

WATTS-TOPPIN FISH PASSAGE IMPROVEMENT PROJECT

100% DESIGN SUBMITTAL

WATERWAYS CONSULTING INC.
1020 SW TAYLOR STREET, STE. 360
PORTLAND, OR 97205
PH: (503) 227-5979 // FAX: (888) 819-6847
WWW.WATWAYS.COM

DATE: 8/29/23
ANNIKA M. SULLIVAN
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 6/30/2024

PREPARED AT THE REQUEST OF:
APPLEGATE PARTNERSHIP
AND WATERSHED COUNCIL

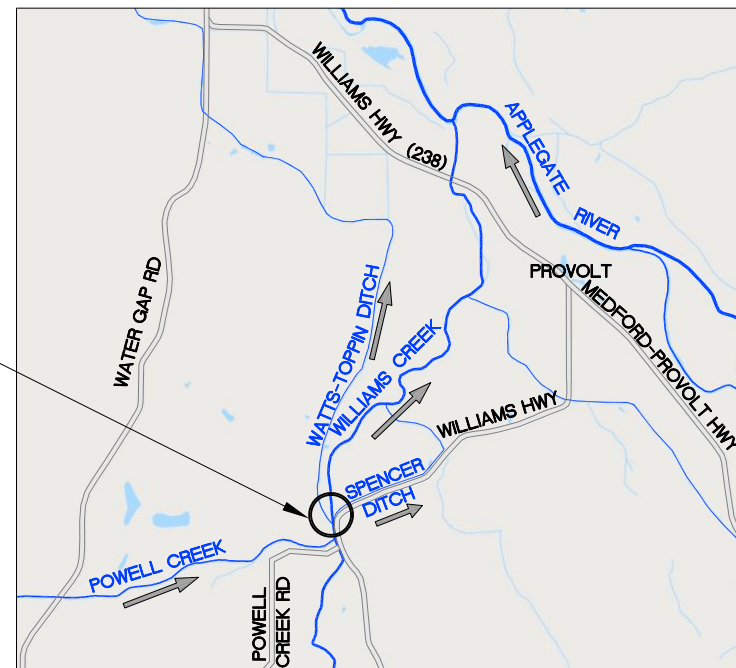
COVER

WATTS-TOPPIN DIVERSION
FISH PASSAGE
IMPROVEMENTS
100% DESIGN SUBMITTAL

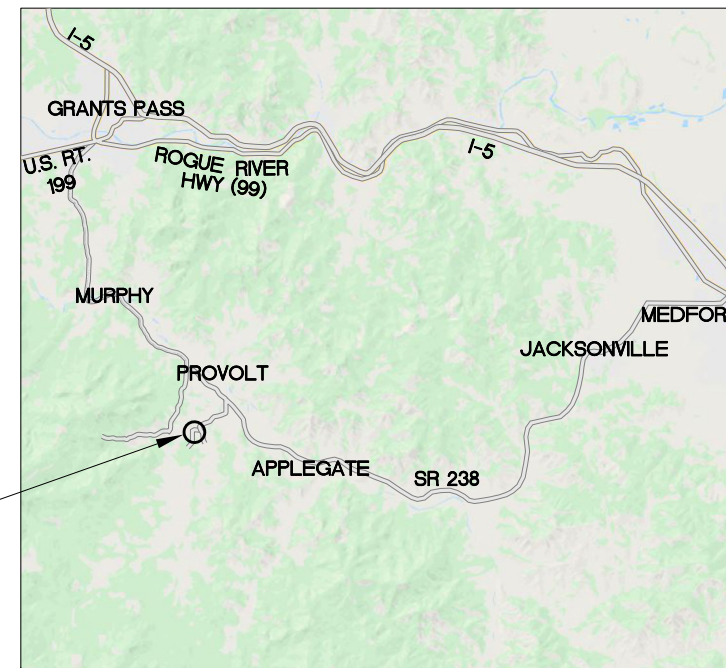
DESIGNED BY: A.S.
DRAWN BY: M.L.
CHECKED BY: J.H.
DATE: 8/29/23
JOB NO.: 20-063

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS

C1 1 OF 17



VICINITY MAP
N.T.S. (GOOGLE)



REGIONAL MAP
N.T.S. (GOOGLE)

GENERAL NOTES

- TOPOGRAPHIC MAPPING WAS PERFORMED BY: WATERWAYS CONSULTING, INC. 1020 SW TAYLOR ST. SUITE 380 PORTLAND, OR 97205 SURVEY DATES: OCTOBER 13-14, 2020; JANUARY 31, 2023.
- LIDAR COLLECTED IN 2012 FOR ROUGUE RIVER. ACCESSED VIA OREGON DOGAMI.
- ELEVATION DATUM: GPS TIES TO NAVD88 USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
- BASIS OF BEARINGS: GPS TIES TO NAD83 OREGON SOUTH STATE PLANE, USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
- SOURCE OF AERIAL PHOTO: CIVIL 3D.
- CONTOUR INTERVAL IS ONE FOOT. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET.
- THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES WERE COMPILED FROM RECORD INFORMATION. THE LOCATION OF THESE LINES IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A COMPLETE BOUNDARY SURVEY.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2021 EDITION OF THE STATE OF OREGON STANDARD SPECIFICATIONS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS "STANDARD SPECIFICATIONS").
- THESE DESIGNS ARE INCOMPLETE WITHOUT THE FINAL STAMPED TECHNICAL SPECIFICATIONS PREPARED BY WATERWAYS CONSULTING, INC. REFER TO TECHNICAL SPECIFICATIONS FOR DETAILS NOT SHOWN HEREON.

ABBREVIATIONS

APPROX.	APPROXIMATE	N.T.S.	NOT TO SCALE
AVG.	AVERAGE	O.C.	ON CENTER
BMP	BEST MANAGEMENT PRACTICES	OHW	ORDINARY HIGH WATER
BW	BASE OF WALL	R	PARCEL NUMBER (RESIDENTIAL)
CC	CONCRETE	RC	RELATIVE COMPACTION
CY	CUBIC YARDS	RD	ROAD
DIA.	DIAMETER	RSP	ROCK SLOPE PROTECTION
DEMO	DEMOLISH	RT	ROUTE
E	EXISTING	SQ.FT.	SQUARE FOOT
EG	EXISTING GROUND	SR	STATE ROUTE
ELEV.	ELEVATION	STD	STANDARD
ESC	EROSION AND SEDIMENT CONTROL	TW	TOP OF WALL
ESM	ENGINEERED STREAMBED MATERIAL	TYP	TYPICAL
DI	DRAINAGE INLET	UNK	UNKNOWN
FG	FINISHED GRADE	U.S.	UNITED STATES
FT	FEET	VERT	VERTICAL
GCS	GRADE CONTROL STRUCTURE	WSE	WATER SURFACE ELEVATION
HDPE	HIGH DENSITY POLYETHYLENE PIPE	YR	YEAR
HORIZ	HORIZONTAL		
HWY	HIGHWAY		
I.E.	INVERT ELEVATION		
IN	INCHES		
INV	INVERT		
LOC	LOCATION		
MH	MANHOLE		
MIN	MINIMUM		
MPH	MILES PER HOUR		
N	NEW		
NIC	NOT IN CONTRACT		

SECTION AND DETAIL CONVENTION

SECTION OR DETAIL IDENTIFICATION (NUMBER OR LETTER)



SHEET REFERENCE

SHEET INDEX

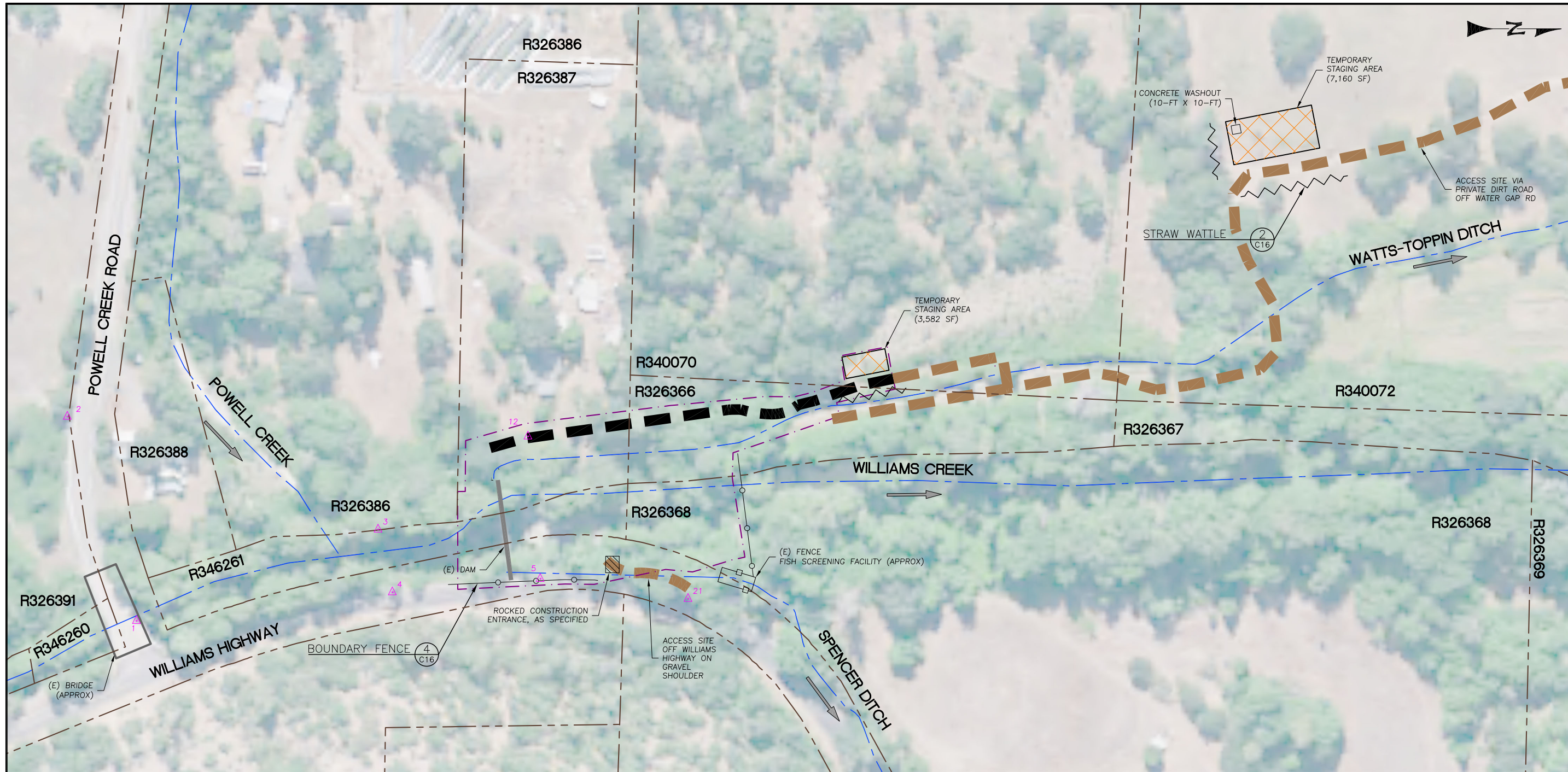
C1	COVER
C2	SITE ACCESS
C3	EXISTING CONDITIONS
C4	DEMOLITION PLAN
C5	CHANNEL GRADING PLAN AND PROFILE (1 OF 2)
C6	CHANNEL GRADING PLAN AND PROFILE (2 OF 2)
C7	SECTIONS (1 OF 2)
C8	SECTIONS (2 OF 2)
C9	CONCRETE DETAILS FOR DAM SILL MODIFICATION
C10	CHANNEL DETAILS
C11	PIPELINE PLAN AND PROFILE
C12	INTAKE STRUCTURE PLAN AND PROFILE
C13	INTAKE STRUCTURE DETAILS
C14	PIPELINE AND CONCRETE DETAILS
C15	DEWATERING AND EROSION CONTROL PLAN
C16	EROSION CONTROL DETAILS AND NOTES
C17	GENERAL AND EARTHWORK NOTES

PROJECT DESCRIPTION

THESE DRAWINGS PROVIDE 100% DESIGN DETAILS FOR FISH PASSAGE IMPROVEMENTS ON WILLIAMS CREEK AND DIVERSION IMPROVEMENTS FOR THE WATTS-TOPPIN DITCH IN JOSEPHINE COUNTY, OREGON.

CONSTRUCTION ACTIVITIES INCLUDE:

- TEMPORARY STREAM DIVERSION AND DEWATERING
- MODIFICATION OF THE EXISTING DAM STRUCTURE
- CONSTRUCTION OF A ROUGHENED CHANNEL DOWNSTREAM OF THE EXISTING DAM
- INSTALLATION OF PLANTED ROCK SLOPE PROTECTION
- MODIFICATION OF THE EXISTING INTAKE STRUCTURE AND IRRIGATION PIPELINE FOR THE WATTS-TOPPIN DIVERSION (ON RIVER LEFT)



LEGEND

- PARCEL BOUNDARY (APPROX)
- (E) FLOW LINE
- (E) FENCE LINE
- △² SURVEY CONTROL POINT
- LIMITS OF DISTURBANCE
- BOUNDARY FENCE
- STRAW WATTLE
- (E) CONCRETE
- (E) BRIDGE (APPROX)
- TEMPORARY ACCESS ROUTE
- ACCESS ROUTE ON EXISTING GRAVEL ROAD
- STORAGE/STAGING AREA
- ROCKED CONSTRUCTION ENTRANCE

CONTROL POINTS

POINT	NORTHING	EASTING	ELEV.	DESC.
1	232680.6987	4177490.7542	1239.05	MAG NAIL
2	232601.6694	4177257.2989	1238.65	MAG NAIL
3	232956.7956	4177386.3319	1223.82	REBAR
4	232973.1510	4177458.0232	1231.24	MAG NAIL
5	233142.1244	4177442.6510	1230.44	MAG NAIL
12	233128.1643	4177279.9565	1233.13	REBAR
21	233311.0228	4177465.5155	1230.04	MAG NAIL

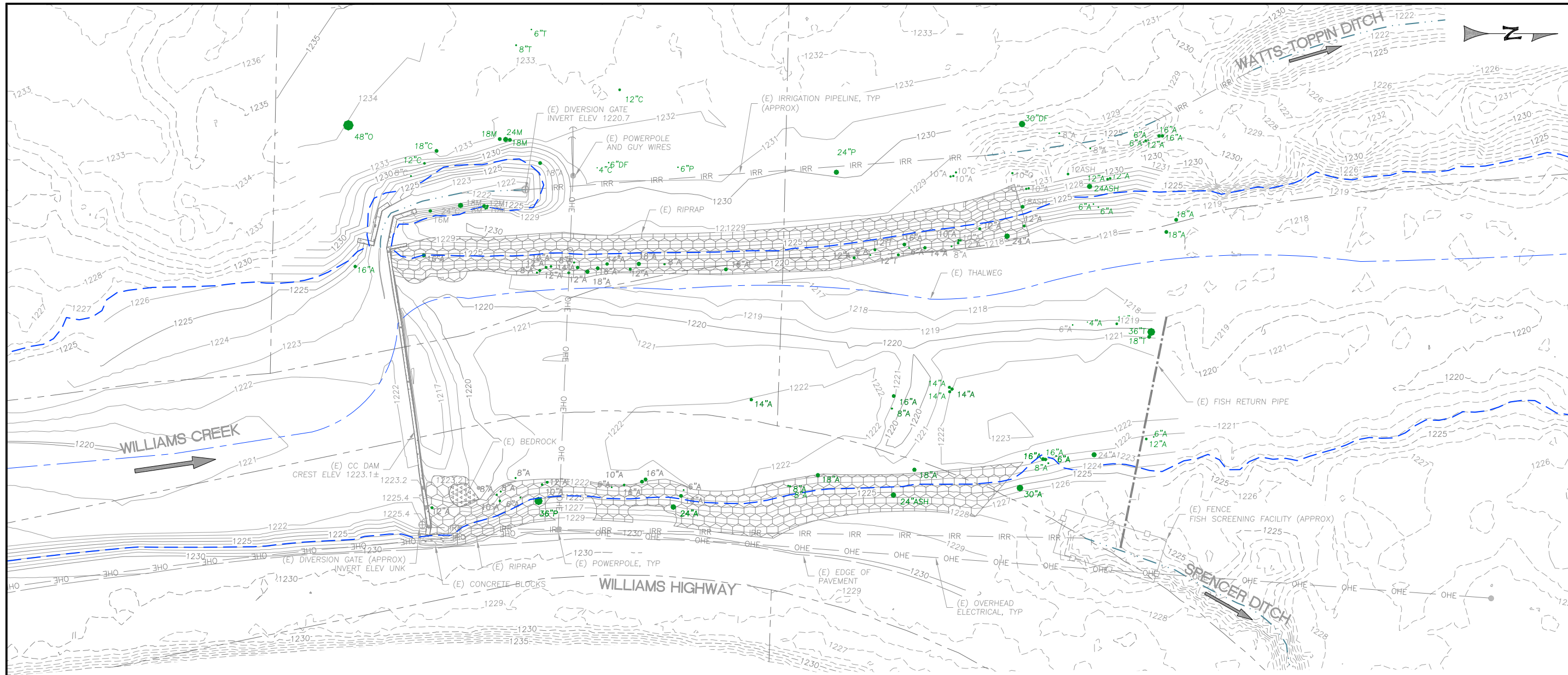
NOTE:

THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES WERE COMPILED FROM RECORD INFORMATION. THE LOCATION OF THESE LINES IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A COMPLETE BOUNDARY SURVEY.

