Appendix A

Fall Creek Fish Facility Operating Procedures

Fall Creek Dam Fishway

Standard Operating Procedure

Prepared by:

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FACILITY DESCRIPTION

Adult Passage Facility

Upstream migrating fish (spring Chinook salmon, winter and summer steelhead, and other migratory species) enter a short fishway at the base of the dam, either through a raceway at the downstream end or through one of two submerged orifices that enter from the secondary stilling basin. Fish proceed upstream through a series of pools, and then must ascend over a single steel finger weir structure and into a holding pool at the head of the fishway. The finger weir prevents fish from dropping back out of the holding pool. The fishway operator uses a power crowder to sweep fish in the holding pool into a holding tank for subsequent anesthetizing. The operator then transfers the anesthetized fish into a 1,500 gallon-capacity liberation truck for subsequent release to Site “C”, an improved release site located approximately 1.5 miles upstream of Fall Creek Reservoir.. All non-target species are released back into the tailrace upon enumeration and tagging.

Figure 1. Fall Creek Fish Collection Facility with features description.

ADULT RETURNS

Migration Timing

Adult spring Chinook return to the Fall Creek Fishway from April – October (Figure 1). Peak returns occur in June and drop off precipitously throughout the summer.

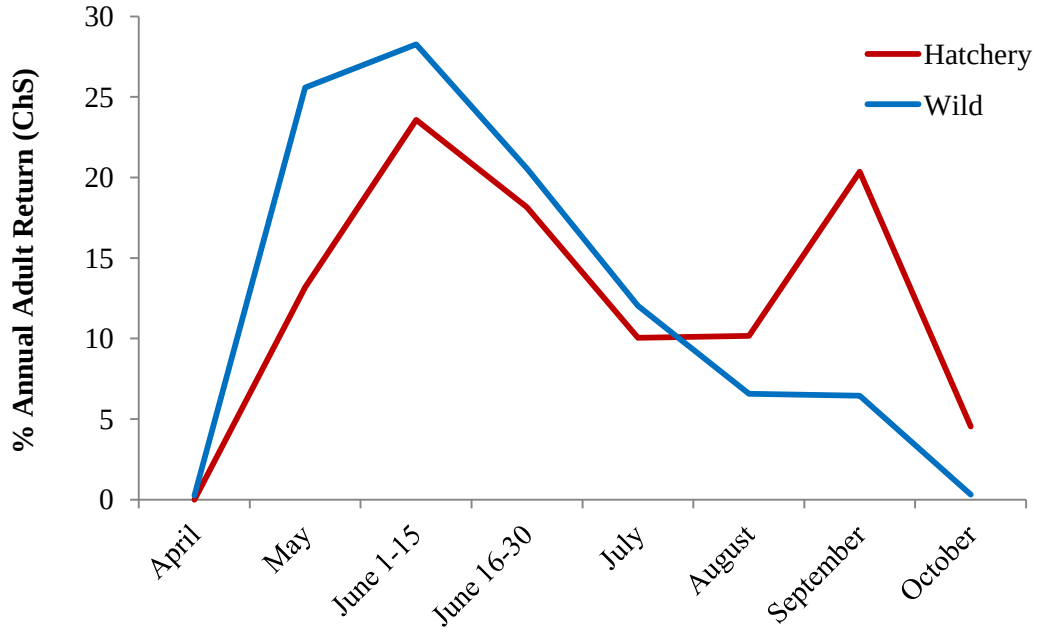


Figure 2. Percentage of hatchery and wild adult spring Chinook salmon returning to the Fall Creek Fishway by month, 2002-11.

Numbers

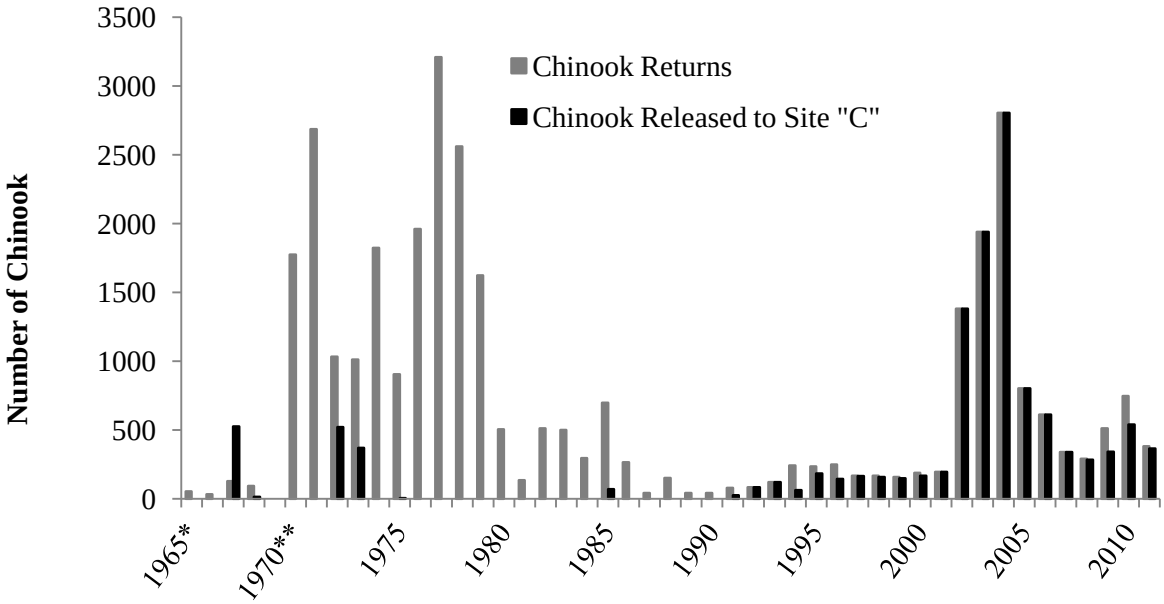


Figure 3. Numbers of adult spring Chinook salmon returning to the Fall Creek Fishway and outplanted above dam, 1965-2011.

