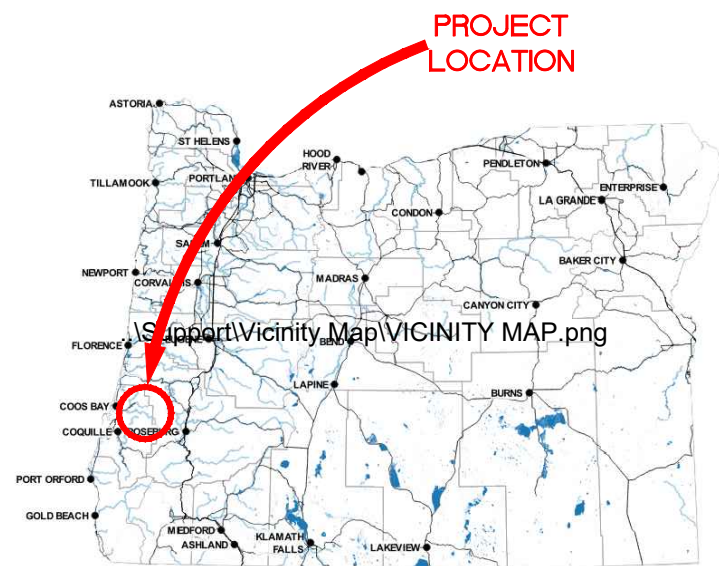


ANCHOR-ALDERWOOD DESIGN SUPPORT COOS BAY, OR

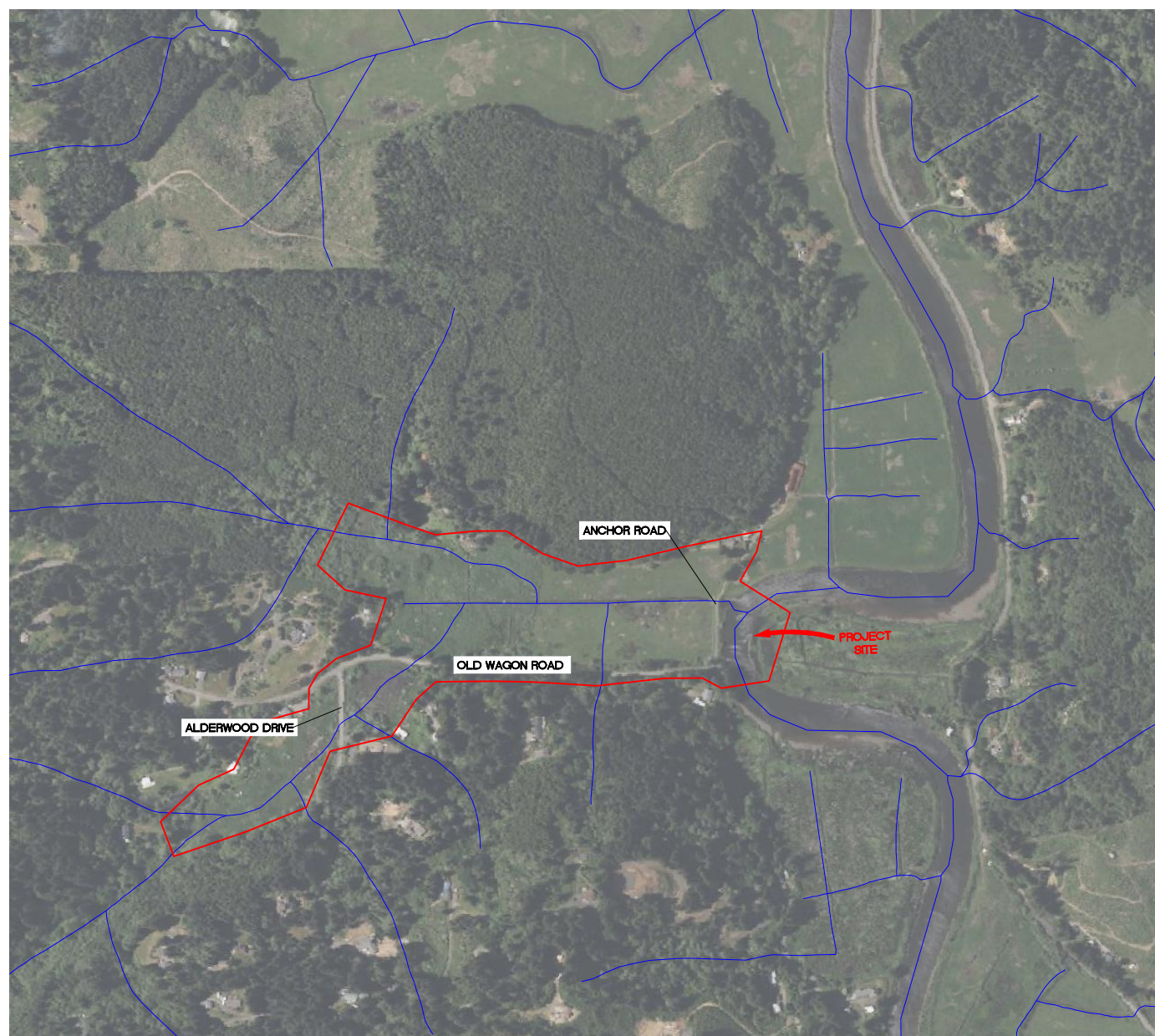
PROJECT PARTNERS



1 LOCATION MAP
SCALE: NOT TO SCALE



2 VICINITY MAP
SCALE: NOT TO SCALE



3 PROJECT AREA
SCALE: 1:400

SHEET INDEX		
SHT NO	DWG NO	SHT TITLE
1	G01	COVER SHEET AND DRAWING INDEX
2	G02	GENERAL NOTES ABBREVIATIONS AND SYMBOLS
3	C01	ESCP AND TWMP NOTES
4	C02	EXISTING CONDITIONS - PLAN
5	C03	ALDERWOOD DRIVE PROPOSED CULVERT - PLAN
6	C04	OLD WAGON ROAD PROPOSED CULVERT - PLAN
7	C05	ALDERWOOD DRIVE CULVERT - PROFILES
8	C06	ANCHOR ROAD PROPOSED CULVERT 1 - PLAN
9	C07	ANCHOR ROAD PROPOSED CULVERT 2 - PLAN
10	C08	ANCHOR ROAD CULVERT 1 AND 2 - PROFILES
11	C09	ROAD AT CULVERT - PROFILES
12	C10	ALDERWOOD CREEK BERM 1
13	C11	ALDERWOOD CREEK BERM 2
14	C12	THIN SPREAD - PLAN
15	C13	TYPICAL CULVERT AND TIDEGATE DETAILS AND NOTES

ADDITIONAL ODOT STD BMP DWGS ATTACHED FOR CONTRACTOR REFERENCE ONLY. SEE SHT C01 FOR INFORMATION ON CONTRACTOR PREPARED ESCP AND BMP RESPONSIBILITIES.

ODFW IN-WATER WORK WINDOW FOR THE MILLICOMA RIVER, SOUTH FORK COOS RIVER, AND TRIBUTARIES: JULY 1 TO SEPTEMBER 15 AND PER GENERAL ESCP NOTE 12 ON SHT C01



NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023

COOS Watershed Association
Improving the Health of Our Watershed
COOS WATERSHED ASSOCIATION
P.O. BOX 388
COOS BAY, OR 97420
PHONE: 541-888-5922



PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT

COVER SHEET AND DRAWING INDEX

DRAWING NO.
G01
SHEET NO.
1
OF
15

FILE: C:\Users\rvankilgren\Kilgren Water Resources.LLC\1.2023.0005.1-CoosWA-Anchor-Alderwood - Documents\CAD\Sheets\Plans\G01 COVER SHEET AND DRAWING INDEX.dwg USER: rvankilgren DATE/TIME: 11/1/2024 5:15 PM

FILE: C:\Users\rvankilgren\Kilgren Water Resources, LLC\1.2023.0005.L-CoosWA-Anchor-Alderwood - Documents\CAD\Sheets\Plans\G02_GENERAL NOTES ABBREVIATIONS AND SYMBOLS.dwg USER: rvankilgren DATE/TIME: 10/31/2024 3:58 PM

GENERAL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS, INCLUDING REQUIREMENTS SET FORTH IN THE PERMITS OBTAINED FOR THIS PROJECT. THE CONTRACTOR SHALL MAINTAIN A COPY OF ALL PERMITS ONSITE DURING CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE CONDITIONS AND THE SAFETY OF HUMAN LIFE DURING THE COURSE OF CONSTRUCTION. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY DURING THE PERIOD OF CONSTRUCTION AND NOT BE LIMITED TO NORMAL WORKING HOURS.
3. THE CONTRACTOR SHALL KEEP THE JOB SITE AREA CLEAN AND HAZARD-FREE, AND SHALL DISPOSE OF ALL DEBRIS, RUBBISH, AND CONSTRUCTION WASTE. UNLESS OTHERWISE DIRECTED BY THE CAR, ALL DISTURBED AREAS SHALL BE REHABILITATED TO A SMOOTH GRADE MATCHED TO UNDISTURBED ADJACENT GRADES SO AS TO FACILITATE POST-CONSTRUCTION SHEET FLOW RUNOFF AND PREVENT CONCENTRATED OR IMPEDED RUNOFF FLOWS.
4. THE CONTRACTOR SHALL PROTECT THE STAGING AREA SO THAT EQUIPMENT AND MATERIALS DO NOT DAMAGE ADJACENT VEGETATED AREAS OR WATERWAYS.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE WITH THE CAR AND CONFIRM THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION.
6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE.

SURVEY CONTROL AND CONSTRUCTION LIMITS NOTES:

1. EXISTING GROUND ELEVATION AND SURVEY CONTROL POINT DATA IS FROM COOSWA SURVEYS IN 2023 AND 2024.
2. PROJECTED COORDINATE SYSTEM
HORIZONTAL: NAD83 OREGON STATE PLANE (POLYCONIC), SOUTH ZONE, WITH UNITS OF US INTERNATIONAL FEET (ESRI:103138)
VERTICAL: NAVD88 WITH UNITS OF FEET
3. ALL STATIONING REFERS TO THE CENTERLINE OF CONSTRUCTION, OR AS SHOWN, AND IS THE MEASURED HORIZONTAL DISTANCE.
4. CONSTRUCTION LIMITS, CENTERLINE, AND OFFSET STAKING TO BE PERFORMED BY THE CONTRACTOR, UNLESS OTHERWISE DIRECTED BY CAR.
5. ALL CONSTRUCTION ACTIVITY, INCLUDING STAGING AND STOCKPILING, SHALL BE CONFINED TO THE LIMITS OF THE GRADING, TEMPORARY CONSTRUCTION ACCESS, AND TEMPORARY CONSTRUCTION STAGING AREAS SHOWN IN THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING REQUIRED DATUM, BENCHMARKS, CONTROL LINES AND LEVELS. DO NOT DISTURB, EXCAVATE, OR WORK BEYOND THE CONSTRUCTION LIMITS WITHOUT APPROVAL FROM CAR.
6. UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND IN SOME CASES HAVE NOT BEEN SURVEYED. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING OREGON UTILITY NOTIFICATION CENTER AT 800.332.2344 72-HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING MARKINGS.

SURVEY CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEV	DESCRIPTION
2	623244.490	3947984.387	11.090	CP1

ENVIRONMENTAL PROTECTION NOTES:

1. IF THE CONTRACTOR ENCOUNTERS POTENTIALLY HAZARDOUS MATERIALS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CAR. ALL CONSTRUCTION SPOILS AND WASTE MATERIALS THAT CONTACT OR CONTAIN HAZARDOUS MATERIALS SHALL BE DISPOSED OF AT AN APPROVED LANDFILL FACILITY.
2. EXISTING ON-SITE MATERIALS SHALL BE CAREFULLY REMOVED AND STORED OR DISPOSED OF. COMPLETELY REMOVE STUMPS, ROOTS, WILLOWS, SHRUBS, WEEDS, AND OTHER DEBRIS PROTRUDING FROM THE GROUND WITHIN THE LIMITS OF GRADING AND AS DIRECTED BY THE CAR.
3. TREES AND LAND AREAS OUTSIDE THE CONSTRUCTION LIMITS SHALL BE PROTECTED FROM DAMAGE. EXERCISE CARE TO AVOID DAMAGE TO NATURAL VEGETATION. ANY TREE TRIMMING OR REMOVAL, INCLUDING WITHIN THE GRADING LIMITS, SHALL BE PRE-APPROVED BY CAR.

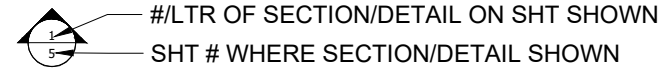
TEMPORARY CONSTRUCTION FACILITIES NOTES:

1. ALL TEMPORARY UTILITIES AND FACILITIES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. A CONSTRUCTION TRAILER IS NOT REQUIRED. ANY USE OF POTABLE WATER OR ELECTRICITY FROM EXISTING CONNECTIONS ON-SITE MUST BE COORDINATED WITH THE CAR FOR LANDOWNER WRITTEN AGREEMENT PRIOR TO USE. A CHEMICAL TOILET OF SUITABLE TYPE SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR AT ALL TIMES.

ABBREVIATIONS AND NOTATIONS:

ACW	ACTIVE CHANNEL WIDTH	MM	MILLIMETER
AG	AGRICULTURAL	N	NORTH, NORTHING
ALIGN	ALIGNMENT	NAD83	NORTH AMERICAN DATUM OF 1983
APPROX	APPROXIMATELY	NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
BMP	BEST MANAGEMENT PRACTICE(S)	NMFS	NATIONAL MARINE FISHERIES SERVICE, NOAA FISHERIES
CAR	CONTRACTING AGENCY REPRESENTATIVE, COOS WATERSHED ASSOCIATION (COOSWA)	NO, #	NUMBER
CFS	CUBIC FEET PER SECOND	NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
CL	CENTERLINE	NOM	NOMINAL
COOSWA	COOS WATERSHED ASSOCIATION	NSG4MA	NEHALEM MARINE SIDE HINGED GATE FOR 4 FOOT DIAMETER CULVERT PIPE WITH A MITIGATOR AND AUXILIARY DOOR
CUYD, CY	CUBIC YARD	NTS	NOT TO SCALE
DBH	DIAMETER AT BREAST HEIGHT	ODOT	OREGON DEPARTMENT OF TRANSPORTATION
DEPT	DEPARTMENT	ODFW	OREGON DEPARTMENT OF FISH AND WILDLIFE
DEQ	OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY	OR	OREGON
DET	DETAIL	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
DIA, Ø	DIAMETER	PT	POINT
DS	DOWNSTREAM	SHT	SHEET
DWG	DRAWING	SPEC	SPECIFICATION(S)
E	NORTH, EASTING	SQ	SQUARE
EA	EACH	STD	STANDARD
EG	EXISTING GROUND	STA	STATION
EL, ELEV	ELEVATION	SY, SQYD	SQUARE YARD
ESCP	EROSION AND SEDIMENT CONTROL PLAN	TB	TURBIDITY BARRIER
EX, EXIST	EXISTING	TBD	TO BE DEVELOPED, TO BE DETERMINED
FG	FINISHED GROUND	TEMP	TEMPORARY
FT, '	FOOT OR FEET	TN	TON
GPM	GALLONS PER MINUTE	TYP	TYPICAL
HTL	HIGH TIDE LINE	US	UNITED STATES, UPSTREAM
HORZ	HORIZONTAL	USGS	UNITED STATES GEOLOGICAL SURVEY
IN, "	INCH	VERT	VERTICAL
IE	INVERT ELEVATION	W	WITH
LF	LINEAR FEET	W/O	WITHOUT
LTR	LETTER	°	DEGREE
MAX	MAXIMUM	@	AT
MHW	MEAN HIGH WATER	%	PERCENT
MIN	MINIMUM		

SYMBOLS:



LEGEND	
EXISTING	PROPOSED
MAJOR CONTOUR ---5---	MAJOR CONTOUR —5—
MINOR CONTOUR ---1---	MINOR CONTOUR —1—
PROPERTY LINE - - - - -	TEMPORARY ISOLATION BARRIER
CULVERT	TEMPORARY SILT FENCE
OVERHEAD ELECTRIC — OE —	TEMPORARY CHECK DAM, TYPE 3
ROADWAY	TEMPORARY PUMP
HIGH TIDE LINE	TEMPORARY CONSTRUCTION ACCESS
MEAN HIGH WATER	THIN SPREAD FILL AREAS
WETLAND AREA FROM USFWS	AGGREGATE / RIPRAP / PIPE BEDDING / PIPE ZONE
	TIDE GATE AND SLEEVE
	CULVERT
	LAYOUT COORDINATE



NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
 21 EAST 28TH AVENUE, SUITE 4
 EUGENE, OR 97405
 PHONE: 971-409-4023



PROJECT NO.
1.2023.0005.1

DESIGNED BY
RWK

DRAWN BY
RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT

GENERAL NOTES ABBREVIATIONS AND SYMBOLS

DRAWING NO.
G02

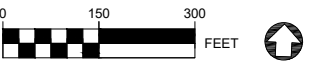
SHEET NO.
2
OF 15

WETLAND AREA TABLE							
NO	USFWS NATIONAL WETLAND INVENTORY CLASSIFICATION						
	SYSTEM	CLASS	SUBCLASS	WATER REGIME	SPECIAL MODIFIERS	CODE	AREA (ACRES)
1	PALUSTRINE	EMERGENT	PERSISTENT	TEMPORARILY FLOODED	PARTLY DRAINED/DITCHED	PEM1Ad	5.95
2	PALUSTRINE	EMERGENT	PERSISTENT	SEASONALLY FLOODED	PARTLY DRAINED/DITCHED	PEM1Cd	2.37
3	PALUSTRINE	EMERGENT	PERSISTENT	TEMPORARILY FLOODED	PARTLY DRAINED/DITCHED	PEM1Ad	17.60
Total							25.92
* WETLAND TYPES AND AREAS FROM USFWS NATIONAL WETLAND INVENTORY, AVAILABLE ONLINE AT HTTP://WWW.FWS.GOV/PROGRAM/NATIONAL-WETLANDS-INVENTORY							



