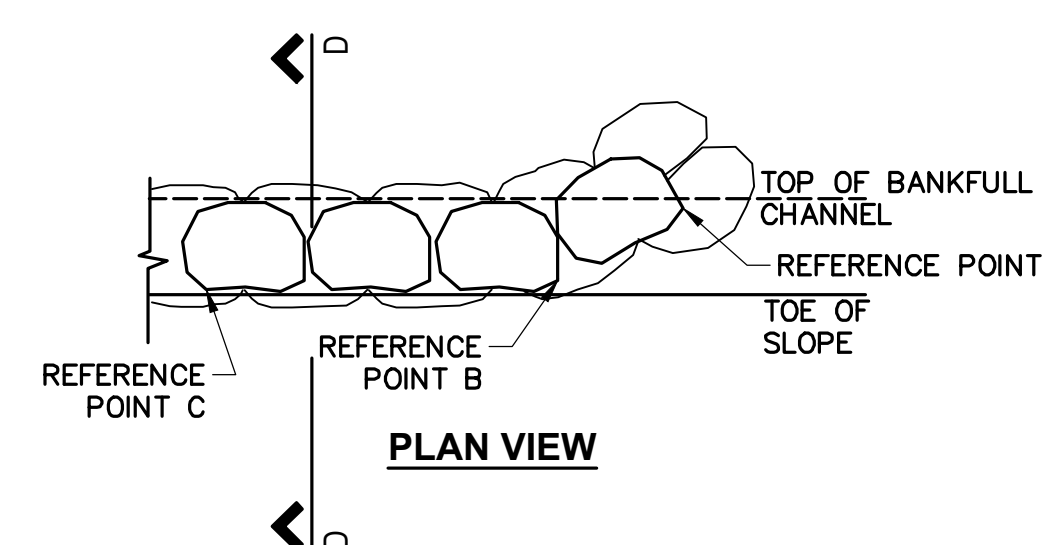
**1 LOG VANE DETAIL**  
12 N.T.S.

**2 DROP LOG DETAIL**  
12 N.T.S.

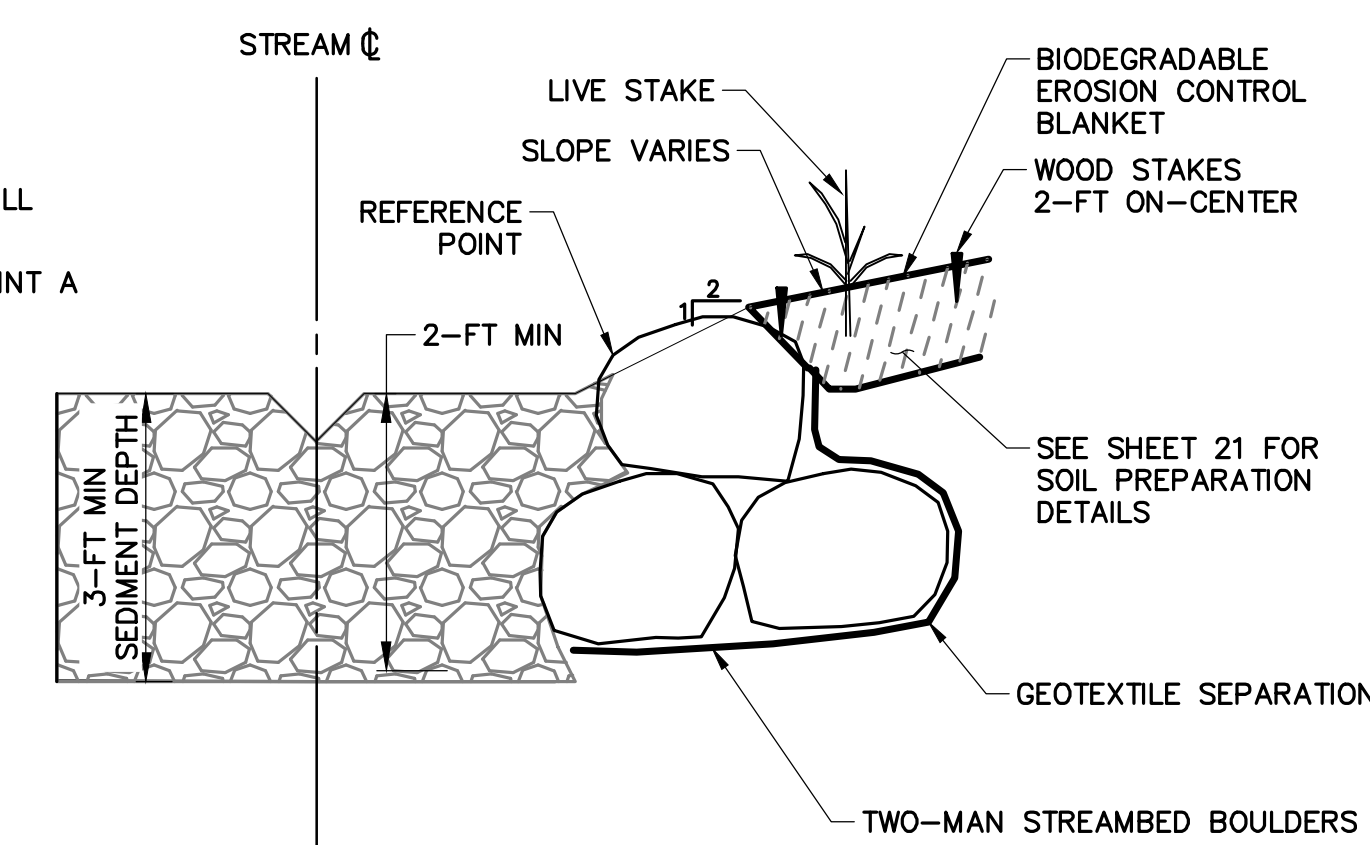


- NOTES:**
1. ROOTWAD DIAMETER SHALL BE 4 TO 5 FT AND EMBEDDED >50% BELOW TOE OF BANK ELEVATION.
  2. ROOTWAD SHALL BE PLACED SUCH THAT THE BASE OF THE TRUNK IS FLUSH WITH THE BANK AND THE TRUNK IS ANGLED DOWNWARD INTO THE BANK.
  3. STAINLESS STEEL CABLE TIE SHALL BE WRAPPED AROUND THE FOOTER LOG AND ROOTWAD TIGHTLY BINDING THE LOGS TOGETHER.
  4. BOULDERS SHALL BE FITTED AS TIGHTLY AS POSSIBLE AND FORM THE SHAPE OF THE PROPOSED BANK.

STR. NO.	REF. PT.	STATION	OFFSET	ELEVATION
LWM-1	A			
	B			
	C			
	D			
LWM-2	A			
	B			
	C			
	D			
LWM-3	A			
	B			
	C			
	D			
LWM-4	A			
	B			
	C			
	D			



- NOTES:**
1. TOP BOULDERS SHALL BE STAGGERED ATOP BOTTOM BOULDERS CREATING A SHINGLED EFFECT ALONG THE BANK.
  2. BOULDERS AT THE ENDS OF BOULDER TOE PROTECTION SHALL BE ANGLED 45° INTO THE BANK.
  3. BOULDERS SHALL BE 18-MIN IN SHORTEST DIMENSION AND LAID FLAT TO FACILITATE STACKING.



REF. PT.	STATION	OFFSET	ELEVATION
A			
B			
C			

**3 LARGE WOODY MATERIAL BANK PROTECTION DETAIL**  
12 N.T.S.

**4 BOULDER TOE PROTECTION DETAIL**  
12 N.T.S.

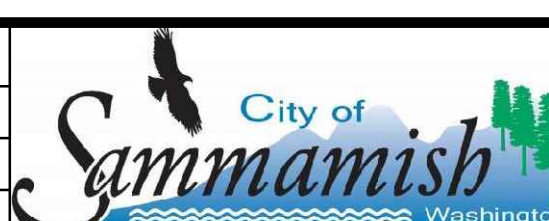
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DESIGNED BY MW  
 DRAWN BY JJ  
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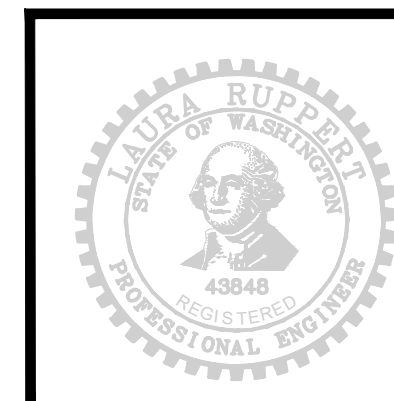
NO.	DATE	REVISION	BY



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 SAMMAMISH, WA 98075

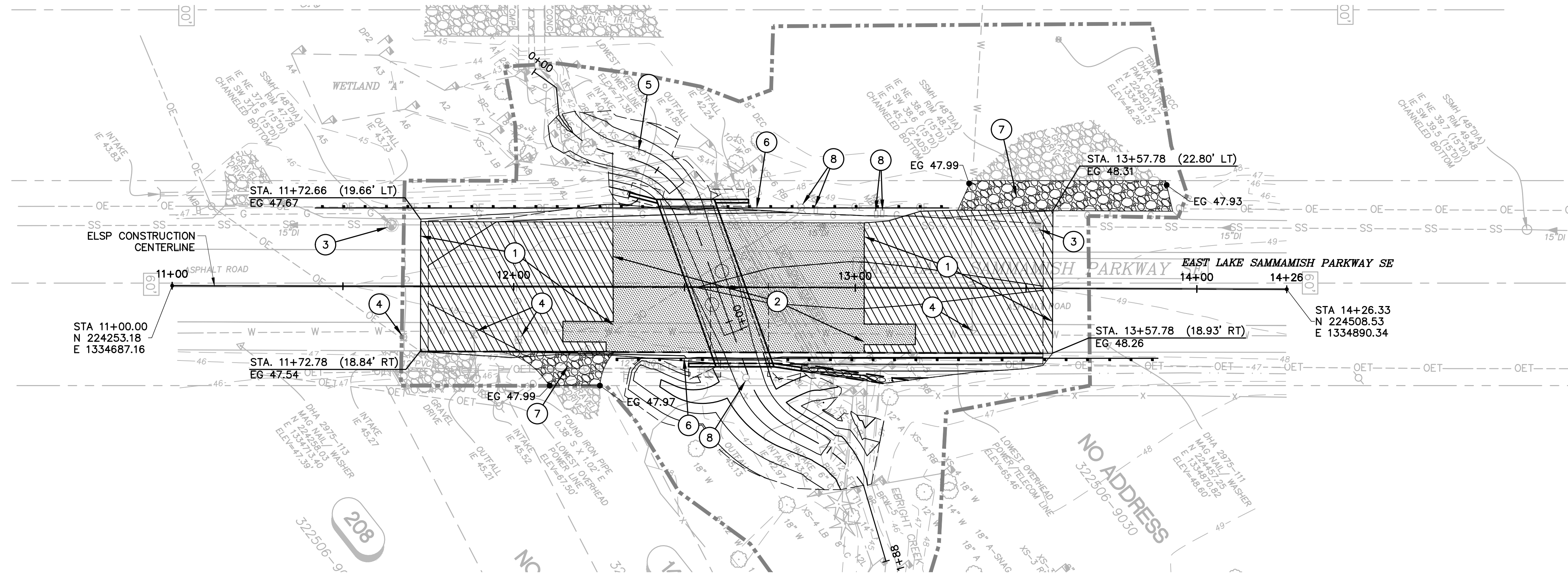
**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 STREAM CHANNEL TYPICAL SECTIONS AND DETAILS 2

JOB# / DWG	DATE
10-190038	07/06/2020
SCALE	SHEET
H: N/A v: N/A	14 of 23

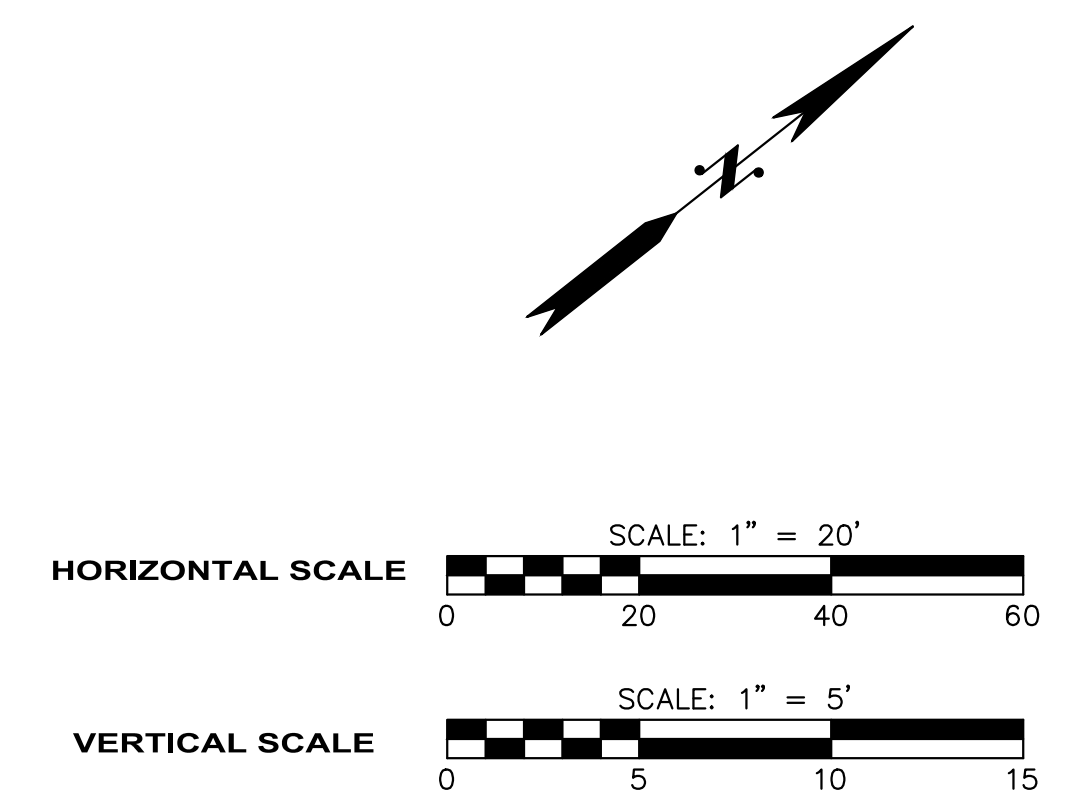




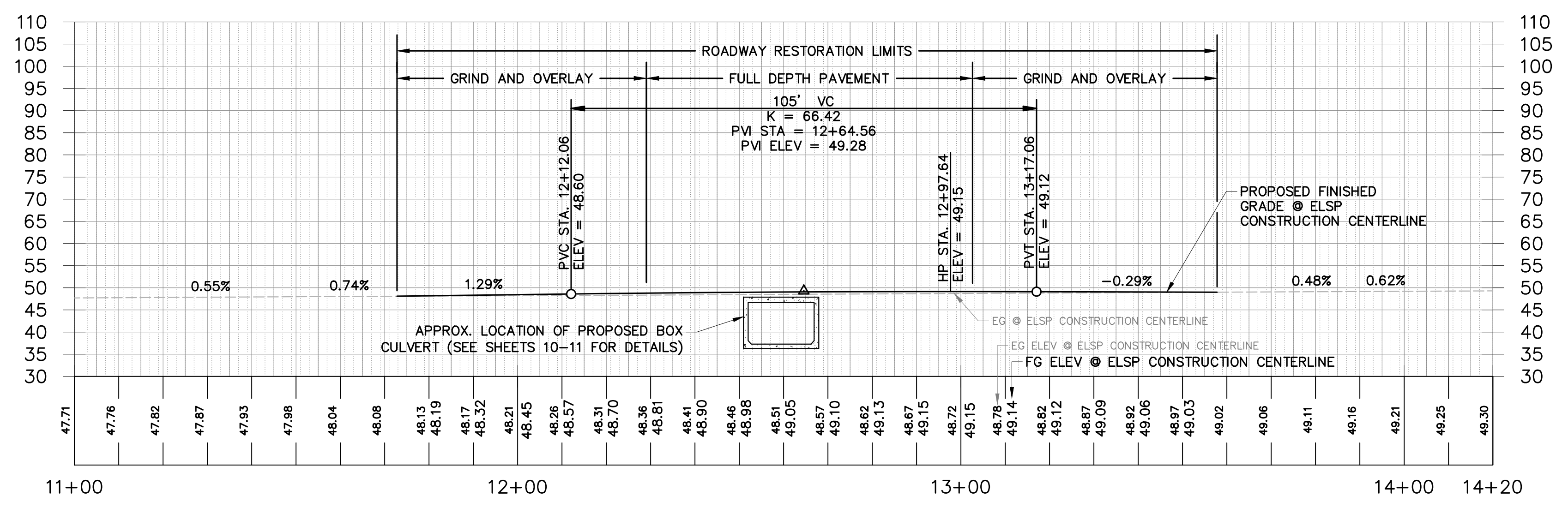
SEC. 32, T. 25 N, R. 6 E., W.M.



