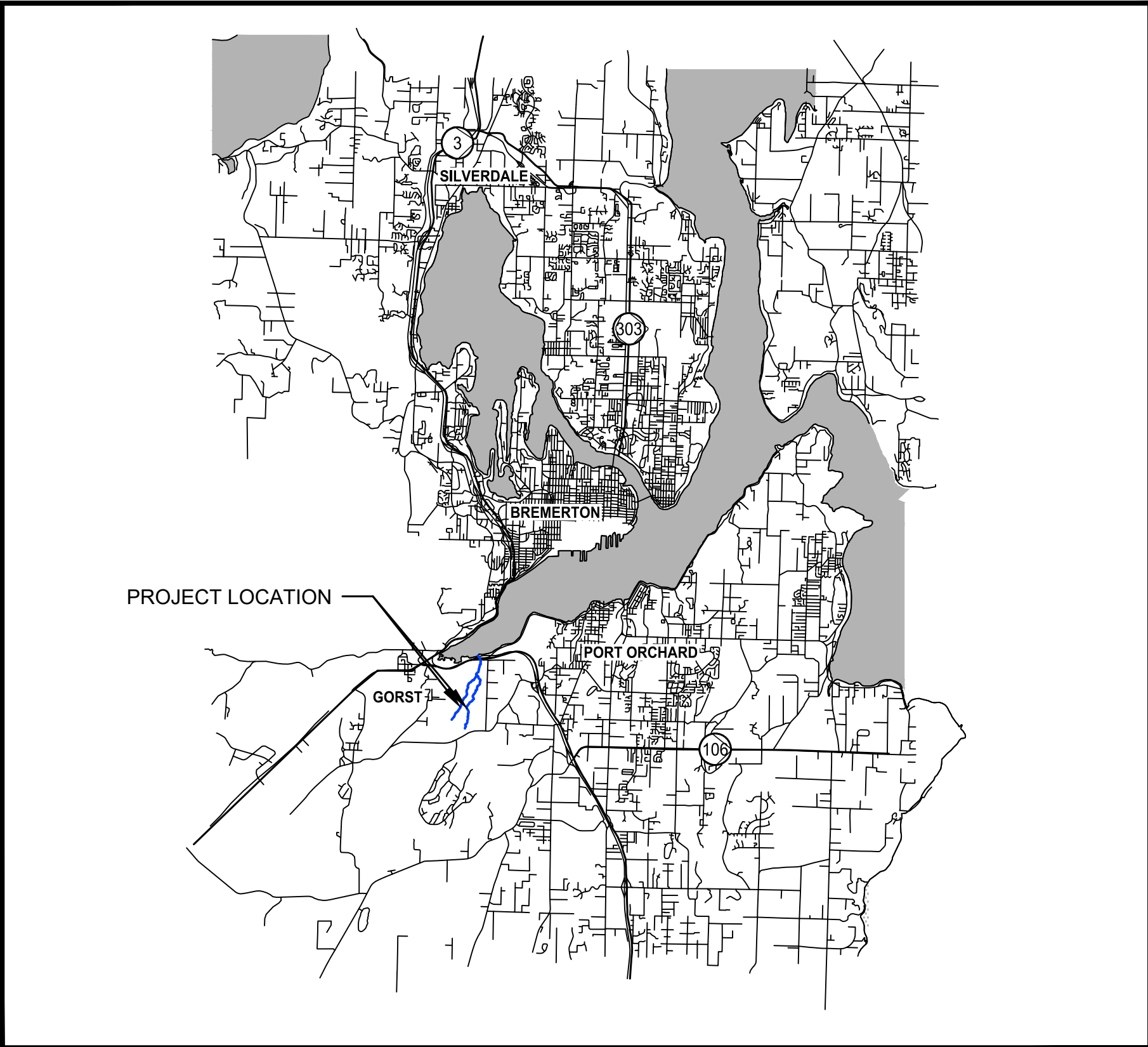


ANDERSON CREEK DAM REMOVALS

PUBLIC WORKS TRUST FUND (PWTF) LOAN NO. PC23-96103-114

PROJECT #4571

MAY 2024



LOCATION MAP

NO SCALE

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11	EC2	SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC - 2
12	EC3	SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC - 3
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14	EC5	SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC DETAILS - 1
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16	EC7	SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC DETAILS - 3

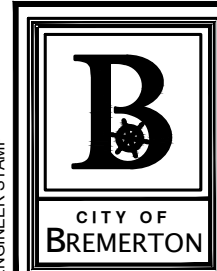
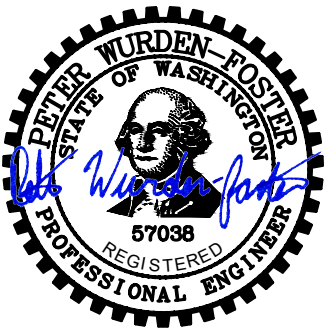
INDEX TO DRAWINGS		
SHT NO.	DWG NO.	SHEET TITLE
CIVIL		
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18	C2	GRADING PLAN - 2
19	C3	STREAM CHANNEL PLAN - 1
20	C4	STREAM CHANNEL PLAN - 2
21	C5	STREAM CHANNEL PROFILE - 1
22	C6	STREAM CHANNEL PROFILE - 2
23	C7	STREAM CHANNEL CROSS SECTIONS
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TRAFFIC CONTROL		
34	TC1	TRAFFIC CONTROL PLAN

ACCEPTED BY:

  
STORMWATER PROJECT MANAGER

05/08/2024

DATE



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON

DEPARTMENT OF PUBLIC WORKS & UTILITIES

ENGINEERING DIVISION

DESIGN BY: P. WURDEN-FOSTER WA P.E.# 57038    DATE: 03/20/2024	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. RUPPERT WA P.E.# 43848    DATE: 03/20/2024
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SECTION, TOWNSHIP, RANGE:  
S16, T24N, R1E, W.M.

GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS

COVER SHEET

SHEET
1 OF 34
PN: 4571
DWG
G1




















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FILE: P\_20-220002\_COVER LAYOUT: COVER SHEET PATH: C:\pw\_coi\_workingdir\osbornconsulting-pw\01\hue ong\hms32284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:40:53 AM



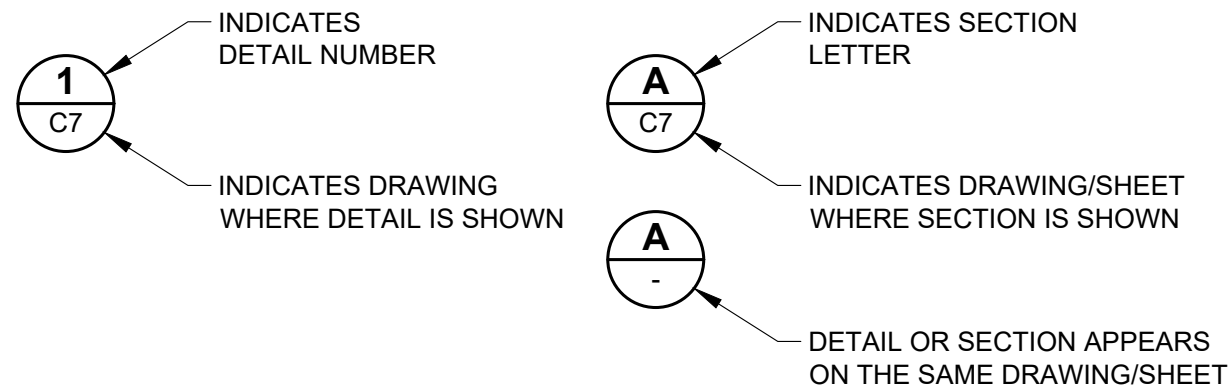
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EXISTING LEGEND

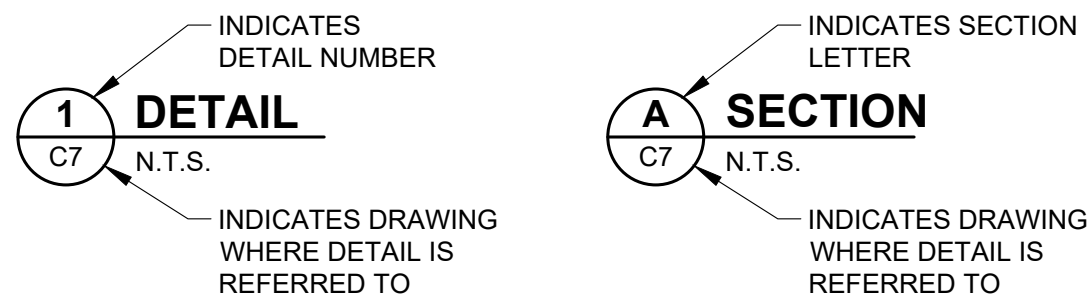
	STORM DRAIN MANHOLE
	SANITARY SEWER MANHOLE
	JUNCTION BOX ELECTRICAL
	ELECTRICAL CABINET
	BOLLARD
	WETLAND FLAG
	MONUMENT
	CONTROL POINT/BENCHMARK
	TREE (DECIDUOUS)
	TREE (CONIFER)
	PROPERTY BOUNDARY
	EXISTING EASEMENT
	SECTION LINE
	FENCE LINE
	TOP OF BANK
	TOE OF BANK
	ROCKERY

SECTION AND DETAIL DESIGNATIONS

DETAIL CALLOUT:



SECTION AND DETAIL DESIGNATIONS:



ABBREVIATIONS:

APPROX.	APPROXIMATE, APPROXIMATELY
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
BMP	BEST MANAGEMENT PRACTICE
BW	BOTTOM OF WALL
CFS	CUBIC FEET PER SECOND
CG	CLEAR AND GRUB
CHNL	CHANNEL
CL	CENTERLINE, CLASS
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CREEK	CREEK
CRZ	CRITICAL ROOT ZONE
CTR	CENTER
CSBC	CRUSHED SURFACING BASE COURSE
CY	CUBIC YARDS
DI	DUCTILE IRON
DIA	DIAMETER
E	EAST, EASTING
EG	EXISTING GRADE
ELEV	ELEVATION
ECB	EROSION CONTROL BLANKET
FIG	FIGURE
FT	FOOT, FEET
GNSS	GLOBAL NAVIGATION SATELLITE SYSTEM
GPS	GLOBAL POSITIONING SYSTEM
HMA	HOT MIX ASPHALT
HPA	HYDRAULIC PROJECT APPROVAL
HVF	HIGH VISIBILITY FENCE
IE	INVERT ELEVATION
IN, "	INCH
LF	LINEAR FOOT
MAX	MAXIMUM
MINIMUM	MINIMUM
MPH	MILES PER HOUR
MON	MONUMENT
N	NORTH, NORTHING
N.T.S.	NOT TO SCALE
OHWM	ORDINARY HIGH WATER MARK
PL	PLACE
PSE	PUGET SOUND ENERGY
R	RADIUS
REQS	REQUIREMENTS
ROW	RIGHT OF WAY
S	SOUTH
SD	STORM DRAIN
SF	SQUARE FEET
STA.	STATION
STD	STANDARD
SSMH	SANITARY SEWER MANHOLE
SW	SOUTHWEST
TBM	TEMPORARY BENCHMARK
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
WA	WASHINGTON
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
YR	YEAR

GENERAL NOTES:

- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION / APWA STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST EDITION, AND CITY OF BREMERTON STANDARDS.
- THE CONTRACTOR SHALL MEET THE CONDITIONS OF ALL PROJECT PERMITS AND LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
- THE CONTRACTOR SHALL LIMIT THE AREA OF CLEARING TO ONLY THAT WHICH IS SHOWN IN THE PLANS. ALL DISTURBED AREAS SHALL BE RESTORED AS SHOWN ON THE PLANS.
- PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT. ALL MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR PARTICULATE EMISSIONS TO THE ATMOSPHERE, SHALL NOT EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY. SEE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS SECTION 1-07.
- GRADING CONSTRUCTION ACTIVITY SHALL NOT OCCUR UNTIL FISH REMOVAL IS COMPLETE AND TEMPORARY STREAM BYPASS SYSTEM IS INSTALLED, FUNCTIONING, AND APPROVED BY THE ENGINEER.
- STREAM WORK BELOW THE ORDINARY HIGH WATER LINE SHALL ONLY OCCUR DURING IN-WATER WORK WINDOWS IN ACCORDANCE WITH PROJECT PERMITS.
- CONTRACTOR SHALL CONFIRM THAT NO UTILITIES ARE PRESENT. IF IT IS DETERMINED THAT THERE ARE UTILITIES AT THE PROJECT SITE, CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDERS TO PROVIDE TEMPORARY RELOCATION AND/OR APPROPRIATE PROTECTION DURING CONSTRUCTION.

SEDIMENT AND EROSION CONTROL NOTES:

- PROTECT EXISTING STORMWATER INFRASTRUCTURE ON EXISTING ROADS NEAR CONSTRUCTION ENTRANCES FROM SEDIMENT LADEN RUNOFF.
- THE TEMPORARY EROSION CONTROL SYSTEM SHALL BE INSTALLED PRIOR TO ALL OTHER CONSTRUCTION.
- WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SEDIMENT CONTROL.
- AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE, THE EROSION CONTROL FACILITIES SHALL BE MAINTAINED AND /OR ALTERED AS REQUIRED BY THE ENGINEER TO INSURE CONTINUING EROSION/SEDIMENT CONTROL.
- ALL TEMPORARY SEDIMENT CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES OPERATIONAL AND THE POTENTIAL FOR EROSION HAS PASSED. AT THIS TIME, WITH APPROVAL FROM THE CITY, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF TEMPORARY SEDIMENT CONTROLS AND RESTORE OR FINISH THE EXPOSED AREAS.
- ALL DISTURBED LAND AREAS LEFT FOR 30 DAYS OR MORE SHALL BE SEEDED WITH A MIX AND BY A METHOD APPROVED BY THE CITY AND MAINTAINED UNTIL SEED GERMINATION IS ASSURED.
- THE PUBLIC RIGHT-OF-WAY SHALL BE KEPT CLEAN. TRACKING OF MUD AND DEBRIS FROM THE SITE ONTO THE PUBLIC RIGHT-OF-WAY WILL NOT BE ALLOWED. FAILURE TO COMPLY WITH THIS CONDITION WILL RESULT IN ALL WORK ON THE SITE BEING STOPPED.
- CLEANUP AND RESTORATION: THE FOLLOWING PROCEDURES SHALL BE FOLLOWED IN CLEANING AND RESTORING THE CONSTRUCTION SITE:
  - STREET SHALL BE SWEEPED EACH DAY AS NEEDED.
  - DISTURBED SOILS SHALL BE FINAL GRADED, SEEDED, AND MULCHED.
  - DITCHES SHALL BE SEEDED, JUTE MATTED, NETTED, SODDED, OR ROCK LINED TO CONTROL EROSION.
  - ANY DEBRIS INCLUDING ROCKS, COBBLES, DIRT, AND SILT THAT HAS ACCUMULATED IN DOWNSTREAM DRAINAGE FACILITIES, WHETHER DITCHES OR PIPES AND CATCH BASINS, WHICH RESULTS FROM CONSTRUCTION ACTIVITIES, SHALL BE CLEANED OUT.

CONSTRUCTION NOTES:

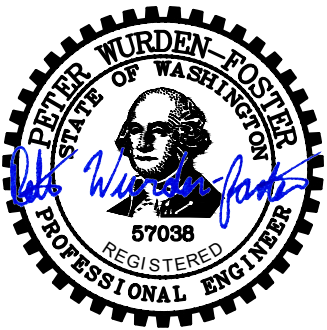
- MAINTAIN CONVEYANCE OF STORM DRAINAGE, SEWAGE FLOWS, AND WATER SERVICE DURING THE CONSTRUCTION. WHEN AN OUTAGE IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE CITY 72 HOURS AHEAD OF THE OUTAGE, THE OUTAGE SHALL NOT EXCEED 4 HOURS UNLESS APPROVED BY THE CITY.
- SURVEY AND FIELD STAKE ALL ALIGNMENTS PRIOR TO EXCAVATION.
- LARGE WOODY MATERIAL PLACEMENTS ARE SHOWN ON THE PLANS SYMBOLICALLY. INSTALL LARGE WOODY MATERIAL PLACEMENTS AS SHOWN ON THE DETAILED DRAWINGS AND AS SPECIFIED. LARGE WOODY MATERIAL LOCATIONS MAY BE ADJUSTED AS DIRECTED IN THE FIELD BY THE ENGINEER. PROVIDE 72 HOURS NOTICE TO THE ENGINEER PRIOR TO LWM INSTALLATION.
- OVERHEAD UTILITY CABLES (E.G. POWER, CABLE, ETC.) ARE GENERALLY NOT SHOWN. DETERMINE THE EXTENT OF HAZARDS OR IMPACTS ON CONSTRUCTION ACTIVITIES DURING THE BIDDING PROCESS AND PRIOR TO MOBILIZATION. FOLLOW LAWFUL AND SAFE PROCEDURES DURING CONSTRUCTION FOR WORKING AROUND OVERHEAD POWER. COORDINATE WITH THE RESPECTIVE FRANCHISE UTILITY (I.E. GAS, CABLE, POWER, TELEPHONE) FOR LOCATING PIPING OR CONDUIT.
- COORDINATE WITH UTILITY PROVIDERS AS NEEDED WHILE WORKING IN THE VICINITY OF UTILITY POLES OR BURIED UTILITIES TO ENSURE UTILITIES ARE NOT DAMAGED OR UNDERMINED DURING SUBSURFACE CONSTRUCTION.
- MAINTAIN ACCESS TO THE CITY OF PORT ORCHARD PUMP STATION FACILITIES AT ALL TIMES. IF A FULL ROAD CLOSURE OF THE ACCESS ROAD IS REQUIRED, IT MAY BE CLOSED UP TO 8 HOURS AND THE CONTRACTOR MUST COORDINATE CLOSURE DATE(S) AND GET CITY OF PORT ORCHARD APPROVAL PRIOR TO BEGINNING CONSTRUCTION.

TREE PROTECTION NOTES:

- THE TREE PROTECTION AREA SHALL BE DEFINED AS A 5-FOOT OFFSET FROM THE TRUNK, MEASURED AT BREAST HEIGHT, AS SHOWN ON DETAIL 2 SHEET EC6.
- DO NOT USE AREA BEYOND CLEARING LIMITS FOR ANY REASON. USE OF THE AREA WITHIN THE TREE PROTECTION FENCE SHALL BE ONLY AS APPROVED BY THE CITY.
- CONTROL SOIL MOISTURE WITHIN TREE PROTECTION AREA. PREVENT FLOODING OF THE SOIL AND PROTECT ROOT AREAS FROM RUNOFF FROM CEMENT, OIL, AND ALL OTHER CONTAMINANTS.
- THE FOLLOWING STEPS SHALL BE IMPLEMENTED FOR REMOVAL OF TREES WITHIN THE CRITICAL ROOT ZONE OF TREES TO REMAIN:
  - REMOVE TREE BRANCHES TO AVOID DAMAGE TO THE CANOPY OF TREES TO REMAIN.
  - GRIND STUMPS TO 6" BELOW FINISH GRADE. DO NOT EXCAVATE.
- CUT OFF ROOTS CLEANLY WITH APPROPRIATE TOOL WHEN ROOTS ARE EXPOSED DUE TO APPROVED DEMOLITION ACTIVITIES. AVOID ALL TEARS AND BREAKS IN ROOT SURFACES. DURING THE TIME OF EXPOSURE KEEP ROOTS MOIST WITH WET MULCH, COMPOST, OR TOPSOIL. HAND DIG TRENCHES IN AREAS WITH EXTENSIVE ROOTS. LEAVE INTACT AND UNDAMAGED ROOTS LARGER THAN TWO INCHES IN DIAMETER. PLACE UTILITY CONDUIT EITHER UNDER ROOTS BY TUNNELING OR OVER ROOTS WITH 18-INCH MINIMUM BEDDING.
- CONTRACTOR SHALL NOTIFY CITY IF ANY TREES TO BE PROTECTED ARE IMPACTED DURING CONSTRUCTION.
- MAINTAIN TREE PROTECTION AREAS FREE OF WEEDS AND TRASH THROUGHOUT CONSTRUCTION.
- DO NOT ALTER GRADES WITHIN TREE PROTECTION AREA.
- DO NOT STORE MATERIALS WITHIN TREE PROTECTION AREAS.

CONSTRUCTION SEQUENCE:

- CONSTRUCTION LIMITS MUST BE STAKED AND MARKED BEFORE BEGINNING OF WORK.
- CONTRACTOR INSTALL TESC MEASURES.
- CONTRACTOR INSTALL TEMPORARY ACCESS ROADS AND PREPARE STAGING AREA(S).
- TEMPORARY STREAM DIVERSION AND FISH EXCLUSION AT BOTH THE EAST AND WEST FORK DAM LOCATIONS SHALL BE COMPLETED BEFORE PERFORMING WORK TO REMOVE EXISTING DAM STRUCTURES, CHANNEL GRADING AND ASSOCIATED WORK OCCURRING BELOW THE ORDINARY HIGH WATER MARK (OHWM). ALL WORK PERFORMED BELOW THE OHWM SHALL ONLY OCCUR WITHIN THE PERMITTED IN-WATER WORK WINDOW. SEE PROJECT SPECIAL PROVISIONS.
- REMOVE THE EXISTING DAM STRUCTURES AND ASSOCIATED DAM APPURTENANCES AND HAUL AND DISPOSE OFF-SITE PER ALL LOCAL, FEDERAL, AND STATE LAWS AND REGULATIONS.
- REGRADE CHANNEL, PLACE STREAMBED MATERIALS, LARGE WOODY MATERIALS, AND DEFORMABLE GRADE CONTROLS.
- STABILIZE AND RESTORE ALL DISTURBED AREAS PER THE STREAM RESTORATION PLAN AND DETAILS PROVIDED.
- UPON COMPLETION OF ALL STREAM WORK AND WORK WITHIN THE OHWM, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY STREAM DIVERSION MEASURES PER THE PROJECT SPECIAL PROVISIONS.
- UPON COMPLETION OF ALL WORK, TEMPORARY EROSION CONTROL MEASURES, MATERIALS AND EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND THE SITE SHALL BE RESTORED TO THE PREVIOUS CONDITION.



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
DESIGN BY: P. WURDEN-FOSTER WA P.E.# 57038	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. RUPPERT WA P.E.# 43848 DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

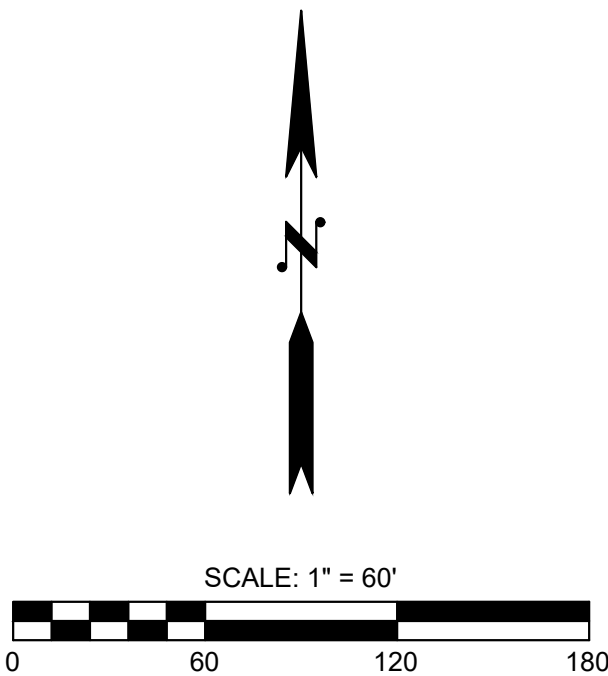
ANDERSON CREEK DAM REMOVALS

GENERAL NOTES, LEGEND & ABBREVIATIONS

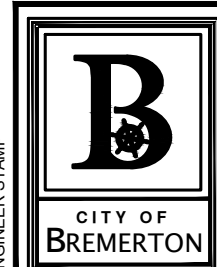
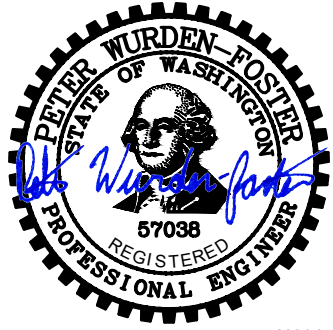
SHEET 2 OF 34
PN: 4571
DWG G2



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<b>SECTION, TOWNSHIP, RANGE:</b> S16, T24N, R1E, W.M.
<b>GRANT/LOAN INFORMATION</b>

**ANDERSON CREEK DAM REMOVALS**

**SHEET KEY**

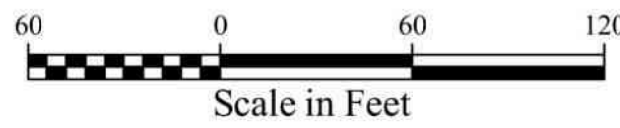
SHEET 3 OF 34
PN: 4571
DWG <b>G3</b>



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NAVD 88  
SCALE: 1" = 60'



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CENTURY COMMUNITIES OF  
WASHINGTON LLC  
PARCEL NO. 042301-2-038-2006

FREESTONE AT BAYSIDE PLAT  
VOL.34 PAGES.82-88

CITY OF BREMERTON  
PARCEL NO. 042301-2-002-2008

CITY OF PORT ORCHARD  
PARCEL NO. 5547-000-168-0007

FOUND 1" IRON PIPE  
W/ TACK CENTERPOINT  
AT 1/4 CORNER POSITION  
VISITED 05/23

FOUND 3.5" KITSAP  
COUNTY BRASS DISC  
MONUMENT AT 1/4  
CORNER POSITION  
VISITED 12/2020

#### NOTES:

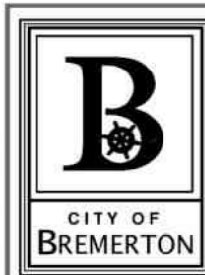
- HORIZONTAL DATUM: NAD 83/2011 (WA NORTH ZONE).
- VERTICAL DATUM: NAVD88
- TIES TO DATUM WERE ESTABLISHED BY GNSS OBSERVATIONS USING THE WASHINGTON STATE REFERENCE NETWORK AND GEIOD12B. SEE MAP FOR BENCHMARKS.
- CONTOURS SHOWN HEREON ARE THE RESULT OF A FIELD SURVEY (BASED ON FIELD DATA) PERFORMED IN MAY OF 2023 WITH A TARGET ACCURACY OF 1/2 CONTOUR. CONTOURS ARE COMPUTER GENERATED.
- UNDERGROUND UTILITIES SHOWN HEREON PER PHYSICAL FEATURES IN THE FIELD, NO UTILITY LOCATES WERE FOUND.
- SPOT SHOTS NOT SHOWN HEREON. THESE WILL BE INCLUDED IN CAD FILE.

#### BOUNDARY NOTES:

BASIS OF BEARINGS: FIELD TIES BETWEEN FOUND IRON PIPE W/ TACK AT WEST 1/4 CORNER POSITION, AND FOUND 3.5" KITSAP COUNTY BRASS DISC MONUMENT AT THE EAST 1/4 CORNER POSITION, BEARING S 88°50'32" E.

BOUNDARY FOR THE PLAT OF THE RIDGE AT MCCORMICK WOODS DIVISION 3 IS BASED UPON GPS FIELD TIES TO CENTERLINE MONUMENTS IN CHANTING CIRCLE NW, AND RIFLEBIRD PLACE SW.

BOUNDARY FOR THE PLAT OF FREESTONE AT BAYSIDE, DIVISION ONE IS BASED UPON GPS FIELD TIES TO THE EAST-WEST CENTERLINE OF SECTION BEING THE EAST AND WEST ¼ CORNER MONUMENTS.



**N.L. Olson & Associates, Inc.**  
Engineering, Planning and Surveying  
(360) 895-2350 or (360) 876-2284  
2453 Bothel Avenue, P.O. Box 637, Port Orchard, WA 98166

NO.	REVISIONS	DATE	BY

### CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

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WA P.E.#	DATE:	WA P.E.#

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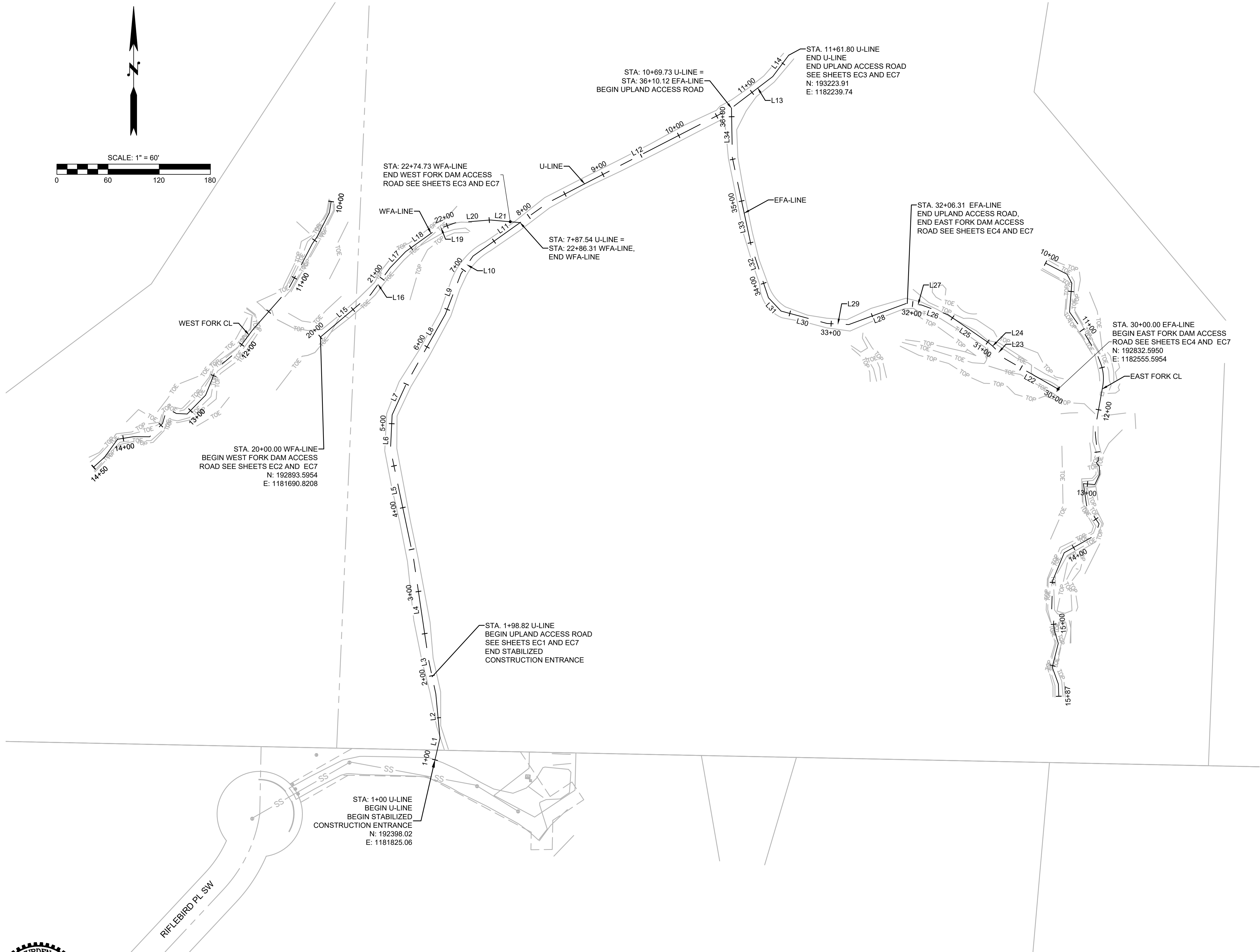
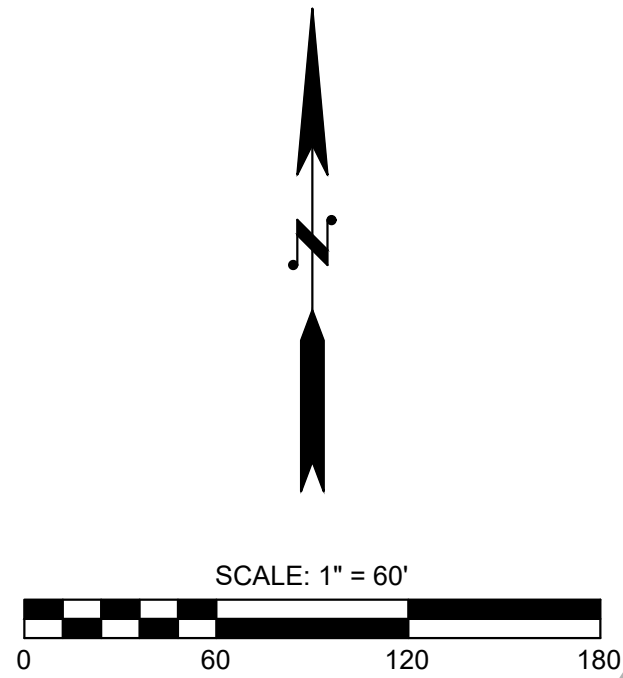
GRANT LOAN INFORMATION

## ANDERSON CREEK DAM REMOVALS HORIZONTAL CONTROL

SHEET  
4 OF 34  
PN:  
DWG  
**G-4**



FILE: P\_20-220002-ALIGN LAYOUT: ACCESS ROAD ALIGNMENT PLAN PATH: C:\pw\_cgi\_workingdir\osbornconsulting-pw-01\hue.ong\dms32284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:41:11 AM



UPLAND ACCESS ROAD (U-LINE)

ACCESS ROAD CENTERLINE		
LINE #	LENGTH	DIRECTION
L1	26.15'	N12° 59' 29"E
L2	52.01'	N05° 23' 24"W
L3	41.32'	N12° 00' 14"W
L4	118.94'	N08° 25' 18"W
L5	131.45'	N11° 54' 42"W
L6	40.48'	N02° 44' 59"E
L7	40.30'	N24° 32' 47"E
L8	93.05'	N29° 19' 01"E
L9	51.40'	N21° 08' 25"E
L10	24.69'	N34° 29' 12"E
L11	108.49'	N54° 34' 52"E
L12	240.28'	N62° 46' 25"E
L13	62.08'	N52° 38' 23"E
L14	31.15'	N36° 47' 10"E

WEST FORK DAM ACCESS ROAD (WFA-LINE)

ACCESS ROAD CENTERLINE		
LINE #	LENGTH	DIRECTION
L15	76.81'	N49° 46' 49"E
L16	39.14'	N35° 57' 52"E
L17	26.25'	N44° 04' 05"E
L18	43.53'	N54° 14' 47"E
L19	24.51'	N70° 01' 42"E
L20	41.00'	N85° 27' 14"E
L21	35.07'	S85° 01' 57"E

EAST FORK DAM ACCESS ROAD (EFA-LINE)

ACCESS ROAD CENTERLINE		
LINE #	LENGTH	DIRECTION
L22	71.90'	N60° 15' 17"W
L23	20.55'	N44° 03' 46"W
L24	6.09'	N50° 31' 30"W
L25	58.20'	N55° 20' 25"W
L26	32.91'	N70° 07' 46"W
L27	17.53'	N83° 50' 55"W
L28	72.11'	S69° 50' 34"W
L29	25.54'	N87° 04' 45"W
L30	55.89'	N74° 54' 19"W
L31	21.48'	N43° 18' 43"W
L32	64.22'	N18° 23' 22"W
L33	105.33'	N12° 23' 15"W
L34	58.36'	N01° 02' 44"W



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038    DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848    DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

**ANDERSON CREEK DAM REMOVALS**  
  
**ACCESS ROAD ALIGNMENT PLAN**

SHEET  
5 OF 34

PN: 4571

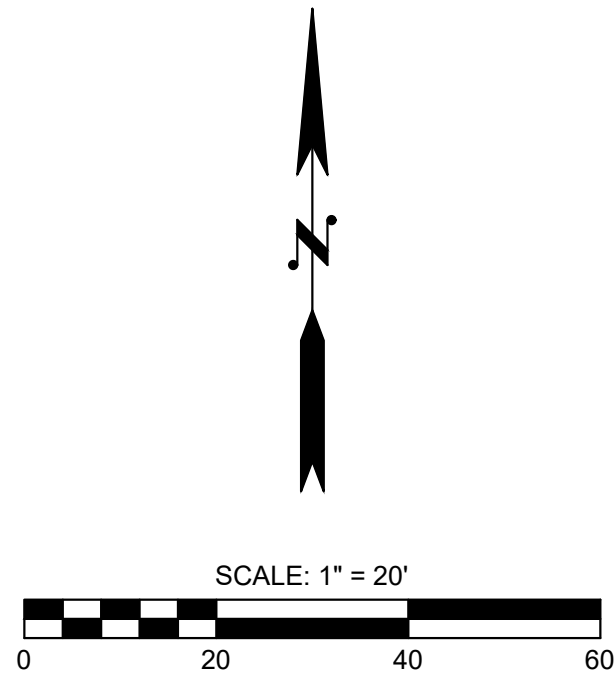
DWG  
**G5**



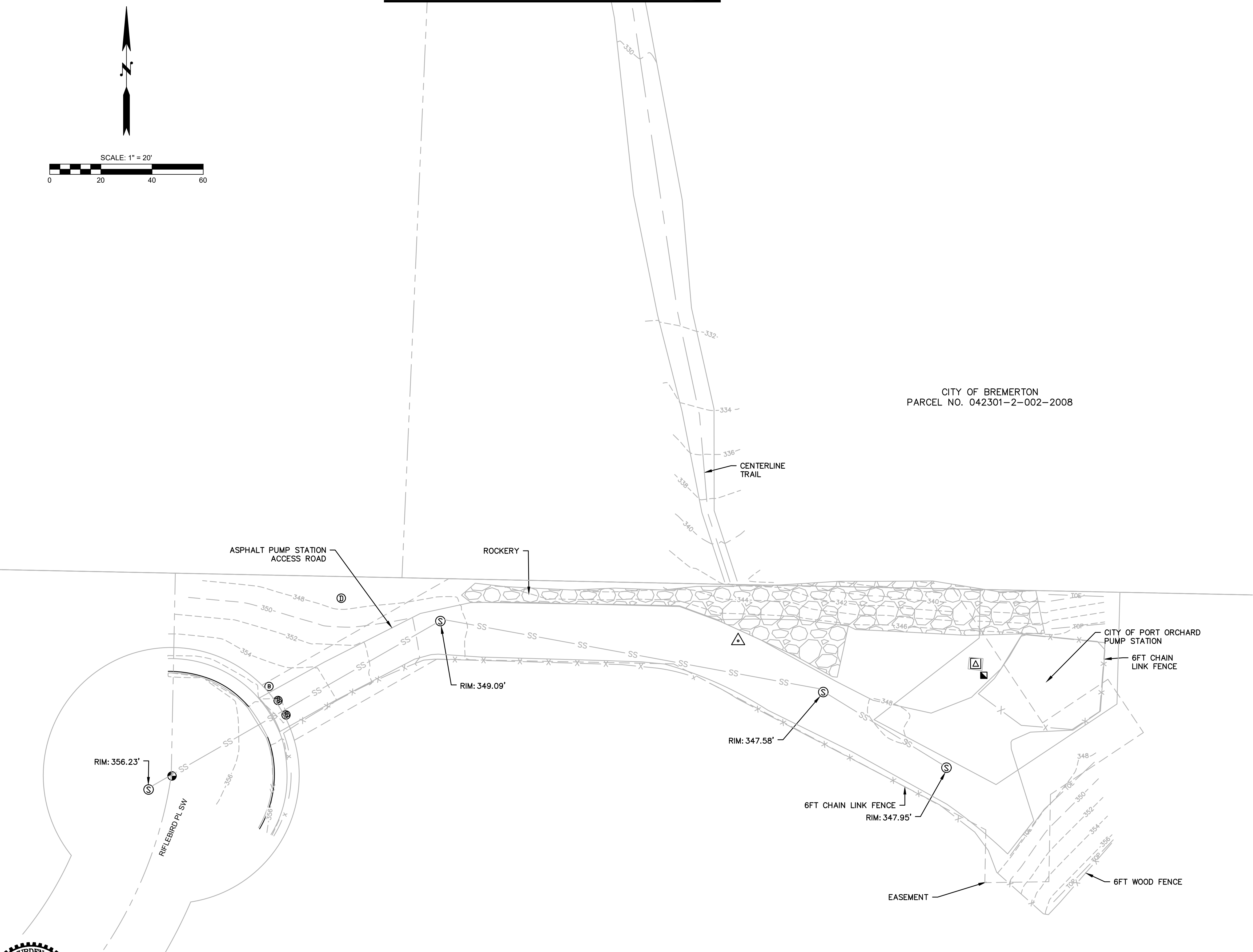
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MATCHLINE SEE DWG G7



CITY OF BREMERTON  
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DESIGN BY: P. WURDEN-FOSTER WA P.E.# 57038	DATE: 03/20/2024	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. RUPPERT WA P.E.# 43848 DATE: 03/20/2024