SITE ACCESS
SCALE: 1" = 60'

ACCESS AND STAGING AREA NOTES

1. USE ONLY THE APPROVED ACCESS POINTS, AS SHOWN ON THE DRAWINGS. STOCKPILE MATERIALS WITHIN AN EXISTING FLAT AND PREVIOUSLY DISTURBED AREA.
2. THE ACCESS PLAN SHOWN ON THE DRAWINGS IS SCHEMATIC. SUBMIT A SITE ACCESS PLAN FOR APPROVAL BY THE ENGINEER, PRIOR TO MOBILIZATION.
3. SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER, PRIOR TO MOBILIZATION.
4. CONTAIN THE DOWNSLOPE PERIMETER OF STAGING OR STOCKPILE AREAS WITH STRAW WATTLES.
5. STORE, MAINTAIN AND REFUEL ALL EQUIPMENT AND MATERIALS IN A DESIGNATED PORTION OF THE STAGING AREA A MINIMUM OF 150 FEET AWAY FROM WATERWAYS.
6. ONSITE VEHICLE SPEED ON UNPAVED SURFACES SHALL BE LIMITED TO 5 MPH.



EXISTING CONDITIONS

SCALE: 1" = 20'

LEGEND

- (E) CONTOURS 1-FT. INTERVALS (SURVEY)
- (E) CONTOURS 1-FT. INTERVALS (LIDAR)
- (E) POWERPOLE
- (E) TREE
- (E) HEADGATE
- (E) GUY WIRE
- PARCEL BOUNDARY (APPROX)
- (E) CREEK FLOW LINE
- (E) DITCH FLOW LINE
- (E) OHW BOUNDARY
- (E) EDGE OF PAVEMENT
- (E) FENCE
- (E) OVERHEAD ELECTRICAL
- (E) BURIED IRRIGATION PIPELINE (APPROX)
- (E) FISH RETURN PIPE
- (E) CONCRETE
- (E) RIPRAP
- (E) BEDROCK

NOTES:

1. SIZE, MATERIAL AND LOCATION OF BURIED IRRIGATION PIPELINE ARE UNKNOWN. ALIGNMENT SHOWN ON PLANS IS APPROX.
2. EXTENT AND DEPTH OF BURIED EXISTING CONCRETE AND RIPRAP ARE UNKNOWN.

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 LICENSE NO. 90206PE
 OREGON
 EXPIRES: 6/30/2024

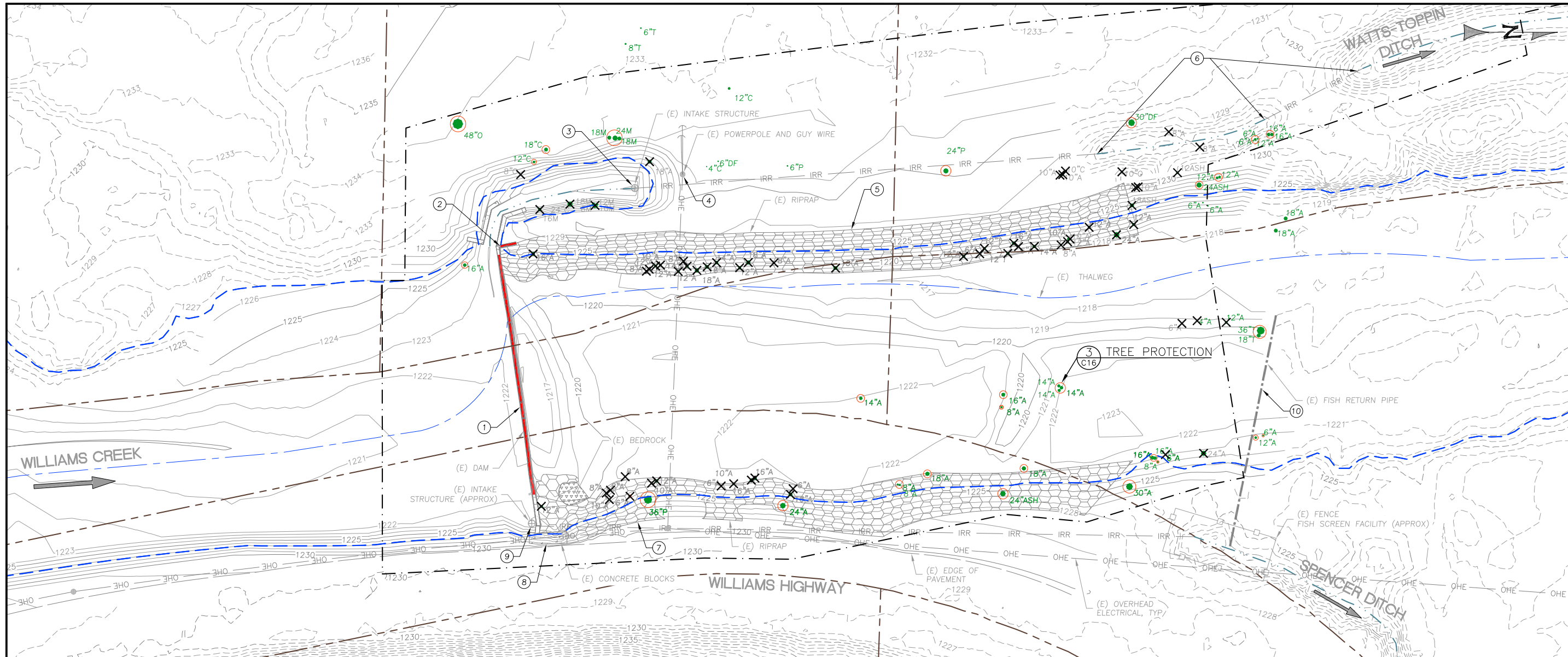
PREPARED AT THE REQUEST OF:
**APPLIGATE PARTNERSHIP
 AND WATERSHED COUNCIL**

**EXISTING
 CONDITIONS**

**WATTS-TOPPIN DIVERSION
 FISH PASSAGE
 IMPROVEMENTS
 100% DESIGN SUBMITAL**

DESIGNED BY: A.S.
 DRAWN BY: M.L.
 CHECKED BY: J.H.
 DATE: 8/29/23
 JOB NO.: 20-063

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS



LEGEND

- (E) CONTOURS 1-FT. INTERVALS (SURVEY)
- (E) CONTOURS 1-FT. INTERVALS (LIDAR)
- (E) POWERPOLE
- (E) TREE
- (E) TREE TO BE REMOVED
- PARCEL BOUNDARY (APPROX)
- (E) THALWEG
- (E) DITCH FLOW LINE
- (E) OHW BOUNDARY
- (E) EDGE OF PAVEMENT
- (E) FENCE
- (E) OVERHEAD ELECTRICAL
- (E) BURIED IRRIGATION PIPELINE APPROXIMATE
- (E) CONCRETE
- (E) RIPRAP
- (E) BEDROCK
- (E) HEADGATE
- (E) GUY WIRE
- DEMOLISH (E) CONCRETE (SEE KEYNOTES)
- TREE PROTECTION
- LIMITS OF DISTURBANCE

DEMOLITION PLAN
SCALE: 1" = 20'

TREE REMOVAL SUMMARY

TREE SPECIES	DBH	QUANTITY
ALDER	6"	6
ALDER	8"	11
ALDER	10"	10
ALDER	12"	10
ALDER	14"	5
ALDER	16"	8
ALDER	18"	5
ALDER	24"	2
ASH	10"	1
ASH	12"	1
CEDAR	8"	1
CEDAR	10"	1
CEDAR	24"	1
MAPLE	8"	1
MAPLE	10"	1
MAPLE	12"	1
MAPLE	16"	1
MAPLE	18"	1
UNKNOWN	10"	2
UNKNOWN	12"	1

KEY NOTES

- ① DEMOLISH AND REMOVE PORTION OF (E) DAM CREST TO ELEV 1222.6 (110-LF), SEE DETAIL 1 ON SHT. C9.
- ② DEMOLISH AND REMOVE PORTION OF (E) CONCRETE TO ELEV 1225.0 (6.2-LF), SEE DETAIL 1 ON SHT. C13.
- ③ DEMOLISH AND REMOVE (E) HEADGATE AND ASSOCIATED INFRASTRUCTURE. CAP (E) PIPE AND ABANDON IN PLACE.
- ④ PROTECT (E) POWERPOLE AND GUY WIRES.
- ⑤ SALVAGE (E) RIPRAP (APPROX 7,000 SF) THICKNESS, UNK.
- ⑥ CAP (E) PIPE AND ABANDON IN PLACE.
- ⑦ PROTECT (E) RIPRAP.
- ⑧ PROTECT (E) CONCRETE BLOCKS.
- ⑨ PROTECT (E) INTAKE STRUCTURE.
- ⑩ PROTECT (E) FISH RETURN PIPE.

NOTE:
1. FOUNDATION OF CONCRETE STRUCTURES UNK. CONTRACTOR TO VERIFY DIMENSIONS WITH ENGINEER DURING CONSTRUCTION.

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EXPIRES: 6/30/2024

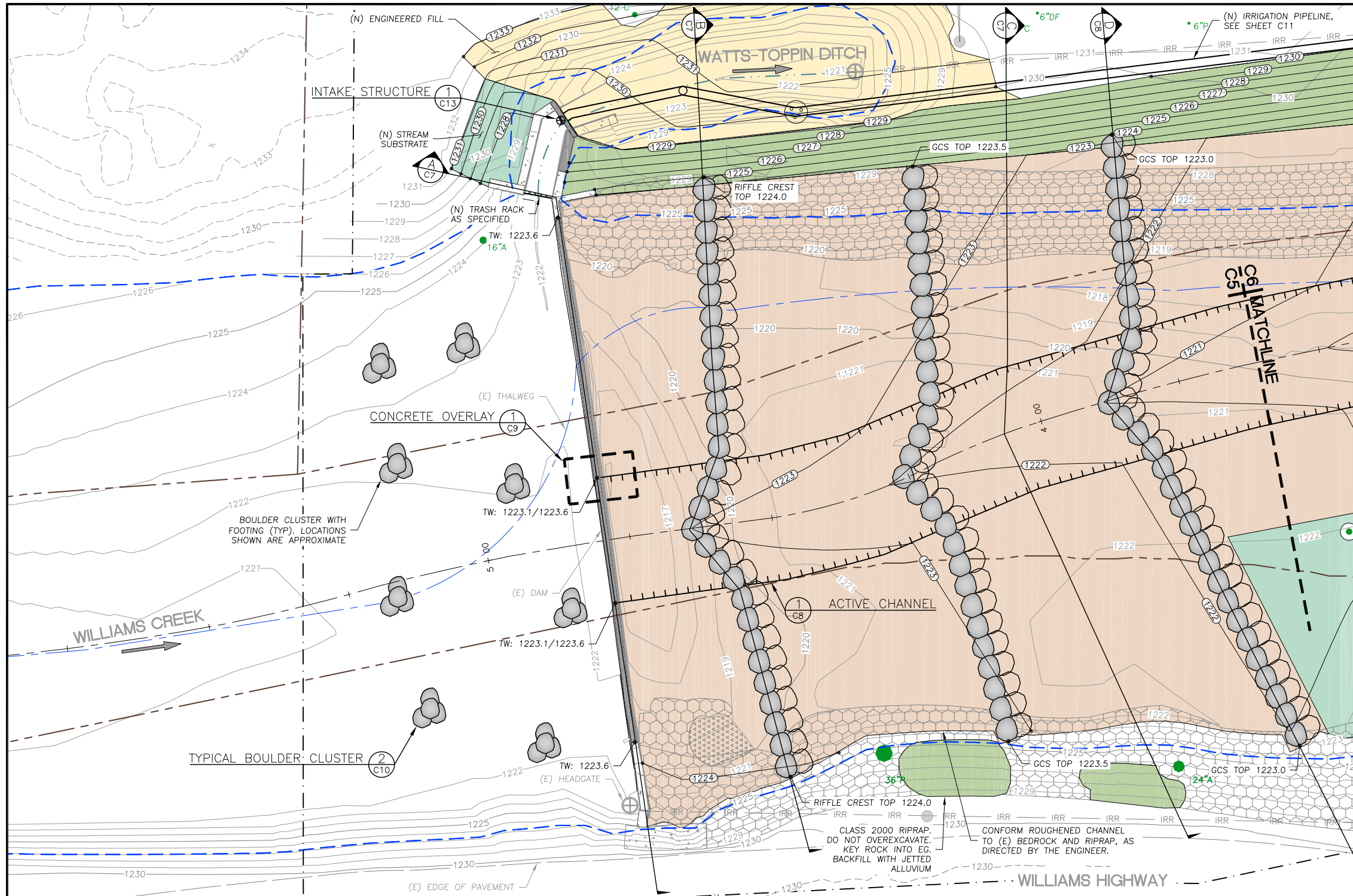
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DEMOLITION PLAN

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS
100% DESIGN SUBMITTAL

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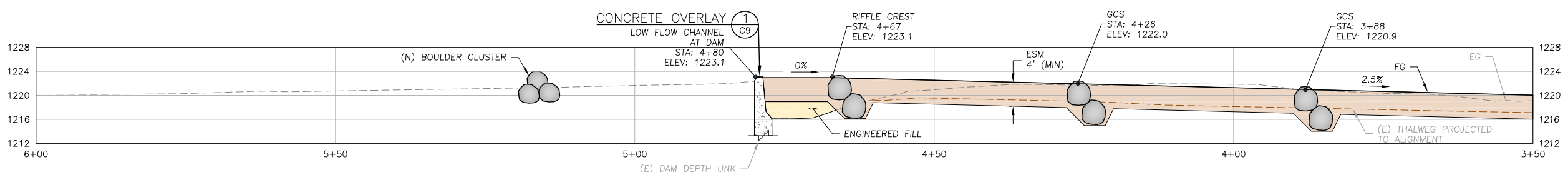
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LEGEND

	(E) CONTOURS 1-FT. INTERVAL (SURVEY)
	(E) CONTOURS 1-FT. INTERVAL (LIDAR)
	PROPOSED CONTOURS 1-FT. INTERVAL
	(E) TREE TO REMAIN
	(E) POWERPOLE
	(E) GUY WIRE
	(E) HEADGATE
	(E) PARCEL BOUNDARY (APPROX)
	(E) THALWEG
	(E) DITCH FLOW LINE
	(E) OHW BOUNDARY
	(E) EDGE OF PAVEMENT
	(E) OVERHEAD ELECTRICAL
	(E) BURIED IRRIGATION PIPELINE APPROXIMATE
	(E) CONCRETE
	(E) RIPRAP
	(E) BEDROCK
	(N) LOW FLOW CHANNEL EXTENT
	(N) CONCRETE
	(N) ESM
	(N) PLANTED RSP
	(N) ENGINEERED FILL
	(N) STREAM SUBSTRATE
	(N) MANHOLE
	(N) IRRIGATION PIPELINE
	(N) HEADGATE
	(N) GRADE CONTROL STRUCTURES
	LIMITS OF DISTURBANCE

CHANNEL GRADING PLAN AND PROFILE (1 OF 2)
SCALE: 1" = 10'



CHANNEL PROFILE
SCALE: 1" = 10'

DATE: 8/29/23

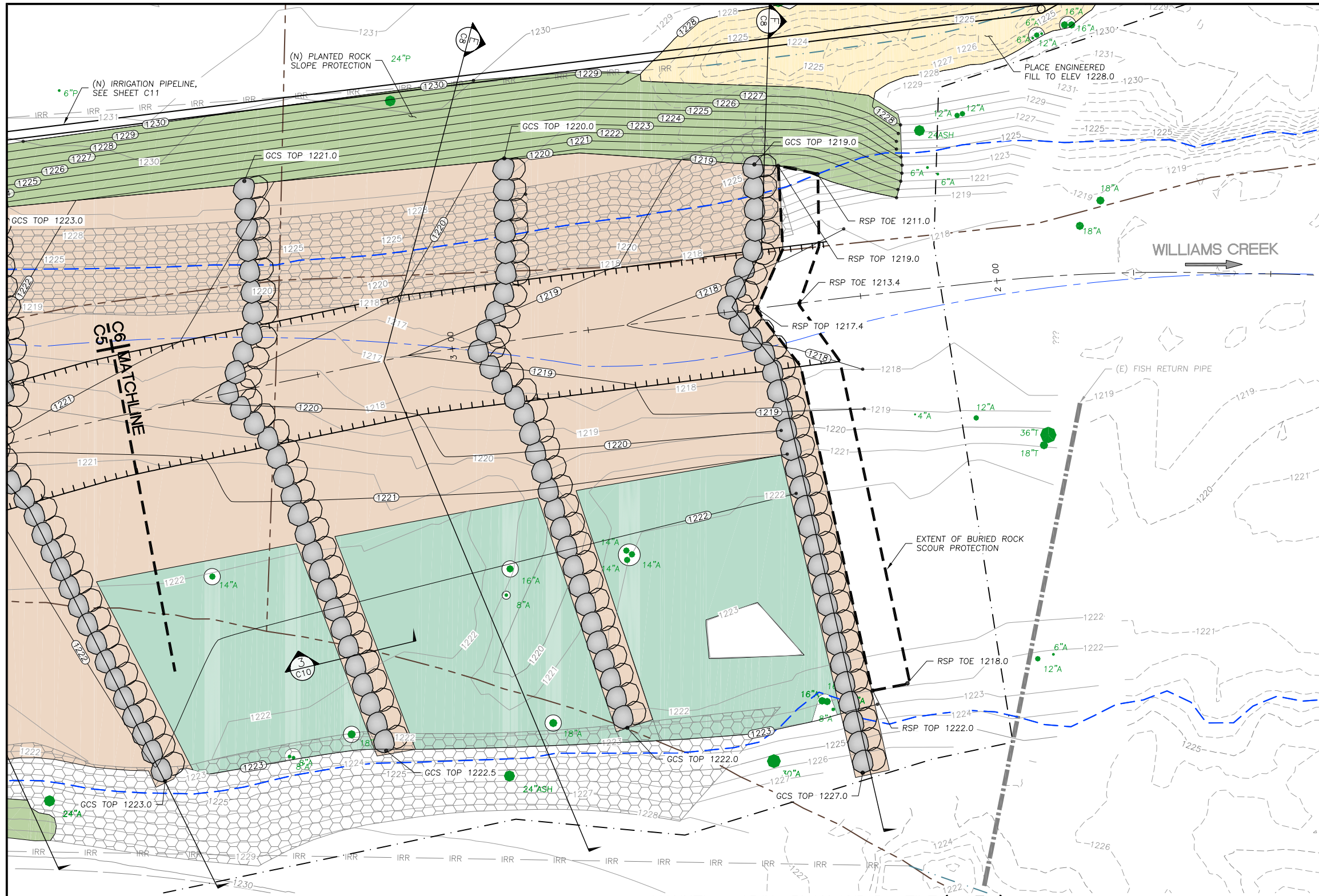
 ANNIKA M. SULLIVAN
 PREPARED AT THE REQUEST OF:
APPLEGATE PARTNERSHIP AND WATERSHED COUNCIL