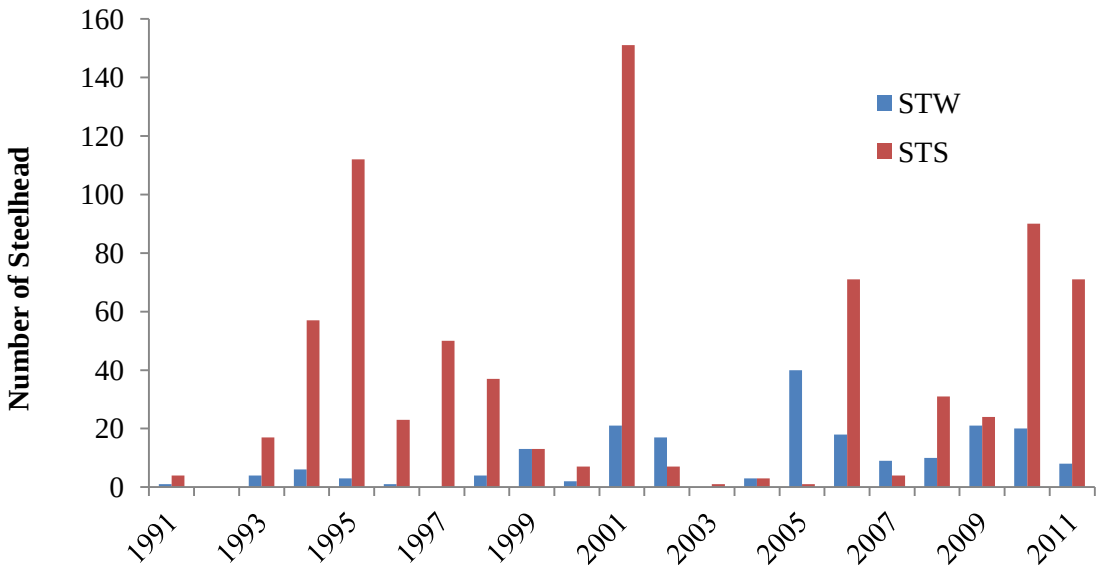


Figure X. Numbers of winter and summer steelhead returning to the Fall Creek Fishway, 1991-2011.

Juvenile Passage Facility

Downstream juvenile fish passage facilities consist of fish horns arranged in groups of three, each at the 800-, 765-, and 720-foot elevations on the upstream face of the dam. Fish horns are used to pass and collect emigrating salmon and steelhead smolts. Each tier contains a large, intermediate, and small fish horn. Three individual conduits serve to pass emigrants from the horns through the dam and discharge them into the fishway approach channel. The three large horns are connected to a 36" diameter pipe conduit, the intermediate horns to a 24" pipe, and the small horns to an 18" pipe. The volume of attraction flow into the transport system can be varied by operating any of the three sets of horns, according to size and elevation. Moreover, the operator can manipulate temperature of the discharge when the reservoir is stratified thermally by opening horns in the tier nearest the desired thermal stratum, provided that the water temperatures in the reservoir are known at each level.

The head of water over the horns and valve openings determine the volume of discharge from the emigrant-transport system. At full pool, maximum discharge does not exceed about 280 cfs. Ball valves, located at the base of each horn adjacent to the transport conduit regulate flow into the fish horns. Gate valves, located in the downstream segments of the individual transport pipes are used in instances of emergency.

The facility was designed where downstream migrants enter the open horns, pass through the ball valves into the respective transport conduits that originate at the top of the dam in a venting chamber, and are transported down the face of the dam on the reservoir side. The transport pipes turn downstream under the dam near the intake structure. At this point, the 30" and 24" pipes constrict to 24" and 18", respectively. Immediately downstream of the dam, the transport pipes expand and rise abruptly into a deceleration unit, from which water and fish discharge at a reduced velocity onto a set of perforated plates known as a separator unit. At the separator, most of the water falls through the perforations into a supply pool that subsequently provides attraction water for the upstream-migrant facility. A small amount of water, along with the

downstream migrants, passes off the end of the perforated plating into a concrete conduit. This channel leads to the fishway approach channel and into the stream below.

The fish horn system proved to be ineffective and smolts were instead passed downstream through 1977 by draining the reservoir in the fall. After 1977 the reservoir was kept up through Labor Day for recreation and the smolts exited through the regulating outlets under high head and high flow conditions. The reservoir rearing program was a success for a number of years following project construction, producing returns of fish in excess of the original run. However, returns after 1977 continued to decline. ODFW assessed the cause of the decline and determined that reservoir operations should be returned to a modified version of the pre-1977 conditions to reduce the high mortality associated with passing the fish through the regulating outlet at high head and flow (Downey and Smith 1992).
The modified drawdown procedure began in 1992 and continued until 1998. The reservoir was drawn down beginning in July from elevation 830 ft at full pool to elevation 824 ft by 15 August and 815 ft by Labor Day. Discharges were raised after Labor Day to 1200 cfs to bring the lake down below the minimum flood control pool elevation (710 ft) by 15 October. Discharges were lowered at this point to bring the pool to elevation 694 ft by the end of October. Operations guidelines included that the system be shut down when the forebay elevation comes within 20 feet of the center line of the fish horn inlets. The procedure was halted when rearing of fingerlings in the reservoir was abandoned in favor of releasing 100,000 marked smolts below the dam. The horn system is presently operated only to provide supplemental water to the adult collection facility.

Currently, we operate Fall Creek dam and reservoir under a modified pre-1977 regime. In fall of 2010 we drew the reservoir down to 690'. In 2011, USACE drew down the reservoir to 670' which showed great migration numbers of spring Chinook smolts.

SCHEDULE

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fishway Operating												
Winter Steelhead												
Spring Chinook												
Trap Closed - Maintenance												

A. Preseason Preparation

1. Before starting the fishway on March 15th, contact the WVP Operations Superintendant and the General Maintenance Supervisor at least two weeks in advance to have the fishway opened by a powerhouse operator.

2. Inspect the holding pool crowder, hopper hoist, and fish transport truck for proper operation. Repairs and alterations will be made as needed.

3. Inspect the fish release site (Site "C") to determine if any maintenance is needed. (See map in appendices)

4. Keep the appropriate WVP personnel aware of activities and dates.

B. General Guidelines

Protocol for Hauling Fish

- Haul fish Mondays and Thursdays or until daily counts increase where schedule needs modification.
    - Fish transported upstream of dam: unmarked adult and jack spring Chinook salmon, winter steelhead, and unmarked migratory fish as directed by ODFW district fish biologist.
    - Record sex and count (if applicable)
    - Fish released into tailrace: marked adult spring Chinook salmon, summer steelhead, unmarked steelhead (presumed summer) after ~1 June 2011 or unmarked steelhead in poor condition.
    - Record sex and count (if applicable)
- Winter steelhead (unmarked/ dark "spawning" colors)
    - Take genetic samples (caudal fin clip)
    - Radio tag
    - PIT tag
    - Floy tag
        - Record sex, length, and all tag#'s
- Hatchery spring Chinook salmon
    - Floy tag
        - Record sex and tag#
- Summer steelhead
    - Floy tag
    - Potentially PIT tag
        - Record sex and tag#
- Spring Chinook salmon juveniles
    - PIT tag (scan first)

        - Record length, weight, tag#, condition
        - Scan for PIT tag
- Unmarked rainbow trout
    - Scan for PIT tag

FISH COLLECTION PROTOCOL

Fisheries Biologist and Fish Truck Driver

*only certified crane operators may operate fish hopper controls

1. Call LOP control room operator (541-937-3072) and notify that you are entering the breaker room.
2. Turn on all necessary electrical breaker switches.
3. Check holding pool to determine the number of fish in trap.
4. Before filling the fish truck with water, run the pump clear of any rust or other debris.
5. Fill the fish truck tank to the appropriate level with clean water and add NovAqua stress coat.
6. Fill the loading hopper with water and add 4-5oz of clove oil/ethanol mixture to hopper, mix well.
7. Close loading hopper lids and lower into position*.
8. Crowd fish from the trap into the loading hopper.
9. Hand-load or net fish from the hopper into the transport truck.
10. Process fish according to sampling protocol.
11. Record and safely release all other fish into tailrace via release pipe with running water*.
12. Complete all necessary data sheets in their entirety.
13. Empty anesthetic tank water onto pavement and allow to evaporate.