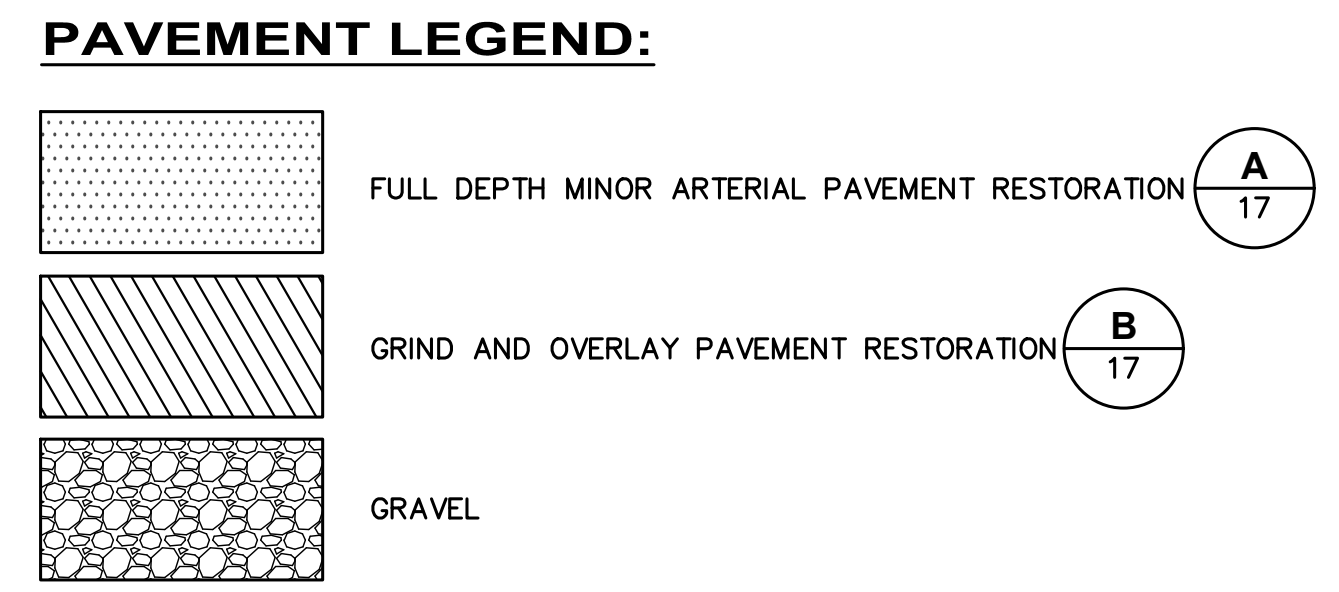
ROADWAY PLAN



- CONSTRUCTION NOTES:**
- 1 GRIND AND OVERLAY ASPHALT PAVEMENT, LIMITS PER PLAN. SEE SHEET 17 FOR DETAILS
  - 2 CONSTRUCT FULL DEPTH ASPHALT CONCRETE PAVEMENT PER ROADWAY SECTION, LIMITS PER PLAN. SEE SHEET 17 FOR DETAILS
  - 3 EXISTING FEATURES OR STRUCTURES TO REMAIN, PROTECT DURING CONSTRUCTION
  - 4 ADJUST EXISTING UTILITY COVER TO FINISHED GRADE
  - 5 SEE SHEET 12 FOR EBRIGHT CREEK GRADING
  - 6 NEW GUARD RAIL. SEE SHEET 16 FOR DETAILS
  - 7 GRAVEL DRIVEWAY TO MATCH PROPOSED ROADWAY
  - 8 EXISTING FEATURE TO BE RELOCATED. SEE SHEET 6 FOR TESC AND DEMO PLAN



ROADWAY PROFILE



Know what's below.  
Call before you dig.

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FILE NAME: C:\PWORKINGDIR\OSBORNCONSULTING-PW-01\KEITH ROGERS\DM15578\VP\_10-190038\_PP\_ROAD.DWG  
PLOT TIME: 7/6/2020 5:40 PM  
USER NAME: KEITH ROGERS



DESIGNED BY JL  
DRAWN BY MH  
CHECKED BY TB

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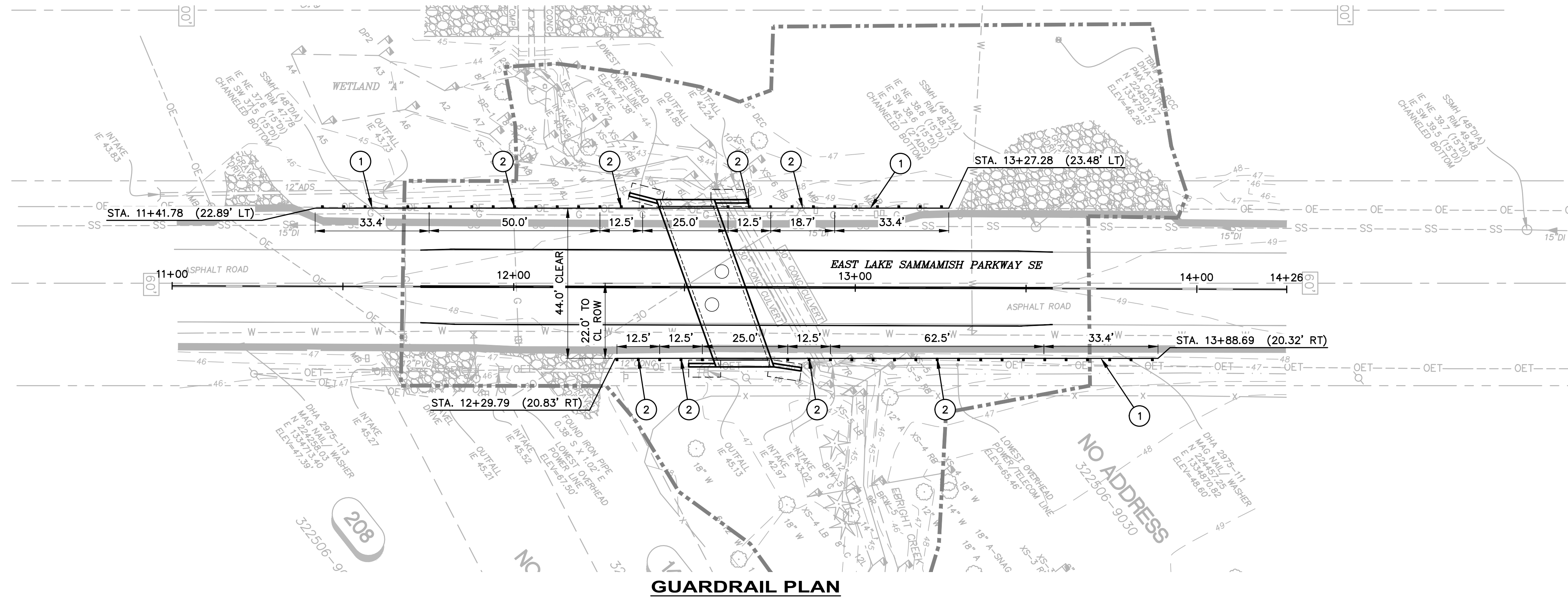


**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
ROADWAY PLAN AND PROFILE

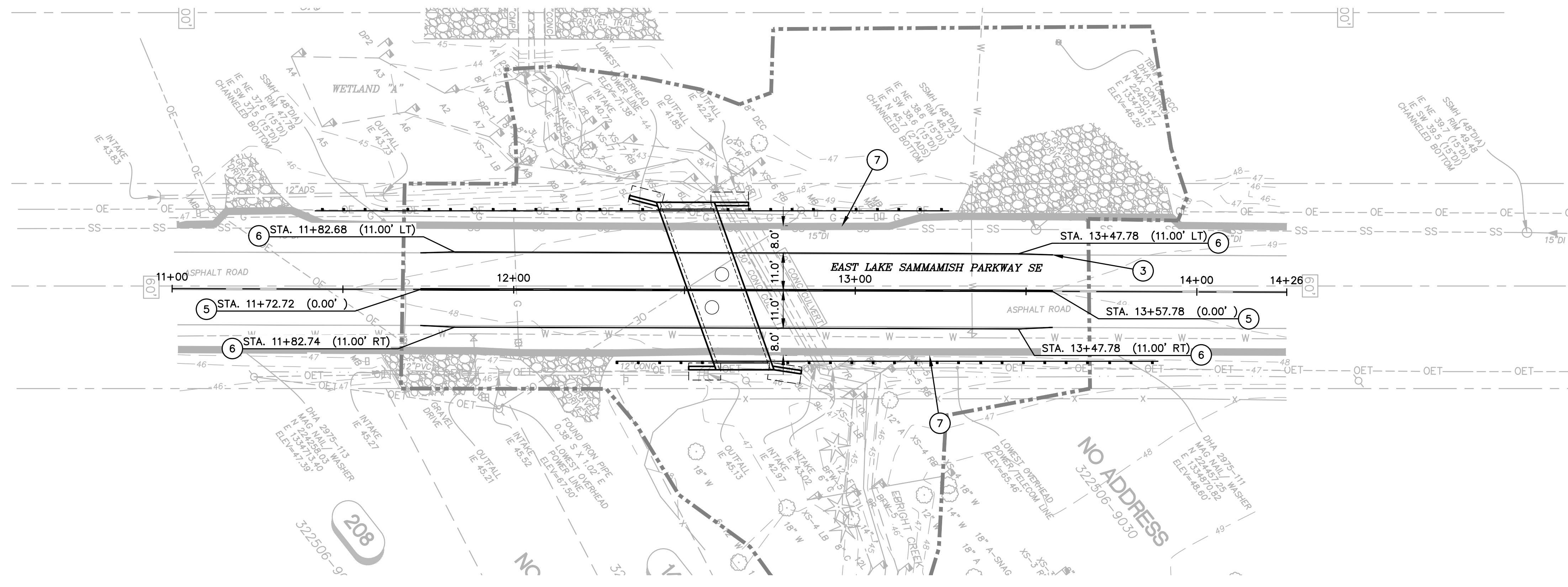
JOB# / DWG 10-190038	DATE 07/06/2020
SCALE H: 1"=20' V: 1"=5'	SHEET 15 of 23



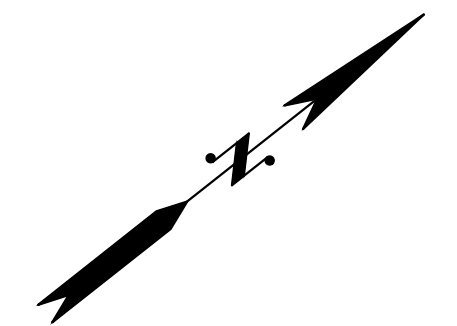
SEC. 32, T. 25 N, R. 6 E., W.M.



GUARDRAIL PLAN



CHANNELIZATION PLAN



GENERAL NOTES:

1. X

CONSTRUCTION NOTES:

- 1. INSTALL BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL MSKT-SP-MGS (TL-2) PER WSDOT STD PLAN C-22.45-04
- 2. INSTALL BEAM GUARDRAIL TYPE 31 PER WSDOT STD PLAN C-20.10-05 & C-20.40.07. 6.25" GUARDRAIL POSTS UNLESS NOTED OTHERWISE
- 3. TRANSITION PAINT MARKINGS TO EX ALIGNMENT (TYP)
- 4. NOT USED
- 5. INSTALL PAINTED DOUBLE YELLOW CENTERLINE
- 6. INSTALL 8-INCH PAINTED WIDE LINE
- 7. PROPOSED EDGE OF NEW PAVEMENT, SEE SHEET 15 LIMIT AND DETAILS

LEGEND:

— GUARDRAIL



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FILE NAME: C:\PWORKINGDIR\OSBORNCONSULTING-PW-BENTLEY.COM\OSBORNCONSULTING-PW-01\KEITH ROGERS\DM151578\VP\_10-190038\_CHAN.DWG  
PLOT TIME: 7/6/2020 5:40 PM  
USER NAME: KEITH ROGERS



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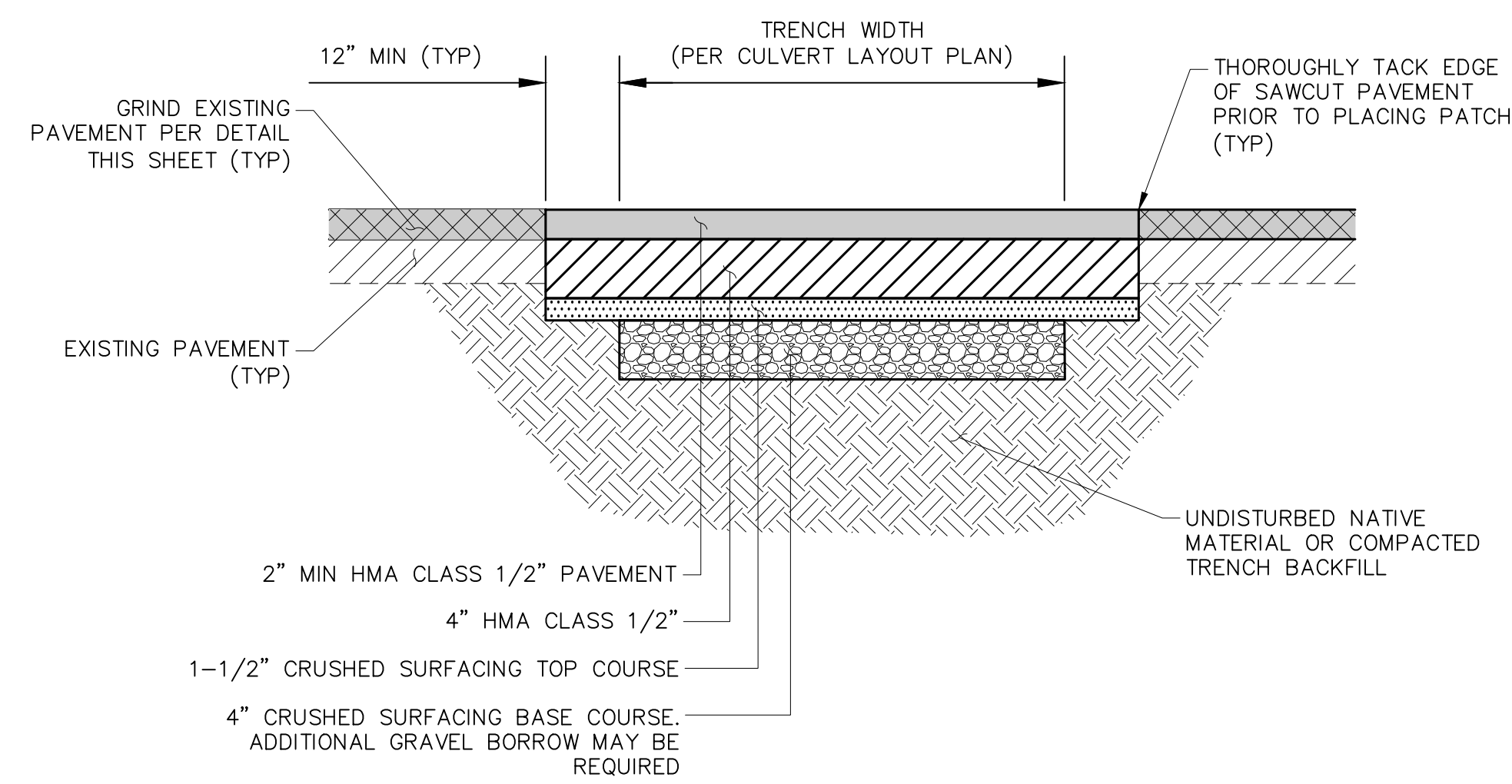