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1 EXISTING CONDITIONS PLAN
SCALE: 1:150



2 ALDERWOOD DRIVE CULVERT UPSTREAM INLET BURIED IN SEDIMENT
Scale: NTS



3 OLD WAGON ROAD CULVERT UPSTREAM INLET WITH TRASH RACK
Scale: NTS



4 ANCHOR DRIVE CULVERT AND TIDEGATE 1 WITH WOOD HEADWALL
Scale: NTS



5 ANCHOR DRIVE CULVERT AND TIDEGATE 2 WITH WOOD HEADWALL
Scale: NTS

NO.	DATE	DESCRIPTION	BY

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PHONE: 971-409-4023

COOS Watershed Association
Improving the Health of Our Watershed
COOS WATERSHED ASSOCIATION
P.O. BOX 388
COOS BAY, OR 97420
PHONE: 541-888-5922

REGISTERED PROFESSIONAL ENGINEER
83634PE
OREGON
June 2, 2010
RYAN WESLEY KILGREN
RENEWS: 6/30/2025

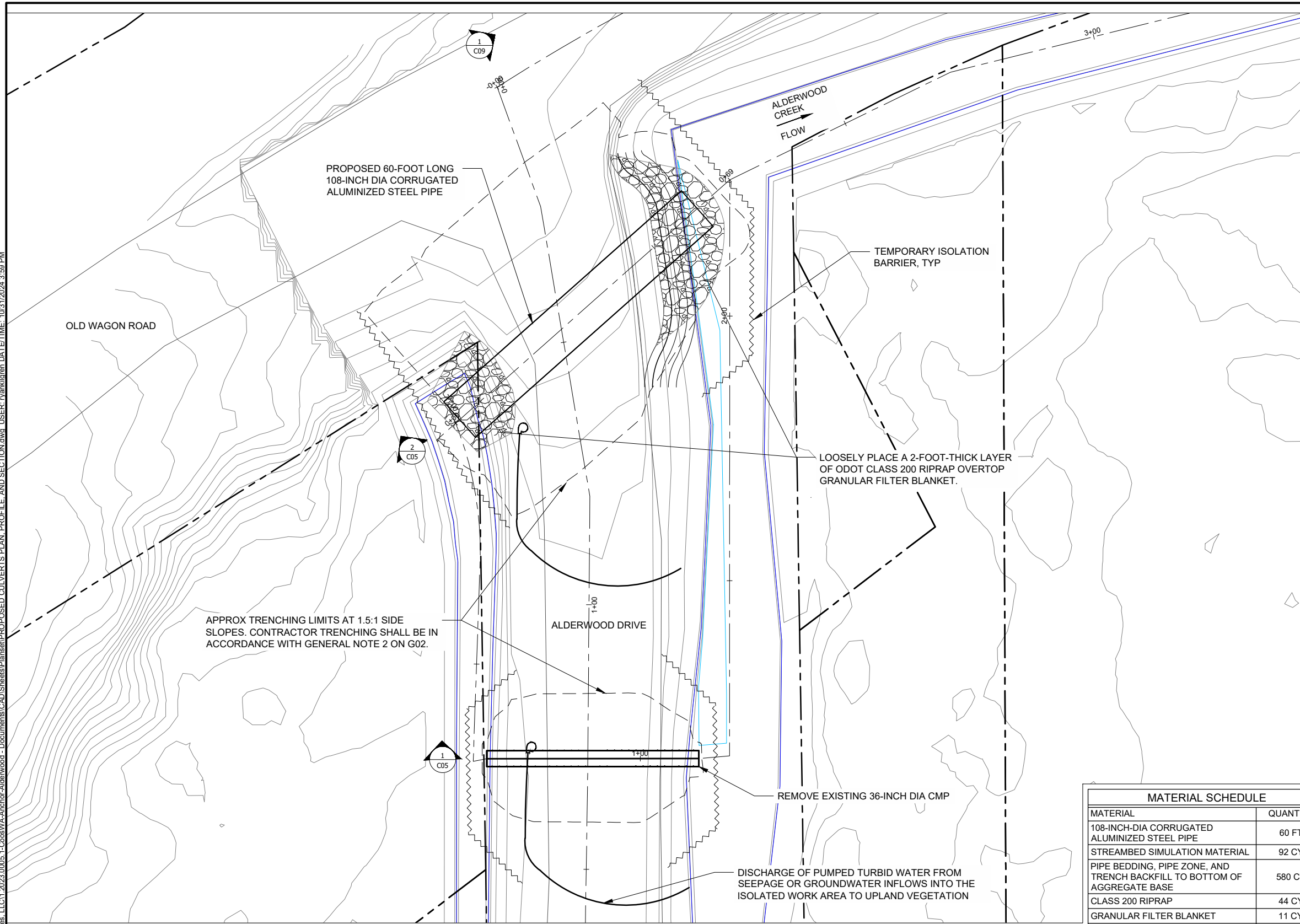
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ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT

EXISTING CONDITIONS - PLAN

DRAWING NO.
C02
SHEET NO.
4
OF
15

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1 ALDERWOOD DRIVE PROPOSED CULVERT - PLAN SCALE: 1:10



GENERAL NOTES

- ACW FOR ALDERWOOD CREEK AT ALDERWOOD DRIVE IS 4.5 FEET, AND IS REPRESENTED AS THE AVERAGE WIDTH BETWEEN THE OHW LINES MEASURED BY COOSWA STAFF AND PER OAR 635-412-005(3). CULVERT SIZING, SLOPE, AND EMBEDDEDNESS IS BASED ON STREAM SIMULATION OPTION DESIGN CONSIDERATIONS OF THE ADJACENT UPSTREAM AND DOWNSTREAM CHANNEL CONDITIONS AND OTHER CRITERIA AS OUTLINED BY OAR 635-412-0035(3)(a).
- CONTRACTOR SHALL LIMIT EARTHWORK TO PERMANENT AND TEMPORARY FEATURES SHOWN ON THE PLANS AND PER DIRECTION OF CAR.
- DISTURBANCE OUTSIDE THE WORK SHOWN SHALL BE MINIMIZED.
- SALVAGE AND STOCKPILE TREES, WOODY VEGETATION, AND TOPSOIL REMOVED DURING CLEARING PER DIRECTION OF CAR. PLACE SALVAGED TOPSOIL AS TOP DRESSING ON FINISHED GRADES TO FACILITATE VEGETATION ESTABLISHMENT. HAUL AND DISPOSE OF EXCESS SALVAGED TREES, WOODY VEGETATION, AND TOPSOIL TO A CAR APPROVED UPLAND OR OFFSITE DISPOSAL FACILITY.
- HAUL AND DISPOSE OF REMOVED EXISTING CULVERTS AT A CAR APPROVED OFFSITE DISPOSAL FACILITY.
- PLACE STREAMBED SIMULATION MATERIAL PER STREAMBED SIMULATION NOTES AND AS SHOWN.
- PREPARE NATIVE SUBGRADE SURFACES BY GRADING TO ACCOMMODATE THE PROPOSED CULVERT, BACKFILL, AND STREAM SIMULATION MATERIALS TO THE LINES AND GRADES SHOWN. COMPACT SUBGRADE SMOOTH. PREPARED SUBGRADE SURFACES SHALL BE FREE FROM MOUNDS, DIPS, CUTS, AND DEBRIS.
- PLACE AND COMPACT PIPE BEDDING AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. GRADE TOP OF PIPE BEDDING TO SUPPORT PROPOSED CULVERT AND ESTABLISH CULVERT GRADE SHOWN.
- PLACE AND COMPACT PIPE ZONE MATERIAL AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. EXERCISE CARE TO FILL AREA AROUND PIPE COMPLETELY WITH PIPE ZONE MATERIAL, AVOIDING POCKETS OR VOIDS. HAND SHOVELING OR SHOVEL SLICING MAY BE NECESSARY TO ENSURE CONTACT OF PIPE ZONE MATERIAL AND CORRUGATIONS OF CULVERT.
- TRENCH BACKFILL SHALL BE 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 WITH LIFT HEIGHTS 3-INCHES MAX TO LEVEL MATCHING ADJACENT AGGREGATE BASE.
- REHABILITATE ROAD TO MATCH EXISTING ROADWAY AT GRADING LIMITS AND PER COOS COUNTY ROAD STANDARDS FOR RURAL LOCAL RESIDENTIAL ROADWAYS SERVING FOUR OR MORE DWELLINGS. CONTRACTOR IS RESPONSIBLE FOR MINIMIZING IMPACTS TO ADJACENT ROADWAY AREAS USED FOR CONSTRUCTION VEHICLE ACCESS AND MATERIAL STAGING. IMPACTS TO ADJACENT ROADWAY SHALL BE ACCESSED BY CAR AND REHABILITATED AT CONTRACTOR COST.
- ESTABLISH PLANTING ZONES FOLLOWING APPROVAL OF CAR AND ENGINEER OF FG.

STREAMBED SIMULATION NOTES

- THE DESIGN INTENT IS TO MIMIC THE NATURAL STREAMBED INSIDE OF THE CULVERT CROSSING TO MEET ODFW FISH PASSAGE RULES SPECIFIED BY OAR 635-412-0035(3)(A). THIS IS ACCOMPLISHED BY EMBEDDING THE BOTTOM OF THE CULVERT BELOW THE NATURAL STREAMBED AND THEN PLACING THE SPECIFIED STREAMBED SIMULATION MATERIAL BACKFILL INSIDE OF THE CULVERT.
- STREAMBED SIMULATION MATERIAL IS COMPRISED OF SALVAGED NATIVE ALLUVIUM EXCAVATED AT AND BELOW THE INVERT ELEVATION OF THE EXISTING CULVERT AND PROPOSED CULVERT LOCATIONS.
- SALVAGED NATIVE ALLUVIUM SHALL BE PLACED WITHIN THE CULVERT TO THE DEPTHS AND GRADES SHOWN.
- AFTER THE STREAMBED SIMULATION MATERIAL IS IN PLACE, THE SURFACE SHALL BE WASHED WITH WATER AND NATIVE FINES TO FILL OPEN VOID SPACES. NATIVE FINES ARE SUFFICIENTLY WASHED INTO THE STREAMBED SIMULATION MATERIAL WHEN WASH-WATER CEASES TO INFILTRATE INTO THE STREAMBED AND IT INSTEAD FLOWS ON THE STREAMBED SURFACE. REPEAT PLACEMENT AND WASHING OF NATIVE FINES UNTIL THIS CONDITION IS ACHIEVED.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE RESTORED STREAMFLOW WITHIN ALDERWOOD CREEK DOES NOT GO SUBSURFACE WITHIN THE STREAMBED SIMULATION MATERIALS PLACED INSIDE OF THE CULVERT FOR A 48-HOUR PERIOD AFTER RE-WATERING.

MATERIAL SCHEDULE	
MATERIAL	QUANTITY
108-INCH-DIA CORRUGATED ALUMINIZED STEEL PIPE	60 FT
STREAMBED SIMULATION MATERIAL	92 CY
PIPE BEDDING, PIPE ZONE, AND TRENCH BACKFILL TO BOTTOM OF AGGREGATE BASE	580 CY
CLASS 200 RIPRAP	44 CY
GRANULAR FILTER BLANKET	11 CY
AGGREGATE BASE	57 CY
MHMAC LEVEL 2, 1/2" DENSE	23 TN

CUT AND FILL SUMMARY		
SITE	CUT (CY)	FILL (CY)
US CHANNEL AND EMBANKMENT GRADING	0	2
DS CHANNEL AND EMBANKMENT GRADING	0	15
TRENCH EXCAVATION TO HAUL FOR DISPOSAL INCLUDING ROAD BASE AND WEARING SURFACE	810	0

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
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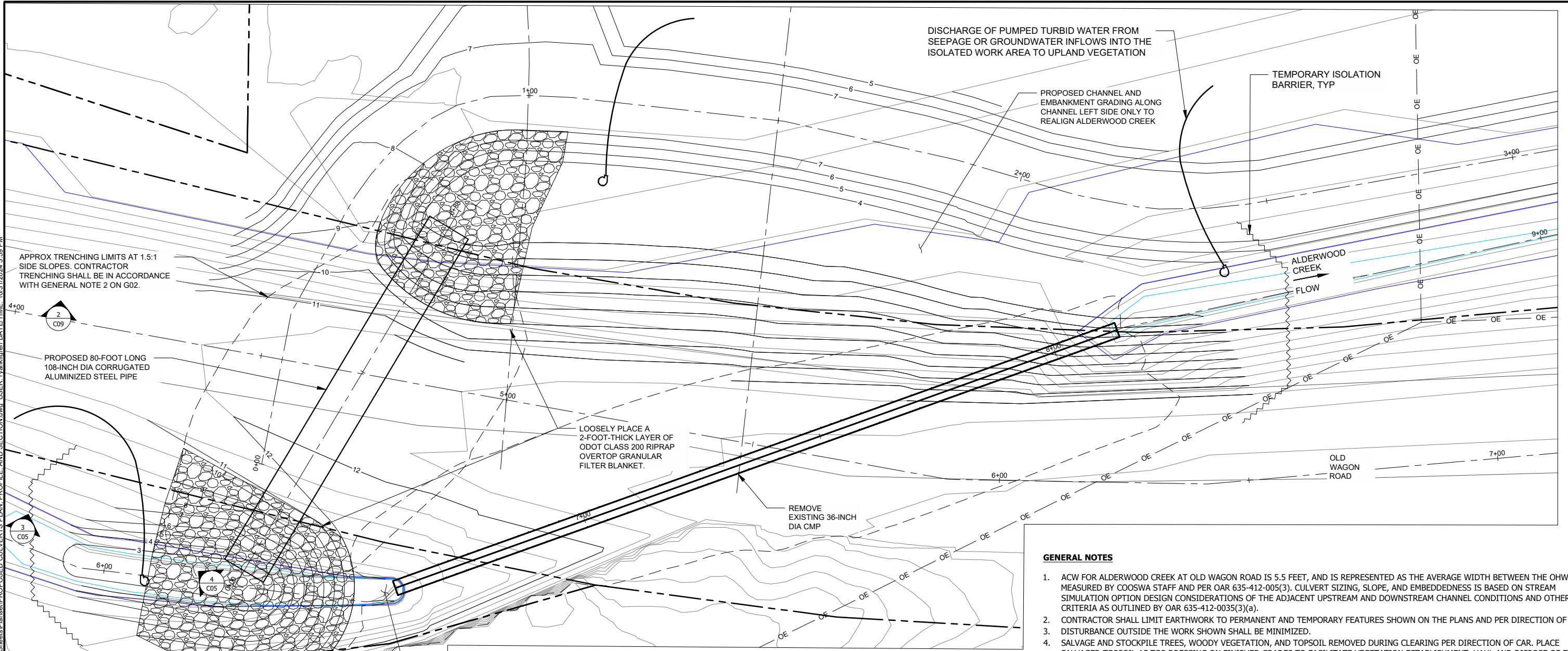


PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
ALDERWOOD DRIVE PROPOSED CULVERT - PLAN

DRAWING NO.
C03
SHEET NO.
5
OF
15

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- GENERAL NOTES**
- ACW FOR ALDERWOOD CREEK AT OLD WAGON ROAD IS 5.5 FEET, AND IS REPRESENTED AS THE AVERAGE WIDTH BETWEEN THE OHW LINES MEASURED BY COOSWA STAFF AND PER OAR 635-412-005(3). CULVERT SIZING, SLOPE, AND EMBEDDEDNESS IS BASED ON STREAM SIMULATION OPTION DESIGN CONSIDERATIONS OF THE ADJACENT UPSTREAM AND DOWNSTREAM CHANNEL CONDITIONS AND OTHER CRITERIA AS OUTLINED BY OAR 635-412-0035(3)(a).
 - CONTRACTOR SHALL LIMIT EARTHWORK TO PERMANENT AND TEMPORARY FEATURES SHOWN ON THE PLANS AND PER DIRECTION OF CAR.
 - DISTURBANCE OUTSIDE THE WORK SHOWN SHALL BE MINIMIZED.
 - SALVAGE AND STOCKPILE TREES, WOODY VEGETATION, AND TOPSOIL REMOVED DURING CLEARING PER DIRECTION OF CAR. PLACE SALVAGED TOPSOIL AS TOP DRESSING ON FINISHED GRADES TO FACILITATE VEGETATION ESTABLISHMENT. HAUL AND DISPOSE OF EXCESS SALVAGED TREES, WOODY VEGETATION, AND TOPSOIL TO A CAR APPROVED UPLAND OR OFFSITE DISPOSAL FACILITY.
 - HAUL AND DISPOSE OF REMOVED EXISTING CULVERTS AT A CAR APPROVED OFFSITE DISPOSAL FACILITY.
 - PLACE STREAMBED SIMULATION MATERIAL PER STREAMBED SIMULATION NOTES AND AS SHOWN.
 - PREPARE NATIVE SUBGRADE SURFACES BY GRADING TO ACCOMMODATE THE PROPOSED CULVERT, BACKFILL, AND STREAM SIMULATION MATERIALS TO THE LINES AND GRADES SHOWN. COMPACT SUBGRADE SMOOTH. PREPARED SUBGRADE SURFACES SHALL BE FREE FROM MOUNDS, DIPS, CUTS, AND DEBRIS.
 - PLACE AND COMPACT PIPE BEDDING AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. GRADE TOP OF PIPE BEDDING TO SUPPORT PROPOSED CULVERT AND ESTABLISH CULVERT GRADE SHOWN.
 - PLACE AND COMPACT PIPE ZONE MATERIAL AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. EXERCISE CARE TO FILL AREA AROUND PIPE COMPLETELY WITH PIPE ZONE MATERIAL, AVOIDING POCKETS OR VOIDS. HAND SHOVELING OR SHOVEL SLICING MAY BE NECESSARY TO ENSURE CONTACT OF PIPE ZONE MATERIAL AND CORRUGATIONS OF CULVERT.
 - TRENCH BACKFILL SHALL BE 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 WITH LIFT HEIGHTS 3-INCHES MAX TO LEVEL MATCHING ADJACENT AGGREGATE BASE.
 - REHABILITATE ROAD TO MATCH EXISTING ROADWAY AT GRADING LIMITS AND PER COOS COUNTY ROAD STANDARDS FOR RURAL LOCAL RESIDENTIAL ROADWAYS SERVING FOUR OR MORE DWELLINGS. CONTRACTOR IS RESPONSIBLE FOR MINIMIZING IMPACTS TO ADJACENT ROADWAY AREAS USED FOR CONSTRUCTION VEHICLE ACCESS AND MATERIAL STAGING. IMPACTS TO ADJACENT ROADWAY SHALL BE ACCESSED BY CAR AND REHABILITATED AT CONTRACTOR COST.
 - ESTABLISH PLANTING ZONES FOLLOWING APPROVAL OF CAR AND ENGINEER OF FG.

