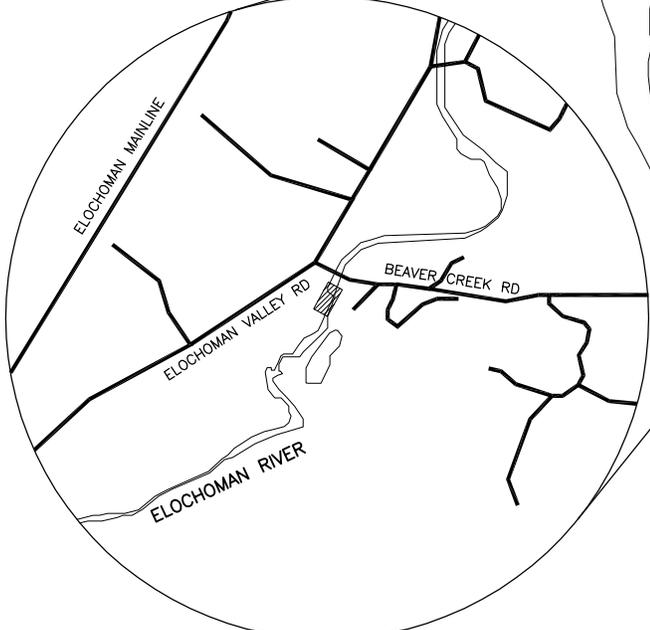
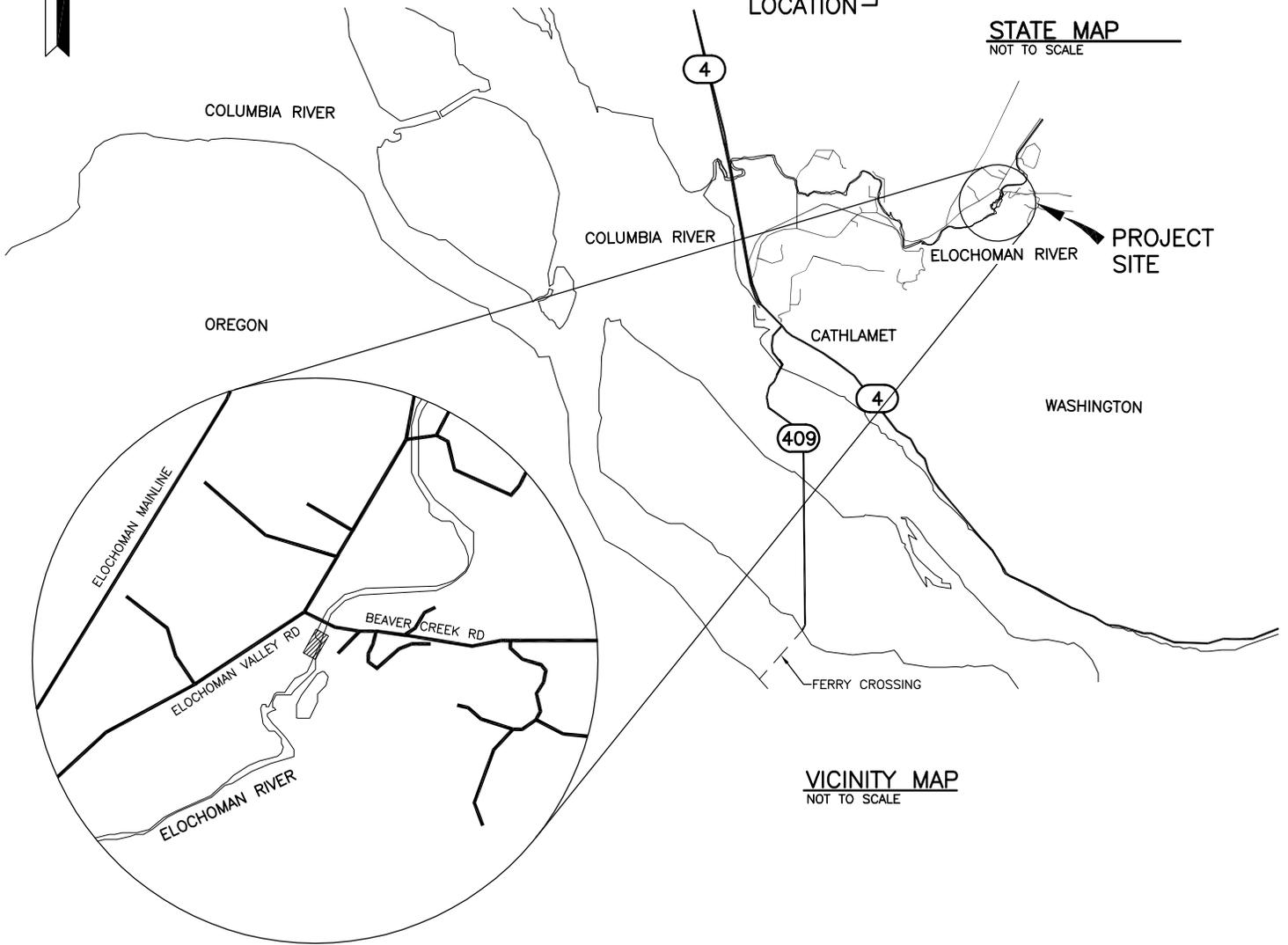


SITE  
LOCATION

STATE MAP  
NOT TO SCALE



PROJECT SITE  
NOT TO SCALE

VICINITY MAP  
NOT TO SCALE

ENG. PROJECT NO. WK:H126:14-1

PORTION OF: SECT. 32, T 9 N, R 5 W

REFERENCE NUMBER:  
APPLICANT:  
WASHINGTON DEPT. of FISH & WILDLIFE  
600 CAPITOL WAY N.  
OLYMPIA, WA 98501-1091

PROJECT LOCATION (ADDRESS):  
BEAVER CREEK HATCHERY  
28 BEAVER CREEK ROAD  
CATHLAMET, WA

PROPOSED PROJECT:  
INTAKE REBUILD

ADJACENT PROPERTY OWNER:

LAT/LONG: 46.2258/-123.3306

IN: ELOCHOMAN RIVER

- 1.
- 2.

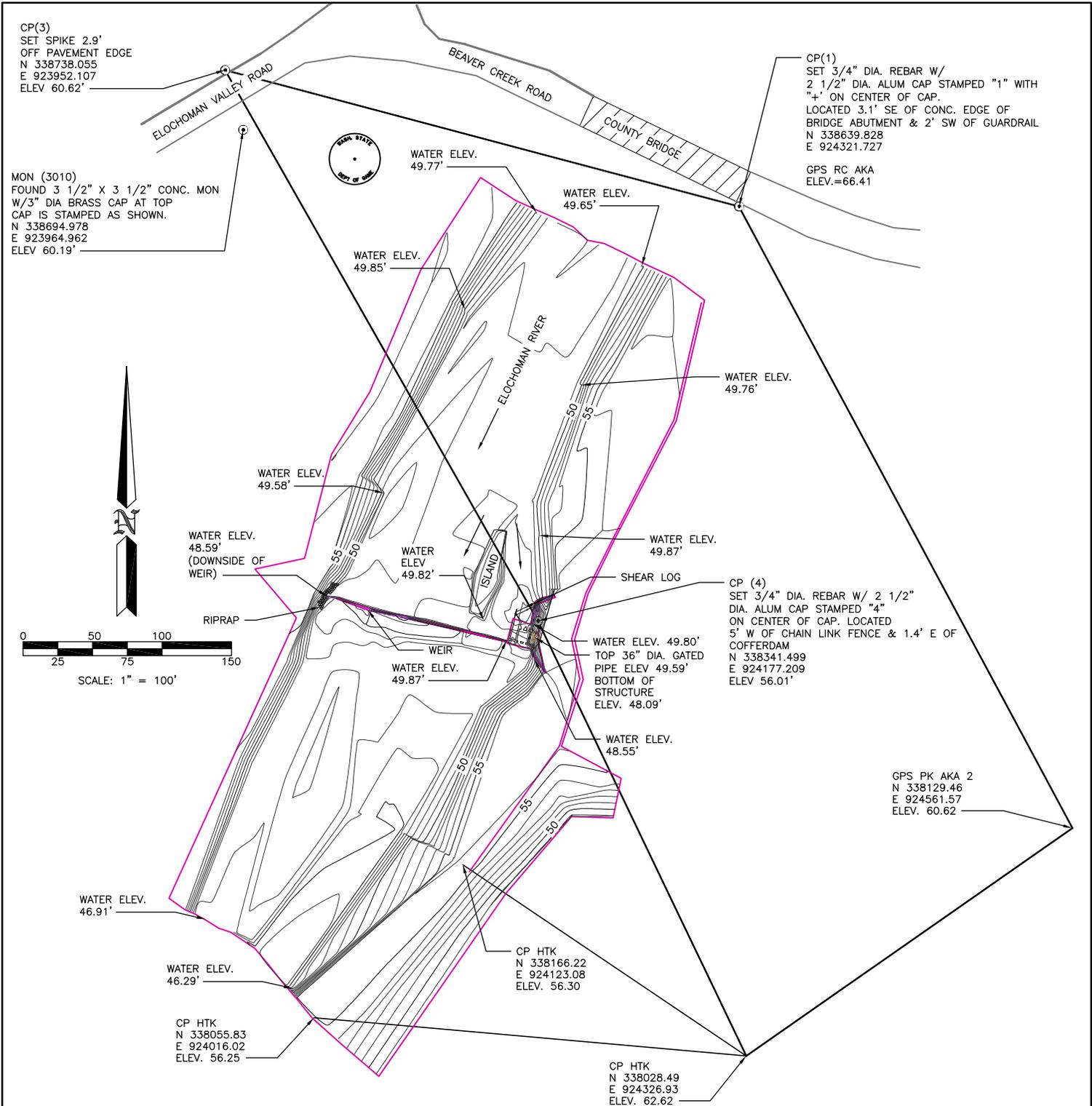
DATUM: NAVD 88

NEAR/AT: CATHLAMET

SHEET 1 OF 14 DATE: 6/2/2017

COUNTY: WAHIAKUM

STATE: WA



**GENERAL SURVEY INFORMATION**

1. SURVEY PROVIDED BY WDFW DECEMBER 3rd, 2014.
2. DRAWN BY S. DABROWSKI
3. EQUIPMENT USED: TRIMBLE 4700 GPS RECEIVERS TOPCON GTS-600 TOTAL STATION THEODOLITE TDS RECON DATA COLLECTOR WILD NA 2002 DIGITAL LEVEL.