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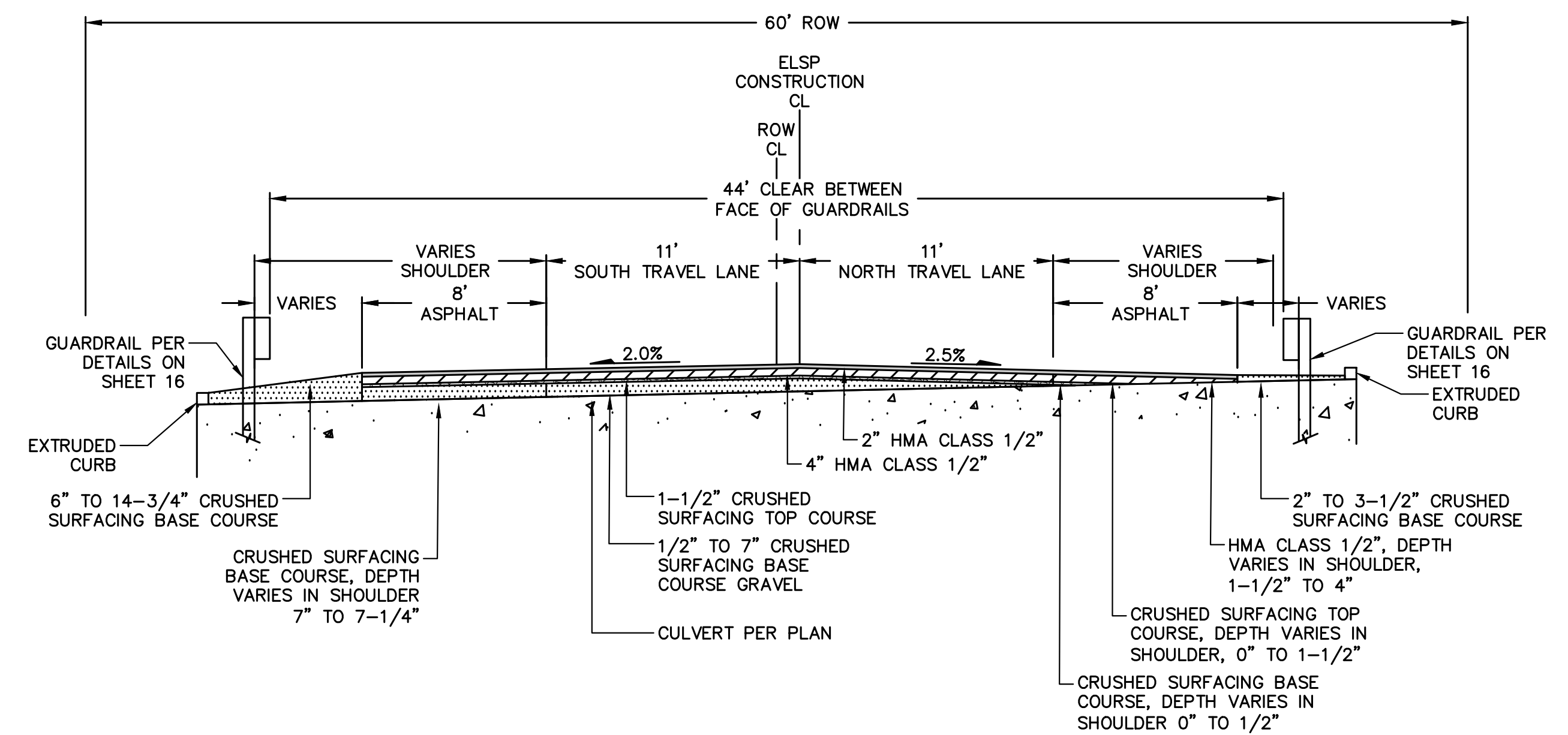
**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
GUARDRAIL AND CHANNELIZATION PLAN

JOB# / DWG	10-190038	DATE	07/06/2020
SCALE	H: 1"=20' V: N/A	SHEET	16 of 23

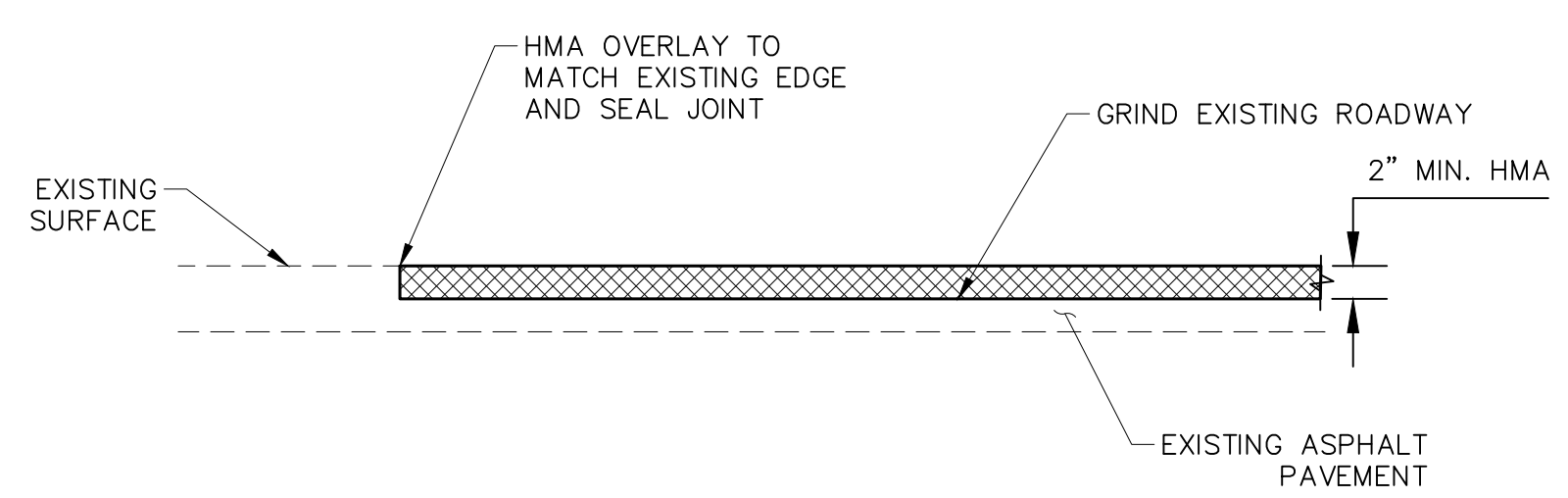




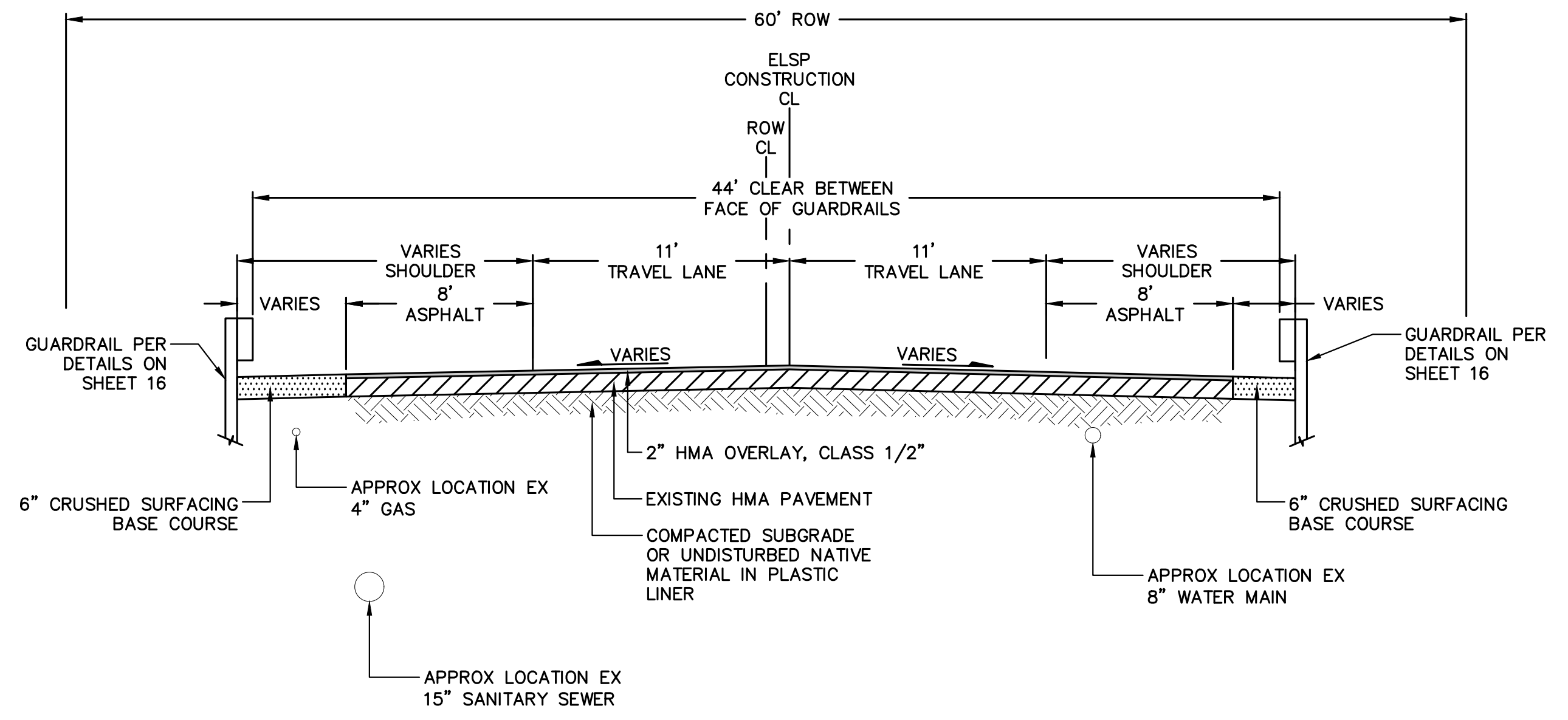
**A**  
15  
**ROADWAY PAVEMENT RESTORATION - NON CULVERT AREAS**  
SCALE: NTS



**C**  
15  
**PAVEMENT SECTION OVER CULVERT**  
SCALE: NTS



**B**  
15  
**PAVEMENT PLANING AND OVERLAY**  
SCALE: NTS



**D**  
15  
**HMA PAVEMENT OVERLAY SECTION**  
SCALE: NTS

NOTE:  
1. PROVIDE TEMPORARY ASPHALT RAMP UNTIL FINAL PAVING.



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FILE NAME: C:\PWORKINGDIR\OSBORNCONSULTING-PW-01\KEITH ROGERS\DM151578\VP\_10-190038\_CIVIL\_DETAILS.DWG  
PLOT TIME: 7/6/2020 4:43 PM  
USER NAME: KEITH ROGERS



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DRAWN BY MH  
CHECKED BY TB  
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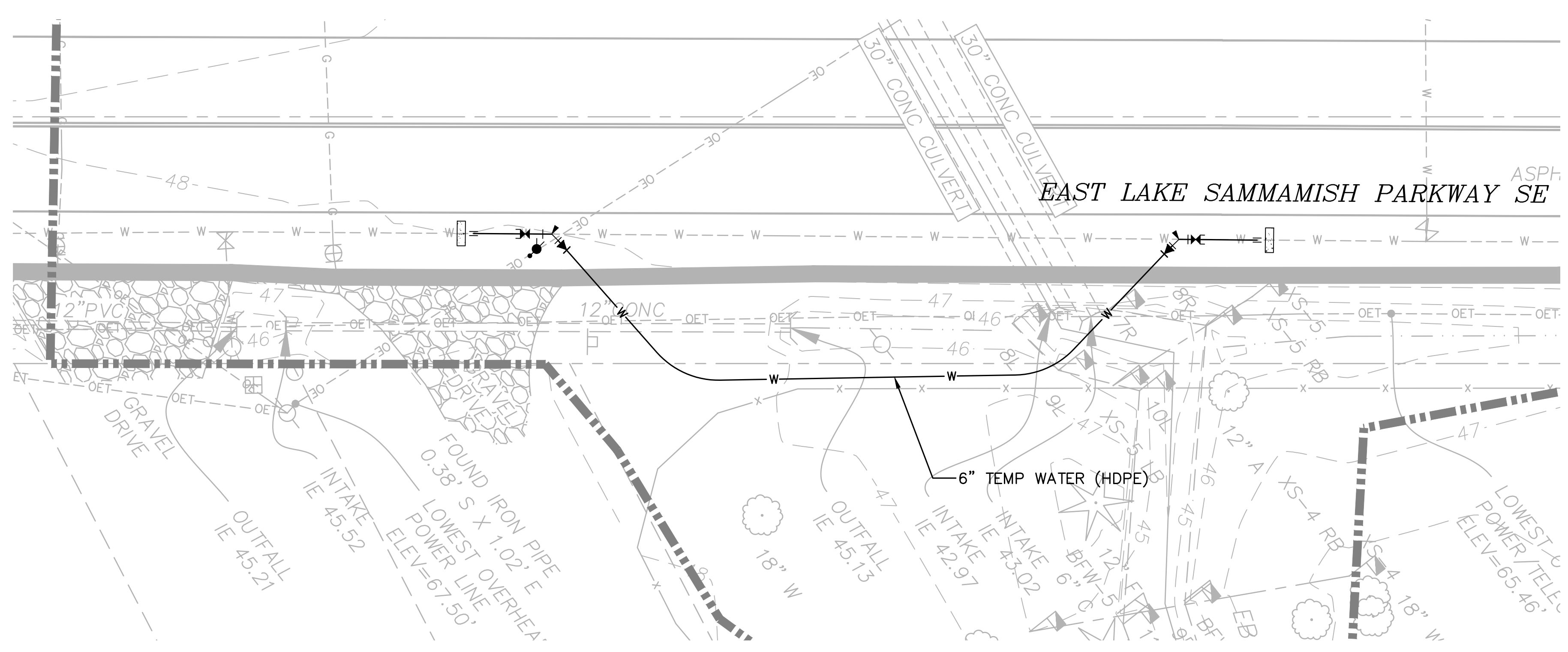