Methods

- Handling: Minimize the amount of time a fish is out of water

- Fish Anesthetic and Disposal: Ethanol/ Clove Oil mixture (9:1) at 4-5 oz /200gallons of water), adjust accordingly; dispose onto pavement and allow to evaporate

- Treatment: All transport tanks are treated with Nov-Aqua, per manufacturer's instructions, to reduce stress during transport

- Loading Density: Transport adult spring Chinook salmon and winter steelhead at a density of $\leq$ 25 gallons of water per fish (60 fish/1,500 gallon tank). When hauling other "native" fish (rainbow, cutthroat, whitefish, lamprey, etc.) adjust density accordingly

- Oxygen: Oxygen levels in the transport truck water tank should never exceed saturation of 12 parts per million (ppm or mg/L) or drop below 7 ppm (mg/L)

- Temperature: Fish will not be released into receiving waters with a seven day mean maximum temperature >65° F or weekly mean temperature >60°F (check online USGS site located below "Site C" prior to hauling). Drivers will measure the temperature of the water in the transport tank and the receiving water prior to releasing the fish. If the temperature difference between the receiving water and tank water is >7°F, the water will be tempered to a difference of <5°F at a rate of 1°F/6 minutes

- Floy tagging: all summer steelhead (adipose- clipped) and hatchery spring Chinook salmon (adipose- clipped)- Record Floy tag number and release into tailrace release pipe

- Pit tagging: all winter and summer steelhead, scan with FS2001F Reader before and after tagging (make sure reader saves codes into a new file for each release location), record data

- Fish transported upstream of dam: unmarked Chinook salmon, unmarked winter steelhead, and all unmarked native fish.

- *Release into tailrace: marked Chinook salmon, marked steelhead, unmarked steelhead (after ~1 June), marked rainbow, juvenile Chinook salmon, and non-native fish.

FISH COLLECTION PROTOCOL

Fish Truck Operator

1. Call the Lookout Point Control Room Operators and tell them you are going to be opening the fishway building. Direct number is 541-937-3072.
2. Make sure the appropriate breakers (hoist, crowder and fill pumps) are all in the "ON" position.
3. Go to the operator's panel near the hopper hoist drain and turn on the power switch (upper left inside panel).
4. Make sure everyone is clear and turn on the overhead fill pipe and run until water is clear.
5. Position the hopper, using the hopper control joystick (lower left of control box), into position over the drain on the north end of the hoist frame. Make sure it is securely on the ground. ***DURING HOIST OPERATIONS THE OPERATOR IS RESPONSIBLE TO KEEP EVERYONE AWAY FROM THE ELEVATED HOPPER!***
6. Move fill pipe over the hopper, make sure the drain valve on the bottom is closed, and open the hopper doors on top.
7. ***BEFORE FILLING, WAIT UNTIL EVERYONE IS ON SITE AND READY TO WORK FISH.*** Turn on the water supply and fill to proper level, adding or having the fish biologists add clove oil/ethanol mixture (4-5 oz). Once hopper is filled to the proper level, turn off the water and cover the hopper by closing the lids. ***MAKE SURE THE***

FILL PIPE HAS BEEN MOVED AND WILL CLEAR THE HOPPER WHEN IT IS LIFTED!

TRUCK OPERATION

1. Check the truck out according to the pre-operations requirements.

2. Check the O2 level and aerator systems for proper operation and to make sure there is enough oxygen.
3. Confirm backup oxygen supply is sufficient for operation.
4. Check the operation of the knife gate and chute.
5. Position the truck under the fill pipe and move the cover from the fill hole.
6. Fill the truck to the proper level.
7. Position the truck where directed and then turn on at least 2 aerators while loading. If loading is prolonged check the O2 saturation frequently to assure levels are acceptable.

LOADING

1. Lift, move, lower and make sure the hopper is in the proper position in the "pit".
2. After hopper is in the pit, move the crowder carriage back (to the east away from the hopper) with the screen in the full up position.
3. Lower the screen.
4. Move the crowder all the way to the hopper end (west) then raise the screen up to push fish into the hopper. NOTE: the biologists working the fish may want to have small amounts of fish in the hopper at one time so you may have to repeat this step several times only allowing a few fish at a time in the hopper.
5. Load fish as directed by biologists, once truck is full or collection is completed; secure the screen lid on top of the truck tank.
6. Haul the fish to their destination and release.

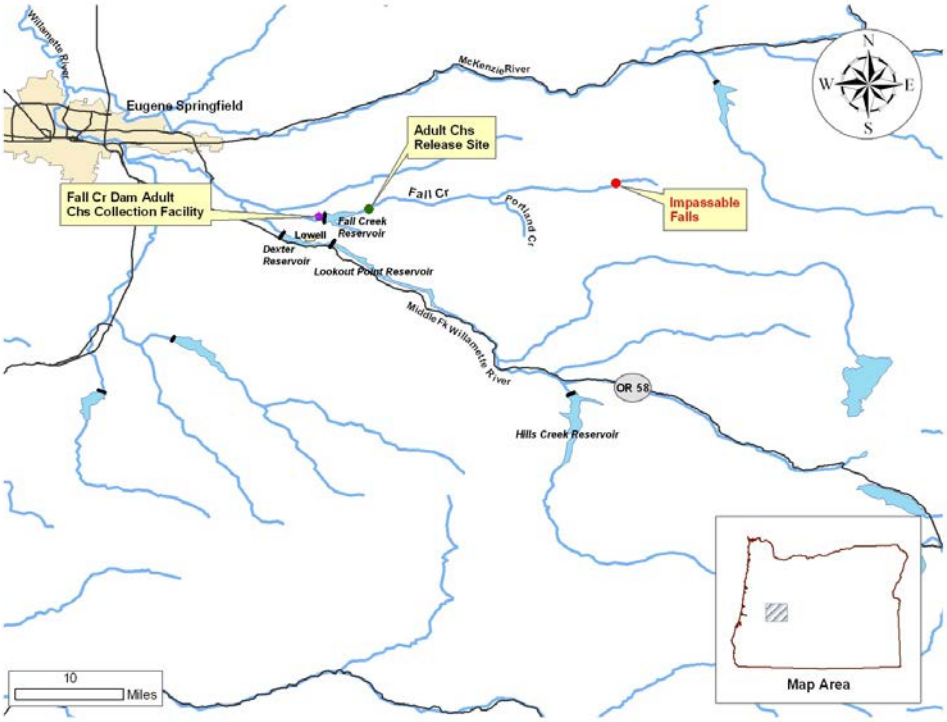
RELEASE

1. Reverse down to the waters edge.
2. Take a tank temperature and release site temperature (river temp) and write them down.
3. Remove the rear cover and extend the chute fully out.
4. Back down until the chute reaches the water.
5. Open the knife gate and release the fish.
6. Check to be sure all fish are out of the truck.
7. Shut the knife gate and secure the protective plate back on.
8. Retract the chute into the truck.
9. Turn off the aerators and O2 systems and bottles.
10. Secure the release site.