CHANNEL GRADING PLAN AND PROFILE (1 OF 2)

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS 100% DESIGN SUBMITTAL

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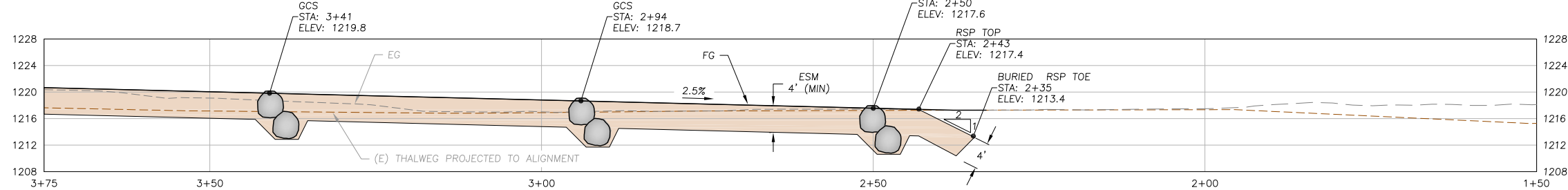


LEGEND

- (E) CONTOURS 1-FT. INTERVAL (SURVEY)
- (E) CONTOURS 1-FT. INTERVAL (LIDAR)
- PROPOSED CONTOURS 1-FT INTERVAL
- (E) TREE TO REMAIN
- (E) PARCEL BOUNDARY (APPROX)
- (E) THALWEG
- (E) DITCH FLOW LINE
- (E) OHW BOUNDARY
- (E) EDGE OF PAVEMENT
- (E) OVERHEAD ELECTRICAL
- (E) BURIED IRRIGATION PIPELINE APPROXIMATE
- (E) RIPRAP
- (N) LOW FLOW CHANNEL EXTENT
- (N) ESM
- (N) PLANTED RSP
- (N) ENGINEERED FILL
- (N) STREAM SUBSTRATE
- (N) BURIED ROCK SCOUR PROTECTION (RSP)
- (N) IRRIGATION PIPELINE
- (N) GRADE CONTROL STRUCTURES
- LIMITS OF DISTURBANCE

CHANNEL GRADING PLAN AND PROFILE (2 OF 2)

SCALE: 1" = 10'



CHANNEL PROFILE

SCALE: 1" = 10'

NOTE:
1. AVOID BASE OF EXISTING TREES TO REMAIN IN FLOODPLAIN TO BE FILLED WITH STREAM SUBSTRATE.

DATE: 8/29/23
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OREGON LICENSE # 110000000
EXPIRES: 6/30/2024

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CHANNEL GRADING PLAN AND PROFILE (2 OF 2)

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS 100% DESIGN SUBMITTAL

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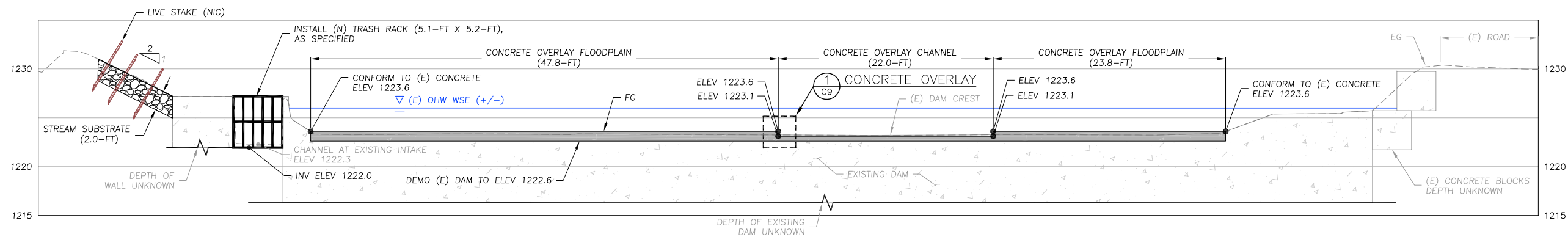
SECTIONS
 (1 OF 2)

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS
 100% DESIGN SUBMITTAL

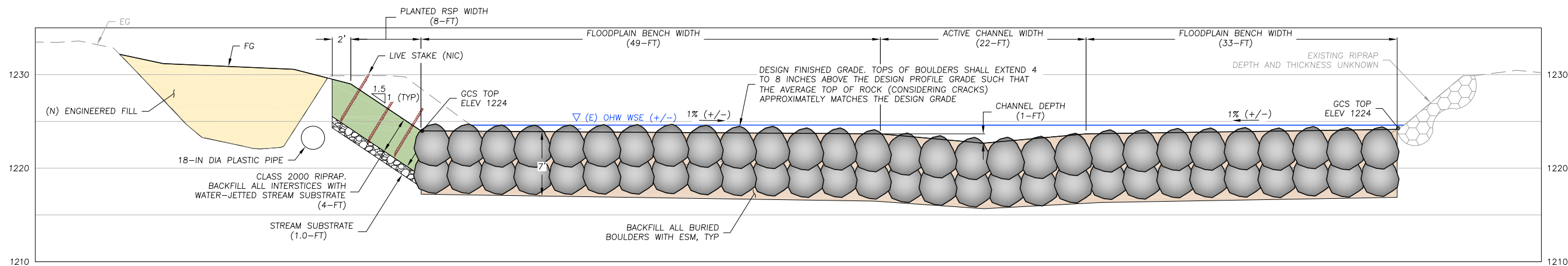
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NOTE:
 1. CONSTRUCT THALWEG TO MEANDER WITHIN THE LOW FLOW CHANNEL PER THE DIRECTION OF THE ENGINEER.

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
 0 1" 1"

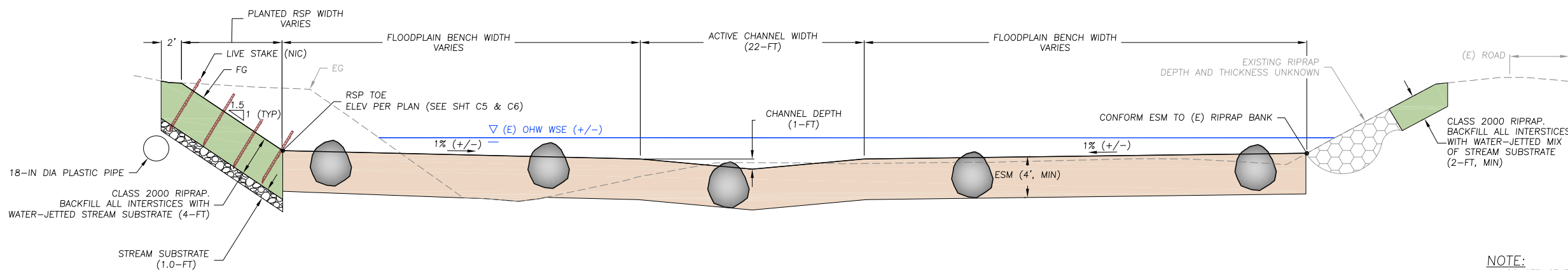


DAM MODIFICATION SECTION (A)
 SCALE: 1" = 6'



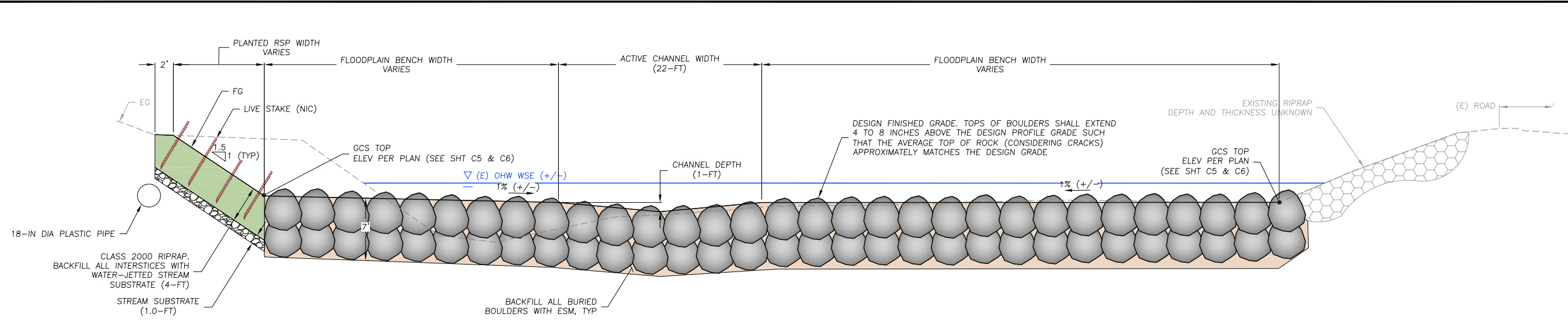
RIFFLE CREST SECTION (B)
 SCALE: 1" = 6'

NOTE:
 1. CONSTRUCT THALWEG TO MEANDER WITHIN THE LOW FLOW CHANNEL PER THE DIRECTION OF THE ENGINEER.

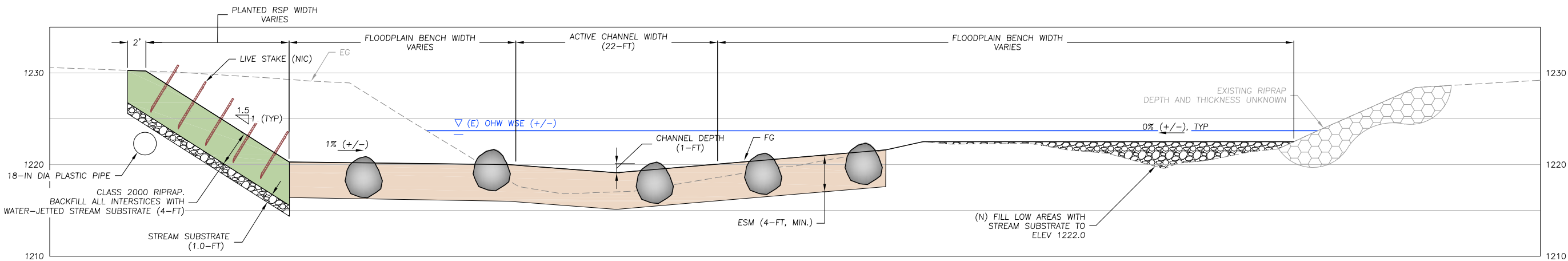


TYPICAL ROUGHENED CHANNEL (C)
 SCALE: 1" = 6'

NOTE:
 1. CONSTRUCT THALWEG TO MEANDER WITHIN THE LOW FLOW CHANNEL PER THE DIRECTION OF THE ENGINEER.

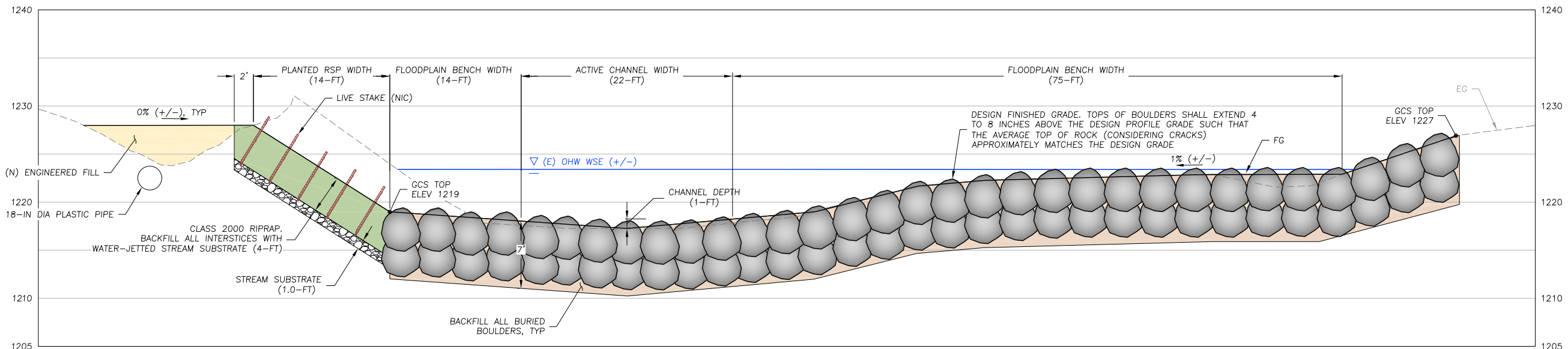


TYPICAL GRADE CONTROL STRUCTURE (D)
SCALE: 1" = 6'



SECTION E (C6)
SCALE: 1" = 6'

NOTE:
1. CONSTRUCT THALWEG TO MEANDER WITHIN THE LOW FLOW CHANNEL PER THE DIRECTION OF THE ENGINEER.



SECTION F (C6)
SCALE: 1" = 6'

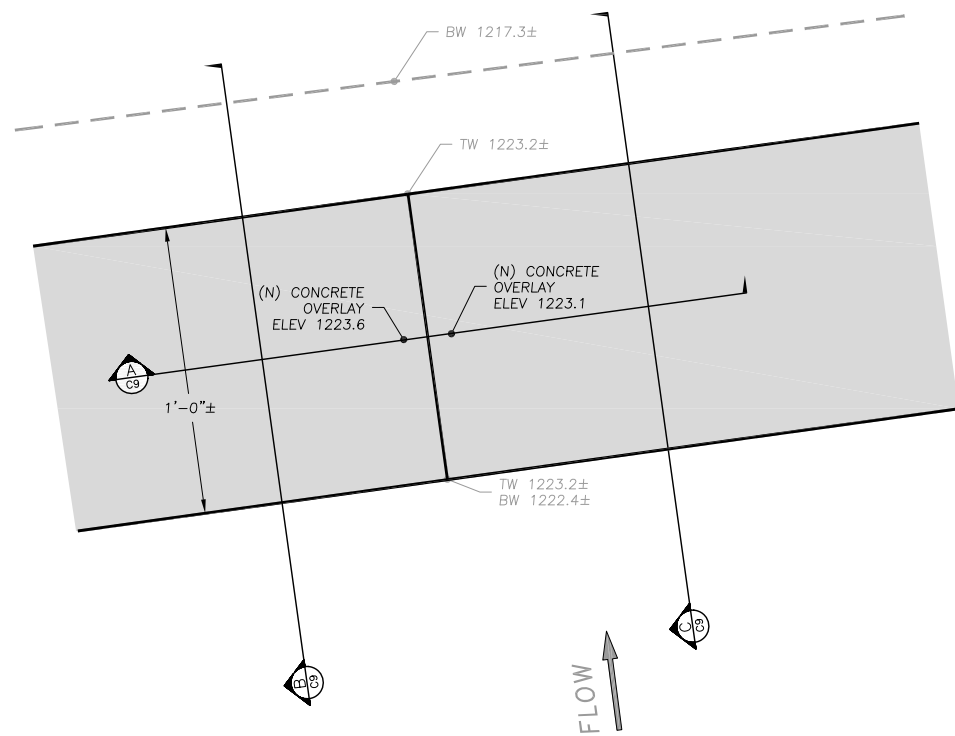
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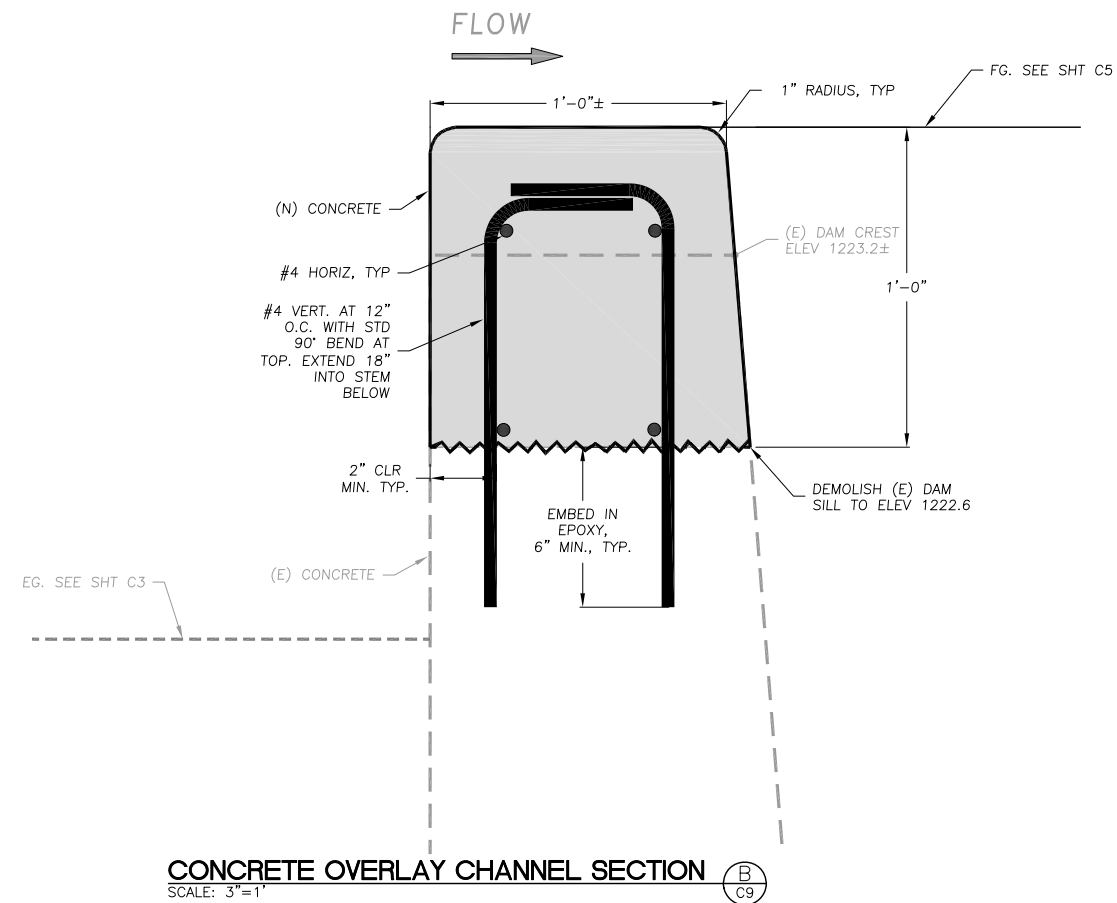
SECTIONS (2 OF 2)