**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
CIVIL DETAILS

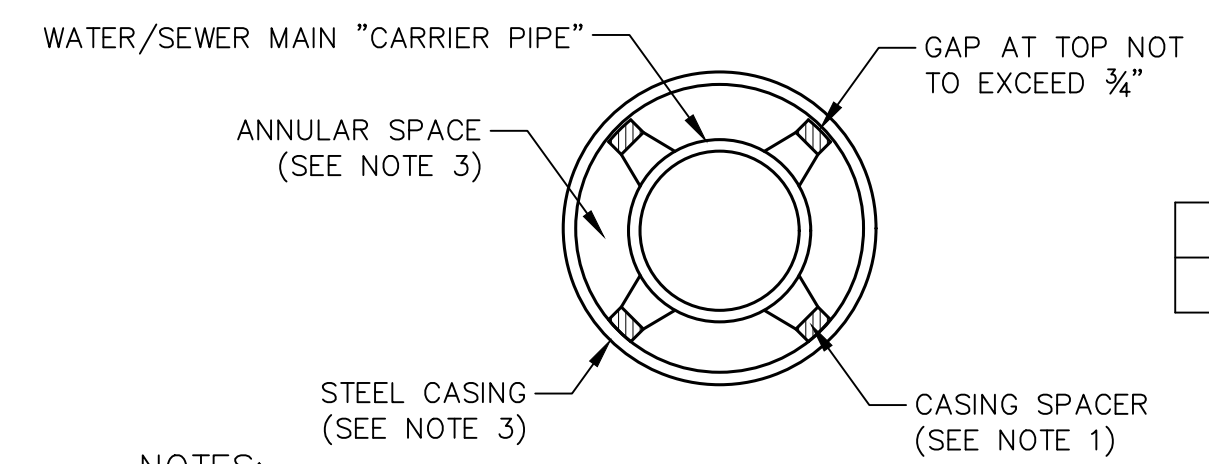
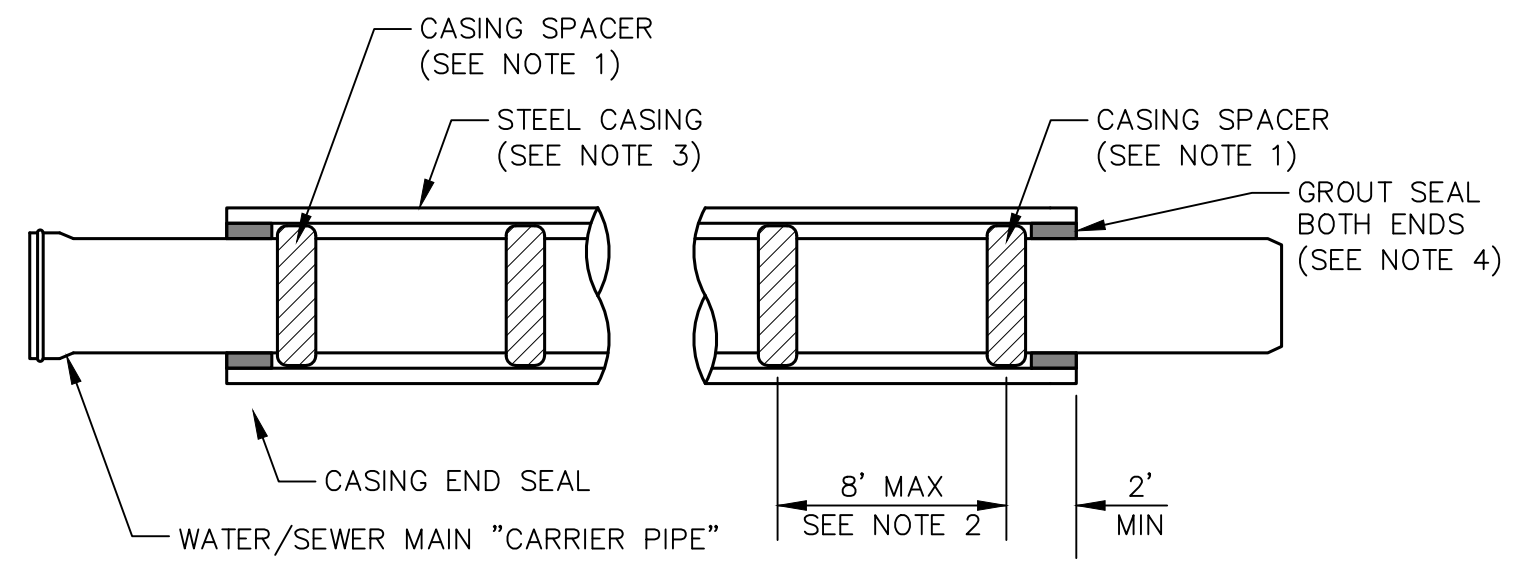
JOB# / DWG	10-190038	DATE	07/06/2020
SCALE	AS SHOWN	SHEET	17 of 23



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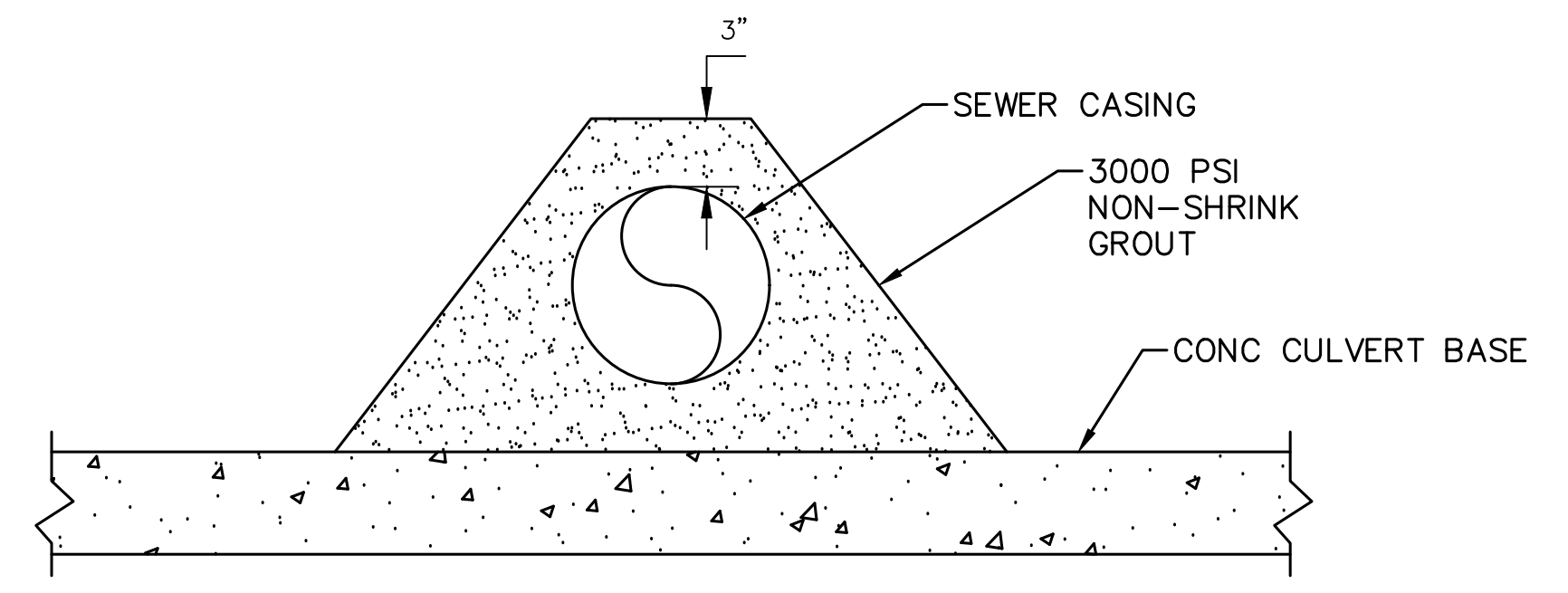
**A** TEMPORARY WATER BYPASS PLAN  
 SCALE: 1"=20'



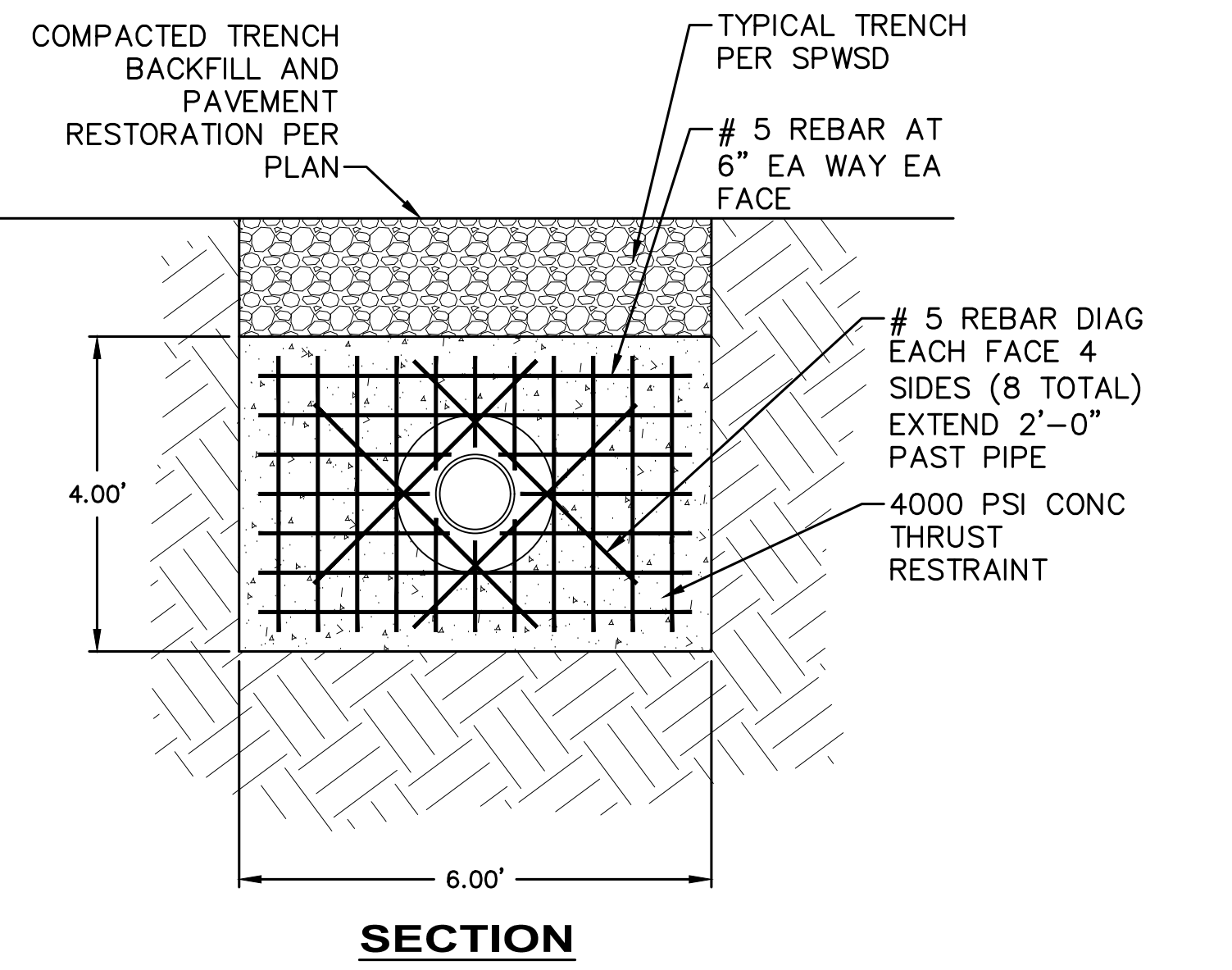
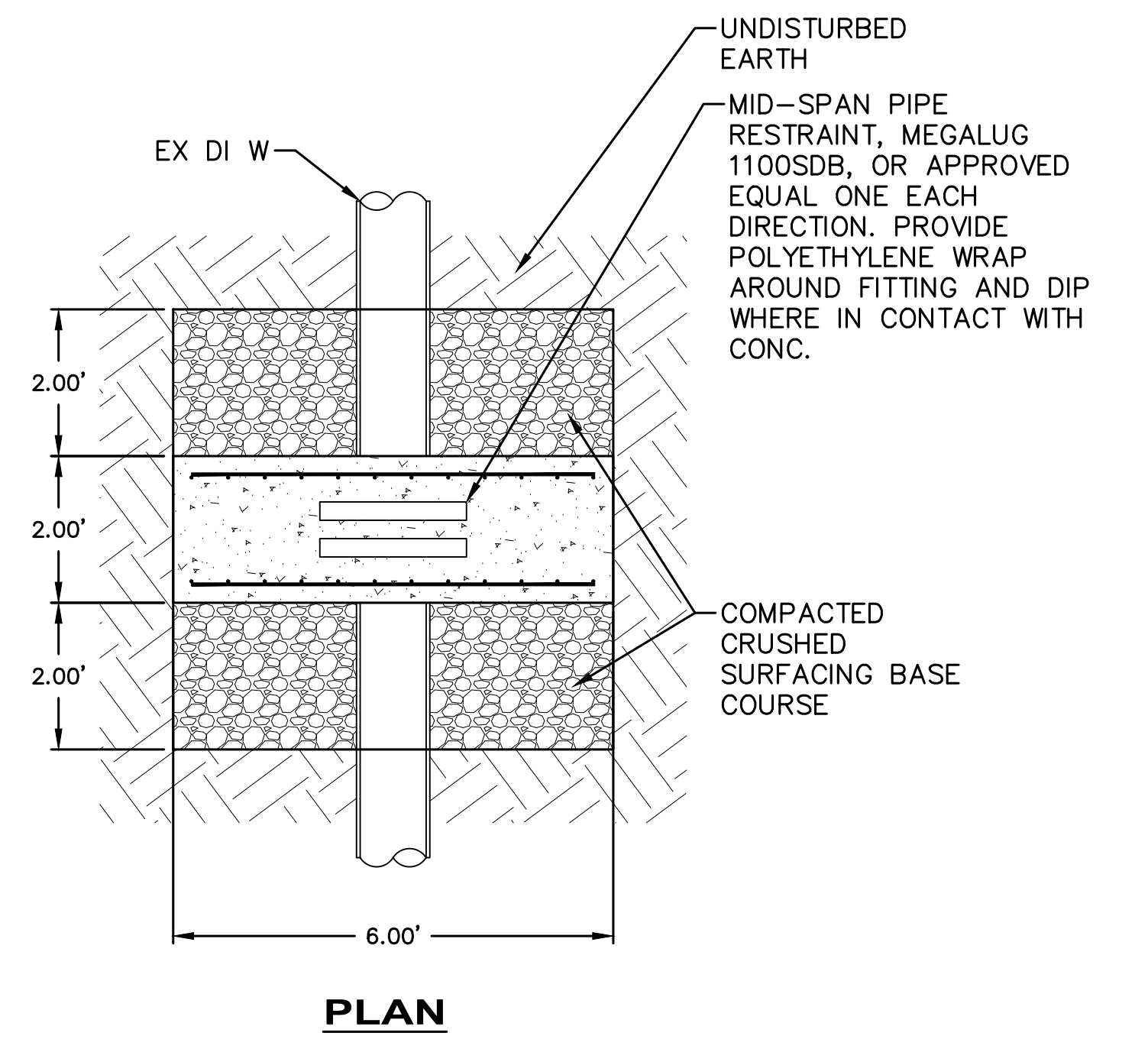
	CASING PIPE SIZE	WALL THICKNESS
SEWER	26"	0.375"
WATER	14"	0.375"

- NOTES:
1. CASING SPACERS SHALL BE CENTER RESTRAINED POSITION TYPE
  2. INSTALL A MINIMUM OF 3 SPACERS PER 20 FEET OF CARRIER PIPE SECTION EQUALLY SPACED.
  3. AFTER HYDROSTATIC PRESSURE TEST IS COMPLETE AND APPROVED BY SPWSD, FILL ANNULAR SPACE WITH SAND.
  4. END SEALS SHALL BE GROUT PLUGS WITH STRENGTH NO GREATER THAN 1500 PSI.