FINISH AND SECURE

1. Return and secure the fish truck to the fish compound.
2. Drain the water from the hopper onto the parking lot, (usually kept on the drain area under the fill pipe).

3. Make sure the crowder screen is all the way up to the west wall, and raised to the upper water level so fish cannot jump out.
4. Press the shut off buttons (2 red ones) located in the control panel and close and lock box.
5. Go into the fish house and secure any breakers that need to be turned off.
6. Fill out fish handling report.
7. Secure buildings and gates.
8. Report to operator upon exiting facility grounds.



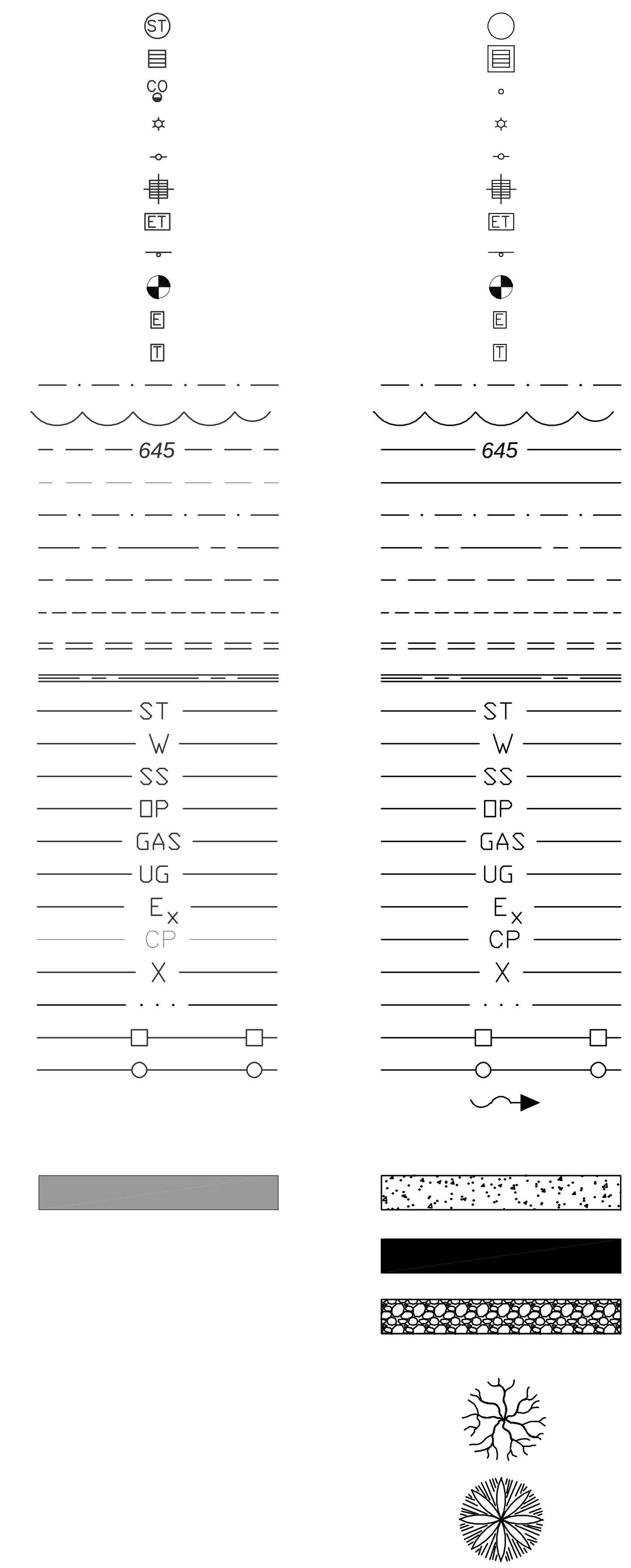
Appendix B

Project Design Drawings

ABBREVIATIONS

AHR	= ANCHOR	NPS	= NOMINAL PIPE SIZE
APPROX	= APPROXIMATE	OAL	= OVER ALL LENGTH
ARCH	= ARCHITECTURAL	OD	= OUTSIDE DIAMETER
BC	= BOLT CIRCLE	OF	= OUTSIDE FACE
BF	= BOTTOM FACE	OL	= OUTSIDE LAYER
BG	= BACK GOUGE	OPP	= OPPOSITE
BHN	= BRINELL HARDNESS NUMBER	OS	= OUTSIDE
BL	= BOTTOM LAYER	O/O	= OUT TO OUT
BMP	= BEST MANAGEMENT PRACTICE	PCC	= PRECAST CONCRETE
BW	= BOTTOM OF WALL	PCF	= POUNDS PER CUBIC FOOT
B/B	= BACK TO BACK	PCR	= POINT OF CURB RETURN
C	= CHANNEL	PERF	= PERFORATED
CB	= CATCH BASIN	MB	= MACHINE BOLT
C/C	= CENTER TO CENTER	PL	= PLATE
C/E JT	= CONTRACTION/EXPANSION JOINT	PLF	= POUNDS PER LINEAR FOOT
CIP	= CAST-IN-PLACE	PMF	= PROBABLE MAXIMUM FLOOD
CJ	= CONSTRUCTION JOINT	PRC	= POINT OF REVERSE CURVTURE
CJP	= COMPLETE JOINT PENETRATION	PS CONC	= PRESTRESSED CONCRETE
CLR	= CLEAR	PSF	= POUNDS PER SQUARE FOOT
CONC	= CONCRETE	PSI	= POUNDS PER SQUARE INCH
CONN	= CONNECTION	PVC	= POLYVINYL CHLORIDE
CONT JT	= CONTRACTION JOINT	R	= RADIUS
CMP	= CORRUGATED METAL PIPE	RCP	= REINFORCED CONCRETE PIPE
CP	= COMPLETE PENETRATION	RH	= ROUND HEAD
CRES	= CORROSION RESISTING STEEL	REF	= REFERENCE
CSP	= CORNER SUPPORT PIECE	REINF	= REINFORCEMENT
CSK	= COUNTERSINK	REQD	= REQUIRED
D&G	= DRILL & GROUT	RO	= ROUGH OPENING
EG	= EXISTING GRADE	ROW	= RIGHT-OF-WAY
EF	= EACH FACE	S=	=SLOPE EQUALS
EJ	= EXPANSION JOINT	SCHED	= SCHEDULE
EQL SP	= EQUALLY SPACED	SHT	= SHEET
EW	= EACH WAY	SIM	= SIMILAR
EXAM	= EXAMINATION	STAG SPL	= STAGGER SPLICE
FB	= FLAT BAR	STD	= STANDARD
FCM	= FRACTURE CRITICAL MEMBER	STIR	= STIRRUP
FD	= FLOOR DRAIN	STL	= STEEL
FF	= FINISH FLOOR	SF	= SQUARE FOOT (FEET)
FH	= FIRE HYDRANT	SS	= SANITARY SEWER
FT	= FEET	SSCO	= SANITARY SEWER CLEANOUT
FW	= FLAT WASHER	SSMH	= SANITARY SEWER MANHOLE
G=	= GUTTER EQUALS	SST	= STAINLESS STEEL
GA	= GAUGE	ST	= STREET
GB	= GRADE BREAKS	STA	= STATION
HD	= HEAVY DUTY	STC	= STEEL TROWELED CONCRETE
HM	= HOLLOW METAL	STMH	= STORM SEWER MANHOLE
HSS	= HOLLOW STRUCTURAL SECTIONS	SYM	= SYMMETRICAL
ID	= INSIDE DIAMETER	T&B	= TOP AND BOTTOM
IF	= INSIDE FACE	TBD	= TO BE DETERMINED
IL	= INSIDE LAYER	TF	= TOP FACE
INFO	= INFORMATION	TJ	= TROWELED JOINT
IS	= INSIDE	TL	= TOP LAYER
JT	= JOINT	TO	= TOP OF
KSF	= KIPS PER SQUARE FOOT	TOC	= TOP OF CONCRETE
KSI	= KIPS PER SQUARE INCH	TOF	= TOP OF FOOTING
L	= ANGLE	TOS	= TOP OF SLAB
LG	= LONG	TOW	= TOP OF WALL
LTH	= LENGTH	TYP	= TYPICAL
LONG	= LONGITUDINAL	UNO	= UNLESS NOTED OTHERWISE
MECH	= MECHANICAL	U/S	= UPSTREAM
MH	= MANHOLE	VBS	= VERTICAL BARRIER SCREEN
MK	= MARK	VERT	= VERTICAL
NAT	= NATURAL	W/	= WITH
NC	= NO CHAMFER	WP	= WELD PLATE
NF	= NEAR FACE	WP	= WORK POINT
NO	= NUMBER	WS	= WATERSTOP
NOM	= NOMINAL	WCJ	= WALL CONSTRUCTION JOINT
		WWF	= WELDED WIRE FABRIC