**VERTICAL DATUM**

1. NAVD88(GEOD12A)
2. DERIVED FROM RAPID-STATIC GPS
3. OBSERVATIONS USING NGS-OPUS SOLUTIONS

**BASIS OF BEARING**

1. NAD83(2011) WA STATE PLANE SO ZONE DERIVED FROM RAPID-STATIC GPS OBSERVATIONS USING NGS-OPUS SOLUTIONS

**EXISTING SITE PLAN**

SCALE: 1" = 100'

REFERENCE NUMBER:

APPLICANT NAME:

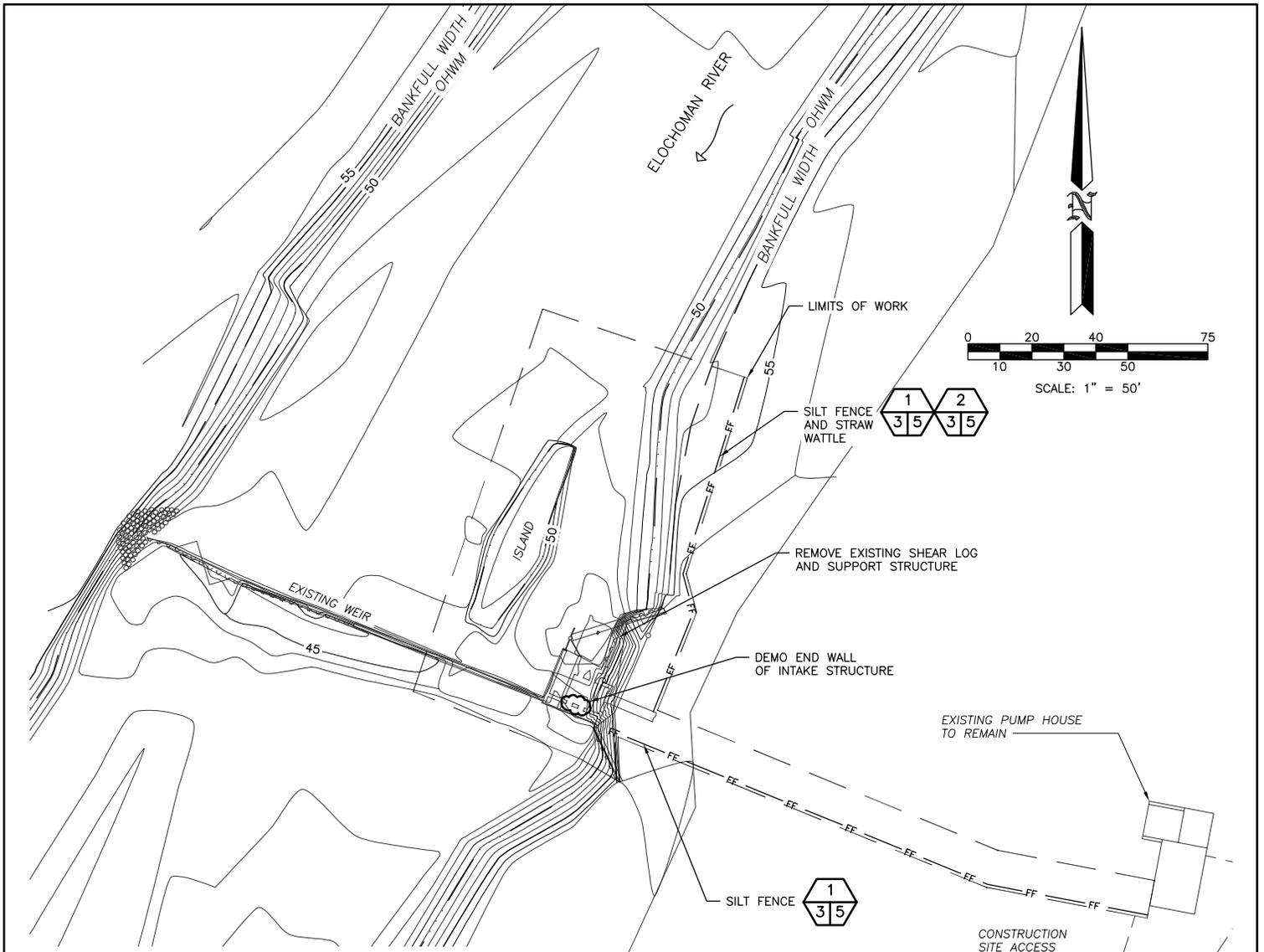
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:

INTAKE REBUILD

LOCATION: BEAVER CREEK HATCHERY

SHEET 2 OF 14 DATE: 6/2/2017



**TESC NOTES**

1. FOR THE PURPOSED OF TEMPORARY EROSION/SEDIMENTATION CONTROL ON THIS PROJECT THE TERM "SEDIMENT" SHALL INCLUDE THE SOIL SEDIMENTS AS WELL AS SAWDUST, CONCRETE, AND OTHER DEBRIS OR PARTICULATE MATTER RESULTING FROM CONSTRUCTION ACTIVITY.
2. ON-SITE EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE FIRST STAGE OF SITE PREPARATION.
4. SHOULD TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES NOT PROVE ADEQUATE TO CONTROL EROSION AND SEDIMENTATION, THE CONTRACTOR SHALL INSTALL ADDITIONAL FACILITIES, AS NECESSARY, TO PROTECT ADJACENT AREAS OUTSIDE THE LIMITS OF WORK.
5. THE TESC MEASURES SHOWN ON SHEET 3 ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS DURING THE CONSTRUCTION PERIOD. THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE AREA OF WORK.
6. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY OR AS DIRECTED BY THE ENGINEER TO ENSURE THEIR CONTINUED FUNCTIONING.
7. ALL EXPOSED SOILS SHALL BE STABILIZED BY SUITABLE APPLICATION OF APPROVED BEST MANAGEMENT PRACTICES (BMPs) INCLUDING, BUT NOT LIMITED TO, SOD OR OTHER VEGETATION, MAT COVERING, OR MULCHING; ALL BMPs SHALL BE SELECTED, DESIGNED, AND MAINTAINED IN ACCORDANCE WITH THE COWLITZ COUNTY STORMWATER DESIGN MANUAL.
8. THE CONTRACTOR SHALL HAVE SUFFICIENT MATERIALS, EQUIPMENT, AND LABOR READILY AVAILABLE TO STABILIZE AND PREVENT EROSION FROM ALL DENUDED AREAS WITHIN 12 HOURS AS SITE AND WEATHER CONDITIONS DICTATE.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL REMAIN UNTIL FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY CONTROLS ARE NO LONGER NEEDED, BUT NO LONGER THAN 30 DAYS AFTER SITE STABILIZATION IS ACHIEVED. TRAPPED SEDIMENTS SHALL BE REMOVED OR STABILIZED ON-SITE.
10. SPECIAL CLEAR AND GRUB EXCEPTION SHALL BE MADE FOR TREES WITH A TRUNK DIAMETER GREATER THAN 24".

**EXISTING DEMO PLAN**

SCALE: 1" = 50'

**GENERAL NOTES**

1. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING MUST BE HELD BETWEEN WDFW AND THE CONTRACTOR.
2. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
3. ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 95 PERCENT DENSITY, STANDARD PROCTOR.

**UTILITY NOTES**

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITIES CONDUITS AND PIPES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL CONFIRM CONDITIONS PRIOR TO CONSTRUCTION.
2. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CONDITIONS HAVE BEEN EVALUATED BY THE ENGINEER OR WDFW.
3. TWO WORKING DAYS PRIOR TO TRENCHING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING 1-800-424-5555.

REFERENCE NUMBER:

APPLICANT NAME:

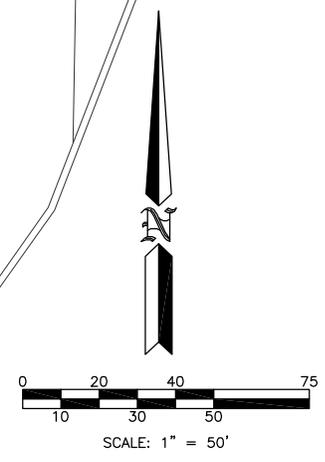
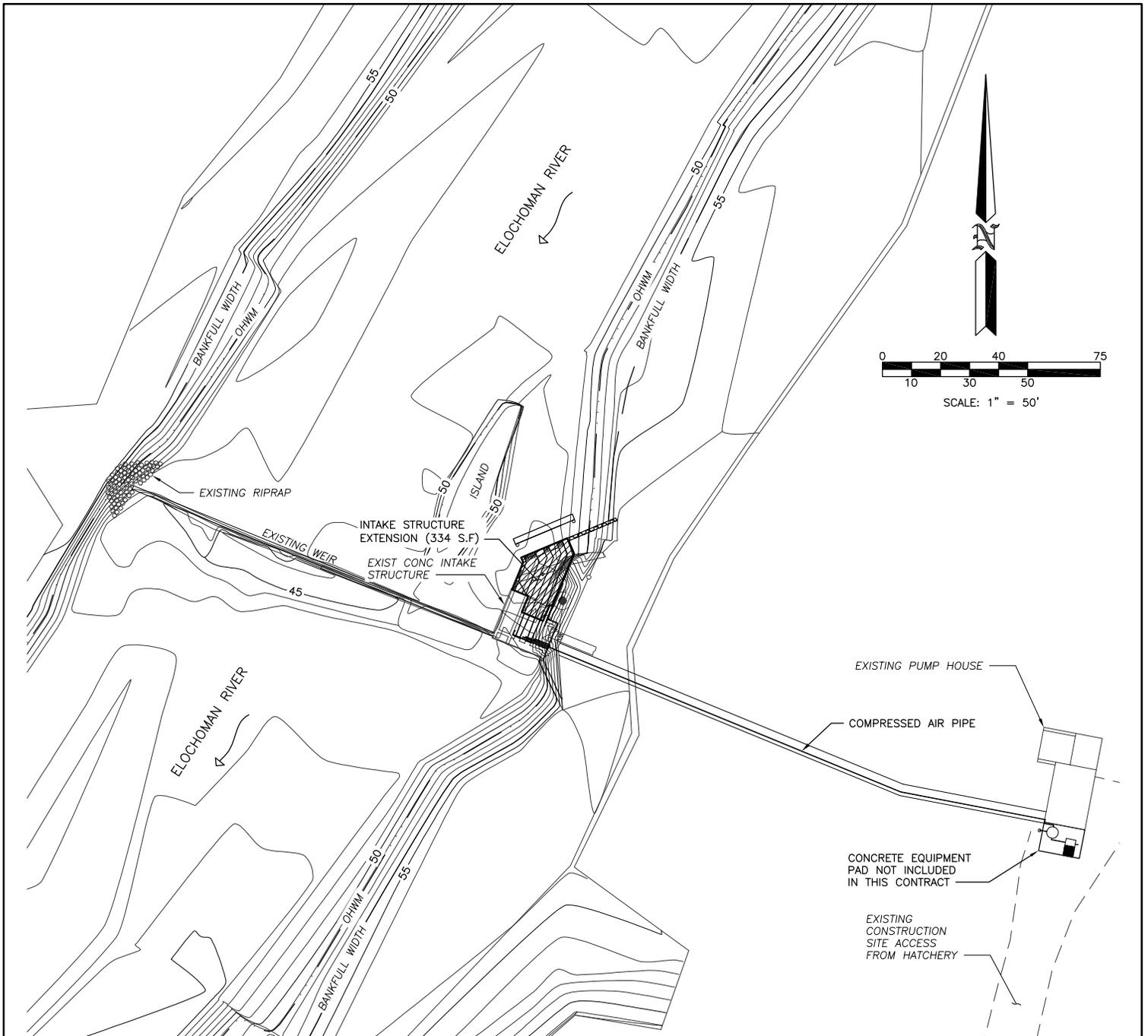
WASHINGTON DEPT. OF FISH & WILDLIFE

PROPOSED PROJECT:

INTAKE REBUILD

LOCATION: BEAVER CREEK HATCHERY

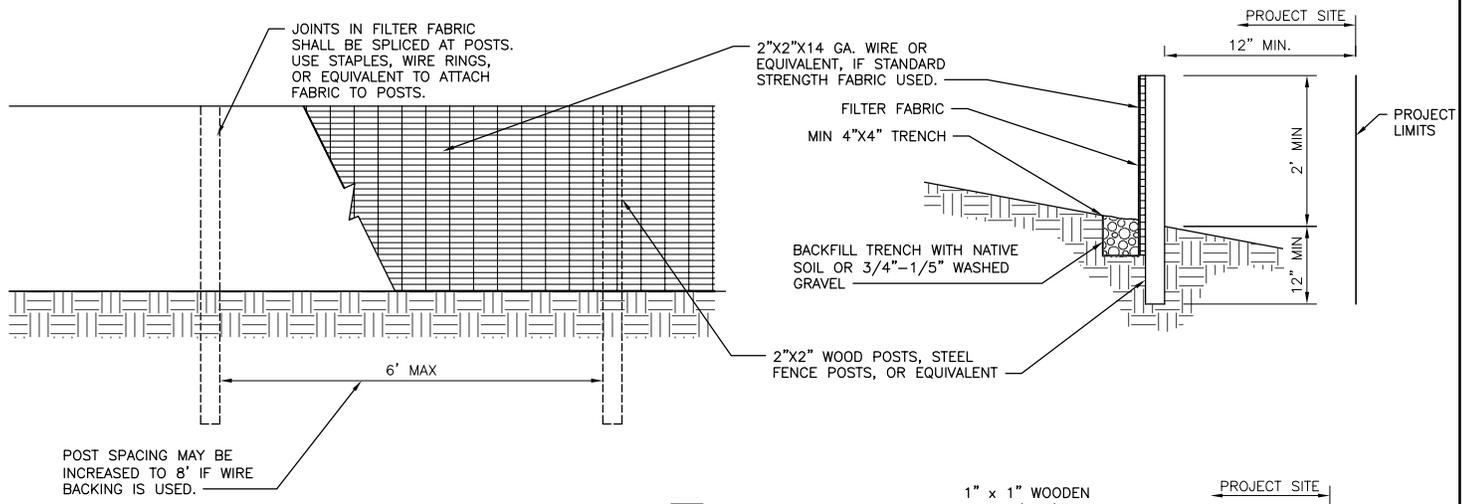
SHEET 3 OF 14 DATE: 6/2/2017



QUANTITIES			
MATERIAL	FILL (ABOVE OHW)	FILL (BELOW OHW)	CUT (BELOW OHW)
CONCRETE	169 SF/18 CY	334 SF/52 CY	-
SHEET PILE (STEEL)		10 LF	-
TRASH RACK (STEEL)		15 LF	-
(2-3) STEEL PILES HSS7		20 LF EACH	-
WEIR CAP		72 LF	-
SOILS		-	-30 CY
TEMPORARY COFFERDAMS		187 LF	-
TEMPORARY SANDBAG BERM		78 LF	-
TEMPORARY STRAW WATTLES		37 LF	-
NET TOTAL	233 SF/28 CY	466 SF/42 CY	

**PROPOSED SITE PLAN**  
SCALE: 1" = 50'

REFERENCE NUMBER:  
 APPLICANT NAME:  
**WASHINGTON DEPT. of FISH & WILDLIFE**  
 PROPOSED PROJECT:  
**INTAKE REBUILD**  
 LOCATION: **BEAVER CREEK HATCHERY**  
 SHEET **4** OF **14** DATE: **6/2/2017**

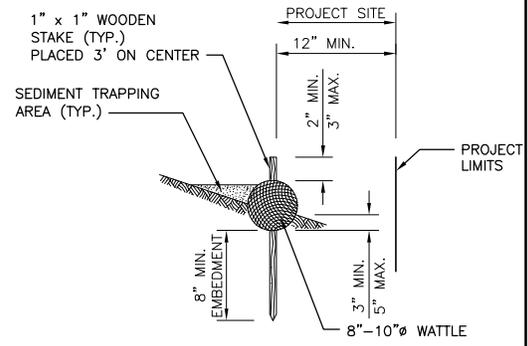


**SILT FENCE**  
NOT TO SCALE



**SILT FENCE MAINTENANCE STANDARDS**

1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6" HIGH.
5. IF THE FILTER FABRIC HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.



**ELEVATION VIEW**

**STRAW WATTLE**  
NOT TO SCALE

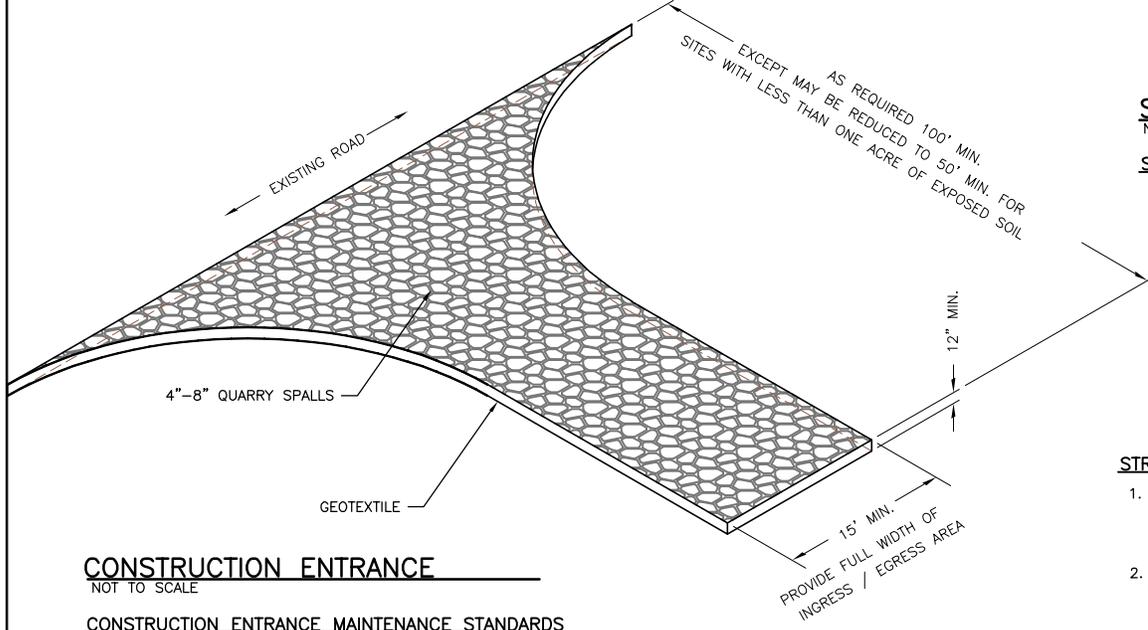


**STRAW WATTLE NOTES**

1. SEE BMP C235: STRAW WATTLE IN APPENDIX B OF THE CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN FOR MORE INFORMATION ON STRAW WATTLE PURPOSE, CONDITIONS OF USE, DESIGN CRITERIA, MAINTENANCE STANDARDS, AND DETAILS
2. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

**STRAW WATTLE MAINTENANCE STANDARDS**

1. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE, LEAVING 2 TO 3 INCHES OF THE STAKE PROTRUDING ABOVE THE WATTLE.
2. WATTLES MAY REQUIRE MAINTENANCE TO ENSURE THEY ARE IN CONTACT WITH SOIL AND THOROUGHLY ENTRENCHED, ESPECIALLY AFTER SIGNIFICANT RAINFALL ON STEEP SANDY SOILS.
3. INSPECT THE SLOPES AFTER SIGNIFICANT STORMS AND REPAIR AREAS WHERE WATTLES ARE NOT TIGHTLY ABUTTED OR WATER HAS SCOURED BENEATH THE WATTLES.