**B** CASING PIPE DETAIL  
 SCALE: NTS



**C** PROTECTION FOR SEWER CASING  
 SCALE: NTS



**D** PIPE COLLAR THRUST RESTRAINT  
 SCALE: NTS



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 DRAWN BY MH  
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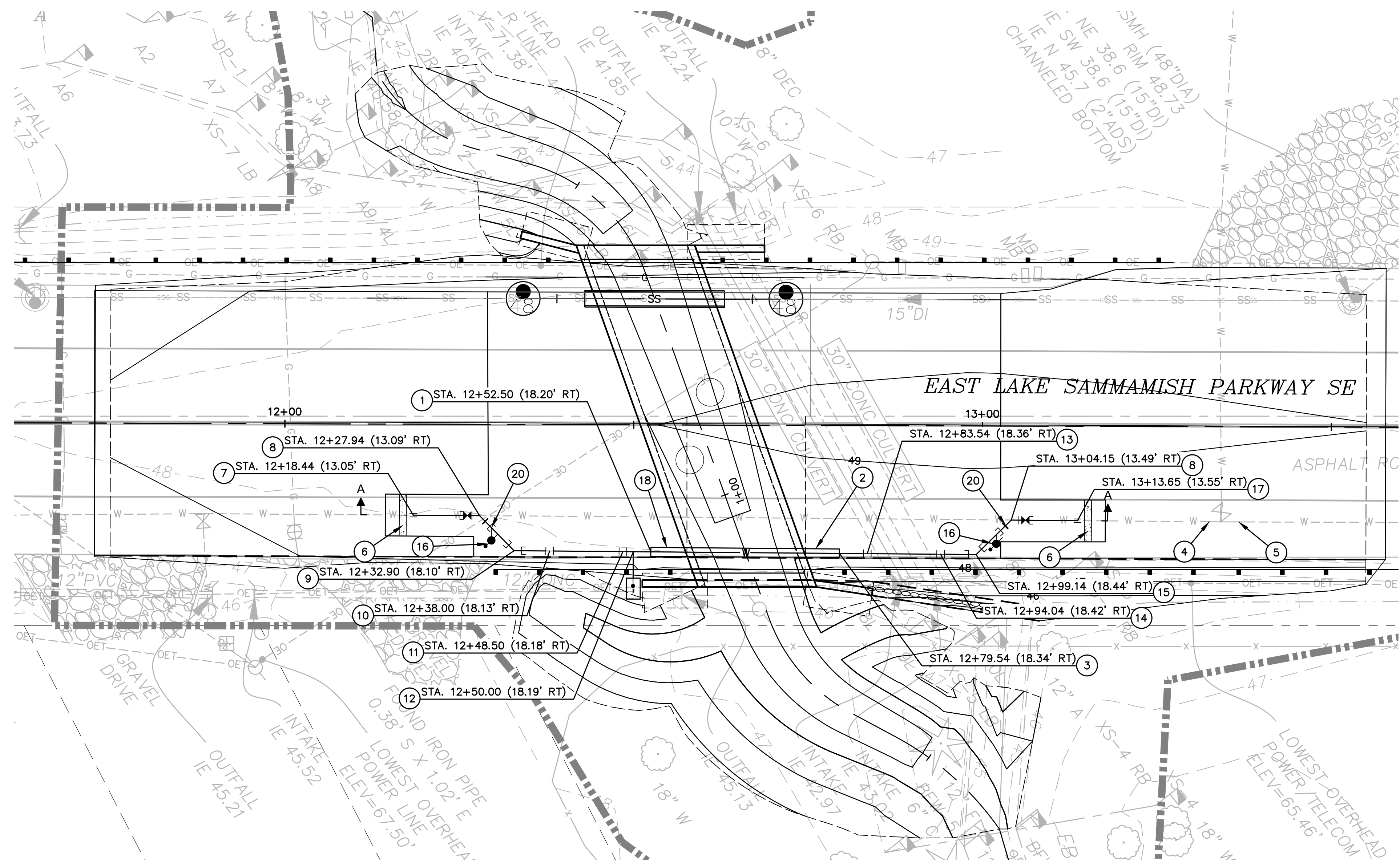
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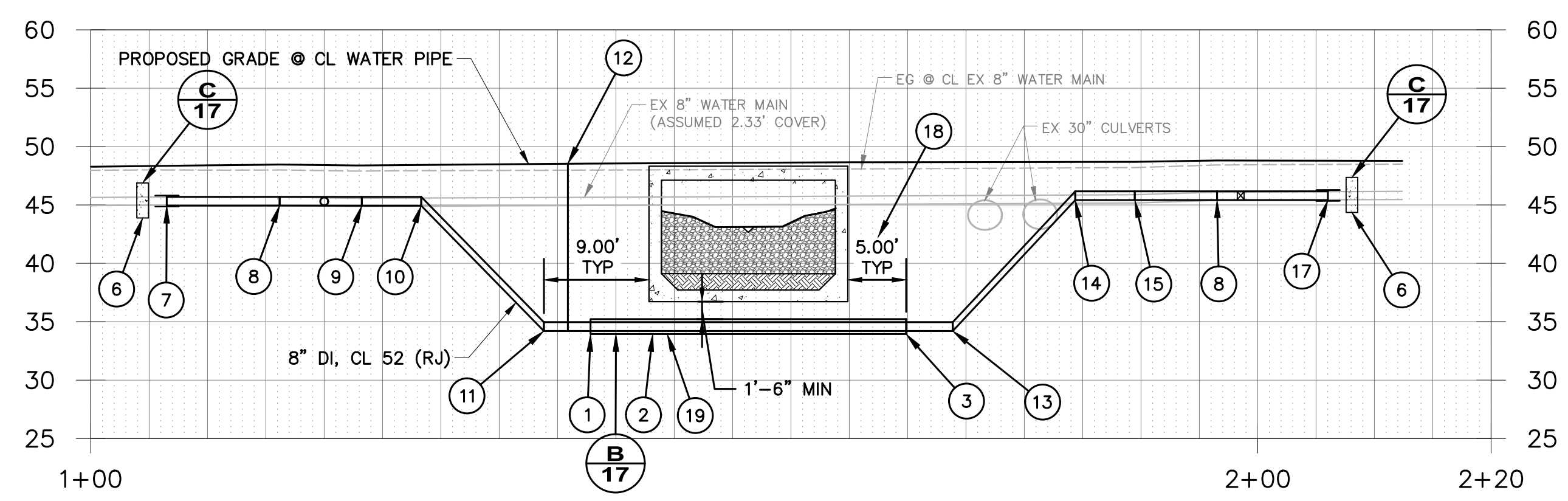
**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 UTILITY DETAILS

JOB# / DWG	DATE
10-190038	07/06/2020
SCALE	SHEET
H: AS SHOWN v:	18 of 23

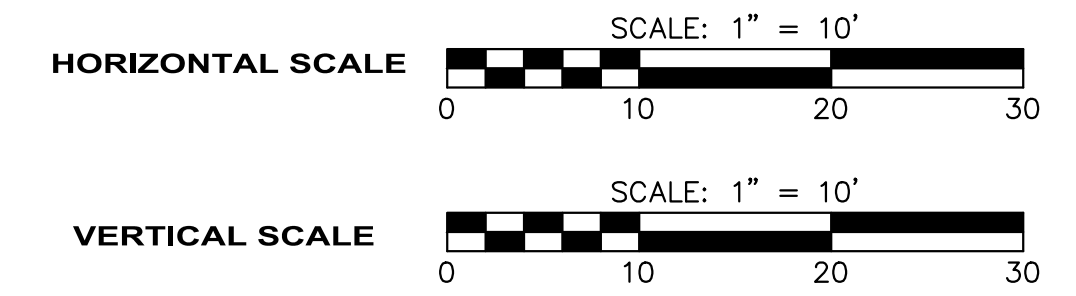




**WATER MAIN PLAN**



**WATER MAIN PROFILE**  
SCALE: 1"=10'



**GENERAL NOTES:**

1. CONTRACTOR SHALL CONTACT SAMMAMISH PLATEAU WATER AND SEWER DISTRICT (SPWSD) PRIOR TO WORK ON WATER MAIN. CONTRACTOR SHALL SUBMIT TEMPORARY BYPASS PLANS FOR WATER WITHIN 3 WEEKS OF NOTICE TO PROCEED. CONTRACTOR SHALL CONTACT SPWSD 7 DAYS BEFORE PERFORMING WORK ON THE WATER MAIN.
2. ALL WORK ON WATER MAIN SHALL MEET THE STANDARDS OF THE SPWSD TECHNICAL SPECIFICATIONS (SEE APPENDIX XXX), AND NO WORK WILL BE ALLOWED WITHOUT APPROVAL FROM THE SPWSD ENGINEER.
3. WATER MAIN PIPE TRENCH SHALL BE IN ACCORDANCE WITH SAMMAMISH PLATEAU WATER STANDARD WATER DETAILS - WATER MAIN TRENCH SECTION PROVIDED IN APPENDIX XXX.
4. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING UTILITIES AT CONNECTION POINTS PRIOR TO CONSTRUCTION.

**CONSTRUCTION NOTES:**

- #
- 1 BEGIN 14" CASING
- 2 27 LF 14" CASING W/ 8" WM
- 3 END 14" CASING
- 4 CLOSEST LINE VALVE APPROX 490' SOUTH
- 5 CLOSEST LINE VALVE APPROX 560' NORTH
- 6 PIPE COLLAR THRUST BLOCK
- 7 1 - 8" SLEEVE (MJ) W/ 2 WRG
- 8 8" 45 DEG HB (FL)  
8" GV (FLXMJ) W/ WRG  
8" ADAPTER (FLXMJ) W/WRG
- 9 8" 45 DEG HB (MJ) W/ WRG
- 10 8" 45 DEG VB (MJ) W/ WRG
- 11 8" VB (RJ) WATERMAIN IE 33.51
- 12 BLOW OFF ASSEMBLY TYPE II AND VALVE MARKER POST PER SPWSD STANDARD PLAN
- 13 8" VB (RJ) WATERMAIN IE 34.21
- 14 8" 45 DEG VB (MJ) W/ WRG
- 15 8" 45 DEG HB (MJ) W/ WRG
- 16 AIR VAC RELIEF VALVE ASSEMBLY PER SPWSD STANDARD PLAN
- 17 1 - 8" SLEEVE (MJ) W/ 2 WRG
- 18 CASING PIPE TO EXTEND 5' PAST EDGE OF CULVERT (TYP)
- 19 NOT USED
- 20 CONTRACTOR SHALL PROVIDE TEMPORARY WATER BYPASS. SEE DETAIL A/18



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FILE NAME: C:\PWORKINGDIR\OSBORNCONSULTING-PW-01\KEITH ROGERS\DM151578\VP\_10-190038\_WATER.DWG  
PLOT TIME: 7/6/2020 5:40 PM  
USER NAME: KEITH ROGERS



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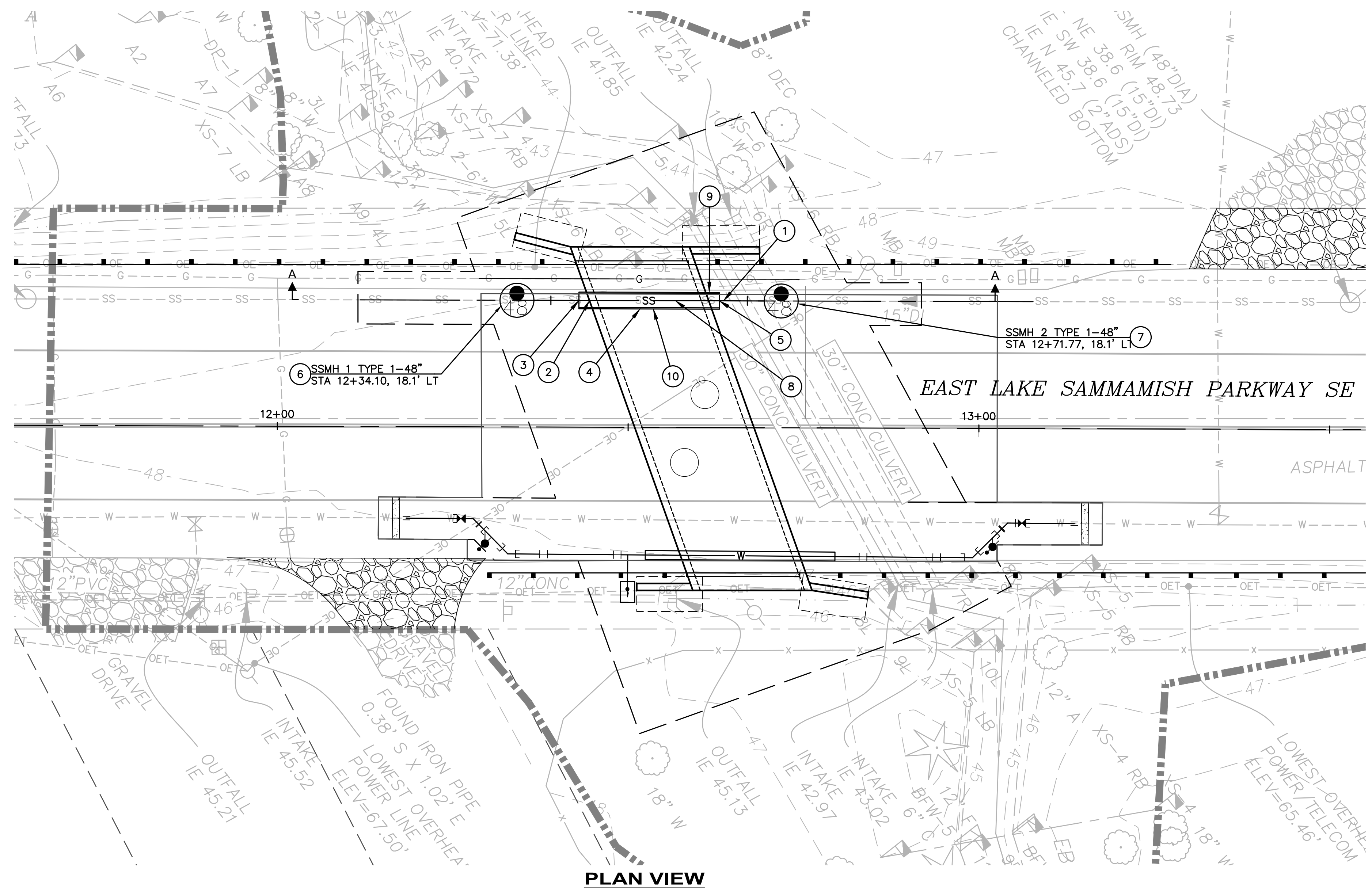
**City of Sammamish**  
Washington

801 228TH AVE SE  
SAMMAMISH, WA 98075

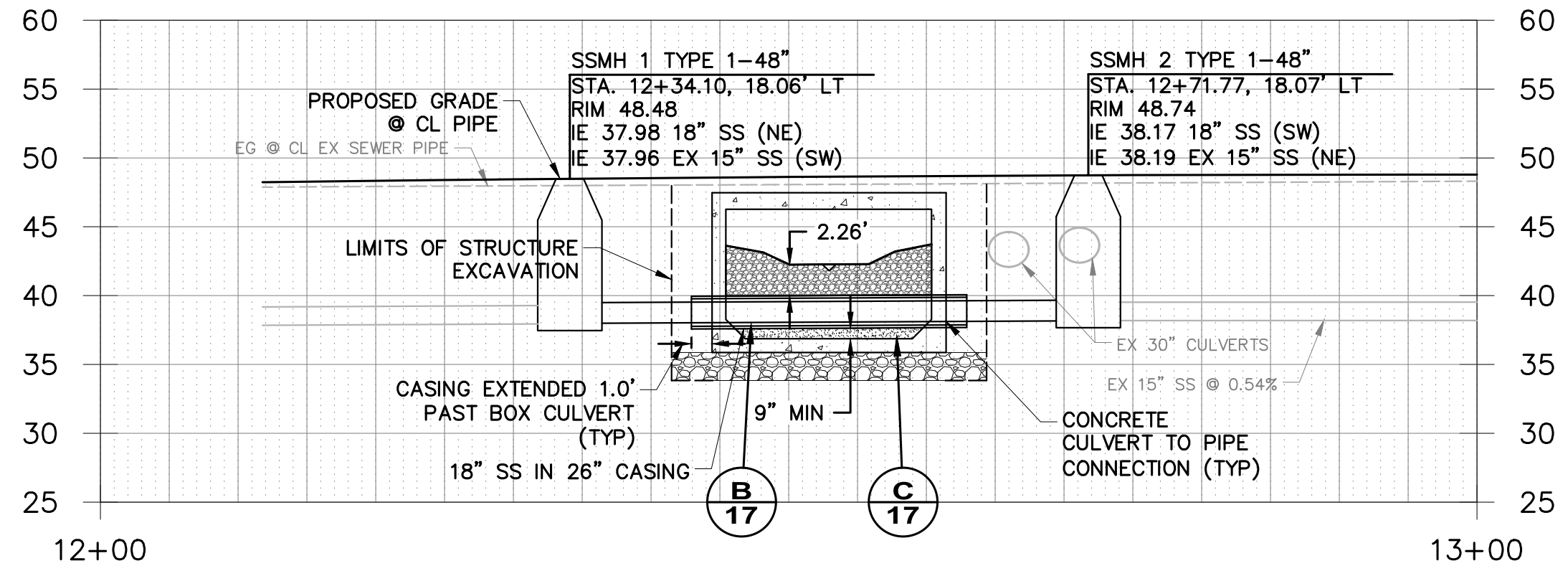
**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
WATER UTILITY RELOCATION