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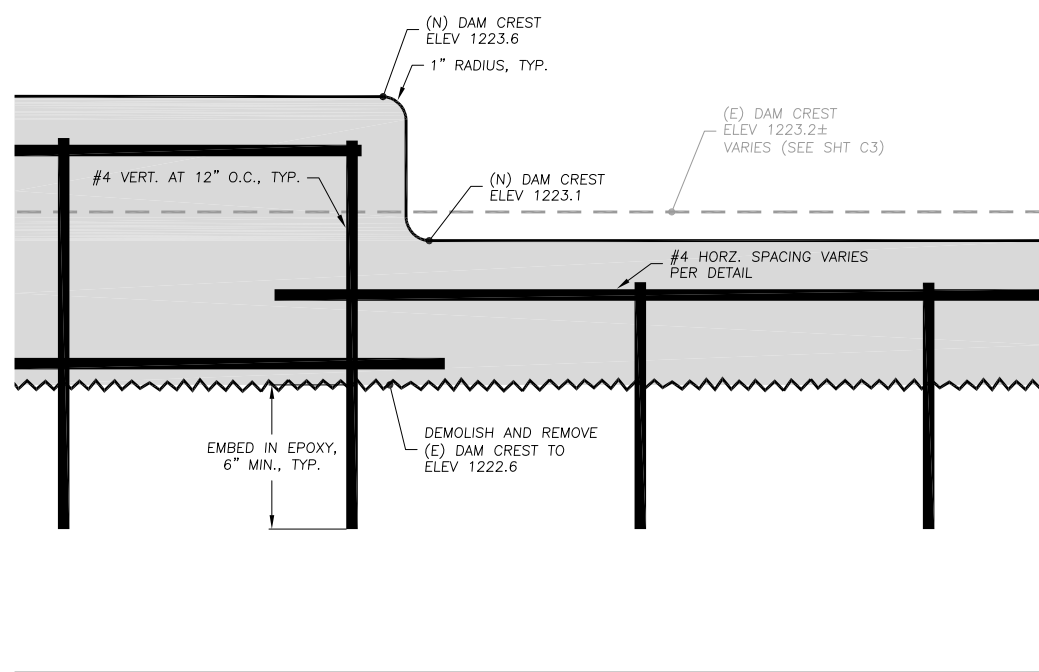
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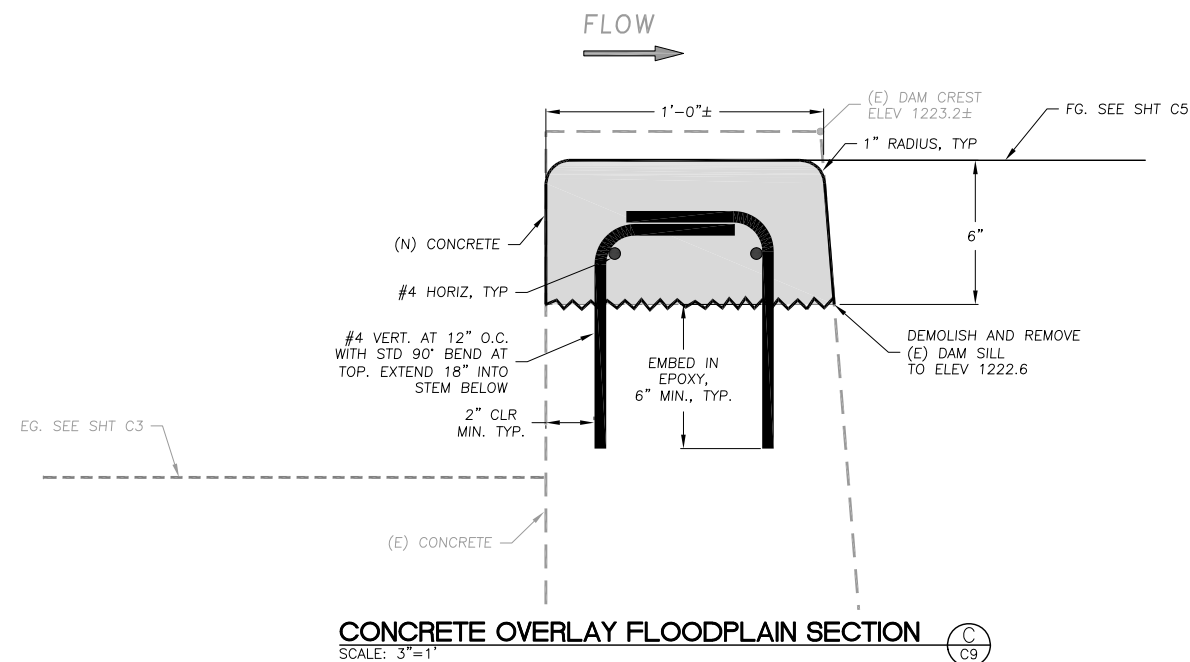
CONCRETE OVERLAY AT DAM SILL PLAN (1)
SCALE: 3"=1'
C5,C7



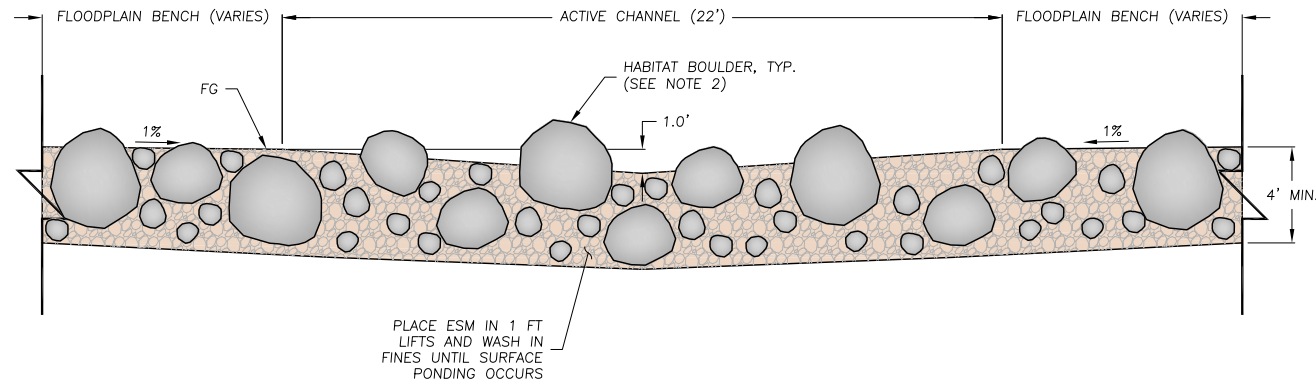
CONCRETE OVERLAY CHANNEL SECTION (B)
SCALE: 3"=1'
C9



TYPICAL CONCRETE OVERLAY ELEVATION (A)
SCALE: 3"=1'
C9

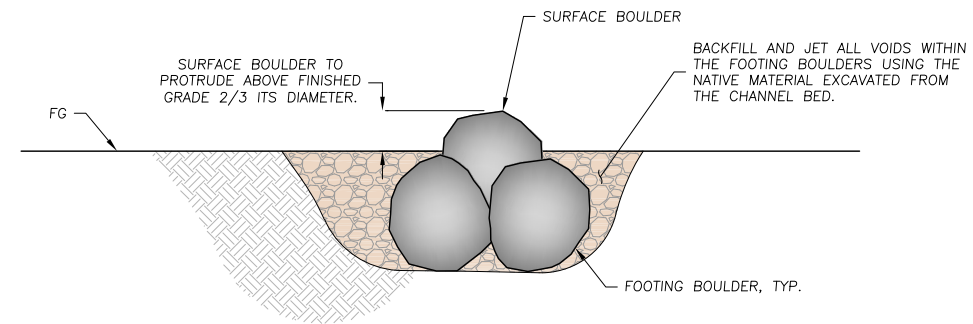


CONCRETE OVERLAY FLOODPLAIN SECTION (C)
SCALE: 3"=1'
C9



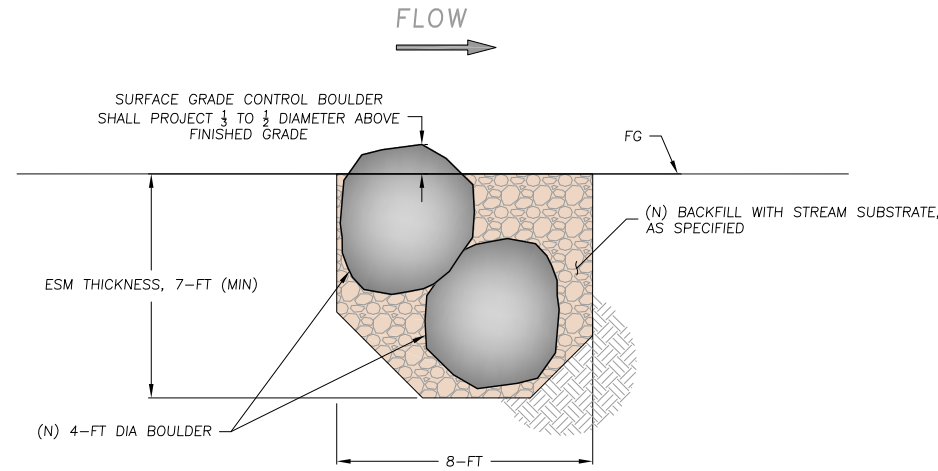
- NOTES:**
- 1) EXISTING GRADE OMITTED FROM THIS DETAIL FOR GRAPHICAL CLARITY.
 - 2) HABITAT BOULDERS WITHIN THE LOW FLOW CHANNEL SHALL BE PLACED AT THE DIRECTION OF THE ENGINEER AND PROJECT $\frac{1}{3}$ TO $\frac{1}{2}$ DIAMETER ABOVE FINISHED GRADE.
 - 3) BOULDERS WITHIN FLOODPLAIN BENCH SHALL NOT PROJECT MORE THAN $\frac{1}{4}$ DIAMETER ABOVE FINISHED GRADE.

TYPICAL ACTIVE CHANNEL 1
SCALE: 1" = 4' C5-C6



- NOTES:**
1. THE LOCATION OF EACH BOULDER CLUSTER WITH FOOTING SHOWN IN PLAN IS APPROXIMATE. THE FINAL LOCATIONS WILL BE STAKED IN THE FIELD BY THE ENGINEER.

TYPICAL BOULDER CLUSTER WITH FOOTING SECTION 2
SCALE: 1" = 3' C5-C6



TYPICAL BOULDER GRADE CONTROL STRUCTURE SECTION 3
SCALE: 1" = 4' C6

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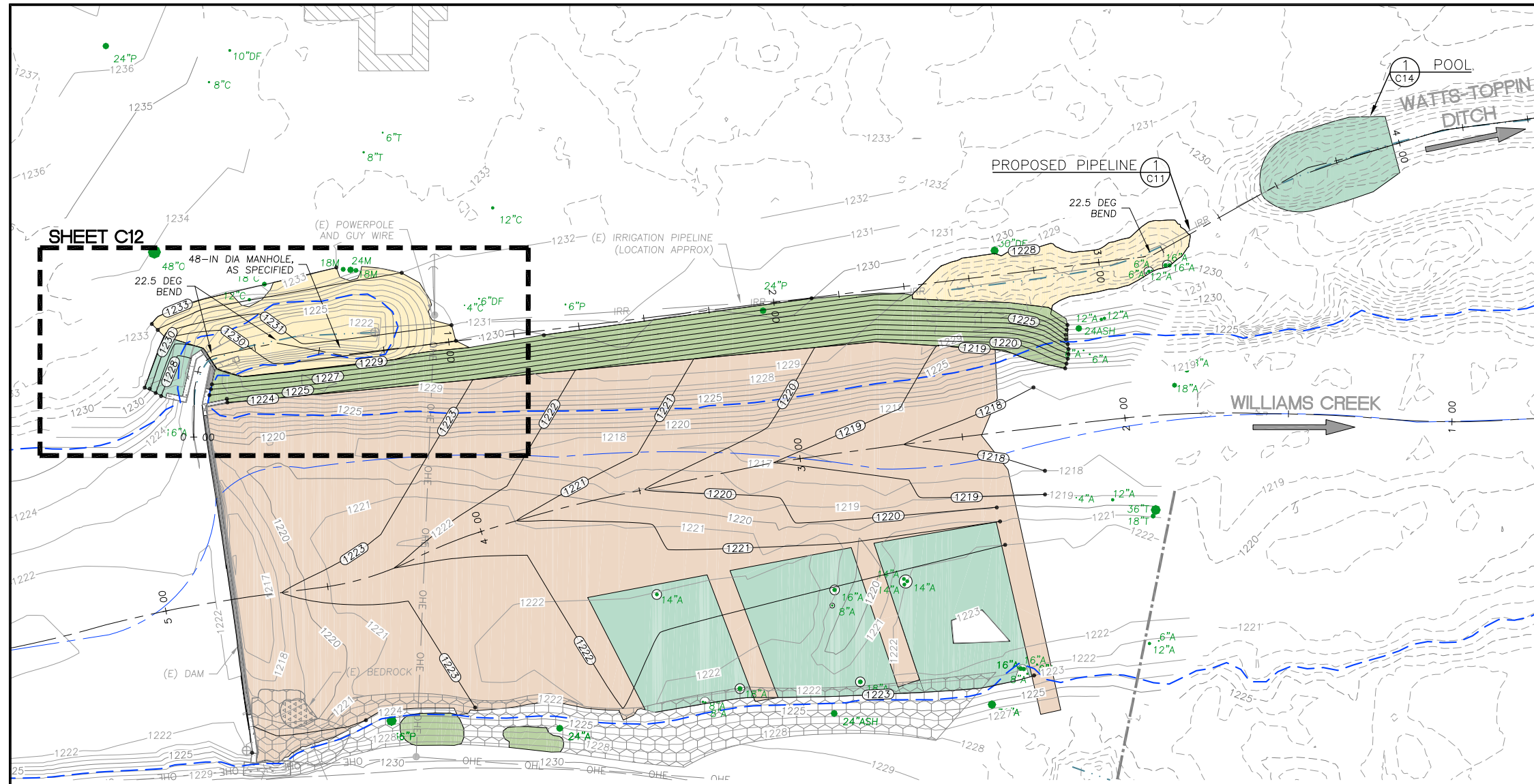
PREPARED AT THE REQUEST OF:
APPLIGATE PARTNERSHIP AND WATERSHED COUNCIL

CHANNEL DETAILS

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS
100% DESIGN SUBMITTAL

DESIGNED BY: A.S.
DRAWN BY: M.L.
CHECKED BY: J.H.
DATE: 8/29/23
JOB NO.: 20-06.3

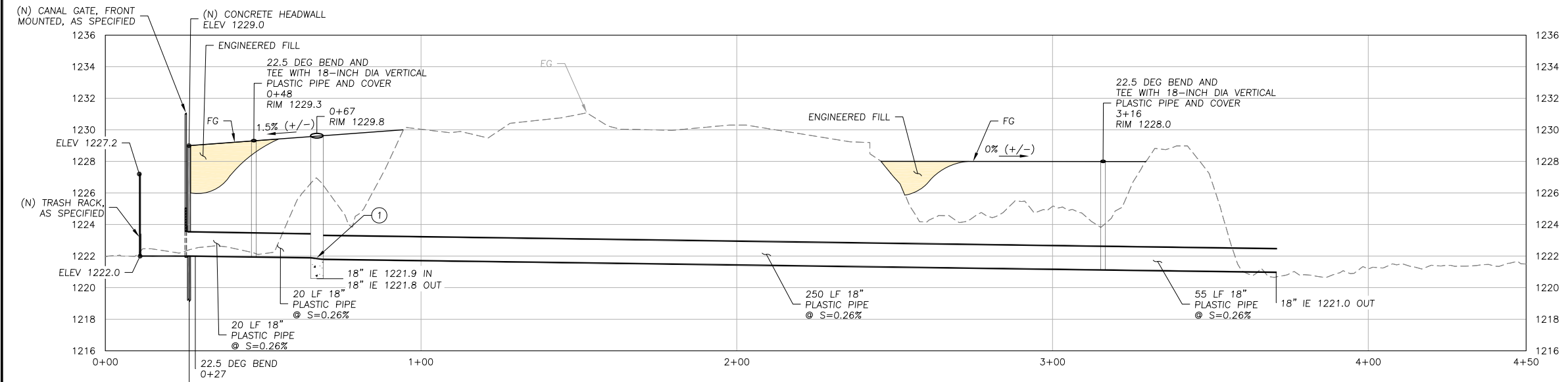
BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
0 1"



PIPELINE PLAN
SCALE: 1" = 20'