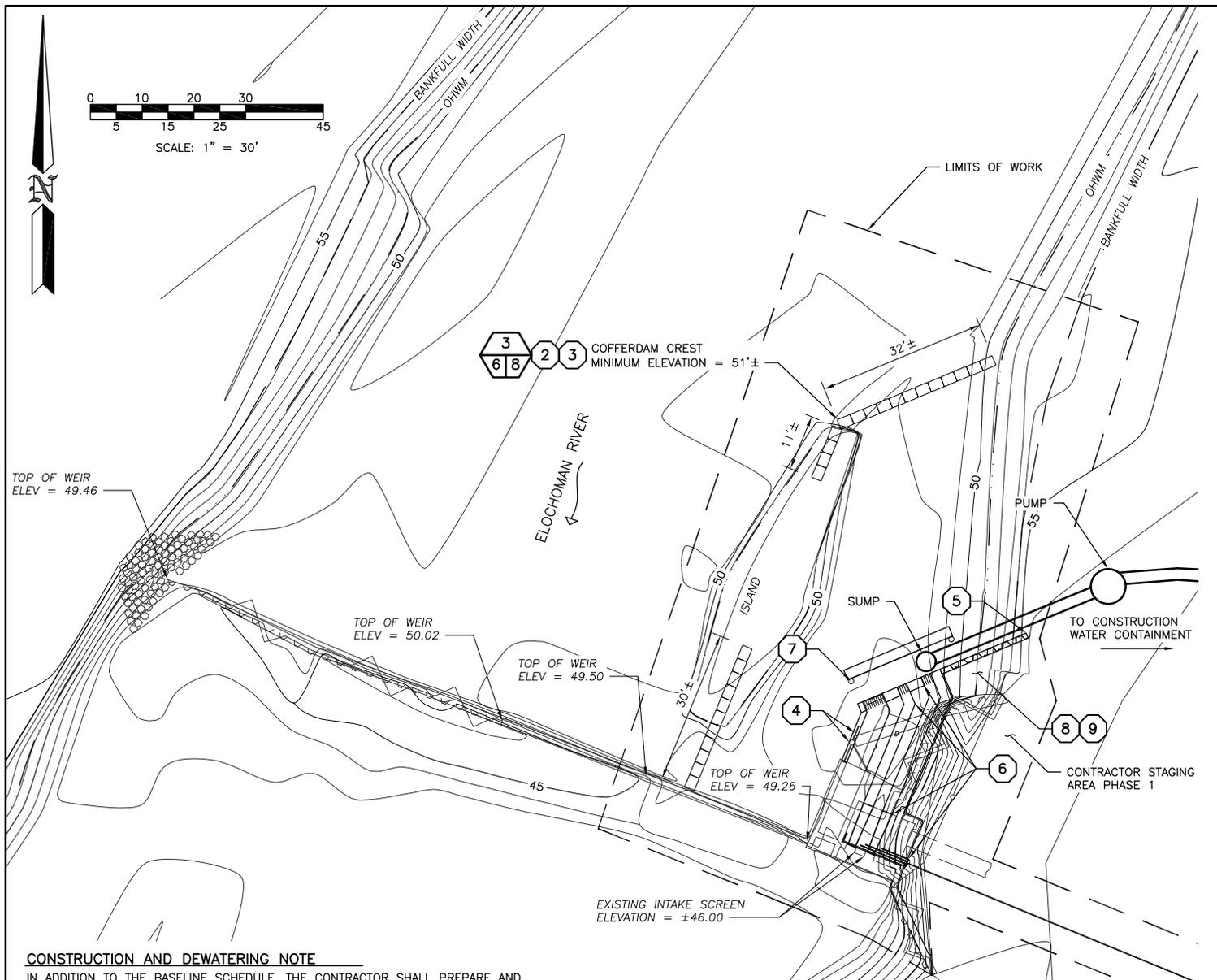


**CONSTRUCTION ENTRANCE**  
NOT TO SCALE

**CONSTRUCTION ENTRANCE MAINTENANCE STANDARDS**

1. QUARRY SPALLS (TYPE I) SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH. IF WASHING IS USED, IT SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK, AND WASH WATER SHALL DRAIN TO A SEDIMENT TRAP OR POND.
3. ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON-SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREETS, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP.
4. ANY QUARRY SPALLS THAT ARE LOOSENED FROM THE PAD AND END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
5. IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING (SEE SECTION D.4.1) SHALL BE INSTALLED TO CONTROL TRAFFIC.

REFERENCE NUMBER:  
 APPLICANT NAME:  
**WASHINGTON DEPT. of FISH & WILDLIFE**  
 PROPOSED PROJECT:  
**INTAKE REBUILD**  
 LOCATION: **BEAVER CREEK HATCHERY**  
 SHEET **5** OF **14** DATE: **6/2/2017**



**DEWATERING PLAN**  
SCALE: 1" = 30'

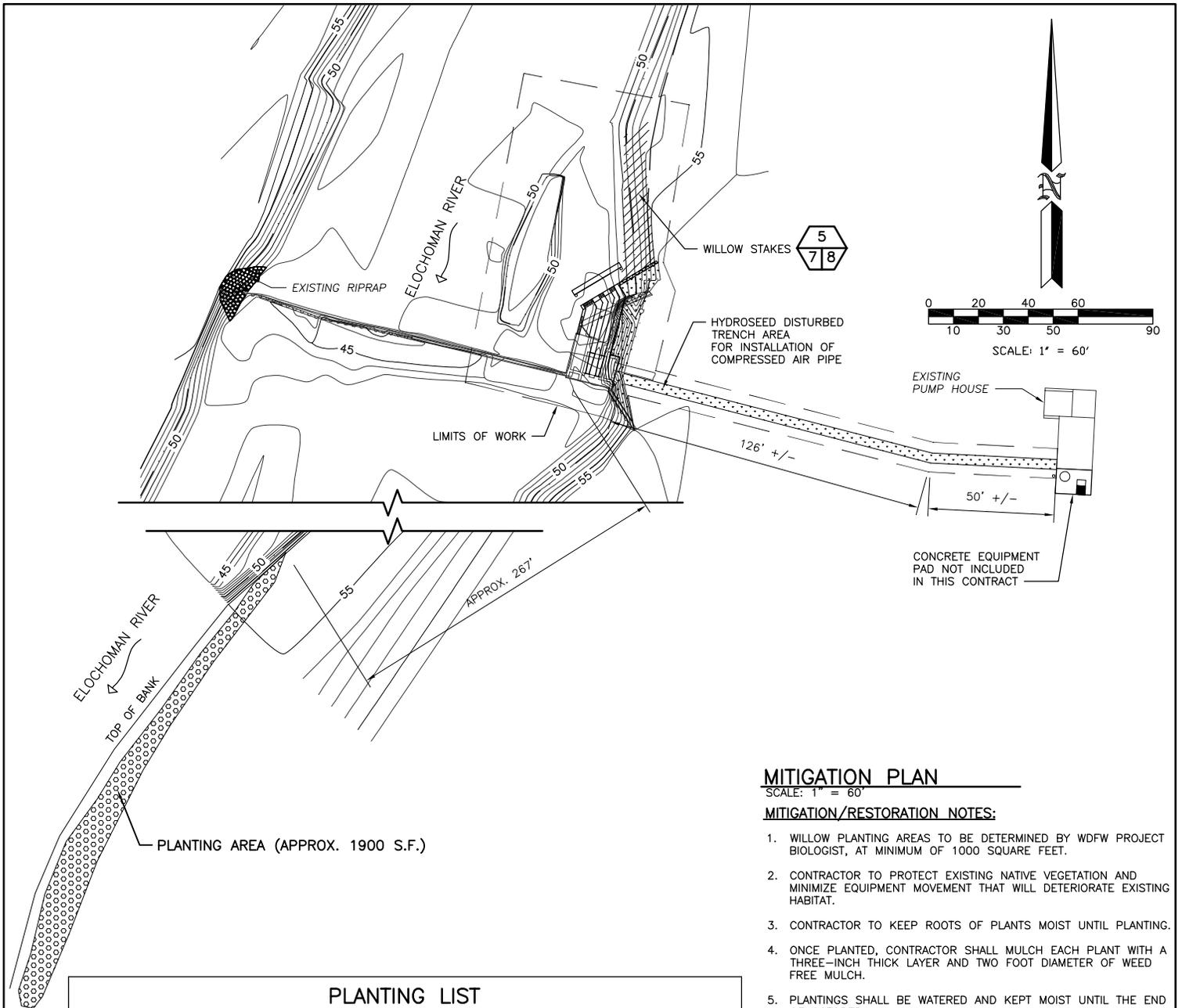
**CONSTRUCTION AND DEWATERING NOTE**

IN ADDITION TO THE BASELINE SCHEDULE, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL A DETAILED CONDITIONS DEWATERING AND PHASING PLAN FOR ALL WORK. THE PLAN SHALL DEMONSTRATE CONFORMANCE WITH THE CONTRACTS LISTED ON THE DRAWINGS. THE PLAN MUST ALSO DEMONSTRATE THE INTERDEPENDENCIES BETWEEN ACTIVITIES AND THE SEQUENCE, MEANS AND METHODS USED TO THE ACCOMPLISH THE WORK.