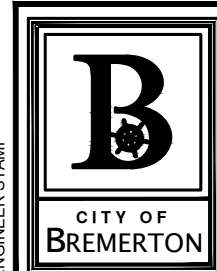
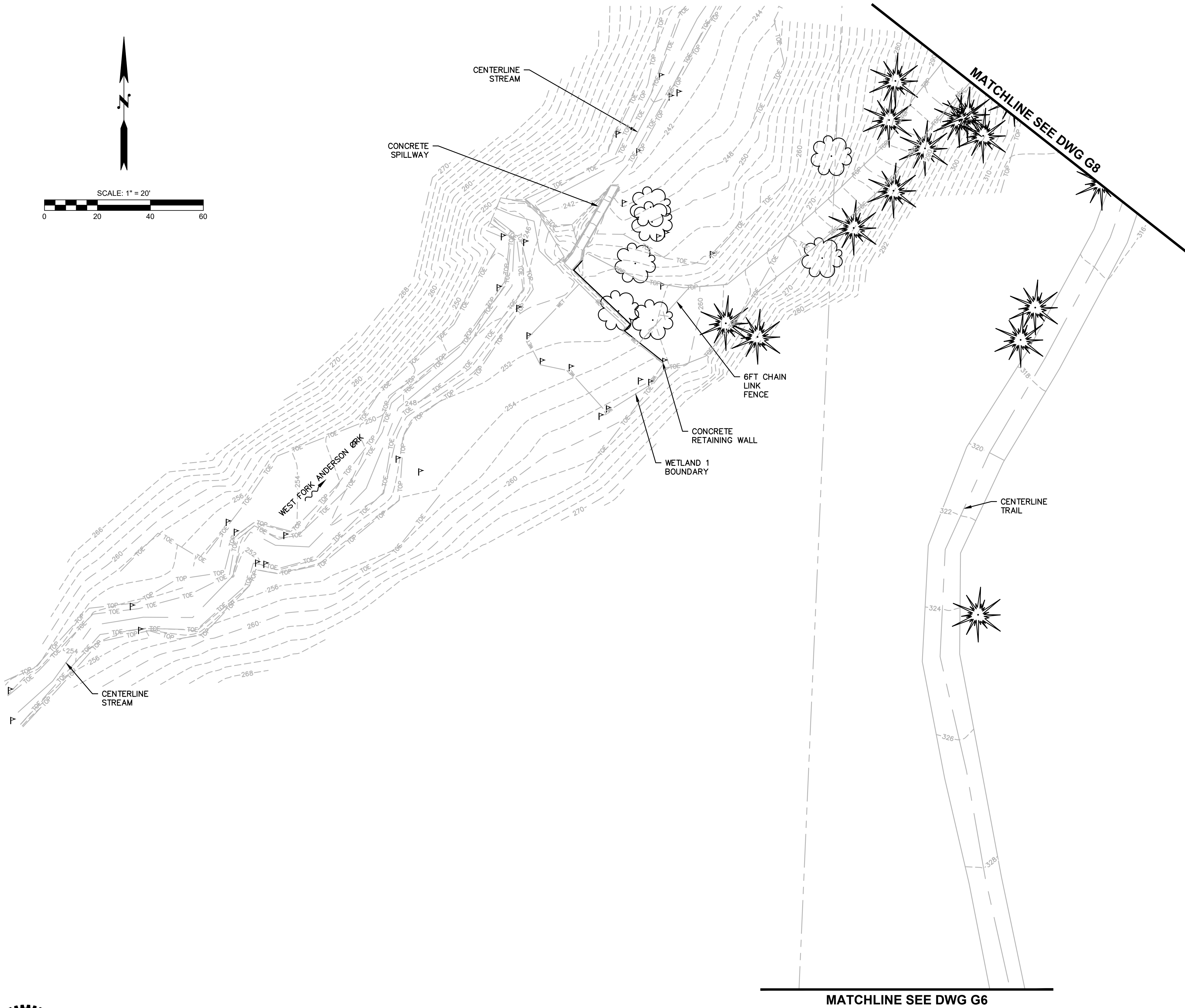
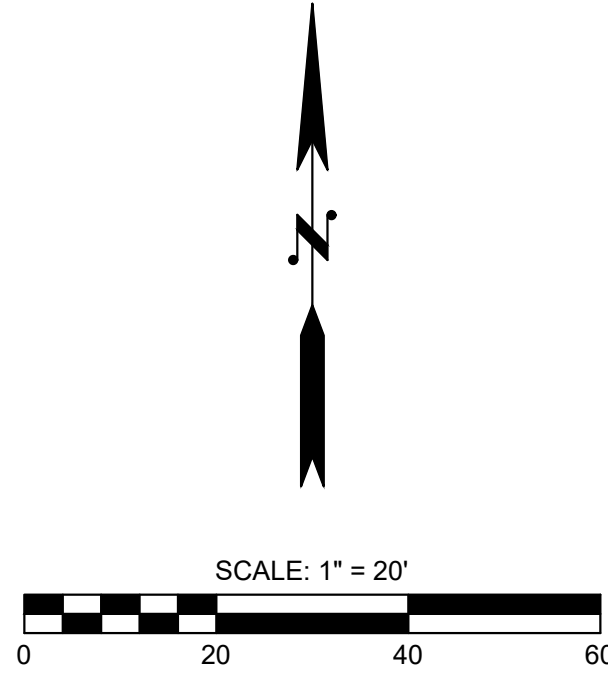
SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS
EXISTING CONDITIONS - 1

SHEET 6 OF 34
PN: 4571
DWG G6



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SECTION, TOWNSHIP, RANGE: S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

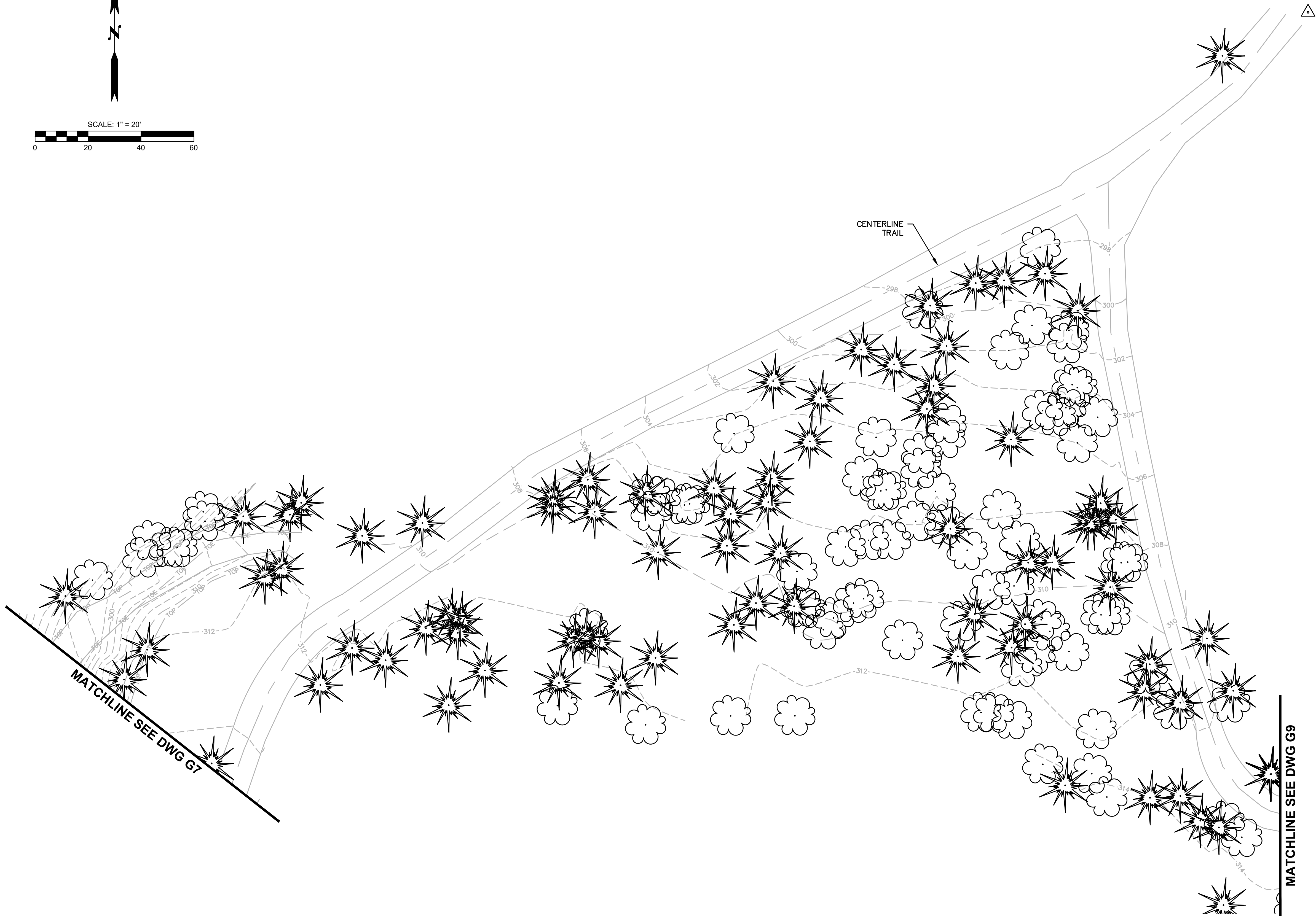
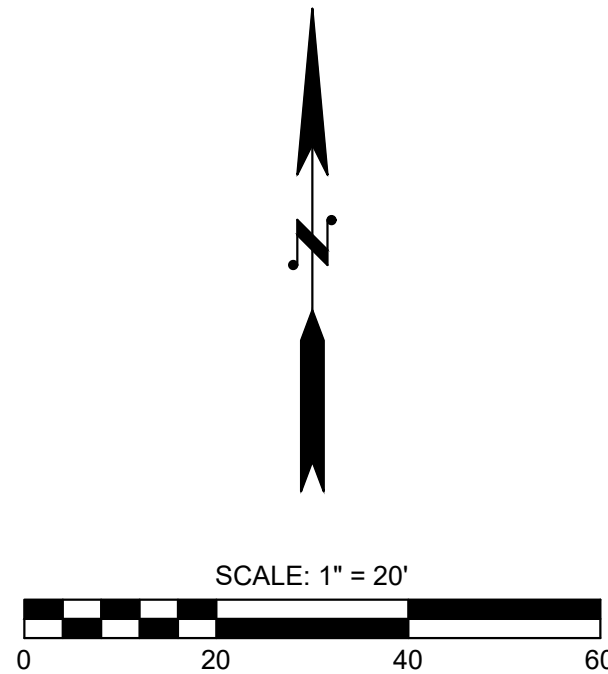
ANDERSON CREEK DAM REMOVALS
EXISTING CONDITIONS - 2

SHEET 7 OF 34
PN: 4571
DWG G7

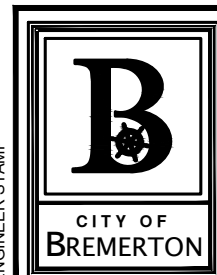


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**ENGINEERING DIVISION**

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DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848    DATE: 03/20/2024

<b>SECTION, TOWNSHIP, RANGE:</b> S16, T24N, R1E, W.M.
<b>GRANT/LOAN INFORMATION</b>

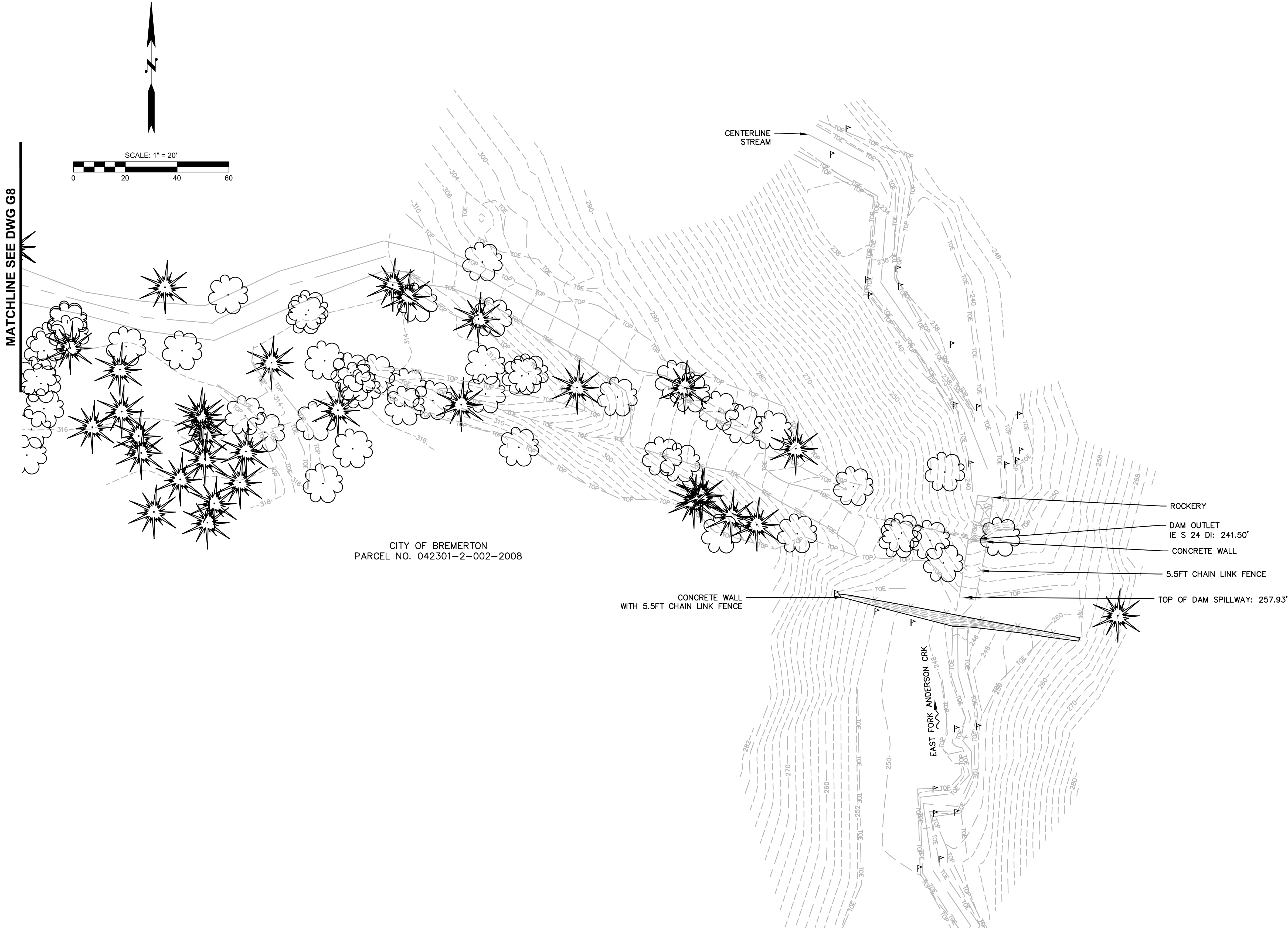
<b>ANDERSON CREEK DAM REMOVALS</b>
<b>EXISTING CONDITIONS - 3</b>

SHEET 8 OF 34
PN: 4571
DWG <b>G8</b>

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SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS	
EXISTING CONDITIONS - 4	

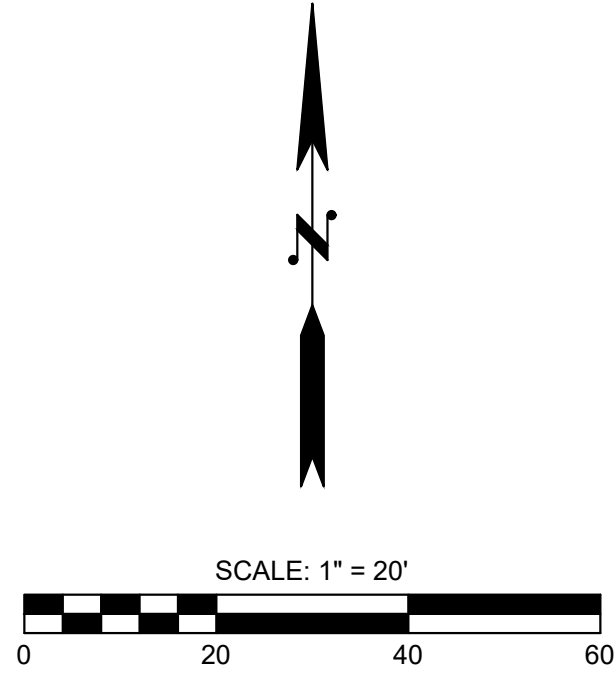
SHEET 9 OF 34
PN: 4571
DWG G9



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FILE: P\_20-220002\_TESC LAYOUT: SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC - 1 PATH: C:\pw\_coi\_workingdir\osbornconsulting-pw-01\hue\_ong\dwms32284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:41:24 AM



MATCHLINE SEE DWG EC2

SEE SHEET G5 FOR UPLAND ACCESS ROAD AND STABILIZED CONSTRUCTION ENTRANCE STATIONING

SITE PREPARATION & DEMOLITION KEY NOTES:

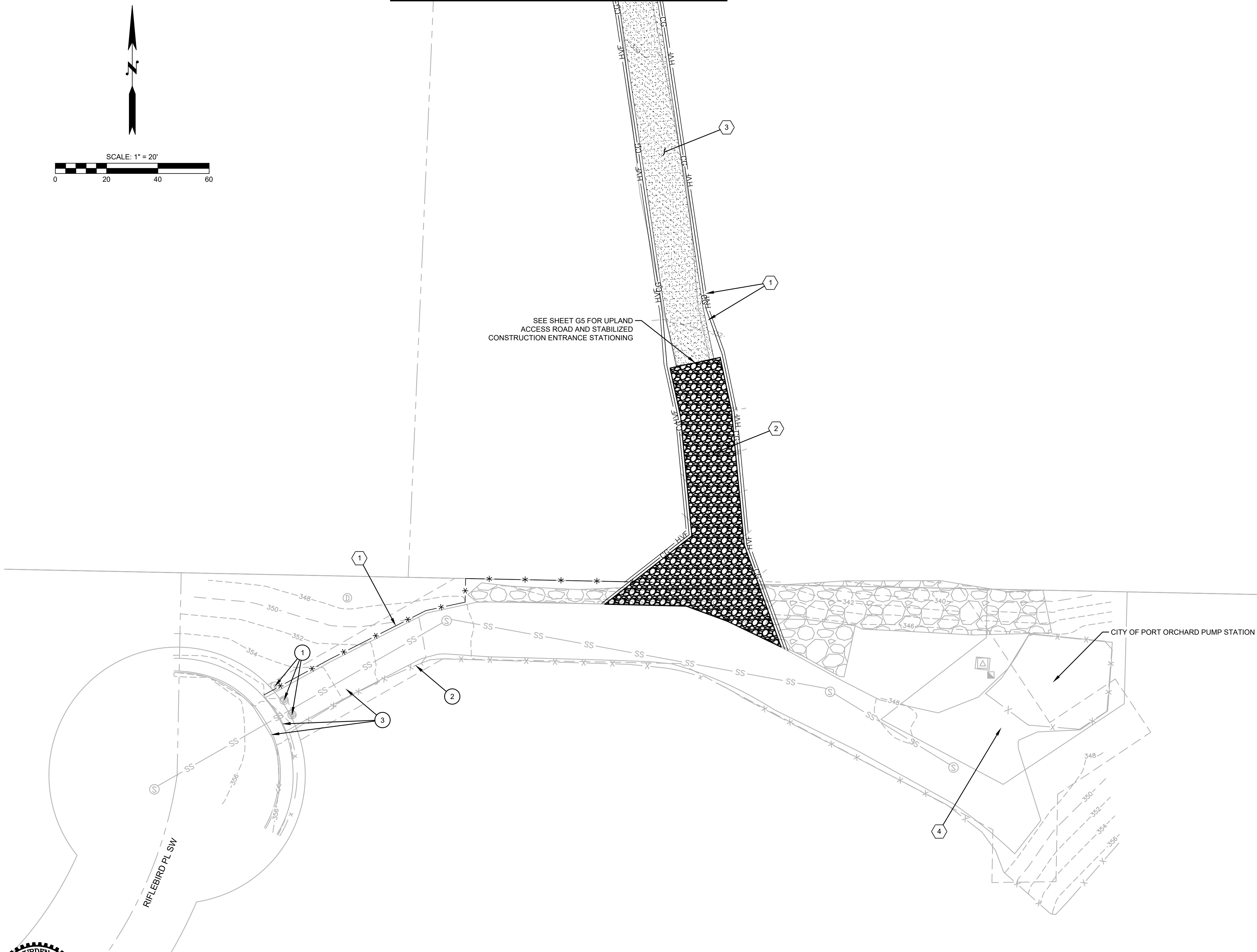
- 1 REMOVE BOLLARDS, STORE DURING CONSTRUCTION, AND REINSTALL FOLLOWING COMPLETION OF SITE WORK AND RESTORATION. BOLLARD BASE INSERTS SHALL BE PROTECTED IN PLACE BY THE CONTRACTOR OR REPLACED IF DAMAGED.
- 2 PROTECT EXISTING FENCING.
- 3 PROTECT EXISTING CONCRETE DRIVEWAY, CURB AND GUTTER, AND PUMP STATION ACCESS ROAD.

TESC KEY NOTES:

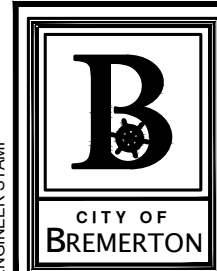
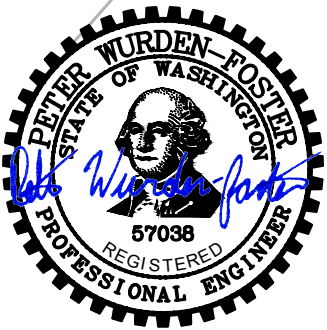
- 1 MARK PROJECT LIMITS AND INSTALL HIGH VISIBILITY FENCE OR HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I-10.10-01 AND I-30.17-01, RESPECTIVELY. CONTRACTOR SHALL CLEAR AND GRUB, WITHIN PROJECT LIMITS SHOWN. LINES SHOWN ARE OFFSET FOR PLAN CLARITY. SEE SHEET EC7 FOR OFFSETS TO ACCESS ROAD ALIGNMENTS.
- 2 INSTALL STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STD PLAN I-80.10-02.
- 3 INSTALL UPLAND ACCESS ROAD. SEE DETAIL 1 SHEET EC7.
- 4 MAINTAIN PUMP STATION ACCESS AT ALL TIMES. LIMITED PAVING CLOSURE ALLOWED, SEE SPECIAL PROVISIONS.

LEGEND

- HVF — HIGH VISIBILITY FENCE
- \* — HIGH VISIBILITY SILT FENCE
- CG — CLEARING AND GRUBBING
- STABILIZED CONSTRUCTION ENTRANCE
- UPLAND ACCESS ROAD
- — — PROPERTY BOUNDARY
- - - - - EXISTING EASEMENT
- - - - - SECTION LINE



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DESIGN BY: P. WURDEN-FOSTER WA P.E.# 57038	DATE: 03/20/2024	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. RUPPERT WA P.E.# 43848 DATE: 03/20/2024
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SECTION, TOWNSHIP, RANGE: S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS

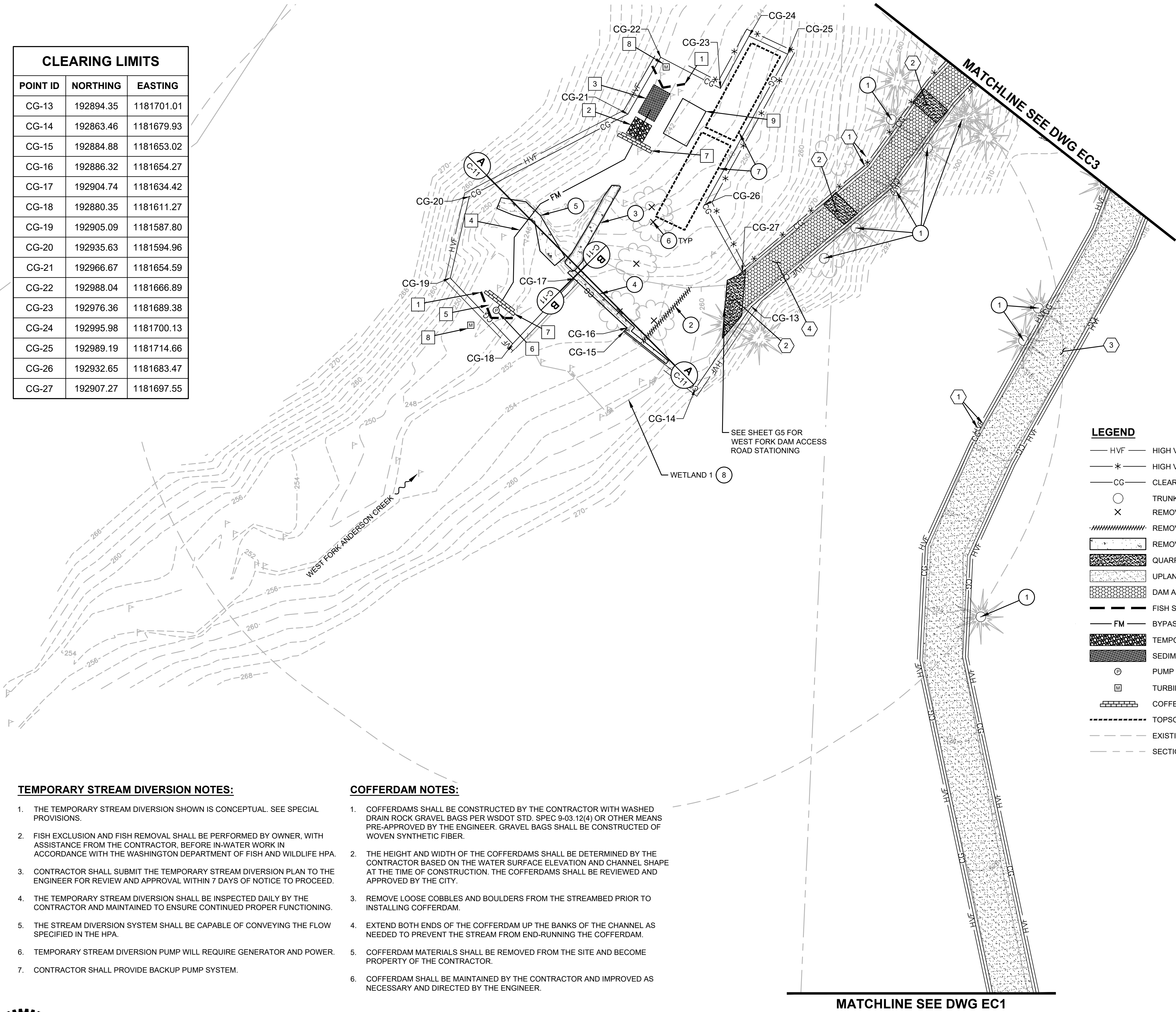
SITE PREPARATION, TEMPORARY STREAM DIVERSION  
& TESC - 1

SHEET 10 OF 34
PN: 4571
DWG EC1



FILE: P\_20-220002\_TESC LAYOUT: SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC - 2 PATH: C:\pw\_osl\_workingd\osbornconsulting-pw-01\hue.ong\dms32284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:41:27 AM

CLEARING LIMITS		
POINT ID	NORTHING	EASTING
CG-13	192894.35	1181701.01
CG-14	192863.46	1181679.93
CG-15	192884.88	1181653.02
CG-16	192886.32	1181654.27
CG-17	192904.74	1181634.42
CG-18	192880.35	1181611.27
CG-19	192905.09	1181587.80
CG-20	192935.63	1181594.96
CG-21	192966.67	1181654.59
CG-22	192988.04	1181666.89
CG-23	192976.36	1181689.38
CG-24	192995.98	1181700.13
CG-25	192989.19	1181714.66
CG-26	192932.65	1181683.47
CG-27	192907.27	1181697.55



**SITE PREPARATION & DEMOLITION KEY NOTES:**

- 1 TRUNK WRAP. SEE DETAIL 1 ON SHEET EC6.
- 2 REMOVE EXISTING CHAIN LINK FENCE AND HAUL OFFSITE FOR DISPOSAL.
- 3 REMOVE EXISTING SPILLWAY, VALVE, AND APPURTENANCES AND HAUL OFFSITE FOR DISPOSAL.
- 4 REMOVE EXISTING CONCRETE WALL AND FOOTING AND HAUL OFFSITE FOR DISPOSAL.
- 5 REMOVE EXISTING CONCRETE REMNANT AND HAUL OFFSITE FOR DISPOSAL.
- 6 REMOVE EXISTING TREES, CONTRACTOR SHALL FLAG ALL TREES TO BE REMOVED FOR ENGINEER CONCURRENCE AND APPROVAL PRIOR TO REMOVAL. TREES SHALL BE USED IN LOG STRUCTURE CONSTRUCTION FOR STREAM RESTORATION AS APPROPRIATE PER SPECIAL PROVISIONS DIVISION 8. ROOTWADS AND BRANCHES SHALL BE KEPT INTACT FOR TREES TO BE REUSED ON SITE. SEE SHEET C3 AND SHEET C4 FOR LARGE WOODY MATERIAL PLANS.
- 7 TOPSOIL STOCKPILE AREA: TOP 12" OF EXISTING TOPSOIL FROM RIPARIAN AND UPLAND RESTORATION TYPE 1 AREA (SEE SHEET R2) TO BE SALVAGED ON SITE IN (2) WINDROWS OF NO MORE THAN 6' TALL X 12' WIDE, LENGTH PER PLAN. SEE SPECIFICATION SECTION 8-02.3(4)B. DO NOT DISTURB TOPSOIL STOCKPILE AREA UNTIL SITE RESTORATION ACTIVITIES COMMENCE. NO DRIVING OVER STOCKPILE.
- 8 CONTRACTOR SHALL NOT IMPACT WETLAND 1, LOCATED BEYOND CLEARING AND GRUBBING LIMITS DEFINED BY POINTS CG-14, CG-15, CG-16, CG-17, AND CG-18, CONTRACTOR TO INSTALL FLAGGING AT 10-FOOT INTERVALS DEMARCATING BOUNDARY ALONG CG-14, CG-15, CG-16, AND CG-17.

**TESC KEY NOTES:**

- 1 MARK PROJECT LIMITS AND INSTALL HIGH VISIBILITY FENCE OR HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I-10.10-01 AND I-30.17-01, RESPECTIVELY. CONTRACTOR SHALL CLEAR AND GRUB, WITHIN PROJECT LIMITS SHOWN. LINES SHOWN ARE OFFSET FOR PLAN CLARITY. SEE SHEET EC7 FOR OFFSETS TO ACCESS ROAD ALIGNMENTS.
- 2 INSTALL WATER BARS AT MAXIMUM 45-FOOT SPACING ALONG WEST FORK DAM ACCESS ROAD. SEE DETAIL 5 SHEET EC5.
- 3 INSTALL UPLAND ACCESS ROAD. SEE DETAIL 1 SHEET EC7.
- 4 INSTALL DAM ACCESS ROAD. SEE DETAIL 2 SHEET EC7.

**TEMPORARY STREAM DIVERSION KEY NOTES:**

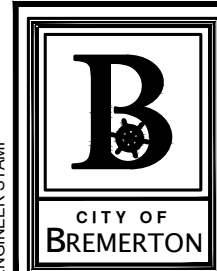
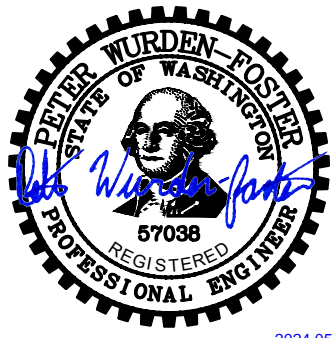
- 1 INSTALL FISH SCREEN. SEE DETAIL 2 SHEET EC5.
- 2 INSTALL TEMPORARY QUARRY SPALLS MAT TO PREVENT EROSION AT TEMPORARY BYPASS OUTFALL. ALL QUARRY SPALLS SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE. SEE DETAIL 1 SHEET EC5.
- 3 INSTALL SEDIMENT MAT. SEE DETAIL 3 SHEET EC5.
- 4 INSTALL TEMPORARY STREAM BYPASS PIPE. ADJUST LOCATION OF BYPASS PIPE AS NEEDED TO PERFORM WORK.
- 5 CAPTURE AND REMOVE ALL FISH BETWEEN THE FISH SCREENS IN ACCORDANCE WITH THE HPA. FISH CAPTURE SHALL BE PERFORMED UNDER THE SUPERVISION OF AN EXPERIENCED FISHERY BIOLOGIST.
- 6 INSTALL PRIMARY PUMP AND BACKUP PUMP.
- 7 INSTALL COFFERDAM. SEE DETAIL 1 SHEET EC5.
- 8 TURBIDITY MONITORING STATION. SEE CONTRACT SPECIFICATIONS FOR MONITORING REQUIREMENTS.
- 9 INSTALL FILTER BAG FOR SEDIMENT REMOVAL FROM ANY DEWATERING ACTIVITIES THAT MAY BE NECESSARY DURING CONSTRUCTION. SEE DETAIL 4 SHEET EC5.

**TEMPORARY STREAM DIVERSION NOTES:**

1. THE TEMPORARY STREAM DIVERSION SHOWN IS CONCEPTUAL. SEE SPECIAL PROVISIONS.
2. FISH EXCLUSION AND FISH REMOVAL SHALL BE PERFORMED BY OWNER, WITH ASSISTANCE FROM THE CONTRACTOR, BEFORE IN-WATER WORK IN ACCORDANCE WITH THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE HPA.
3. CONTRACTOR SHALL SUBMIT THE TEMPORARY STREAM DIVERSION PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL WITHIN 7 DAYS OF NOTICE TO PROCEED.
4. THE TEMPORARY STREAM DIVERSION SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING.
5. THE STREAM DIVERSION SYSTEM SHALL BE CAPABLE OF CONVEYING THE FLOW SPECIFIED IN THE HPA.
6. TEMPORARY STREAM DIVERSION PUMP WILL REQUIRE GENERATOR AND POWER.
7. CONTRACTOR SHALL PROVIDE BACKUP PUMP SYSTEM.

**COFFERDAM NOTES:**

1. COFFERDAMS SHALL BE CONSTRUCTED BY THE CONTRACTOR WITH WASHED DRAIN ROCK GRAVEL BAGS PER WSDOT STD. SPEC 9-03.12(4) OR OTHER MEANS PRE-APPROVED BY THE ENGINEER. GRAVEL BAGS SHALL BE CONSTRUCTED OF WOVEN SYNTHETIC FIBER.
2. THE HEIGHT AND WIDTH OF THE COFFERDAMS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE WATER SURFACE ELEVATION AND CHANNEL SHAPE AT THE TIME OF CONSTRUCTION. THE COFFERDAMS SHALL BE REVIEWED AND APPROVED BY THE CITY.
3. REMOVE LOOSE COBBLES AND BOULDERS FROM THE STREAMBED PRIOR TO INSTALLING COFFERDAM.
4. EXTEND BOTH ENDS OF THE COFFERDAM UP THE BANKS OF THE CHANNEL AS NEEDED TO PREVENT THE STREAM FROM END-RUNNING THE COFFERDAM.
5. COFFERDAM MATERIALS SHALL BE REMOVED FROM THE SITE AND BECOME PROPERTY OF THE CONTRACTOR.
6. COFFERDAM SHALL BE MAINTAINED BY THE CONTRACTOR AND IMPROVED AS NECESSARY AND DIRECTED BY THE ENGINEER.



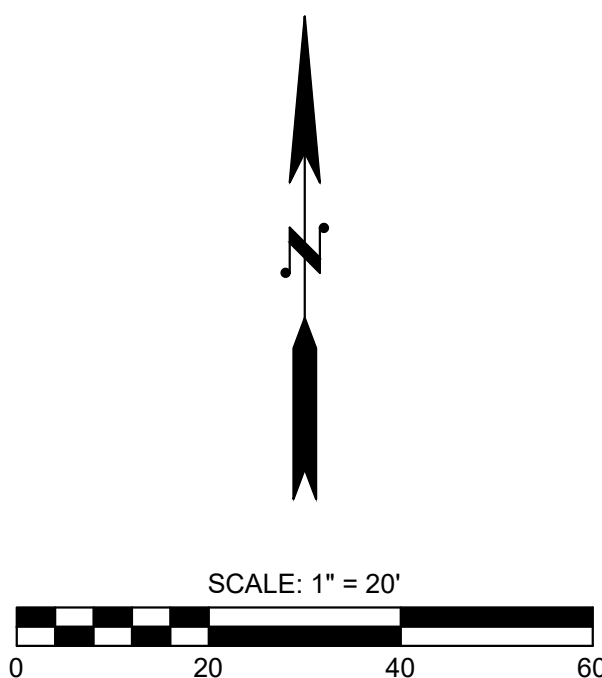
NO.	REVISIONS	DATE	BY

CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
DESIGN BY: P. WURDEN-FOSTER WA P.E.# 57038	DATE: 03/20/2024	CHECKED BY: L. RUPPERT DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

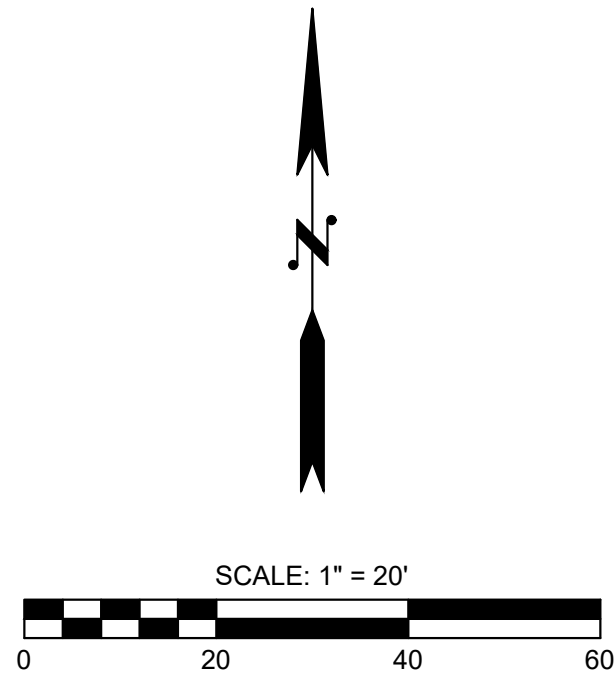
ANDERSON CREEK DAM REMOVALS	
SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC - 2	

SHEET 11 OF 34
PN: 4571
DWG EC2

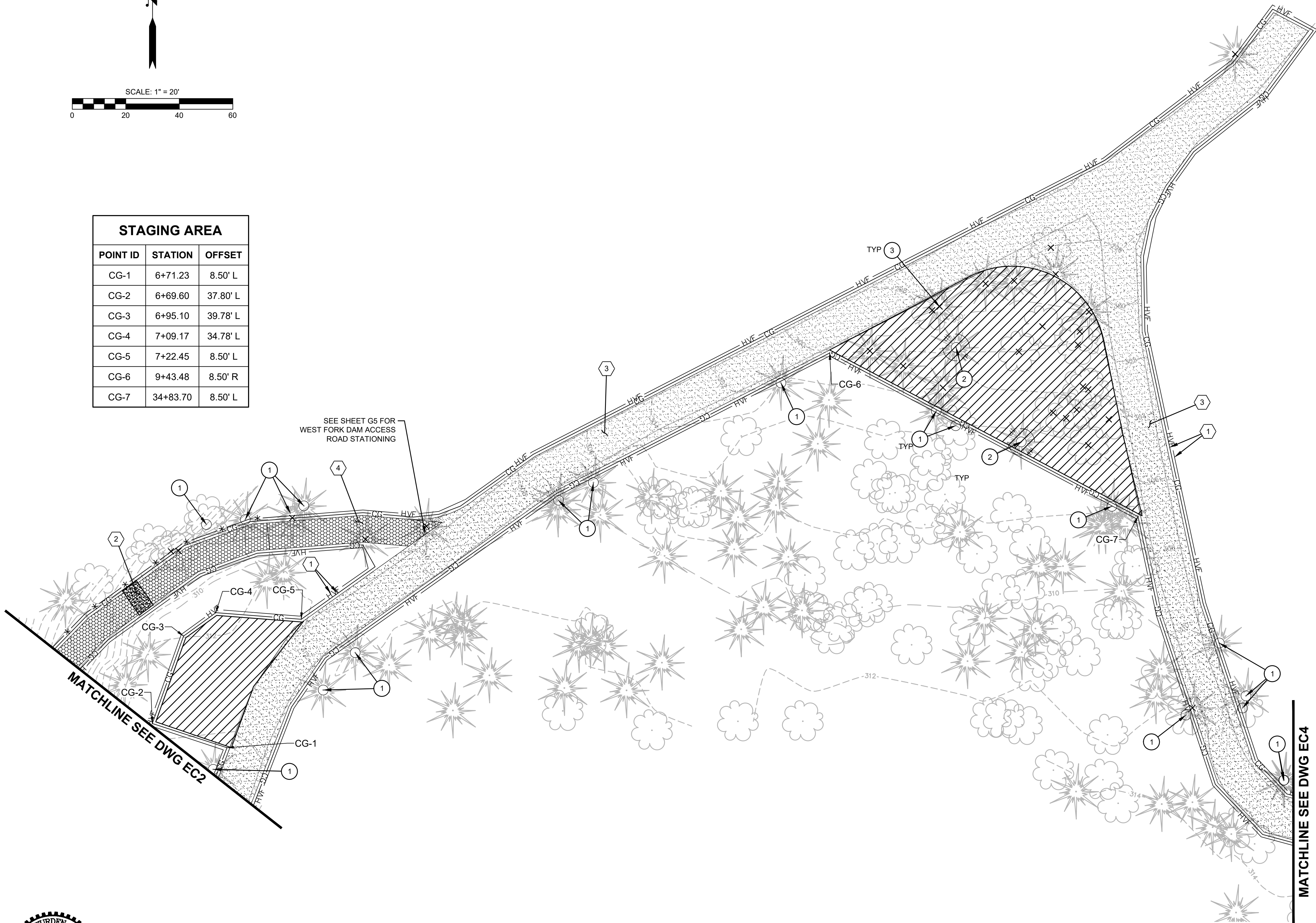




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STAGING AREA		
POINT ID	STATION	OFFSET
CG-1	6+71.23	8.50' L
CG-2	6+69.60	37.80' L
CG-3	6+95.10	39.78' L
CG-4	7+09.17	34.78' L
CG-5	7+22.45	8.50' L
CG-6	9+43.48	8.50' R
CG-7	34+83.70	8.50' L



**SITE PREPARATION & DEMOLITION KEY NOTES:**

- 1 TRUNK WRAP. SEE DETAIL 1 ON SHEET EC6.
- 2 PRESERVE AND PROTECT TREE. SEE DETAIL 2 ON SHEET EC6.
- 3 REMOVE EXISTING TREES. CONTRACTOR SHALL FLAG ALL TREES TO BE REMOVED FOR ENGINEER CONCURRENCE AND APPROVAL PRIOR TO REMOVAL. TREES SHALL BE USED IN LOG STRUCTURE CONSTRUCTION FOR STREAM RESTORATION AS APPROPRIATE PER SPECIAL PROVISIONS DIVISION 8. ROOTWADS SHALL BE KEPT INTACT FOR TREES TO BE REUSED ON SITE. SEE SHEET C3 AND SHEET C4 FOR LARGE WOODY MATERIAL PLANS.