- STREAMBED SIMULATION NOTES**
- THE DESIGN INTENT IS TO MIMIC THE NATURAL STREAMBED INSIDE OF THE CULVERT CROSSING TO MEET ODFW FISH PASSAGE RULES SPECIFIED BY OAR 635-412-0035(3)(A). THIS IS ACCOMPLISHED BY EMBEDDING THE BOTTOM OF THE CULVERT BELOW THE NATURAL STREAMBED AND THEN PLACING THE SPECIFIED STREAMBED SIMULATION MATERIAL BACKFILL INSIDE OF THE CULVERT.
 - STREAMBED SIMULATION MATERIAL IS COMPRISED OF SALVAGED NATIVE ALLUVIUM EXCAVATED AT AND BELOW THE INVERT ELEVATION OF THE EXISTING CULVERT AND PROPOSED CULVERT LOCATIONS.
 - SALVAGED NATIVE ALLUVIUM SHALL BE PLACED WITHIN THE CULVERT TO THE DEPTHS AND GRADES SHOWN.
 - AFTER THE STREAMBED SIMULATION MATERIAL IS IN PLACE, THE SURFACE SHALL BE WASHED WITH WATER AND NATIVE FINES TO FILL OPEN VOID SPACES. NATIVE FINES ARE SUFFICIENTLY WASHED INTO THE STREAMBED SIMULATION MATERIAL WHEN WASH-WATER CEASES TO INFILTRATE INTO THE STREAMBED AND IT INSTEAD FLOWS ON THE STREAMBED SURFACE. REPEAT PLACEMENT AND WASHING OF NATIVE FINES UNTIL THIS CONDITION IS ACHIEVED.
 - CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE RESTORED STREAMFLOW WITHIN ALDERWOOD CREEK DOES NOT GO SUBSURFACE WITHIN THE STREAMBED SIMULATION MATERIALS PLACED INSIDE OF THE CULVERT FOR A 48-HOUR PERIOD AFTER RE-WATERING.

1 OLD WAGON ROAD PROPOSED CULVERT - PLAN
SCALE: 1:10



CUT AND FILL SUMMARY		
SITE	CUT (CY)	FILL (CY)
US CHANNEL AND EMBANKMENT GRADING	36	135
DS CHANNEL AND EMBANKMENT GRADING	170	40
TRENCH EXCAVATION TO HAUL FOR DISPOSAL INCLUDING ROAD BASE AND WEARING SURFACE	2016	0

MATERIAL SCHEDULE	
MATERIAL	QUANTITY
108-INCH-DIA CORRUGATED ALUMINIZED STEEL PIPE	80 FT
STREAMBED SIMULATION MATERIAL	123 CY
PIPE BEDDING, PIPE ZONE, AND TRENCH BACKFILL TO BOTTOM OF AGGREGATE BASE	1,655 CY
CLASS 200 RIPRAP	175 CY
GRANULAR FILTER BLANKET	45 CY
AGGREGATE BASE	120 CY
MHMAC LEVEL 2, 1/2" DENSE	48 TN

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023

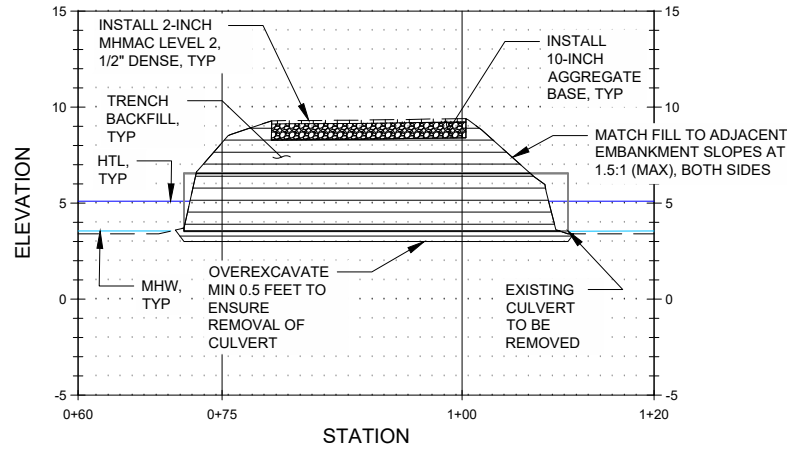


PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

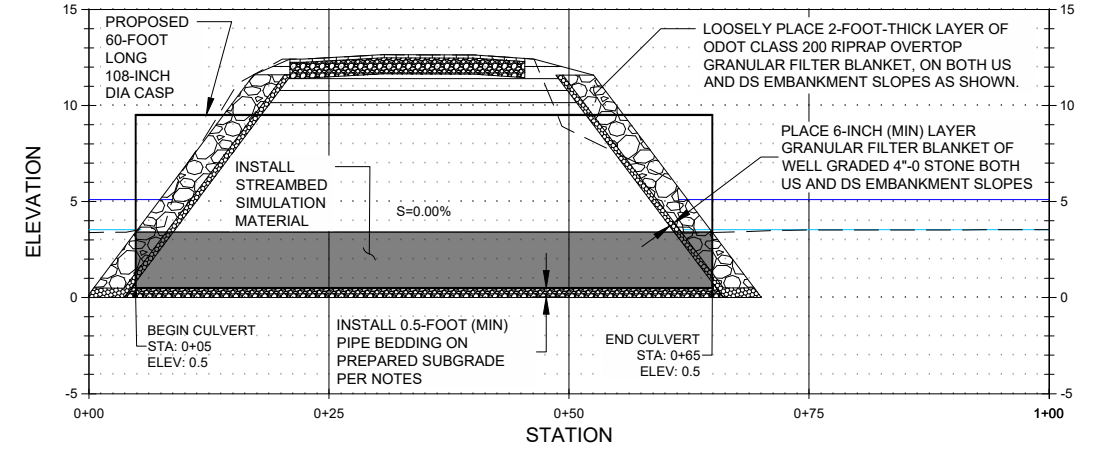
ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
OLD WAGON ROAD PROPOSED CULVERT - PLAN

DRAWING NO.
C04
SHEET NO.
6
OF
15

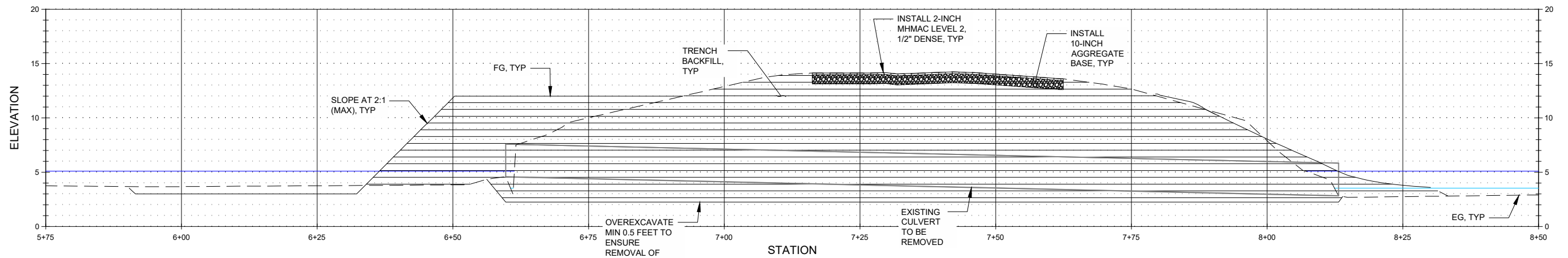
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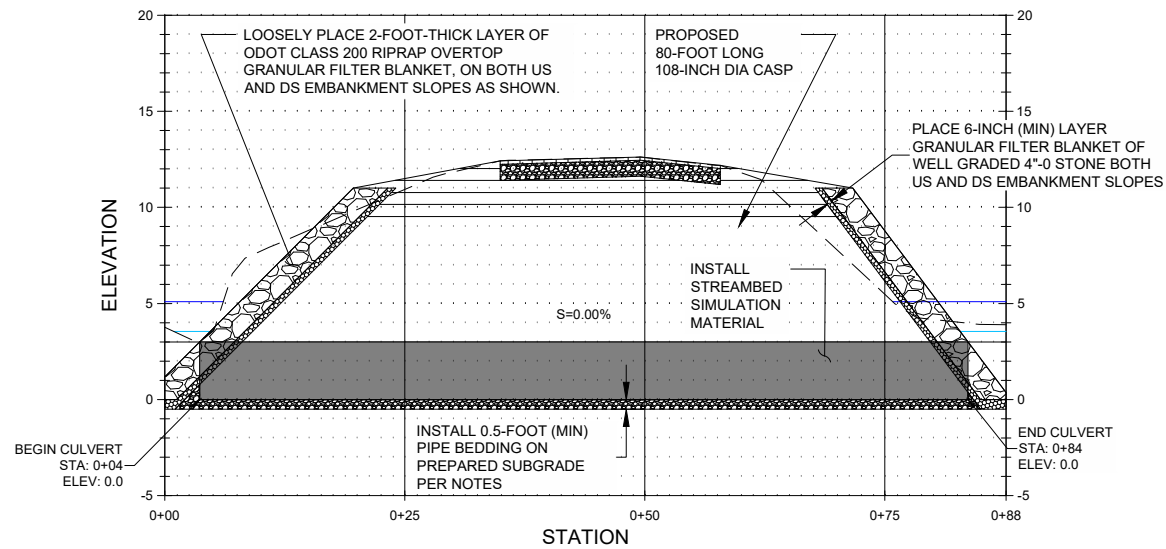
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C03 EXISTING ALDERWOOD CREEK ALIGNMENT AT ALDERWOOD DRIVE EXISTING CULVERT TO REMOVE - PROFILE
Scale: HOZ: 1:10 VERT: 1:5



2
C03 PROPOSED ALDERWOOD CREEK REALIGNMENT AT ALDERWOOD DRIVE PROPOSED CULVERT - PROFILE
Scale: HOZ: 1:10 VERT: 1:5



3
C04 EXISTING ALDERWOOD CREEK ALIGNMENT AT OLD WAGON ROAD EXISTING TO REMOVE - PROFILE
Scale: HOZ: 1:10 VERT: 1:5



4
C04 PROPOSED ALDERWOOD CREEK REALIGNMENT AT OLD WAGON ROAD PROPOSED CULVERT - PROFILE
Scale: HOZ: 1:10 VERT: 1:5

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023

COOS
Watershed
Association
Improving the Health of Our Watershed
COOS WATERSHED ASSOCIATION
P.O. BOX 388
COOS BAY, OR 97420
PHONE: 541-888-5922

REGISTERED PROFESSIONAL
ENGINEER
83634PE
OREGON
June 2, 2010
RYAN WESLEY KILGREN
RENEWS: 6/30/2025

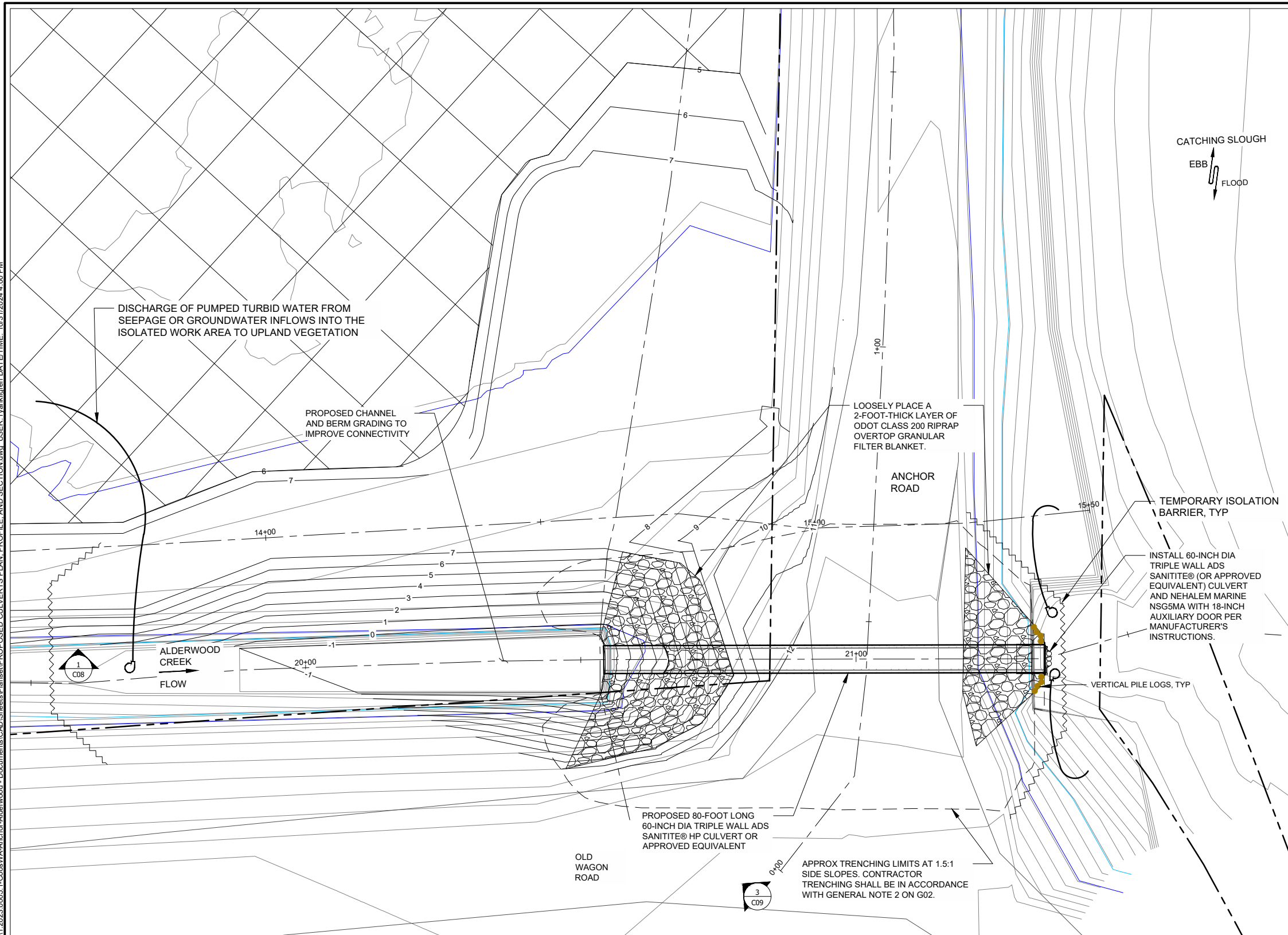
PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
ALDERWOOD CREEK AT ALDERWOOD DRIVE
AND OLD WAGON ROAD
EXISTING AND PROPOSED CULVERT - PROFILES

DRAWING NO.
C05
SHEET NO.
7
OF
15



FILE: C:\Users\rvankilgren\OneDrive\Work\Projects\1.2023.0005_1_CoosWA_Anchor\Anchor-Alderwood - Documents\CAD\Sheets\Proposed\Culverts\PLAN_PROFILE_AND_SECTION.dwg USER: rvankilgren DATE/TIME: 10/31/2024 4:00 PM



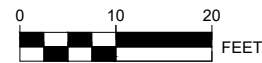
CUT AND FILL SUMMARY		
SITE	CUT (CY)	FILL (CY)
US CHANNEL AND BERM GRADING	230	130
DS CHANNEL AND EMBANKMENT GRADING	0	2
TRENCH EXCAVATION TO HAUL FOR DISPOSAL INCLUDING ROAD AGGREGATE	970	0