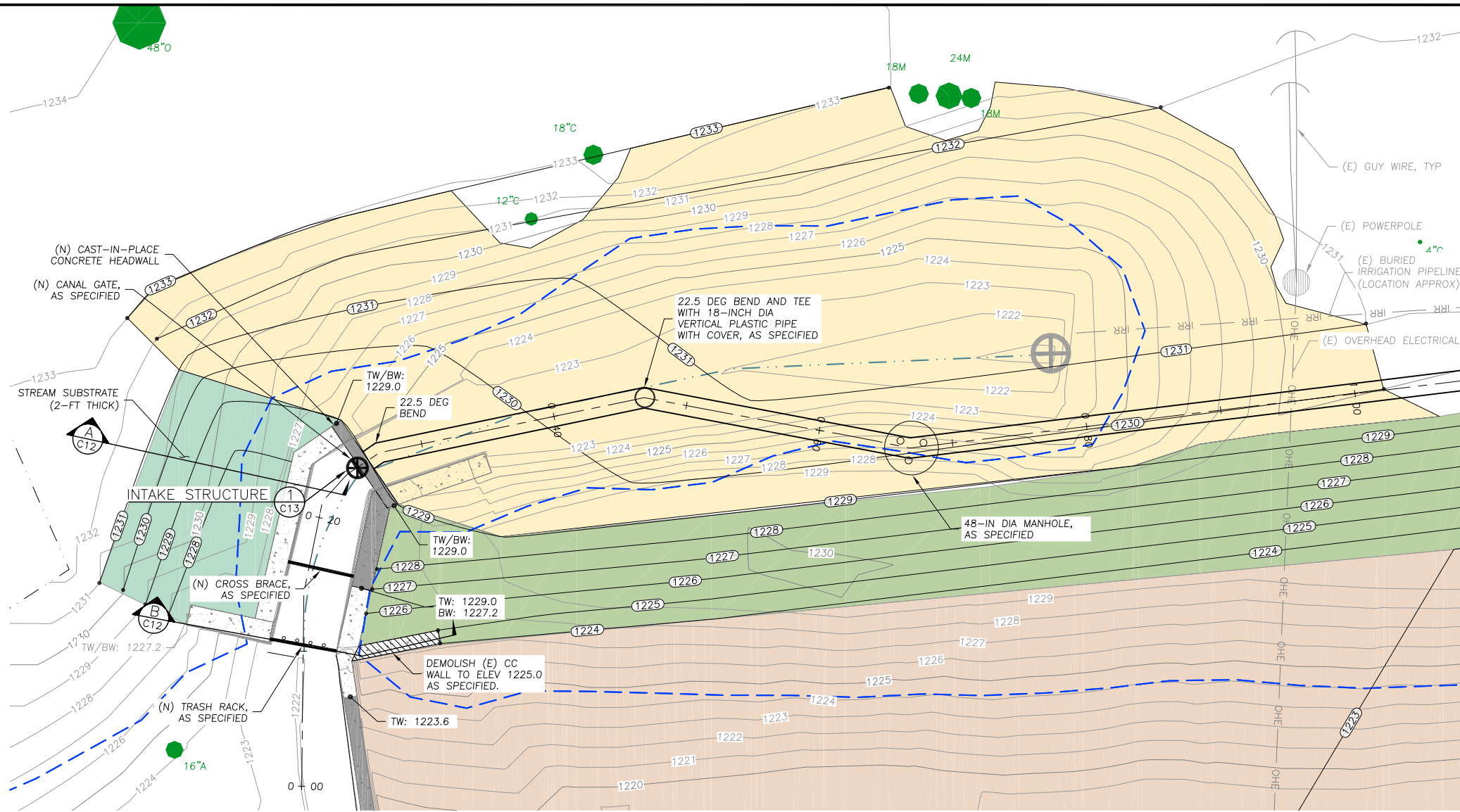
- LEGEND**
- (E) CONTOURS 1-FT. INTERVALS (SURVEY)
 - (E) CONTOURS 1-FT. INTERVALS (LIDAR)
 - PROPOSED CONTOURS 1-FT. INTERVALS
 - (E) TREE TO REMAIN
 - (E) POWERPOLE
 - (E) GUY WIRE
 - (E) THALWEG
 - (E) DITCH FLOW LINE
 - (E) OHW BOUNDARY
 - (E) EDGE OF PAVEMENT
 - (E) OVERHEAD POWERLINE
 - (E) BURIED IRRIGATION PIPELINE APPROXIMATE
 - (E) FISH RETURN PIPE
 - (E) CONCRETE
 - (E) SURVEYED RIPRAP EXTENT
 - (E) BEDROCK
 - (E) BUILDING
 - (N) CONCRETE
 - (N) ESM
 - (N) PLANTED ROCK SLOPE PROTECTION
 - (N) ENGINEERED FILL
 - (N) STREAM SUBSTRATE
 - (N) IRRIGATION PIPELINE
 - (N) MANHOLE
 - LIMITS OF DISTURBANCE

NOTE:
CONTRACTOR MAY SUBMIT AN ALTERNATIVE PIPING PLAN FOR APPROVAL BY ENGINEER PRIOR TO MOBILIZATION.



PROPOSED PIPELINE PROFILE
SCALE: HORIZ: 1" = 20'; VERT: 1" = 4'

KEYNOTE:
① CONTRACTOR SHALL PROVIDED A SMOOTH FORMED INVERT ELEVATION BETWEEN THE INLET PIPE, MANHOLE BOTTOM, AND OUTLET PIPE.

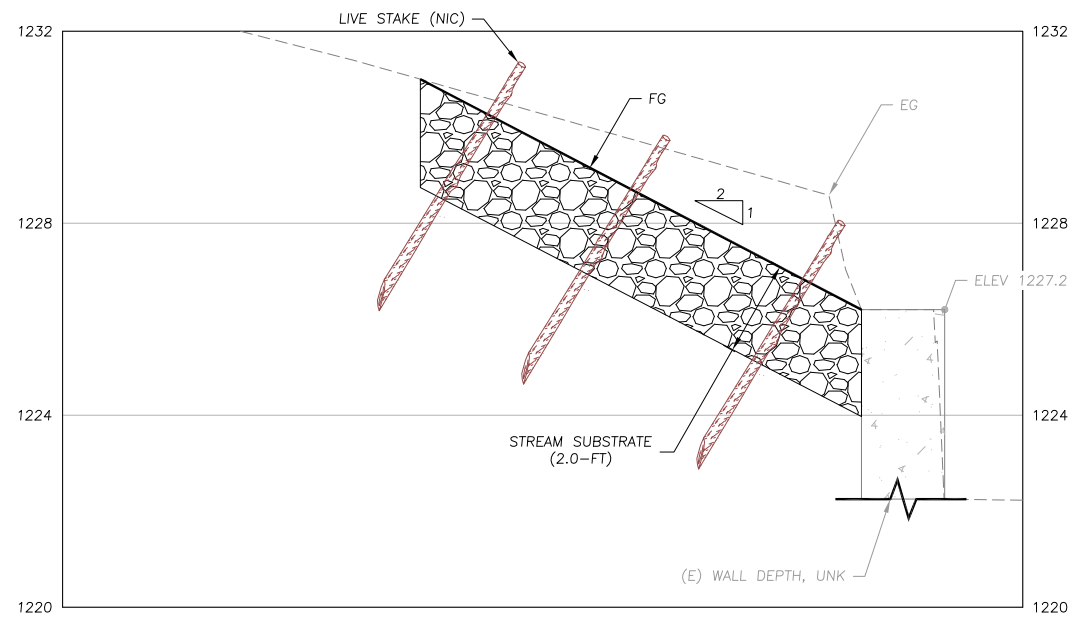


LEGEND

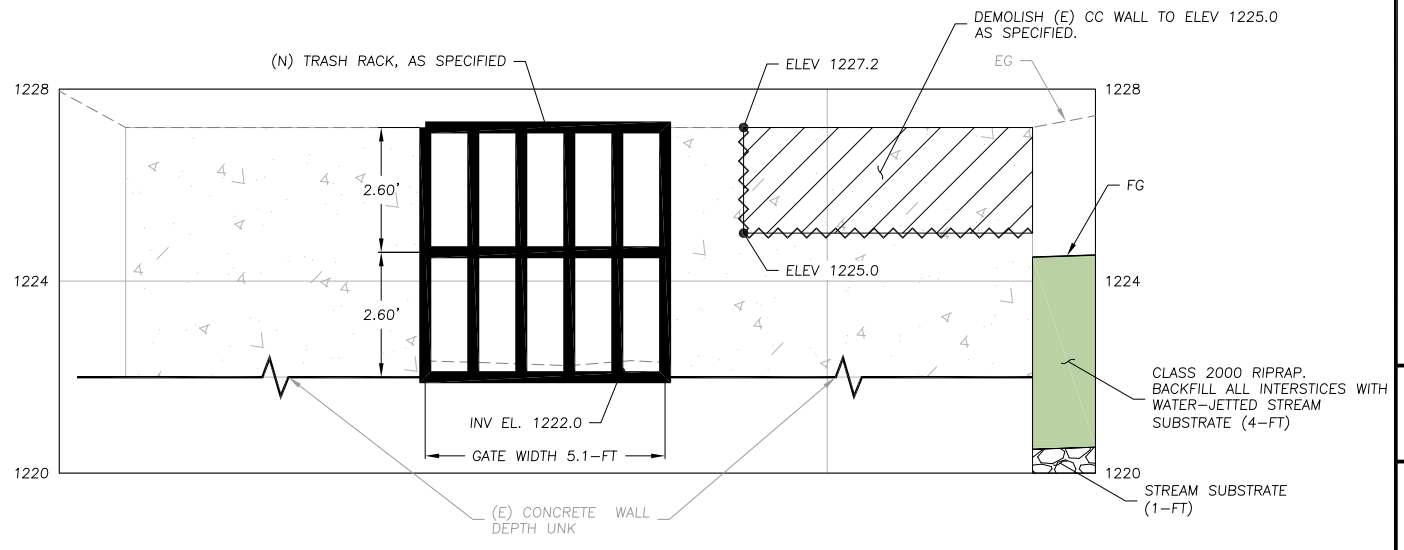
- (E) CONTOURS 1-FT. INTERVALS (SURVEY)
- (E) CONTOURS 1-FT. INTERVALS (LIDAR)
- PROPOSED CONTOURS 1-FT INTERVALS
- (E) TREE TO REMAIN
- (E) POWERPOLE
- (E) GUY WIRE
- (E) OVERHEAD ELECTRICAL
- (E) IRRIGATION PIPELINE
- (E) DITCH FLOW LINE
- (E) OHW BOUNDARY
- (E) CONCRETE
- (N) IRRIGATION PIPELINE
- (N) MANHOLE
- (N) CANAL GATE
- (N) ESM
- (N) PLANTED RSP
- (N) CONCRETE
- (N) ENGINEERED FILL
- DEMOLISH (E) CONCRETE WALL

NOTE:
1. FRONT MOUNT TRASH RACK ON (E) CONCRETE

INTAKE STRUCTURE PLAN
SCALE: 1" = 5'



SECTION A
SCALE: 1" = 2' C12



SECTION B
SCALE: 1" = 2' C12

DATE: 8/29/23
ANNIKA M SULLIVAN
REGISTERED PROFESSIONAL ENGINEER
OREGON LICENSE NO. 90206PE
EXPIRES: 6/30/2024

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APPLIGATE PARTNERSHIP AND WATERSHED COUNCIL

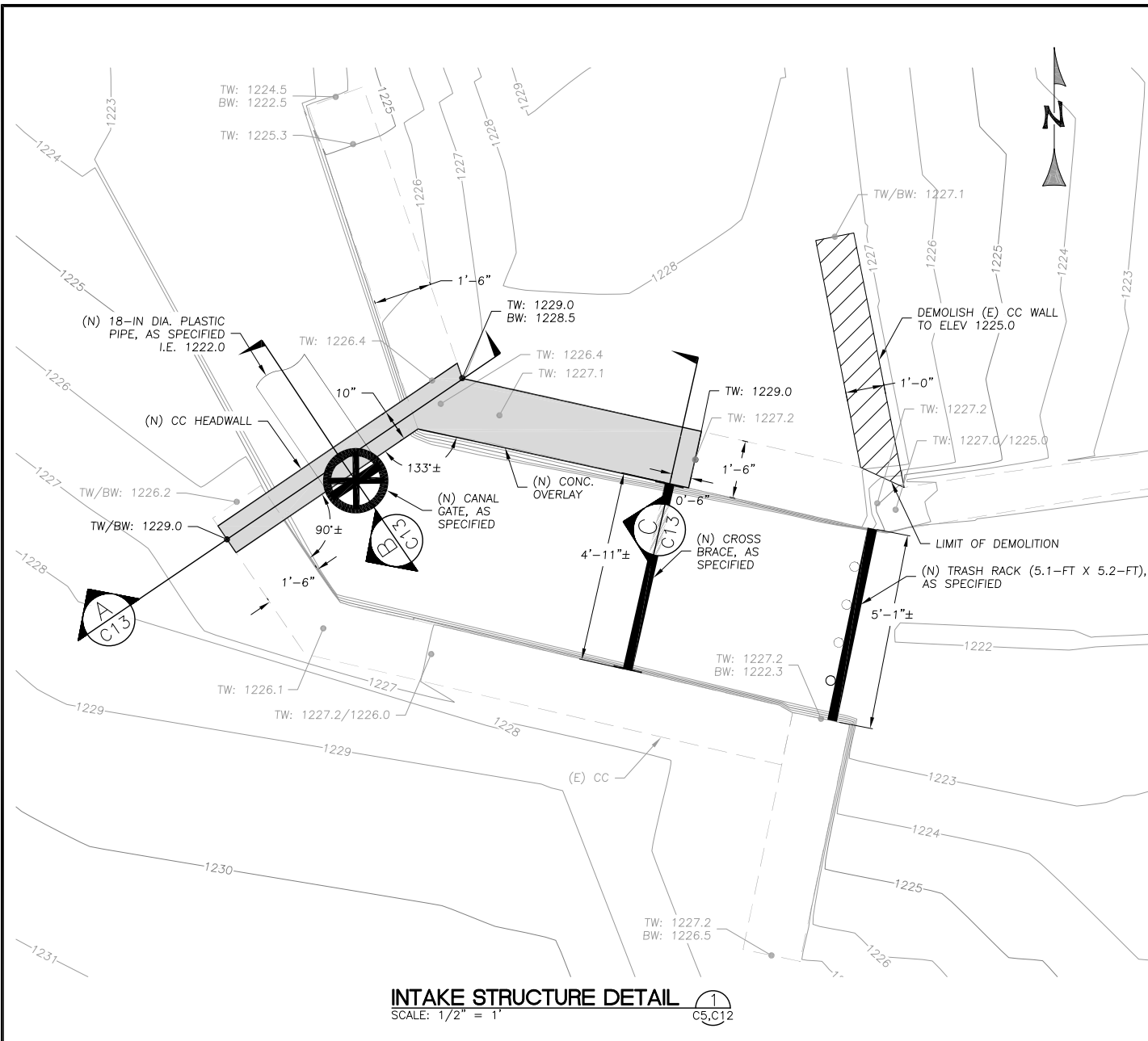
INTAKE STRUCTURE PLAN AND PROFILE

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS

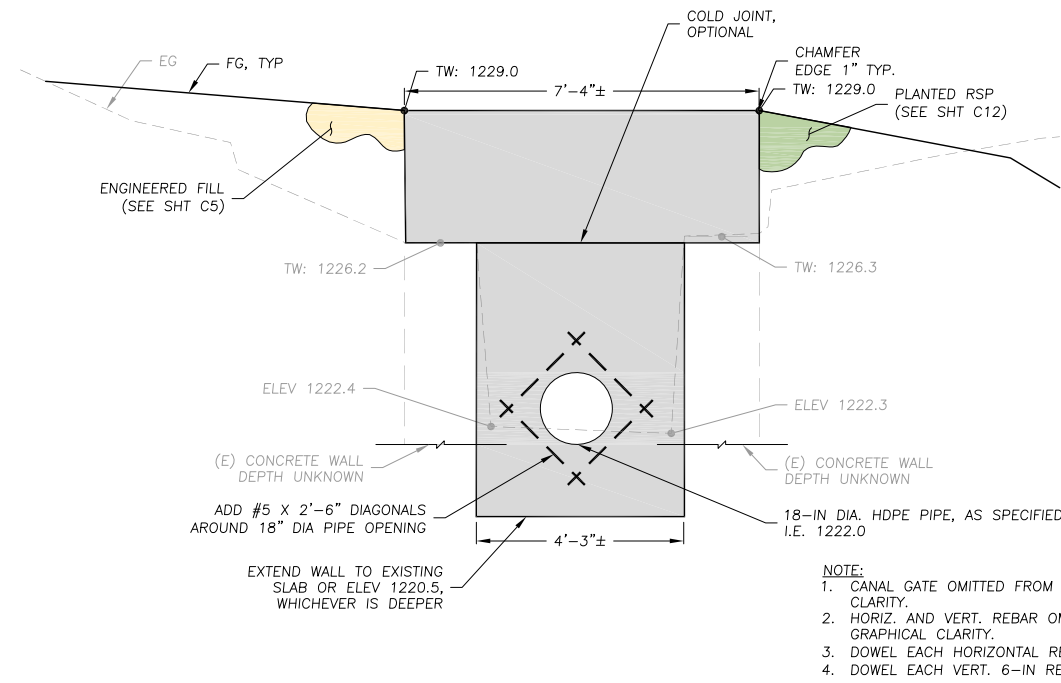
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DESIGNED BY: A.S.
DRAWN BY: M.L.
CHECKED BY: J.H.
DATE: 8/29/23
JOB NO.: 20-063