**CONSTRUCTION, DEWATERING**

- 1 IN WATER CONSTRUCTION SHALL OCCUR BETWEEN JULY 1 AND SEPTEMBER 15.  
ANTICIPATED PEAK FLOWS DURING THESE MONTHS:  
JULY : 127 CFS  
AUGUST : 105 CFS  
SEPTEMBER : 268 CFS
- 2 INSTALL COFFERDAM RUNNING NORTH TO SOUTH IN MAIN CHANNEL UTILIZING EXISTING ISLAND AS A PARTIAL BERM. COFFERDAM TO EXTEND FROM NORTH END OF ISLAND TO THE EAST BANK AND FROM THE SOUTH END OF THE ISLAND TO THE EXISTING WEIR, DIRECTING FLOW TO THE WEST SIDE OF THE WEIR.
- 3 COFFERDAM MINIMUM CREST HEIGHT SHOWN IS RELATIVE TO WSEL DETERMINED THROUGH HYDROLOGIC MODELLING WITH HEC-RAS USING EXTREME HIGH FLOWS (5% LIKELIHOOD OF EXCEEDENCE) DURING THE CONSTRUCTION WINDOW.
- 4 REMOVE EXISTING SHEAR LOG AND VERTICAL SUPPORT STRUCTURE.
- 5 INSTALL SHEET PILE WINGWALL UPSTREAM OF EXISTING INTAKE STRUCTURE.
- 6 CONSTRUCT INTAKE STRUCTURE, TRASH RACK, AIR BURST SYSTEM, AND INTAKE SCREENS.
- 7 DRIVE VERTICAL POST PILES FOR SHEAR LOG AND SECURE SHEAR LOG.
- 8 BACKFILL BEHIND INTAKE STRUCTURE AND NEW WINGWALL.
- 9 HYDROSEED AREA BEHIND NEW WINGWALL, RESTORE EAST BANK PER RESTORATION PLAN.

REFERENCE NUMBER:  
 APPLICANT NAME:  
**WASHINGTON DEPT. of FISH & WILDLIFE**  
 PROPOSED PROJECT:  
**INTAKE REBUILD**  
 LOCATION: **BEAVER CREEK HATCHERY**  
 SHEET **6** OF **14** DATE: **6/2/2017**



**MITIGATION PLAN**

SCALE: 1" = 60'

**MITIGATION/RESTORATION NOTES:**

1. WILLOW PLANTING AREAS TO BE DETERMINED BY WDFW PROJECT BIOLOGIST, AT MINIMUM OF 1000 SQUARE FEET.
2. CONTRACTOR TO PROTECT EXISTING NATIVE VEGETATION AND MINIMIZE EQUIPMENT MOVEMENT THAT WILL DETERIORATE EXISTING HABITAT.
3. CONTRACTOR TO KEEP ROOTS OF PLANTS MOIST UNTIL PLANTING.
4. ONCE PLANTED, CONTRACTOR SHALL MULCH EACH PLANT WITH A THREE-INCH THICK LAYER AND TWO FOOT DIAMETER OF WEED FREE MULCH.
5. PLANTINGS SHALL BE WATERED AND KEPT MOIST UNTIL THE END OF OCTOBER.
6. PACIFIC WILLOW STAKES SHALL BE PLACED ALONG THE WETTED PERIMETER AS WELL AS WITHIN THE HABITAT MIX.
7. HABITAT MIX SHALL BE APPLIED WITHIN THE ONE MAN BOULDERS AND OTHER AREAS TO SPECIFIED ELEVATIONS. HABITAT MIX SHALL MEET THE FOLLOWING GRADATION.

SIEVE	PERCENT PASSING BY WEIGHT
2-INCH	100
1-1/2-INCH	80-95
3/4-INCH	60-80
NO. 4	40 TO 60
NO. 10	30 TO 50
NO. 40	10 TO 20
NO. 200	0 TO 5 MAX (WET SCREEN)

**PLANTING LIST**

SYMBOL	PLANT SPECIES	PLANT TYPE	SPACING (FEET ON CENTER)	NUMBER OF PLANTS	AREA	TOTAL MITIGATION AREA
	NATIVE GRASS SEED	APPLICATION RATE: 2500 LB/ACRE			1120 SF	-
	PACIFIC WILLOW	LIVE STAKES	3 (SPARSE, SEE NOTE 5)	MINIMUM 200	MINIMUM 1000 SF	2015 SF AT A 4:1 RATIO
	SNOWBERRY	SHRUBS, 18-36"	6 BETWEEN TREES	50	1900 SF	
	GRAND FIR	TREES, 18"+ BAREROOT	PLANT IN BEST EXISTING SOILS	10		
	BIG LEAF MAPLE	TREES, 18"+ BAREROOT		10		
	RED ALDER	TREES, 18"+ BAREROOT		10		
PACIFIC WILLOW	TREES, 18"+ BAREROOT	40				
	ONE-MAN BOULDERS, SEE NOTE 6				196 SF	-

REFERENCE NUMBER:

APPLICANT NAME:

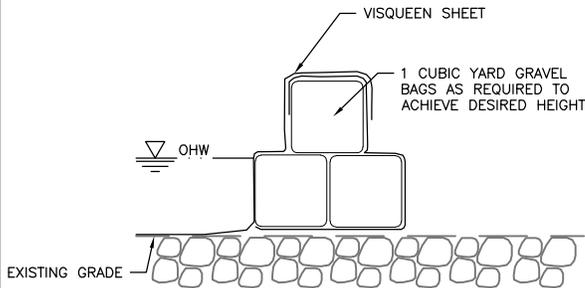
WASHINGTON DEPT. of FISH & WILDLIFE

PROPOSED PROJECT:

INTAKE REBUILD

LOCATION: BEAVER CREEK HATCHERY

SHEET 7 OF 14 DATE: 6/2/2017



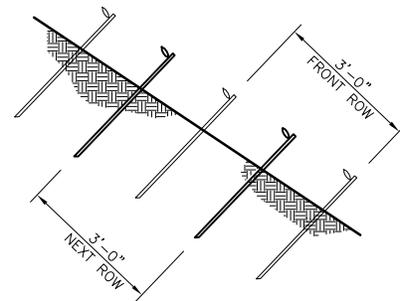
**COFFERDAM  
DETAIL**

NOT TO SCALE



**NOTES:**

COFFERDAMS SHALL BE COMPLETELY SEALED TO PREVENT CONCRETE OR OTHER DELETERIOUS PRODUCTS FROM LEACHING INTO THE STREAM. UPON COMPLETION OF THE PROJECT, ALL COFFERDAM MATERIALS SHALL BE REMOVED.



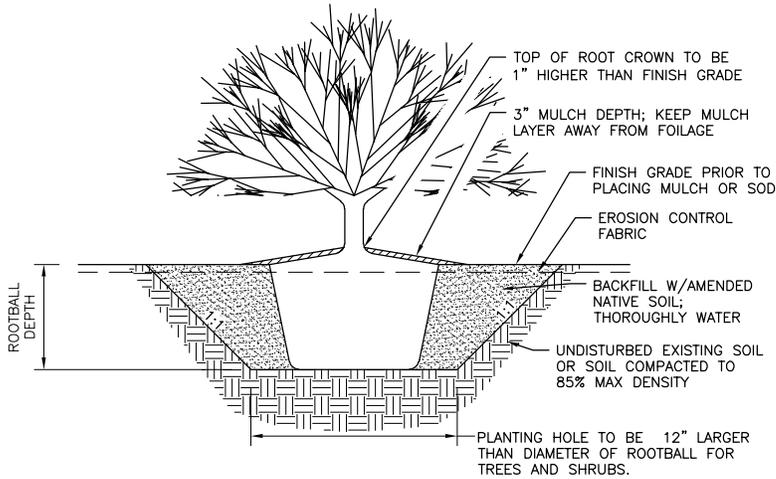
**WILLOW STAKES TYPICAL  
DETAIL**

NOT TO SCALE



**CUTTING NOTES:**

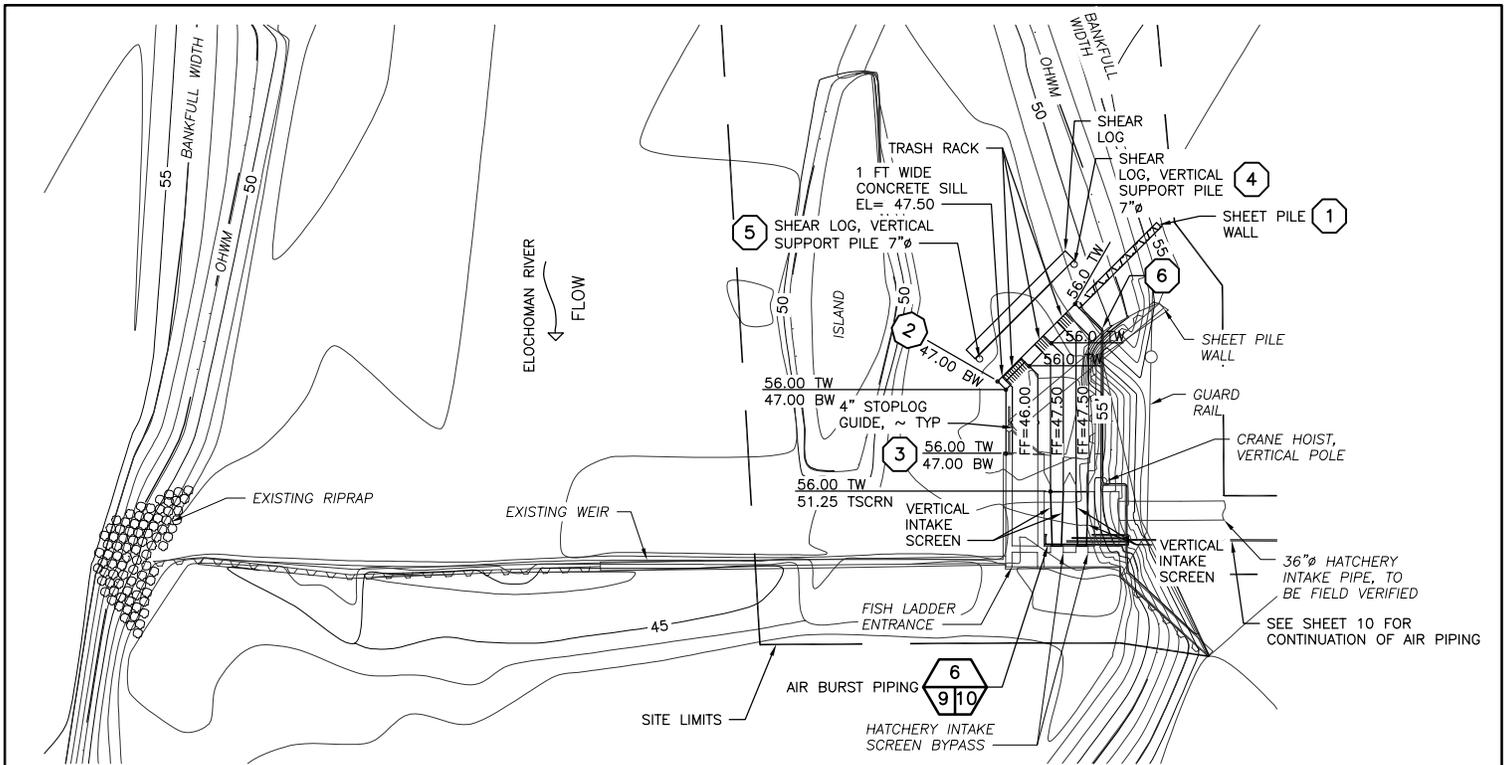
1. CUT 1/4 TO 1 INCH DIAMETER PLANTS OR STEMS AND REMOVE ALL BRANCHES.
2. CUT THE STEMS WITH A KNIFE OR PRUNING SHEARS INTO 24 TO 36 INCH LENGTHS.
3. MAKE A HORIZONTAL CUT ON THE END WHICH WILL REMAIN EXPOSED AND A 45 DEGREE ANGLE CUT ON THE END TO BE PLANTED. MAKE SURE BUDS ON THE PLANT FACE UP.
4. PUSH CUTTING DIRECTLY ONTO SOIL OR CREATE A PILOT HOLE BY POUNDING A PIECE OF REBAR INTO SOIL, AND THEN PUSH IN THE CUTTING.
5. PLANT CUTTINGS AT 3 FOOT ON CENTER INTERVALS, STAGGER ROWS.
6. ONLY 4 TO 8 INCHES OF STEM SHOULD BE EXPOSED.