EXISTING / PROPOSED / DESCRIPTION



MANHOLE
CATCH BASIN
CLEAN OUT
LIGHT
UTILITY POLE
FENCE/GATE POST
TRANSFORMER
SIGN
TEST PIT
ELECTRIC SERVICE BOX
TELEPHONE PEDESTAL
ORDINARY HIGH WATER
TREE DRIPLINE
5' INTERVAL CONTOUR
1' INTERVAL CONTOUR
PROPERTY LINE
CENTERLINE
EASEMENT LINE
SAWCUT LINE
EDGE OF AC OR GRAVEL
CURB
STORM DRAIN
WATER
SANITARY SEWER
OVERHEAD POWER
GAS
UNDERGROUND ELECTRICAL
PRIMARY OVERHEAD POWER
STORM CULVERT
FENCE
FLOWLINE
SEDIMENT FENCE
TREE PROTECTION FENCE
DRAINAGE FLOW DIRECTION

CONCRETE PAVING
ASPHALT PAVING
GRAVEL CONSTRUCTION ENTRANCE

DECIDUOUS TREE
EVERGREEN TREE

GENERAL NOTES

1. FOR CURBS AND SIDEWALKS, USE 3000 PSI MIX PER SPECIFICATION SECTION 03 31 01.00 25 - CAST-IN PLACE STRUCTURAL CONCRETE FOR CIVIL WORKS.

2. FOR CONCRETE PAVING, SUE 45OO PSI MIX PER SPECIFICATION SECTION 03 31 01.00 25 - CAST-IN PLACE STRUCTURAL CONCRETE FOR CIVIL WORKS.

3. PER ASPHALT PAVING, SEE SPECIFICATION SECTION 32 12 16.00 25 - HOT MIX ASPHALT (HMA) FOR ROADS

LEGEND

1. DETAILING CONVENTION SHALL BE INTERPRETED AS SHOWN BELOW:

X / X-XXX — DETAIL IDENTIFICATION SYMBOL; SHEET NUMBER ON WHICH DETAIL APPEARS

XX / X-XXX DETAIL SCALE: X" = X'-X" — SHEET NUMBER ON WHICH DETAIL WAS TAKEN* — *WHEN BLANK, DETAIL APPEARS ON THE SAME SHEET AS IT WAS TAKEN

2. SECTIONING CONVENTION SHALL BE INTERPRETED AS SHOWN BELOW:

XX / X-XXX — SECTION IDENTIFICATION SYMBOL; SHEET NUMBER ON WHICH SECTION APPEARS* — *WHEN BLANK, DETAIL APPEARS ON THE SAME SHEET AS IT WAS TAKEN

3. DRAWING NUMBER CONVENTION SHALL BE INTERPRETED AS SHOWN BELOW:

MTF-1.102-2/302

PROJECT CODE
FEATURE CODE
SEPARATOR SYMBOL
SERIES CODE
SEQUENCE NUMBER
SEPARATOR SYMBOL
DISCIPLINE CODE
SEPARATOR SYMBOL

4. SHEET IDENTIFICATION CONVENTION SHALL BE INTERPRETED AS SHOWN BELOW:

SA302

DISCIPLINE
AREA FEATURE
SEQUENCE NUMBER (00 THRU 99)
TYPE DESIGNATOR (0 THRU 9)

5. FILE NAME CONVENTION SHALL BE INTERPRETED AS SHOWN BELOW:

S-02-1.101A302-MTF-C.DGN

DISCIPLINE ALPHA CODE
SEPARATOR SYMBOL
DISCIPLINE NUMBERIC CODE
SEPARATOR SYMBOL
SERIES CODE
SEQUENCE NUMBER
FILE EXTENSION
PURPOSE CODE
SEPARATOR SYMBOL
FEATURE CODE
PROJECT CODE
SEPARATOR SYMBOL

US Army Corps of Engineers®
PORTLAND DISTRICT

P&S REVIEW 30%

MARK | DESCRIPTION | DATE | APPR.