JOB# / DWG	DATE
10-190038	07/06/2020
SCALE	SHEET
H: 1"=10' V: 1"=10'	19 of 23

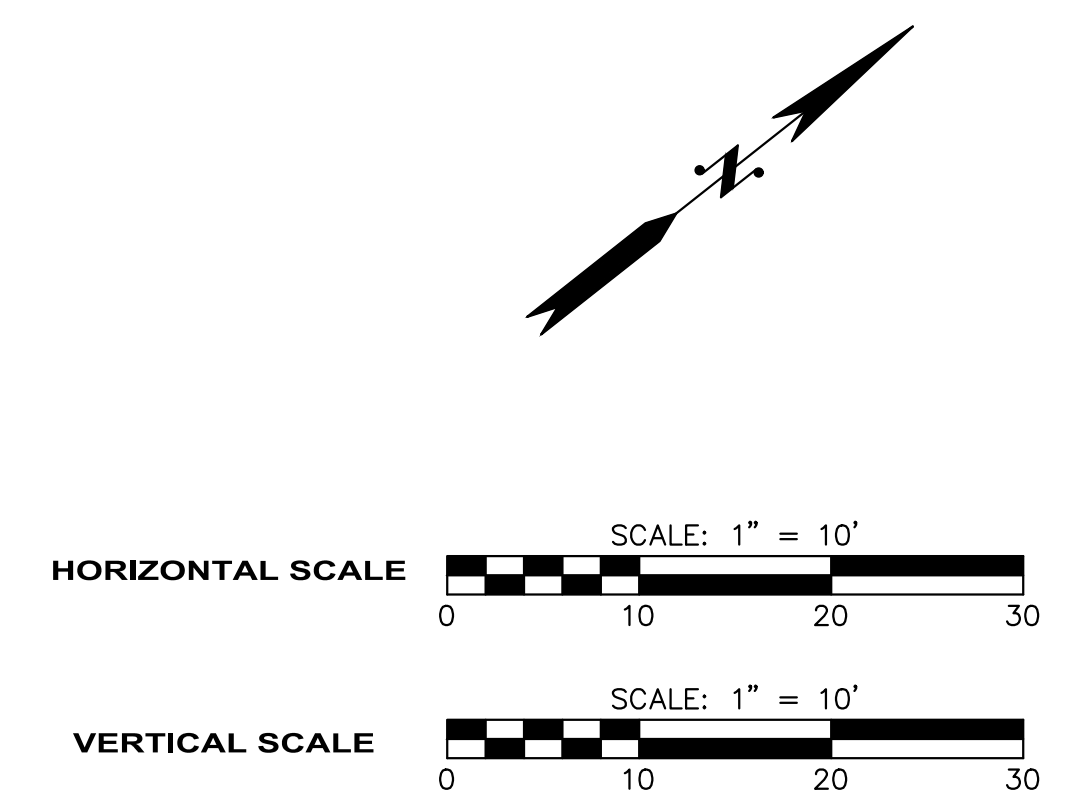




**PLAN VIEW**



**SEWER PROFILE**  
SCALE: 1"=10'



**GENERAL NOTES:**

1. CONTRACTOR SHALL CONTACT SAMMAMISH PLATEAU WATER AND SEWER DISTRICT (SPWSD) PRIOR TO WORK ON LOW PRESSURE SEWER MAIN. CONTRACTOR SHALL SUBMIT TEMPORARY BYPASS PLANS FOR SEWER WITHIN 3 WEEKS OF NOTICE TO PROCEED. CONTRACTOR SHALL CONTACT SPWSD 7 DAYS BEFORE PERFORMING WORK ON THE LOW PRESSURE SEWER MAIN.
2. ALL WORK ON LOW PRESSURE SEWER MAIN SHALL MEET THE STANDARDS OF THE SPWSD TECHNICAL SPECIFICATIONS (SEE APPENDIX XXX), AND NO WORK WILL BE ALLOWED WITHOUT APPROVAL FROM THE SPWSD ENGINEER.
3. LOW PRESSURE SEWER MAIN PIPE TRENCH SHALL BE IN ACCORDANCE WITH SAMMAMISH PLATEAU WATER STANDARD SEWER DETAILS - SANITARY SEWER TRENCH SECTION PROVIDED IN APPENDIX XXX.
4. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING UTILITIES AT CONNECTION POINTS PRIOR TO CONSTRUCTION.

**CONSTRUCTION NOTES:**

- 1 REMOVE AND REPLACE EXISTING 15" SANITARY SEWER W/ 18" DIP
- 2 30" PENETRATION THROUGH CULVERT (TYP)
- 3 BEGIN 26" CASING
- 4 20 LF 26" CASING W/ 18" SS
- 5 END 26" CASING
- 6 SSMH 1 -48" SADDLE MAINTENANCE HOLE  
RIM 48.48  
18" SS IE (NE) 37.98  
EX 15" SS IE (SW) 37.96
- 7 SSMH 2-48" SADDLE MAINTENANCE HOLE  
RIM 48.74  
EX 15" SS IE (NE) 38.19  
18" SS IE (SW) 38.17
- 8 CONTRACTOR TO PROVIDE BYPASS
- 9 CONCRETE CULVERT TO PIPE CONNECTION (TYP)
- 10 CASING PIPE TO BE EMBEDDED WITHIN GROUT. SEE DETAIL C/18 FOR INFO



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FILE NAME: C:\PWORKINGDIR\OSBORNCONSULTING-PW-01\KEITH ROGERS\DMST15578\VP\_10-190038\_SEWER.DWG  
PLOT TIME: 7/6/2020 5:46 PM  
USER NAME: KEITH ROGERS



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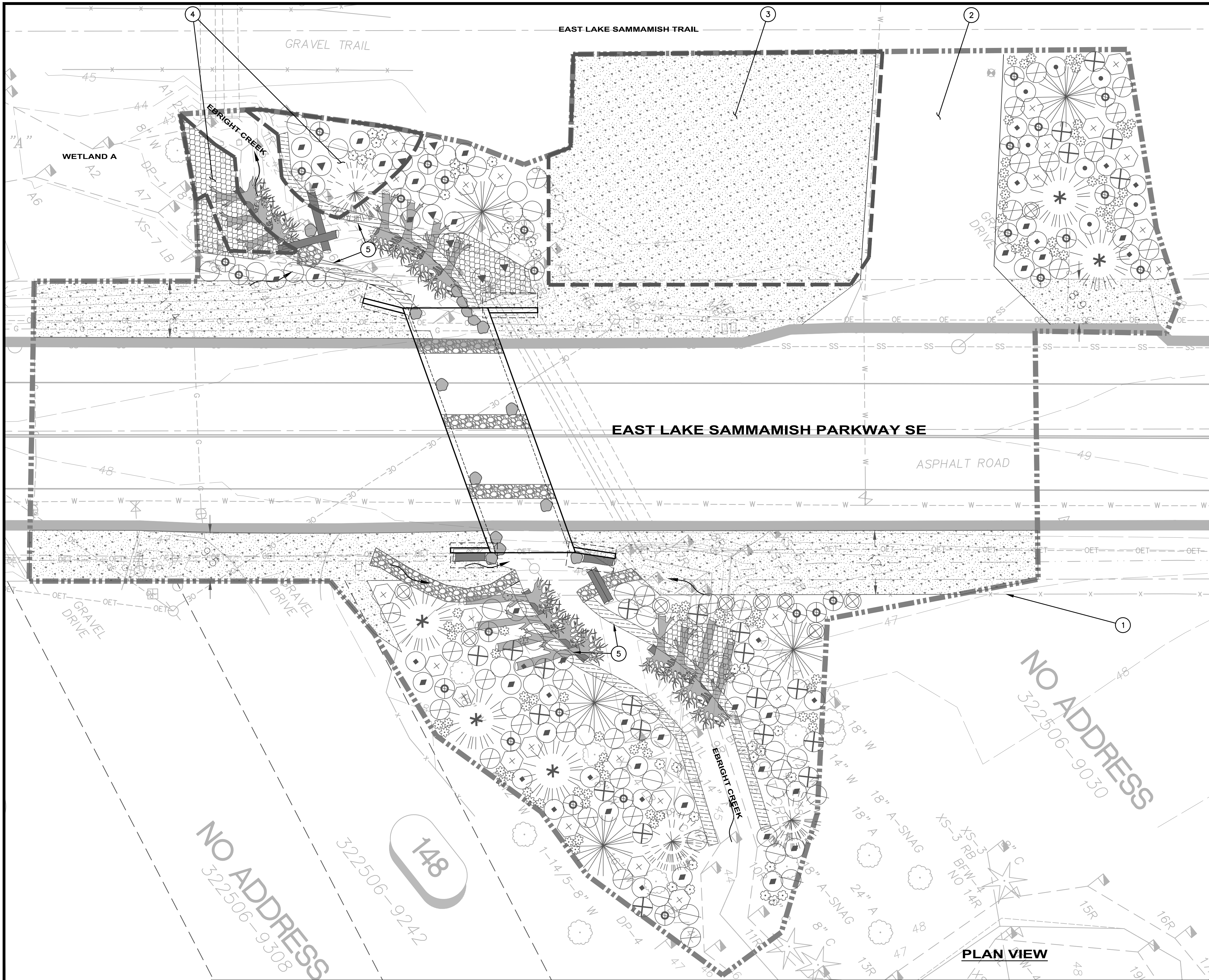
**City of Sammamish**  
801 228TH AVE SE  
SAMMAMISH, WA 98075

**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
SEWER UTILITY RELOCATION

JOB# / DWG	DATE
10-190038	07/06/2020
SCALE	SHEET
H: 1"=10' V: 1"=10'	20 of 23



FILE NAME: C:\P\WORKINGDIR\OSBORNCONSULTING-PW\BENTLEY\COM\OSBORNCONSULTING-PW-01\KYLE BRAUN\DWG15581\10-190038\_L1.DWG  
 PLOT TIME: 7/6/2020 4:54 PM  
 USER NAME: KYLE BRAUN



**PLANTING PLAN NOTES:**

1. MITIGATION PLANTING BY OTHERS IS PLANNED WITHIN FUTURE PROJECT LIMITS FOR THE EASTLAKE SAMMAMISH TRAIL. AREA IS TO BE RESTORED TO EXISTING CONDITION FOR THIS PROJECT.
2. CONTRACTOR SHALL ARRANGE TO MEET ON SITE WITH THE ENGINEER TO DISCUSS LIMITS OF WORK AND METHODS. CONSTRUCTION ACTIVITIES SHALL NOT COMMENCE UNTIL ACCESS LIMITS OF WORK, AND METHODS ARE APPROVED. ALL SAFETY FENCING AND TESC MEASURES MUST BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
3. ALL TREES AND VEGETATION TO BE RETAINED AND PROTECTED WITHIN THE WORK LIMITS WILL BE FLAGGED BY ENGINEER PRIOR TO COMMENCING WITH CLEARING WORK.
4. RESTORATION PLANNING PLANS REPRESENT A CONCEPTUAL PLANTING LAYOUT. FINAL PLANT LOCATIONS SHALL BE APPROVED BY ENGINEER PRIOR TO PLANTING.
5. EXISTING AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THAT ARE NOT SHOWN ARE TO BE RESTORED AND SEEDED TO EXISTING CONDITION.
6. TREES, SHRUBS AND GROUNDCOVER SHALL ADHERE TO CITY OF SAMMAMISH PUBLIC WORKS SIZE AND SPACING REQUIREMENTS.
7. STAKE ALL TREES 3' AND TALLER.
8. CONTRACTOR SHALL REMOVE ALL TREE STAKES AFTER END OF YEAR 1.
9. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
10. SEE PLANTING SCHEDULE ON SHEET 22.
11. SEE PLANTING DETAILS ON SHEET 23.

**PLANT MATERIAL SETBACK CHART**

	GUARDRAIL BARRIER	EDGE OF ROAD	PATHS, TRAILS	WALL	FENCE	SIGNS	EXISTING TREE, TRUNK	EXISTING VEGETATION MASS
EVERGREEN TREE	8'	10'	10'	8'	8'	15'	10'	-
SHRUBS	5'	5'	8'	8'	3'	6'	5'	5'

THIS CHART SUPPLEMENTS SECTION 8.02.3(7) OF THE STANDARD SPECIFICATIONS SETBACKS APPLY UNLESS OTHERWISE ADJUSTED BY ENGINEER DURING PLANT STAKING OR LAYOUT DISTANCES ARE THE STEM OR TRUNK OF THE PLANT BEING INSTALLED.

\*MAINTAIN SIGHT DISTANCE FOR SIGNS ACCORDING TO M51-02-07 (TRAFFIC MANUAL)

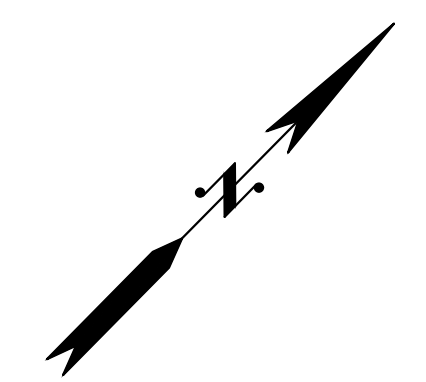
**# CONSTRUCTION NOTES:**

1. EXISTING FENCE TO BE REPLACED IN SAME LOCATION OR AS DIRECTED BY ENGINEER.
2. EXISTING GRAVEL DRIVEWAY NOT SURVEYED. VERIFY LIMITS IN FIELD. RETURN TO EXISTING CONDITION.
3. FUTURE EAST LAKE SAMMAMISH TRAIL MITIGATION AREA. TO BE TEMPORARILY RESTORED UNTIL MITIGATION IS INSTALLED.
4. PROPOSED PLANTING LOCATED WITHIN FUTURE CLEAR AND GRADING LIMITS OF EAST LAKE SAMMAMISH TRAIL - EBRIGHT CREEK CULVERT PROJECT. CONTRACTOR SHALL COORDINATE WITH CITY AT TIME OF CONSTRUCTION TO VERIFY FUTURE PROJECT TIMELINE AND CLEAR AND GRADING LIMITS.
5. PLANT CONTAINERS, LIVESTAKES, AND PLUGS IN AND AROUND INSTALLED LARGE WOODY MATERIAL, AND BANK STABILIZATION MATERIALS.