MATERIAL SCHEDULE	
MATERIAL	QUANTITY
60-INCH DIA TRIPLE WALL ADS SANITITE® HP PIPE (OR APPROVED EQUIVALENT)	80 FT
NEHALEM MARINE NSG5MA WITH 18-INCH AUXILIARY DOOR AND PIPE SLEEVE (OR APPROVED EQUIVALENT)	1
PIPE BEDDING, PIPE ZONE, AND TRENCH BACKFILL TO BOTTOM OF AGGREGATE BASE	805 CY
CLASS 200 RIPRAP	75 CY
GRANULAR FILTER BLANKET	20 CY
AGGREGATE BASE	51 CY
VERTICAL PILE LOGS, 12-INCH DIA (MIN) AND 20-FOOT LONG (MIN)	8

GENERAL NOTES

1. THE ACW FOR ALDERWOOD CREEK AT THE ANCHOR ROAD CULVERT 1 IS HEAVILY ALTERED FROM LAND MANAGEMENT ACTIONS. THEREFORE, THE PRELIMINARY REPLACEMENT CULVERT AND TIDEGATE SIZE AND INVERT ELEVATION WERE DETERMINED USING A COMBINATION OF RESULTS FROM THE OREGON TIDE GATE PARTNERSHIP TIDE GATE PIPE SIZING TOOL, WHICH WAS DEVELOPED TO SUPPORT COMPLIANCE WITH OAR 635-412-0035(4), AND INPUT FROM LANDOWNER AND ODFW INPUT. FOR FURTHER COMPLIANCE WITH OAR 635-412-0035(4), THE TIDEGATE SHALL BE LIGHTWEIGHT, SIDE HINGED, AND INCLUDE MITTIGATOR FLOATS AND AN AUXILIARY GATE TO PROVIDE IMPROVED CONNECTIVITY AND PASSAGE OPPORTUNITIES, AS WELL AS ADAPTIVE MANAGEMENT FOR VARIABLE HYDROLOGIC CONDITIONS AND LANDOWNER NEEDS.
2. CONTRACTOR SHALL LIMIT EARTHWORK TO PERMANENT AND TEMPORARY FEATURES SHOWN ON THE PLANS AND PER DIRECTION OF CAR.
3. DISTURBANCE OUTSIDE THE WORK SHOWN SHALL BE MINIMIZED.
4. SALVAGE AND STOCKPILE TREES, WOODY VEGETATION, AND TOPSOIL REMOVED DURING CLEARING PER DIRECTION OF CAR. PLACE SALVAGED TOPSOIL AS TOP DRESSING ON FINISHED GRADES TO FACILITATE VEGETATION ESTABLISHMENT. HAUL AND DISPOSE OF EXCESS SALVAGED TREES, WOODY VEGETATION, AND TOPSOIL TO A CAR APPROVED UPLAND OR OFFSITE DISPOSAL FACILITY.
5. HAUL AND DISPOSE OF REMOVED EXISTING CULVERT AND TIDEGATE AT A CAR APPROVED OFFSITE DISPOSAL FACILITY.
6. NO STREAMBED SIMULATION MATERIAL TO BE PLACED IN TIDEGATED CULVERT.
7. PREPARE NATIVE SUBGRADE SURFACES BY GRADING TO ACCOMMODATE THE PROPOSED CULVERT AND BACKFILL MATERIALS TO THE LINES AND GRADES SHOWN. COMPACT SUBGRADE SMOOTH. PREPARED SUBGRADE SURFACES SHALL BE FREE FROM MOUNDS, DIPS, CUTS, AND DEBRIS.
8. PLACE AND COMPACT PIPE BEDDING AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. GRADE TOP OF PIPE BEDDING TO SUPPORT PROPOSED CULVERT AND ESTABLISH CULVERT GRADE SHOWN.
9. PLACE AND COMPACT PIPE ZONE MATERIAL AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. EXERCISE CARE TO FILL AREA AROUND PIPE COMPLETELY WITH PIPE ZONE MATERIAL, AVOIDING POCKETS OR VOIDS. HAND SHOVELING OR SHOVEL SLICING MAY BE NECESSARY TO ENSURE CONTACT OF PIPE ZONE MATERIAL AND CORRUGATIONS OF CULVERT.
10. TRENCH BACKFILL SHALL BE 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 WITH LIFT HEIGHTS 3-INCHES MAX TO LEVEL MATCHING ADJACENT AGGREGATE BASE.
11. REHABILITATE ROAD TO MATCH EXISTING ROADWAY AT GRADING LIMITS AND PER COOS COUNTY ROAD STANDARDS FOR RURAL LOCAL RESIDENTIAL ROADWAYS SERVING FOUR OR MORE DWELLINGS. CONTRACTOR IS RESPONSIBLE FOR MINIMIZING IMPACTS TO ADJACENT ROADWAY AREAS USED FOR CONSTRUCTION VEHICLE ACCESS AND MATERIAL STAGING. IMPACTS TO ADJACENT ROADWAY SHALL BE ACCESSED BY CAR AND REHABILITATED AT CONTRACTOR COST.
12. ESTABLISH PLANTING ZONES FOLLOWING APPROVAL OF CAR AND ENGINEER OF FG.

1 ANCHOR ROAD PROPOSED CULVERT 1 - PLAN
SCALE: 1:10



NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023

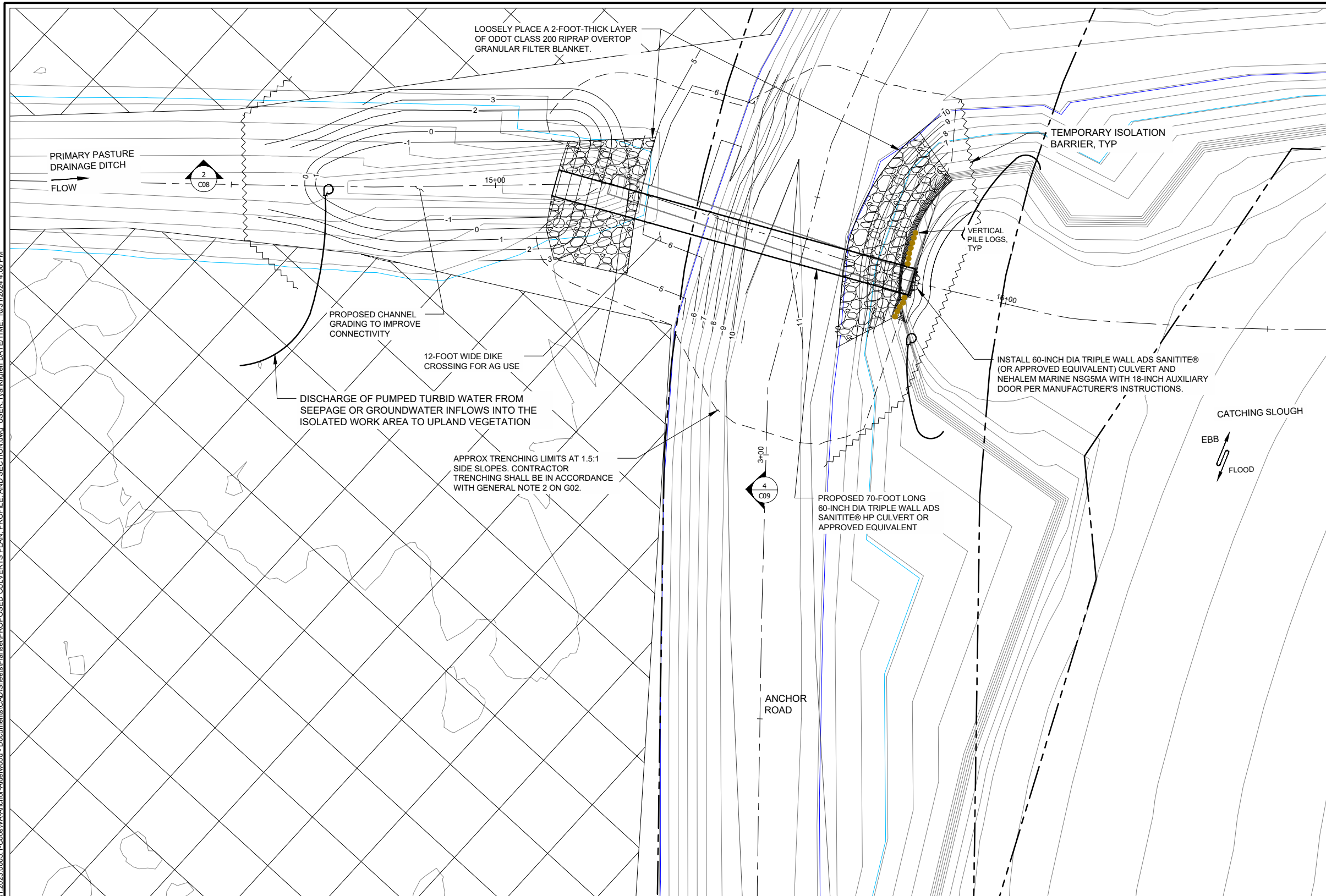


PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
ANCHOR ROAD PROPOSED CULVERT 1 - PLAN

DRAWING NO.
C06
SHEET NO.
8
OF
15

FILE: C:\Users\rvankilgren\Kilgren Water Resources, LLC\1.2023.0005.1-CoosWA-Alderwood - Documents\CAD\Sheets\Plans\PROPOSED CULVERTS PLAN_PROFILE AND SECTION.dwg USER: rvankilgren DATE/TIME: 10/31/2024 4:00 PM



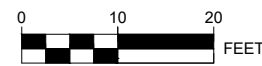
CUT AND FILL SUMMARY		
SITE	CUT (CY)	FILL (CY)
US CHANNEL	115	0
DIKE CROSSING FOR AG USE	0	55
DS CHANNEL AND EMBANKMENT GRADING	0	2
TRENCH EXCAVATION TO HAUL FOR DISPOSAL INCLUDING ROAD AGGREGATE	875	0

MATERIAL SCHEDULE	
MATERIAL	QUANTITY
60-INCH DIA TRIPLE WALL ADS SANITITE® HP PIPE (OR APPROVED EQUIVALENT)	70 FT
NEHALEM MARINE NSG5MA WITH 18-INCH AUXILIARY DOOR AND PIPE SLEEVE (OR APPROVED EQUIVALENT)	1
PIPE BEDDING, PIPE ZONE, AND TRENCH BACKFILL TO BOTTOM OF AGGREGATE BASE	770 CY
CLASS 200 RIPRAP	60 CY
GRANULAR FILTER BLANKET	15 CY
AGGREGATE BASE	20 CY
VERTICAL PILE LOGS, 12-INCH DIA (MIN) AND 20-FOOT LONG (MIN)	12

GENERAL NOTES

1. THE ACW FOR THE PRIMARY PASTURE DRAINAGE DITCH AT THE ANCHOR ROAD CULVERT 2 IS HEAVILY ALTERED FROM LAND MANAGEMENT ACTIONS. THEREFORE, THE PRELIMINARY REPLACEMENT CULVERT AND TIDEGATE SIZE AND INVERT ELEVATION WERE DETERMINED USING A COMBINATION OF RESULTS FROM THE OREGON TIDE GATE PARTNERSHIP TIDE GATE PIPE SIZING TOOL, WHICH WAS DEVELOPED TO SUPPORT COMPLIANCE WITH OAR 635-412-0035(4), AND INPUT FROM LANDOWNER AND ODFW INPUT. FOR FURTHER COMPLIANCE WITH OAR 635-412-0035(4), THE TIDEGATE SHALL BE LIGHTWEIGHT, SIDE HINGED, AND INCLUDE MITIGATOR FLOATS AND AN AUXILIARY GATE TO PROVIDE IMPROVED CONNECTIVITY AND PASSAGE OPPORTUNITIES, AS WELL AS ADAPTIVE MANAGEMENT FOR VARIABLE HYDROLOGIC CONDITIONS AND LANDOWNER NEEDS.
2. CONTRACTOR SHALL LIMIT EARTHWORK TO PERMANENT AND TEMPORARY FEATURES SHOWN ON THE PLANS AND PER DIRECTION OF CAR.
3. DISTURBANCE OUTSIDE THE WORK SHOWN SHALL BE MINIMIZED.
4. SALVAGE AND STOCKPILE TREES, WOODY VEGETATION, AND TOPSOIL REMOVED DURING CLEARING PER DIRECTION OF CAR. PLACE SALVAGED TOPSOIL AS TOP DRESSING ON FINISHED GRADES TO FACILITATE VEGETATION ESTABLISHMENT. HAUL AND DISPOSE OF EXCESS SALVAGED TREES, WOODY VEGETATION, AND TOPSOIL TO A CAR APPROVED UPLAND OR OFFSITE DISPOSAL FACILITY.
5. HAUL AND DISPOSE OF REMOVED EXISTING CULVERT AND TIDEGATE AT A CAR APPROVED OFFSITE DISPOSAL FACILITY.
6. NO STREAMBED SIMULATION MATERIAL TO BE PLACED IN TIDEGATED CULVERT.
7. PREPARE NATIVE SUBGRADE SURFACES BY GRADING TO ACCOMMODATE THE PROPOSED CULVERT AND BACKFILL MATERIALS TO THE LINES AND GRADES SHOWN. COMPACT SUBGRADE SMOOTH. PREPARED SUBGRADE SURFACES SHALL BE FREE FROM MOUNDS, DIPS, CUTS, AND DEBRIS.
8. PLACE AND COMPACT PIPE BEDDING AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. GRADE TOP OF PIPE BEDDING TO SUPPORT PROPOSED CULVERT AND ESTABLISH CULVERT GRADE SHOWN.
9. PLACE AND COMPACT PIPE ZONE MATERIAL AS 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 TO THE LAYER THICKNESS SHOWN WITH LIFT HEIGHTS 3-INCHES MAX. EXERCISE CARE TO FILL AREA AROUND PIPE COMPLETELY WITH PIPE ZONE MATERIAL, AVOIDING POCKETS OR VOIDS. HAND SHOVELING OR SHOVEL SLICING MAY BE NECESSARY TO ENSURE CONTACT OF PIPE ZONE MATERIAL AND CORRUGATIONS OF CULVERT.
10. TRENCH BACKFILL SHALL BE 3/4-INCH MINUS MEETING ODOT STD SPEC 2630.10 WITH LIFT HEIGHTS 3-INCHES MAX TO LEVEL MATCHING ADJACENT AGGREGATE BASE.
11. REHABILITATE ROAD TO MATCH EXISTING ROADWAY AT GRADING LIMITS AND PER COOS COUNTY ROAD STANDARDS FOR RURAL LOCAL RESIDENTIAL ROADWAYS SERVING FOUR OR MORE DWELLINGS. CONTRACTOR IS RESPONSIBLE FOR MINIMIZING IMPACTS TO ADJACENT ROADWAY AREAS USED FOR CONSTRUCTION VEHICLE ACCESS AND MATERIAL STAGING. IMPACTS TO ADJACENT ROADWAY SHALL BE ACCESSED BY CAR AND REHABILITATED AT CONTRACTOR COST.
12. ESTABLISH PLANTING ZONES FOLLOWING APPROVAL OF CAR AND ENGINEER OF FG.

1 ANCHOR ROAD PROPOSED CULVERT 2 - PLAN
SCALE: 1:10



NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023

COOS Watershed Association
Improving the Health of Our Watershed
COOS WATERSHED ASSOCIATION
P.O. BOX 388
COOS BAY, OR 97420
PHONE: 541-888-5922

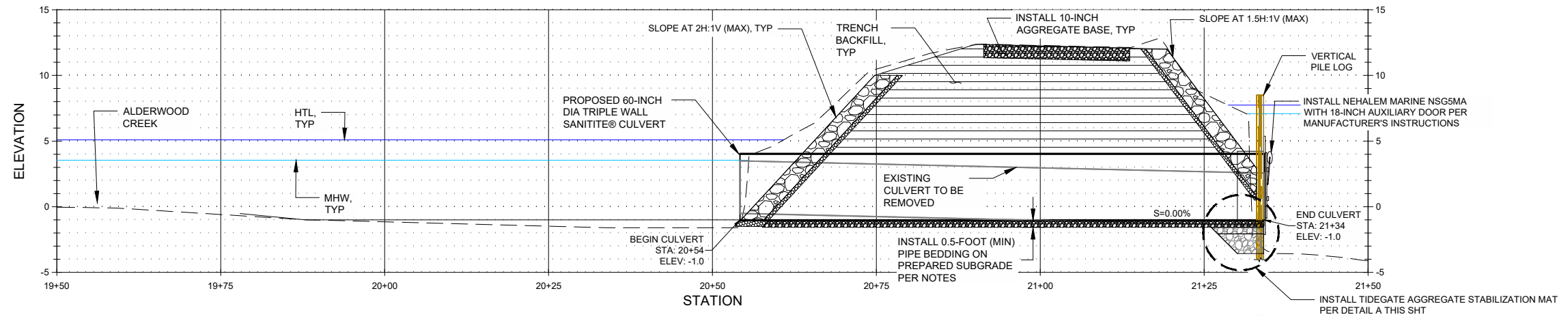


PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

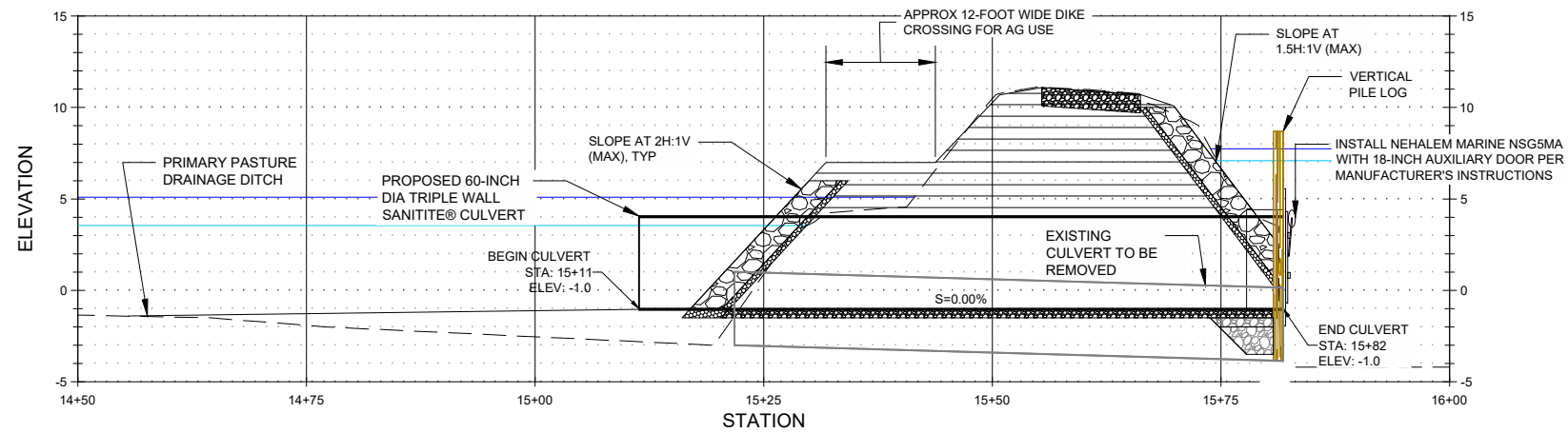
ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
ANCHOR ROAD PROPOSED CULVERT 2 - PLAN