**TESC KEY NOTES:**

- 1 MARK PROJECT LIMITS AND INSTALL HIGH VISIBILITY FENCE OR HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I-10.10-01 AND I-30.17-01, RESPECTIVELY. CONTRACTOR SHALL CLEAR AND GRUB, WITHIN PROJECT LIMITS SHOWN. LINES SHOWN ARE OFFSET FOR PLAN CLARITY. SEE SHEET EC7 FOR OFFSETS TO ACCESS ROAD ALIGNMENTS.
- 2 INSTALL WATER BARS AT MAXIMUM 45-FOOT SPACING ALONG WEST FORK DAM ACCESS ROAD. SEE DETAIL 5 SHEET EC5.
- 3 INSTALL UPLAND ACCESS ROAD. SEE DETAIL 1 SHEET EC7.
- 4 INSTALL DAM ACCESS ROAD. SEE DETAIL 2 SHEET EC7.

**LEGEND**

- HVF HIGH VISIBILITY FENCE
- \* HIGH VISIBILITY SILT FENCE
- CG CLEARING AND GRUBBING
- TRUNK WRAP
- TREE PROTECTION FENCE
- X REMOVE TREE
- MATERIAL STOCKPILE AND STAGING AREA
- QUARRY SPALL WATER BAR
- UPLAND ACCESS ROAD
- DAM ACCESS ROAD



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**CITY OF BREMERTON  
DEPARTMENT OF PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER WA P.E.# 57038	DATE: 03/20/2024	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. RUPPERT WA P.E.# 43848 DATE: 03/20/2024
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<b>SECTION, TOWNSHIP, RANGE:</b> S16, T24N, R1E, W.M.
<b>GRANT/LOAN INFORMATION</b>

**ANDERSON CREEK DAM REMOVALS**

**SITE PREPARATION, TEMPORARY STREAM DIVERSION  
& TESC - 3**

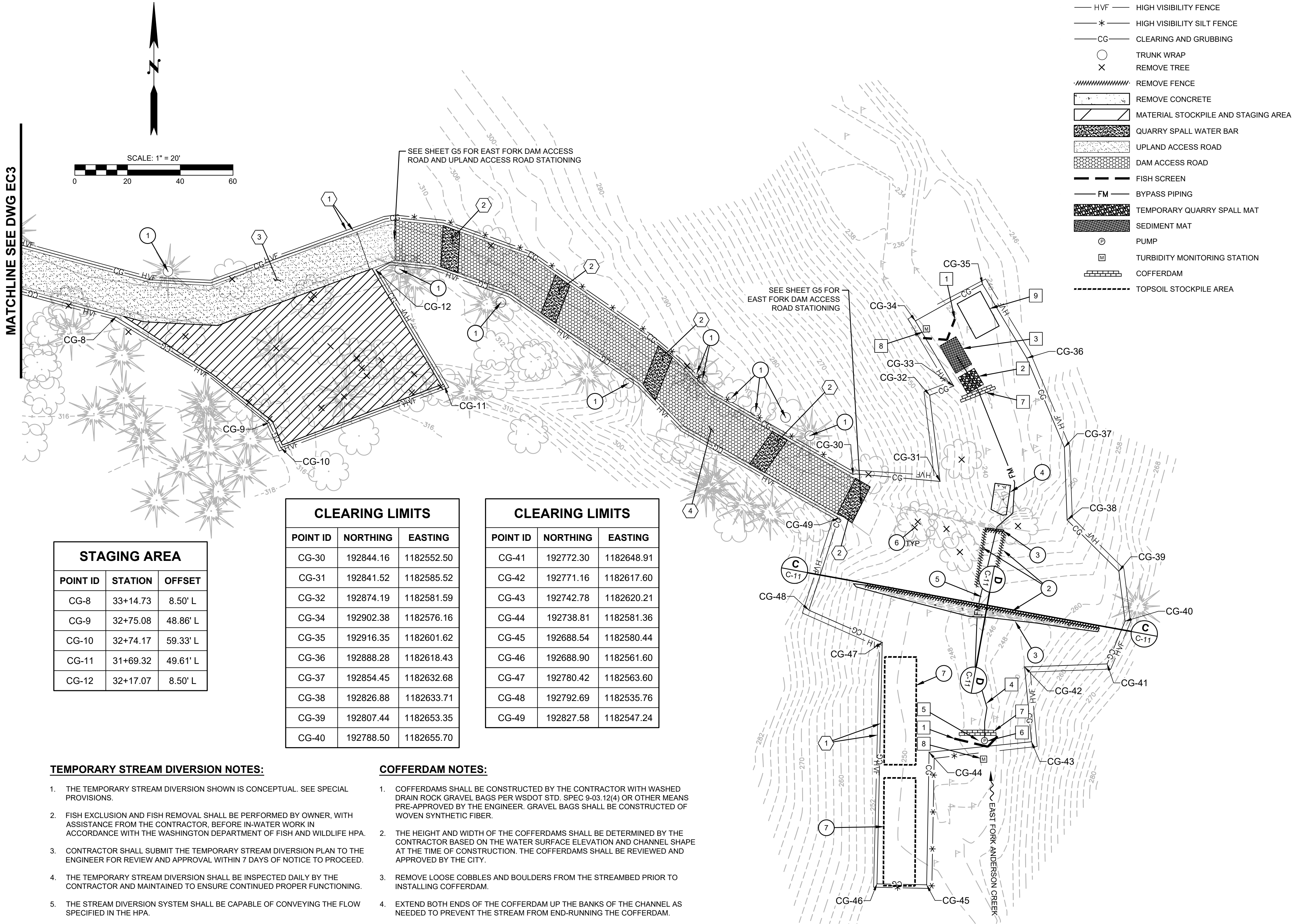
SHEET 12 OF 34
PN: 4571
DWG <b>EC3</b>



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SITE PREPARATION & DEMOLITION KEY NOTES:

- 1 TRUNK WRAP. SEE DETAIL 1 ON SHEET EC6.
- 2 REMOVE EXISTING CHAIN LINK FENCE AND HAUL OFFSITE FOR DISPOSAL.
- 3 REMOVE EXISTING CONCRETE WALL AND FOOTING AND HAUL OFFSITE FOR DISPOSAL.
- 4 REMOVE EXISTING CONCRETE WINGWALL AND HAUL OFFSITE FOR DISPOSAL.
- 5 REMOVE EXISTING SPILLWAY, DI PIPE, VALVE, SLUICEGATE, AND APPURTENANCES AND HAUL OFFSITE FOR DISPOSAL.
- 6 REMOVE EXISTING TREES, CONTRACTOR SHALL FLAG ALL TREES TO BE REMOVED FOR ENGINEER CONCURRENCE AND APPROVAL PRIOR TO REMOVAL. TREES SHALL BE USED IN LOG STRUCTURE CONSTRUCTION FOR STREAM RESTORATION AS APPROPRIATE PER SPECIAL PROVISIONS DIVISION 8. ROOTWADS SHALL BE KEPT INTACT FOR TREES TO BE REUSED ON SITE. SEE SHEET C3 AND SHEET C4 FOR LARGE WOODY MATERIAL PLANS.
- 7 TOPSOIL STOCKPILE AREA: TOP 12" OF EXISTING TOPSOIL FROM RIPARIAN AND UPLAND RESTORATION TYPE 1 AREA (SEE SHEET R4) TO BE SALVAGED ON SITE IN (2) WINDROWS OF NO MORE THAN 6' TALL X 12' WIDE, LENGTH PER PLAN. SEE SPECIFICATION SECTION 8-02.3(4)B. DO NOT DISTURB TOPSOIL STOCKPILE AREA UNTIL SITE RESTORATION ACTIVITIES COMMENCE. NO DRIVING OVER STOCKPILE.

TESC KEY NOTES:

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- 2 INSTALL WATER BARS AT MAXIMUM 45-FOOT SPACING ALONG EAST FORK DAM ACCESS ROAD. SEE DETAIL 5 SHEET EC5.
- 3 INSTALL UPLAND ACCESS ROAD. SEE DETAIL 1 SHEET EC7.
- 4 INSTALL DAM ACCESS ROAD. SEE DETAIL 2 SHEET EC7.

TEMPORARY STREAM DIVERSION KEY NOTES:

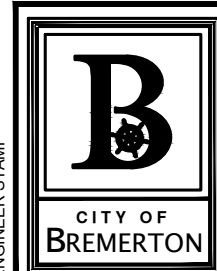
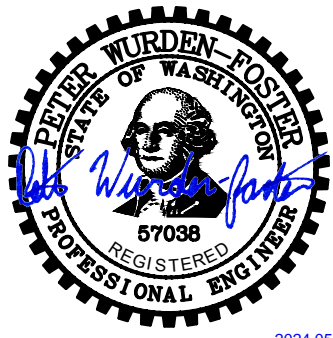
- 1 INSTALL FISH SCREEN. SEE DETAIL 2 SHEET EC5.
- 2 INSTALL TEMPORARY QUARRY SPALLS MAT TO PREVENT EROSION AT TEMPORARY BYPASS OUTFALL. ALL QUARRY SPALLS SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.
- 3 INSTALL SEDIMENT MAT. SEE DETAIL 3 SHEET EC5.
- 4 INSTALL TEMPORARY STREAM BYPASS PIPE. ADJUST LOCATION OF BYPASS PIPE AS NEEDED TO PERFORM WORK.
- 5 CAPTURE AND REMOVE ALL FISH BETWEEN THE FISH SCREENS IN ACCORDANCE WITH THE HPA. FISH CAPTURE SHALL BE PERFORMED UNDER THE SUPERVISION OF AN EXPERIENCED FISHERY BIOLOGIST.
- 6 INSTALL PRIMARY PUMP AND BACKUP PUMP.
- 7 INSTALL COFFERDAM. SEE DETAIL 1 SHEET EC5.
- 8 TURBIDITY MONITORING STATION. SEE CONTRACT SPECIFICATIONS FOR MONITORING REQUIREMENTS.
- 9 INSTALL FILTER BAG FOR SEDIMENT REMOVAL FROM ANY DEWATERING ACTIVITIES THAT MAY BE NECESSARY DURING CONSTRUCTION. SEE DETAIL 4 SHEET EC5.

TEMPORARY STREAM DIVERSION NOTES:

1. THE TEMPORARY STREAM DIVERSION SHOWN IS CONCEPTUAL. SEE SPECIAL PROVISIONS.
2. FISH EXCLUSION AND FISH REMOVAL SHALL BE PERFORMED BY OWNER, WITH ASSISTANCE FROM THE CONTRACTOR. BEFORE IN-WATER WORK IN ACCORDANCE WITH THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE HPA.
3. CONTRACTOR SHALL SUBMIT THE TEMPORARY STREAM DIVERSION PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL WITHIN 7 DAYS OF NOTICE TO PROCEED.
4. THE TEMPORARY STREAM DIVERSION SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING.
5. THE STREAM DIVERSION SYSTEM SHALL BE CAPABLE OF CONVEYING THE FLOW SPECIFIED IN THE HPA.
6. TEMPORARY STREAM DIVERSION PUMP WILL REQUIRE GENERATOR AND POWER.
7. CONTRACTOR SHALL PROVIDE BACKUP PUMP SYSTEM.

COFFERDAM NOTES:

1. COFFERDAMS SHALL BE CONSTRUCTED BY THE CONTRACTOR WITH WASHED DRAIN ROCK GRAVEL BAGS PER WSDOT STD. SPEC 9-03.12(4) OR OTHER MEANS PRE-APPROVED BY THE ENGINEER. GRAVEL BAGS SHALL BE CONSTRUCTED OF WOVEN SYNTHETIC FIBER.
2. THE HEIGHT AND WIDTH OF THE COFFERDAMS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE WATER SURFACE ELEVATION AND CHANNEL SHAPE AT THE TIME OF CONSTRUCTION. THE COFFERDAMS SHALL BE REVIEWED AND APPROVED BY THE CITY.
3. REMOVE LOOSE COBBLES AND BOULDERS FROM THE STREAMBED PRIOR TO INSTALLING COFFERDAM.
4. EXTEND BOTH ENDS OF THE COFFERDAM UP THE BANKS OF THE CHANNEL AS NEEDED TO PREVENT THE STREAM FROM END-RUNNING THE COFFERDAM.
5. COFFERDAM MATERIALS SHALL BE REMOVED FROM THE SITE AND BECOME PROPERTY OF THE CONTRACTOR.
6. COFFERDAM SHALL BE MAINTAINED BY THE CONTRACTOR AND IMPROVED AS NECESSARY, DIRECTED BY THE ENGINEER.



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CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
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SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS
SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC - 4

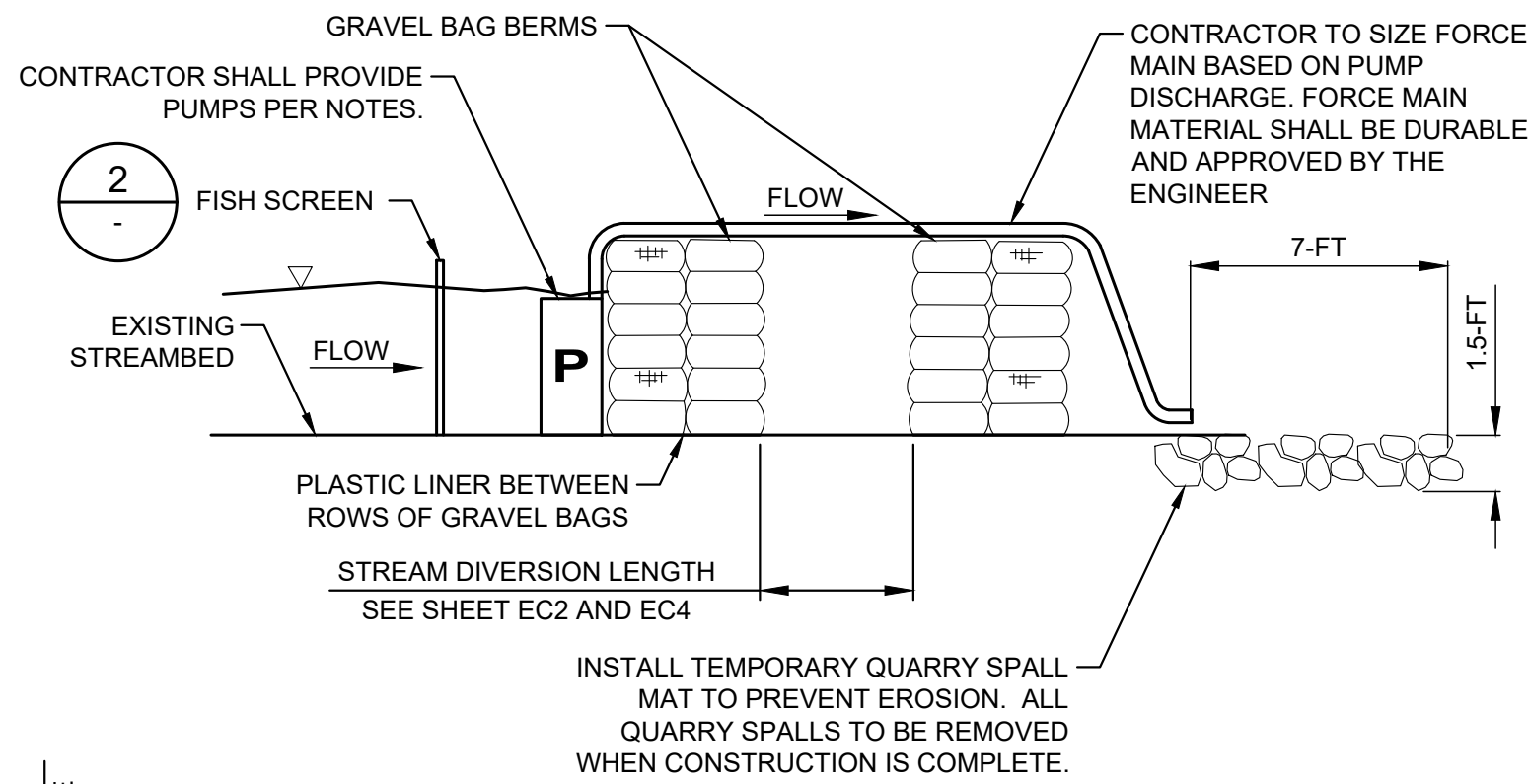
SHEET 13 OF 34
PN: 4571
DWG EC4



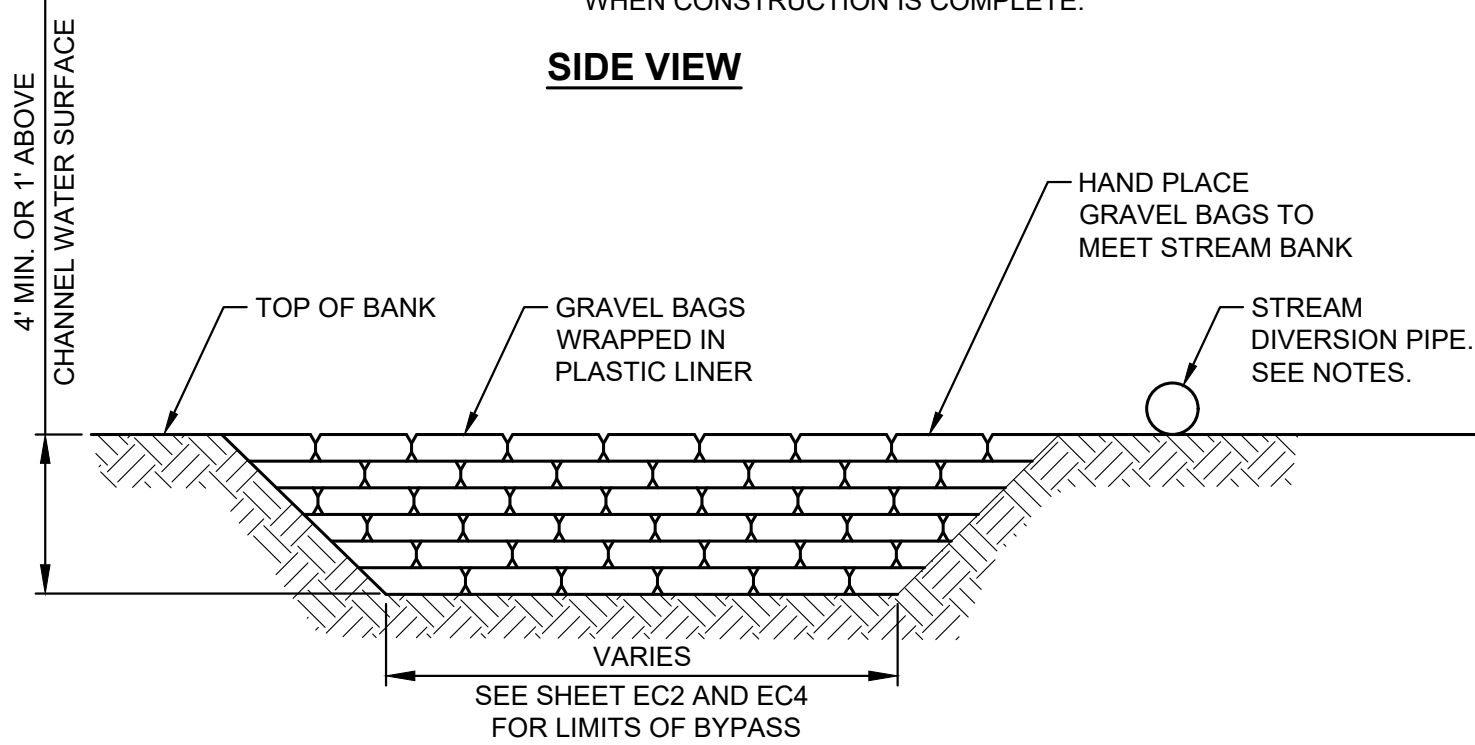
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FILE: P\_20-220002-EXIST\_DET - LAYOUT: SITE PREPARATION - TEMPORARY STREAM DIVERSION & TESC DETAILS - 1 - PATH: C:\pwworking\osbornconsulting-pw-01\hues ong\rms32284 - PLOTTED BY: hues - DATE: Tuesday, May 7, 2024 9:41:40 AM



SIDE VIEW

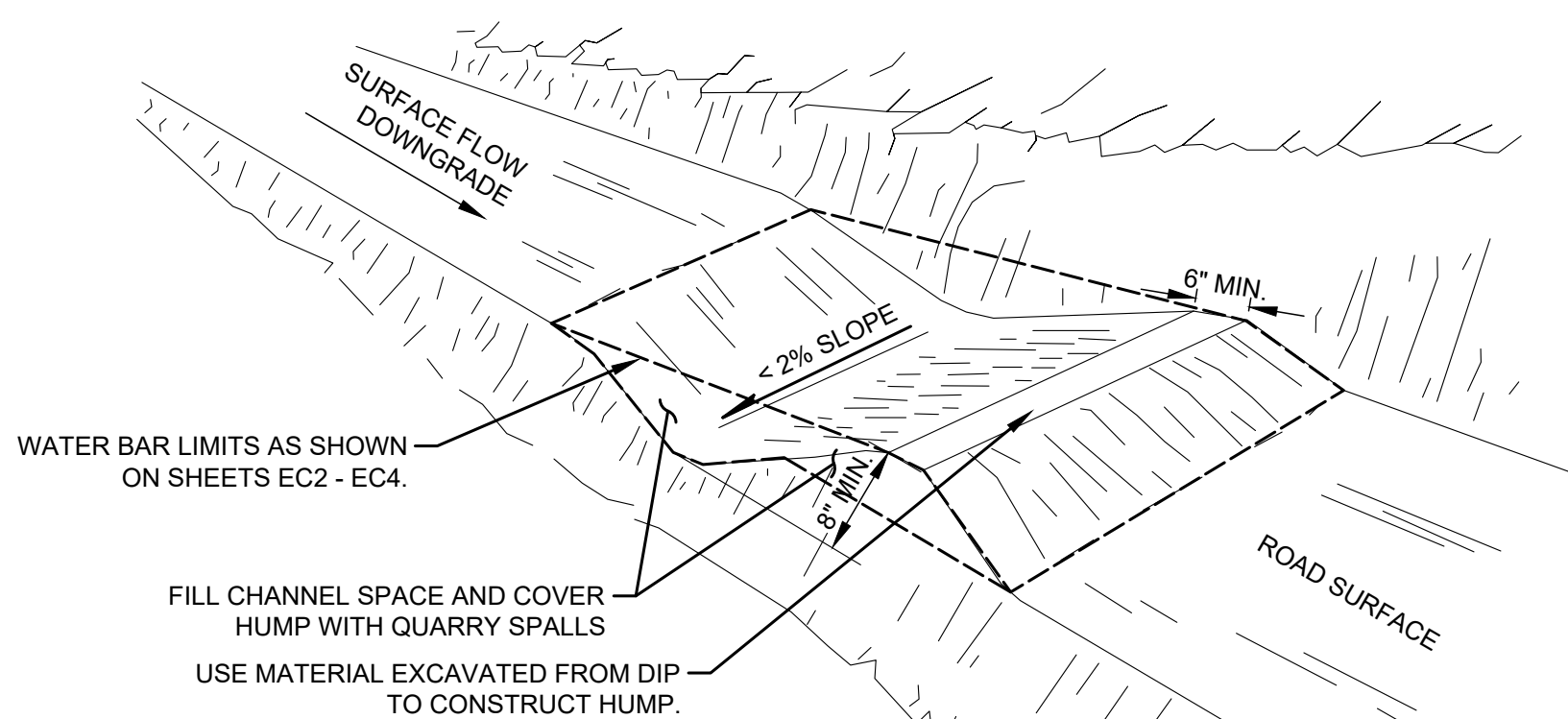


FRONT VIEW

NOTES:

1. TYPICAL 2-YR IN-STREAM WORK WINDOW PEAK FLOW IS 1.4 CFS (WEST FORK ANDERSON CREEK) AND 0.9 CFS (EAST FORK ANDERSON CREEK).
2. CONTRACTOR SHALL HAVE ON SITE, EMERGENCY DIVERSION PIPE, PUMPS, GENERATOR, AND APPURTENANCES IN THE EVENT OF HIGH FLOWS AS WELL AS BACKUP PUMP(S) IN CASE OF PRIMARY PUMP FAILURE. EMERGENCY DIVERSION PUMP INTAKE MUST BE SCREENED TO PREVENT FISH FROM ENTERING DIVERSION SYSTEM. SEE THE CONTRACT PROVISIONS AND THE HPA FOR ADDITIONAL INFORMATION ON TEMPORARY STREAM DIVERSION.
3. GRAVEL BAGS SHALL BE FILLED WITH ROUNDED PEA GRAVEL; NO ANGULAR OR CRUSHED MATERIALS MAY BE USED. GRAVEL BAGS SHALL BE WASTEHAULED AFTER REMOVAL OF BYPASS.
4. PUMP INTAKE SCREEN SHALL BE BACKWATERED WITH THE PLACEMENT OF THE GRAVEL BAG BERM TO PREVENT FISH FROM GETTING IMPINGED OR ENTRAINED ON THE INTAKE SCREEN.

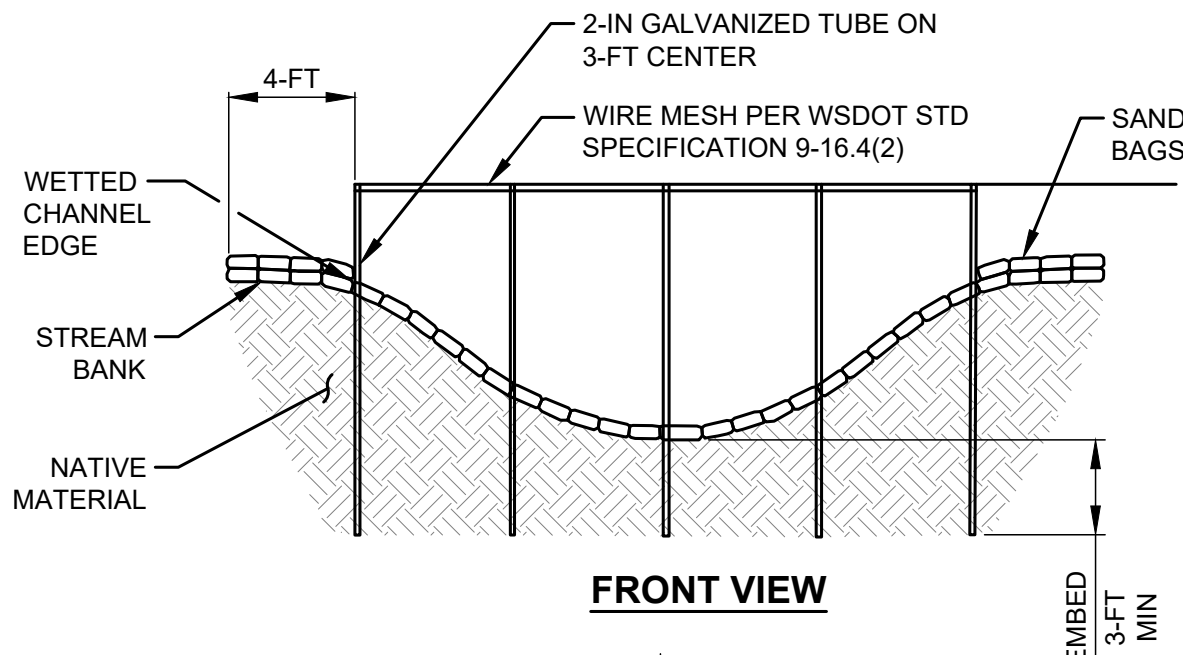
1 TEMPORARY COFFERDAM DETAIL  
EC2,EC4 N.T.S.



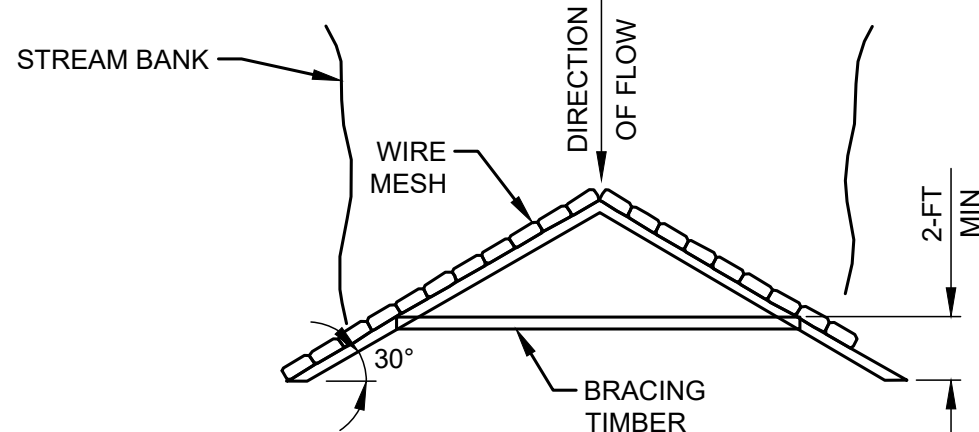
NOTES:

1. SIDE SLOPES OF CHANNEL MUST BE 3H:1V OR FLATTER.
2. INSTALL WATER BARS AS SOON AS THE CLEARING AND GRADING IS COMPLETE.
3. COMPACT THE WATER BAR HUMP.
4. STABILIZE, SEED, AND MULCH THE PORTIONS OF THE WATER BAR THAT ARE NOT SUBJECT TO TRAFFIC. INSTALL QUARRY SPALLS IN AREAS CROSSED BY VEHICLES.
5. PERIODICALLY INSPECT WATER BARS AFTER EVERY HEAVY RAINFALL FOR WEAR AND EROSION DAMAGE. REMOVE SEDIMENT AND REPAIR AS NEEDED.

5 WATER BAR  
EC2, EC3, EC4 N.T.S.



FRONT VIEW

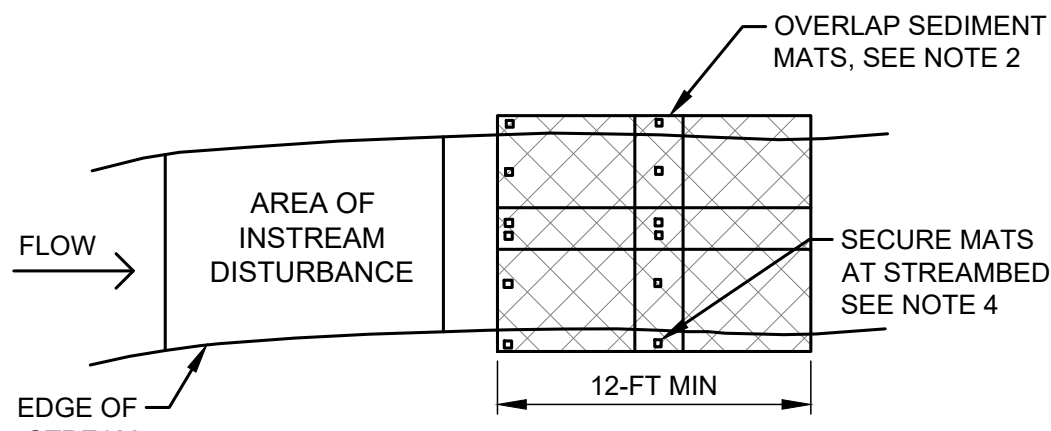


PLAN VIEW

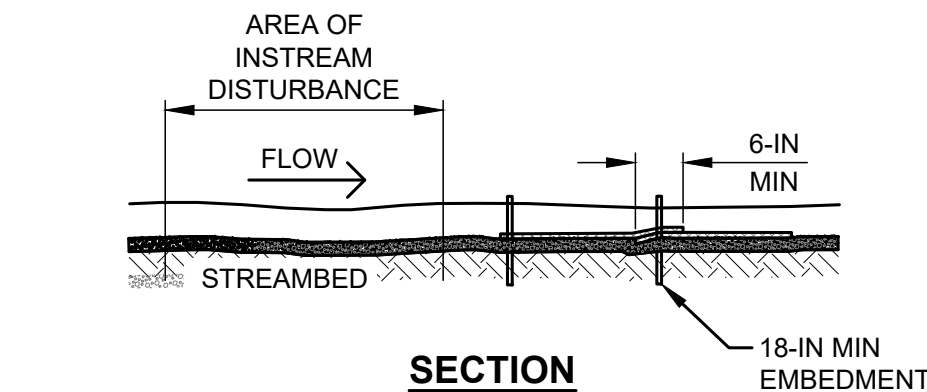
CONSTRUCTION SEQUENCE

1. INSTALL 2-IN GALVANIZED TUBES ON 3-FT CENTERS.
2. SECURE WIRE MESH TO 2-IN GALVANIZED TUBES WITH WIRE FASTENER.
3. SECURE 1/4-IN 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-FT MIN INTO STREAM BANKS.
6. ADD BRACING TIMBER AS NEEDED TO SUPPORT THE SCREEN.
7. 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.

2 FISH SCREEN DETAIL  
EC2,EC4 N.T.S.



PLAN

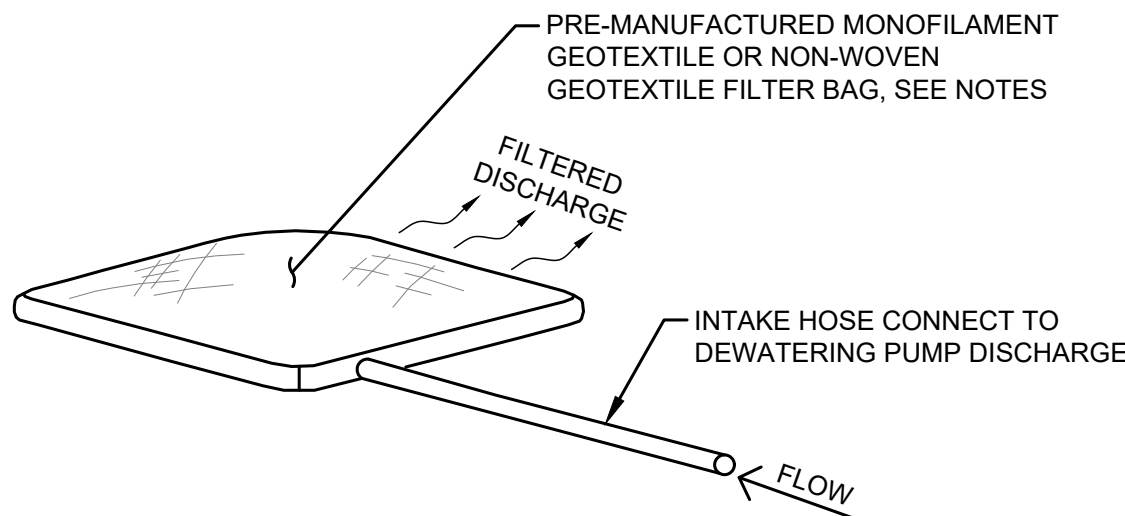


SECTION

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-IN. OVERLAP SIDES A MINIMUM OF 6-IN.
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-IN X 2-IN X 2-FT LONG WOOD STAKES.
5. IF STREAM VELOCITY IS HIGH, ENGINEER MAY REQUIRE ADDITIONAL LENGTH OF SEDIMENT MAT.

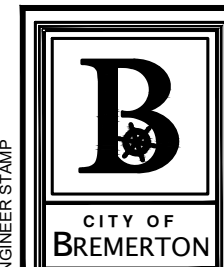
3 SEDIMENT MAT DETAIL  
EC2,EC4 N.T.S.



NOTES:

1. FILTER BAG SHALL BE MINIMUM 10-FT X 15-FT AND REPLACED AS NEEDED TO ACCOMMODATE ACTUAL SEDIMENT LOAD CONDITIONS (I.E. VOLUME, TYPE OF SEDIMENT, ETC.)
2. DRAIN FILTER BAG TO CITY APPROVED RECEIVING AREA. RECEIVING AREA SHALL BE VEGETATED AND UPLAND OF THE OHWM AND TURBIDITY MONITORING STATION.
3. FILTER BAG SYSTEM TO BE INSPECTED DAILY WHEN IN USE TO VERIFY ADEQUATE PERFORMANCE.
4. TURBIDITY MONITORING STATION INSTALLED AND MAINTAINED PER PERMIT REQUIREMENTS. SHOULD A TURBIDITY EXCEEDENCE OCCUR, THE FILTER BAG SYSTEM IS TO BE INSPECTED IMMEDIATELY AND REPLACED IF ANOTHER SEDIMENT SOURCE IS NOT IDENTIFIED.

4 FILTER BAG DETAIL  
EC2,EC4 N.T.S.



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ENGINEERING DIVISION

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DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848 DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:  
S16, T24N, R1E, W.M.

GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS

SITE PREPARATION, TEMPORARY STREAM DIVERSION  
& TESC DETAILS - 1

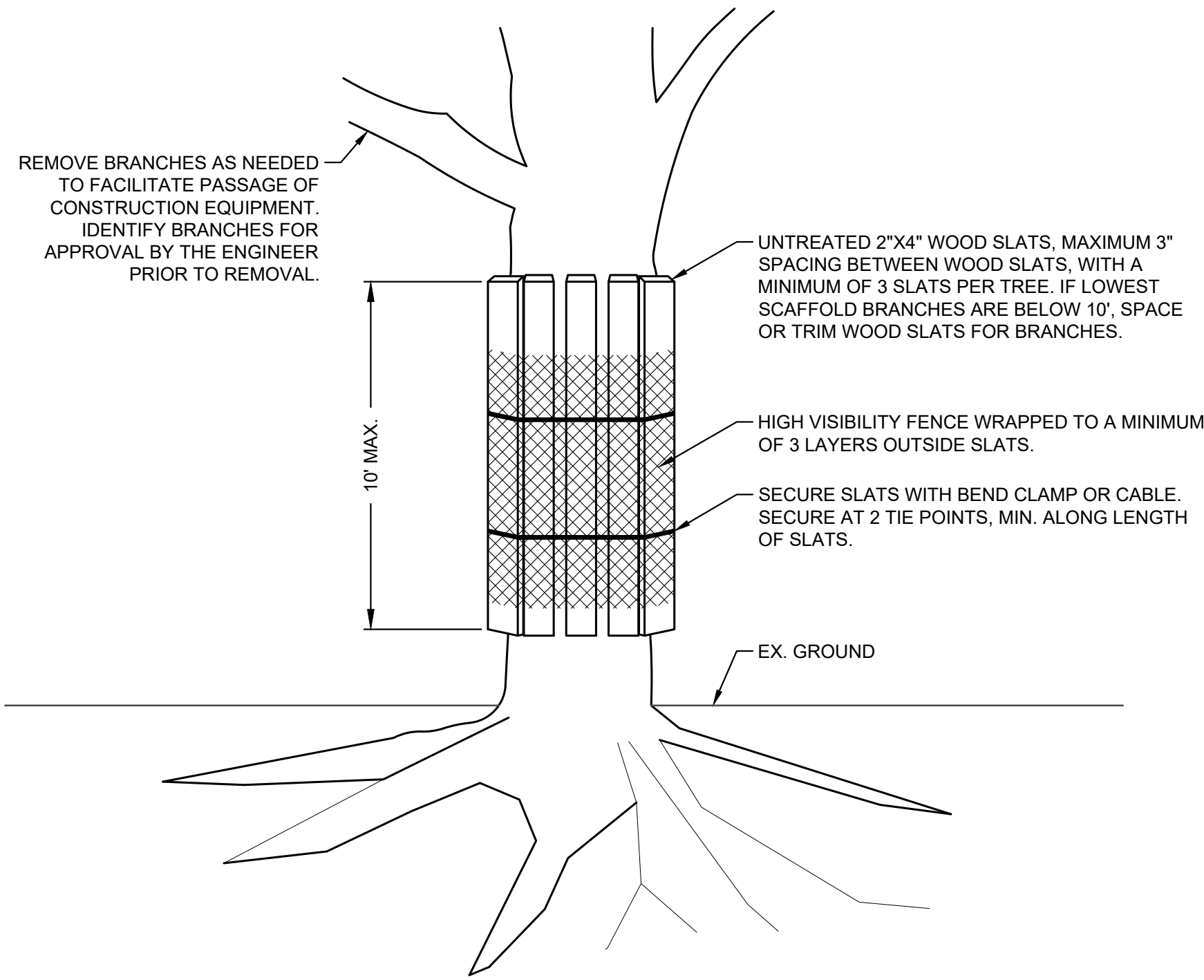
SHEET  
14 OF 34  
PN: 4571  
DWG  
EC5



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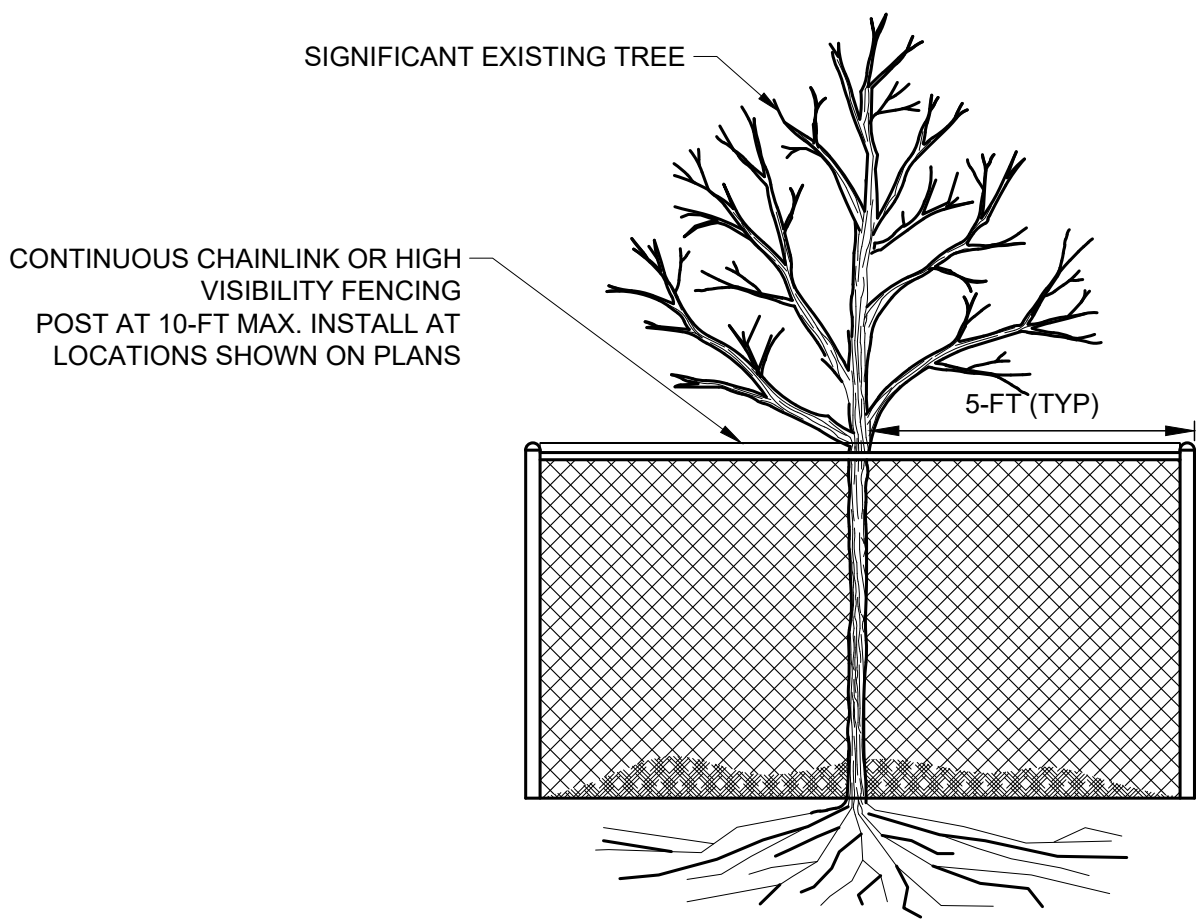


**NOTES:**

1. WRAP HIGH VISIBILITY FENCE ON TOP OF WOOD SLATS WITH AN OVERLAP OF 12" AND TIE WITH WIRE.
2. TRUNK WRAP SHALL BE IN PLACE NO MORE THAN 5 WORKING DAYS BEFORE WORK ADJACENT TO TREE, AND REMOVED NO MORE THAN 5 WORKING DAYS AFTER WORK ADJACENT TO TREE, UNLESS OTHERWISE DIRECTED BY THE CITY.
3. FOR PROJECT DURATIONS LASTING MORE THAN 4 MONTHS, LANDSCAPE ARCHITECT TO INSPECT AND DETERMINE IF PROTECTION NEEDS TO BE ADJUSTED.
4. REDUCE ROOT ZONE COMPACTION: WOOD CHIP MULCH SHALL BE APPLIED TO A SIX-INCH DEPTH, WITH  $\frac{5}{8}$  PLYWOOD SHEETING OR A STEEL PLATE ON TOP. WOOD CHIP MULCH TO SIX-INCH DEPTH WITH  $\frac{5}{8}$  PLYWOOD SHEETING SHALL BE TEMPORARILY UTILIZED WHEN HEAVY MACHINERY AND EQUIPMENT ARE WITHIN THE DRIPLINE OF THE TREE. ONCE ASSOCIATED CONSTRUCTION WORK ENDS, WOOD CHIP MULCH AND PLYWOOD / STEEL PLATE SHALL BE REMOVED.
5. SEE SPECIFICATION SPECIAL PROVISIONS 9.14.