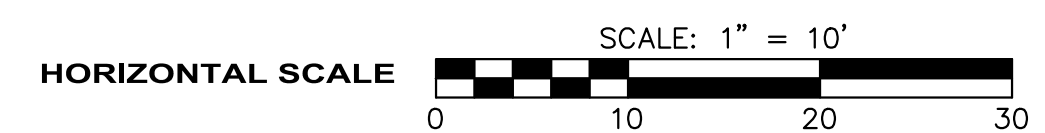
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NO ADDRESS  
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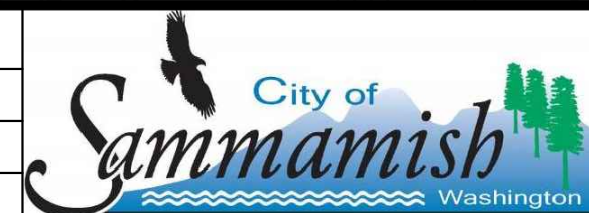


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MF  
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**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
STREAM RESTORATION PLAN

JOB# / DWG 10-190038	DATE 07/06/2020
SCALE H: 1"=10' V: N/A	SHEET 21 of 23



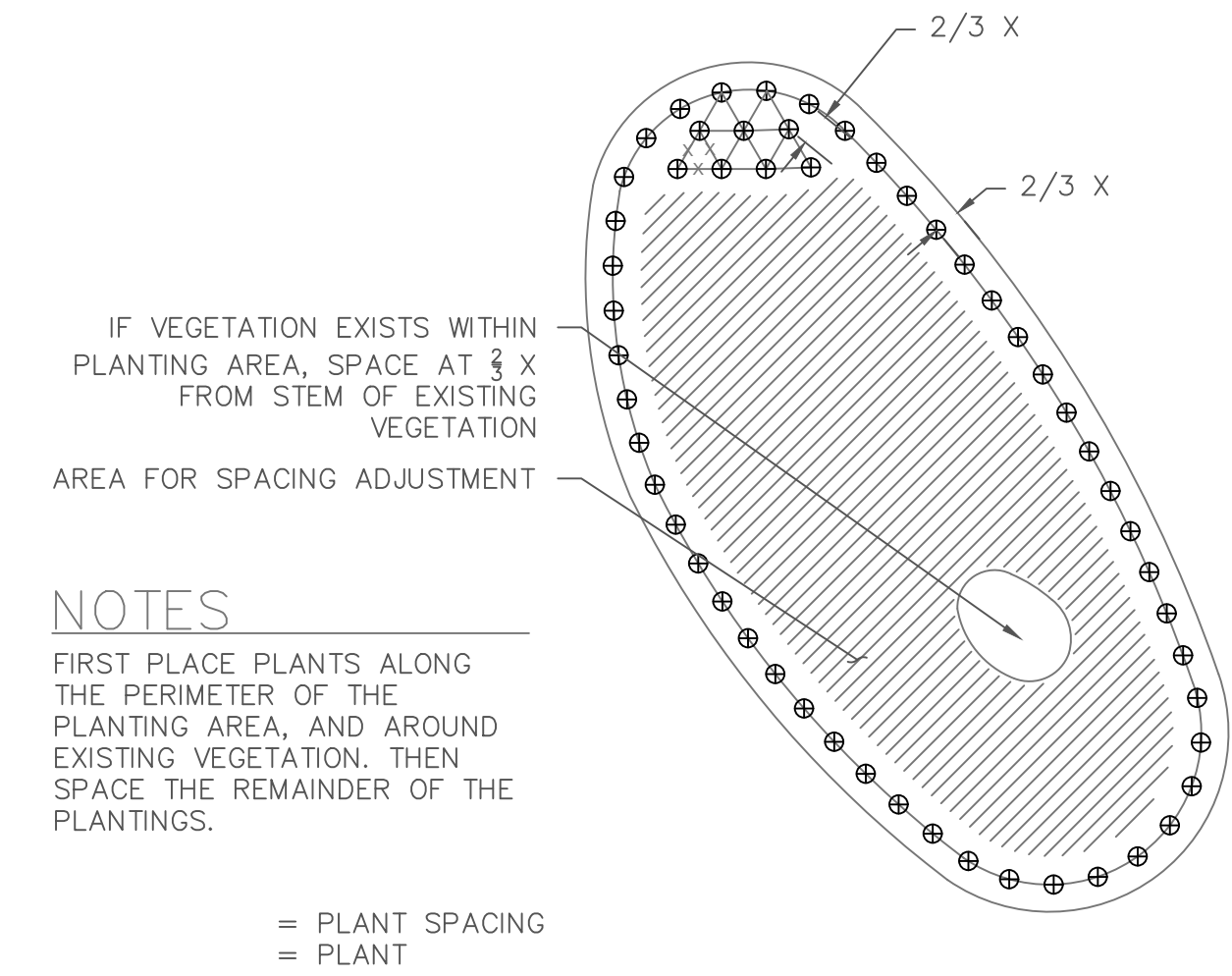
**PLANTING SCHEDULE:**

TREES	BOTANICAL / COMMON NAME	SIZE	QTY
	PICEA SITCHENSIS SITKA SPRUCE	6' TALL	3
	PSEUDOTSUGA MENZIESII DOUGLAS FIR	6' TALL	5
	THUJA PLICATA WESTERN RED CEDAR	6' TALL	5
SHRUBS & GC	BOTANICAL / COMMON NAME	SIZE	QTY
	ACER CIRCINATUM VINE MAPLE	1 GALLON	25
	ATHYRIUM FILIX-FEMINA COMMON LADY FERN	1 GALLON	34
	CORNUS SERICEA RED TWIG DOGWOOD	1 GALLON	33
	CORYLUS CORNUTA WESTERN HAZELNUT	1 GALLON	16
	MAHONIA AQUIFOLIUM OREGON GRAPE	1 GALLON	7
	OEMLERIA CERASIFORMIS OSOBERRY	1 GALLON	7
	PHYSOCARPUS CAPITATUS PACIFIC NINEBARK	1 GALLON	28
	POLYSTICHUM MUNITUM WESTERN SWORD FERN	1 GALLON	83
	RIBES BRACTEOSUM STINK CURRANT	1 GALLON	3
	RIBES LACUSTRE BLACK SWAMP GOOSEBERRY	1 GALLON	7
	RIBES SANGUINEUM RED FLOWERING CURRANT	1 GALLON	8
	RUBUS SPECTABILIS SALMONBERRY	1 GALLON	31
	SAMBUCUS RACEMOSA RED ELDERBERRY	1 GALLON	23
	SYMPHORICARPOS ALBUS COMMON WHITE SNOWBERRY	1 GALLON	31

SHRUB AREAS	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
	RIPARIAN RESTORATION AREA			424 SF
	CORNUS SERICEA RED TWIG DOGWOOD	LIVE STAKE. MIN. 48"	12" o.c.	148
	SALIX LUCIDA PACIFIC WILLOW	LIVE STAKE. MIN. 48"	12" o.c.	148
	SALIX SITCHENSIS SITKA WILLOW	LIVE STAKE. MIN. 48"	12" o.c.	150
	EMERGENT/BACKWATER RESTORATION AREA			538 SF
	ATHYRIUM FILIX-FEMINA COMMON LADY FERN	10" PLUG	12" o.c.	112
	CAREX OBNUPTA SLOUGH SEDGE	10" PLUG	12" o.c.	112
	RIBES BRACTEOSUM STINK CURRANT	1 GALLON	24" o.c.	14
	SCIRPUS ACUTUS HARDSTEM BULRUSH	10" PLUG	12" o.c.	140
	SCIRPUS MICROCARPUS SMALL-FRUITED BULRUSH	10" PLUG	12" o.c.	140
SEEDING	BOTANICAL / COMMON NAME	SIZE	QTY	
	SEEDING AND MULCH (WSDOT STD 8-02.2(9-14.3).OPT10.LSP) EXCLUDES LUPINE SP.			6,644 SF

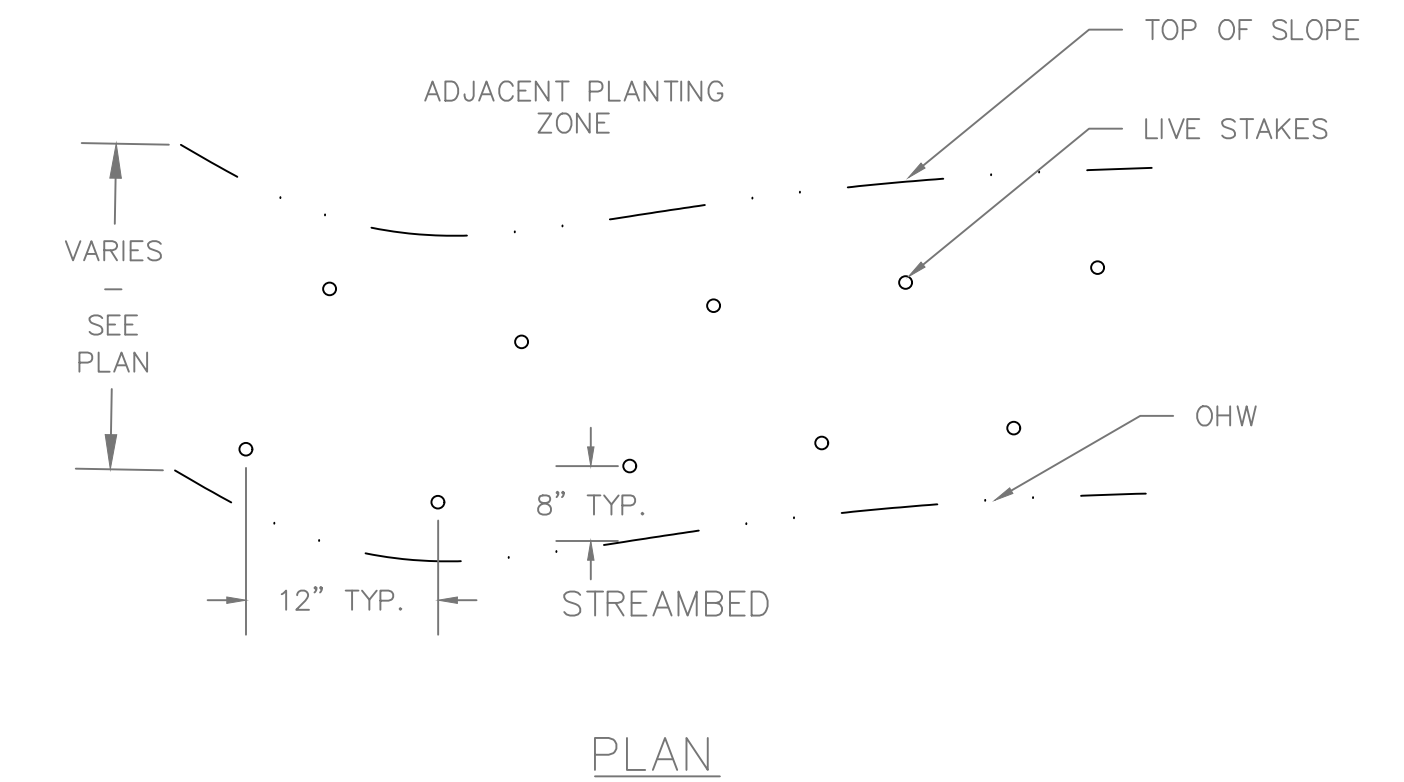
**PLANT SCHEDULE NOTES:**

1. AMEND ALL PLANTING AREAS AND SEEDING AREAS PER SOIL PREPARATION DETAILS ON SHEET 23. SOIL AMENDMENT SHALL BE WSDOT STD. FINE COMPOST.
2. ALL TREES SHALL BE MINIMUM 6' HEIGHT, B&B OR CONTAINER. FULL, DENSE, AND SYMMETRICAL IN SHAPE.
3. ALL 1 GALLON CONTAINER PLANTS SHALL BE MINIMUM HEIGHT OF 12'.
4. IN EMERGENT BACKWATER RESTORATION AREA CLUSTER SAME SPECIES IN GROUPS OF 3, 5, AND 7.
5. LIVE STAKES SHALL BE 1/2" - 1" DIAMETER X 48" LONG, MINIMUM 12 LATERAL BUDS PER STAKE.
6. HYDROSEED SHALL BE DONE PER SEEDING AND MULCHING WSDOT STANDARD SPECIFICATION 8-01.



**PLANT SPACING**

NOT TO SCALE



**LIVE STAKE SPACING**

NOT TO SCALE

**PLAN VIEW**

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 PLOT TIME: 7/6/2020 4:54 PM  
 USER NAME: KYLE BRAUN

THE WATERSHED COMPANY  
 790 Sixth Street South  
 Kirkland, WA 98033  
 P 425.822.5242  
 WWW.WATERSHEDCOMPANY.COM  
 Science & Design

DESIGNED BY GJ/MF  
 DRAWN BY MF  
 CHECKED BY GJ

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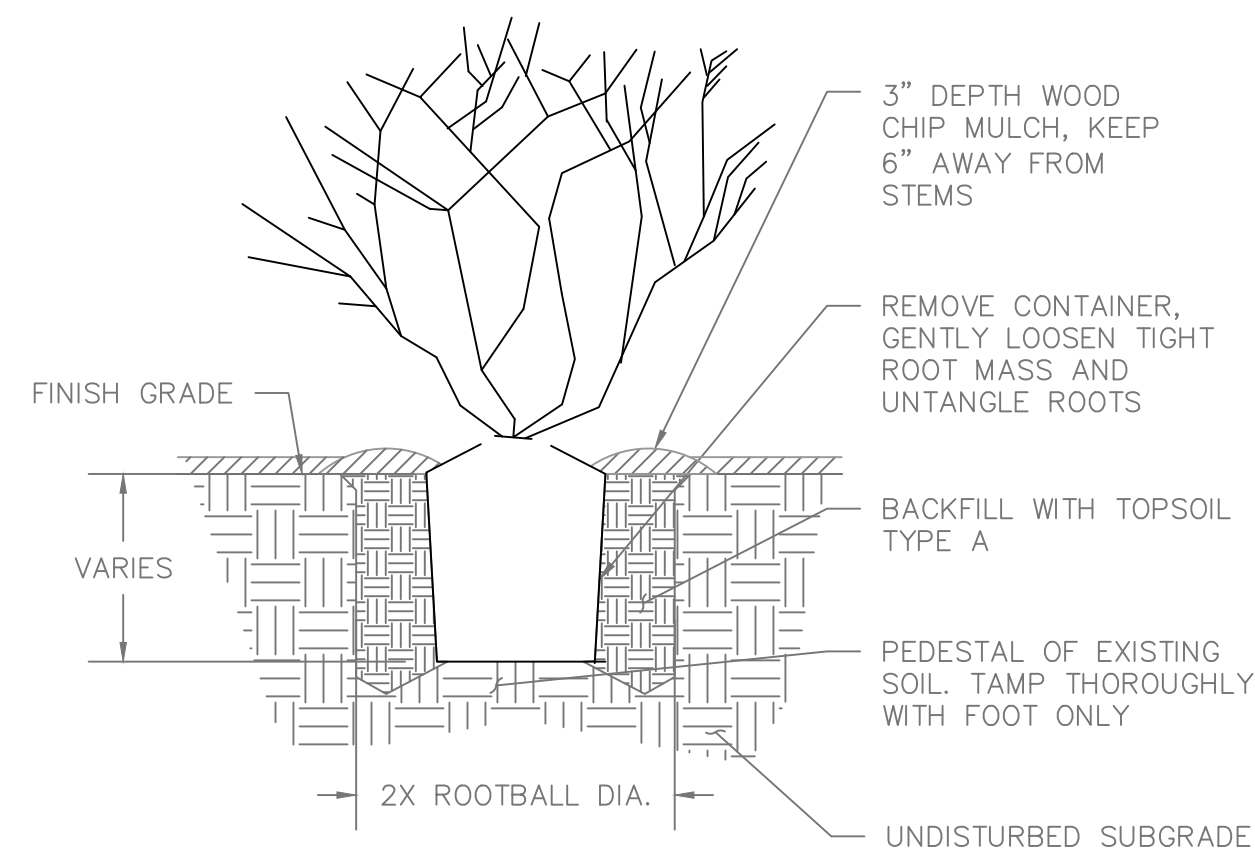
**EBRIGHT CREEK FISH PASSAGE**  
 CITY OF SAMMAMISH  
 STREAM RESTORATION PLANT SCHEDULE

JOB# / DWG 10-190038  
 SCALE H: 1"=10' V: N/A

DATE 07/06/2020  
 SHEET 22 of 23

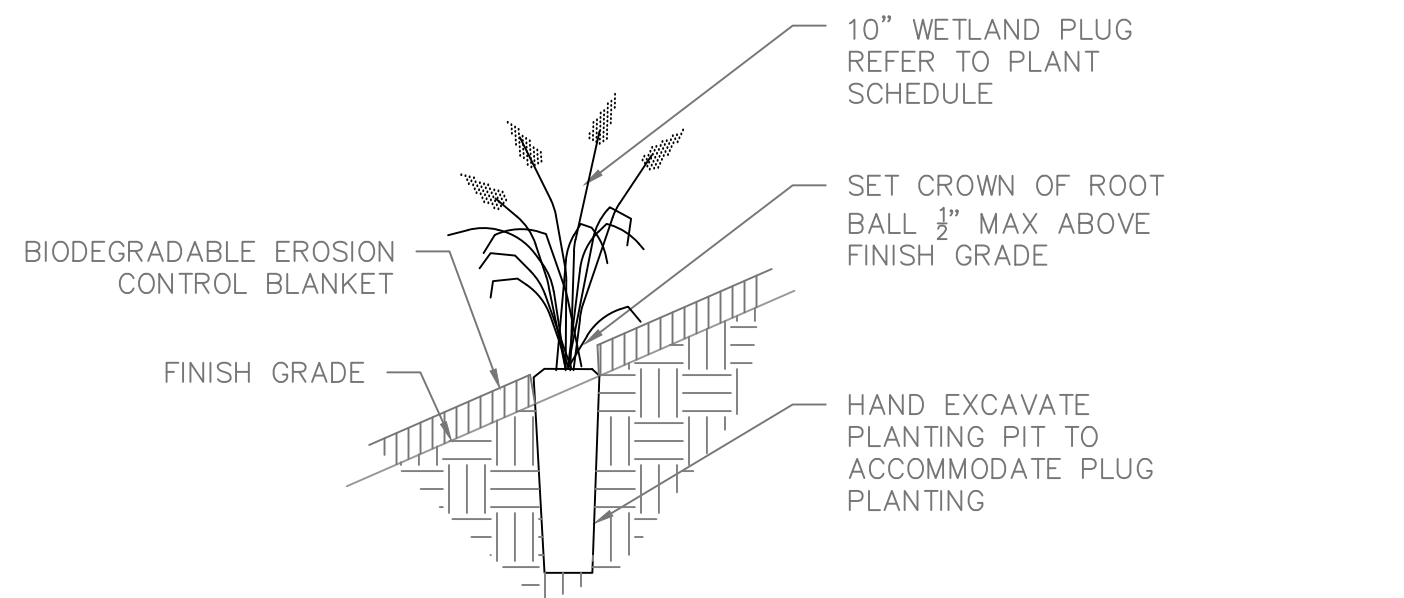
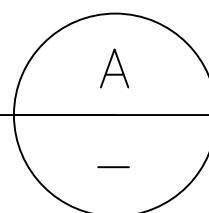