DRAWING NO.
C07
SHEET NO.
9
OF
15

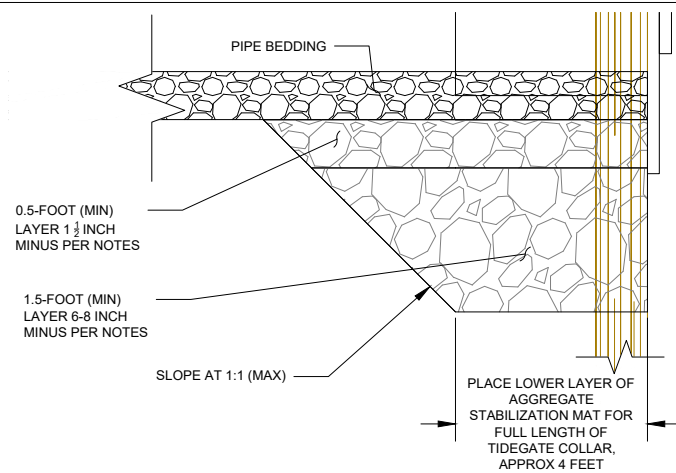
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1
C06 ALDERWOOD CREEK ALIGNMENT AT ANCHOR ROAD CULVERT 1 - PROFILE
Scale: HOZ: 1:10 VERT: 1:5



2
C07 PRIMARY PASTURE DRAINAGE DITCH ALIGNMENT AT ANCHOR ROAD CULVERT 2 - PROFILE
Scale: HOZ: 1:10 VERT: 1:5



A
TYPICAL TIDEGATE AGGREGATE STABILIZATION MAT DETAILS
Scale: HOZ: 1:2 VERT: 1:1

TIDEGATE AGGREGATE STABILIZATION MAT CONSTRUCTION NOTES

1. PREPARE NATIVE SUBGRADE SURFACES BY GRADING TO ACCOMMODATE TIDEGATE AGGREGATE STABILIZATION MAT MATERIAL PLACEMENT TO THE LINES AND GRADES SHOWN. SMOOTH AND LEVEL SUBGRADE SURFACE. PREPARED SUBGRADE SURFACES SHALL BE FREE OF MOUNDS, DIPS, CUTS, AND DEBRIS.
2. THE PIPE BEDDING MATERIAL AT THE OUTLET OF THE TIDEGATED CULVERTS BEARS ON AGGREGATE STABILIZATION MATS COMPRISED OF TWO AGGREGATE MATERIAL LAYERS CONFINED WITHIN NATIVE SOILS.
3. PLACE AND COMPACT 6-8" MINUS IN MINIMUM 2 LIFTS, WITH LIFT HEIGHTS 9" MAX.
4. PLACE AND COMPACT 1 1/2" MINUS, MEETING ODOT STD SPEC 02630.10, IN MINIMUM 2 LIFTS, WITH LIFT HEIGHTS 3" MAX. GRADE AND SMOOTH UPPER LIFT FINISHED SURFACE TO ENSURE PLACEMENT OF PIPE BEDDING AT CULVERT SLOPE SHOWN.
5. MAKE 3 PASSES WITH A VIBRATORY COMPACTOR OVER EACH PLACED AGGREGATE LIFT. IF FINES ARE ABSENT OR VOIDS ARE OBSERVED IN THE COMPACTED LIFT, WASH NATIVE FINES INTO LIFT TO FILL VOID SPACE AND MAKE AN ADDITIONAL 3 PASSES WITH A VIBRATORY COMPACTOR.

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023

COOS
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Association
Improving the Health of Our Watershed
COOS WATERSHED ASSOCIATION
P.O. BOX 388
COOS BAY, OR 97420
PHONE: 541-888-5922



PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

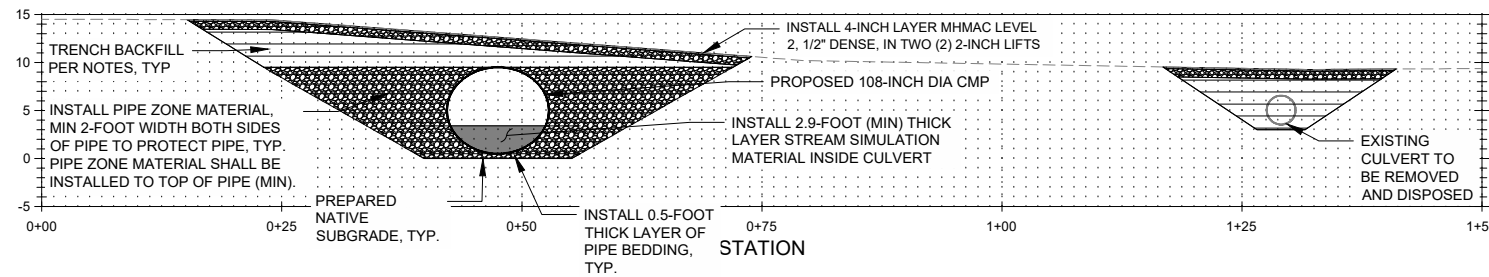
ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT

ALDERWOOD CREEK AT ANCHOR ROAD AND PRIMARY
PASTURE DRAINAGE DITCH AT ANCHOR ROAD
EXISTING AND PROPOSED CULVERT - PROFILES

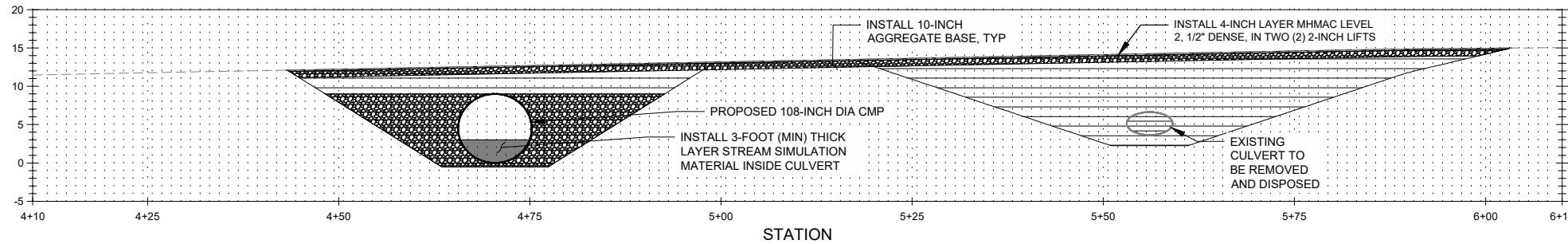
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C08
SHEET NO.
10
OF
15



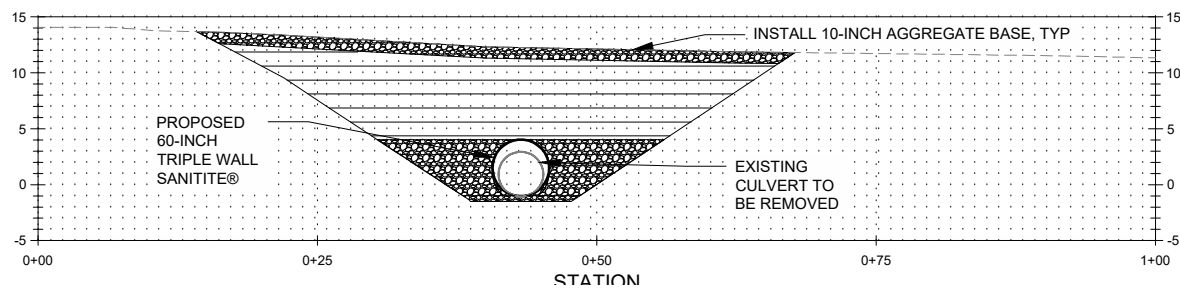
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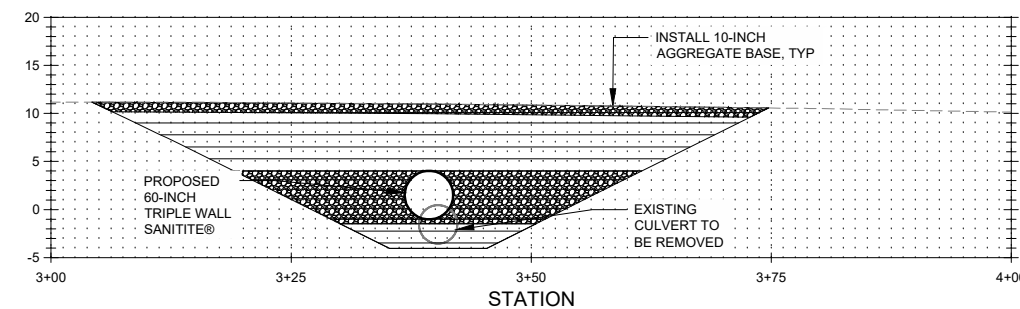
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C03 ALDERWOOD DRIVE AT PROPOSED AND EXISTING CULVERTS - PROFILE
Scale: HOZ: 1:10 VERT: 1:10



2
C04 OLD WAGON ROAD AT PROPOSED AND EXISTING CULVERTS - PROFILE
Scale: HOZ: 1:10 VERT: 1:10



3
C06 ANCHOR ROAD AT CULVERT 1 - PROFILE
Scale: HOZ: 1:10 VERT: 1:10



4
C07 ANCHOR ROAD AT CULVERT 2 - PROFILE
Scale: HOZ: 1:10 VERT: 1:10

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
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COOS Watershed Association
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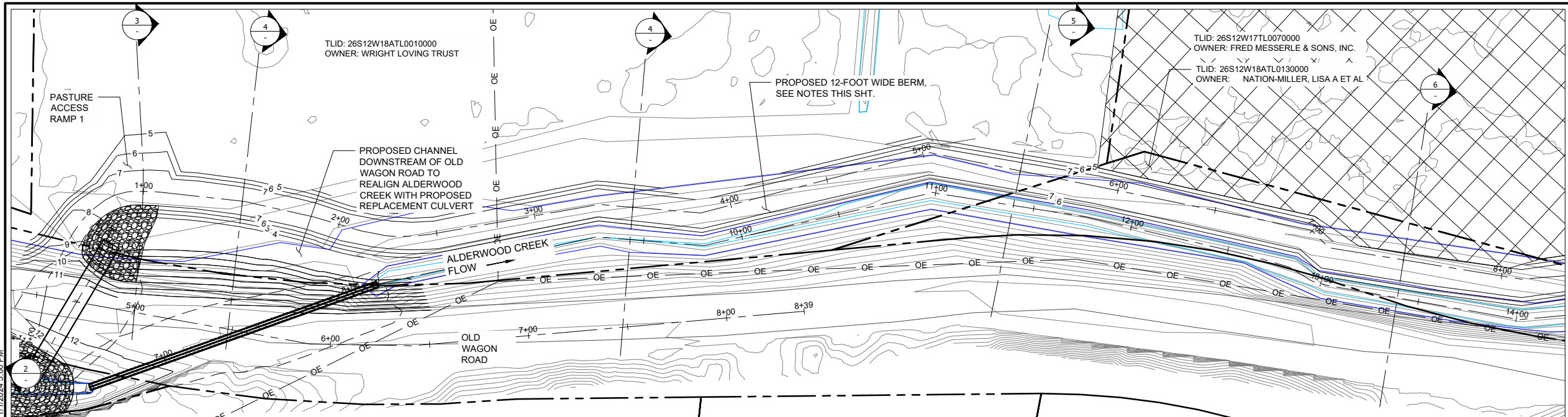
REGISTERED PROFESSIONAL ENGINEER
83634PE
OREGON
June 2, 2010
RYAN WESLEY KILGREN
RENEWS: 6/30/2025

PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
ALDERWOOD ROAD, OLD WAGON ROAD, AND ANCHOR ROAD
EXISTING AND PROPOSED CULVERT - PROFILES

DRAWING NO.
C09
SHEET NO.
11
OF
15

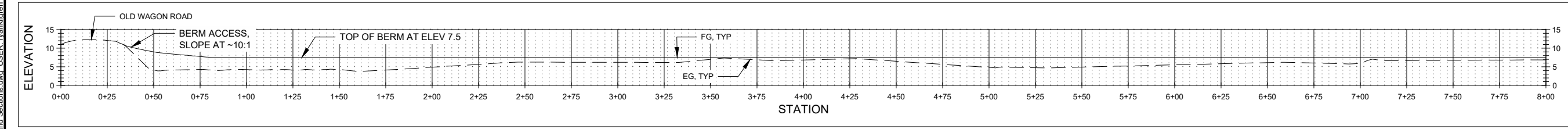




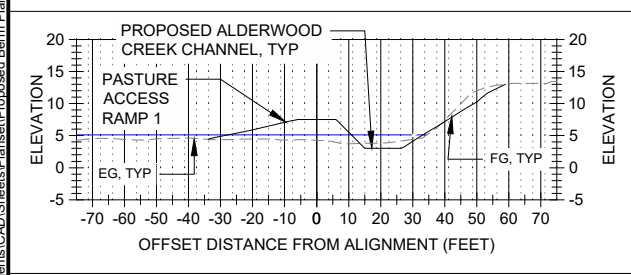
- GENERAL NOTES**
1. CONTRACTOR SHALL LIMIT EARTHWORK TO PERMANENT AND TEMPORARY FEATURES SHOWN ON THE PLANS AND PER DIRECTION OF CAR.
 2. DISTURBANCE OUTSIDE THE WORK SHOWN SHALL BE MINIMIZED.
 3. SALVAGE AND STOCKPILE TREES, WOODY VEGETATION, AND TOPSOIL REMOVED DURING CLEARING PER DIRECTION OF CAR. PLACE SALVAGED TOPSOIL AS TOP DRESSING ON FINISHED GRADES TO FACILITATE VEGETATION ESTABLISHMENT. HAUL AND DISPOSE OF EXCESS SALVAGED TREES, WOODY VEGETATION, AND TOPSOIL TO A CAR APPROVED UPLAND OR OFFSITE DISPOSAL FACILITY.
 4. EXCESS CUT MATERIAL MAY BE THIN SPREAD ALONG EXISTING BERM TOPS AND LANDWARD SIDE SLOPES TO REHABILITATE SURFACE DEFORMITIES AND AS OTHERWISE DIRECTED BY CAR. THIN SPREAD MATERIAL SHALL BE PLACED IN A SINGLE UNCOMPACTED LIFT WITH A LAYER HEIGHT NOT TO EXCEED 3 INCHES. TRACK WALK THIN SPREAD MATERIAL AND APPLY PERMANENT EROSION CONTROL SEEDING AND PLANTING PER CAR. SEE SHT C12 FOR APPROX THIN SPREAD AREAS TO BE DELINEATED BY CAR.
 5. ESTABLISH PLANTING ZONES FOLLOWING APPROVAL OF CAR AND ENGINEER OF FG.
 6. SEED BERM TOP AND SIDES PER CAR.