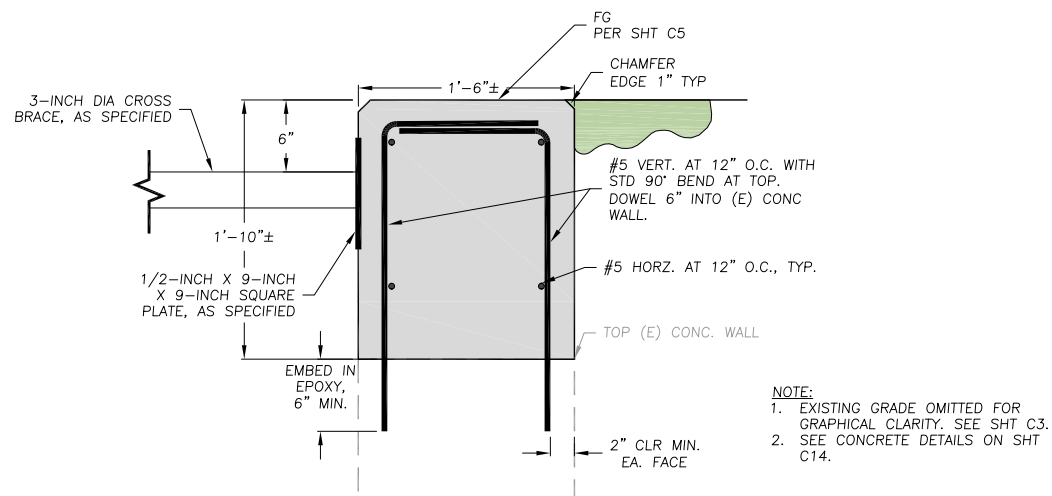
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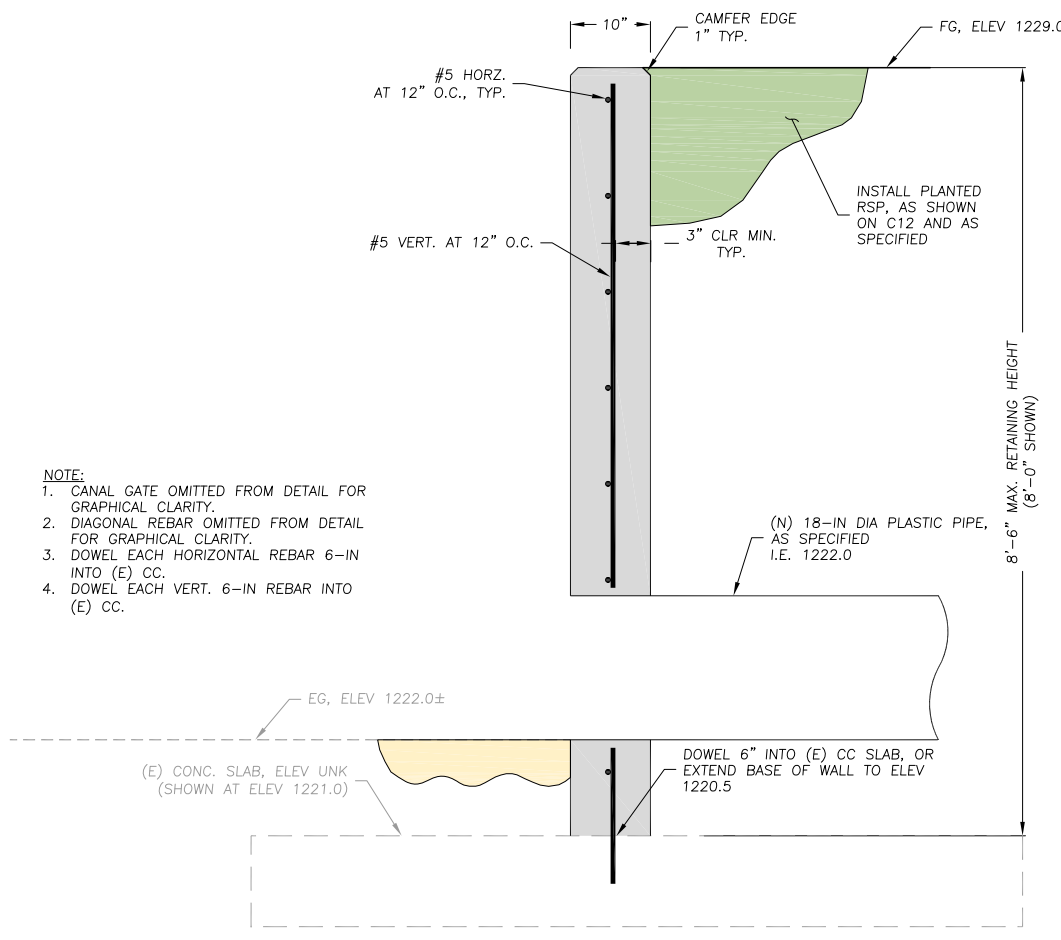
INTAKE STRUCTURE DETAIL
SCALE: 1/2" = 1'
C5, C12



INTAKE STRUCTURE ELEVATION
SCALE: 1/2" = 1'
A
C13



INTAKE STRUCTURE CONCRETE OVERLAY SECTION
SCALE: 1/2" = 1'
C
C9



INTAKE STRUCTURE SECTION
SCALE: 1" = 1'
B
C13

DATE: 8/29/23
 PREPARED BY: ANNKA M. SULLIVAN
 CHECKED BY: J.H.
 DATE: 8/29/23
 EXPIRES: 6/30/2024

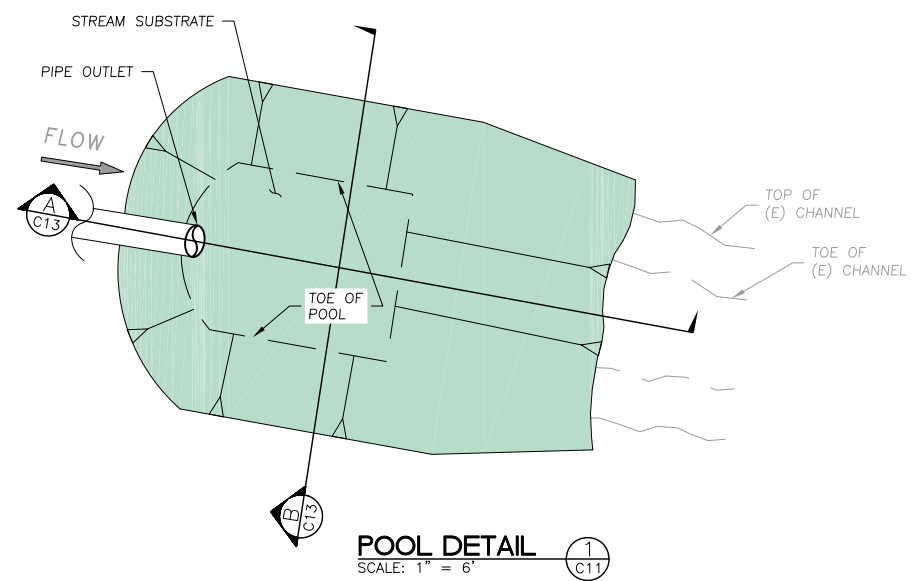
PREPARED AT THE REQUEST OF:
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PIPELINE AND CONCRETE DETAILS

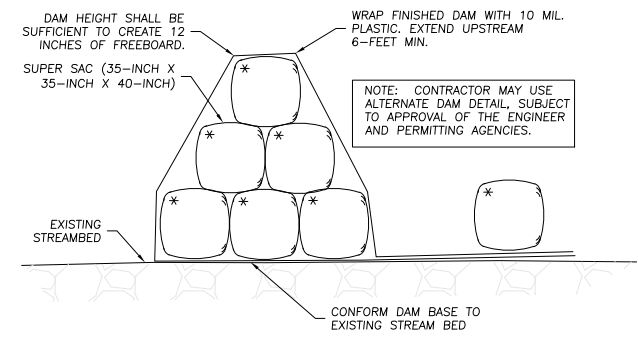
WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS
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DESIGNED BY: A.S.
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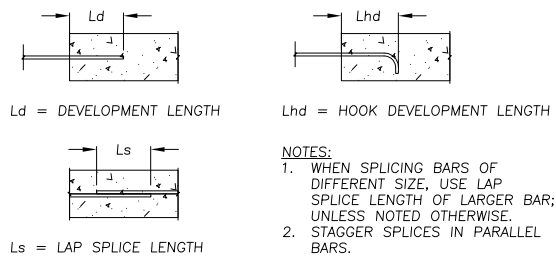


POOL DETAIL (1)
 SCALE: 1" = 6'



DIVERSION DAM PROFILE (3)
 SCALE: 1" = 6'

BAR LOCATION	CONCRETE REINFORCEMENT DEVELOPMENT AND SPLICE LENGTHS (INCHES)							
	TYPE	STRENGTH	#4			#5		
			LD	LS	LHD	LD	LS	LHD
ABUTMENT/WALL VERT. BARS	NWC	2.5 KSI	12	16	6	18	24	11
ABUTMENT/WALL HORIZ. BARS	NWC	2.5 KSI	13	17	6	24	32	11

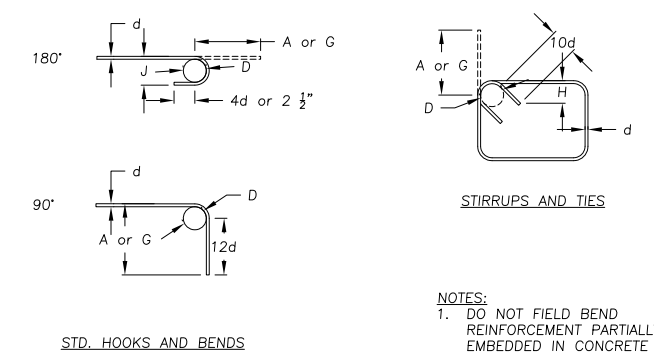


REINFORCEMENT SPLICE AND DEVELOPMENT LENGTH (4)
 SCALE: 1" = 1'

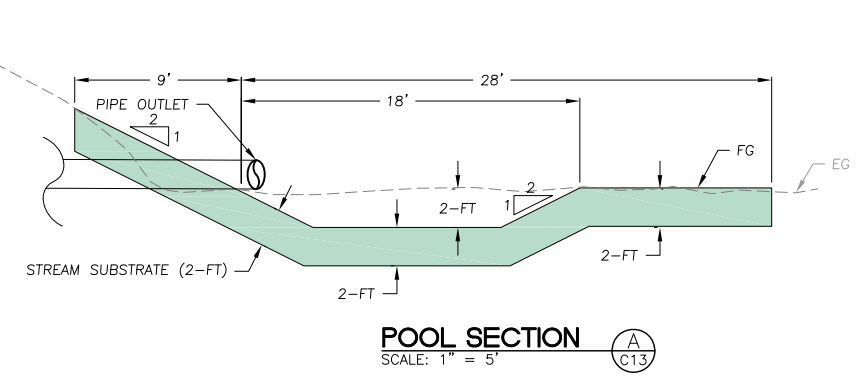
END HOOKS				
BAR SIZE	D	180 DEGREE HOOKS		90 DEGREE HOOKS
		A OR G	J	A OR G
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"

STIRRUPS AND TIES				
BAR SIZE	D	90 DEGREE HOOKS	135 DEGREE HOOKS	
		A or G	A or G	H approx
#4	2"	4 1/2"	4 1/2"	3"
#5	2 1/2"	6"	5 1/2"	3 3/4"

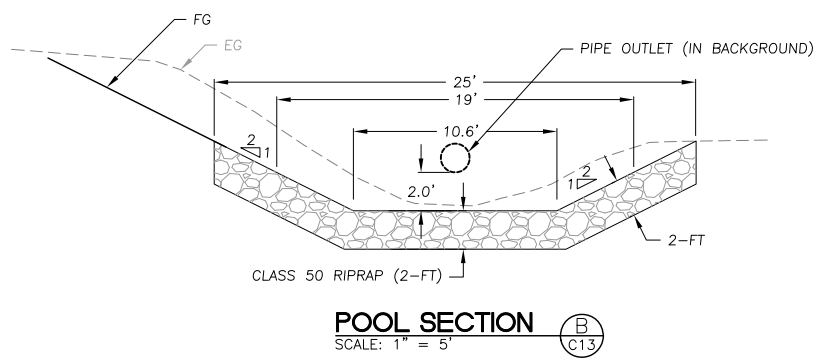
SEISMIC TIES			
BAR SIZE	D	135 DEGREE HOOKS	
		A or G	H APPROX
#4	2"	6 1/2"	4 1/2"
#5	2 1/2"	8"	5 1/2"



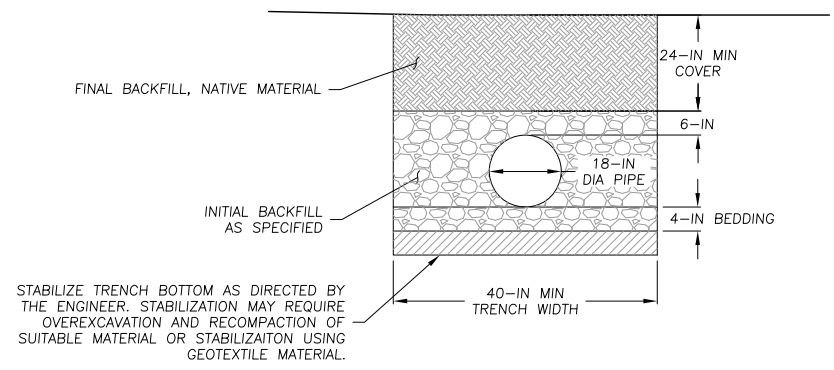
HOOKS AND BENDS (5)
 SCALE: 1" = 1'



POOL SECTION (A)
 SCALE: 1" = 5'



POOL SECTION (B)
 SCALE: 1" = 5'

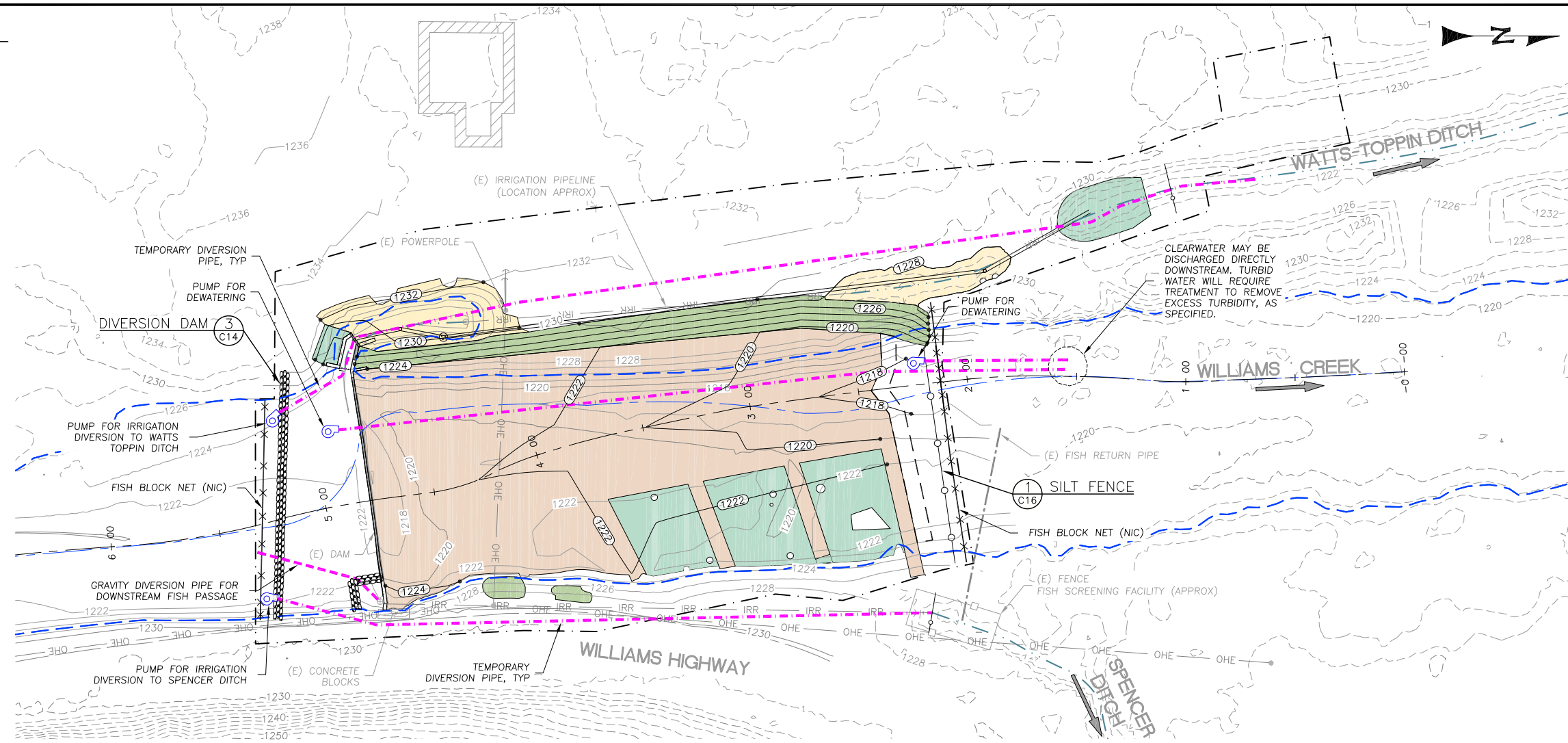


TYPICAL TRENCH SECTION (2)
 SCALE: NTS

STABILIZE TRENCH BOTTOM AS DIRECTED BY THE ENGINEER. STABILIZATION MAY REQUIRE OVEREXCAVATION AND RECOMPACTION OF SUITABLE MATERIAL OR STABILIZATION USING GEOTEXTILE MATERIAL.