**TREE PLANTING DETAIL**

NOT TO SCALE

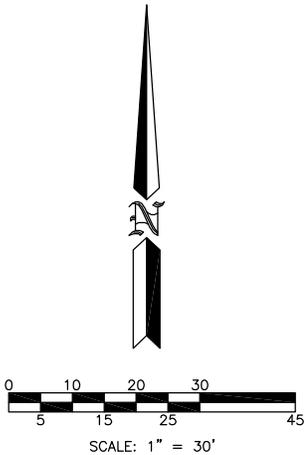
REFERENCE NUMBER:  
 APPLICANT NAME:  
 WASHINGTON DEPT. of FISH & WILDLIFE  
 PROPOSED PROJECT:  
 INTAKE REBUILD  
 LOCATION: BEAVER CREEK HATCHERY  
 SHEET 8 OF 14 DATE: 6/2/2017



### HORIZONTAL CONTROL PLAN

SCALE: 1" = 30'

LAYOUT SCHEDULE		
NO.	NORTHING	EASTING
①	338371.54	924191.91
②	338354.34	924161.12
③	338343.00	924159.57
④	338369.19	924177.31
⑤	338358.46	924159.25
⑥	338358.08	924178.91



REFERENCE NUMBER:  
 APPLICANT NAME:  
**WASHINGTON DEPT. of FISH & WILDLIFE**  
 PROPOSED PROJECT:  
**INTAKE REBUILD**  
 LOCATION: **BEAVER CREEK HATCHERY**  
 SHEET **9** OF **14** DATE: **6/2/2017**

NEW INTAKE  
SCREENS, TYP 4  
VERTICAL 2  
HORIZONTAL

NEW 24"Ø WALL  
MOUNT GATE,  
TYP OF 2

NEW 8"Ø WALL  
MOUNT GATE

ELECTRICAL  
CONTROL  
PANEL, LOCATION  
TO BE FIELD  
VERIFIED

7  
1011 CONTROL VALVE  
PANEL

NEW VERTICAL  
INTAKE  
SCREENS, TYP 8

8  
1011

EXISTING 36"Ø  
SLIDE GATE AND  
HATCHERY  
SUPPLY PIPE

WALL PENETRATION FOR  
AIR PIPE WITH LINK  
SEAL OR OTHER TO  
FILL ANNULAR SPACE

200' +/-

2" AIR PIPING  
TO SCREENS

CONCRETE  
PAD

CAST IRON  
VALVE BOX

1" PVC DRAIN PIPE

3'-0"

RECEIVER TANK  
TOTAL SYSTEM VOLUME  
1040 GAL

2" CA

EX PUMP HOUSE

REQUIRED 42"  
ACCESS  
CLEARANCE  
PER NEC

1" CA

4'-0"

AIR  
COMPRESSOR

COMPRESSOR CONDENSATE  
DRAIN, FIELD ROUTE TO  
VALVE BOX, SLOPE TO  
DRAIN

14'-3"

10'-0"

DETAIL

SCALE: 1" = 4'

6  
910

REFERENCE NUMBER:

APPLICANT NAME:

WASHINGTON DEPT. of FISH & WILDLIFE

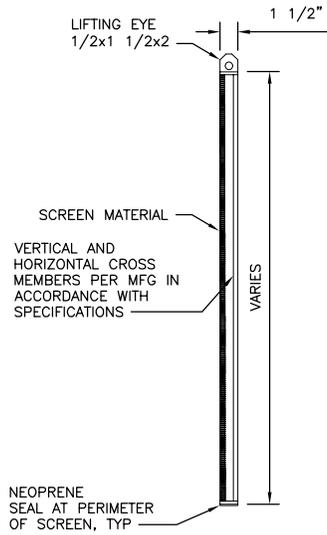
PROPOSED PROJECT:

INTAKE REBUILD

LOCATION: BEAVER CREEK HATCHERY

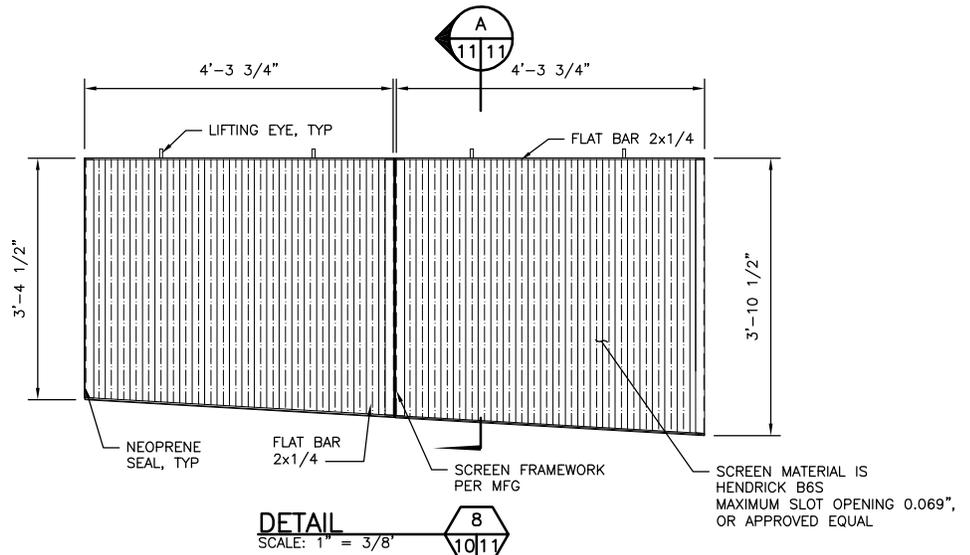
SHEET 10 OF 14

DATE: 6/2/2017



**SECTION**

SCALE: 3/4" = 1'-0"



**DETAIL**

SCALE: 1" = 3/8"

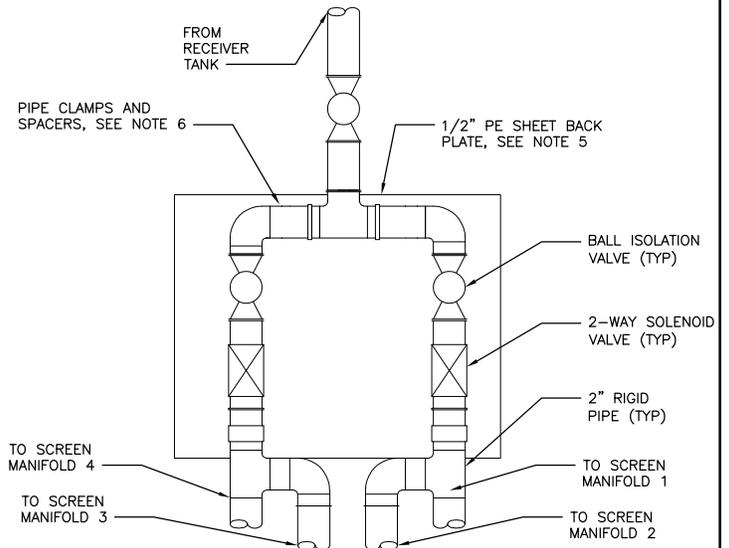


**GENERAL SHEET NOTES**

1. CONCRETE PAD, NOT IN THIS SCOPE. CONCRETE PAD TO BE PROVIDED BY WDFW PRIOR TO INSTALLATION OF EQUIPMENT.
2. ROUTE AIR COMPRESSOR AND RECEIVER DRAINS TO DISCHARGE THROUGH VALVE BOX LID. VALVE BOX SHALL BE PROVIDED WITH OPEN BOTTOM AND 6"-DEEP BY 1 SQ FT DRAIN ROCK LAYER AT BASE.
3. PROVIDE CIRCUIT BREAKERS (1+1 SPARE) TO EXISTING LIGHTING PANEL, SIZED FOR COMPRESSOR PROVIDED. IN ADDITION, PROVIDE ONE 15-AMP, 1-POLE CIRCUIT BREAKER FOR CONNECTION OF BACKWASH CONTROLS AND SOLENOID VALVES.
4. FIELD ROUTE ALL ELECTRICAL CONNECTIONS.
5. INSTALL PIPES TO BACK PLATE USING PIPE CLAMPS AND SPACERS AS NEEDED.
6. FIELD LOCATE CONTROL VALVE PANEL AT ACCESSIBLE HEIGHT OFF GROUND, FIELD ROUTE AIR PIPING FROM RECEIVER TANK ACCORDINGLY.