CUT AND FILL SUMMARY		
SITE	CUT (CY)	FILL (CY)
BERM, CONTINUED ON SHT C11	50	1570
PASTURE ACCESS RAMP 1	0	45

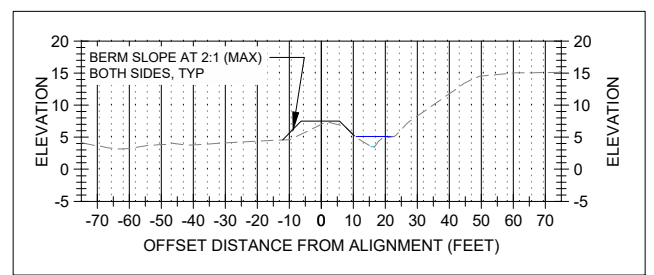
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SCALE: 1:30



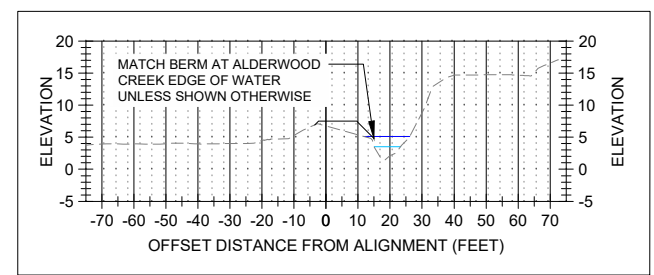
2 ALDERWOOD CREEK BERM STA 0+00 TO 8+00 - PROFILE
Scale: HOZ: 1:30 VERT: 1:15



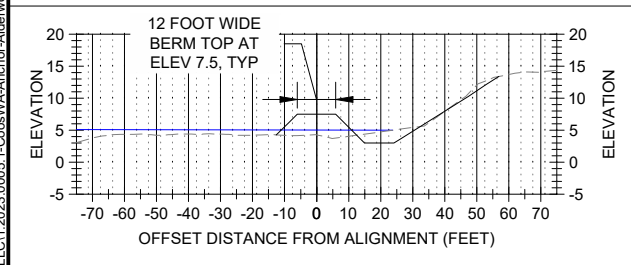
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Scale: HOZ: 1:30 VERT: 1:15



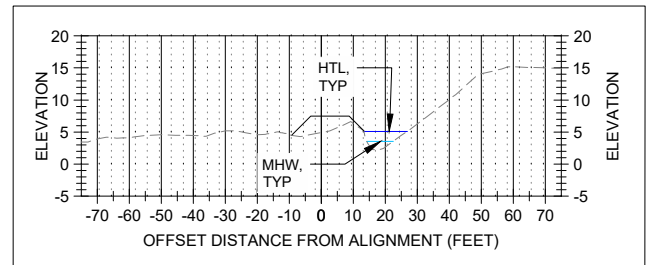
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Scale: HOZ: 1:30 VERT: 1:15



6 ALDERWOOD CREEK BERM STA 7+50 - SECTION
Scale: HOZ: 1:30 VERT: 1:15



4 ALDERWOOD CREEK BERM STA 1+50 - SECTION
Scale: HOZ: 1:30 VERT: 1:15



6 ALDERWOOD CREEK BERM STA 5+50 - SECTION
Scale: HOZ: 1:30 VERT: 1:15

BERM CONSTRUCTION NOTES

1. BERM FILL MATERIAL SHALL BE FROM EXCESS CUT MATERIAL FROM CULVERT REMOVAL AND INSTALLATION, CHANNEL EXCAVATION, AND REHABILITATION OF THE EXISTING BERM AT AND ABOVE THE ALDERWOOD CREEK EDGE OF WATER.
2. BERM FILL MATERIAL SHALL BE MOISTURE CONDITIONED AS CLOSE TO OPTIMUM MOISTURE CONTENT AS PRACTICABLE. EXCAVATED MATERIALS SELECTED FOR BERM FILL SHALL BE PLACED IN TEMPORARY STOCKPILES THAT ARE SUBSEQUENTLY DISC HARROWED AND AIR DRIED FOR APPROX TWO (2) WEEKS PRIOR TO PLACEMENT AS BERM FILL. THE ACTUAL DRYING TIME FOR DISCED SOILS SHALL BE DETERMINED DURING CONSTRUCTION, AND SHALL BE SUFFICIENT SUCH THAT THE DRIED MATERIAL CAN BEAR THE WEIGHT OF TRACKED OR RUBBER Tired EQUIPMENT. ADDITIONAL DISCING MAY BE NECESSARY FOR OVERLY WET MATERIALS TO IMPROVE AERATION AND ACCELERATE DRYING. OPTIMUM MOISTURE CONTENT MAY BE FIELD ESTIMATED BY ROLLING PREVIOUSLY AERATED SOIL INTO A CYLINDRICAL THREAD APPROXIMATELY 2-INCHES LONG BY 0.1 INCHES IN DIAMETER, AND THEN BENDING THE SOIL THREAD UNTIL THE POINT OF CRACKING OR BREAKING. ROLLED COHESIVE SOIL THAT IS NEAR OPTIMUM MOISTURE CONTENT WILL TEND TO BREAK UNIFORMLY WITHIN THE CENTRAL THIRD, OR MIDDLE, OF THE THREAD, AND NOT CRACK OUTSIDE OF THE CENTRAL THIRD OR OTHERWISE STRETCH IN AN UNBROKEN STATE.
3. EXISTING VEGETATION AROUND TEMPORARY STOCKPILES IS ASSUMED TO PROVIDE SUFFICIENT RUNOFF FLOW DISPERSION TO MITIGATE EROSION AND SEDIMENTATION, HOWEVER CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT SILT LADEN RUNOFF FROM THE TEMPORARY STOCKPILES DOES NOT LEAVE THE SITE OR IMPACT WATERS OF THE STATE. IF EROSION AND SEDIMENTATION ISSUES ARISE, THE CONTRACTOR MAY NEED TO USE ADDITIONAL CONTROL MEASURES AND ESC BMPs, SUCH AS BY INSTALLING TEMPORARY SEDIMENT BARRIER TYPE 3 PER ODOT STD DWG RD1030 OR TEMPORARY SILT FENCE PER ODOT STD DWG RD1040.
4. REMOVE TREE STUMPS AND ROOT MASSES TO THE EXTENT PRACTICABLE WITHIN THE BERM FOOTPRINT TO MINIMIZE FUTURE DEVELOPMENT OF SLUMPING AND PREFERENTIAL FLOW PATHS DUE TO DETERIORATION OF SUBSURFACE WOODY MATERIALS.
5. PLACE BERM FILL IN 6-INCH (MAX) LIFTS OF LOOSE MATERIAL. COMPACT THE ENTIRE SURFACE OF EACH LIFT WITH A SHEEPS FOOT, PAD FOOT, OR TAMPING ROLLER WITH A MINIMUM OF THREE (3) COVERAGES. EACH LIFT IS SUFFICIENTLY COMPACTED WHEN THE ROLLER'S LUGS WALK OUT OF THE COMPACTED SOIL AS VISUALLY CONFIRMED BY THE CAR. REPEAT LIFT PLACEMENT AND COMPACTION UNTIL BERM FINAL GRADE SHOWN IS ACHIEVED.

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023

COOS Watershed Association
Improving the Health of Our Watershed
COOS WATERSHED ASSOCIATION
P.O. BOX 388
COOS BAY, OR 97420
PHONE: 541-888-5922



PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
NPS, RWK

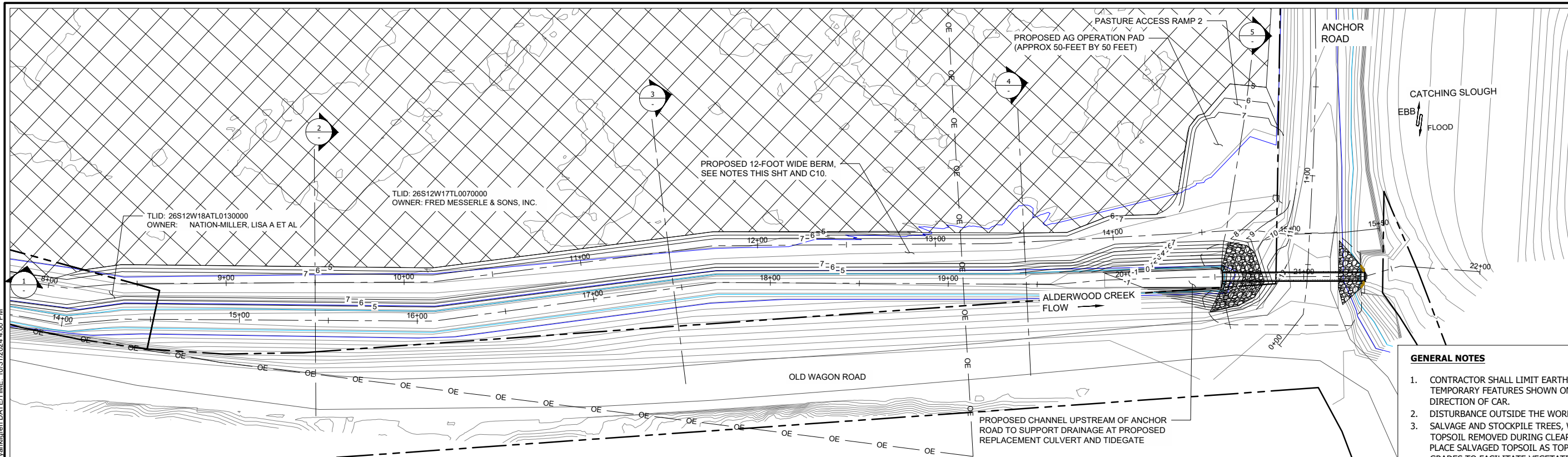
ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
ALDERWOOD CREEK BERM STA 0+00 TO 8+00
PLAN, PROFILE, AND SECTIONS

DRAWING NO.
C10
SHEET NO.
12
OF
15

FILE: C:\Users\rvankilgren\Kilgren Water Resources\LLC\1.2023.0005.1\CoosWA\Anchor-Alderwood - Documents\CAD\Sheets\Proposed BERM Plan, Profile, and Sections.dwg USER: rvankilgren DATE/TIME: 11/11/2024 5:00 PM



FILE: C:\Users\rvankilgren\OneDrive - CoosWA\Anchor-Alderwood - Documents\CAD\Sheets\Plans\Proposed Berm Plan, Profile, and Sections.dwg USER: rvankilgren DATE/TIME: 10/31/2024 4:00 PM

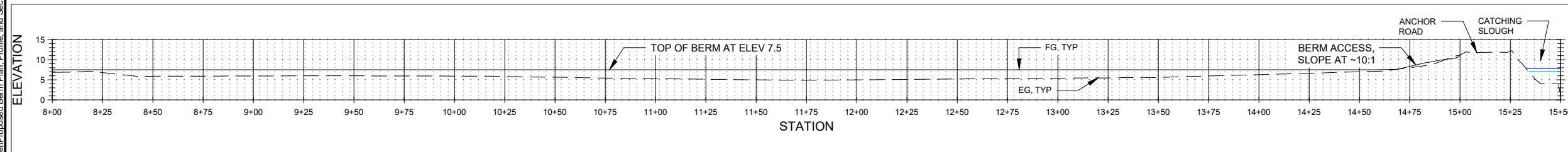


1 ALDERWOOD CREEK BERM STA 8+00 TO 15+50 - PLAN
SCALE: 1:30



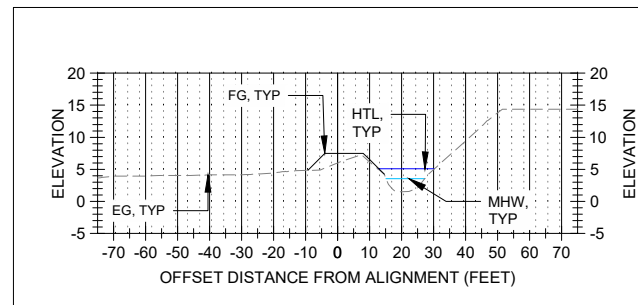
GENERAL NOTES

- CONTRACTOR SHALL LIMIT EARTHWORK TO PERMANENT AND TEMPORARY FEATURES SHOWN ON THE PLANS AND PER DIRECTION OF CAR.
- DISTURBANCE OUTSIDE THE WORK SHOWN SHALL BE MINIMIZED.
- SALVAGE AND STOCKPILE TREES, WOODY VEGETATION, AND TOPSOIL REMOVED DURING CLEARING PER DIRECTION OF CAR. PLACE SALVAGED TOPSOIL AS TOP DRESSING ON FINISHED GRADES TO FACILITATE VEGETATION ESTABLISHMENT. HAUL AND DISPOSE OF EXCESS SALVAGED TREES, WOODY VEGETATION, AND TOPSOIL TO A CAR APPROVED UPLAND OR OFFSITE DISPOSAL FACILITY.
- EXCESS CUT MATERIAL MAY BE THIN SPREAD ALONG EXISTING BERM TOPS AND LANDWARD SIDE SLOPES TO REHABILITATE SURFACE DEFORMITIES AND AS OTHERWISE DIRECTED BY CAR. THIN SPREAD MATERIAL SHALL BE PLACED IN A SINGLE UNCOMPACTED LIFT WITH A LAYER HEIGHT NOT TO EXCEED 3 INCHES. TRACK WALK THIN SPREAD MATERIAL AND APPLY PERMANENT EROSION CONTROL SEEDING AND PLANTING PER CAR. SEE SHT C12 FOR APPROX THIN SPREAD AREAS TO BE DELINEATED BY CAR.
- ESTABLISH PLANTING ZONES FOLLOWING APPROVAL OF CAR AND ENGINEER OF FG.
- TOP OF BERM AND BERM SHALL BE SEEDED PER CAR.

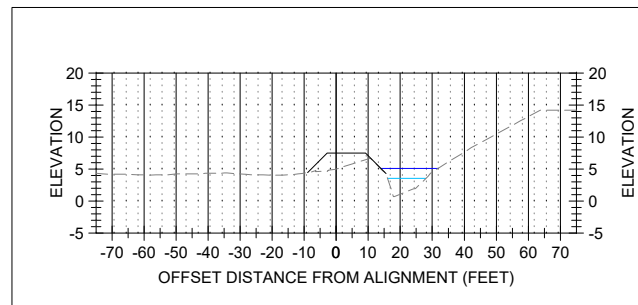


2 ALDERWOOD CREEK BERM STA 8+00 TO 15+50 - PROFILE
Scale: HOZ: 1:30 VERT: 1:15

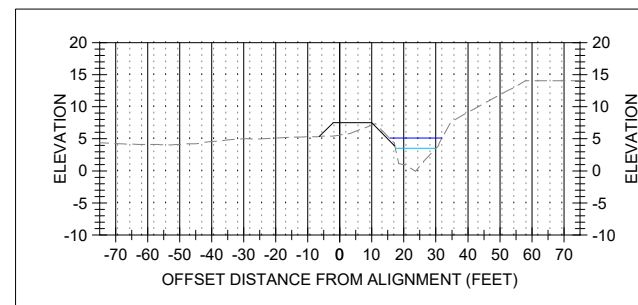
CUT AND FILL SUMMARY		
SITE	CUT (CY)	FILL (CY)
BERM, CONTINUED ON SHT C10	50	1570
PASTURE ACCESS RAMP 2	0	35
AG OPERATION PAD	0	250



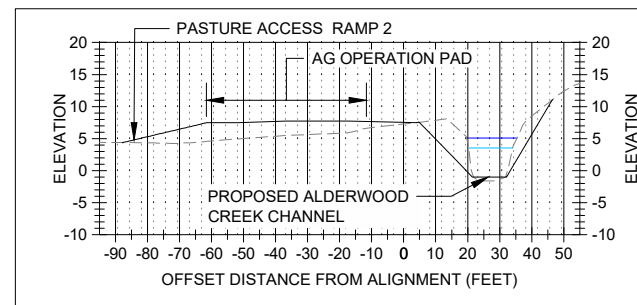
3 ALDERWOOD CREEK BERM STA 9+50 - SECTION
Scale: HOZ: 1:30 VERT: 1:15



4 ALDERWOOD CREEK BERM STA 11+50 - SECTION
Scale: HOZ: 1:30 VERT: 1:15



5 ALDERWOOD CREEK BERM STA 13+50 - SECTION
Scale: HOZ: 1:30 VERT: 1:15

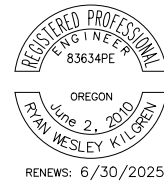


6 ALDERWOOD CREEK BERM STA 14+64 - SECTION
Scale: HOZ: 1:30 VERT: 1:15

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
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PROJECT NO.
1.2023.0005.1
DESIGNED BY
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DRAWN BY
NPS, RWK

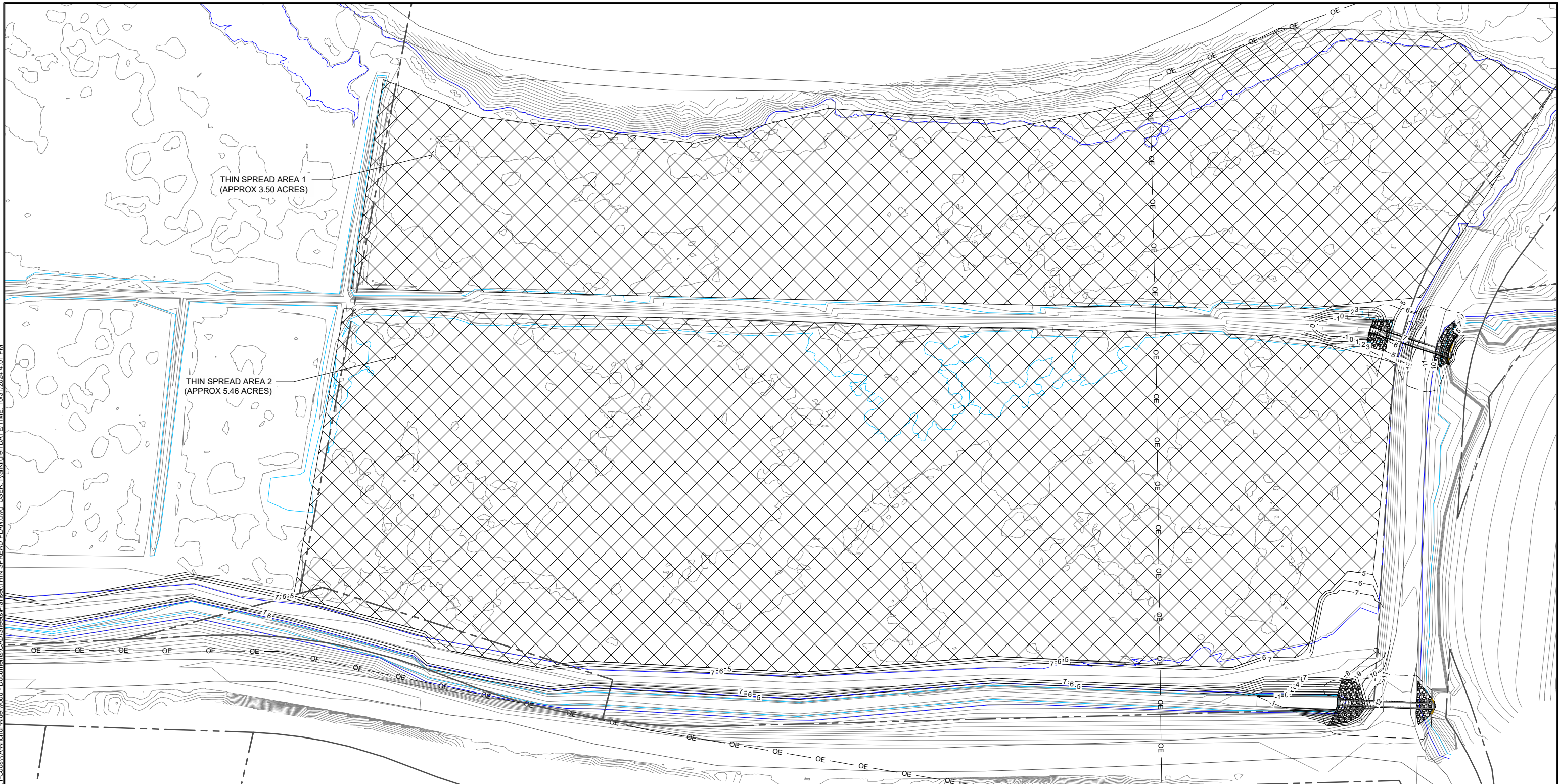
ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT

ALDERWOOD CREEK BERM STA 8+00 TO 15+50
PLAN, PROFILE, AND SECTIONS

DRAWING NO.
C11
SHEET NO.
13
OF
15



FILE: C:\Users\rvankillgren\OneDrive\Water Resources\LL\1.2023.0005.L\CoosWA\Anchor-Alderwood - Documents\CAD\Sheets\Plans\THIN SPREAD PLAN.dwg USER: rvankillgren DATE/TIME: 10/31/2024 4:01 PM



1 THIN SPREAD - PLAN
SCALE: 1"=40'



CUT AND FILL SUMMARY		
SITE	CUT (CY)	FILL (CY)
THIN SPREAD AREA 1	0	1,213
THIN SPREAD AREA 2	0	1,893

GENERAL NOTES

- CONTRACTOR TO PLACE THIN SPREAD FILL AS A UNIFORM LAYER IN A SINGLE LIFT TO ENHANCE HABITAT AND AG LAND USES PER DIRECTION OF CAR AND WITHIN EXTENTS SHOWN.
- THIN SPREAD FILL AREA IS ASSUMED TO HAVE A MINIMUM LAYER THICKNESS OF 1 INCH AND SHALL NOT EXCEED 3-INCHES. ACTUAL APPLICATION MAY COVER A SMALLER EXTENT AND/OR SMALLER UNIFORM LAYER HEIGHT.
- CONTRACTOR SHALL LIMIT EARTHWORK TO PERMANENT AND TEMPORARY FEATURES SHOWN ON THE PLANS AND PER DIRECTION OF CAR.
- DISTURBANCE OUTSIDE THE WORK SHOWN SHALL BE MINIMIZED.
- ESTABLISH PLANTING ZONES FOLLOWING APPROVAL OF CAR AND ENGINEER OF FG.

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
21 EAST 28TH AVENUE, SUITE 4
EUGENE, OR 97405
PHONE: 971-409-4023



PROJECT NO.
1.2023.0005.1

DESIGNED BY
RWK

DRAWN BY
RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT

THIN SPREAD - PLAN

DRAWING NO.

C12

SHEET NO.

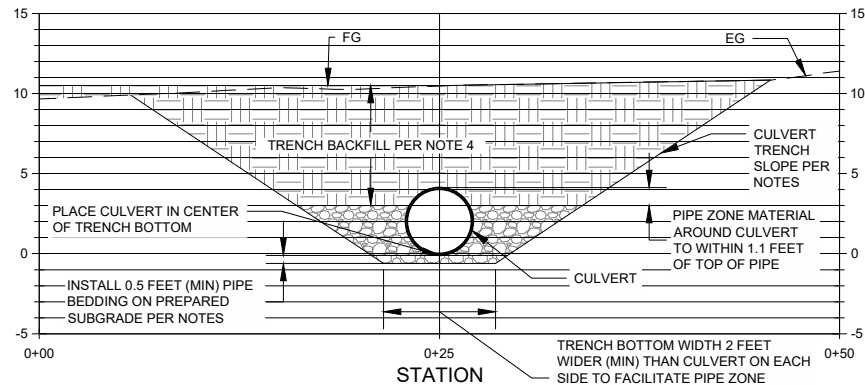
14

OF

15



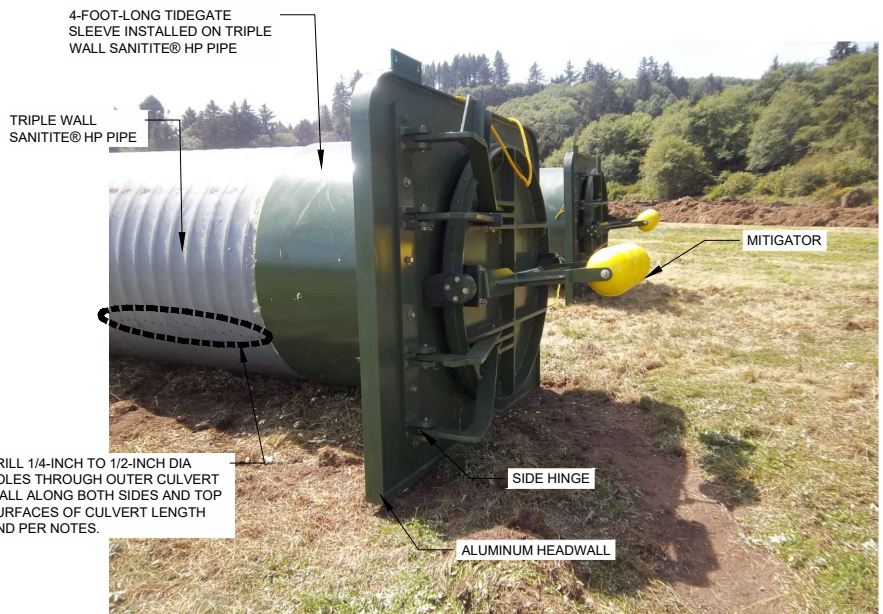
FILE: C:\Users\rvankilgren\OneDrive - CoosWA\Anchor-Alderwood - Documents\CAD\Sheets\Plans\CULVERT TYPICAL DETAILS AND NOTES.dwg USER: rvankilgren DATE/TIME: 10/31/2024 4:01 PM



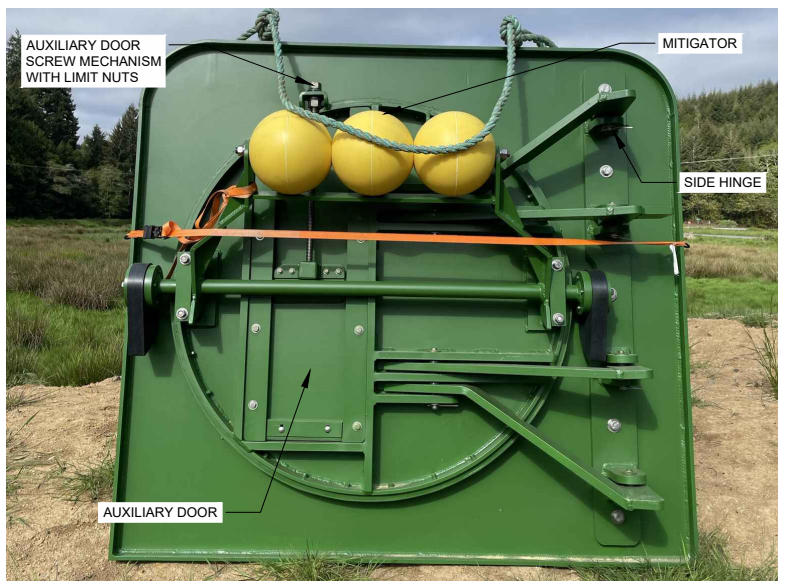
1 TYPICAL CULVERT TRENCH SECTION
Scale: 1:6

GENERAL NOTES

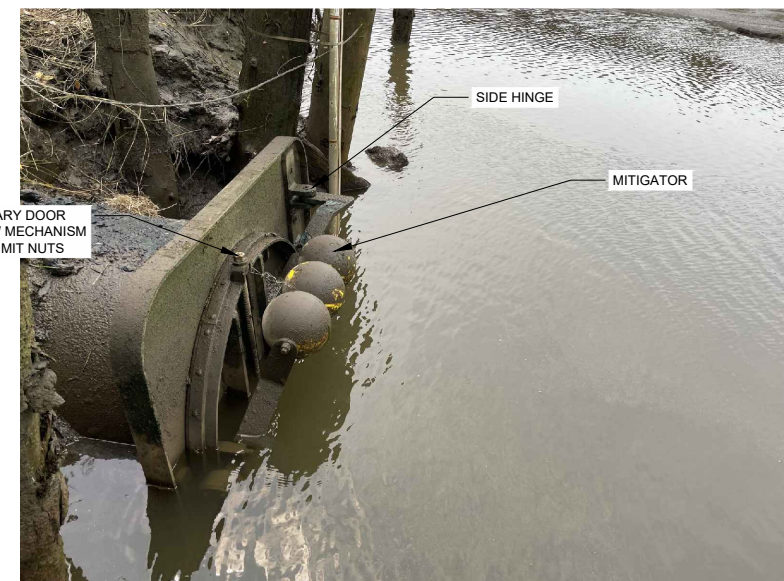
1. NEW CULVERT PIPES SHALL BE TRIPLE WALL ADS SANTITE® HP PIPE (OR APPROVED EQUIVALENT).
2. DRILL HOLES THROUGH OUTERMOST CULVERT WALL AS SHOWN TO FACILITATE CULVERT SUBMERGENCE FOR INSTALLATION AND REDUCE CULVERT BUOYANCY. DRILL THREE (3) HOLES MIN PER CULVERT RIB, INCLUDING BOTH SIDES AND TOP CULVERT OUTER WALL SURFACES. DO NOT DRILL THROUGH INNER CULVERT WALLS.
3. NEW TIDEGATES SHALL BE NEHALEM MARINE NSG5MA WITH 18 INCH AUXILIARY DOOR AND 4 FOOT PIPE SLEEVE (OR APPROVED EQUIVALENT).
4. TEMPORARY TRENCH SIDE SLOPES ASSUMED AS 1.5H:1V. MINIMIZE TEMPORARY TRENCH EXCAVATION AS PRACTICAL AND IN ACCORDANCE WITH OSHA REQUIREMENTS SO AS TO LIMIT THE DISTURBANCE OF NATIVE SUBGRADE AND QUANTITY OF IMPORTED PIPE BEDDING AND PIPE ZONE MATERIAL.
5. CONTRACTOR TO REMOVE, HAUL, AND DISPOSE OF EXISTING CULVERTS, TIDEGATES, WOOD HEADWALLS, AND APPURTENANCES AT APPROPRIATE OFF-SITE DISPOSAL FACILITY.
6. SUBGRADE SURFACES SHALL BE GRADED AND COMPACTED TO BE SMOOTH. PREPARED SUBGRADE SURFACES SHALL BE FREE FROM MOUNDS, DIPS, CUTS, AND DEBRIS. POCKETS OF SAND OVER 2 CUBIC FEET IN SUBGRADE SHALL BE OVEREXCAVATED AND REPLACED WITH COMPACTED PIPE BEDDING MATERIAL.
7. TRENCH BACKFILL SHALL BE ODOT CLASS A EXCAVATED NATIVE MATERIAL, FREE FROM ORGANIC OR DELETERIOUS MATERIALS, ROCKS OR BROKEN CONCRETE, OR OTHER FOREIGN MATERIALS. TRENCH BACKFILL SHALL BE APPROVED BY ENGINEER PRIOR TO PLACEMENT. PLACE TRENCH BACKFILL IN 8 INCH (MAX) LIFT HEIGHTS AND COMPACT EACH LIFT TO 95% MAXIMUM DRY DENSITY PER ASTM D1557.
8. GRANULAR FILTER BLANKET IS SPECIFIED ONLY WHERE RIPRAP WILL BE PLACED. GRANULAR FILTER BLANKET SHALL BE 6" (MIN) LAYER OF WELL GRADED 4"-0 STONE PER ODOT STD SPEC 00330.16 TO PROVIDE SEPARATION BETWEEN FINER SUBSURFACE FILLS AND COARSER RIPRAP PLACE ON TOP OF GRANULAR FILTER BLANKET.
9. RIPRAP SHALL BE LOOSELY PLACED ON TOP OF GRANULAR FILTER BLANKET PER ODOT STD SPEC 00390.44(b). DO NOT DUMP OR DROP RIPRAP MATERIAL ONTO GRANULAR FILTER BLANKET.
10. PIPE BEDDING AND PIPE ZONE MATERIAL SHALL BE 3"-0 AGGREGATE, OR WITH ENGINEER APPROVAL QUARRY SCALPS/REJECT MAY BE SUBSTITUTED. CONTRACTOR TO PROVIDE 2 GALLON (MIN) SAMPLE OF PIPE BEDDING AND PIPE ZONE MATERIAL FOR CAR INSPECTION 5 DAYS (MIN) PRIOR TO MATERIAL DELIVERY TO SITE. PLACE AND COMPACT PIPE BEDDING SURFACE TO 95% MAXIMUM DRY DENSITY PER ASTM D1557 AND GRADE SHOWN. HAND TAMP PIPE ZONE MATERIAL AROUND CULVERT TO WITHIN 1.1 FEET OF TOP OF PIPE.
11. VERTICAL PILE LOGS ARE INTENDED TO SUPPORT RETENTION OF RIPRAP AND PREVENT RIPRAP PARTICLES FROM OBSTRUCTING TIDEGATE AND CULVERT OPERATION IF PARTICLES ARE MOBILIZED DOWN ARMORED SLOPES. VERTICAL PILE LOGS SHALL BE UNTREATED WHOLE LOGS AND SOURCED FROM CEDAR, DOUGLAS FIR, OR OTHER CONIFER SPECIES WITH PRIOR CAR APPROVAL. PILE LOG LIMBS SHALL BE REMOVED TO WITHIN 1 INCH OF LOG STEM. VERTICAL PILE LOGS SHALL BE STRAIGHT AND HAVE A MAXIMUM DIAMETER TAPER OF 1 INCH PER 10 FEET, OR AS OTHERWISE APPROVED BY THE ENGINEER. VERTICAL PILE LOGS SHALL BE DRIVEN AT A VERTICAL ORIENTATION OR WITH SLIGHT LANDWARD BATTER TO A BOTTOM TIP ELEVATION OF -11.5 FEET OR REFUSAL. ENSURE LOG-TO-LOG CONTACT BETWEEN ADJACENT PILE LOGS TO FORM A CONTINUOUS RETENTION FACE, REPOSITION AND RE-DRIVE PILE LOGS IF NECESSARY TO ACHIEVE LOG-TO-LOG CONTACT. A LENGTH OF 2 FEET MAX FROM THE TERMINAL ENDS OF THE PIER LOGS MAY BE SHARPENED OR MITER CUT PRIOR TO DRIVING INTO THE SUBGRADE. PILE LOG TOPS SHALL EXTEND A MINIMUM 4 FEET ABOVE THE FINISHED RIPRAP SURFACE.