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: DEREK MCCURDY, P.E.
DATE: 12/02/2013
DRAWN BY: G2ECDJNS
CHECKED BY:
SOLICITATION NO.:
SUBMITTED BY: MARK W. BRODESSER, P.E.
CONTRACT NO.:
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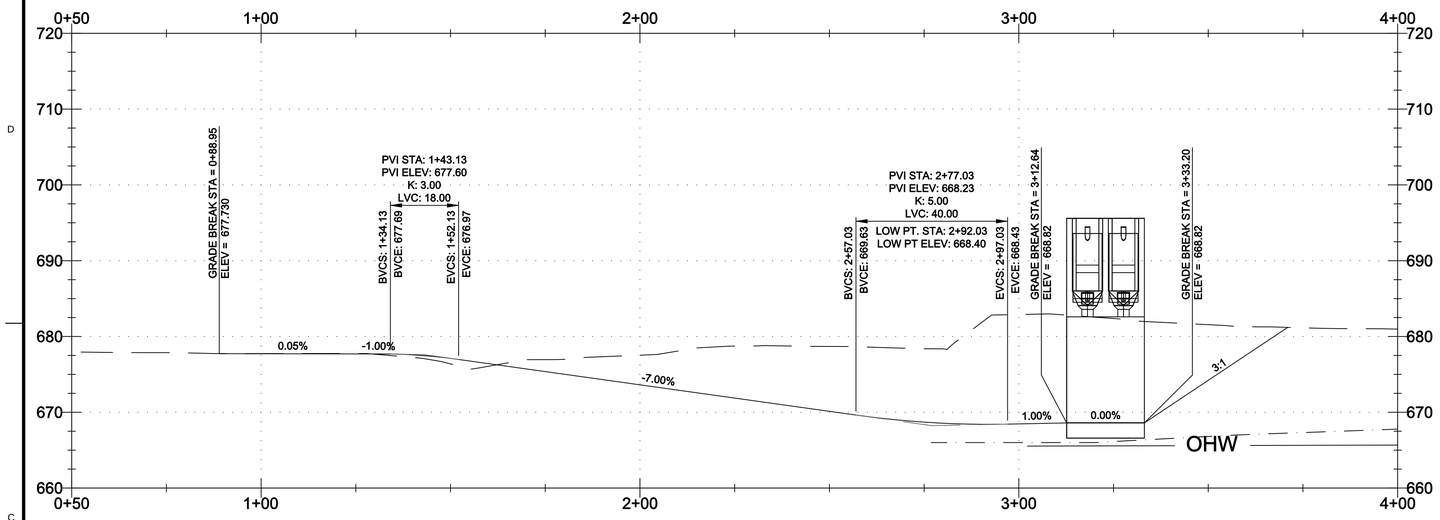
PLOT DATE:
FILE NUMBER:
SIZE: ANSI F
FILE NAME: FLF1.102_C-00XLEG.dwg

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

CIVIL NOTES AND LEGEND

SHEET IDENTIFICATION
C-001

BORDER VERSION UPDATE [07-2013]



ACCESS ROAD PROFILE

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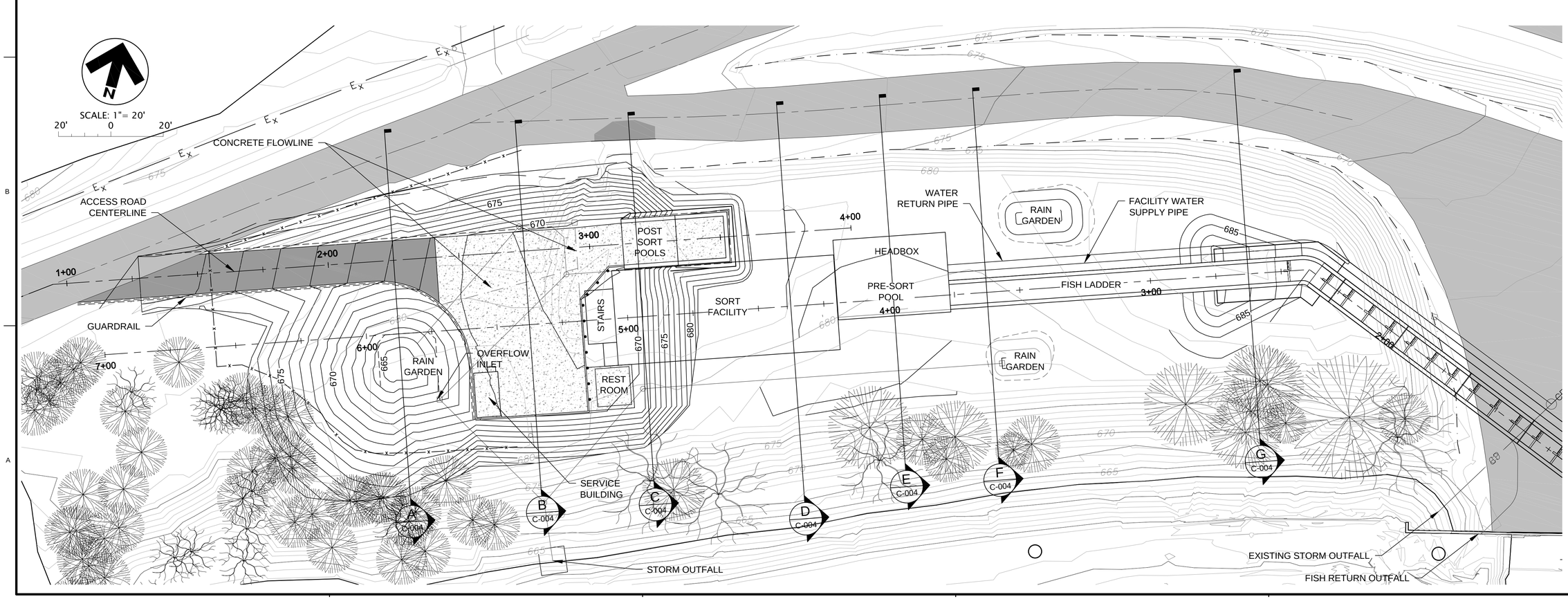

US Army Corps of Engineers
PORTLAND DISTRICT

P&S REVIEW 30%

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

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DRAWN BY: G2ECDJT9
SUBMITTED BY: MARK W. BRODEGGER, P.E.
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DATE:
CHECKED BY:
PLOT DATE: $$$$$$
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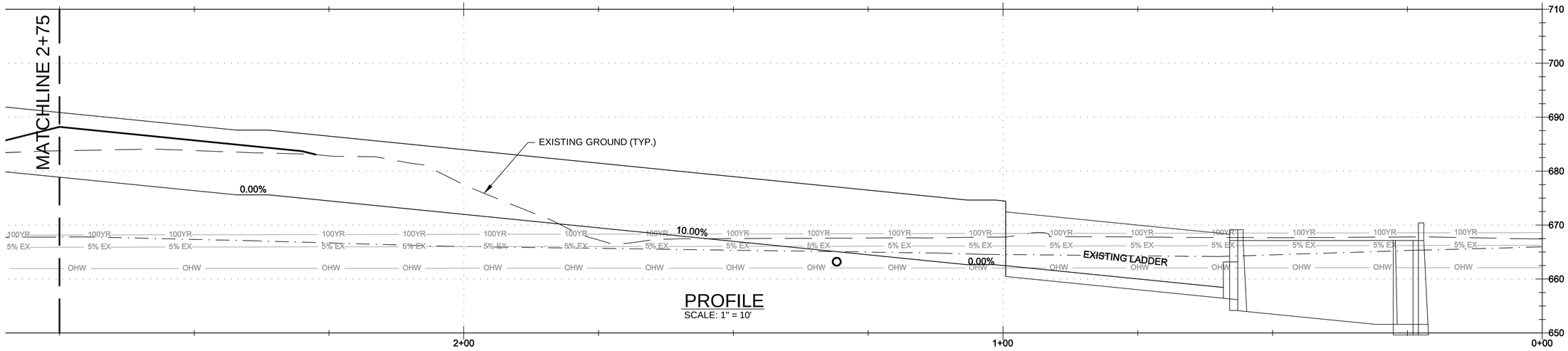
SOLICITATION NO.:
CONTRACT NO.:
DRAWING NUMBER:

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

SITE PLAN

SHEET IDENTIFICATION
C-002



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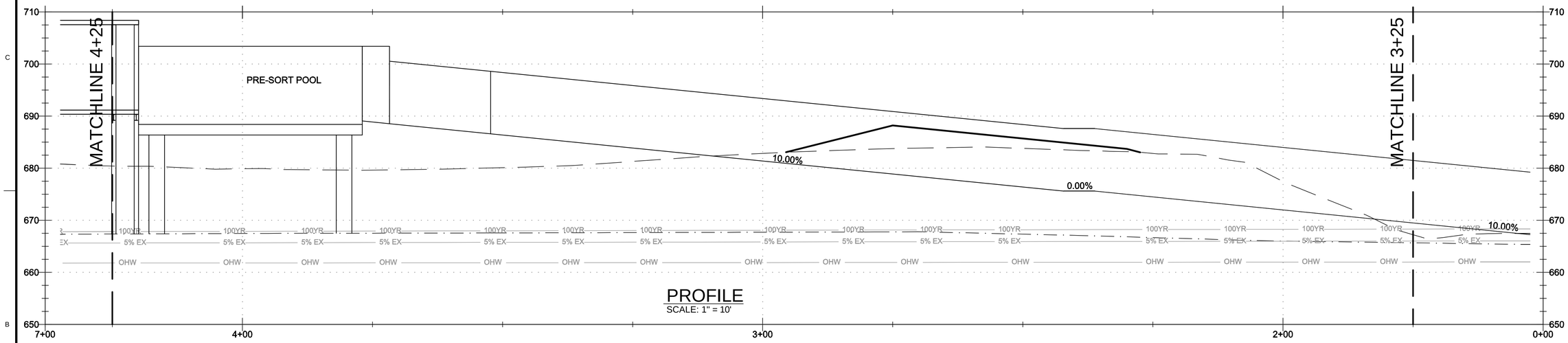

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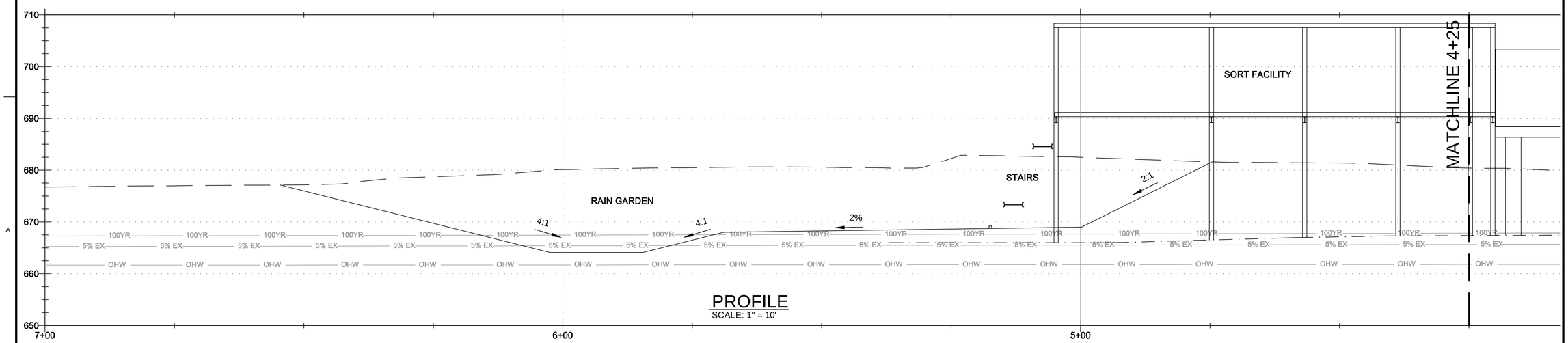

PROFILE
SCALE: 1" = 10'

US Army Corps of Engineers
PORTLAND DISTRICT

MARK	DESCRIPTION	DATE	APPR.
	P&S REVIEW 30%		

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CONTRACT NO.:
DRAWING NUMBER:
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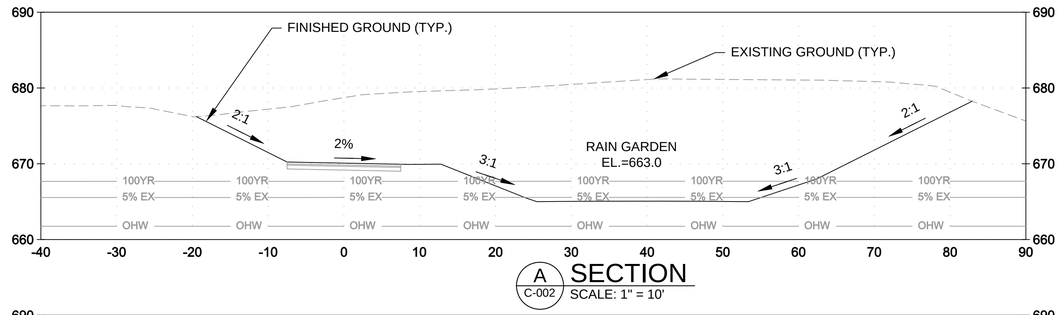
PORTLAND DISTRICT
PORTLAND, OREGON

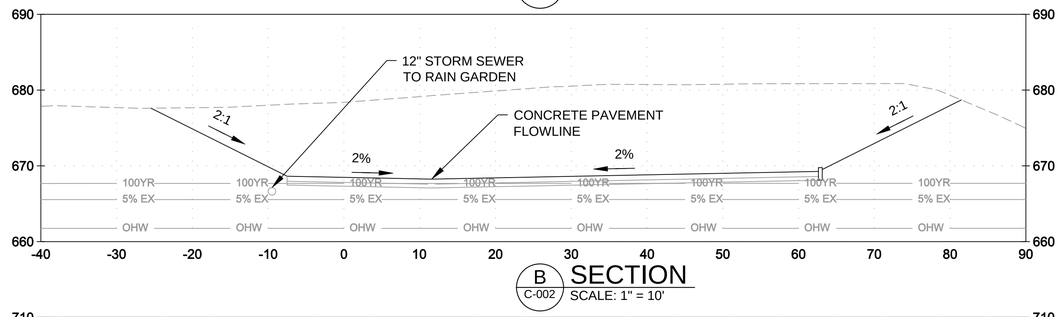
FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

SITE PROFILE

SHEET IDENTIFICATION
C-003



A SECTION
C-002 SCALE: 1" = 10'



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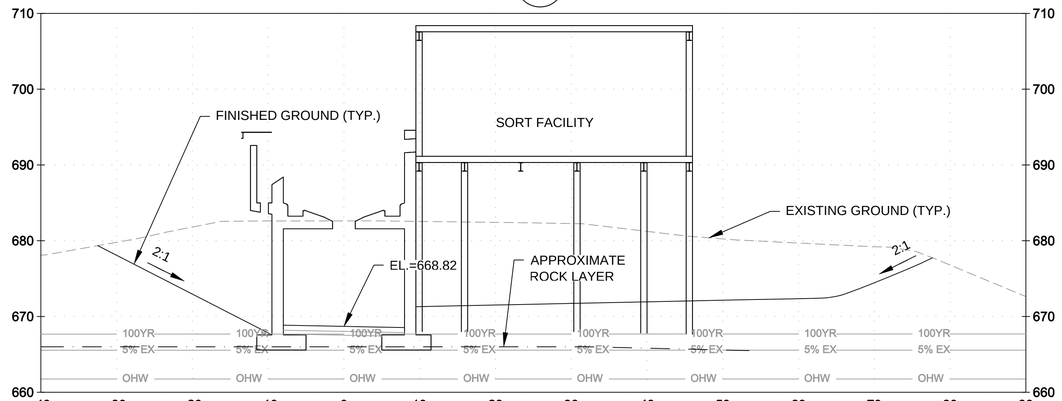
C-002 SCALE: 1" = 10'