LEGEND

- (E) CONTOURS 2-FT. INTERVALS (SURVEY)
- (E) CONTOURS 2-FT. INTERVALS (LIDAR)
- (N) CONTOURS 2-FT INTERVALS
- (E) POWERPOLE
- (E) HEADGATE
- (E) CREEK FLOW LINE
- (E) DITCH FLOW LINE
- (E) OHW BOUNDARY
- (E) EDGE OF PAVEMENT
- (E) BRIDGE EXTENT
- (E) OVERHEAD POWERLINE
- (E) BURIED IRRIGATION PIPELINE
- (E) FISH RETURN PIPE
- (E) CONCRETE
- (E) BUILDING FOOTPRINT (APPROX.)
- LIMITS OF DISTURBANCE
- (N) HEADGATE
- (N) ESM
- (N) PLANTED RSP
- (N) CONCRETE
- (N) STREAM SUBSTRATE
- (N) ENGINEERED FILL
- TEMPORARY FISH BLOCK NET (NIC)
- TEMPORARY SILT FENCE
- TEMPORARY GRAVITY DIVERSION PIPE
- TEMPORARY DIVERSION PIPE
- TEMPORARY PUMP
- TEMPORARY DIVERSION DAM



DEWATERING AND EROSION CONTROL PLAN
SCALE: 1" = 30'

BEST MANAGEMENT PRACTICES TO AVOID CONCRETE CONTAMINATION:

1. COMPLY WITH ALL PERMIT CONDITIONS, INCLUDING PH MONITORING OR TREATMENT OF CONTAMINATED WATERS, WHERE SPECIFIED OR OTHERWISE REQUIRED TO MEET DISCHARGE STANDARDS.
2. NOTIFY THE ENGINEER A MINIMUM OF 5 WORKING DAYS PRIOR TO CONCRETE POUR TO COORDINATE ENGINEER'S INSPECTION OF THE DIVERSION AND DEWATERING SYSTEM THE DAY BEFORE SCHEDULED CONCRETE POURS, TO ALLOW TIME FOR IMPLEMENTATION OF ANY NECESSARY ADJUSTMENTS BASED ON WEATHER FORECAST AND DIVERSION CONDITIONS. CONCRETE POURS WILL NOT BE ALLOWED UNTIL DIVERSION AND DEWATERING SYSTEM IS INSTALLED IN A MANNER THAT IS APPROVED BY THE ENGINEER.
3. NO CONCRETE OR ANY CEMENT PRODUCT MAY BE POURED IF MEASURABLE RAIN IS FORECASTED WITHIN 5 DAYS.
4. DO NOT MIX MORE FRESH CONCRETE OR MORTAR THAN WILL BE USED AT ONE TIME.
5. USE TARPS OR HEAVY PLASTIC TRAYS UNDER ALL PUMPS OR MIXING AREAS.
6. PROVIDE LINED CONCRETE WASHOUT FACILITY AT GREATER THAN 150 FEET FROM LIVE CHANNEL (SEE SHT C2).
7. PROTECT WET CONCRETE FROM RAINFALL, USING PLASTIC TARPS, FOR A MINIMUM OF 10 DAYS AFTER PLACEMENT. TARPS AND SUFFICIENT SANDBAGS AND ROPE TO SECURE THE TARPS SHALL BE MOBILIZED TO THE SITE PRIOR TO POURING CONCRETE.
8. A NON-TOXIC SUBSTANCE THAT CAN BUFFER THE PH SHALL BE MADE AVAILABLE ON SITE TO USE IF ANY CONTAMINATION TO WATER OCCURS.
9. IF PUMPED WATER CONTACTS UNCURED CONCRETE, IT SHALL BE PUMPED TO A STORAGE FACILITY (TANK OR LINED PIT), FOR TESTING, PRIOR TO DISCHARGE.
10. DEWATERING PUMPS SHALL BE SET LOW ENOUGH TO EFFECTIVELY DEWATER ACTIVE WORK AREA.

DIVERSION NOTES

THE DIVERSION PLAN SHOWN IS SCHEMATIC. GENERAL REQUIREMENTS ARE PROVIDED BELOW. THE FULL REQUIREMENTS OF THE DIVERSION AND DEWATERING PLAN ARE SPECIFIED IN THE PROJECT TECHNICAL SPECIFICATIONS.

1. GENERAL
 - 1.1. DEWATER THE PROJECT SITE AS REQUIRED TO FACILITATE IN-STREAM CONSTRUCTION AND TO REDUCE POTENTIAL IMPACTS TO WATER QUALITY DOWNSTREAM OF THE PROJECT SITE.
 - 1.2. CONFIRM THAT A FAVORABLE LONG TERM WEATHER FORECAST (1 WEEK, MIN.) IS OBSERVED PRIOR TO PLACEMENT OF DIVERSION STRUCTURES.
 - 1.3. PRIOR TO PLACEMENT OF DIVERSION STRUCTURE, OWNER SHALL REMOVE FISH FROM THE PROJECT REACH, IN ACCORDANCE WITH SECTION 2.
 - 1.4. DIVERT FLOW ONLY WHEN THE DIVERSION CONSTRUCTION IS OTHERWISE COMPLETE. FOLLOWING ENGINEER'S APPROVAL OF THE COMPLETED WORK, REMOVE DIVERSION BEGINNING AT THE DOWNSTREAM LIMIT, IN AN UPSTREAM DIRECTION.
2. FISH REMOVAL
 - 2.1. FISH SHALL BE REMOVED FROM THE PROJECT SITE BY THE OWNER'S QUALIFIED FISHERIES BIOLOGIST, AUTHORIZED TO PERFORM SUCH ACTIVITIES BY THE NATIONAL MARINE FISHERIES SERVICE AND THE OREGON DEPARTMENT OF FISH AND WILDLIFE. COORDINATE ALL DIVERSION ACTIVITIES WITH OWNER.
 - 2.2. BLOCK NETS SHALL BE PROVIDED AND INSTALLED BY THE FISHERIES BIOLOGIST. BLOCK NETS SHALL BE MAINTAINED BY THE CONTRACTOR BOTH UPSTREAM AND DOWNSTREAM OF THE DIVERSION, THROUGHOUT THE PERIOD OF CONSTRUCTION. MAINTENANCE INCLUDES PERIODIC REMOVAL OF ACCUMULATED DEBRIS, AS NECESSARY TO ENSURE FUNCTION. BLOCK NETS SHALL BE REMOVED BY THE FISHERIES BIOLOGIST AFTER THE DIVERSION IS REMOVED AND THE IN CHANNEL WORK AREA IS RE-WATERED.
 - 2.3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A FISH SALVAGE PERMIT FROM ODFW PRIOR TO MOBILIZATION. ODFW DISTRICT WILL NEED TO BE NOTIFIED TWO WEEKS PRIOR TO SALVAGE. CONTRACTOR SHALL COORDINATE WITH ODFW FOR WHERE TO RELEASE FISH.
3. DIVERSION SYSTEM
 - 3.1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DIVERSION FLOWS TO WATTS-TOPPIN AND SPENCER DITCHES THROUGHOUT CONSTRUCTION AND MAINTAINING DOWNSTREAM FISH PASSAGE IF FLOWS IN WILLIAMS CREEK EXCEED THE DIVERSION FLOWS.
 - 3.2. INSTALL A SEALED, TEMPORARY DIVERSION DAM CONSTRUCTED USING GRAVEL FILLED BAGS TO CAPTURE AND DIVERT STREAM FLOW UPSTREAM OF THE PROJECT SITE. THE DAM AND METHOD OF SEALING SHALL BE PLACED AT AN APPROPRIATE DEPTH TO CAPTURE SUBSURFACE STREAM FLOW, AS NEEDED TO DEWATER THE STREAMBED. GRAVEL SHALL BE WASHED PRIOR TO PLACEMENT IN BAGS. THE USE OF SAND WILL NOT BE ALLOWED. NO OTHER DIVERSION METHOD SHALL BE USED WITHOUT AUTHORIZATION OF THE ENGINEER. IF AN ALTERNATE DIVERSION METHOD IS PREFERRED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL, DETAILING THE DESIRED DIVERSION METHOD.
 - 3.3. THE DIVERSION STRUCTURE SHALL BE CONSTRUCTED AS SHOWN ON DETAIL 3 OF SHEET C14, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
 - 3.4. IN THE EVENT OF A SIGNIFICANT STORM, THE CONTRACTOR SHALL BE PREPARED TO TAKE NECESSARY MEASURES TO INSURE SAFE PASSAGE OF STORM WATER FLOW THROUGH THE PROJECT AREA, WITHOUT DAMAGE TO EXISTING STRUCTURES, OR INTRODUCTION OF EXCESSIVE SEDIMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY EROSION CONTROL BMPs.
4. DEWATERING OF CONSTRUCTION AREAS
 - 4.1. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY PUMPS, PIPING, FILTERS, SHORING, AND OTHER TOOLS AND MATERIALS NECESSARY FOR DEWATERING. IF A PUMPED SYSTEM IS RELIED UPON TO ENSURE DOWNSTREAM WATER QUALITY, A BACKUP PUMP OF EQUAL CAPACITY SHALL BE PROVIDED AT ALL TIMES AND THE PUMP MUST BE CONTINUOUSLY MONITORED.
 - 4.2. DEWATERING ACTIVITIES WHICH MAY BE REQUIRED FOR CONSTRUCTION PURPOSES SHALL COMPLY WITH WATER QUALITY STANDARDS ISSUED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY.
 - 4.3. DISCHARGE OF WATER FROM THE DEWATERED CONSTRUCTION SITE, EITHER BY GRAVITY OR PUMPING, SHALL BE PERFORMED IN A MANNER THAT PREVENTS EXCESSIVE TURBIDITY FROM ENTERING THE RECEIVING WATERWAYS AND PREVENTS SCOUR AND EROSION OUTSIDE OF THE CONSTRUCTION SITE. PUMPED WATER SHOULD BE PRE-FILTERED WITH A GRAVEL PACK AROUND SUMPS FOR SUBSURFACE FLOWS AND A SILT FENCE AROUND PUMPS FOR SURFACE FLOW. PUMPED WATER SHALL BE DISCHARGED INTO ISOLATED LOCAL DEPRESSIONS, FILTER BAGS, SETTLING (BAKER) TANKS, OR TEMPORARY SEDIMENT BASINS, AS NECESSARY TO MEET WATER QUALITY REQUIREMENTS. WHERE WATER TO BE DISCHARGED INTO THE CREEK WILL CREATE EXCESSIVE TURBIDITY, THE WATER SHALL BE ROUTED THROUGH A SEDIMENT INTERCEPTOR OR OTHER FACILITIES TO REMOVE SEDIMENT FROM WATER.

WATERWAYS CONSULTING INC.
1020 SW TAYLOR STREET, STE. 360
PORTLAND, OR 97205
PH: (503) 227-5979 // FAX: (888) 819-6847
WWW.WATWAYS.COM

DATE: 8/29/23
ANNIKA M. SULLIVAN
REGISTERED PROFESSIONAL ENGINEER
OREGON LICENSE NO. 90206PE
EXPIRES: 6/30/2024

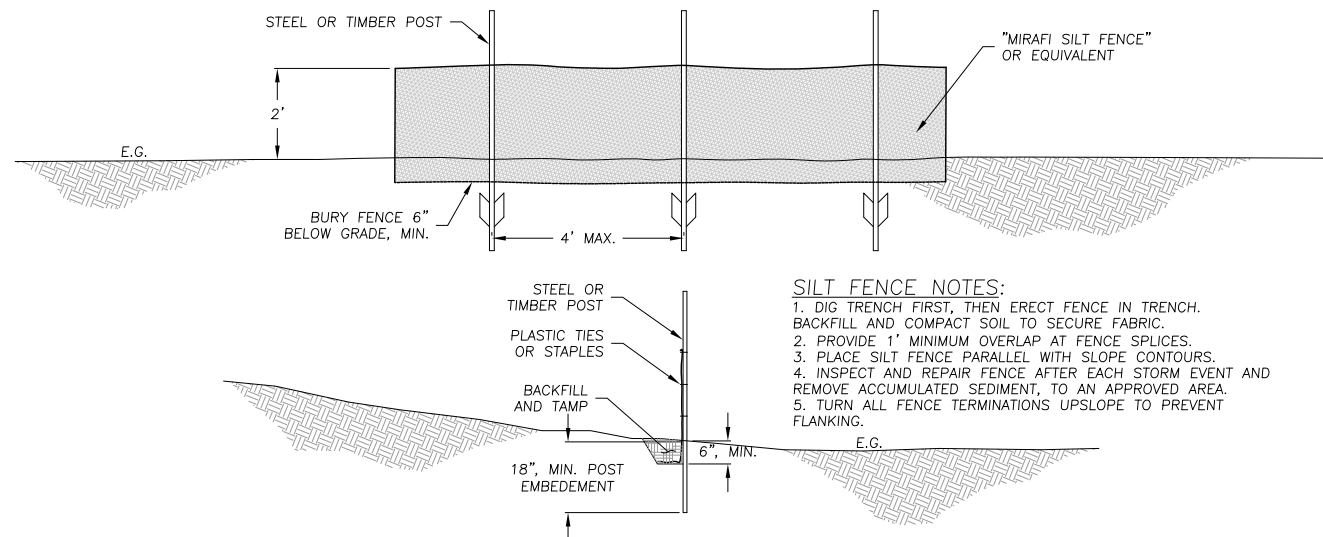
PREPARED AT THE REQUEST OF:
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DEWATERING AND EROSION CONTROL PLAN

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS
100% DESIGN SUBMITTAL

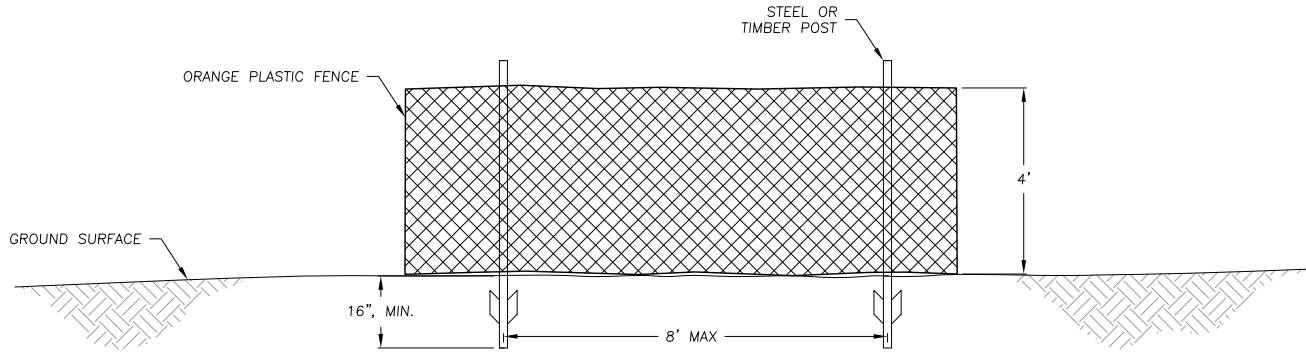
DESIGNED BY: A.S.
DRAWN BY: M.L.
CHECKED BY: J.H.
DATE: 8/29/23
JOB NO.: 20-063

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
0 1"



- SILT FENCE NOTES:**
1. DIG TRENCH FIRST, THEN ERECT FENCE IN TRENCH. BACKFILL AND COMPACT SOIL TO SECURE FABRIC.
 2. PROVIDE 1' MINIMUM OVERLAP AT FENCE SPLICES.
 3. PLACE SILT FENCE PARALLEL WITH SLOPE CONTOURS.
 4. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE ACCUMULATED SEDIMENT, TO AN APPROVED AREA.
 5. TURN ALL FENCE TERMINATIONS UPSLOPE TO PREVENT FLANKING.

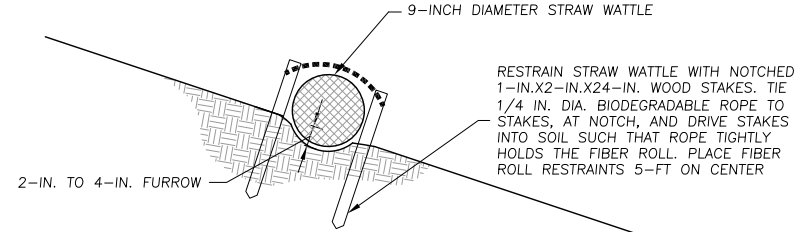
SILT FENCE DETAIL (1) C15
SCALE: 1"=2'



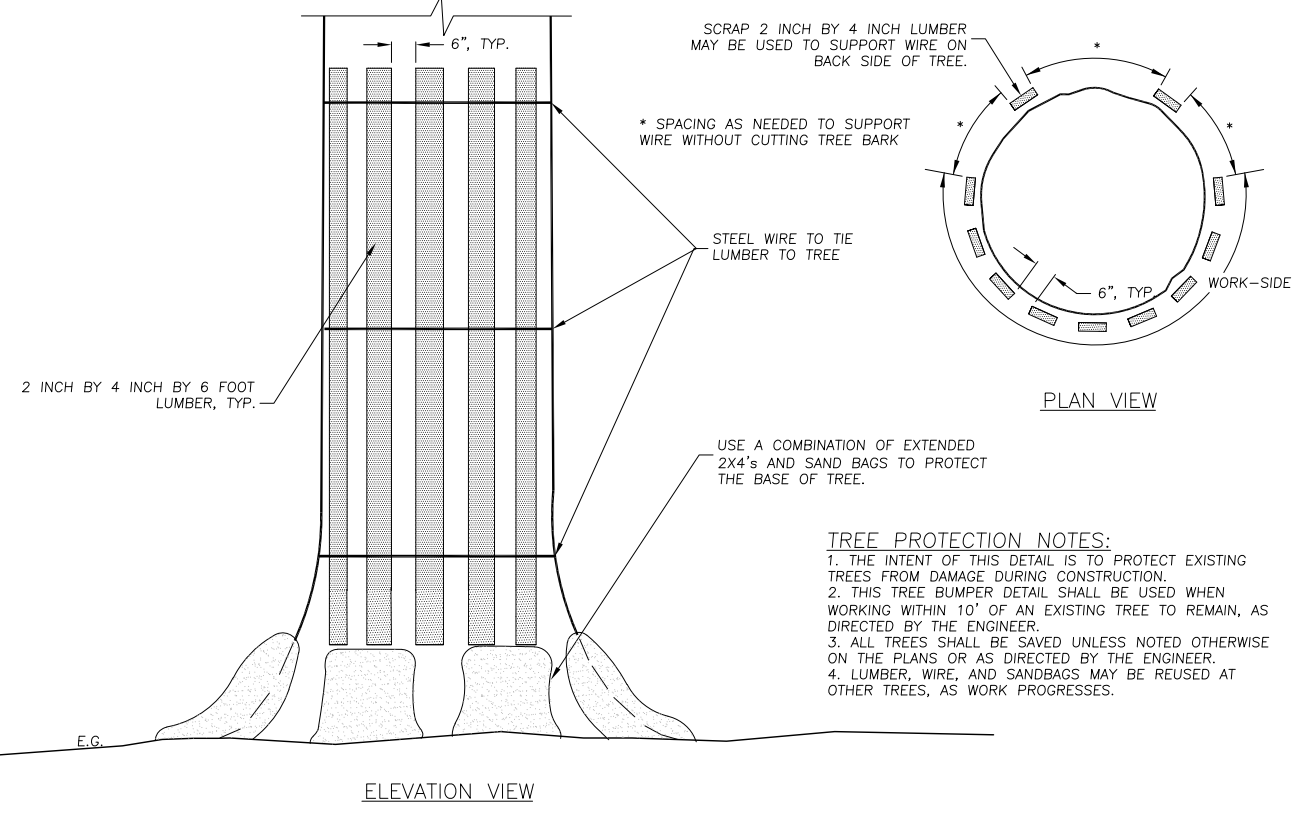
BOUNDARY FENCE DETAIL (4) C2
SCALE: 1"=2'

EROSION CONTROL NOTES

1. THE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
2. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
3. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS.
4. PRESERVE EXISTING VEGETATION WHEN PRACTICAL. SEEDING, MULCHING, AND PLANTING TO BE COMPLETED BY OWNER. PROVIDE TEN (10) DAYS NOTICE TO OWNER'S AUTHORIZED REPRESENTATIVE AS TO ANTICIPATED COMPLETION OF GRADING AND GROUND DISTURBING ACTIVITIES.
5. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
6. IMPLEMENT TEMPORARY SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
7. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS.
8. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPs SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPs MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
9. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE.
10. USE BMPs TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS.
11. FUELING ACTIVITIES MUST BE LOCATED A MINIMUM OF 150 FEET FROM ORDINARY HIGH WATER AND SENSITIVE WATERS, INCLUDING WETLANDS.
12. IMPLEMENT THE FOLLOWING BMPs WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES.
13. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
14. ONSITE VEHICLE SPEED ON UNPAVED SURFACES SHALL BE LIMITED TO 5 MPH.
15. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
16. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR.
17. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPs MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS.
18. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER.
19. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL.
20. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME.
21. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS, DRAINAGE WAYS, OR WETLANDS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS.
22. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. OWNER WILL BE RESPONSIBLE FOR PERMANENT SEEDING AND MULCHING OF THE SITE. COORDINATE ACCORDINGLY.
23. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE.
24. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS AS THEY ARE COMPLETED. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPs.