**1 TRUNK WRAP DETAIL**

EC2,EC3 N.T.S.  
EC4

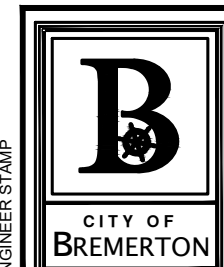


**NOTES:**

1. CONTRACTOR SHALL PLACE 6 INCHES OF COMPOSTED WOODCHIPS WITHIN THE FENCE LIMITS.
2. MINIMUM FOUR (4) FT HIGH TEMPORARY CHAIN LINK FENCE OR HIGH VISIBILITY FENCE FASTENED, AS APPROVED BY THE ENGINEER, TO STEEL STAKES/ POLES DRIVEN SECURELY INTO THE GROUND SHALL BE PLACED MINIMUM FIVE FEET BEYOND THE TREE FOR ALL INDIVIDUAL TREES. ANY DEVIATION FROM THE TREE FENCING METHODS LISTED ABOVE MUST BE AUTHORIZED IN WRITING BY THE CITY IN ADVANCE.
3. 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.
4. 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. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT AND WITH PRIOR APPROVAL BY THE CITY.
5. IF TREE PROTECTION FENCING AS DESCRIBED ABOVE IS INFEASIBLE DUE TO CONSTRUCTION ACTIVITIES, CONTRACTOR MAY PROTECT TREE USING TRUNK WRAP PER DETAIL 1 THIS SHEET. USE OF TRUNK WRAP PROTECTION MUST BE APPROVED BY THE ENGINEER AND AUTHORIZED IN WRITING BY THE CITY.

**2 TREE PROTECTION FENCE DETAIL**

EC2,EC3 N.T.S.  
EC4



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CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
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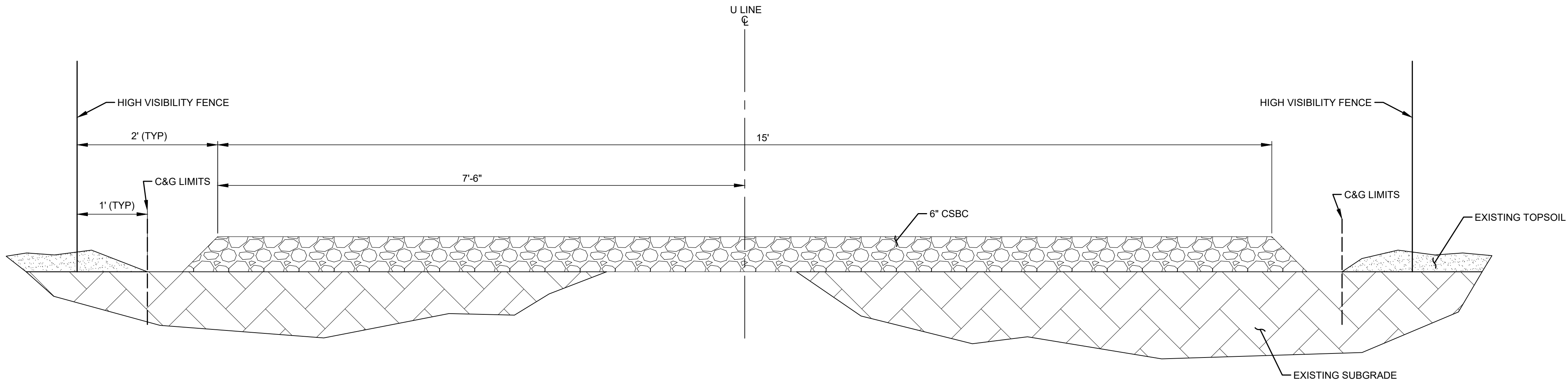
SECTION, TOWNSHIP, RANGE:	ANDERSON CREEK DAM REMOVALS  SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC DETAILS - 2	SHEET 15 OF 34
S16, T24N, R1E, W.M.		PN: 4571
GRANT/LOAN INFORMATION		DWG EC6



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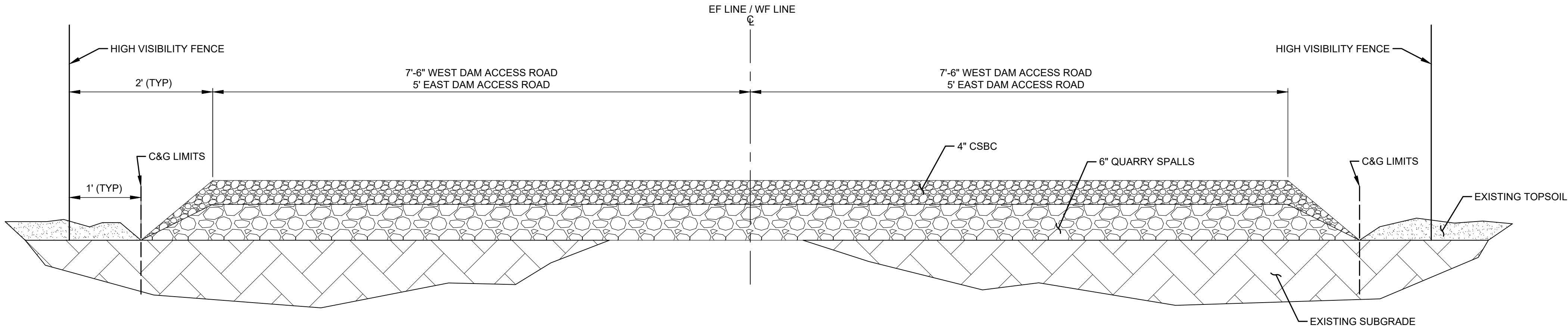
FILE: P\_20-220002-EXIST\_DET - LAYOUT: SITE PREPARATION - TEMPORARY STREAM DIVERSION & TESC DETAILS - 3 - PATH: C:\p\_w\oc\workingdir\osbornconsulting-pw-01\hue\_ong\dwg\ms32284 - PLOTTED BY: hueo - DATE: Tuesday, May 7, 2024 8:41:41 AM



**1 UPLAND ACCESS ROAD**  
EC2, EC3 N.T.S.  
EC4 U-LINE STA 1+98.82 TO STA 11+61.80  
EFA-LINE STA 32+06.31 TO STA 36+10.12

**UPLAND ACCESS ROAD PREPARATION NOTES:**

1. REMOVE EXISTING VEGETATION FOR CONSTRUCTION OF UPLAND ACCESS ROAD AND OVERHEAD CLEARANCE FOR EQUIPMENT.
2. REMOVE AND STOCKPILE SURFICIAL LOOSE MATERIAL, INCLUDING ORGANIC TOPSOIL AND ANY TREE STUMPS, IN THE MATERIAL STOCKPILE AND STAGING AREAS IDENTIFIED ON SHEETS EC3 AND EC4 TO EXPOSE UNDERLYING SOIL. PREPARED SUBGRADE TO BE INSPECTED BY ENGINEER PRIOR TO ADVANCING ACCESS ROAD CONSTRUCTION.
3. PLACE A MINIMUM OF 6 INCHES OF CSBC PER WSDOT STANDARD SPECIFICATION 9-03.9(3). PLACE AND COMPACT CSBC.
4. MONITOR THE UPLAND ACCESS ROAD WITH THE PASSAGE OF CONSTRUCTION EQUIPMENT. AS APPROVED BY THE ENGINEER, PLACE ADDITIONAL CSBC TO MAINTAIN ACCESS ROAD.



**2 WEST FORK/EAST FORK DAM ACCESS ROAD DETAIL**  
EC2, EC3 N.T.S.  
EC4 WFA-LINE STA 20+00 TO STA 22+74.73  
EFA-LINE STA 30+00 TO STA 32+06.31

**DAM ACCESS ROAD PREPARATION NOTES:**

1. REMOVE EXISTING VEGETATION FOR CONSTRUCTION OF DAM ACCESS ROAD AND OVERHEAD CLEARANCE FOR EQUIPMENT.
2. REMOVE AND STOCKPILE SURFICIAL LOOSE MATERIAL, INCLUDING ORGANIC TOPSOIL AND ANY TREE STUMPS, IN THE MATERIAL STOCKPILE AND STAGING AREAS IDENTIFIED ON SHEETS EC3 AND EC4 TO EXPOSE UNDERLYING SOIL. PREPARED SUBGRADE TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO ADVANCING ACCESS ROAD CONSTRUCTION.
3. PLACE 6-INCHES OF 4-INCH TO 8-INCH QUARRY SPALLS PER WSDOT STD SPECIFICATION 9-13.1(5).
4. PLACE A MINIMUM OF 4 INCHES OF CSBC PER WSDOT STANDARD SPECIFICATION 9-03.9(3) OVER THE QUARRY SPALLS AS A CHOKING LAYER. PLACE AND COMPACT CSBC TO FILL VOIDS ON TOP OF QUARRY SPALLS.
5. MONITOR THE DAM ACCESS ROAD WITH THE PASSAGE OF CONSTRUCTION EQUIPMENT. AS APPROVED BY THE ENGINEER, PLACE ADDITIONAL CSBC TO MAINTAIN ACCESS ROAD



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**ANDERSON CREEK DAM REMOVALS**  
  
**SITE PREPARATION, TEMPORARY STREAM DIVERSION & TESC DETAILS - 3**

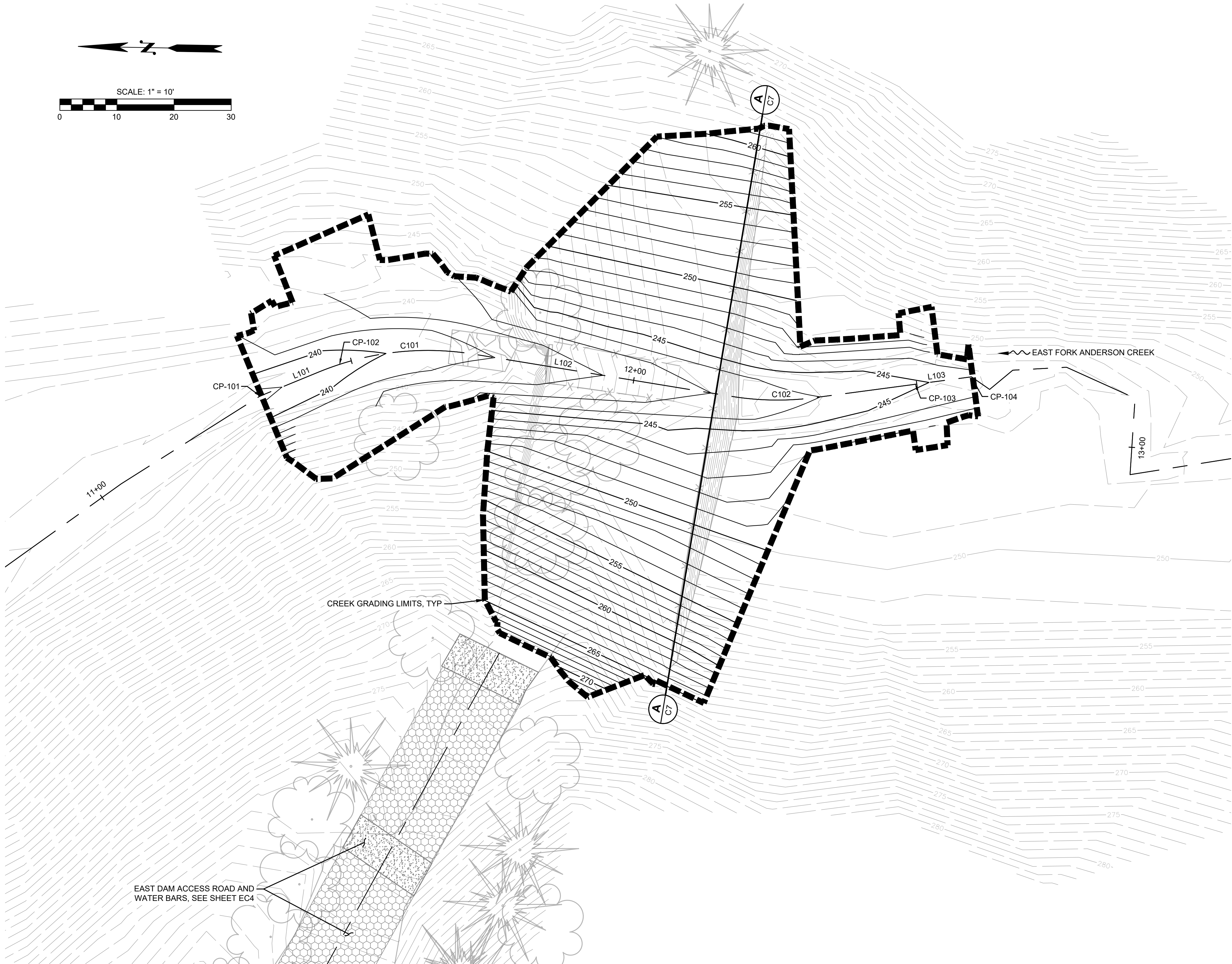
SHEET 16 OF 34
PN: 4571
DWG EC7



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- GENERAL NOTES:**
- SEE SHEET C3 AND SHEET C5 FOR PROPOSED STREAM CHANNEL PLAN AND PROFILE.
  - SEE SECTION A ON SHEET C7 FOR STREAM CROSS SECTION.
  - ALL DISTURBED AREAS SHALL BE RESTORED PER SHEETS R1-R4.
  - FILL SOIL EXCAVATED BELOW TOPSOIL LAYER (SEE SITE PREPARATION & DEMOLITION KEY NOTE 7, SHEET EC4), TO BE STOCKPILED IN MATERIAL STOCKPILE AND STAGING AREAS IDENTIFIED ON SHEET EC3 AND EC4.

EAST FORK ANDERSON CREEK CENTERLINE LINE TABLE				
LINE ID	LENGTH	BEARING	START POINT	END POINT

EAST FORK ANDERSON CREEK CENTERLINE CURVE TABLE			
CURVE ID	DELTA	RADIUS	LENGTH

EAST FORK ANDERSON CREEK CONSTRUCTION POINT TABLE			
POINT ID	STATION	OFFSET	DESCRIPTION
CP-101	11+32.86	0.00C	DOWNSTREAM TIE-IN POINT MATCH EXISTING GRADE @ THALWEG (238.78'), BEGIN TRANSITION FROM EXISTING CHANNEL SECTION TO CHANNEL SECTION A
CP-102	11+47.86	0.00C	END TRANSITION FROM EXISTING CHANNEL SECTION TO CHANNEL SECTION A
CP-103	12+49.74	0.00C	BEGIN TRANSITION FROM CHANNEL SECTION A TO EXISTING CHANNEL SECTION
CP-104	12+59.65	0.00C	UPSTREAM TIE-IN POINT MATCH EXISTING GRADE @ THALWEG (245.39'), END TRANSITION FROM CHANNEL SECTION A TO EXISTING CHANNEL SECTION



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**ENGINEERING DIVISION**

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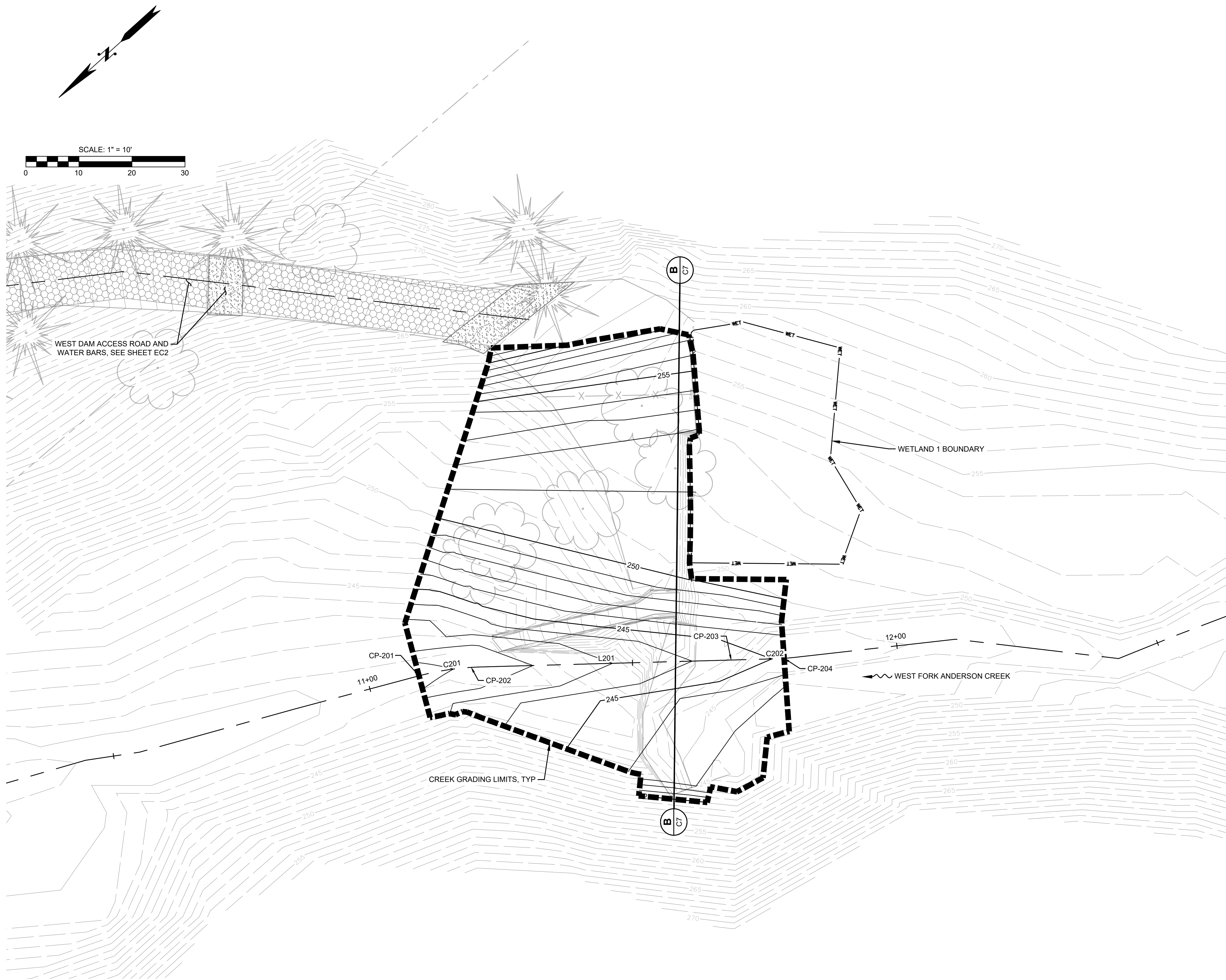
SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

**ANDERSON CREEK DAM REMOVALS**  
**EAST FORK ANDERSON CREEK**  
**GRADING PLAN - 1**

SHEET 17 OF 34
PN: 4571
DWG <b>C1</b>



FILE: P\_20-220002-GRAD-2 LAYOUT: GRADING PLAN - 2 PATH: C:\pw\_oc\workingdir\osbornconsulting-pw-01\vue org\dms32284. PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:41:54 AM

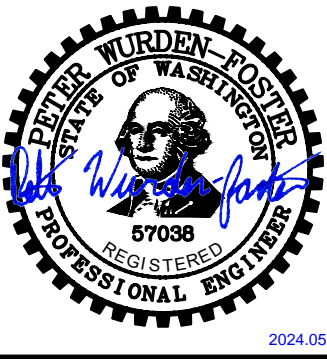


- GENERAL NOTES:**
- SEE SHEET C4 AND SHEET C6 FOR PROPOSED STREAM CHANNEL PLAN AND PROFILE.
  - SEE SECTION B ON SHEET C7 FOR STREAM CROSS SECTION.
  - ALL DISTURBED AREAS SHALL BE RESTORED PER SHEETS R1-R4.
  - FILL SOIL EXCAVATED BELOW TOPSOIL LAYER (SEE SITE PREPARATION & DEMOLITION KEY NOTE 7, SHEET EC2), TO BE STOCKPILED IN MATERIAL STOCKPILE AND STAGING AREAS IDENTIFIED ON SHEET EC3 AND EC4.
  - CONTRACTOR SHALL NOT IMPACT WETLAND 1. SEE SHEET EC2.

WEST FORK ANDERSON CREEK CENTERLINE LINE TABLE				
LINE ID	LENGTH	BEARING	START POINT	END POINT
L201	55.28	S41° 23' 52.86"W	N 192944.9786, E 1181649.1728	N 192903.5102, E 1181612.6161

WEST FORK ANDERSON CREEK CENTERLINE CURVE DATA TABLE			
CURVE ID	DELTA	RADIUS	LENGTH
C201	13.3590	50.00	11.66
C202	4.8493	50.00	4.23

WEST FORK ANDERSON CREEK CONSTRUCTION POINT TABLE			
POINT ID	STATION	OFFSET	DESCRIPTION
CP-201	11+09.57	0.00C	DOWNSTREAM TIE-IN POINT MATCH EXISTING GRADE @ THALWEG (240.58'), BEGIN TRANSITION FROM EXISTING CHANNEL SECTION TO CHANNEL SECTION B
CP-202	11+19.57	0.00C	END TRANSITION FROM EXISTING CHANNEL SECTION TO CHANNEL SECTION B
CP-203	11+68.61	0.00C	BEGIN TRANSITION FROM CHANNEL SECTION B TO EXISTING CHANNEL SECTION
CP-204	11+78.61	0.00C	UPSTREAM TIE-IN POINT MATCH EXISTING GRADE @ THALWEG (245.15'), BEGIN TRANSITION FROM CHANNEL SECTION TO CHANNEL SECTION B



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SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

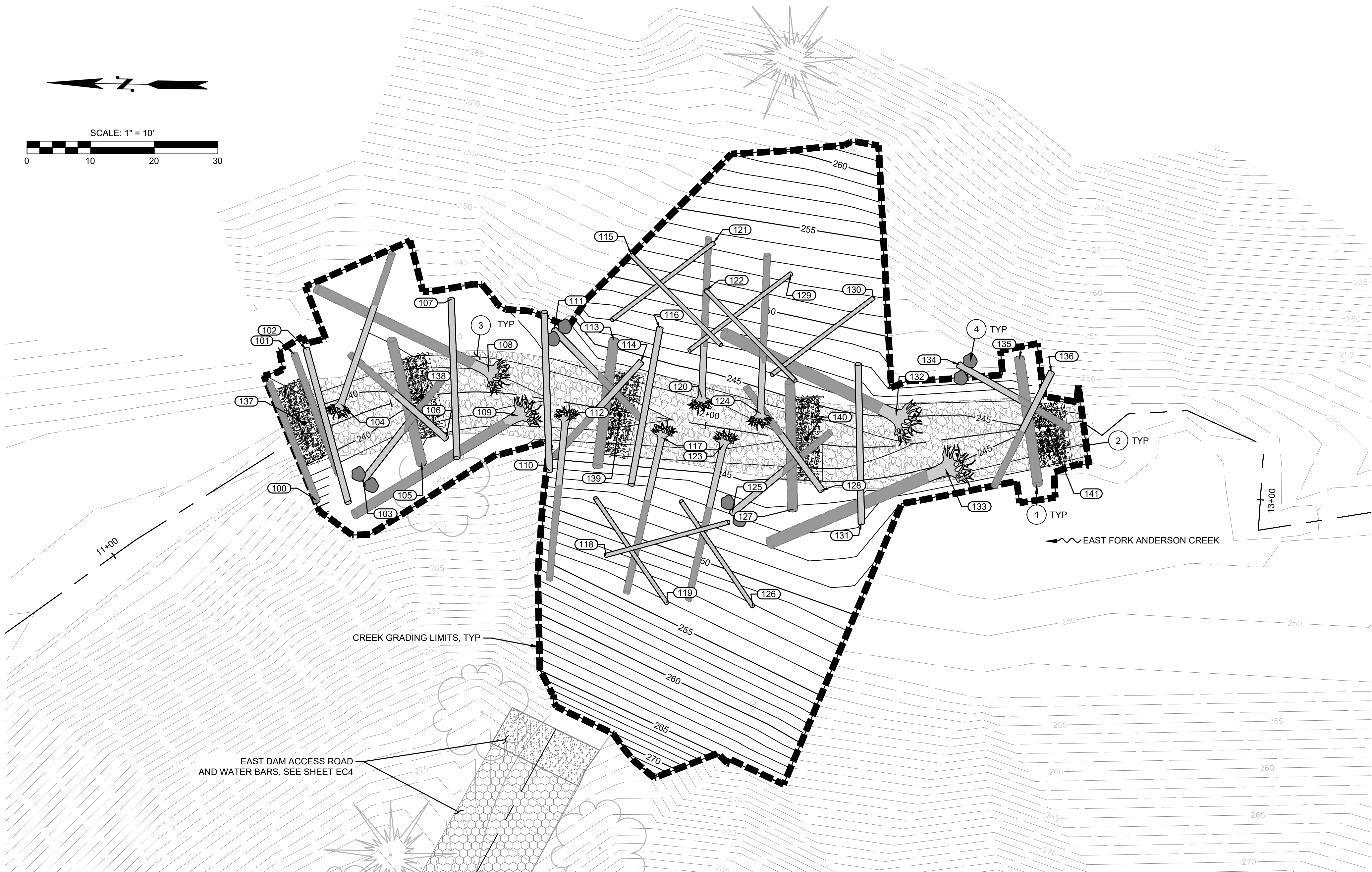
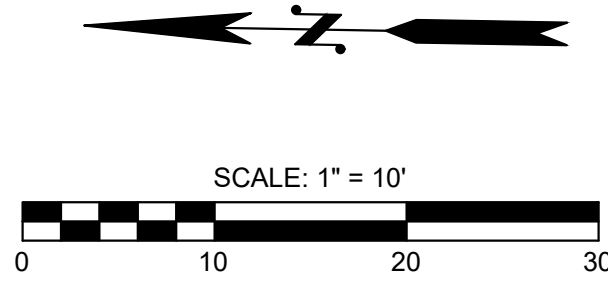
**ANDERSON CREEK DAM REMOVALS**  
**WEST FORK ANDERSON CREEK**  
**GRADING PLAN - 2**

SHEET 18 OF 34
PN: 4571
DWG <b>C2</b>



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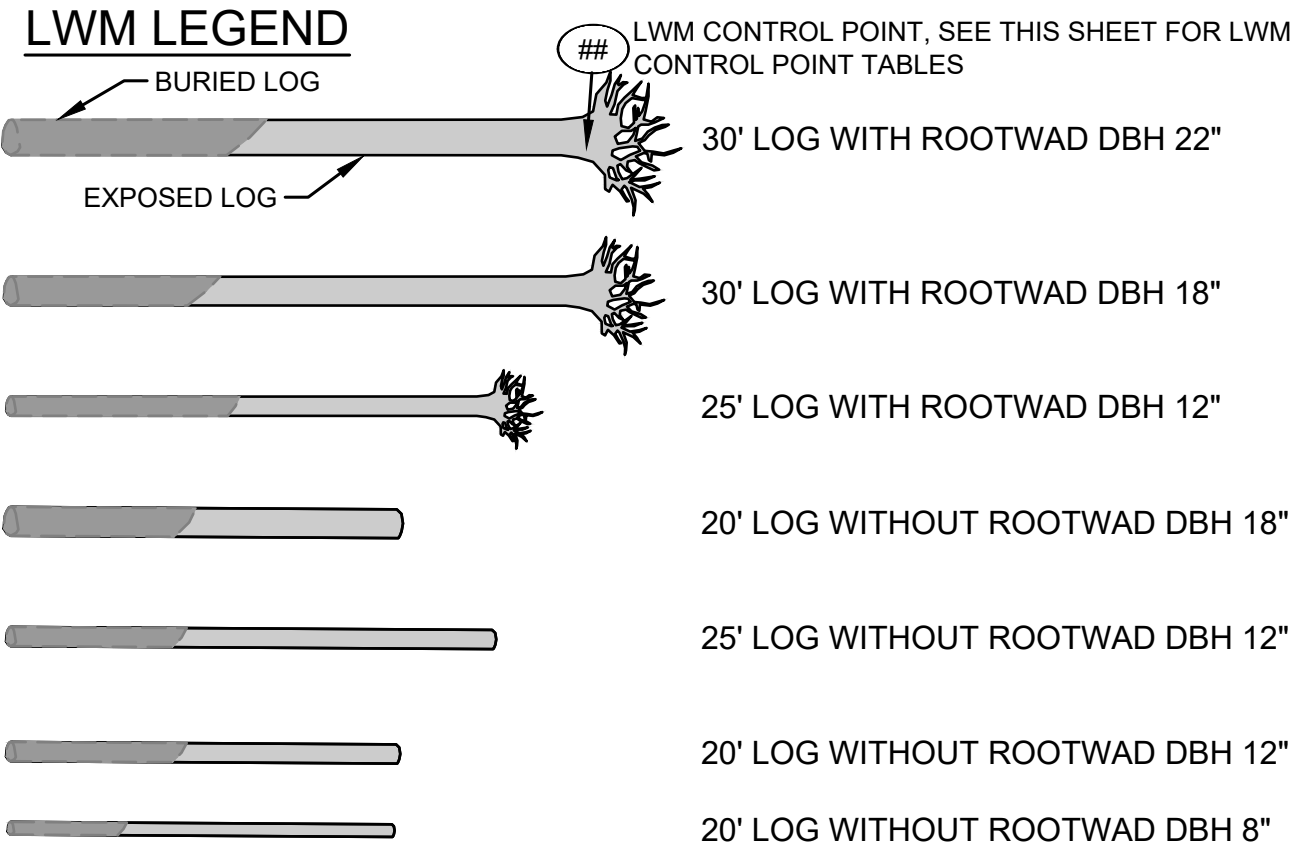
GENERAL NOTES:

- 1. SEE SHEET C5 FOR PROPOSED STREAM PROFILE.
- 2. SEE SECTION A ON SHEET C7 FOR STREAM CROSS SECTION.
- 3. ALL DISTURBED AREAS SHALL BE RESTORED PER SHEETS R1-R4.
- 4. ALL LWM USED IN THE STREAM DESIGN SHALL EITHER BE EXISTING TREES THAT ARE REMOVED AS PART OF CONSTRUCTION OR CITY SUPPLIED LWM THAT WILL BE IMPORTED FROM OFFSITE.

KEY NOTES:

- 1 LOCATIONS AND ORIENTATIONS OF LOG PIECES AS SHOWN ON THIS SHEET ARE APPROXIMATE. LOG LOCATIONS MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER. SEE DETAILS ON SHEET C8. AND LWM CONTROL POINT TABLES ON THIS SHEET.
- 2 DEFORMABLE GRADE CONTROL, SEE DETAIL ON SHEET C10.
- 3 STREAMBED AGGREGATE, PLACE PER SECTION A ON SHEET C7.
- 4 HABITAT BOULDER TYPE 3 PER WSDOT STANDARD SPECIFICATION 9-03.11(5) PLACE PER DETAIL ON SHEET C10.

LWM LEGEND



LOG TYPE SCHEDULE	
LOG TYPE	NUMBER OF LOGS
30' LOG WITH ROOTWAD DBH 22"	2
30' LOG WITH ROOTWAD DBH 18"	2
25' LOG WITH ROOTWAD DBH 12"	6
20' LOG WITHOUT ROOTWAD DBH 18"	4
25' LOG WITHOUT ROOTWAD DBH 12"	5
20' LOG WITHOUT ROOTWAD DBH 12"	10
20' LOG WITHOUT ROOTWAD DBH 8"	8
DEFORMABLE GRADE CONTROL SLASH (3-8" DBH 3-5")	18 CY

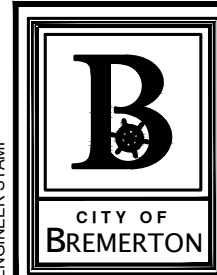
HABITAT BOULDER SCHEDULE	
HABITAT BOULDER TYPE	NUMBER OF BOULDERS
HABITAT BOULDER TYPE 3	8

LARGE WOODY MATERIAL			
POINT #	DESCRIPTION	NORTHING	EASTING
100	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 3	192869.6539	1182592.0196
101	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 3	192872.8995	1182615.0930
102	25' LOG WITHOUT ROOTWAD DBH 12", DETAIL 3	192870.9938	1182615.8111
103	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192862.3022	1182595.1035
104	25' LOG WITH ROOTWAD DBH 12", DETAIL 2	192865.6627	1182607.1671
105	20' LOG WITHOUT ROOTWAD DBH 18", DETAIL 1	192853.1078	1182597.6435
106	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192849.2443	1182601.5191
107	25' LOG WITHOUT ROOTWAD DBH 12", DETAIL 3	192848.1302	1182623.3774
108	30' LOG WITH ROOTWAD DBH 18", DETAIL 4	192842.4080	1182611.9807
109	30' LOG WITH ROOTWAD DBH 18", DETAIL 4	192837.8918	1182604.9149
110	25' LOG WITHOUT ROOTWAD DBH 12", DETAIL 3	192833.0595	1182596.2021

LARGE WOODY MATERIAL			
POINT #	DESCRIPTION	NORTHING	EASTING
111	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192832.0141	1182618.3523
112	25' LOG WITH ROOTWAD DBH 12", DETAIL 2	192830.4986	1182603.9221
113	20' LOG WITHOUT ROOTWAD DBH 18", DETAIL 1	192822.6406	1182616.5844
114	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192818.4687	1182613.0429
115	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192819.7148	1182629.9742
116	25' LOG WITHOUT ROOTWAD DBH 12", DETAIL 3	192815.3863	1182618.3629
117	25' LOG WITH ROOTWAD DBH 12", DETAIL 2	192815.3443	1182601.2024
118	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192824.3663	1182582.7698
119	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192814.8653	1182575.1595
120	25' LOG WITH ROOTWAD DBH 12", DETAIL 2	192808.9453	1182607.4620
121	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192806.7833	1182631.6265

LARGE WOODY MATERIAL			
POINT #	DESCRIPTION	NORTHING	EASTING
122	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192808.0821	1182624.2066
123	25' LOG WITH ROOTWAD DBH 12", DETAIL 2	192805.6321	1182599.9347
124	25' LOG WITH ROOTWAD DBH 12", DETAIL 2	192799.7465	1182604.7432
125	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192804.4387	1182589.1240
126	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192801.3828	1182574.4634
127	20' LOG WITHOUT ROOTWAD DBH 18", DETAIL 1	192794.9126	1182589.6169
128	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192790.3959	1182592.5065
129	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192794.6701	1182626.6588
130	20' LOG WITHOUT ROOTWAD DBH 8", DETAIL 3	192781.7747	1182622.6628
131	25' LOG WITHOUT ROOTWAD DBH 12", DETAIL 3	192784.1396	1182587.3166
132	30' LOG WITH ROOTWAD DBH 22", DETAIL 4	192778.4458	1182604.0435

LARGE WOODY MATERIAL			
POINT #	DESCRIPTION	NORTHING	EASTING
133	30' LOG WITH ROOTWAD DBH 22", DETAIL 4	192770.8188	1182595.6558
134	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192768.4397	1182611.9683
135	20' LOG WITHOUT ROOTWAD DBH 18", DETAIL 1	192758.9380	1182612.8092
136	20' LOG WITHOUT ROOTWAD DBH 12", DETAIL 1	192753.9619	1182610.5321
137	DEFORMABLE GRADE CONTROL	192871.4824	1182604.2276
138	DEFORMABLE GRADE CONTROL	192852.9757	1182608.1247
139	DEFORMABLE GRADE CONTROL	192821.8511	1182604.8194
140	DEFORMABLE GRADE CONTROL	192792.5393	1182600.6986
141	DEFORMABLE GRADE CONTROL	192754.4936	1182601.4422



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038    DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848    DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE: S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

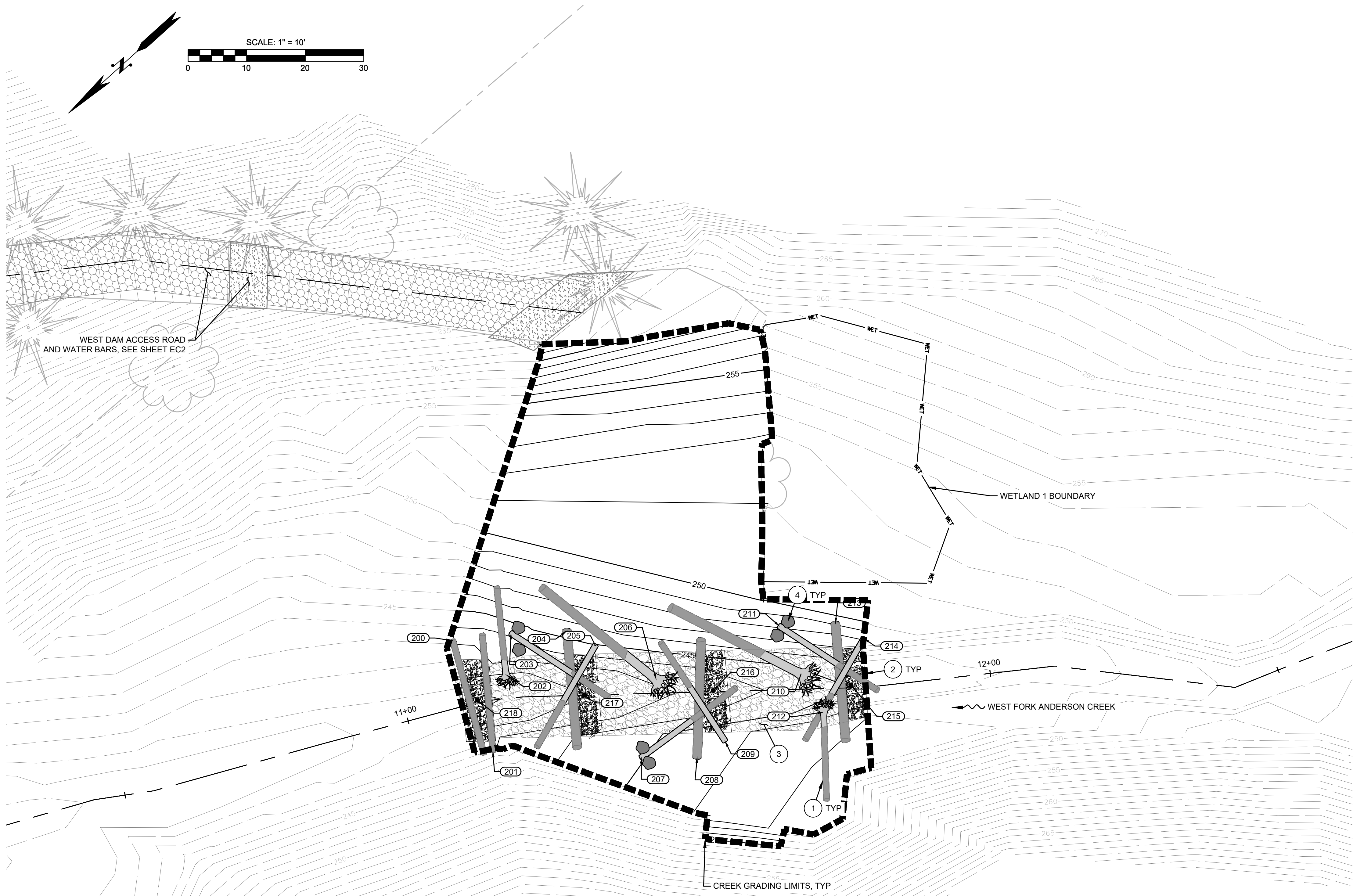
ANDERSON CREEK DAM REMOVALS  
EAST FORK ANDERSON CREEK  
STREAM CHANNEL PLAN - 1



SHEET 19 OF 34
PN: 4571
DWG <b>C3</b>



FILE: P\_20-220002-R1WR-2 LAYOUT: STREAM CHANNEL PLAN - 2 PATH: C:\pw\_oc\workingdir\osbornconsulting-pw-01\ue org\dms32284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:42:12 AM



- GENERAL NOTES:**
- SEE SHEET C6 FOR PROPOSED STREAM PROFILE.
  - SEE SECTION B ON SHEET C7 FOR STREAM CROSS SECTION.
  - ALL DISTURBED AREAS SHALL BE RESTORED PER SHEETS R1-R4.
  - ALL LWM USED IN THE STREAM DESIGN SHALL EITHER BE EXISTING TREES THAT ARE REMOVED AS PART OF CONSTRUCTION OR CITY SUPPLIED LWM THAT WILL BE IMPORTED FROM OFFSITE.