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 USER NAME: KYLE BRAUN



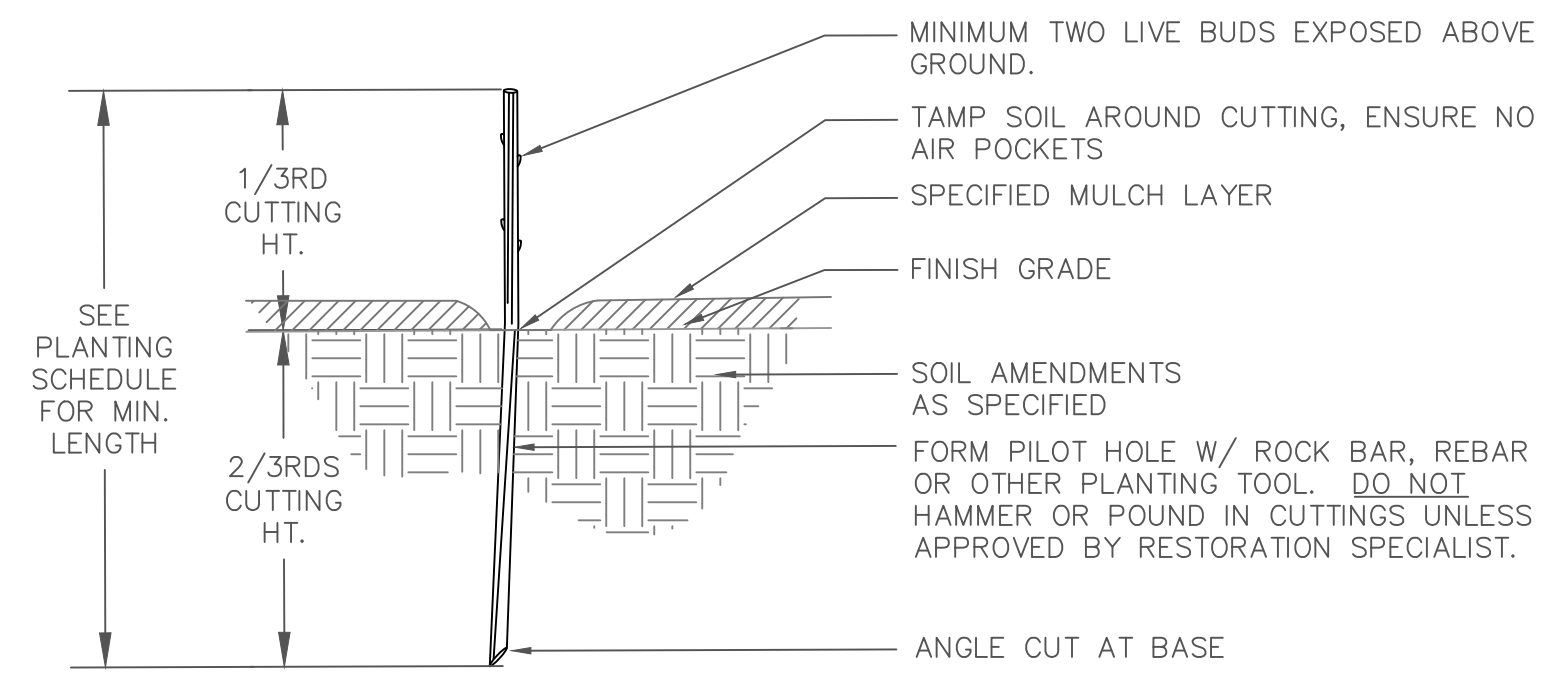
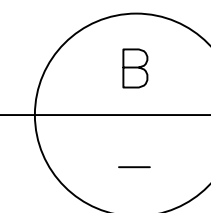
### TREE AND SHRUB PLANTING

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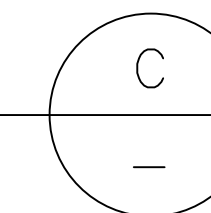
### PLUG PLANTING

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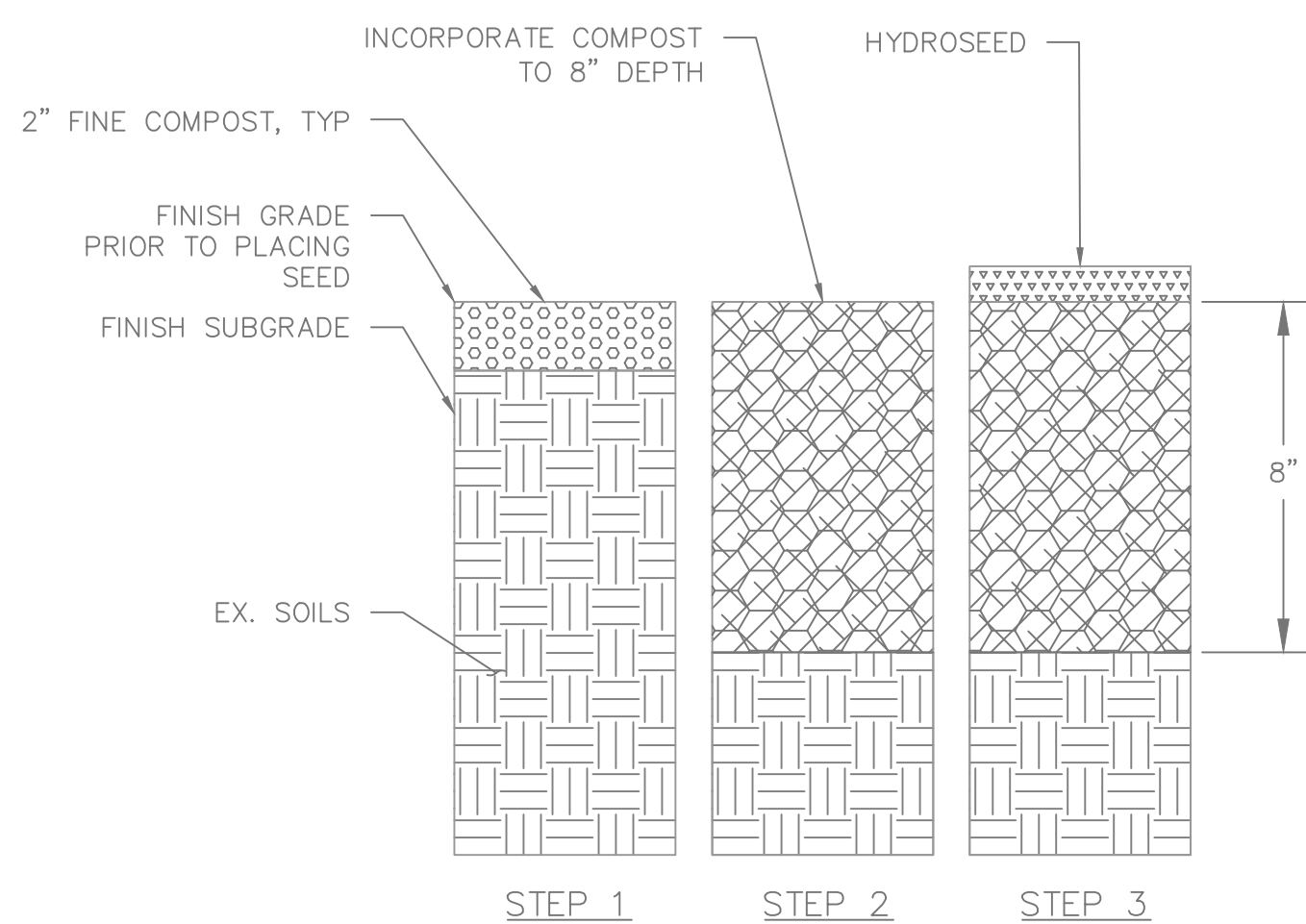
### LIVE STAKE PLANTING

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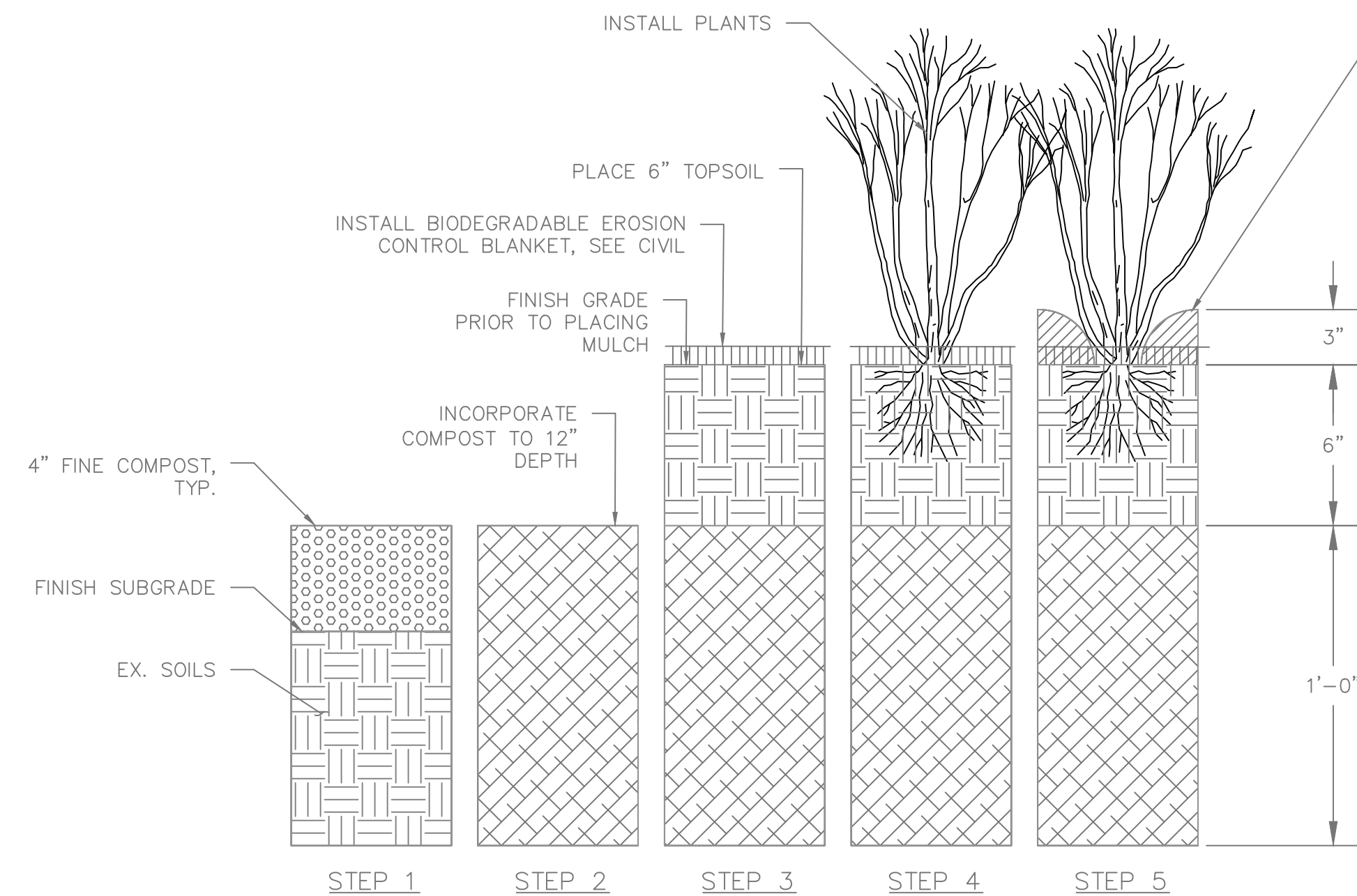
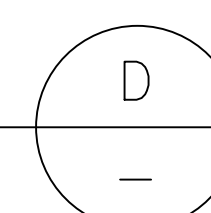
- NOTES:**
- SEE SHEET 22 FOR PLANT SPACING AND LAYOUT.
  - APPLY SOIL PREPARATION TYPE 2 WITHOUT MULCH (OMIT STEP 5 OF DETAIL 5, THIS SHEET).
  - TO PLANT THROUGH EROSION CONTROL BLANKET, CUT 'X' TWICE AS WIDE AS THE ROOTBALL THROUGH BLANKET.

- NOTES:**
- INSTALL HARDWOOD CUTTINGS DURING THEIR DORMANCY. DO NOT ALLOW THEM TO DRY OUT.
  - CUTTINGS SHALL BE 3/4" TO 1" IN DIAMETER OR APPROVED EQUIVALENT.
  - INSTALL TO MIN. 2/3RDS DEPTH INTO SOIL. USE TRIANGULAR SPACING. SEE PLANTING SCHEDULE FOR SPACING.
  - INSURE THAT BUDS ARE POINTING UP.
  - FIRM UP SOIL AROUND INSTALLED CUTTING.
  - WATER AFTER PLANTING AND BEFORE MULCHING.



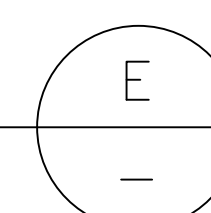
### SOIL PREPARATION SEQUENCE 1 (SEEDED AREAS)

NOT TO SCALE



### SOIL PREPARATION SEQUENCE 2 (PLANTING AREAS)

NOT TO SCALE



### PLANTING AREA PREPARATION SEQUENCE

- STEP 1**  
CONTRACTOR SHALL PREPARE SITE IN ACCORDANCE TO STANDARD SPECIFICATION 8-02.3(3)C. PLACE 4" FINE COMPOST
- STEP 2**  
INCORPORATE FINE COMPOST TO 12" DEPTH
- STEP 3**  
PLACE 6" TOPSOIL. NO TOPSOIL BELOW PROPOSED OHW OR WITHIN WETLANDS.
- STEP 4**  
INSTALL PLANTS. SEE PLANTING PLAN FOR LOCATIONS
- STEP 5**  
INSTALL BARK OR WOOD CHIP MULCH 3" DEEP. NO MULCH BELOW PROPOSED OHW OR WITHIN WETLANDS.



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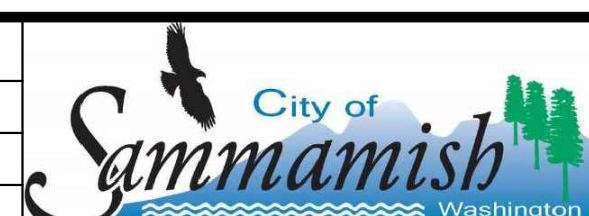


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GJ/MF  
DRAWN BY  
MF  
CHECKED BY  
GJ



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801 228TH AVE SE  
SAMMAMISH, WA 98075

**EBRIGHT CREEK FISH PASSAGE**  
CITY OF SAMMAMISH  
STREAM RESTORATION PLANTING DETAILS

JOB# / DWG 10-190038	DATE 07/06/2020
SCALE H: 1"=10' V: N/A	SHEET 23 of 23