**EQUIPMENT SPECIFICATIONS**

- A. AIR COMPRESSOR SHALL BE ROTARY-SCREW STYLE, FULLY PACKAGED, BASE-MOUNTED UNIT COMPLETE WITH CONTROL PANEL, PRESSURE GAUGE, SAFETY RELIEF VALVE, AIR FILTRATION SYSTEM, AND AUTOMATIC CONDENSATE DRAIN. THE MOTOR SHALL BE 5 HP, 240 VOLT, 3-PHASE, 60 HERTZ WITH REDUCED VOLTAGE STARTER. THE UNIT SHALL HAVE A NEMA 4 ENCLOSURE RATED OR MODIFIED FOR OUTDOOR INSTALLATION WITH NO SHELTER. THE COMPRESSOR SHALL PROVIDE MAXIMUM OPERATING SOUND LEVEL TO BE 65 DECIBELS. THE COMPRESSOR SHALL BE INGERSOLL-RAND MODEL UP6-7.5-150 OR EQUAL.
- B. THE RECEIVER TANK SHALL BE VERTICALLY MOUNTED, AND SHALL BE RATED 200 PSI MINIMUM IN ACCORDANCE WITH ASME BOILER AND PRESSURE VESSEL CODE. THE TANK SHALL BE COATED WITH A HIGH BUILD, AMINE CURE EPOXY COATING DEMONSTRATED SUITABLE FOR RESISTANCE TO CORROSION, COLOR TO BE SELECTED BY WDFW. TOTAL VOLUME FOR COMPRESSOR AND RECEIVER TANK SHALL BE 1040 GAL.
- C. AUTOMATIC DRAIN VALVE FOR THE RECEIVER TANK SHALL BE AN ELECTRICALLY ACTUATED DRAIN VALVE A SOLID STATE TIMER, RATED FOR MIN 200 PSI AND SUITABLE FOR EXTERIOR INSTALLATION IN THE AMBIENT CONDITIONS AT THE HATCHERY. INITIALLY SET TIMER FOR A VALVE OPEN TIMER OF 2 SECONDS EVERY 45 MINUTES.
- D. BALL VALVES FOR ISOLATION AND DRAIN SHALL BE MANUALLY OPERATED, FULL PORT, RATED FOR 250 PSI OR GREATER.
- E. SOLENOID VALVES SHALL BE 2-WAY, 2-POSITION VALVES, NORMALLY CLOSED WHEN DE-ENERGIZED. FURNISH VALVES WITH WATERTIGHT, NEMA 4 ENCLOSURES.
- F. PRESSURE RELIEF VALVE FOR THE RECEIVER TANK SHALL MEET THE REQUIREMENTS OF ASME BOILER AND PRESSURE CODE. VALVE SHALL OPEN WHEN INLET PRESSURE EXCEEDS 150 PSI.



**DETAIL**

SCALE: 1" = 1"



REFERENCE NUMBER:

APPLICANT NAME:

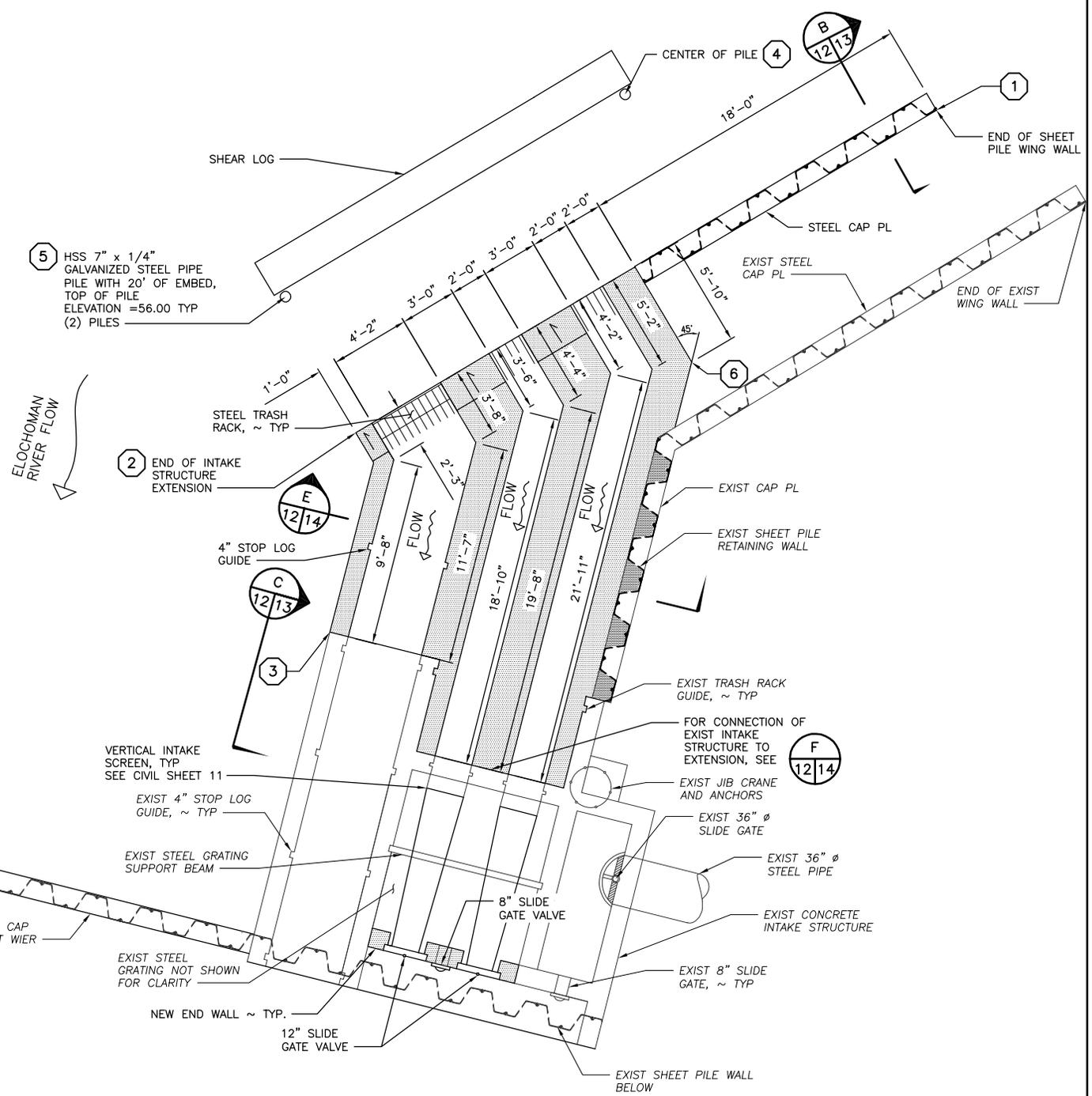
WASHINGTON DEPT. OF FISH & WILDLIFE

PROPOSED PROJECT:

INTAKE REBUILD

LOCATION: BEAVER CREEK HATCHERY

SHEET 11 OF 14 DATE: 6/2/2017



5 HSS 7" x 1/4" GALVANIZED STEEL PIPE PILE WITH 20' OF EMBED, TOP OF PILE ELEVATION =56.00 TYP (2) PILES

2 END OF INTAKE STRUCTURE EXTENSION

4" STOP LOG GUIDE

VERTICAL INTAKE SCREEN, TYP SEE CIVIL SHEET 11

EXIST 4" STOP LOG GUIDE, ~ TYP

EXIST STEEL GRATING SUPPORT BEAM

EXIST CAP PL AT WIER

EXIST STEEL GRATING NOT SHOWN FOR CLARITY

NEW END WALL ~ TYP.