- KEY NOTES:**
- LOCATIONS AND ORIENTATIONS OF LOG PIECES AS SHOWN ON THIS SHEET ARE APPROXIMATE. LOG LOCATIONS MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER. SEE DETAILS ON SHEET C9 AND AND LWM CONTROL POINT TABLES ON THIS SHEET.
  - DEFORMABLE GRADE CONTROL, SEE DETAIL ON SHEET C10.
  - STREAMBED AGGREGATE, PLACE PER SECTION B ON SHEET C7.
  - HABITAT BOULDER TYPE 3 PER WSDOT STANDARD SPECIFICATION 9-03.11(5) PLACE PER DETAIL ON SHEET C10.

**LWM LEGEND**

**BURIED LOG**

**EXPOSED LOG**

**LWM CONTROL POINT, SEE THIS SHEET FOR LWM CONTROL POINT TABLES**

**25' LOG WITH ROOTWAD DBH 18"**

**20' LOG WITHOUT ROOTWAD DBH 18"**

**20' LOG WITHOUT ROOTWAD DBH 12"**

**15' LOG WITH ROOTWAD DBH 12"**

**DEFORMABLE GRADE CONTROL**

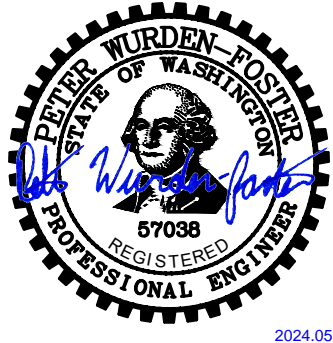
LOG TYPE SCHEDULE	
LOG TYPE	NUMBER OF LOGS
25' LOG WITH ROOTWAD DBH 18"	2
20' LOG WITHOUT ROOTWAD DBH 18"	3
20' LOG WITHOUT ROOTWAD DBH 12"	8
15' LOG WITH ROOTWAD DBH 12"	2
DEFORMABLE GRADE CONTROL SLASH (3-8" DBH 3-5")	11 CY

HABITAT BOULDER SCHEDULE	
HABITAT BOULDER TYPE	NUMBER OF BOULDERS
HABITAT BOULDER TYPE 3	6

LARGE WOODY MATERIAL			
POINT #	DESCRIPTION	NORTHING	EASTING
200	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 3	192948.0588	1181665.1041
201	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 3	192955.9277	1181646.6660
202	15' LOG WITH ROOTWAD 12" DBH, DETAIL 2	192945.3888	1181654.7013
203	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 1	192939.9448	1181659.2623
204	20' LOG WITHOUT ROOTWAD 18" DBH, DETAIL 1	192932.6837	1181653.0765
205	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 1	192930.8187	1181647.9317
206	25' LOG WITH ROOTWAD 18" DBH, DETAIL 4	192927.1970	1181636.5893
207	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 1	192938.1188	1181628.5979

LARGE WOODY MATERIAL			
POINT #	DESCRIPTION	NORTHING	EASTING
208	20' LOG WITHOUT ROOTWAD 18" DBH, DETAIL 1	192931.0713	1181622.1698
209	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 1	192925.7332	1181620.9647
210	25' LOG WITH ROOTWAD 18" DBH, DETAIL 4	192908.4483	1181620.4352
211	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 1	192905.5838	1181628.9029
212	15' LOG WITH ROOTWAD 12" DBH, DETAIL 2	192910.0540	1181613.0467
213	20' LOG WITHOUT ROOTWAD 18" DBH, DETAIL 1	192898.3226	1181622.7172
214	20' LOG WITHOUT ROOTWAD 12" DBH, DETAIL 1	192896.4576	1181617.5724
215	DEFORMABLE GRADE CONTROL	192903.4812	1181613.2559

LARGE WOODY MATERIAL			
POINT #	DESCRIPTION	NORTHING	EASTING
216	DEFORMABLE GRADE CONTROL	192921.3412	1181628.5913
217	DEFORMABLE GRADE CONTROL	192938.0023	1181643.0229
218	DEFORMABLE GRADE CONTROL	192951.9204	1181654.8100



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038    DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848    DATE: 03/20/2024

<b>SECTION, TOWNSHIP, RANGE:</b> S16, T24N, R1E, W.M.
<b>GRANT/LOAN INFORMATION</b>

**ANDERSON CREEK DAM REMOVALS**  
**WEST FORK ANDERSON CREEK**  
**STREAM CHANNEL PLAN - 2**

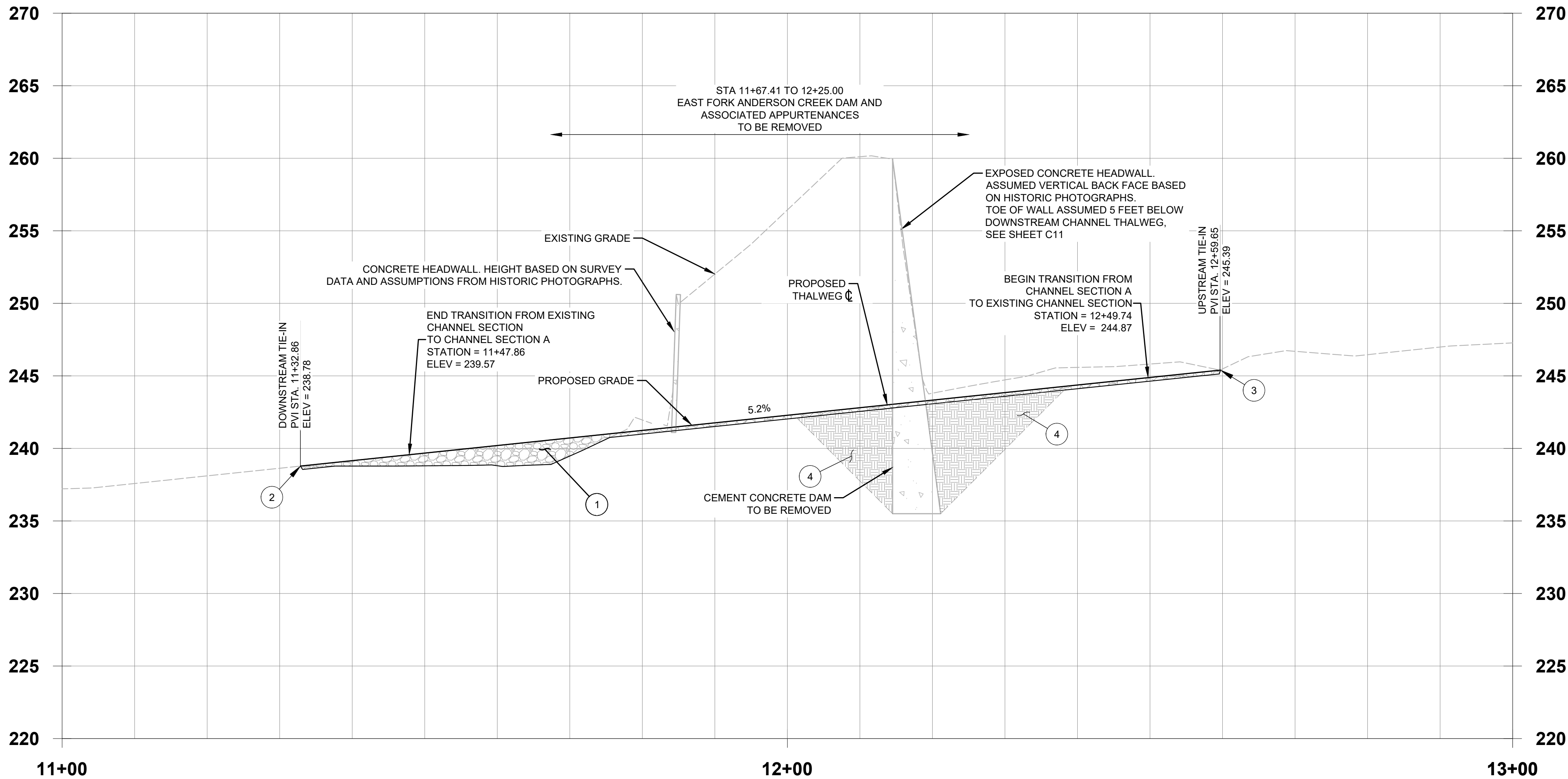
SHEET 20 OF 34
PN: 4571
DWG <b>C4</b>



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FILE: P\_20-220002-PROF-1 LAYOUT: STREAM CHANNEL PROFILE - 1 PATH: C:\pw\_dct\_workingdir\osbornconsulting-pw-01\ue\_ong\dms32284\_ PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:42:17 AM

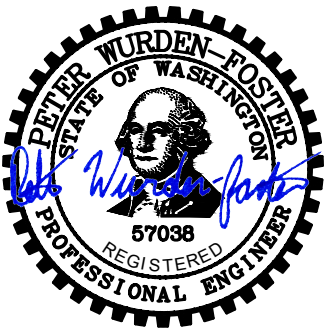
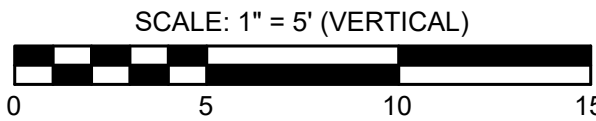
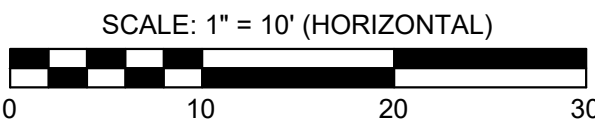


**GENERAL NOTES:**

1. SEE SHEET C1 FOR STREAM GRADING PLAN AND SHEET C3 FOR PROPOSED STREAM CHANNEL PLAN.
2. SEE SECTION A ON SHEET C7 FOR STREAM CROSS SECTION.
3. PROFILE SHOWN ALONG PROPOSED CREEK THALWEG.
4. SEE SPECIAL PROVISIONS "AGGREGATES FOR STREAMS".

**KEY NOTES:**

- 1 GRADE PROPOSED CHANNEL SECTION INTO IN-SITU FILL OR ADVANCE OUTWASH MATERIAL UPON APPROVAL OF ENGINEER AND GEOTECHNICAL ENGINEER PER SECTION A ON SHEET C7.
- 2 BEGIN NEW STREAM CHANNEL, MATCH EXISTING.
- 3 END NEW STREAM CHANNEL, MATCH EXISTING.
- 4 BACKFILL EXCAVATION WITH IN-SITU FILL OR ADVANCE OUTWASH MATERIAL UPON APPROVAL OF ENGINEER AND GEOTECHNICAL ENGINEER. IF IN-SITU MATERIAL IS NOT ACCEPTED BY THE ENGINEER, INSTALL STREAMBED MATERIAL CONSISTENT WITH THE STREAMBED MATERIAL MIX PROVIDED IN TABLE 1 ON SHEET C7. CONTRACTOR SHALL PREPARE AND SUBMIT AN AGGREGATE MIXING PLAN FOR APPROVAL PRIOR TO MIXING AGGREGATE.



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038 DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848 DATE: 03/20/2024

**SECTION, TOWNSHIP, RANGE:**  
S16, T24N, R1E, W.M.

**GRANT/LOAN INFORMATION**

**ANDERSON CREEK DAM REMOVALS**  
**EAST FORK ANDERSON CREEK**  
**STREAM CHANNEL PROFILE - 1**

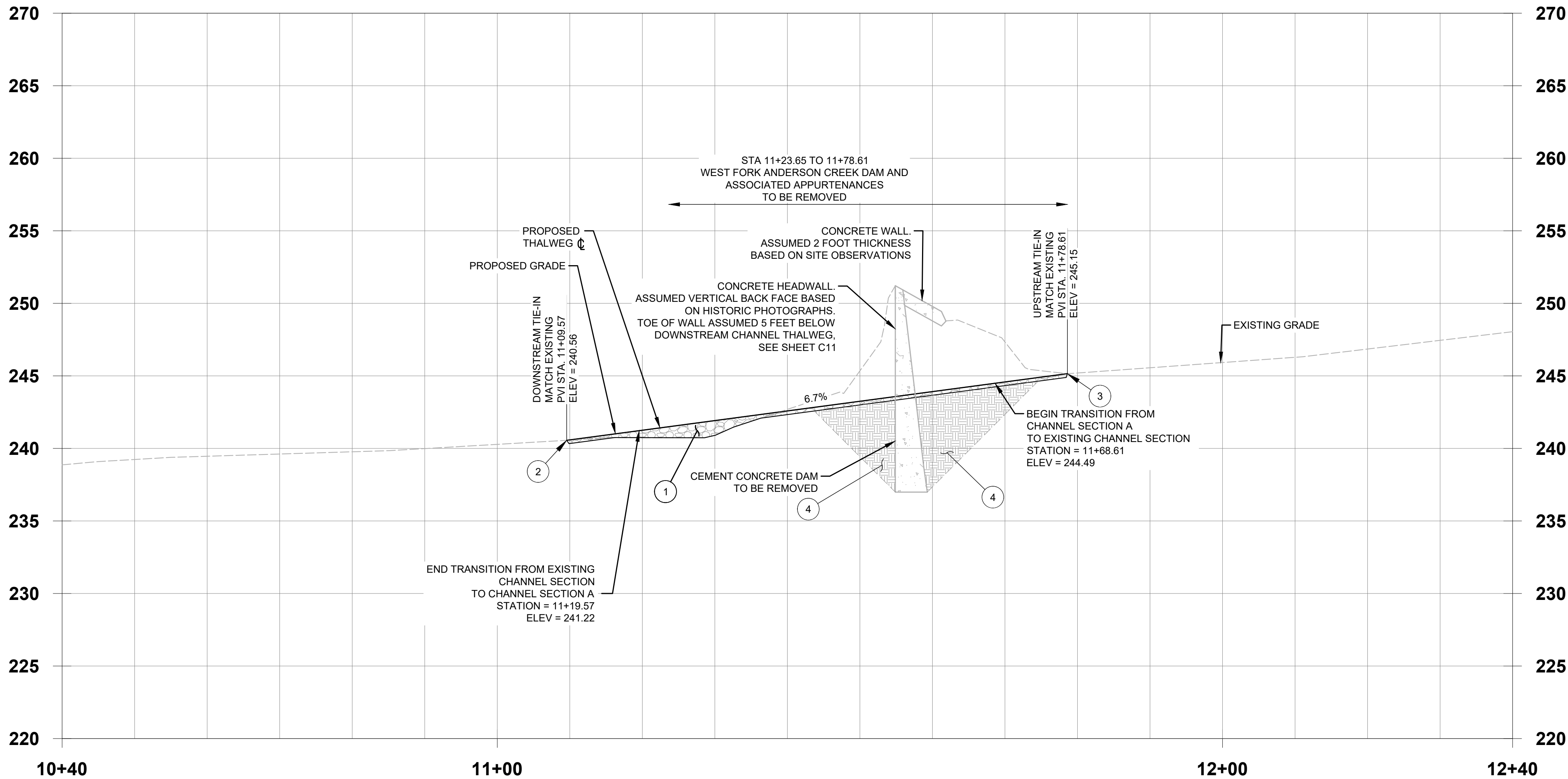
SHEET  
21 OF 34  
PN: 4571  
DWG  
**C5**



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FILE: P\_20-220002\_PROF-2 LAYOUT: STREAM CHANNEL PROFILE - 2 PATH: C:\pw\_coi\_workingdir\osbornconsulting-pw-bentley.com\_osbornconsulting-pw-bentley.com\_osbornconsulting-pw-bentley.com DATE: Tuesday, May 7, 2024 9:42:21 AM PLOTTED BY: hueo

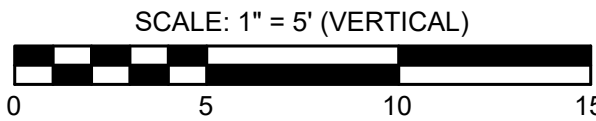
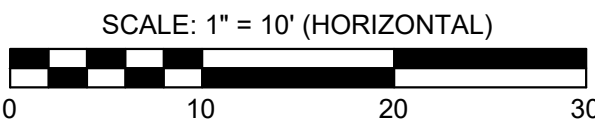


**GENERAL NOTES:**

1. SEE SHEET C2 FOR STREAM GRADING PLAN AND SHEET C4 FOR PROPOSED STREAM CHANNEL PLAN.
2. SEE SECTION B ON SHEET C7 FOR STREAM CROSS SECTION.
3. PROFILE SHOWN ALONG PROPOSED CREEK THALWEG.
4. SEE SPECIAL PROVISIONS "AGGREGATES FOR STREAMS".

**KEY NOTES:**

1. GRADE PROPOSED CHANNEL SECTION INTO IN-SITU FILL OR ADVANCE OUTWASH MATERIAL UPON APPROVAL OF ENGINEER AND GEOTECHNICAL ENGINEER PER SECTION B ON SHEET SHEET C7.
2. BEGIN NEW STREAM CHANNEL, MATCH EXISTING.
3. END NEW STREAM CHANNEL, MATCH EXISTING.
4. BACKFILL EXCAVATION WITH IN-SITU FILL OR ADVANCE OUTWASH MATERIAL UPON APPROVAL OF ENGINEER AND GEOTECHNICAL ENGINEER. IF IN-SITU MATERIAL IS NOT ACCEPTED BY THE ENGINEER, INSTALL STREAMBED MATERIAL CONSISTENT WITH THE STREAMBED MATERIAL MIX PROVIDED IN TABLE 1 ON SHEET C7. CONTRACTOR SHALL PREPARE AND SUBMIT AN AGGREGATE MIXING PLAN FOR APPROVAL PRIOR TO MIXING AGGREGATE.



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038    DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848    DATE: 03/20/2024

**SECTION, TOWNSHIP, RANGE:**  
S16, T24N, R1E, W.M.

**GRANT/LOAN INFORMATION**

**ANDERSON CREEK DAM REMOVALS**  
**WEST FORK ANDERSON CREEK**  
**STREAM CHANNEL PROFILE - 2**

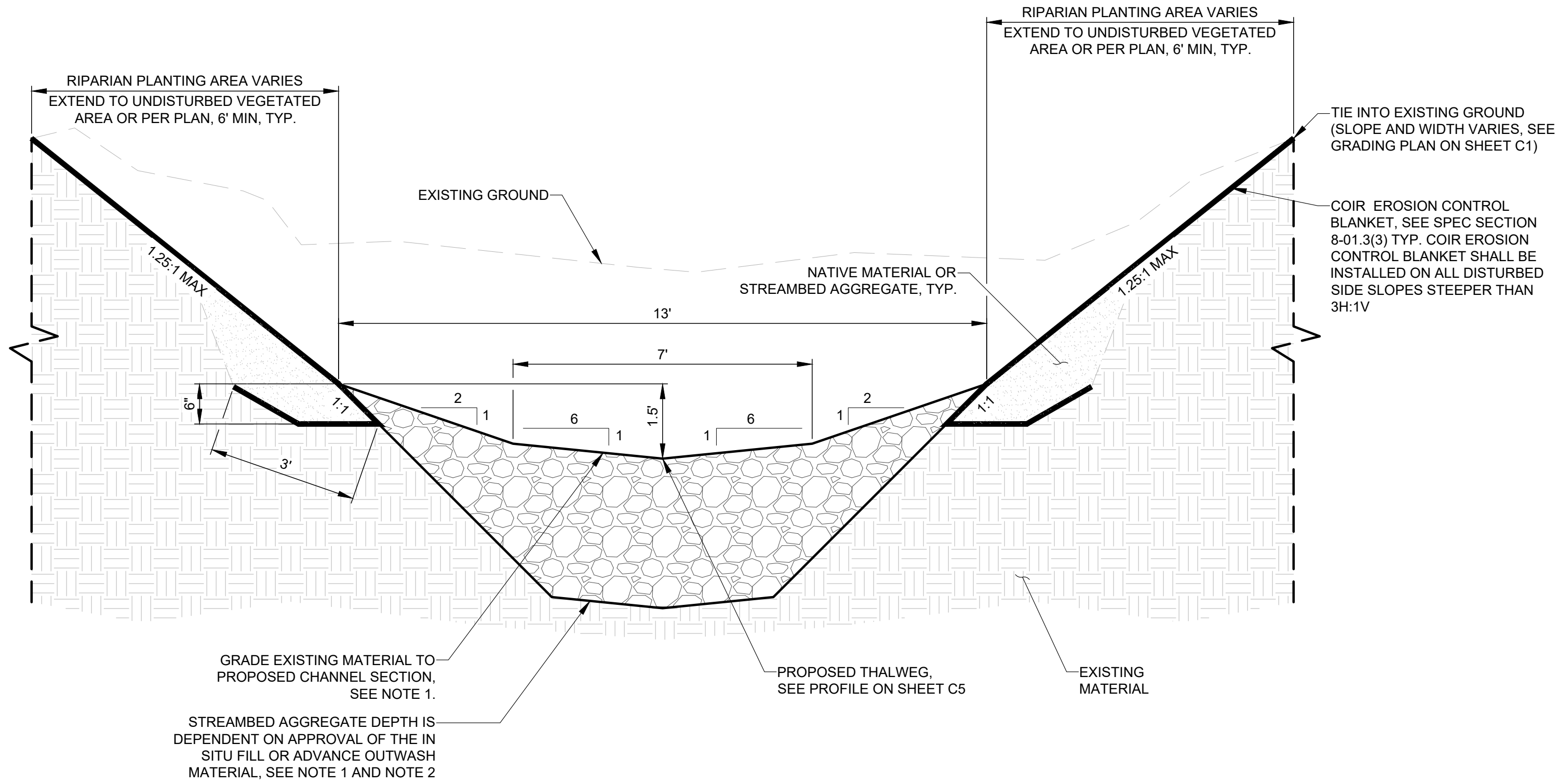
SHEET  
22 OF 34  
PN: 4571  
DWG  
**C6**



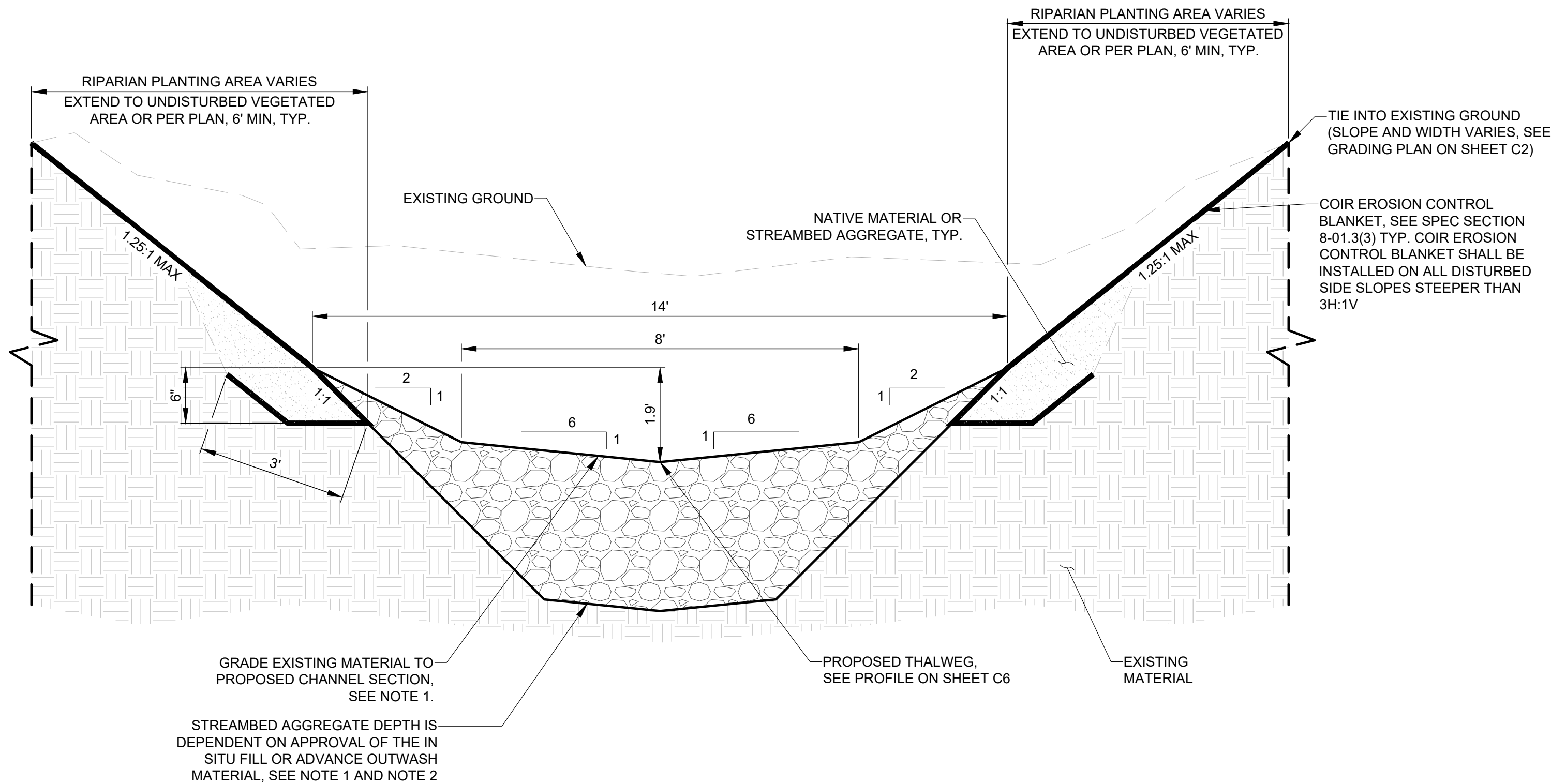
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FILE: P\_20-220002\_SECT LAYOUT: STREAM CHANNEL CROSS SECTIONS PATH: C:\p\_w\_o\_c\_l\_workingd\osbornconsulting-pw\1\ue\_ong\ams3284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:42:25 AM



**A EAST FORK ANDERSON CREEK TYPICAL SECTION**  
C1 N.T.S.



**B WEST FORK ANDERSON CREEK TYPICAL SECTION**  
C2 N.T.S.

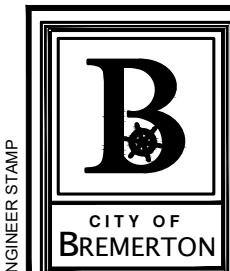
**STREAM CHANNEL CROSS SECTION NOTES:**

- IF THE IN-SITU FILL OR ADVANCE OUTWASH MATERIAL PRESENT ON THE SITE IS APPROVED BY THE ENGINEER AS DESCRIBED IN SPEC SECTIONS 2-08 AND 8-34, GRADE THE PROPOSED CHANNEL SECTION INTO THE IN-SITU FILL MATERIAL OR ADVANCE OUTWASH MATERIAL. REMOVE AND STOCKPILE TOPSOIL, AS SHOWN ON SHEETS EC2 AND EC4, IF PRESENT.
- IF IN-SITU MATERIAL IS NOT ACCEPTED BY THE ENGINEER, INSTALL STREAMBED MATERIAL CONSISTENT WITH THE STREAMBED MATERIAL MIX PROVIDED IN TABLE 1. CONTRACTOR SHALL PREPARE AND SUBMIT AN AGGREGATE MIXING PLAN FOR APPROVAL PRIOR TO MIXING AGGREGATE.
- IMPORTED STREAMBED AGGREGATE SHALL BE "WASHED IN" USING WATER AND STREAMBED SEDIMENT PER SPECIAL PROVISIONS SECTION 8-34 "AGGREGATES FOR STREAMS".

TABLE 1 STREAMBED MATERIAL MIX		
MATERIAL 1		
STREAMBED AGGREGATE	PERCENT BY VOLUME	WSDOT STANDARD SPECIFICATION
STREAMBED SEDIMENT	75%	9-03.11(1)
10-IN COBBLE	25%	9-03.11(4)



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Llama antes de excavar.



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038    DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848    DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

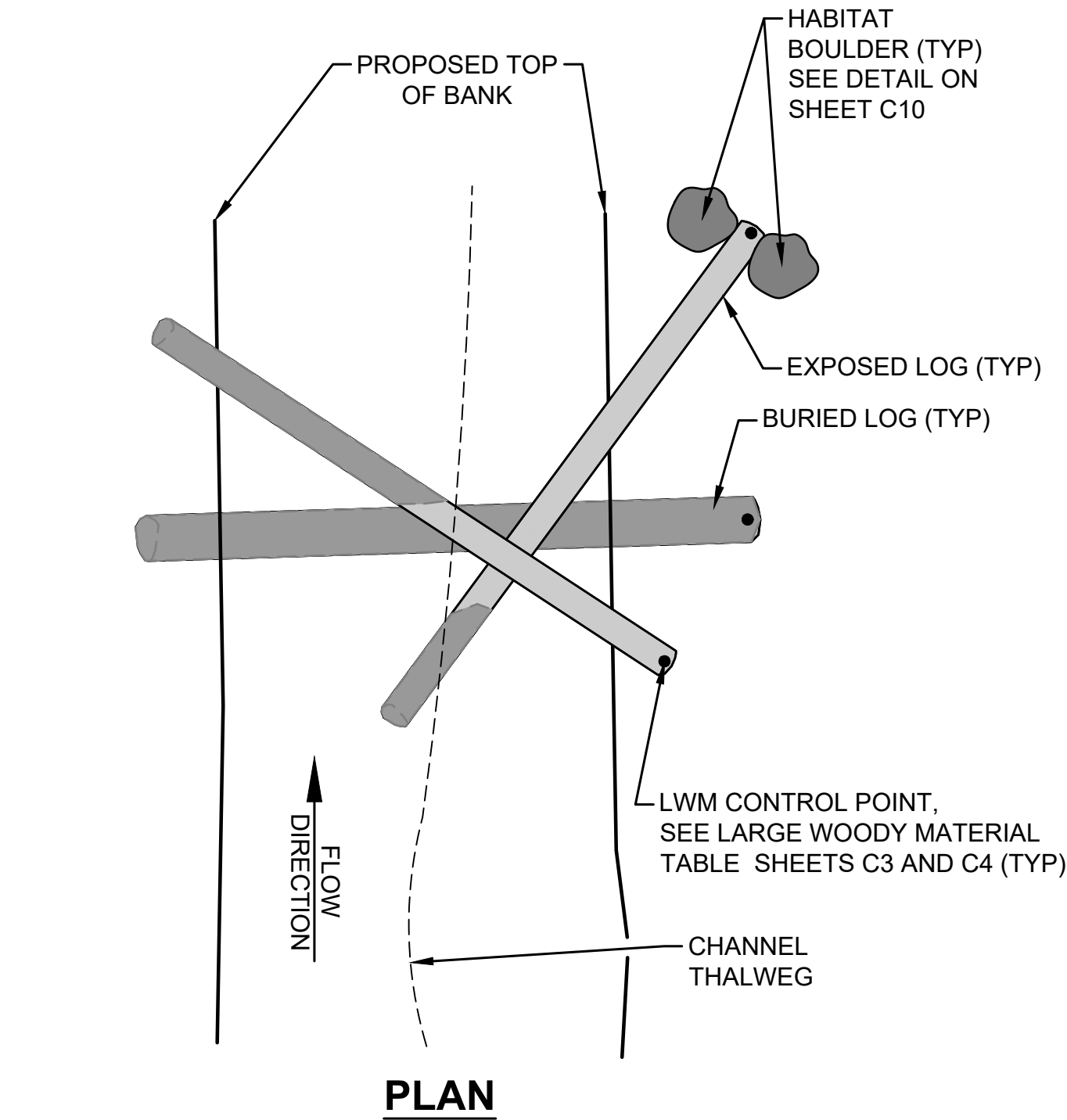
**ANDERSON CREEK DAM REMOVALS**

**STREAM CHANNEL CROSS SECTIONS**

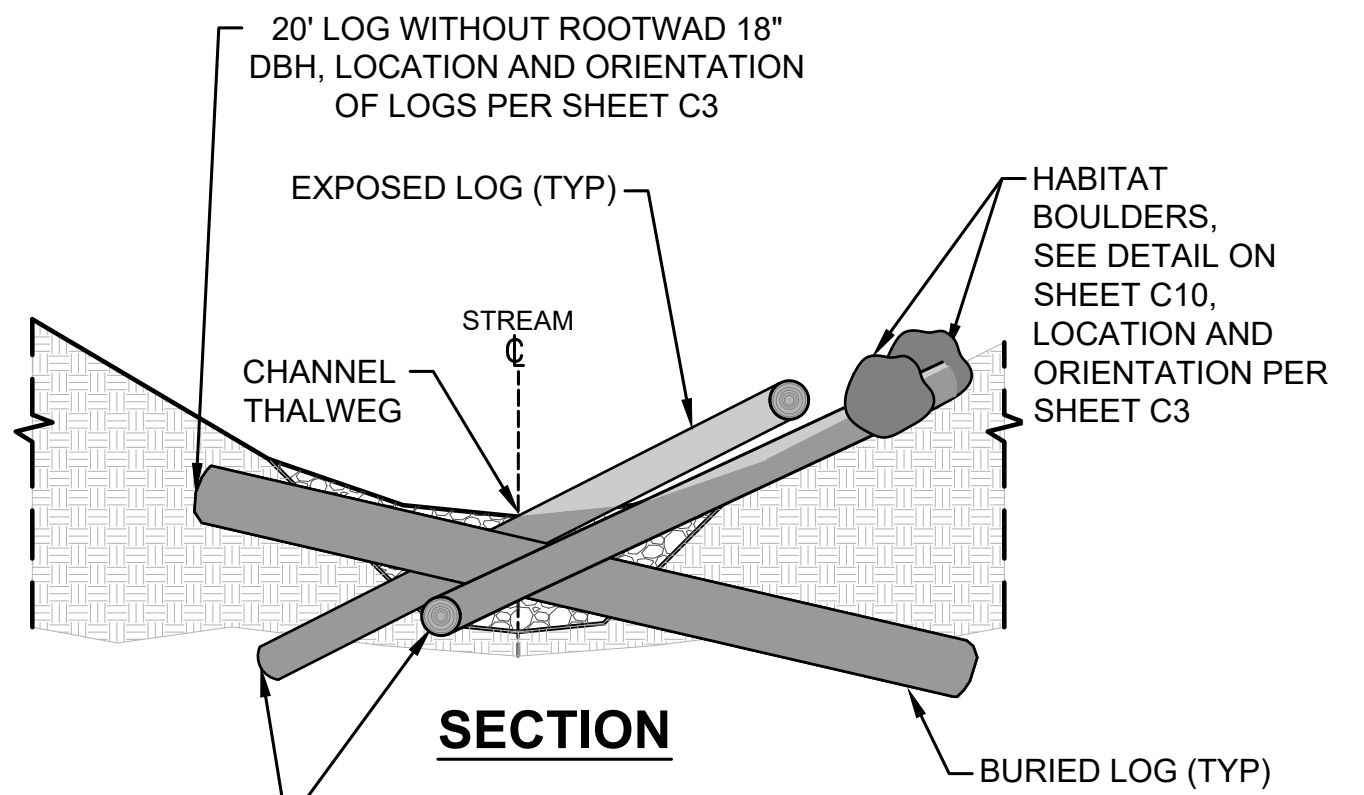
SHEET	23 OF 34
PN: 4571	
DWG	
<b>C7</b>	



FILE: P\_20-220002-LWM\_DETAILS - 1 LAYOUT: STREAM CHANNEL AND LARGE WOODY MATERIAL DETAILS - 1 PATH: C:\pwworkingdir\osbornconsulting-pw-01\hue.ong\dms32284 PLOTTED BY: hue DATE: Tuesday, May 7, 2024 9:42:29 AM



PLAN



SECTION

NOTES:

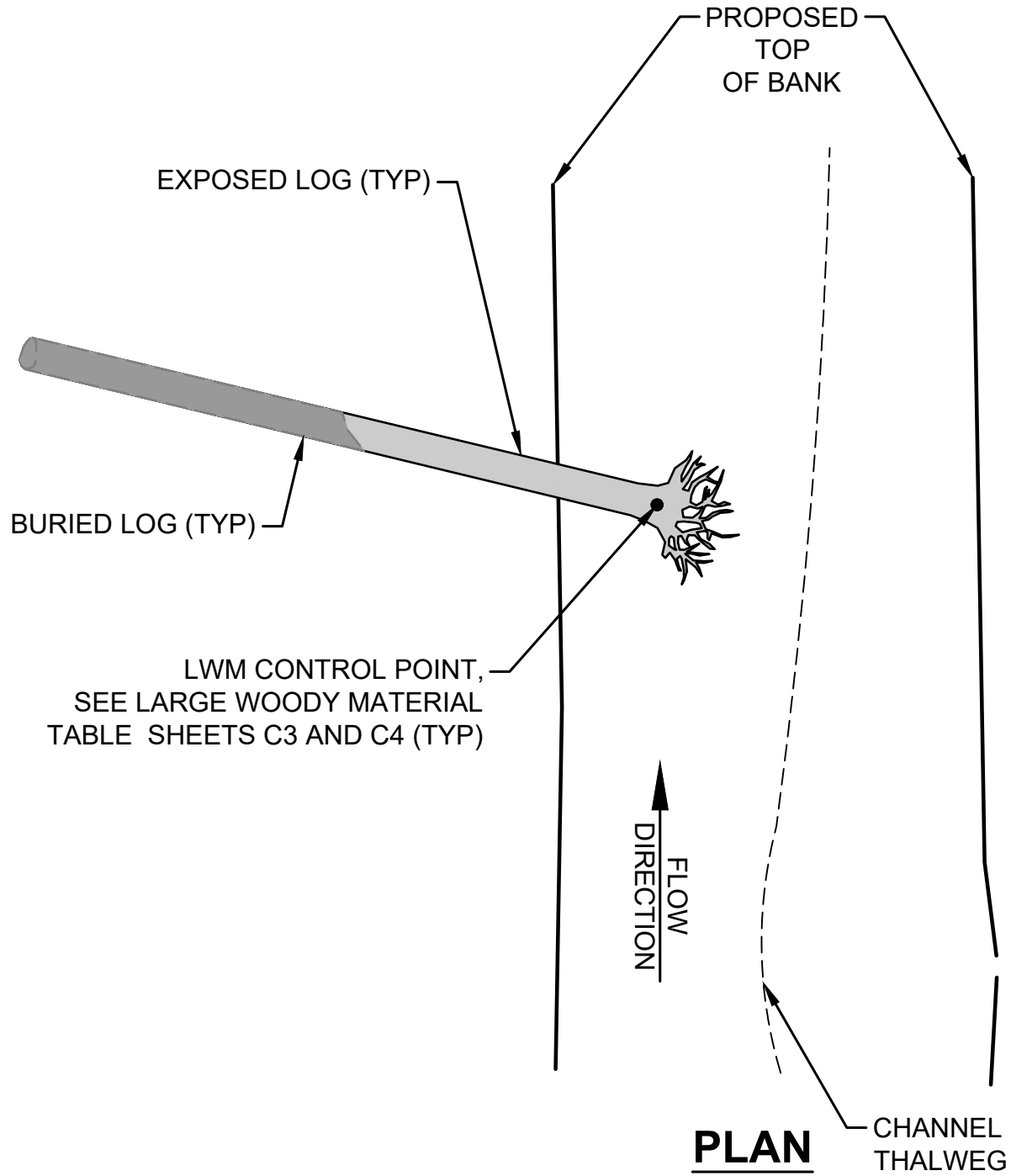
1. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C3 FOR LOCATION AND ORIENTATION OF ALL LOGS.