2 SIDE HINGED TIDEGATE WITH MITIGATOR PRIOR TO INSTALLATION - SIDE VIEW
Scale: NTS



3 SIDE HINGED TIDEGATE WITH MITIGATOR PRIOR TO INSTALLATION - ELEVATION VIEW
Scale: NTS



4 SIDE HINGED TIDEGATE WITH MITIGATOR AFTER INSTALLATION
Scale: NTS

NO.	DATE	DESCRIPTION	BY

KILGREN WATER RESOURCES
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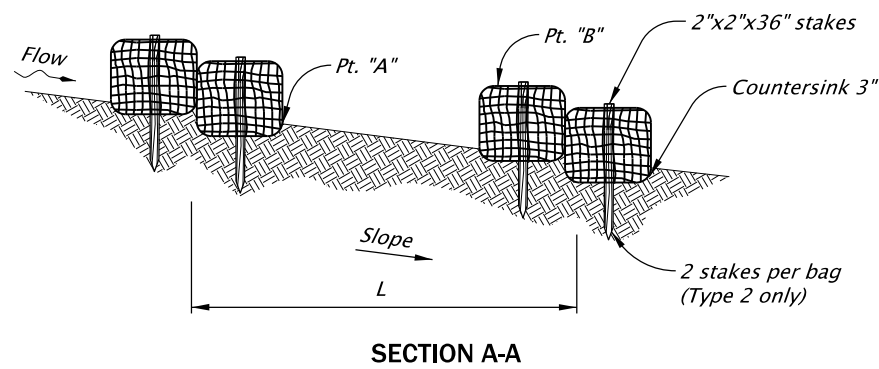
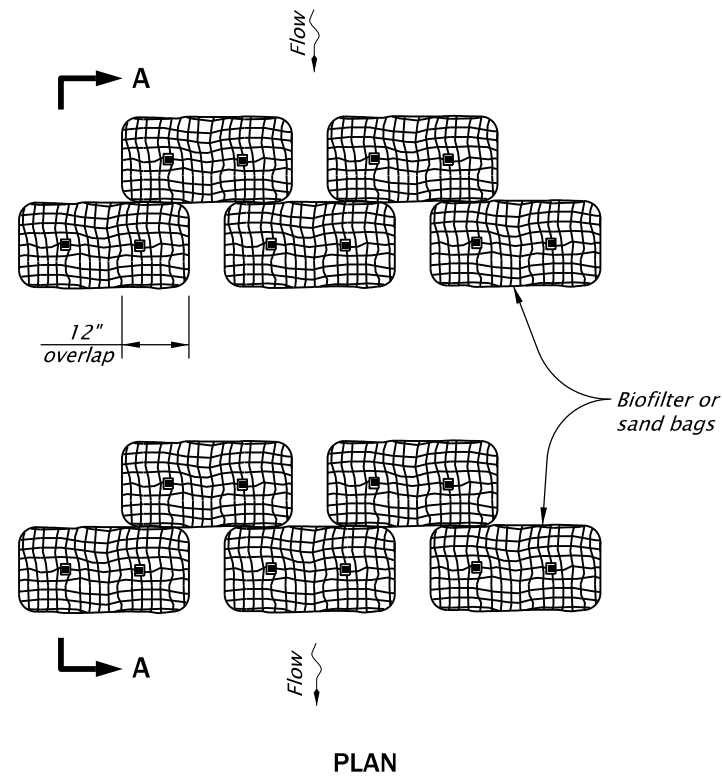
REGISTERED PROFESSIONAL ENGINEER
83634PE
OREGON
June 2, 2010
RYAN WESLEY KILGREN
RENEWS: 6/30/2025

PROJECT NO.
1.2023.0005.1
DESIGNED BY
RWK
DRAWN BY
RWK

ANCHOR, ALDERWOOD AND OLD WAGON FISH PASSAGE PROJECT
TYPICAL CULVERT AND TIDEGATE DETAILS AND NOTES

DRAWING NO.
C13
SHEET NO.
15
OF
15



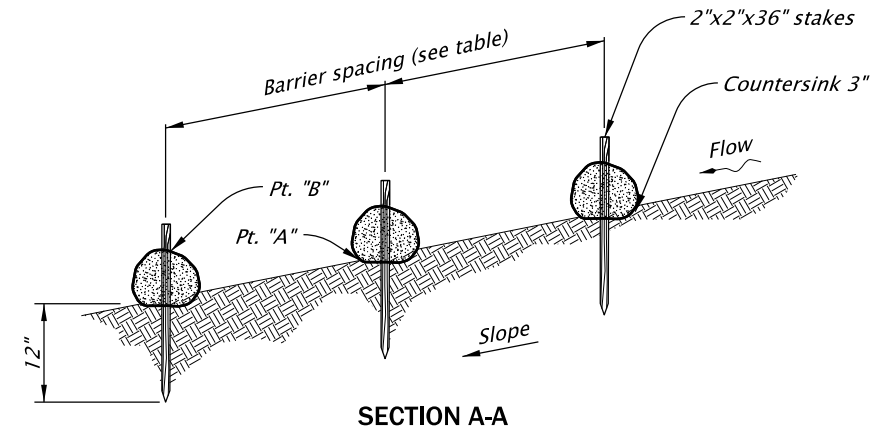
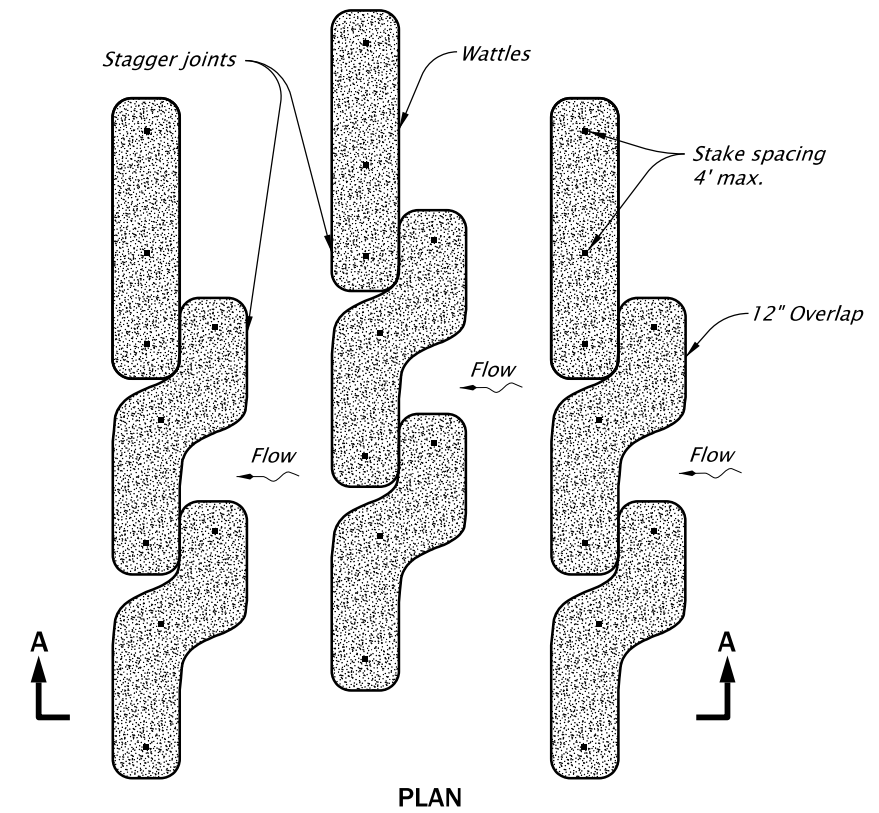


BIOFILTER BAG / SAND BAG BARRIER - TYPE 2 AND 4
NOT TO SCALE

NOTES:

1. For Type 2 barrier, drive stakes flush with top of bag and into undisturbed ground a min. of 12". Omit stakes if bags are placed on paved surface.
2. For Type 2 and Type 4 barriers, space bags (L) so that the elevation of point "A" is less than or equal to the elevation of point "B".

Type 2 - Biofilter bags
Type 3 - Wattles
Type 4 - Sand bags

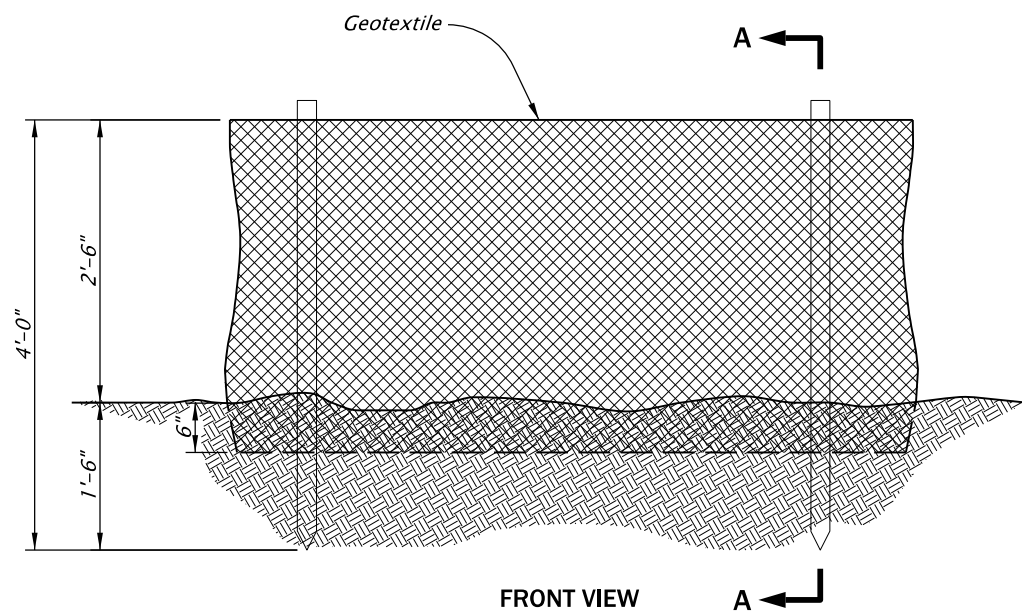


FIBER ROLL BARRIER - TYPE 3
NOT TO SCALE

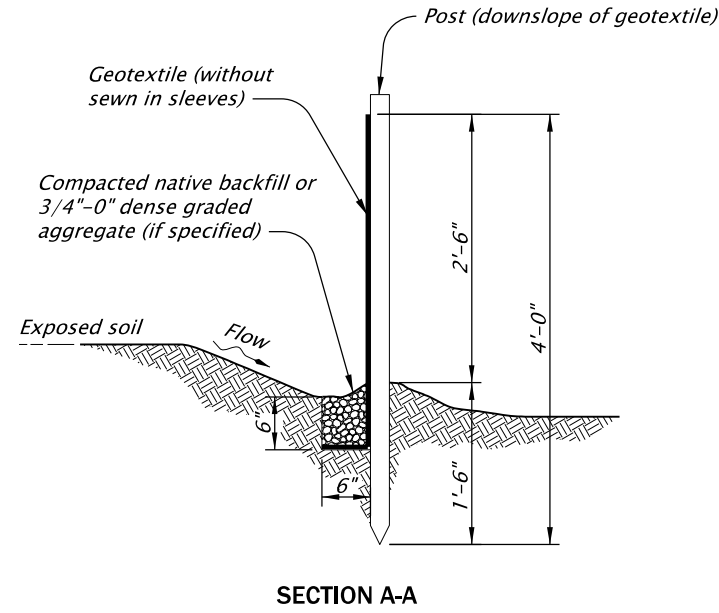
BARRIER SPACING		
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	% SLOPE	MAXIMUM SPACING ON SLOPE
10% Flatter	1:10 or Flatter	300'
10 > % ≥ 15	10 > X ≥ 7.5	150'
15 > % ≥ 20	7.5 > X ≥ 5	100'
20 > % ≥ 30	5 > X ≥ 3	50'
Steeper than 30%	Steeper than 1:3	25'

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.		
OREGON STANDARD DRAWINGS		
SEDIMENT BARRIER TYPE 2, 3 AND 4		
2024		
DATE	REVISION DESCRIPTION	
01-2021	REMOVED CALC BOOK NUMBERS	
CALC. BOOK NO.	N/A	SDR DATE
		20-JAN-2021
		RD1030

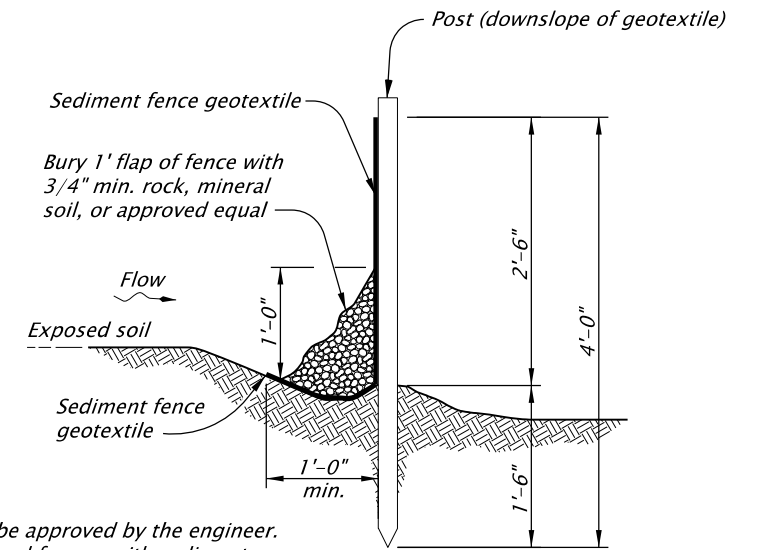


FRONT VIEW



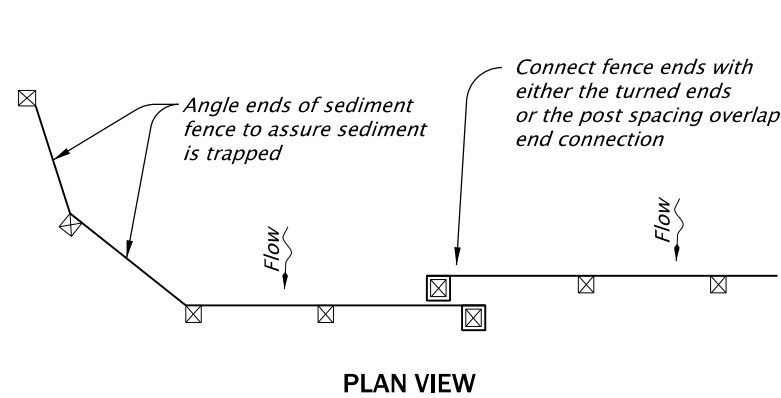
SECTION A-A

SEDIMENT FENCE AND GEOTEXTILE BURY DETAIL - TYPE 1
NOT TO SCALE

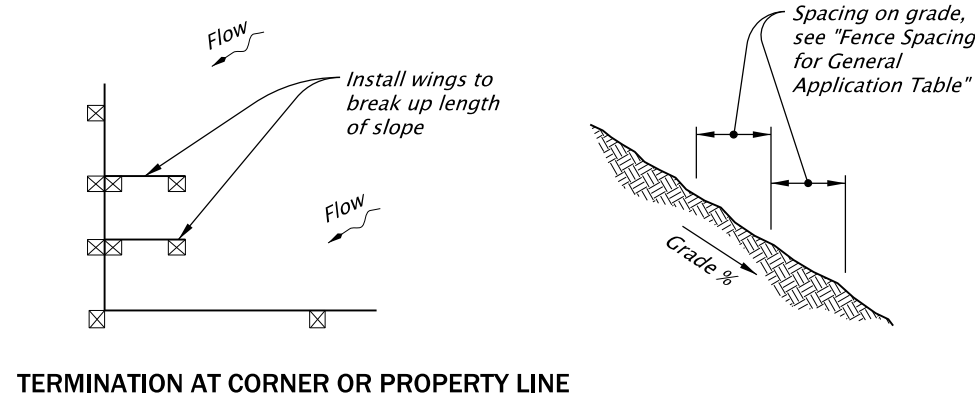


- NOTES:
 1. Use must be approved by the engineer.
 2. Not approved for use with sediment fencing with sewn-in post sleeves.

ALTERNATE SEDIMENT FENCE WITHOUT TRENCHING - TYPE 2
NOT TO SCALE



PLAN VIEW

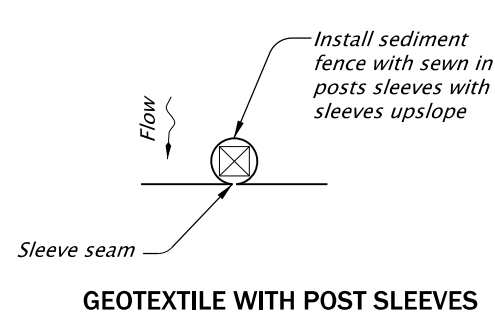


TERMINATION AT CORNER OR PROPERTY LINE

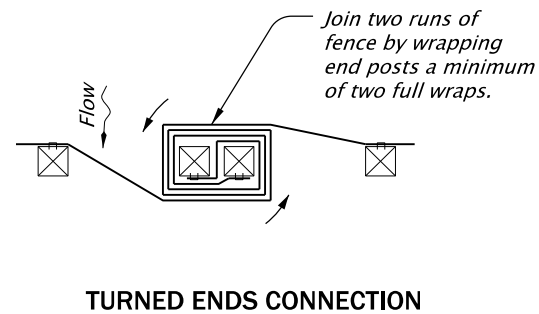
GENERAL NOTES:

1. Use 2"x2" wood fence posts.
2. Posts to be installed on downhill side of sediment fence geotextile. Position posts to prevent separation from geotextile.
3. Compact filter fabric trench backfill and soil on uphill side of fence.
4. Locate fence no closer than three feet to the toe of a slope.
5. Wing spacing shall comply with "Fence Spacing for General Application Table".

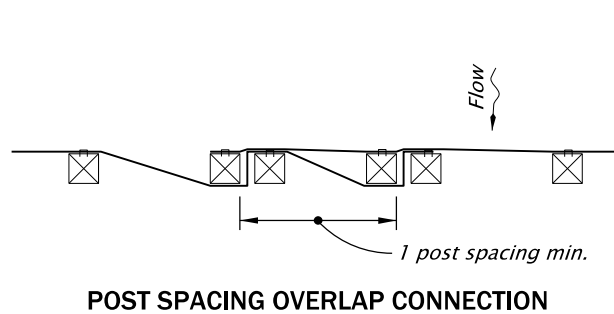
FENCE SPACING FOR GENERAL APPLICATION TABLE	
INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS	
GRADE	MAXIMUM SPACING ON GRADE
Grade < 10%	300'
10% ≤ Grade < 15%	150'
15% ≤ Grade < 20%	100'
20% ≤ Grade < 30%	50'
30% ≤ Grade	25'



GEOTEXTILE WITH POST SLEEVES



TURNED ENDS CONNECTION



POST SPACING OVERLAP CONNECTION

GEOTEXTILE END CONNECTIONS
NOT TO SCALE

POST SPACING TABLE	
6'	Sediment Fence with Geotextile elongation less than 50%
4'	Sediment Fence with Geotextile elongation 50% or more

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.			
OREGON STANDARD DRAWINGS			
SEDIMENT FENCE			
2024			
DATE	REVISION DESCRIPTION		
01-2021	REMOVED CALC BOOK NUMBERS		
CALC. BOOK NO.	N/A	SDR DATE	20-JAN-2021
			RD1040