12" SLIDE GATE VALVE

8" SLIDE GATE VALVE

EXIST 36" Ø SLIDE GATE

EXIST 36" Ø STEEL PIPE

EXIST CONCRETE INTAKE STRUCTURE

EXIST 8" SLIDE GATE, ~ TYP

EXIST SHEET PILE WALL BELOW

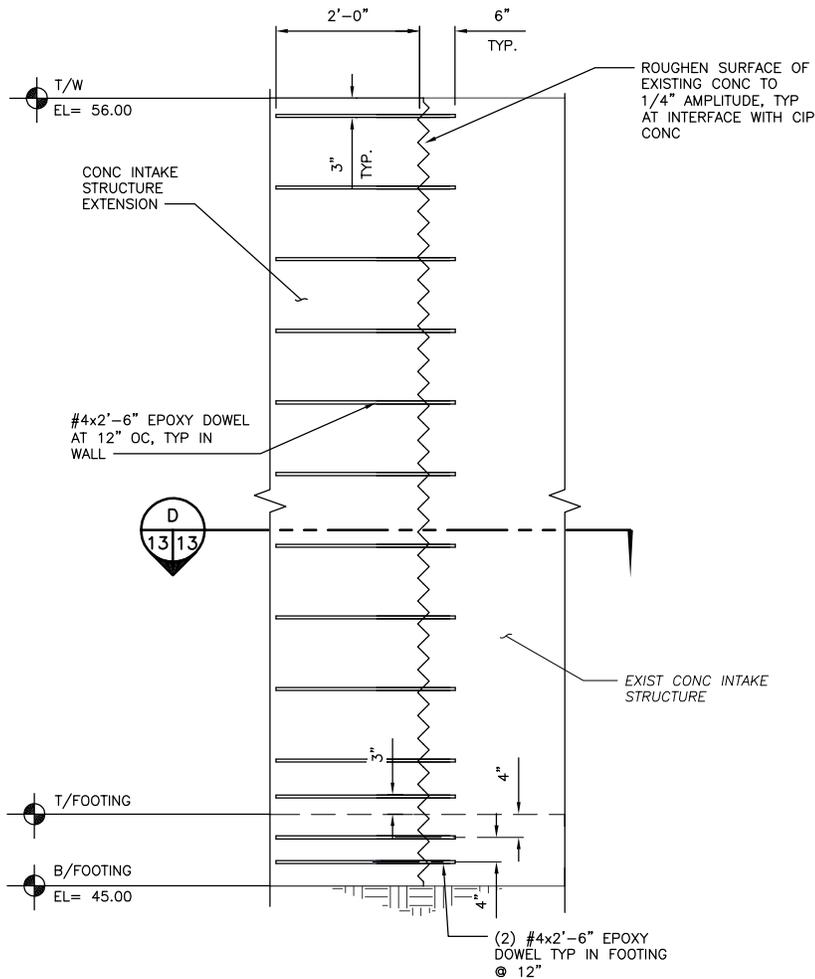
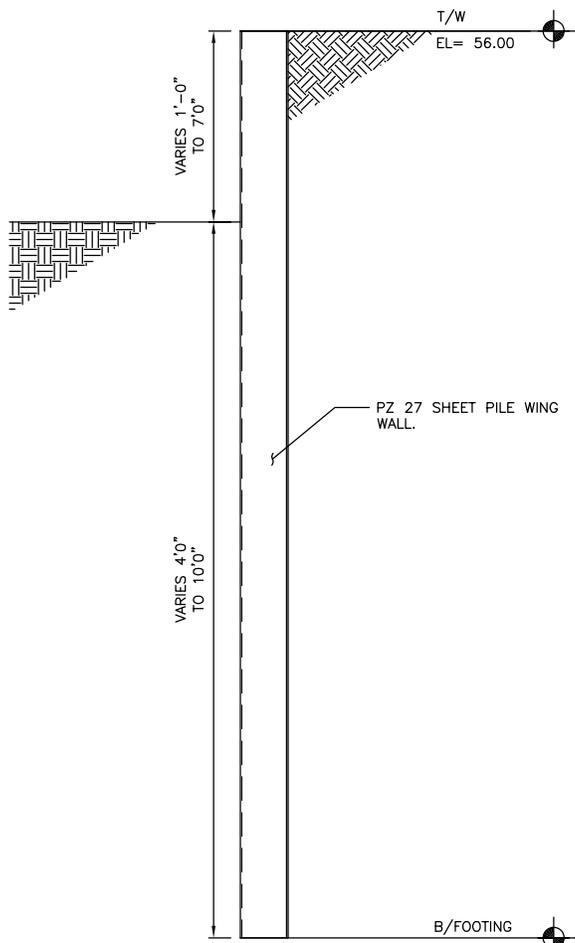
**INTAKE PLAN**

SCALE: 1/8" = 1'-0"

**KEY:**

-  INDICATES CAST-IN-PLACE CONCRETE
-  INDICATES LAYOUT CONTROL POINT, SEE SHEET 9

REFERENCE NUMBER:  
 APPLICANT NAME:  
**WASHINGTON DEPT. of FISH & WILDLIFE**  
 PROPOSED PROJECT:  
**INTAKE REBUILD**  
 LOCATION: **BEAVER CREEK HATCHERY**  
 SHEET 12 OF 14 DATE: 6/2/2017



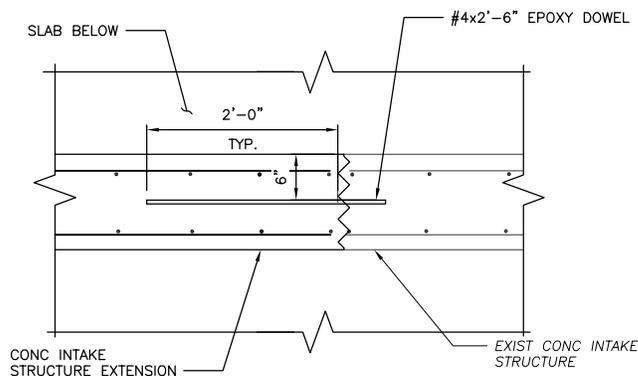
**SHEET PILE WING WALL SECTION**

SCALE: 1/4" = 1'-0"



**CONNECTION FROM EXISTING INTAKE WALL**

SCALE: 3/8" = 1'-0"



**TYPICAL CONNECTION BETWEEN WALLS**

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



REFERENCE NUMBER:

APPLICANT NAME:

WASHINGTON DEPT. of FISH & WILDLIFE

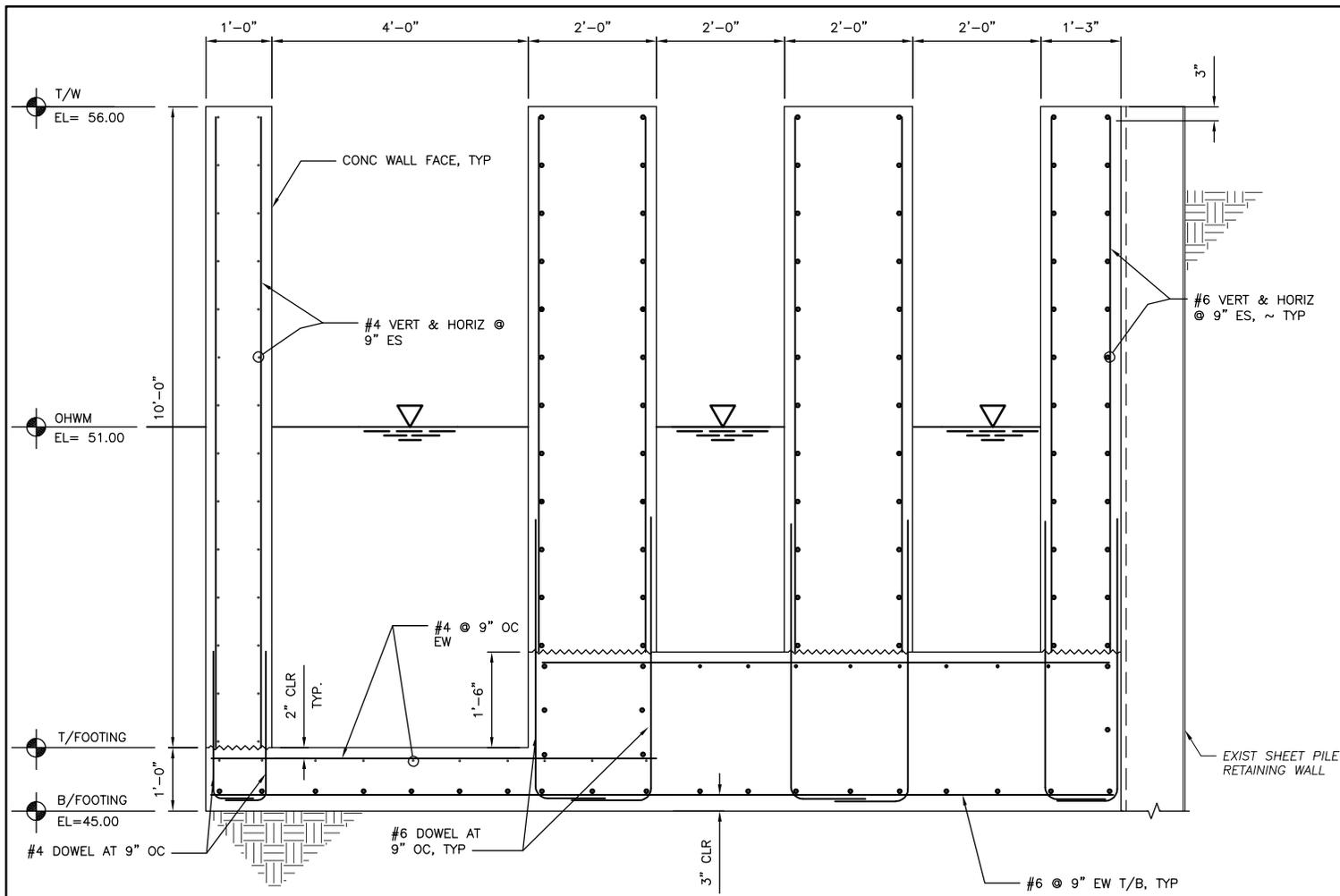
PROPOSED PROJECT:

INTAKE REBUILD

LOCATION: BEAVER CREEK HATCHERY

SHEET 13 OF 14

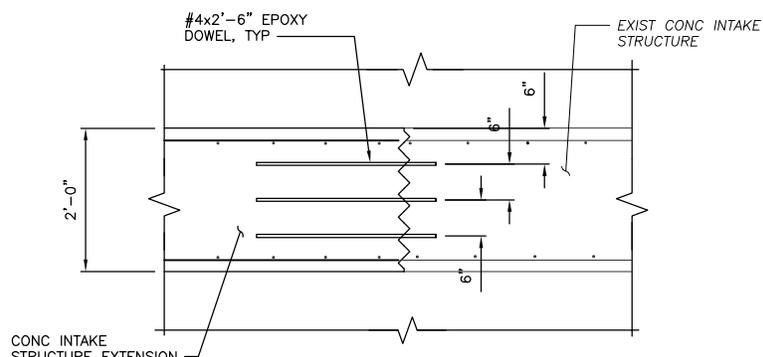
DATE: 6/2/2017



**INTAKE STRUCTURE EXTENSION SECTION**

SCALE: 3/8" = 1'-0"

E  
12|14



**CONNECTIONS AT 2' WALLS**

SCALE: 3/8" = 1'-0"

F  
12|14

REFERENCE NUMBER:  
 APPLICANT NAME:  
 WASHINGTON DEPT. of FISH & WILDLIFE  
 PROPOSED PROJECT:  
 INTAKE REBUILD  
 LOCATION: BEAVER CREEK HATCHERY  
 SHEET 14 OF 14 DATE: 6/2/2017