1

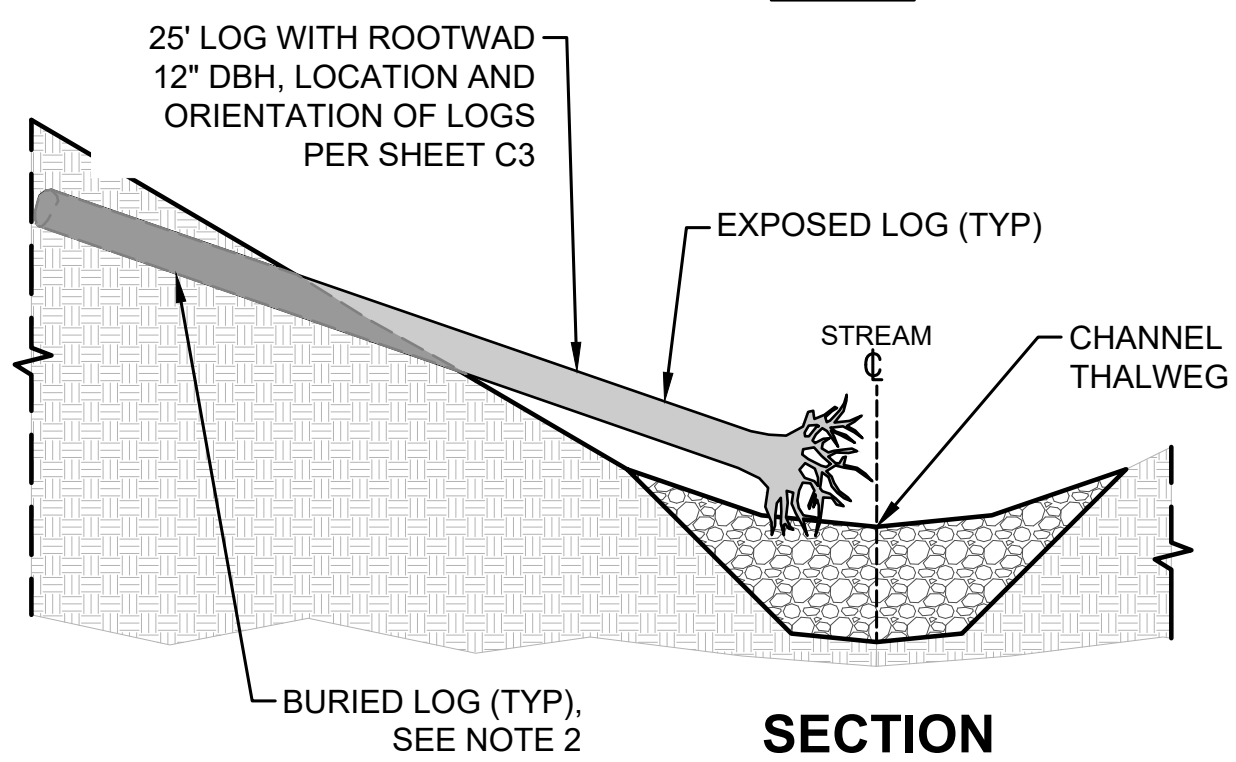
C3

LARGE WOODY MATERIAL DETAIL

N.T.S.



PLAN



SECTION

NOTES:

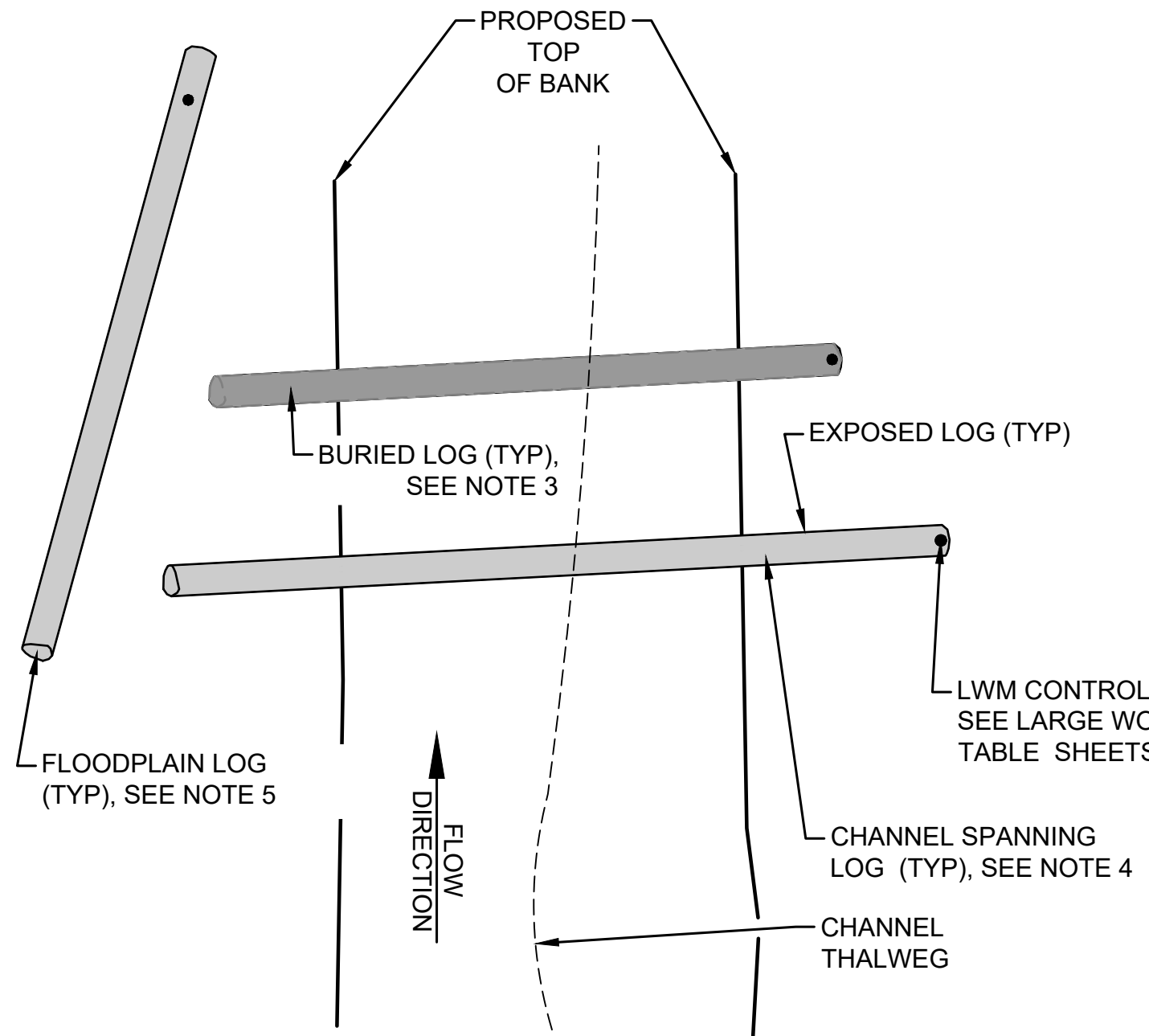
1. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C3 FOR LOCATION AND ORIENTATION OF ALL LOGS.
2. BURY LOG IN BANK AT 15" FROM HORIZONTAL BEGINNING AT ROOT COLLAR, AS DIRECTED BY THE ENGINEER. ROOTWAD SHALL BE EMBEDDED 0% TO 20% BELOW TOE OF BANK ELEVATION AND EXTEND INTO THE CHANNEL 1/3 TO 1/2 OF THE CHANNEL WIDTH AS DIRECTED BY THE ENGINEER

2

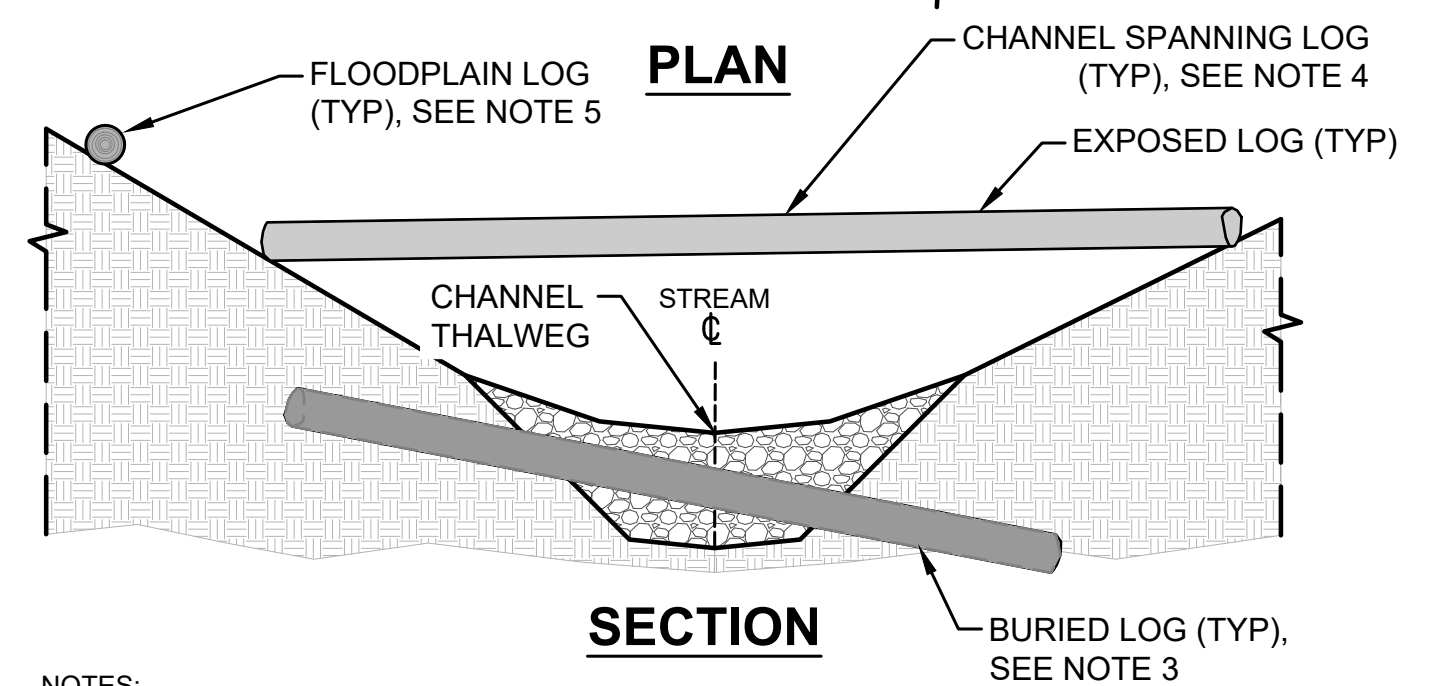
C3

LARGE WOODY MATERIAL DETAIL

N.T.S.



PLAN



SECTION

NOTES:

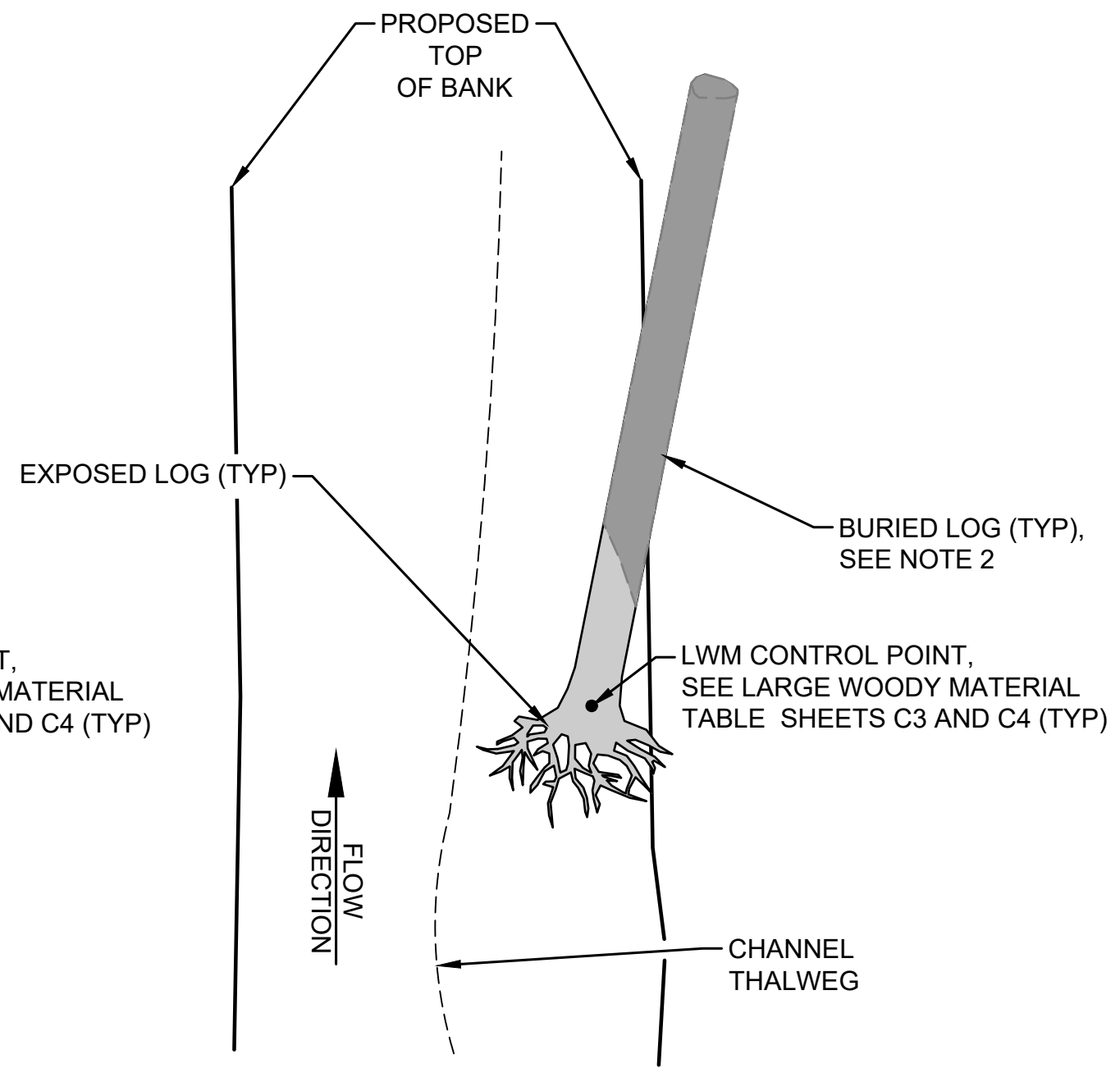
1. ALL LOGS INCLUDED IN THIS DETAIL MAY BE PLACED INDIVIDUALLY, NOT RELATIVE TO OTHER LOGS IN THE DETAIL. ALL LOGS WITH DESCRIPTIONS REFERENCING THIS DETAIL ARE FOR ONE OF THE THREE LOG TYPES SHOWN.
2. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C3 FOR LOCATION AND ORIENTATION OF ALL LOGS.
3. 20' LOG WITHOUT ROOTWAD 12" DBH, BURIED BELOW CHANNEL (SEE SHEET C3). BURY LOG AT -10" FROM HORIZONTAL MEASURED FROM THE LOG CONTROL POINT.
4. 25' LOG WITHOUT ROOTWAD 12" DBH, PLACED IN OVERBANK AREA SPANNING ABOVE THE CHANNEL (SEE SHEET C3).
5. 20' LOG WITHOUT ROOTWAD (FLOODPLAIN), LOG DIAMETER AND ORIENTATION VARIES (SEE SHEET C3). PLACE LOG IN FLOODPLAIN AS DIRECTED BY THE ENGINEER.

3

C3

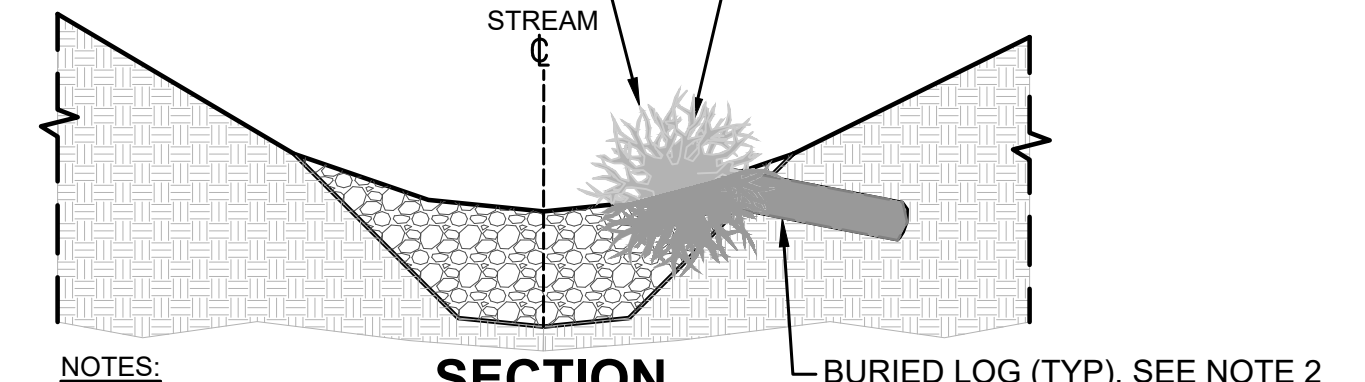
LARGE WOODY MATERIAL DETAIL

N.T.S.



PLAN

30' LOG WITH ROOTWAD. DBH VARRIES SEE SHEET C3. LOCATION AND ORIENTATION OF LOGS PER SHEET C3



SECTION

NOTES:

1. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C3 FOR LOCATION AND ORIENTATION OF ALL LOGS.
2. BURY LOG IN BANK AT -6" FROM HORIZONTAL BEGINNING AT ROOT COLLAR. ROOTWAD TO BE EMBEDDED >20% BELOW TOE OF BANK ELEVATION AND EXTEND INTO CHANNEL 1/3 TO 1/2 CHANNEL WIDTH.

4

C3

LARGE WOODY MATERIAL DETAIL

N.T.S.

LARGE WOODY MATERIAL GENERAL NOTES:

1. SEE SHEET C3 FOR APPROXIMATE LOG ORIENTATION. LOG INSTALLATION SHALL BE VERIFIED BY THE ENGINEER.
2. LOG AND BOULDER LOCATION MAY BE ADJUSTED BY THE ENGINEER. PROVIDE NOTICE TO ENGINEER AT LEAST 3 DAYS PRIOR TO LOG AND BOULDER INSTALLATION.
3. EXISTING TREES THAT ARE REMOVED SHALL BE STOCKPILED AND INCORPORATED INTO THE LOG STRUCTURES AS FIELD DIRECTED BY THE ENGINEER.
4. ALL LWM DETAIL SECTIONS ON THIS SHEET ARE LOOKING DOWNSTREAM.



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON  
DEPARTMENT OF PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038 DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848 DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:  
S16, T24N, R1E, W.M.

GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS  
EAST FORK ANDERSON CREEK  
STREAM CHANNEL AND LARGE WOODY MATERIAL DETAILS - 1

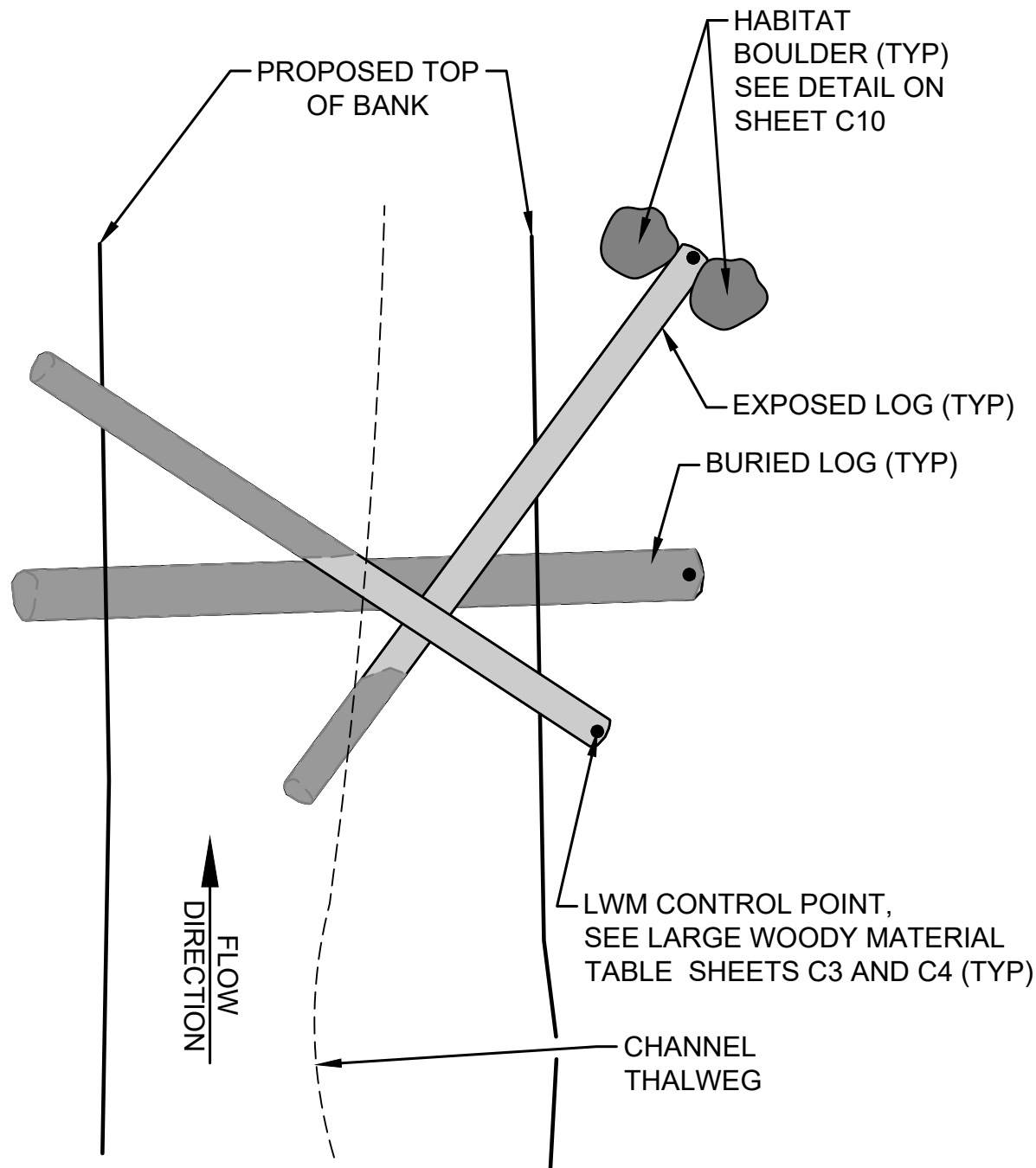
SHEET  
24 OF 34  
PN: 4571  
DWG  
C8



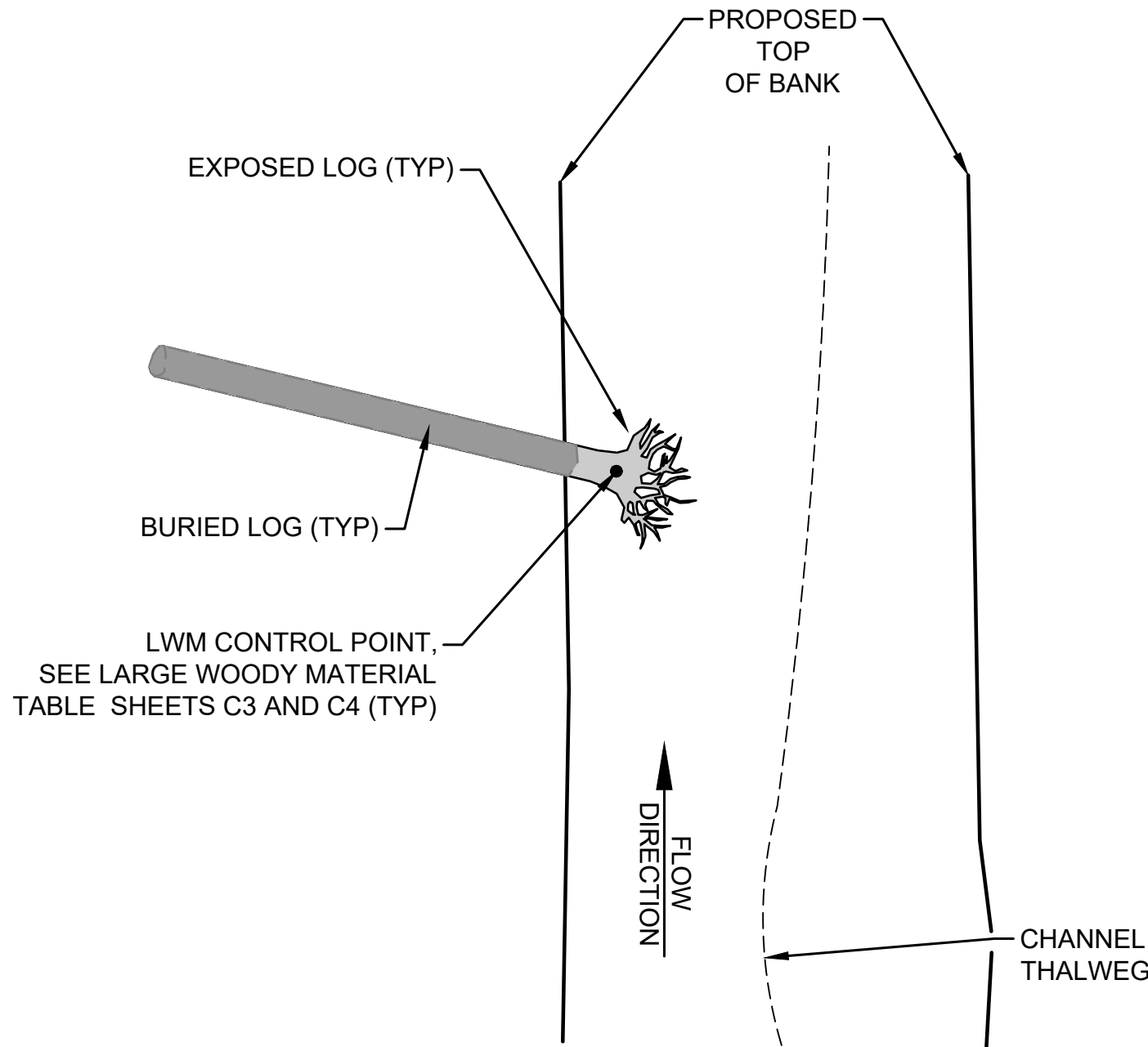
Know what's below.  
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Determina lo que esta bajo tierra.  
Llama antes de excavar.



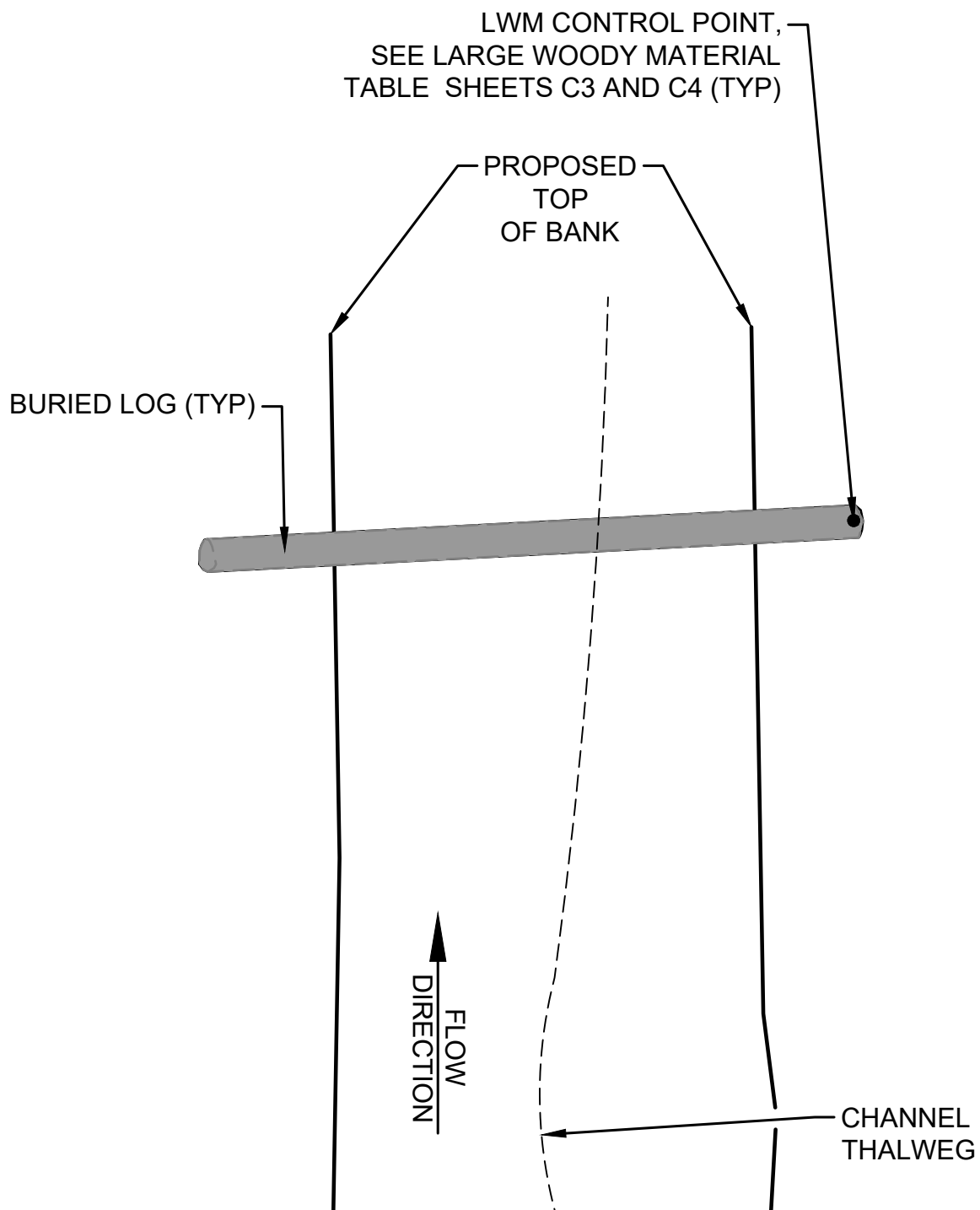
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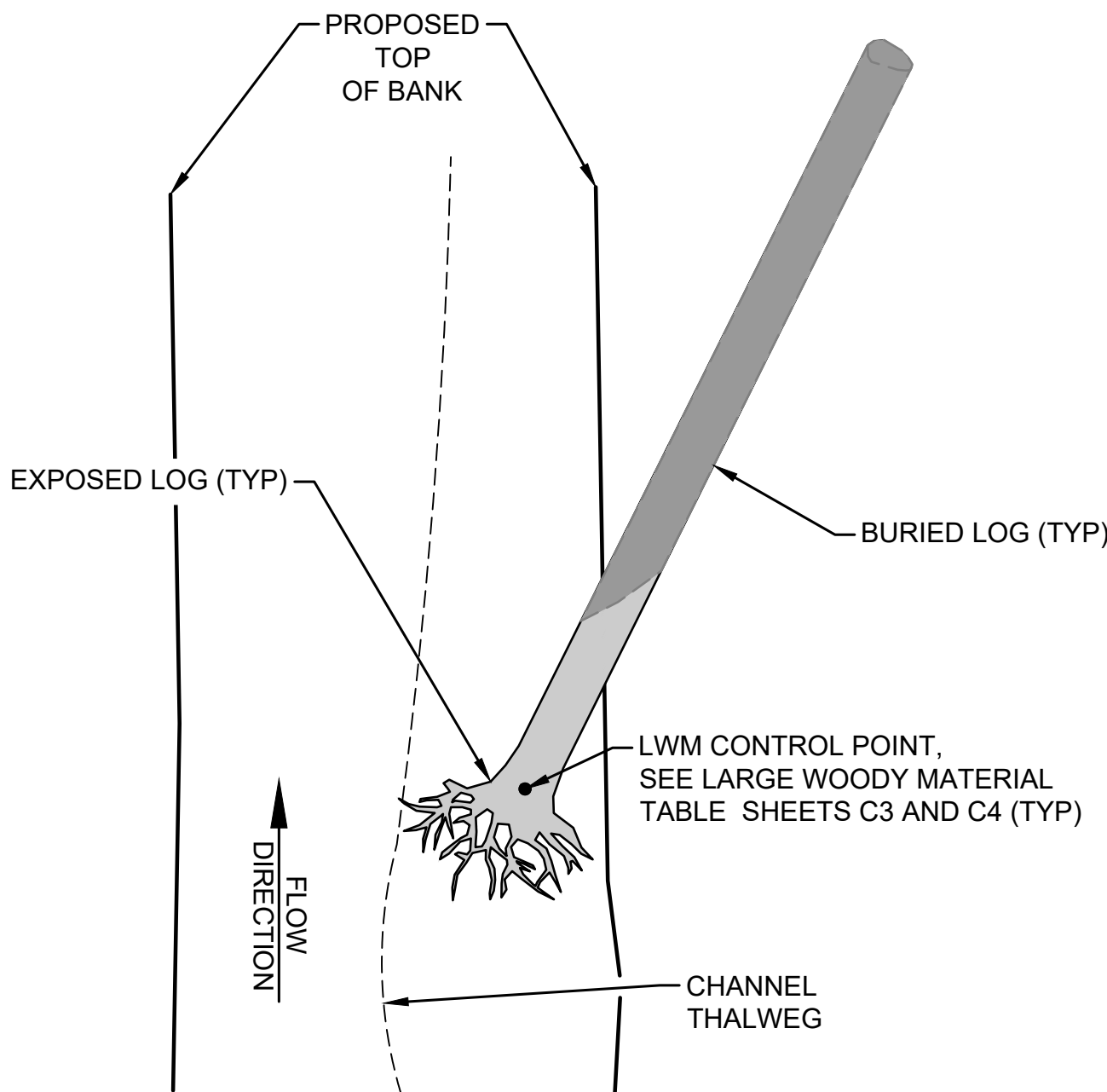
PLAN



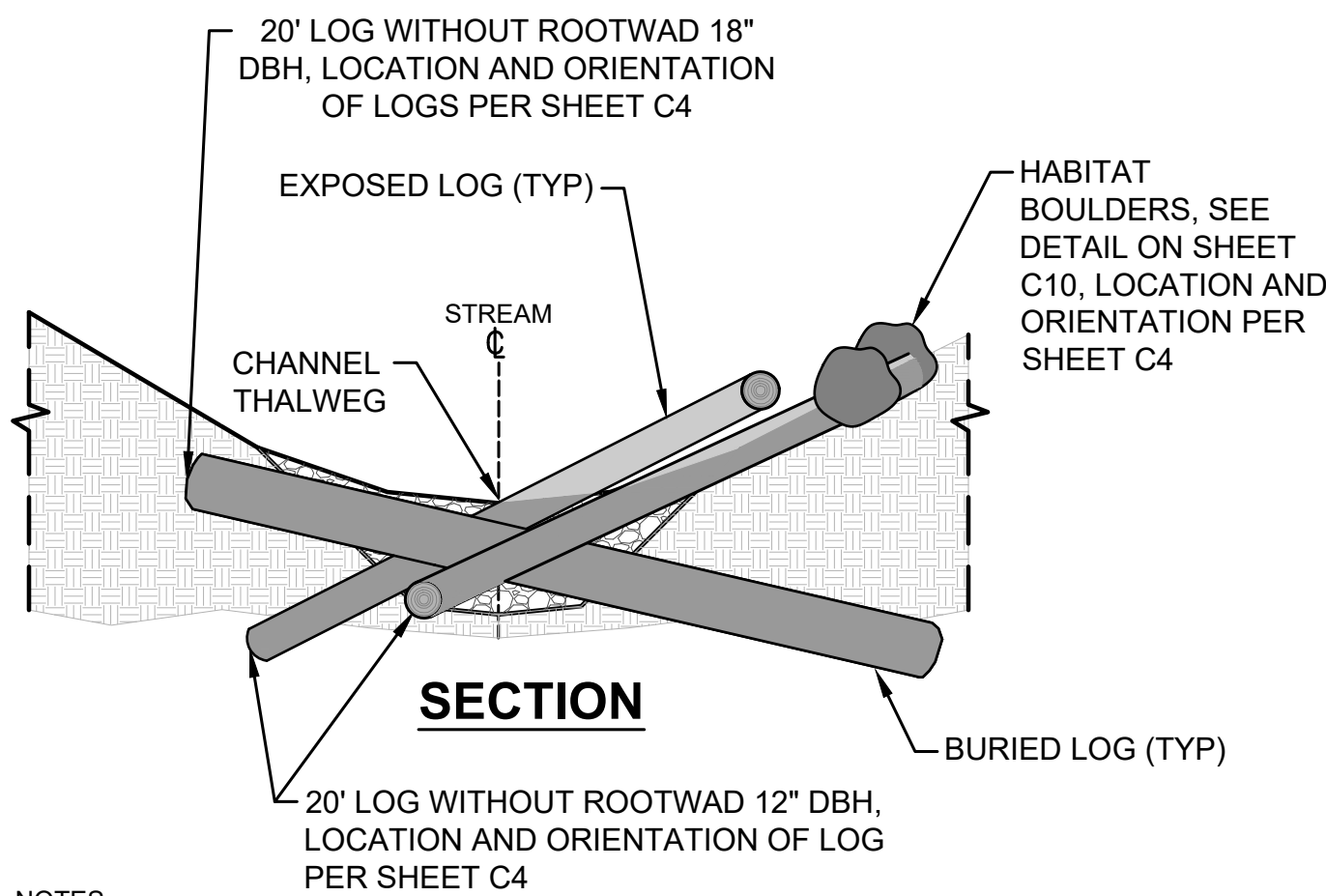
PLAN



PLAN



PLAN



SECTION

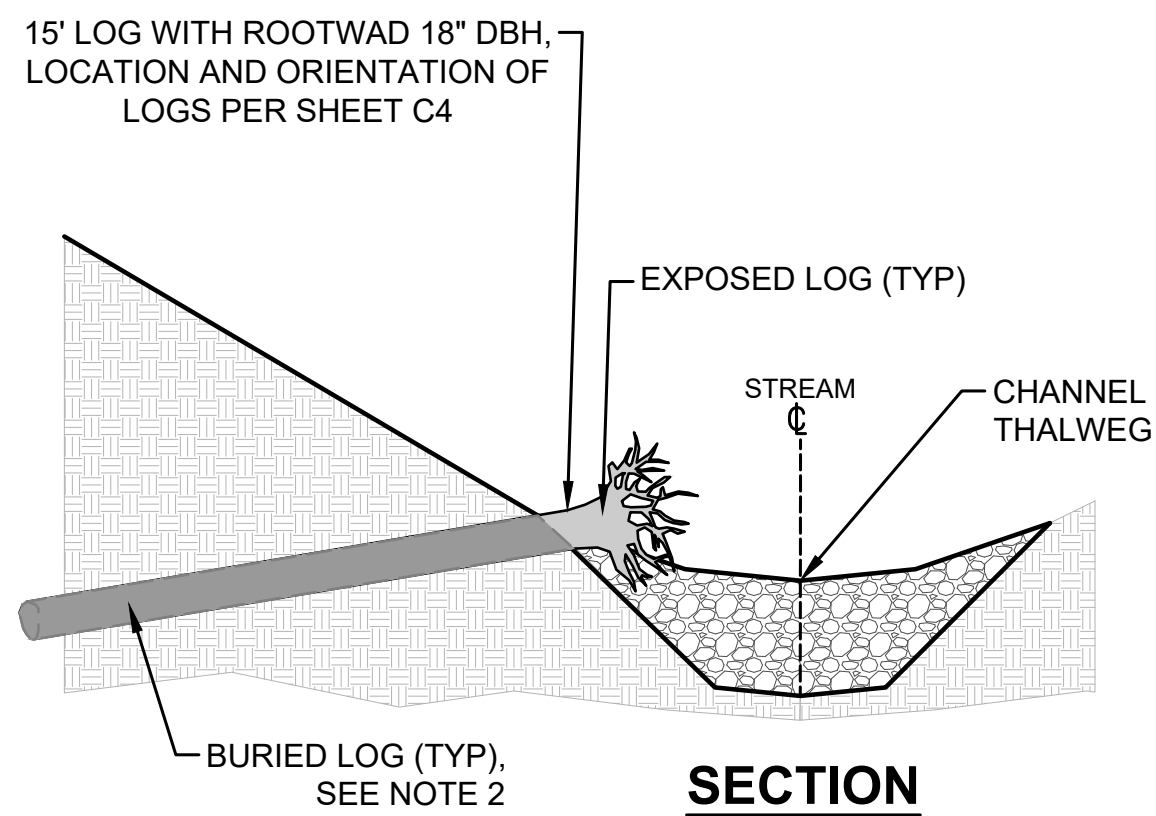
- NOTES:
1. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C4 FOR LOCATION AND ORIENTATION OF ALL LOGS.

1

C4

LARGE WOODY MATERIAL DETAIL

N.T.S.



SECTION

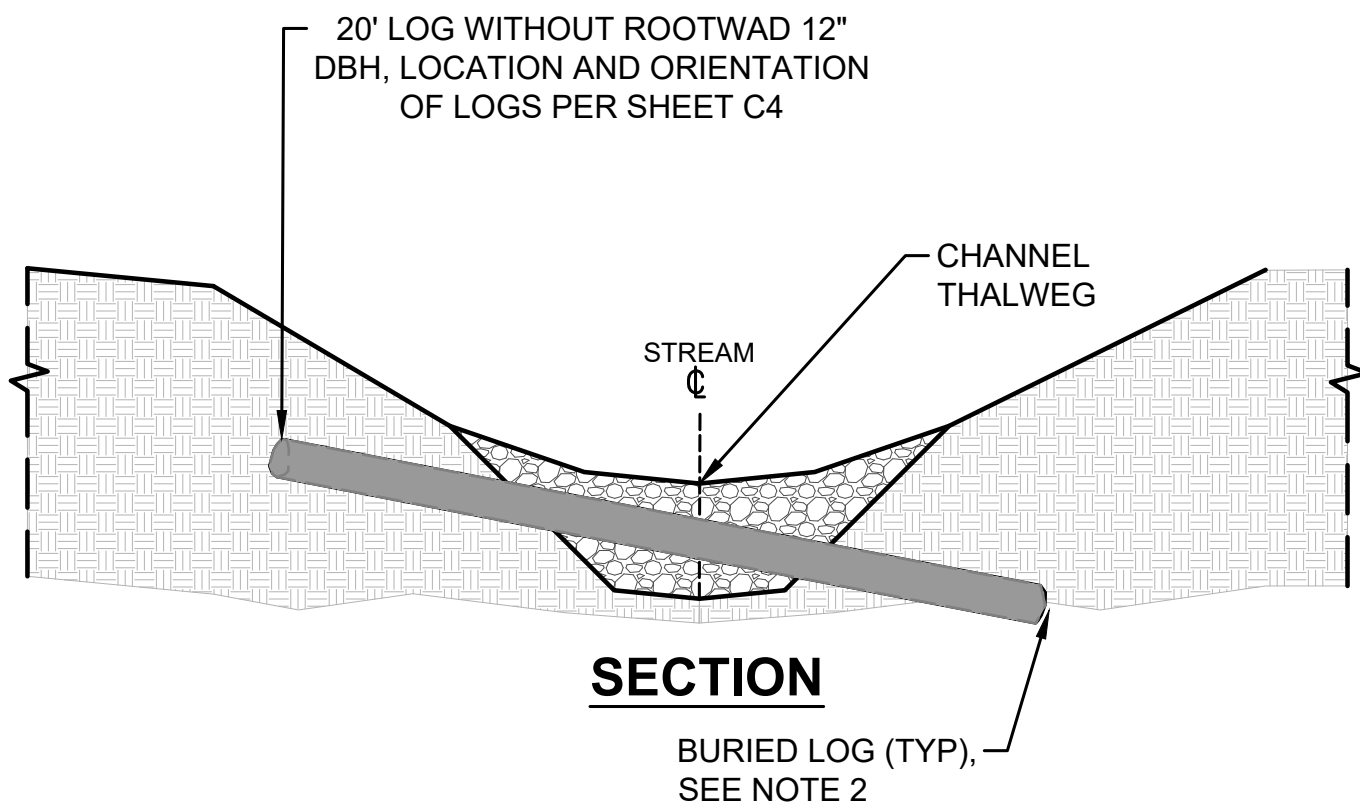
- NOTES:
1. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C4 FOR LOCATION AND ORIENTATION OF ALL LOGS.
  2. BURY LOG IN BANK AT -3" OR GREAT FROM HORIZONTAL BEGINNING AT ROOT COLLAR, AS DIRECTED BY THE ENGINEER. ROOTWAD SHALL BE EMBEDDED 0% TO 20% BELOW TOE OF BANK ELEVATION AND EXTEND INTO THE CHANNEL 1/3 TO 1/2 OF THE CHANNEL WIDTH AS DIRECTED BY THE ENGINEER

2

C4

LARGE WOODY MATERIAL DETAIL

N.T.S.