STRAW WATTLE DETAIL (2) C2
SCALE: 1"=1'



- TREE PROTECTION NOTES:**
1. THE INTENT OF THIS DETAIL IS TO PROTECT EXISTING TREES FROM DAMAGE DURING CONSTRUCTION.
 2. THIS TREE BUMPER DETAIL SHALL BE USED WHEN WORKING WITHIN 10' OF AN EXISTING TREE TO REMAIN, AS DIRECTED BY THE ENGINEER.
 3. ALL TREES SHALL BE SAVED UNLESS NOTED OTHERWISE ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 4. LUMBER, WIRE, AND SANDBAGS MAY BE REUSED AT OTHER TREES, AS WORK PROGRESSES.

TREE PROTECTION DETAIL (3) C4
SCALE: 1"=1'

DATE: 8/29/23
ANNIKA M SULLIVAN
REGISTERED PROFESSIONAL ENGINEER
OREGON LICENSE NO. 90206PE
EXPIRES: 6/30/2024

PREPARED AT THE REQUEST OF:
APPLIGATE PARTNERSHIP AND WATERSHED COUNCIL

EROSION CONTROL DETAILS AND NOTES

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS
100% DESIGN SUBMITTAL

DESIGNED BY: A.S.
DRAWN BY: M.L.
CHECKED BY: J.H.
DATE: 8/29/23
JOB NO.: 20-063

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
0 1"

GENERAL NOTES

- PREPARED AT THE REQUEST OF:
APPLGATE PARTNERSHIP AND WATERSHED COUNCIL
P.O. BOX 899
JACKSONVILLE, OR 97530
TELEPHONE: (541) 899-9982
- AFFECTED PARCEL NUMBERS: R346261, R326387, R326366, R326368
- THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES WERE COMPILED FROM RECORD INFORMATION AND FROM FIELD TIES TO EXISTING BOUNDARY MONUMENTATION. THE LOCATION OF THESE LINES IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A COMPLETE BOUNDARY SURVEY.
- THE OWNER SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL PROPERTY LINES AND EASEMENTS AND CONFIRMING THAT THEY HAVE COORDINATED WITH OWNERS AND APPROPRIATE PERMISSIONS ARE GRANTED FOR THE WORK.
- NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER OR A DESIGNATED REPRESENTATIVE SHALL OBSERVE THE CONSTRUCTION PROCESS, AS NECESSARY TO ENSURE PROPER INSTALLATION PROCEDURES.
- EXISTING UNDERGROUND UTILITY LOCATIONS:
 - CALL UNDERGROUND SERVICE ALERT (1-800-642-2444) TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO COMMENCING CONSTRUCTION.
 - PRIOR TO BEGINNING WORK, CONTACT ALL UTILITIES COMPANIES WITH REGARD TO WORKING OVER, UNDER, OR AROUND EXISTING FACILITIES AND TO OBTAIN INFORMATION REGARDING RESTRICTIONS THAT ARE REQUIRED TO PREVENT DAMAGE TO THE FACILITIES.
 - EXISTING UTILITY LOCATIONS SHOWN ARE COMPILED FROM INFORMATION SUPPLIED BY THE APPROPRIATE UTILITY AGENCIES AND FROM FIELD MEASUREMENTS TO ABOVE GROUND FEATURES READILY VISIBLE AT THE TIME OF SURVEY. LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND DEPTH OF UNDERGROUND UTILITIES.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
 - PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION, DISCOVER OR VERIFY THE ACTUAL DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES AND POT HOLE THOSE AREAS WHERE POTENTIAL CONFLICTS ARE LIKELY OR DATA IS OTHERWISE INCOMPLETE.
 - TAKE APPROPRIATE MEASURES TO PROTECT EXISTING UTILITIES DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIR/REPLACEMENT OF ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
 - UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY BY TELEPHONE AND IN WRITING.
 - UTILITY RELOCATIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT FACILITIES WILL BE PERFORMED BY THE UTILITY COMPANY, UNLESS OTHERWISE NOTED.
- IF DISCREPANCIES ARE DISCOVERED BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
- ALL TESTS, INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE REQUIRED TESTS AND INSPECTIONS ARE PERFORMED.
- PROJECT SCHEDULE: PRIOR TO COMMENCEMENT OF WORK, SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL A DETAILED CONSTRUCTION SCHEDULE. DO NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN IS APPROVED BY THE ENGINEER. ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL. PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, INSTALLATION, AND MAINTENANCE OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION. ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
- CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTION LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. NEITHER THE PROFESSIONAL ACTIVITIES OF CONSULTANT NOR THE PRESENCE OF CONSULTANT OR HIS OR HER EMPLOYEES OR SUB-CONSULTANTS AT A CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR AND ITS SUBCONTRACTORS OF THEIR RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND APPLICABLE HEALTH OR SAFETY REQUIREMENTS OF ANY REGULATORY AGENCY OR OF STATE LAW.
- MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL AS-BUILT DEVIATIONS FROM THE CONSTRUCTION AS SHOWN ON THESE DRAWINGS AND SPECIFICATIONS, FOR THE PURPOSE OF PROVIDING THE ENGINEER OF RECORD WITH A BASIS FOR THE PREPARATION OF RECORD DRAWINGS.
- MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. STORE ALL MATERIALS WITHIN APPROVED STAGING AREAS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL PERMIT CONDITIONS, LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS, WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
- PROVIDE, AT CONTRACTOR'S SOLE EXPENSE, ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL SURVEY MONUMENTS OR PROPERTY CORNERS. DISTURBED MONUMENTS SHALL BE RESTORED BACK TO THEIR ORIGINAL LOCATION AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR AT THE SOLE EXPENSE OF THE CONTRACTOR.

20. TREE DIMENSIONS: TRUNK DIAMETERS SHOWN REPRESENT DIAMETER AT BREAST HEIGHT (DBH), MEASURED IN INCHES. DBH IS MEASURED 4.5 FT ABOVE GROUND FOR SINGLE TRUNKS AND TRUNKS THAT SPLIT INTO SEVERAL STEMS CLOSE TO THE GROUND. THE DBH FOR TREES THAT SPLIT INTO SEVERAL STEMS CLOSE TO THE GROUND MAY BE CONSOLIDATED INTO A SINGLE DBH BY TAKING THE SQUARE ROOT OF THE SUM OF ALL SQUARED STEM DBH'S, UNLESS OTHERWISE NOTED. WHERE TREES FORK NEAR BREAST HEIGHT, TRUNK DIAMETER IS MEASURED AT THE NARROWEST PART OF THE MAIN STEM BELOW THE FORK. FOR TREES ON A SLOPE, BREAST HEIGHT IS REFERENCED FROM THE UPPER SIDE OF THE SLOPE. FOR LEANING TREES, BREAST HEIGHT IS MEASURED ON THE SIDE THAT THE TREE LEANS TOWARD. TREES WITH DBH LESS THAN 8" ARE TYPICALLY NOT SHOWN.

12"P = 12" DBH PINE

21. TREE SPECIES ARE IDENTIFIED WHEN KNOWN. HOWEVER, FINAL DETERMINATION SHOULD BE MADE BY A QUALIFIED BOTANIST. REFER TO THE LEGEND FOR TREE SPECIES SYMBOLS.

22. TREE TRUNK DIMENSIONS MAY BE SHOWN OUT-OF-SCALE FOR PLOTTING CLARITY. CAUTION SHOULD BE USED IN DESIGNING NEAR TREE TRUNKS. THERE ARE LIMITATIONS ON FIELD ACCURACY, DRAFTING ACCURACY, MEDIUM STRETCH AS WELL AS THE "SPREAD" OR "LEANING" OF TREES. REQUEST ADDITIONAL TOPOGRAPHIC DETAIL WHERE CLOSE TOLERANCES ARE ANTICIPATED. INDIVIDUAL TREES ARE NOT TYPICALLY LOCATED WITHIN DRIPLINE CANOPY AREAS SHOWN.

23. ALL STANDARD STREET MONUMENTS, LOT CORNER PIPES, AND OTHER PERMANENT MONUMENTS DISTURBED DURING THE PROCESS OF CONSTRUCTION SHALL BE REPLACED AND A RECORD OF SURVEY OR CORNER RECORD PER SECTION 209.150 OF THE OREGON REVISED STATUTES FILED BEFORE ACCEPTANCE OF THE IMPROVEMENTS BY THE COUNTY OF JOSEPHINE. COPIES OF ANY RECORD OF SURVEY OR CORNER RECORDS SHALL BE SUBMITTED TO THE COUNTY.

24. CONTRACTOR IS REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

25. THE CONTRACTOR SHALL CONFORM TO THE RULES AND REGULATIONS OF THE CONSTRUCTION RULES OF THE OREGON OCCUPATIONAL SAFETY AND HEALTH PERTAINING TO EXCAVATION AND TRENCHES THE OREGON ADMINISTRATIVE RULE 437-004-3100 EXCAVATION.

26. CULTURAL RESOURCES: IN THE EVENT THAT HUMAN REMAINS AND/OR CULTURAL MATERIALS ARE FOUND, ALL PROJECT-RELATED CONSTRUCTION SHALL CEASE WITHIN A 100-FOOT RADIUS. THE CONTRACTOR SHALL, PURSUANT TO THE OREGON REVISED STATUTES 390.235, NOTIFY THE JOSEPHINE COUNTY CORONER IMMEDIATELY.

EARTHWORK NOTES

- GRADING SUMMARY:
TOTAL CUT VOLUME = 1,117 CY
TOTAL FILL VOLUME = 1,591 CY
NET (FILL) = 474 CY

THE ABOVE QUANTITIES ARE APPROXIMATE IN-PLACE VOLUMES CALCULATED AS THE DIFFERENCE BETWEEN EXISTING GROUND AND THE PROPOSED FINISH GRADE, PREPARED FOR PERMITTING PURPOSES ONLY. EXISTING GROUND IS DEFINED BY THE TOPOGRAPHIC CONTOURS AND/OR SPOT ELEVATIONS ON THE PLAN. PROPOSED FINISH GRADE IS DEFINED AS THE DESIGN SURFACE ELEVATION OF WORK TO BE CONSTRUCTED. THE QUANTITIES HAVE NOT BEEN FACTORED TO INCLUDE ALLOWANCES FOR BULKING, CLEARING AND GRUBBING, SUBSIDENCE, SHRINKAGE, OVER EXCAVATION, AND RECOMPACTION, UNDERGROUND UTILITY AND SUBSTRUCTURE SPOILS AND CONSTRUCTION METHODS.

THE CONTRACTOR SHALL PERFORM AN INDEPENDENT EARTHWORK ESTIMATE FOR THE PURPOSE OF PREPARING BID PRICES FOR EARTHWORK. THE BID PRICE SHALL INCLUDE COSTS FOR ANY NECESSARY IMPORT AND PLACEMENT OF EARTH MATERIALS OR THE EXPORT AND PROPER DISPOSAL OF EXCESS OR UNSUITABLE EARTH MATERIALS.

- PRIOR TO COMMENCING WORK, PROTECT ALL SENSITIVE AREAS TO REMAIN UNDISTURBED WITH TEMPORARY FENCING, AS SHOWN ON THE DRAWINGS, AS SPECIFIED, OR AS DIRECTED BY THE ENGINEER.
- DO NOT DISTURB AREAS OUTSIDE OF THE DESIGNATED LIMITS OF DISTURBANCE, UNLESS AUTHORIZED IN WRITING BY THE ENGINEER. THE COST OF ALL ADDITIONAL WORK ASSOCIATED WITH RESTORATION AND REVEGETATION OF DISTURBED AREAS OUTSIDE THE DESIGNATED LIMITS OF DISTURBANCE, AS SHOWN ON THE DRAWINGS, SHALL BE BORNE SOLELY BY THE CONTRACTOR.
- REMOVE ALL EXCESS SOILS TO AN APPROVED DUMP SITE OR DISPOSE OF ON SITE AT A LOCATION TO BE APPROVED BY THE ENGINEER, IN A MANNER THAT WILL NOT CAUSE EROSION.
- CLEARING AND GRUBBING, SUBGRADE PREPARATION AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 00320 OF THE STANDARD SPECIFICATIONS, THESE DRAWINGS, AND THE TECHNICAL SPECIFICATIONS.
- PRIOR TO STARTING WORK ON THE PROJECT, SUBMIT FOR ACCEPTANCE BY THE ENGINEER A HAZARDOUS MATERIALS CONTROLS AND SPILL PREVENTION PLAN. INCLUDE PROVISIONS FOR PREVENTING HAZARDOUS MATERIALS FROM CONTAMINATING SOIL OR ENTERING WATER COURSES, AND ESTABLISH A SPILL PREVENTION AND COUNTERMEASURE PLAN.
- UNLESS AUTHORIZED BY THE ENGINEER, THE FOLLOWING MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK:
 - ORGANIC MATERIALS SUCH AS PEAT, MULCH, ORGANIC SILT OR SOD.
 - SOILS CONTAINING EXPANSIVE CLAYS.
 - MATERIAL CONTAINING EXCESSIVE MOISTURE.
 - POORLY GRADED COURSE MATERIAL PARTICLE SIZES IN EXCESS OF 6 INCHES.
 - MATERIAL WHICH WILL NOT ACHIEVE SPECIFIED DENSITY OR BEARING.
- FINE GRADING ELEVATIONS, CONFORMS, AND SLOPES NOT CLEARLY SHOWN ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD TO DIRECT DRAINAGE TO PROTECTED DRAINAGE CONTROL STRUCTURES OR NATURAL WATERWAYS IN A MANNER THAT SUPPORTS THE INTENT OF THE DESIGN. ALL FINAL GRADING SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- THE TOP 6" OF SUBGRADE UNDER ALL PAVED SURFACES SUBJECT TO VEHICULAR USE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION, IN ACCORDANCE WITH ASTM-D1557. ALL OTHER FILL TO BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DENSITY AS DETERMINED BY ASTM-D1557 AND SO CERTIFIED BY TESTS AND REPORTS FROM THE CIVIL ENGINEER IN CHARGE OF THE GRADING CERTIFICATION.
- SPREAD FILL MATERIAL IN LIFTS OF APPROXIMATELY 8 INCHES, MOISTENED OR DRIED TO NEAR OPTIMUM MOISTURE CONTENT AND RECOMPACTED. THE MATERIALS FOR ENGINEERED FILL SHALL BE APPROVED BY A REGISTERED CIVIL ENGINEER. ANY IMPORTED MATERIALS MUST BE APPROVED BEFORE BEING BROUGHT TO THE SITE. THE MATERIALS USED SHALL BE FREE OF ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS.
- ALL CONTACT SURFACES BETWEEN ORIGINAL GROUND AND RECOMPACTED FILL SHALL BE EITHER HORIZONTAL OR VERTICAL. ALL ORGANIC MATERIAL SHALL BE REMOVED AND THE REMAINING SURFACE SCARIFIED TO A DEPTH OF AT LEAST 12 INCHES, UNLESS DEEPER EXCAVATION IS REQUIRED BY THE ENGINEER.
- REGULATORY AGENCIES MAY REQUIRE A FINAL GRADING COMPLIANCE LETTER. WE CAN ONLY OFFER THIS LETTER IF WE ARE CALLED TO THE SITE TO OBSERVE AND TEST, AS NECESSARY, ANY GRADING AND EXCAVATION OPERATIONS FROM THE START OF CONSTRUCTION. WE CANNOT PREPARE A LETTER IF WE ARE NOT AFFORDED THE OPPORTUNITY OF OBSERVATION FROM THE BEGINNING OF THE GRADING OPERATION. THE CONTRACTOR MUST BE MADE AWARE OF THIS AND EARTHWORK TESTING AND OBSERVATION MUST BE SCHEDULED ACCORDINGLY. PLEASE CONTACT OUR OFFICE: (503) 227-5979.

WATERWAYS CONSULTING INC.
1020 SW TAYLOR STREET, STE. 360
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WWW.WATWAYS.COM

8/29/23 DATE
ANNIKA M SULLIVAN
REGISTERED PROFESSIONAL ENGINEER
NO. 19193
EXPIRES: 6/30/2024

PREPARED AT THE REQUEST OF:
APPLGATE PARTNERSHIP AND WATERSHED COUNCIL

GENERAL AND EARTHWORK NOTES

WATTS-TOPPIN DIVERSION FISH PASSAGE IMPROVEMENTS
100% DESIGN SUBMITTAL

DESIGNED BY: A.S.
DRAWN BY: M.L.
CHECKED BY: J.H.
DATE: 8/29/23
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BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
0 1"

C17
17 OF 17