SECTION

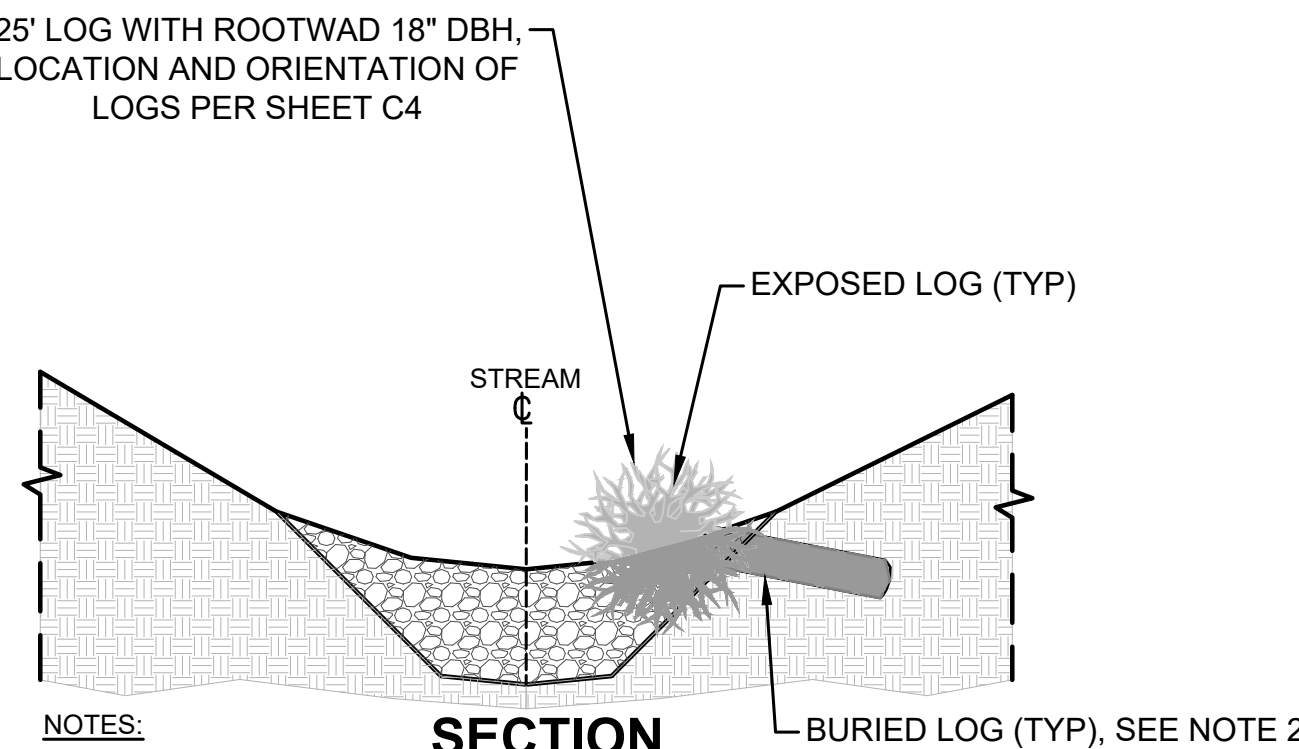
- NOTES:
1. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C4 FOR LOCATION AND ORIENTATION OF ALL LOGS.
  2. BURY LOG AT -16" FROM HORIZONTAL, MEASURED FROM THE LOG CONTROL POINT.

3

C4

LARGE WOODY MATERIAL DETAIL

N.T.S.



SECTION

- NOTES:
1. DETAIL APPLIES TO INSTALLATION ON EITHER BANK. REFER TO SHEET C4 FOR LOCATION AND ORIENTATION OF ALL LOGS.
  2. BURY LOG IN BANK AT -4" FROM HORIZONTAL BEGINNING AT ROOT COLLAR. ROOTWAD TO BE EMBEDDED >33% BELOW TOE OF BANK ELEVATION AND EXTEND INTO CHANNEL 1/3 TO 1/2 THE CHANNEL WIDTH. LOCATION AND ORIENTATION OF LOGS PER PLAN

4

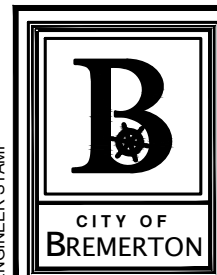
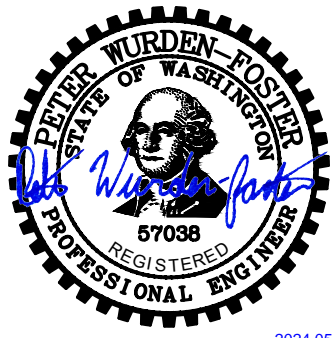
C4

LARGE WOODY MATERIAL DETAIL

N.T.S.

LARGE WOODY MATERIAL GENERAL NOTES:

1. SEE SHEET C4 FOR APPROXIMATE LOG ORIENTATION. LOG INSTALLATION SHALL BE VERIFIED BY THE ENGINEER.
2. LOG AND BOULDER INSTALLATION MAY BE ADJUSTED BY THE ENGINEER. PROVIDE NOTICE TO ENGINEER AT LEAST 3 DAYS PRIOR TO LOG AND BOULDER INSTALLATION.
3. EXISTING TREES THAT ARE REMOVED SHALL BE STOCKPILED AND INCORPORATED INTO THE LOG STRUCTURES AS FIELD DIRECTED BY THE ENGINEER.
4. ALL LWM DETAIL SECTIONS ON THIS SHEET ARE LOOKING DOWNSTREAM.



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON  
DEPARTMENT OF PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038    DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848    DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE: S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS  
WEST FORK ANDERSON CREEK  
STREAM CHANNEL AND LARGE WOODY MATERIAL DETAILS - 2

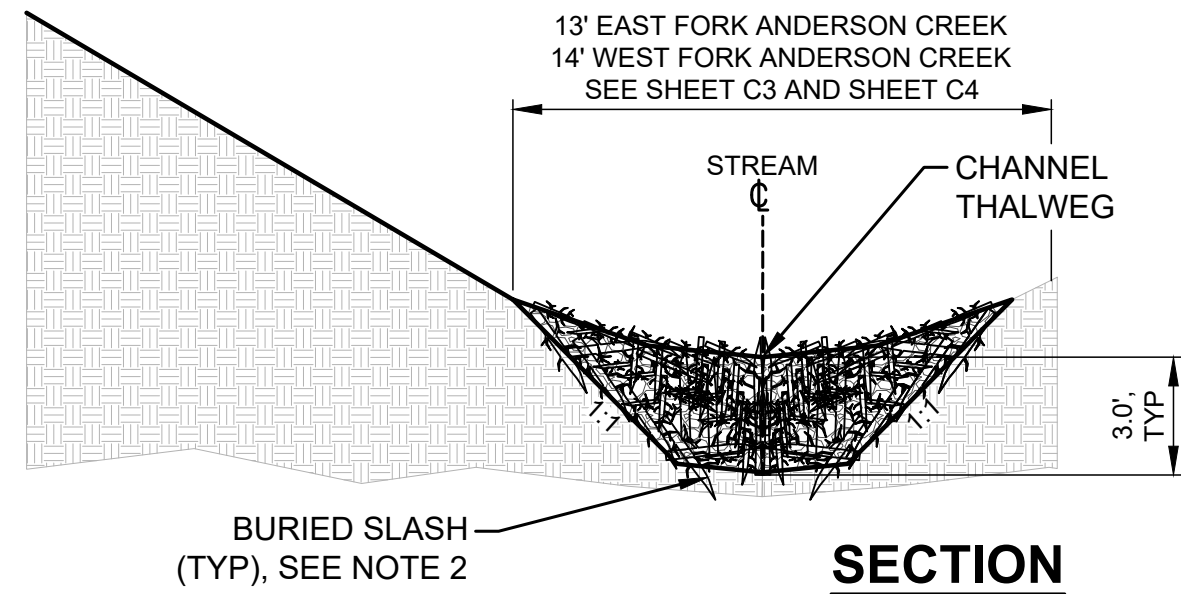
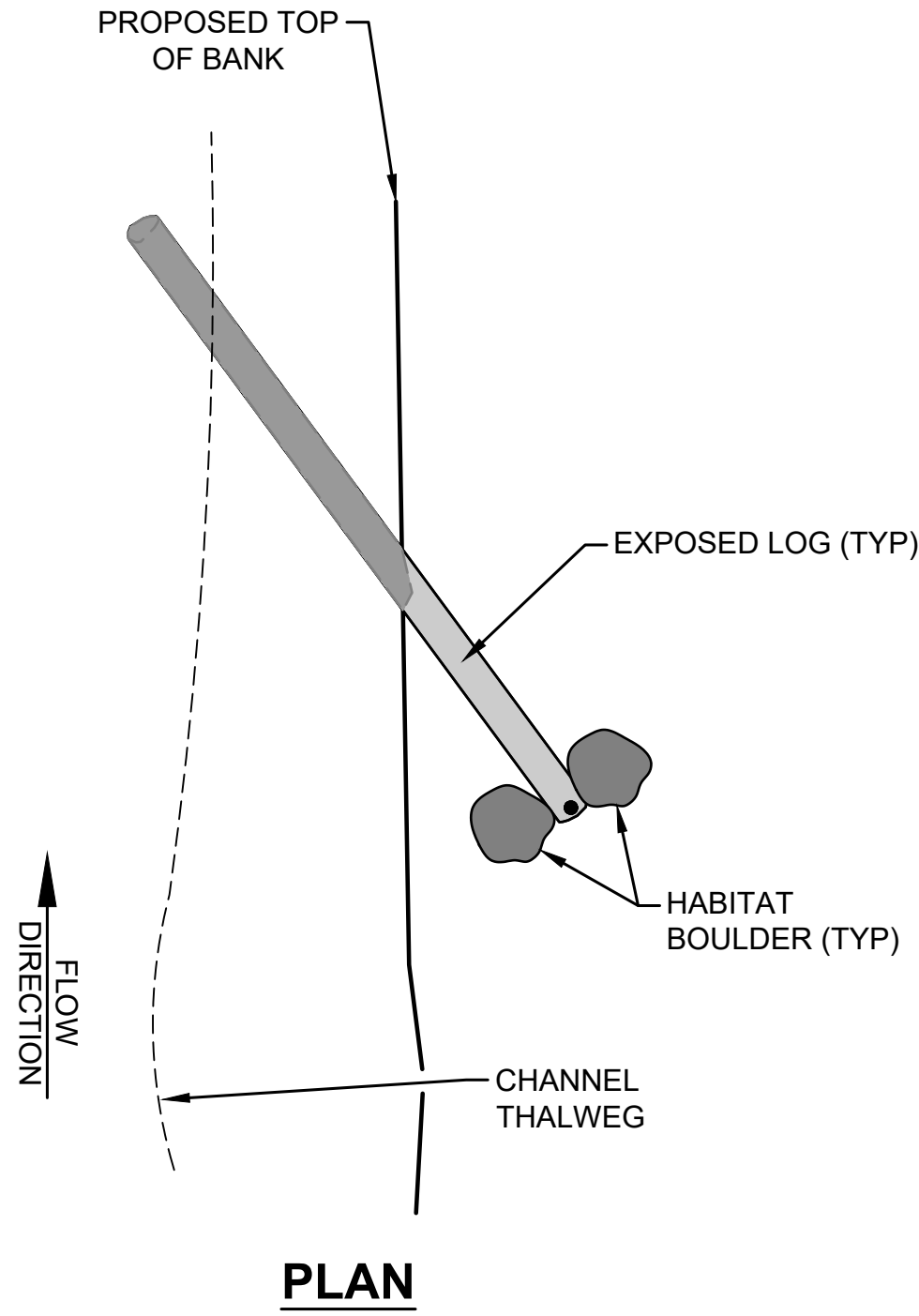
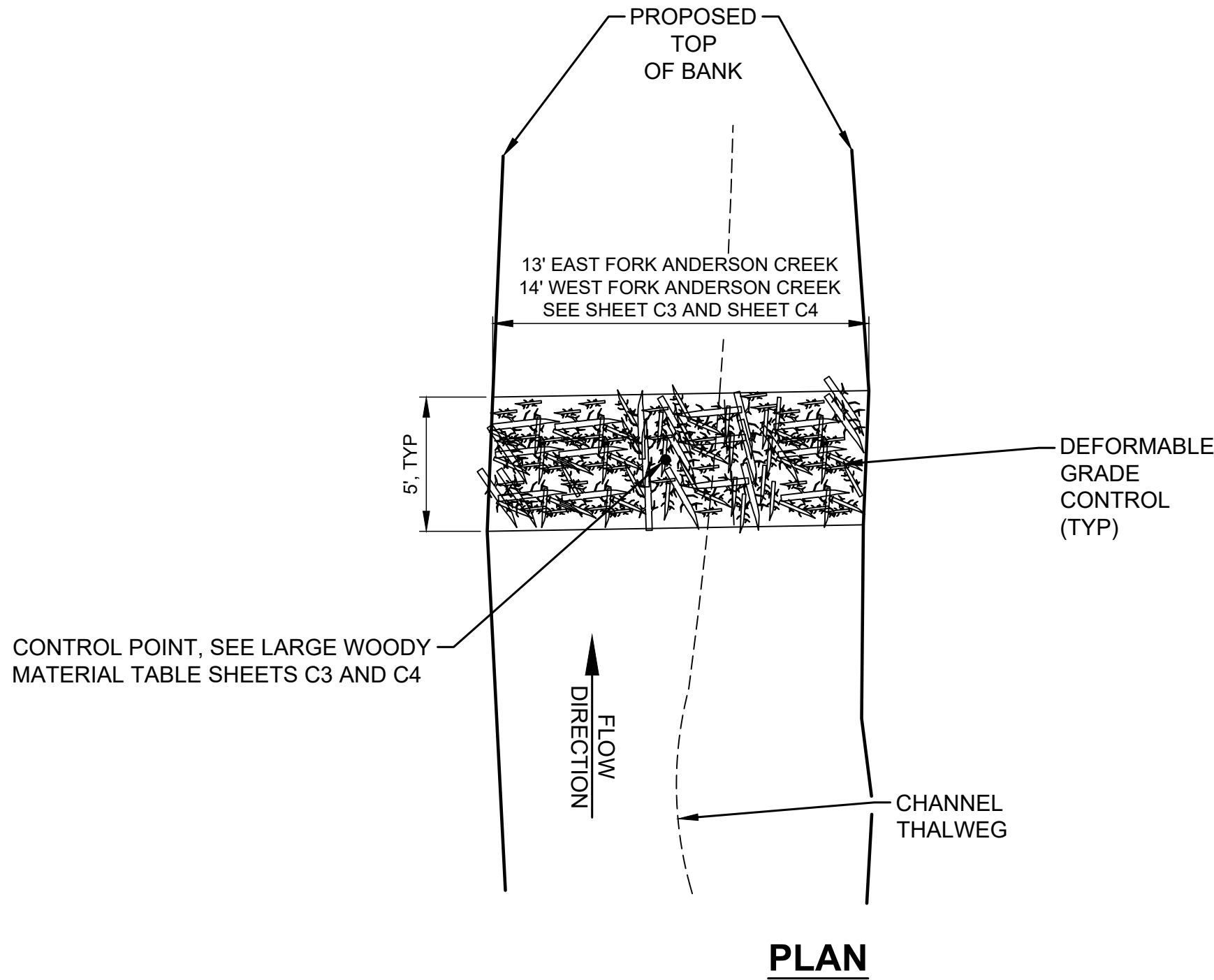
SHEET 25 OF 34
PN: 4571
DWG C9



Know what's below.  
Call before you dig.  
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Llama antes de excavar.



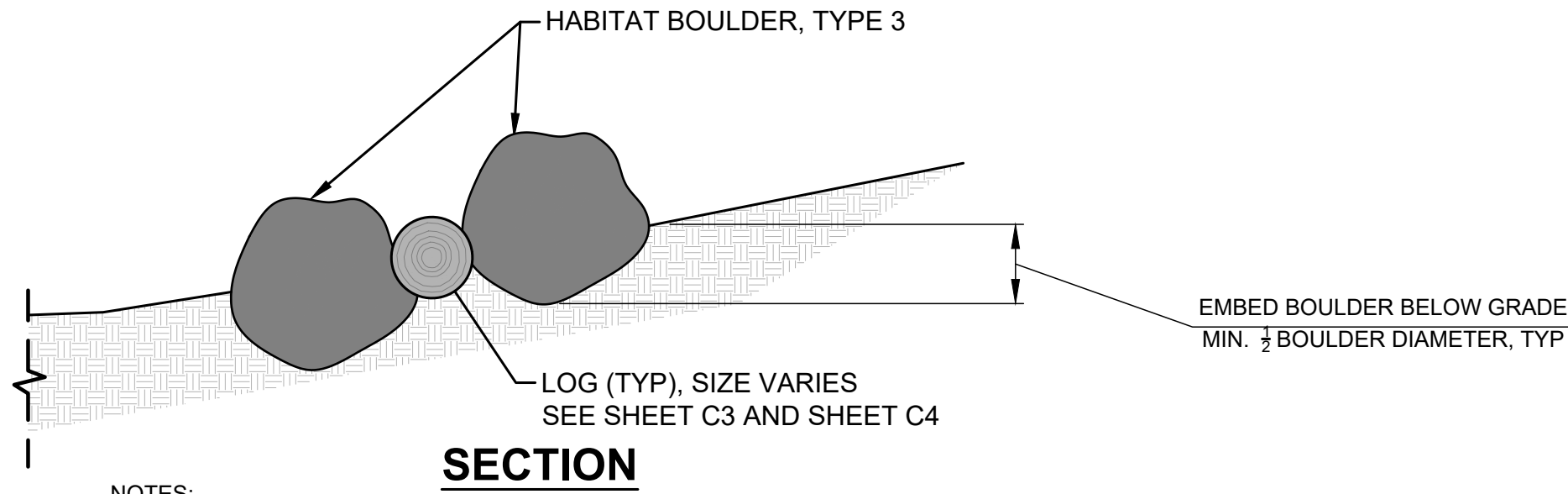
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NOTES:

- REFER TO SHEET C3 AND SHEET C4 FOR LOCATION AND ORIENTATION OF ALL DEFORMABLE GRADE CONTROLS.
- SLASH SHOULD BE SLIGHTLY EXPOSED ABOVE FINISHED GRADE.
- STREAMBED MATERIAL, INCLUDING GRAVELS AND COBBLES, SHALL BE LAYERED OVER WOODY DEBRIS TO MAINTAIN COHESIVE MATRIX IN THE DEFORMABLE GRADE CONTROL. WOODY DEBRIS SHALL RANGE IN LENGTH (3 FT - 8 FT) AND DBH (3 IN-5 IN) SLASH SHALL MAKE UP APPROXIMATELY 50% OF THE DEFORMABLE GRADE CONTROL BY VOLUME.

**1** DEFORMABLE GRADE CONTROL DETAIL  
C3 C4 N.T.S.



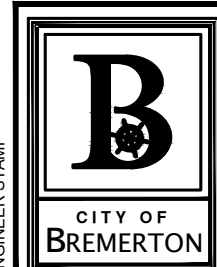
NOTES:

- REFER TO SHEET C3 AND SHEET C4 FOR LOCATION AND ORIENTATION OF ALL HABITAT BOULDERS.
- BOULDERS SHALL BE ORIENTED SO THAT THEY PROVIDE LWM STABILITY. BOULDERS SHOULD BE IN CONTACT WITH LWM AND EMBEDDED A MINIMUM OF 1/2 THE DIAMETER OF THE BOULDER.

**2** HABITAT BOULDER ANCHOR DETAIL  
C3 C4 N.T.S.

STREAM DETAILS GENERAL NOTES:

- SEE SHEET C3 AND SHEET C4 FOR APPROXIMATE DEFORMABLE GRADE CONTROL AND HABITAT BOULDER LOCATIONS. LOCATION AND INSTALLATION SHALL BE VERIFIED BY THE ENGINEER.
- DEFORMABLE GRADE CONTROL AND BOULDER INSTALLATION MAY BE ADJUSTED BY THE ENGINEER. PROVIDE NOTICE TO ENGINEER AT LEAST 3 DAYS PRIOR TO INSTALLATION.
- EXISTING TREES THAT ARE REMOVED SHALL BE STOCKPILED AND INCORPORATED INTO THE DEFORMABLE GRADE CONTROLS AS FIELD DIRECTED BY THE ENGINEER.
- ALL DETAIL SECTIONS ON THIS SHEET ARE LOOKING DOWNSTREAM.
- SEE SPECIAL PROVISIONS SECTIONS 8-32 "DEFORMABLE GRADE CONTROLS" AND 8-35 "HABITAT BOULDERS"



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION			
DESIGN BY: P. WURDEN-FOSTER WA P.E.# 57038	DATE: 03/20/2024	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. RUPPERT WA P.E.# 43848 DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS
STREAM CHANNEL AND LARGE WOODY MATERIAL DETAILS - 3

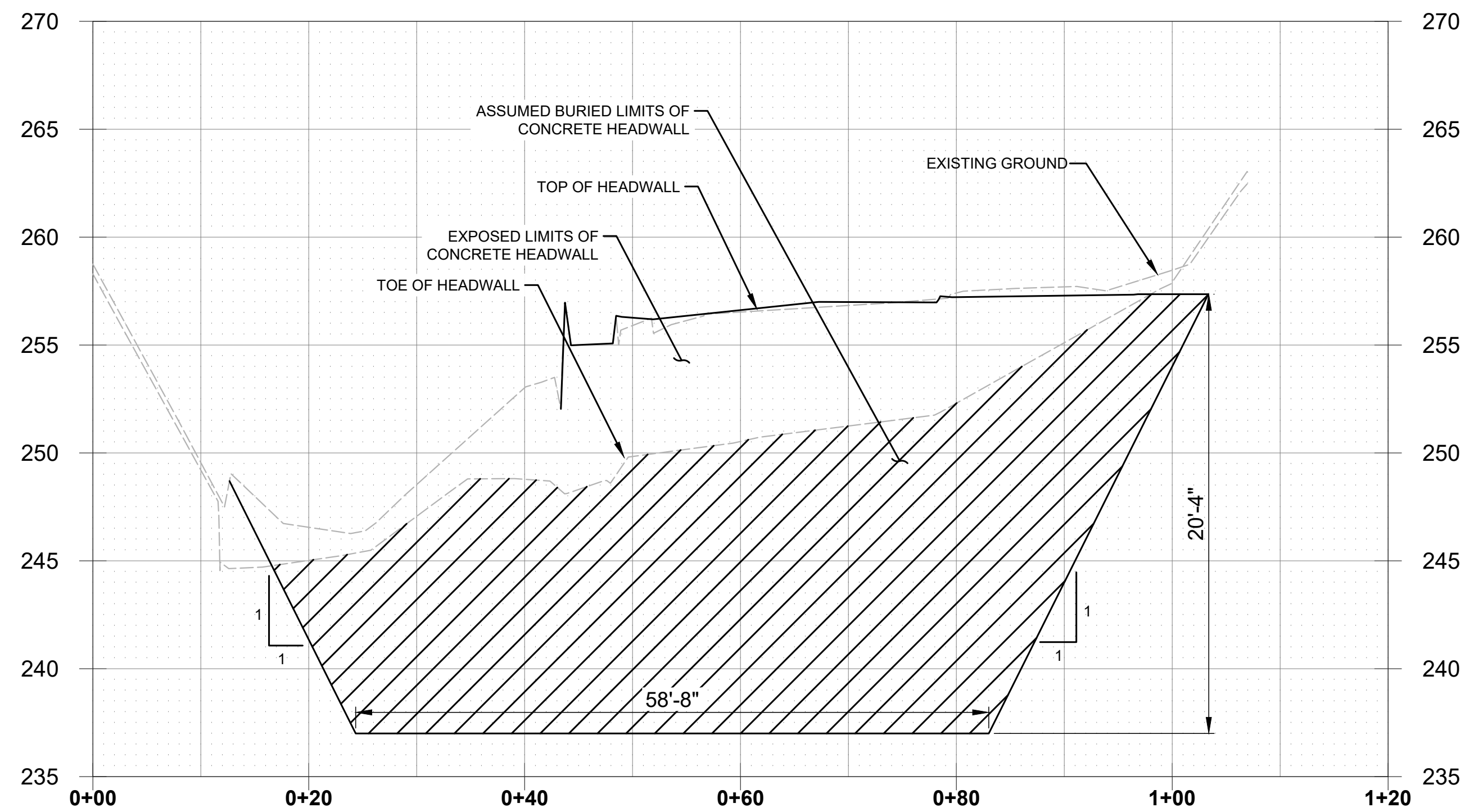
SHEET 26 OF 34
PN: 4571
DWG C10



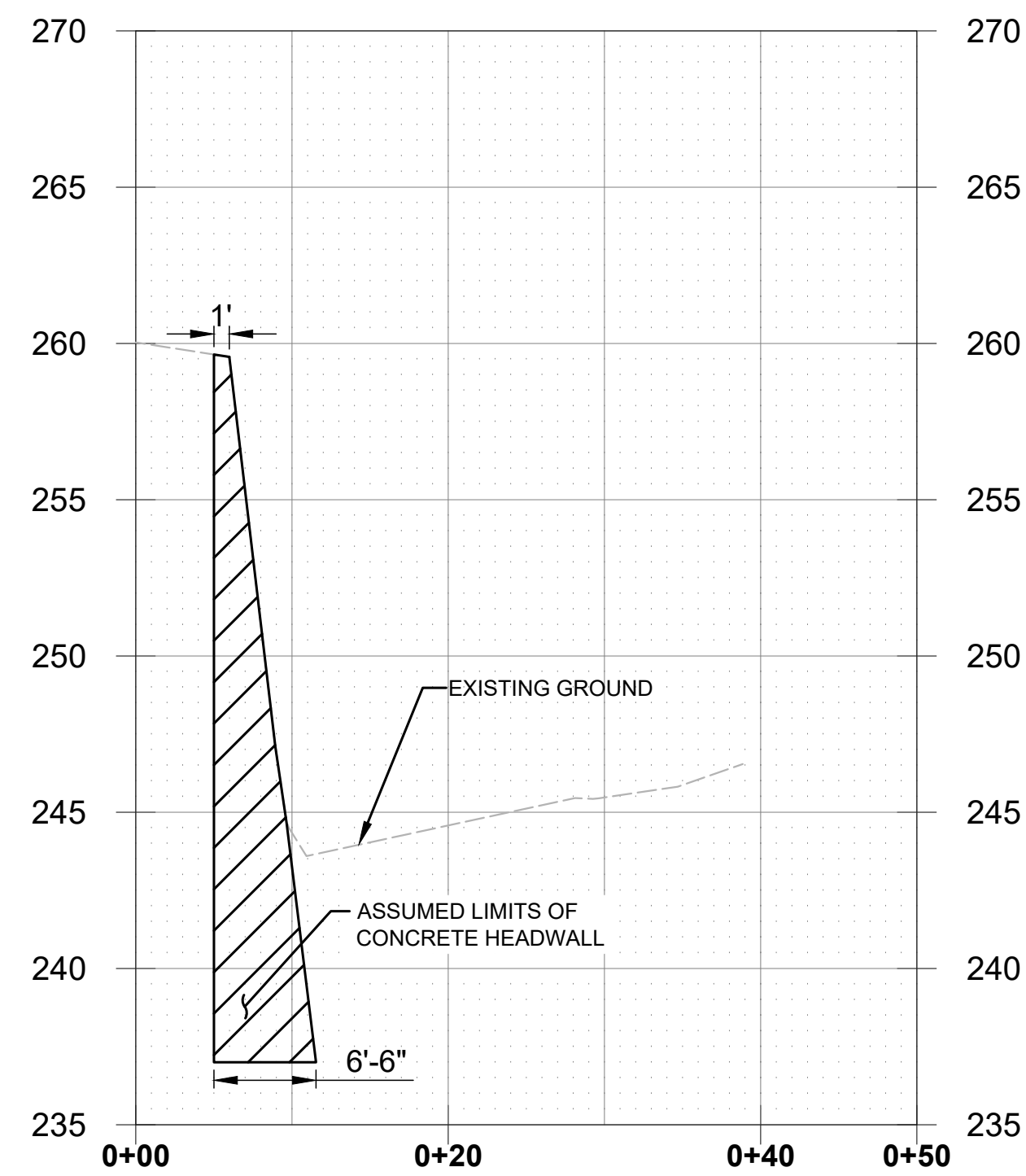
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Llama antes de excavar.



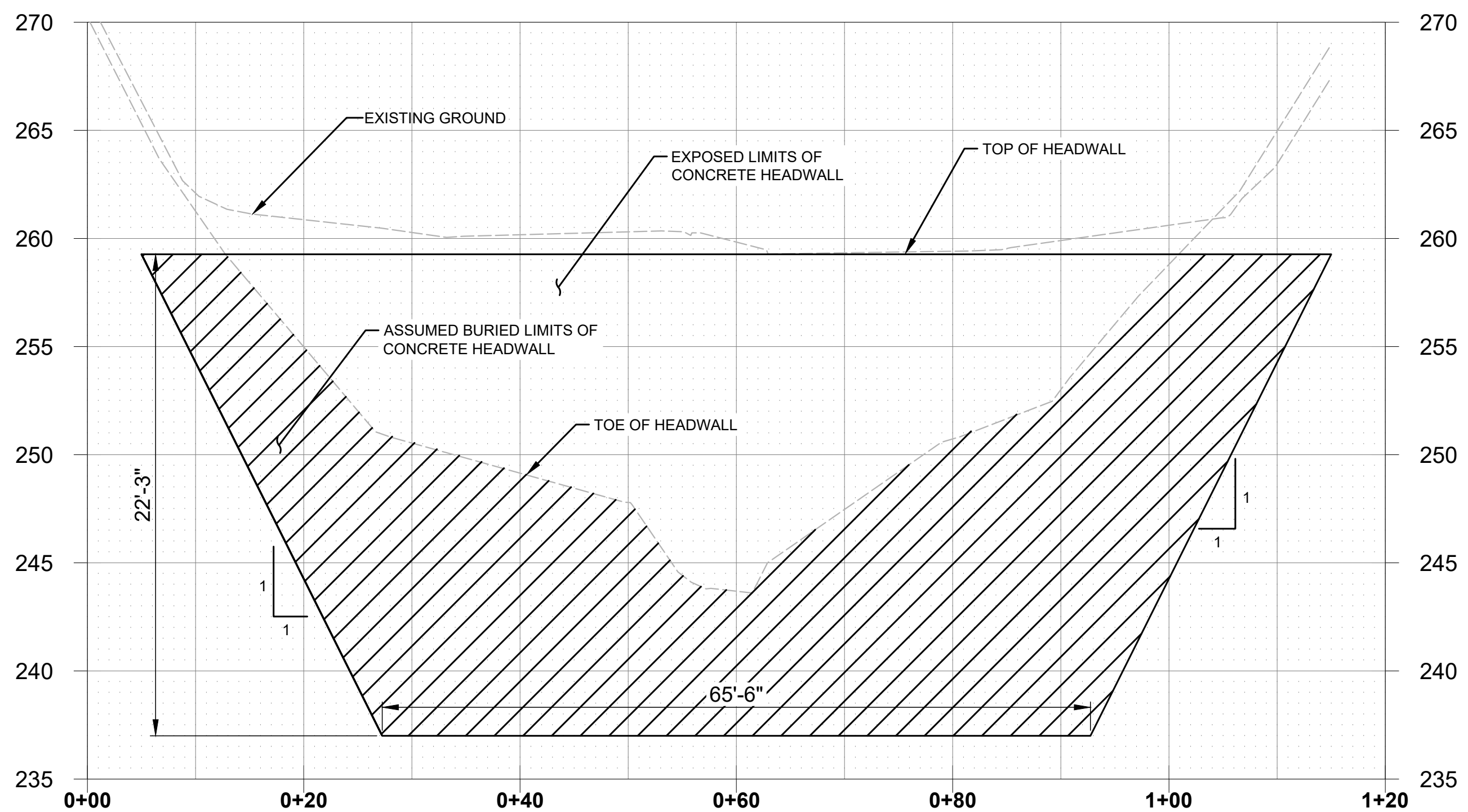
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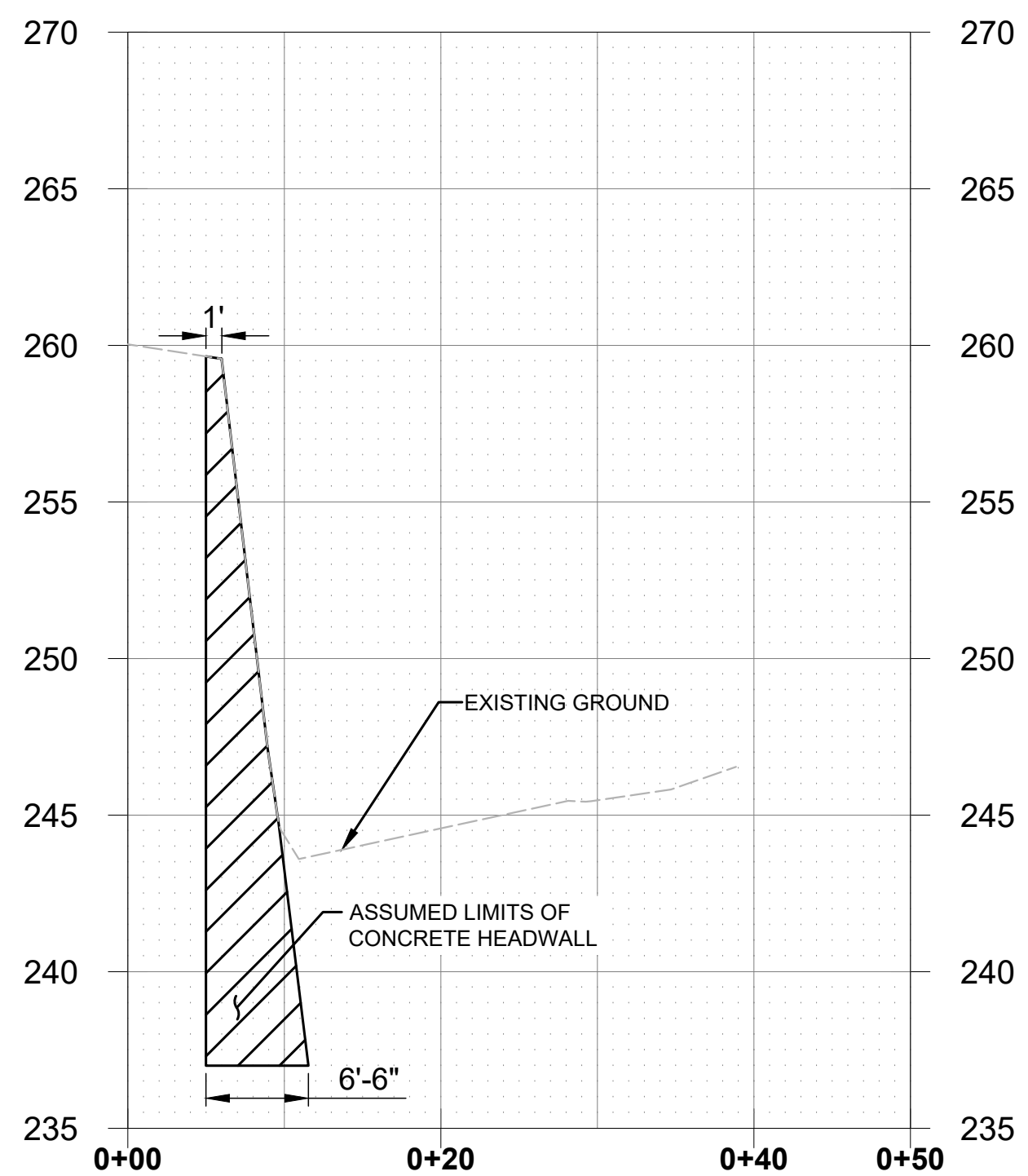
**A WESTERN DAM SECTION**  
N.T.S.



**B WESTERN DAM PROFILE**  
N.T.S.



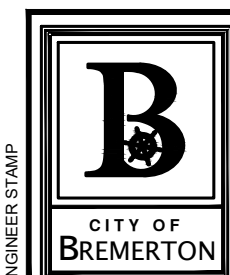
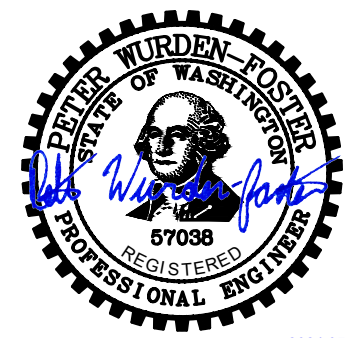
**C EASTERN DAM SECTION**  
N.T.S.



**D EASTERN DAM PROFILE**  
N.T.S.

**NOTES:**

- BELOW GRADE LIMITS OF DAM STRUCTURES ASSUMED BASED ON HISTORIC PHOTOS AND SITE OBSERVATIONS.



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038 DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848 DATE: 03/20/2024

**SECTION, TOWNSHIP, RANGE:**  
S16, T24N, R1E, W.M.

**GRANT/LOAN INFORMATION**

**ANDERSON CREEK DAM REMOVALS**

**DAM CROSS SECTION - 1**

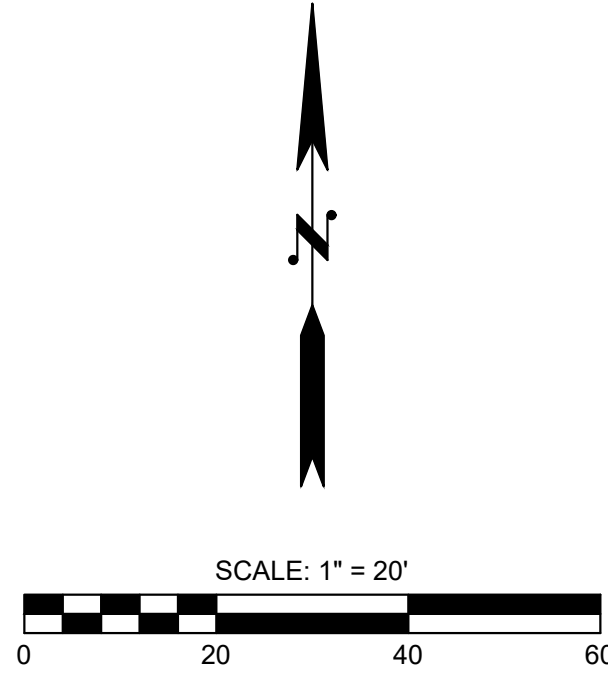


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Llama antes de excavar.

SHEET  
27 OF 34  
PN: 4571  
DWG  
**C11**



MATCHLINE SEE DWG R2



GENERAL NOTES:

1. SEE SHEET R5 FOR PLANT SCHEDULE AND PLANTING AND SOILS NOTES.

KEY NOTES:

- 1 REINSTALL BOLLARDS STORED DURING CONSTRUCTION.
- 2 REMOVE EXISTING CONCRETE DRIVEWAY AND REPLACE IN KIND IF REQUIRED AND APPROVED BY CITY. SEE SPECIAL PROVISION 2-02.3(3)
- 3 230 LINEAR FEET OF GRIND AND OVERLAY PAVEMENT RESTORATION IF REQUIRED AND APPROVED BY CITY. SEE SPECIAL PROVISION 2-02.3(3)
- 4 INSTALL 7 CONCRETE BLOCKS TO BLOCK ACCESS ROAD.

PLANTING AND RESTORATION LEGEND

- CG CLEARING AND GRUBBING LINE
- CONTOURS - EXISTING

STABILIZED CONSTRUCTION ENTRANCE RESTORATION AREA: REMOVE ALL ROCK AND AGGREGATE INSTALLED FOR CONSTRUCTION ENTRANCE AND DECOMPACT SUBGRADE TO A DEPTH OF 18". APPLY 12" OF TOPSOIL (TYPE B) FOLLOWED BY 3" OF WOOD CHIP MULCH GENERATED ON SITE FROM TREES TO BE REMOVED (SEE SPECIAL PROVISION 9-14.5(3)).

2" GRIND AND OVERLAY PAVEMENT RESTORATION

UPLAND ACCESS ROAD: DECOMPACT TO A DEPTH OF 18" AND APPLY MAXIMUM 15" DEPTH OF STOCKPILED SOILS FROM MATERIAL STOCKPILE AND STAGING AREAS IDENTIFIED ON SHEET EC3 AND EC4. APPLY 3" DEPTH WOOD CHIP MULCH, GENERATED ON SITE FROM TREES TO BE REMOVED (SEE SPECIFICATION SPECIAL PROVISION 9-14.5(3)).

FILE: P\_20-220002.REST LAYOUT: RESTORATION & PLANTING PLAN - 1 PATH: C:\vw\_ccl\_workingdir\osbornconsulting-pw\Bentley.com\osbornconsulting-pw-01\vue\_ong\vrms32284 PLOTTED BY: huea DATE: Tuesday, May 7, 2024 9:42:42 AM



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
DESIGN BY: C. TALLEY WA L.A.#	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. BROWNING WA L.A.# 21017741 DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

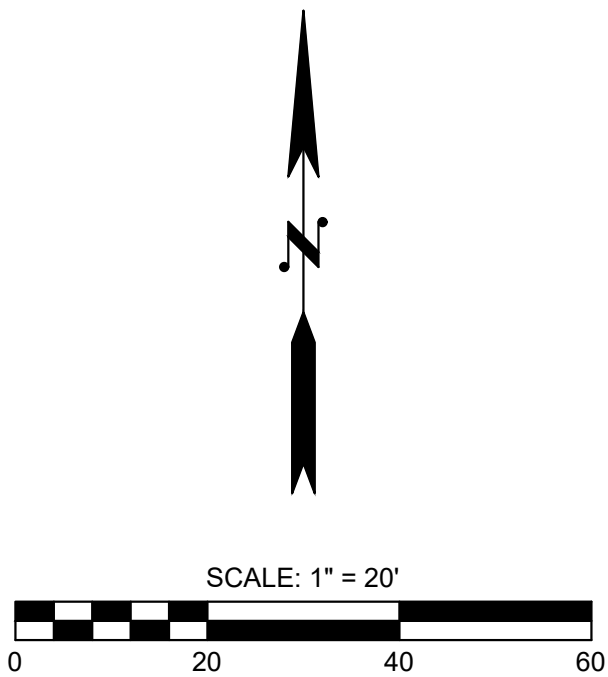
ANDERSON CREEK DAM REMOVALS

RESTORATION & PLANTING PLAN - 1

SHEET 28 OF 34
PN: 4571
DWG R1



FILE: P\_20-220002.REST LAYOUT: RESTORATION & PLANTING PLAN - 2 PATH: C:\pw\_coi\_workingdir\osbornconsulting-pw\01\hue.ong\dms3284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:42:43 AM



**GENERAL NOTES:**

1. SEE SHEET R5 FOR PLANT SCHEDULE AND PLANTING AND SOILS NOTES.

**KEY NOTES:**

- ① WETLAND BUFFER  
② EXISTING WETLAND BOUNDARY, NO WORK INSIDE WETLAND BOUNDARY

**PLANTING AND RESTORATION LEGEND**

- CG CLEARING AND GRUBBING LINE  
TOPSOIL STOCKPILE AREA  
CONTOURS - EXISTING

- PICEA SITCHENSIS  
ALNUS RUBRA  
PSEUDOTSUGA MENZIESII  
ACER MACROPHYLLUM

- EXISTING TREE

- RIPARIAN AND UPLAND RESTORATION TYPE 1:  
DECOMPACT SUBGRADE TO DEPTH OF 18" PLACE 12" OF TOPSOIL (TYPE B) FROM ON SITE STOCKPILE IN 2 LIFTS. ON AREAS STEEPER THAN 3:1, PLACE COIR EROSION CONTROL BLANKET (PER SPECIFICATION SPECIAL PROVISION 8-01.3(3)). AFTER PLANTING, APPLY 3" OF WOOD CHIP MULCH TO BE GENERATED ON SITE FROM TREES TO BE REMOVED. SEE SPECIFICATION SPECIAL PROVISION 9-14.5(3).

- UPLAND ACCESS ROAD:  
DECOMPACT TO A DEPTH OF 18" AND APPLY MAXIMUM 15" DEPTH OF STOCKPILED SOILS FROM MATERIAL STOCKPILE AND STAGING AREAS IDENTIFIED ON SHEET EC3 AND EC4. APPLY 3" DEPTH WOOD CHIP MULCH, GENERATED ON SITE FROM TREES TO BE REMOVED (SEE SPECIFICATION SPECIAL PROVISION 9-14.5(3)).



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: C. TALLEY WA L.A.#	DATE: 03/20/2024	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. BROWNING WA L.A.# 21017741 DATE: 03/20/2024
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<b>SECTION, TOWNSHIP, RANGE:</b> S16, T24N, R1E, W.M.
<b>GRANT/LOAN INFORMATION</b>

**ANDERSON CREEK DAM REMOVALS**

**RESTORATION & PLANTING PLAN - 2**

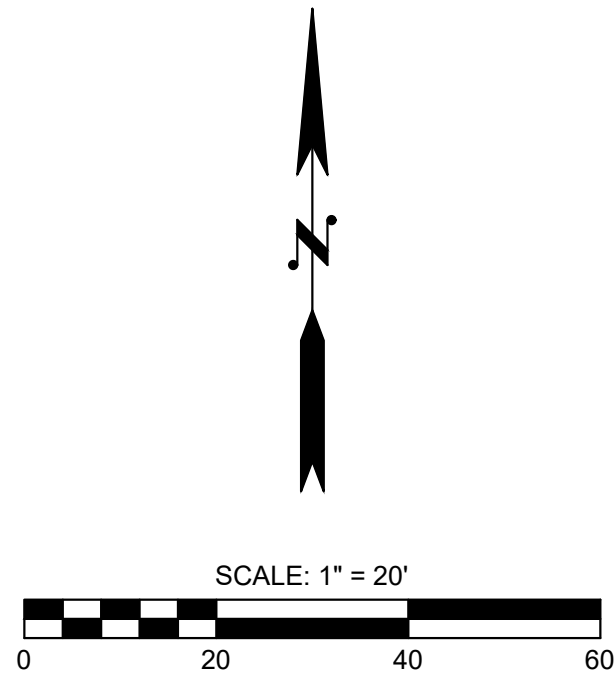
SHEET 29 OF 34
PN: 4571
DWG <b>R2</b>



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Llama antes de excavar.



FILE: P\_20-220002.REST LAYOUT: RESTORATION & PLANTING PLAN - 3 PATH: C:\pw\_coi\_working\osbornconsulting-pw\01\hue\_ong\rms3284 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:42:44 AM

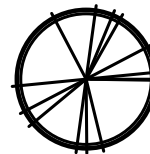
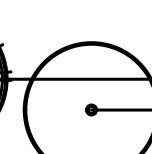
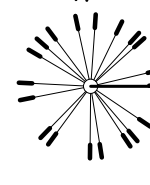
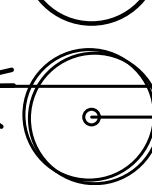


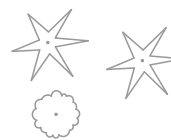
**GENERAL NOTES:**

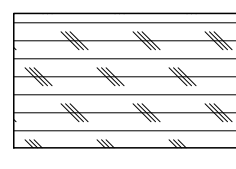
1. SEE SHEET R5 FOR PLANT SCHEDULE AND PLANTING AND SOILS NOTES.

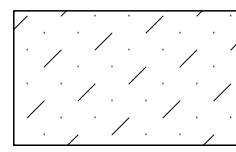
**PLANTING AND RESTORATION LEGEND**

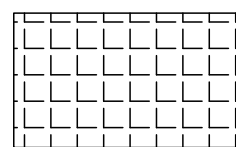
- CG CLEARING AND GRUBBING LINE  
TP TREE PROTECTION FENCE  
--- CONTOURS - EXISTING

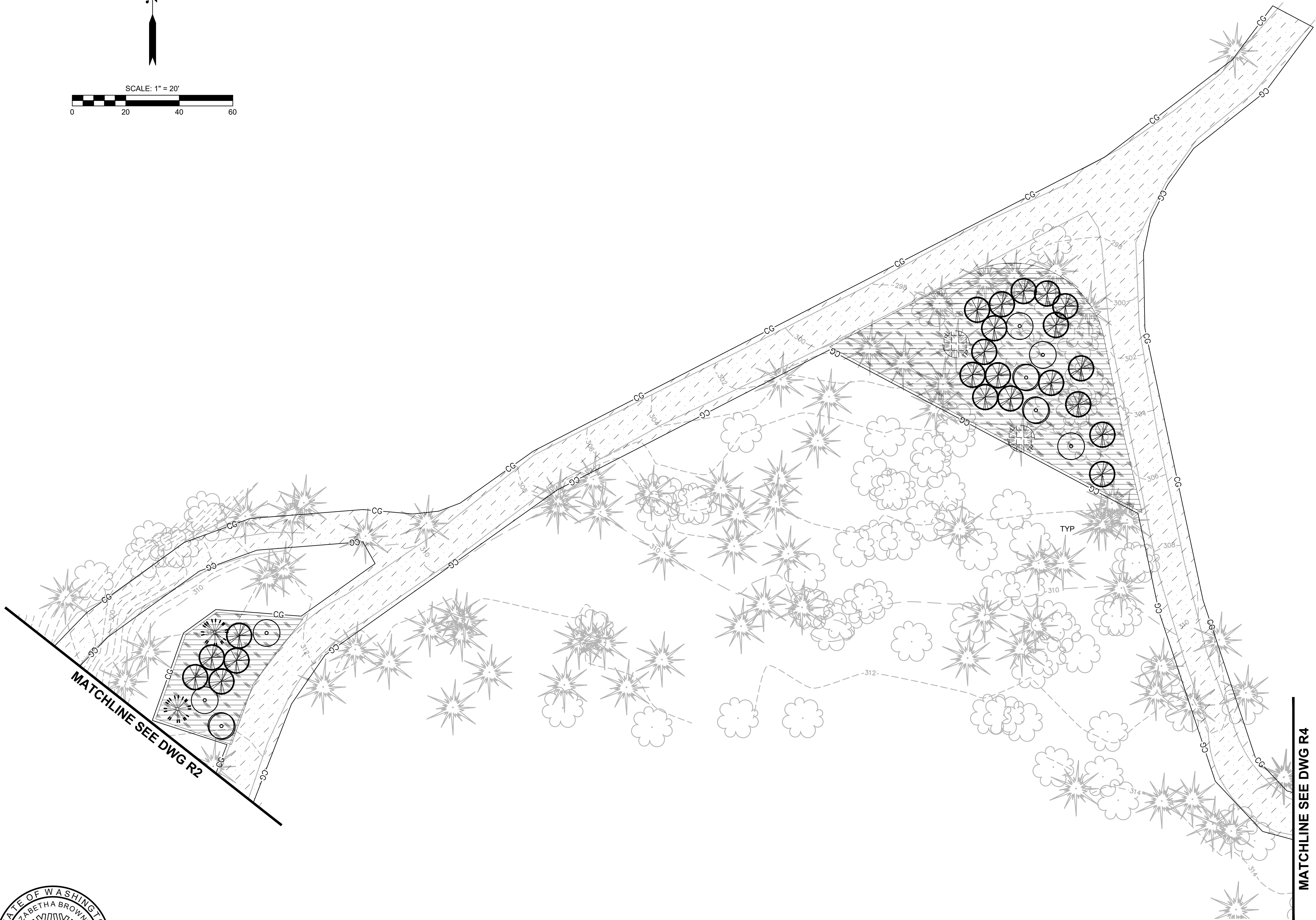
-   PICEA SITCHENSIS  
ALNUS RUBRA  
  PSEUDOTSUGA MENZIESII  
ACER MACROPHYLLUM

-  EXISTING TREE

-  RIPARIAN AND UPLAND RESTORATION TYPE 2:  
DECOMPACT SUBGRADE TO DEPTH OF 18". PLACE 6" OF  
TOPSOIL (TYPE B) IN 2 LIFTS. AFTER PLANTING, APPLY 3" OF  
WOOD CHIP MULCH GENERATED ON SITE FROM TREES TO  
BE REMOVED (SEE SPECIFICATION SECTION 9-14.5(3)).

-  UPLAND ACCESS ROAD:  
DECOMPACT TO A DEPTH OF 18" AND APPLY MAXIMUM 15"  
DEPTH OF STOCKPILED SOILS FROM MATERIAL STOCKPILE  
AND STAGING AREAS IDENTIFIED ON SHEET EC3 AND EC4.  
APPLY 3" DEPTH WOOD CHIP MULCH, GENERATED ON SITE  
FROM TREES TO BE REMOVED (SEE SPECIFICATION  
SPECIAL PROVISION 9-14.5(3)).

-  TREE PROTECTION AREA - UNDERSTORY REMOVAL, 6"  
DEPTH WOOD CHIP MULCH. SEE TREE PROTECTION NOTES  
ON SHEET G2



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
DESIGN BY: C. TALLEY WA L.A.#	DATE: 03/20/2024	CHECKED BY: L. BROWNING WA L.A.# 21017741 DATE: 03/20/2024
DRAWN BY: H. ONG DATE: 03/20/2024		

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS
RESTORATION & PLANTING PLAN - 3

SHEET 30 OF 34
PN: 4571
DWG R3



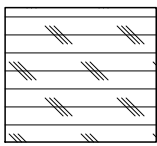
Know what's below.  
Call before you dig.  
Determina lo que esta bajo tierra.  
Llama antes de excavar.







PLANT SCHEDULE



RIPARIAN AND UPLAND PLANTING SHRUBS  
ATHYRIUM CYCLOSORUM / WESTERN LADY FERN  
CORNUS SERICEA / RED TWIG DOGWOOD  
CORYLUS CORNUTA / WESTERN HAZELNUT  
DRYOPTERIS EXPANSA / SPREADING WOOD FERN  
LONICERA INVOLUCRATA / TWINBERRY  
MAHONIA NERVOSA / OREGON GRAPE  
OEMLERIA CERASIFORMIS / OSOBERY  
OPLOPANAX HORRIDUS / DEVIL'S CLUB  
POLYSTICHUM MUNITUM / WESTERN SWORD FERN  
ROSA NUTKANA / NOOTKA ROSE  
RUBUS PARVIFLORUS / THIMBLEBERRY  
RUBUS SPECTABILIS / SALMONBERRY  
SALIX SCOULERIANA / SCOULER'S WILLOW  
SYMPHORICARPOS ALBUS / COMMON WHITE SNOWBERRY  
VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY

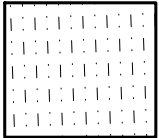
SIZE	SPACING	QUANTITY
#1	36" O.C.	227
LIVE STAKES	36" O.C.	227
#1	36" O.C.	227
#1	36" O.C.	227
#1	36" O.C.	227
#1	36" O.C.	227
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#1	36" O.C.	227
#1	36" O.C.	227
#1	36" O.C.	227

TREES



ACER MACROPHYLLUM / BIG LEAF MAPLE  
ALNUS RUBRA / RED ALDER  
PICEA SITCHENSIS / SITKA SPRUCE  
PSEUDOTSUGA MENZIESII / DOUGLAS FIR

SIZE	SPACING	QUANTITY
1.5" CAL.	PER PLAN	18
1.5" CAL.	PER PLAN	18
6' HT. MIN	PER PLAN	67
6' HT. MIN	PER PLAN	74



STABILIZED CONSTRUCTION ENTRANCE PLANTING  
MAHONIA NERVOSA / OREGON GRAPE  
POLYSTICHUM MUNITUM / WESTERN SWORD FERN  
VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY

SIZE	SPACING	QUANTITY
#1	36" O.C.	78
#1	36" O.C.	78
#1	36" O.C.	78

PLANTING AND SOILS NOTES:

- ALL PLANTING RESTORATION AREAS SHALL RECEIVE PREPARATION INCLUDING DECOMPACTION TO A DEPTH OF 18" AND REMOVAL OF EXCESS MATERIALS SUCH AS ROCKS AND OTHER ITEMS OVER 3" IN DIAMETER PER SPECIFICATION SECTION 8-02.3(5)C.
- TOPSOIL SHALL BE INSTALLED ACCORDING TO SPECIFICATION SECTION 8-02.3(4). TOPSOIL DEPTHS GREATER THAN 6" SHALL BE PLACED IN LIFTS NO MORE THAN 6" IN DEPTH. THE FIRST LIFT OF TOPSOIL SHALL BE INCORPORATED WITH SUB-SOIL TO A DEPTH OF 8" AND SUBSEQUENT LIFTS PLACED AND LIGHTLY TAMPED BETWEEN LIFTS. AFTER THE TOPSOIL HAS BEEN SPREAD, REMOVE LARGE CLODS, HARD LUMPS, AND ROCKS 2" IN DIAMETER AND LARGER.
- INSTALL COIR EROSION CONTROL FABRIC PER SPECIFICATION SPECIAL PROVISION 8-01.3(3) IN ALL PLANTING AREAS 3:1 IN SLOPE OR GREATER.
- PLANTING AND MULCHING OF THE PREPARED PLANTING AREAS SHALL BEING WITHIN TWO DAYS OF FINAL PREPARATION PER SPECIFICATION 9-02.3(5)C.
- ALL PLANTING AREAS AND OTHER MULCHED AREAS AS IDENTIFIED IN THE PLANS SHALL RECEIVE 3" OF WOOD CHIP MULCH TOP DRESSING. WOOD CHIP MULCH SHALL BE CHIPPED MATERIALS FROM ON-SITE SOURCES.
- UNDER NO CIRCUMSTANCES WILL PLANTING BE PERMITTED DURING UNSUITABLE SOIL OR WEATHER CONDITIONS AS DETERMINED BY THE ENGINEER OR AS PER SPECIFICATION 8-02.3(8)A. ALL PLANTING FOR NON-IRRIGATED PLANT MATERIAL SHALL OCCUR OCTOBER 1 THROUGH MARCH 1.



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: C. TALLEY  
WA L.A.#      DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE:      03/20/2024

CHECKED BY: L. BROWNING  
WA L.A.# 21017741 DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS

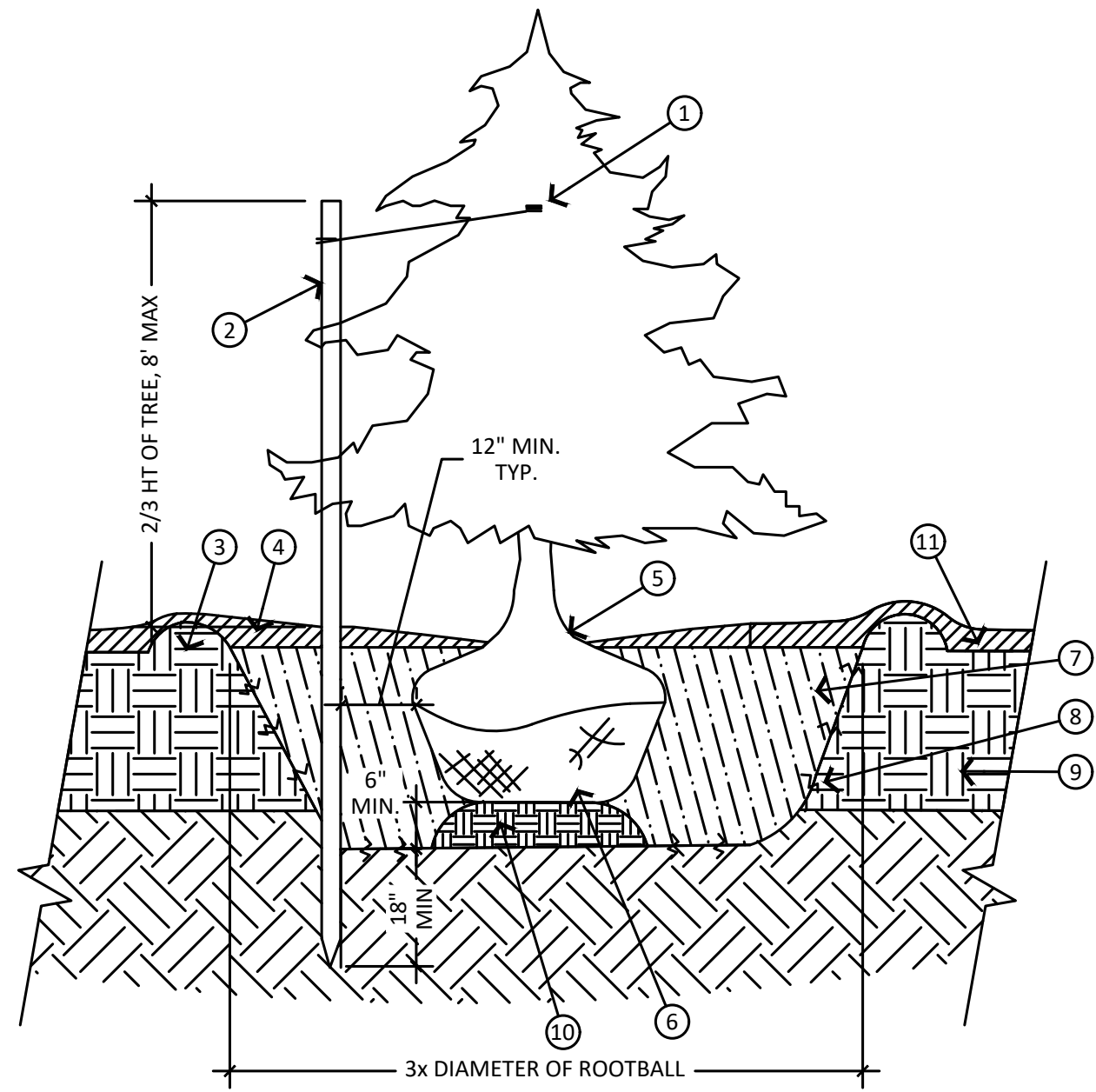
PLANTING SCHEDULE AND NOTES

SHEET 32 OF 34
PN: 4571
DWG <b>R5</b>



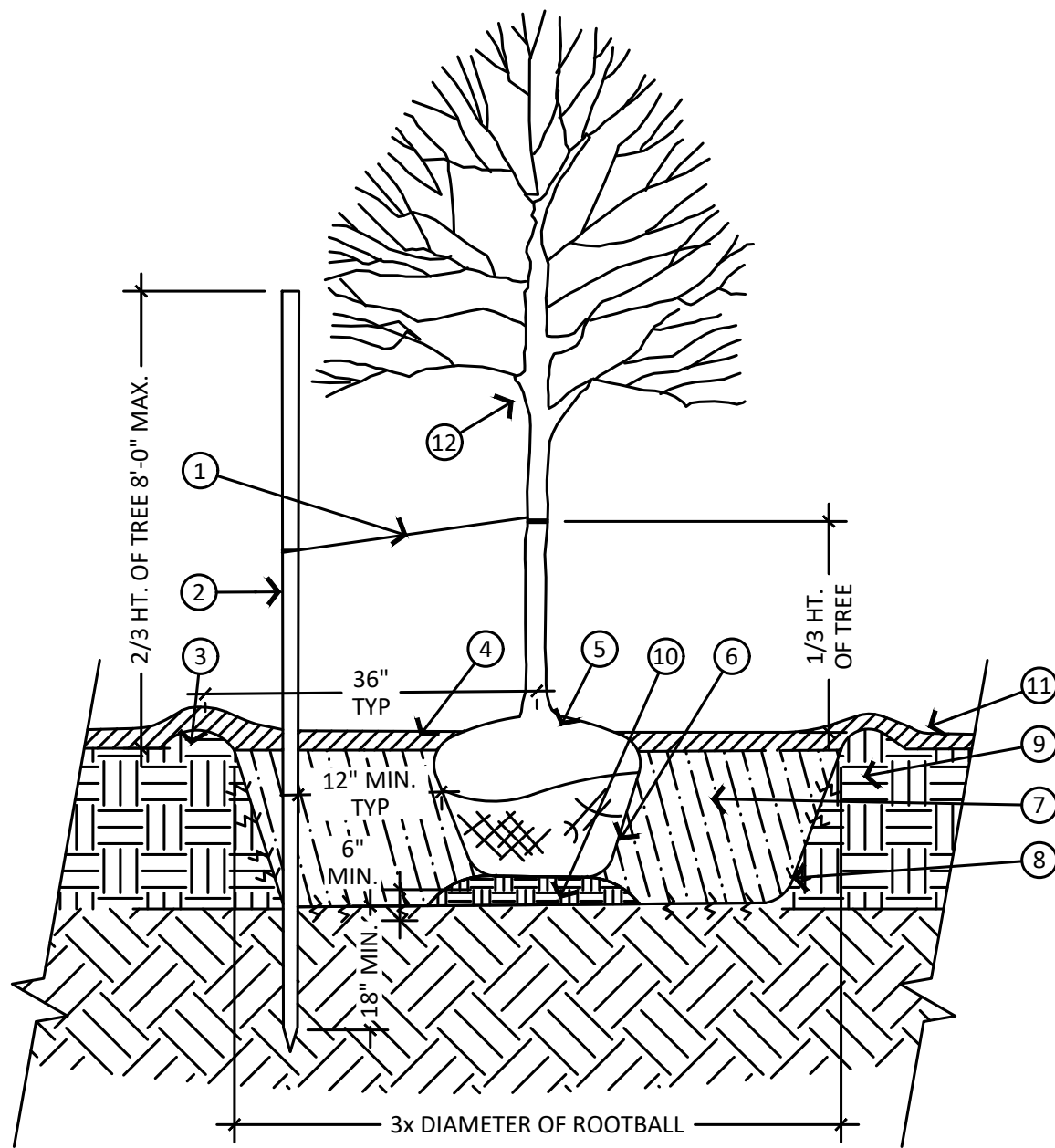
Know what's below.  
Call before you dig.  
Determina lo que esta bajo tierra.  
Llama antes de excavar.





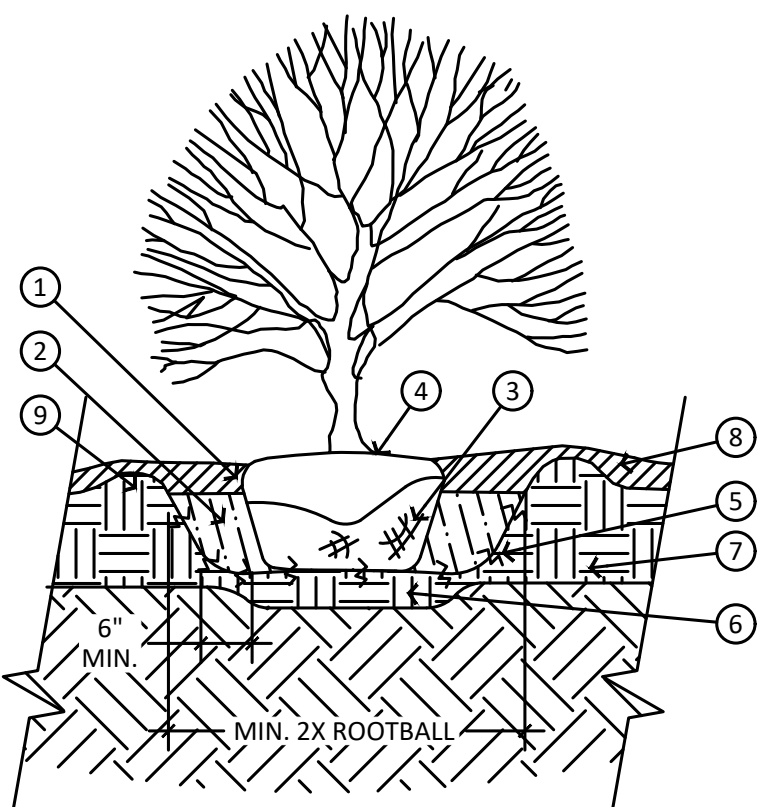
1. GUY TRUNK TO STAKE WITH TREE CHAIN.
2. 1" X 1" X 4' BAMBOO STAKE. CUT TOP OF STAKE.
3. 6" BERM - SET AT 3' RADIUS FROM CENTER OF TREE. IN SEED/TURF BEDS THAT ARE LESS THAN 5' WIDE MAKE SQUARE TO ADJACENT PAVEMENT.
4. 3" MIN. TOP MULCH LAYER - DO NOT PLACE MULCH DIRECTLY AGAINST TREE TRUNK.
5. SET SO ROOT FLARE OR FIRST ROOT IS 1" ABOVE FINISHED GRADE.
6. CUT AND REMOVE BURLAP AND WIRE BASKET.
7. BACKFILL WITH SOIL FROM PIT EXCAVATION. WATER SETTLE SOIL AFTER PLANTING.
8. ROUGHEN SIDES AND BOTTOM OF THE HOLE. PREPARED SUBGRADE AND PLANTING SOIL.
9. RETAIN UNDISTURBED NATIVE SOIL OR COMPACT PREPARED SUBGRADE FOR FIRM BASE.
10. WHEN PLANTING TREES WITHIN PLANTING BED, EXTEND COMPOST MULCH TO EDGE OF BED.

NOTES  
A. DO NOT PLANT IN WET CONDITIONS. PROVIDE DRAINAGE FROM EACH PLANTING PIT IF NECESSARY.  
B. CONIFEROUS TREES PLANTED IN LAWN AREAS TO HAVE 4' DIAMETER COMPOST MULCH CIRCLE, CENTERED ON TRUNK.



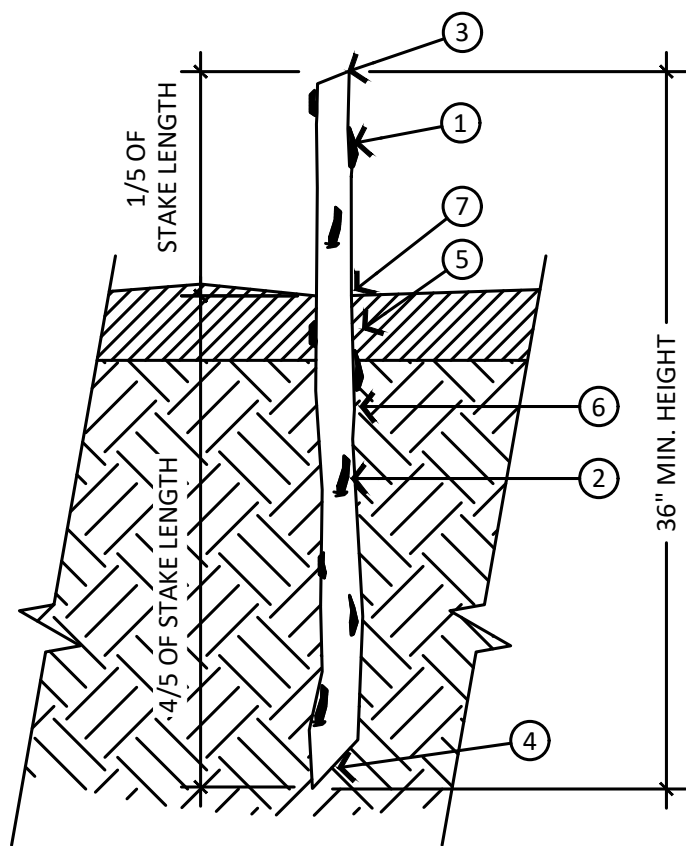
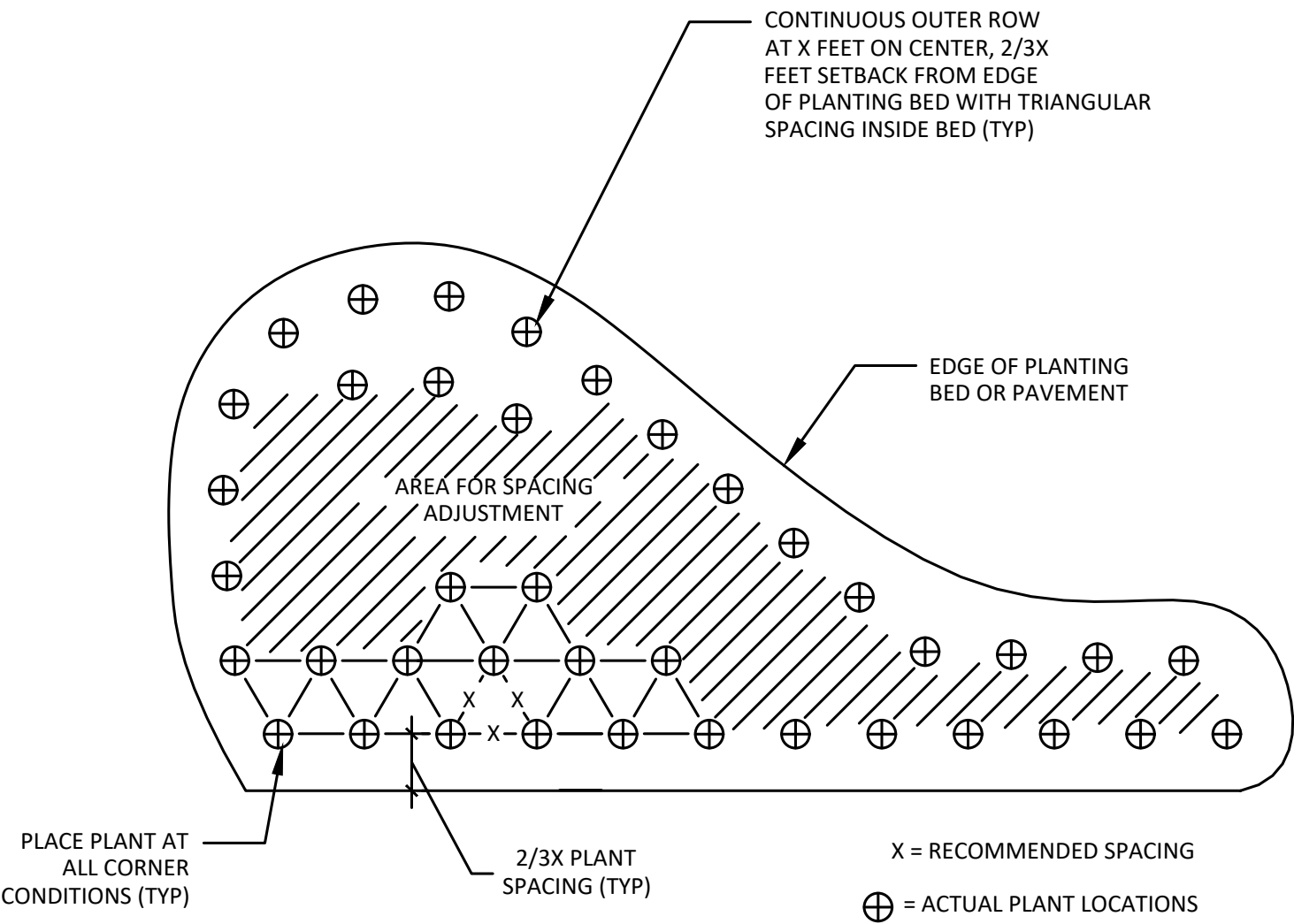
1. GUY TRUNK TO STAKE WITH TREE CHAIN.
2. 1" X 1" X 4' BAMBOO STAKE. CUT TOP OF STAKE.
3. 6" BERM - SET AT 3' RADIUS FROM CENTER OF TREE. IN SEED/TURF BEDS THAT ARE LESS THAN 5' WIDE MAKE SQUARE TO ADJACENT PAVEMENT.
4. 3" MIN. TOP MULCH LAYER - DO NOT PLACE MULCH DIRECTLY AGAINST TREE TRUNK.
5. SET SO ROOT FLARE OR FIRST ROOT IS 1" ABOVE FINISHED GRADE.
6. REMOVE BURLAP AND WIRE BASKET.
7. BACKFILL WITH TOPSOIL TYPE B. WATER SETTLE SOIL AFTER PLANTING.
8. ROUGHEN SIDES AND BOTTOM OF THE HOLE. PREPARED SUBGRADE AND TOPSOIL.
9. RETAIN UNDISTURBED NATIVE SOIL OR COMPACT PREPARED SUBGRADE FOR FIRM BASE.
10. WHEN PLANTING TREES WITHIN PLANTING BED, EXTEND COMPOST MULCH TO EDGE OF BED.
11. BRANCHING HEIGHT PER PLANT SCHEDULE.

NOTE  
A. DO NOT PLANT IN WET CONDITIONS. PROVIDE DRAINAGE FROM EACH PLANTING PIT IF NECESSARY.



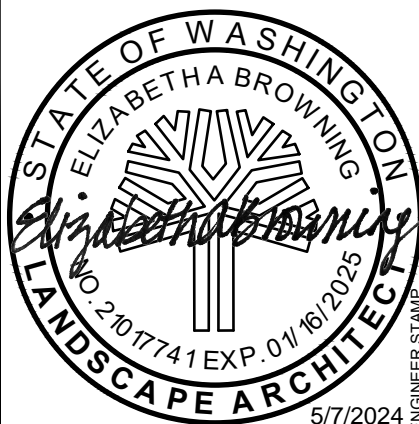
1. 3" MIN. TOP MULCH - FEATHER BACK FROM STEM.
2. PREPARED PLANTING SOIL.
3. COMPLETELY REMOVE CONTAINER OR BURLAP.
4. SET SO FIRST ROOT EMERGING FROM MAIN STEM IS 1" ABOVE FINISHED GRADE.
5. ROUGHEN SIDES AND BOTTOM OF HOLE.
6. COMPACT SOIL FOR FIRM BASE.
7. PREPARED SUBGRADE AND PLANTING SOIL.
8. WHEN PLANTING SHRUBS WITHIN PLANTING BED, EXTEND TOP MULCH TO EDGE OF BED.
9. 6" BERM AROUND PLANTING PIT.

NOTES:  
A. DO NOT PLANT IN WET CONDITIONS, PROVIDE DRAINAGE FROM EACH PLANTING PIT IF NECESSARY.  
B. SPACING TO BE TRIANGULAR UNLESS SHOWN OTHERWISE.  
C. SEE SPEC SECTION 8-02



1. MINIMUM 2 NODES ABOVE GROUND
2. MINIMUM 2 NODES UNDERGROUND
3. SQUARE CUT ON TOP
4. ANGLE CUT 30° ON BOTTOM
5. TAMP SOIL AND COMPOST MULCH AROUND CUTTING FOR FULL CONTACT AT NODES
6. PRE-DIG HOLES WITH POLE IF EXISTING SOIL IS TOO HARD FOR EASY INSERTION
7. CUTTINGS TO BE PLANTED PERPENDICULAR TO GROUND SURFACE

NOTE  
A. CUTTINGS TO BE BETWEEN 3/4" AND 1-1/2" IN DIAMETER.



NO.	REVISIONS	DATE	BY

CITY OF BREMERTON DEPARTMENT OF PUBLIC WORKS & UTILITIES ENGINEERING DIVISION		
DESIGN BY: C. TALLEY WA L.A.#	DRAWN BY: H. ONG DATE: 03/20/2024	CHECKED BY: L. BROWNING WA L.A.# 21017741 DATE: 03/20/2024

SECTION, TOWNSHIP, RANGE:
S16, T24N, R1E, W.M.
GRANT/LOAN INFORMATION

ANDERSON CREEK DAM REMOVALS
PLANTING DETAILS

SHEET 33 OF 34
PN: 4571
DWG R6



FILE: P\_20-220002-TC LAYOUT: TRAFFIC CONTROL PLAN PATH: C:\pw\oc\workingd\osbornconsulting-pw\01\hue\eng\dms32264 PLOTTED BY: hueo DATE: Tuesday, May 7, 2024 9:42:52 AM




**GENERAL NOTES:**


1. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN FOR APPROVAL MEETING THE MINIMUM REQUIREMENTS SHOWN ON THIS SHEET. SEE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS, HOUSES AND BUILDINGS AT ALL TIMES.
3. CITY OF PORT ORCHARD ACCESS ALONG THE CITY OF PORT ORCHARD OWNED ACCESS ROAD TO THE PUMP STATION SHALL BE COORDINATED PRIOR TO CONSTRUCTION BEGINNING.
4. IF A FULL ROAD CLOSURE OF THE ACCESS ROAD IS REQUIRED, IT MAY BE CLOSED UP TO 8 HOURS AND THE CONTRACTOR MUST COORDINATE CLOSURE DATE(S) AND GET CITY OF PORT ORCHARD APPROVAL PRIOR TO BEGINNING CONSTRUCTION.
5. SIGNS REFERENCED ON THIS SHEET REFERENCE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SIGN TYPES.
6. PUBLIC ROADS AND PUMP STATION ACCESS ROAD ARE NOT TO BE USED FOR CONSTRUCTION PARKING, STORAGE OR STAGING. SEE SHEET EC3 AND EC4 FOR STAGING AREA LIMITS.

**SYMBOL LEGEND**

 WORK AREA

 TYPE 3 BARRICADE

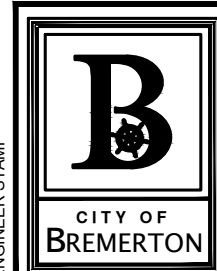
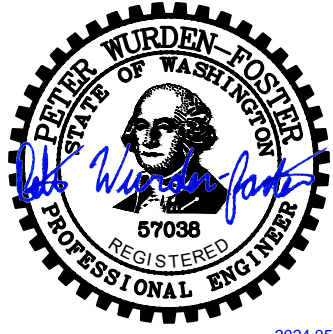
**SIGN KEY**

 **ROAD CLOSED**  
R11-2  
48" X 30"

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Know what's below.  
Call before you dig.  
Determina lo que esta bajo tierra.  
Llama antes de excavar.



NO.	REVISIONS	DATE	BY

**CITY OF BREMERTON**  
**DEPARTMENT OF PUBLIC WORKS & UTILITIES**  
**ENGINEERING DIVISION**

DESIGN BY: P. WURDEN-FOSTER  
WA P.E.# 57038 DATE: 03/20/2024

DRAWN BY: H. ONG  
DATE: 03/20/2024

CHECKED BY: L. RUPPERT  
WA P.E.# 43848 DATE: 03/20/2024

**SECTION, TOWNSHIP, RANGE:**  
S16, T24N, R1E, W.M.

**GRANT/LOAN INFORMATION**

**ANDERSON CREEK DAM REMOVALS**

**TRAFFIC CONTROL PLAN**

SHEET	34 OF 34
PN: 4571	
DWG	
TC1	