C SECTION
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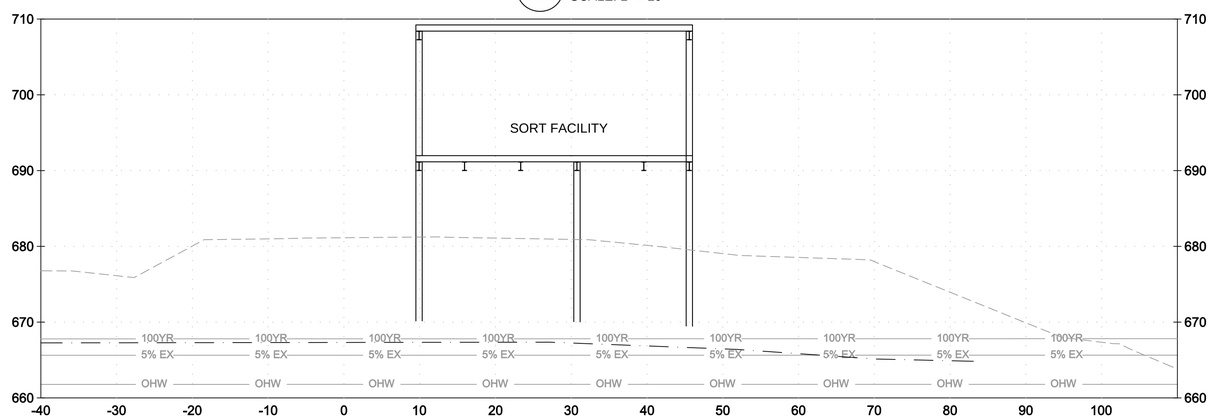

D SECTION
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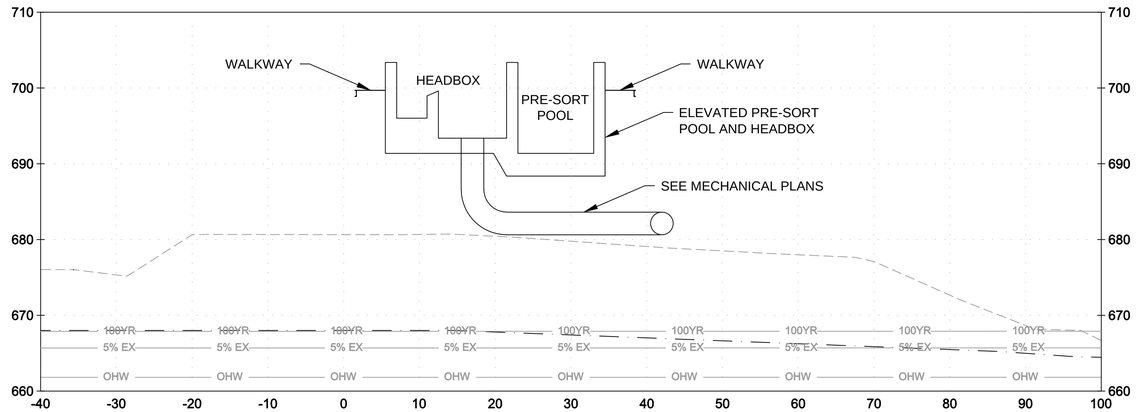

E SECTION
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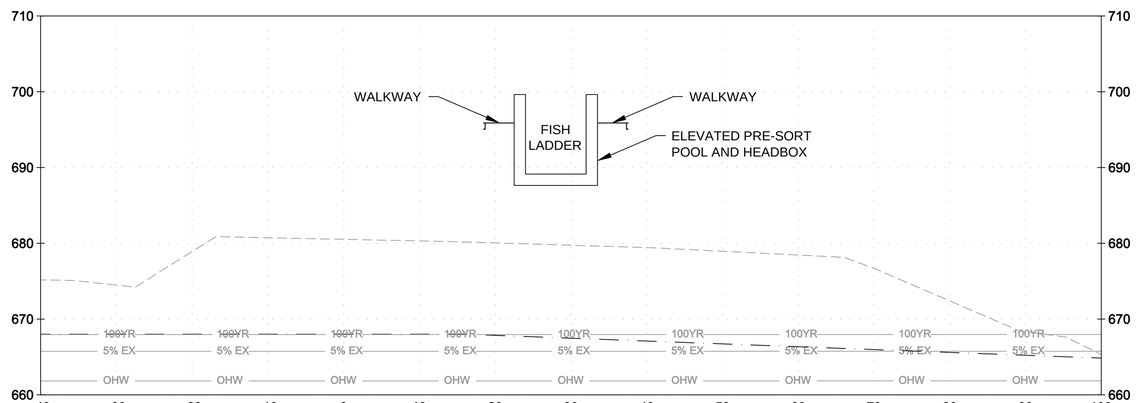
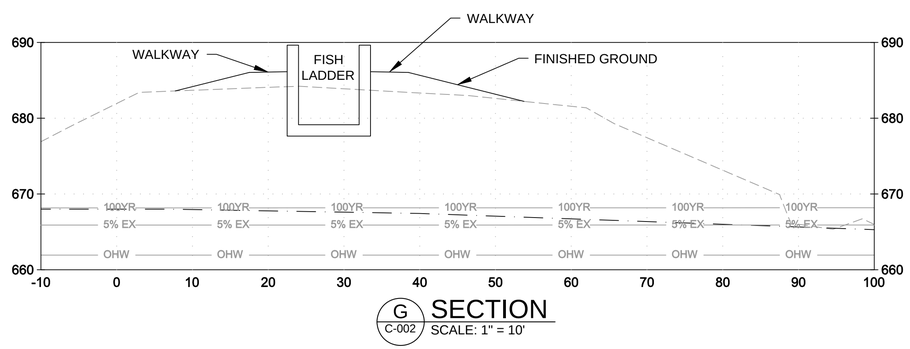


F SECTION
C-002 SCALE: 1" = 10'



G SECTION
C-002 SCALE: 1" = 10'

US Army Corps of Engineers
PORTLAND DISTRICT

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DESIGNED BY: ROBERT E. MORICK, P.E.
DRAWN BY: G2ECDJT9
CHECKED BY:
SUBMITTED BY: MARK W. BRODESSER, P.E.
PLOT SCALE: 1:1
PLOT DATE: 8/17/2023
SOLICITATION NO.:
CONTRACT NO.:
DRAWING NUMBER:
SIZE: ANSI D
FILE NAME: FLFI 1302_C-004SECT.dwg

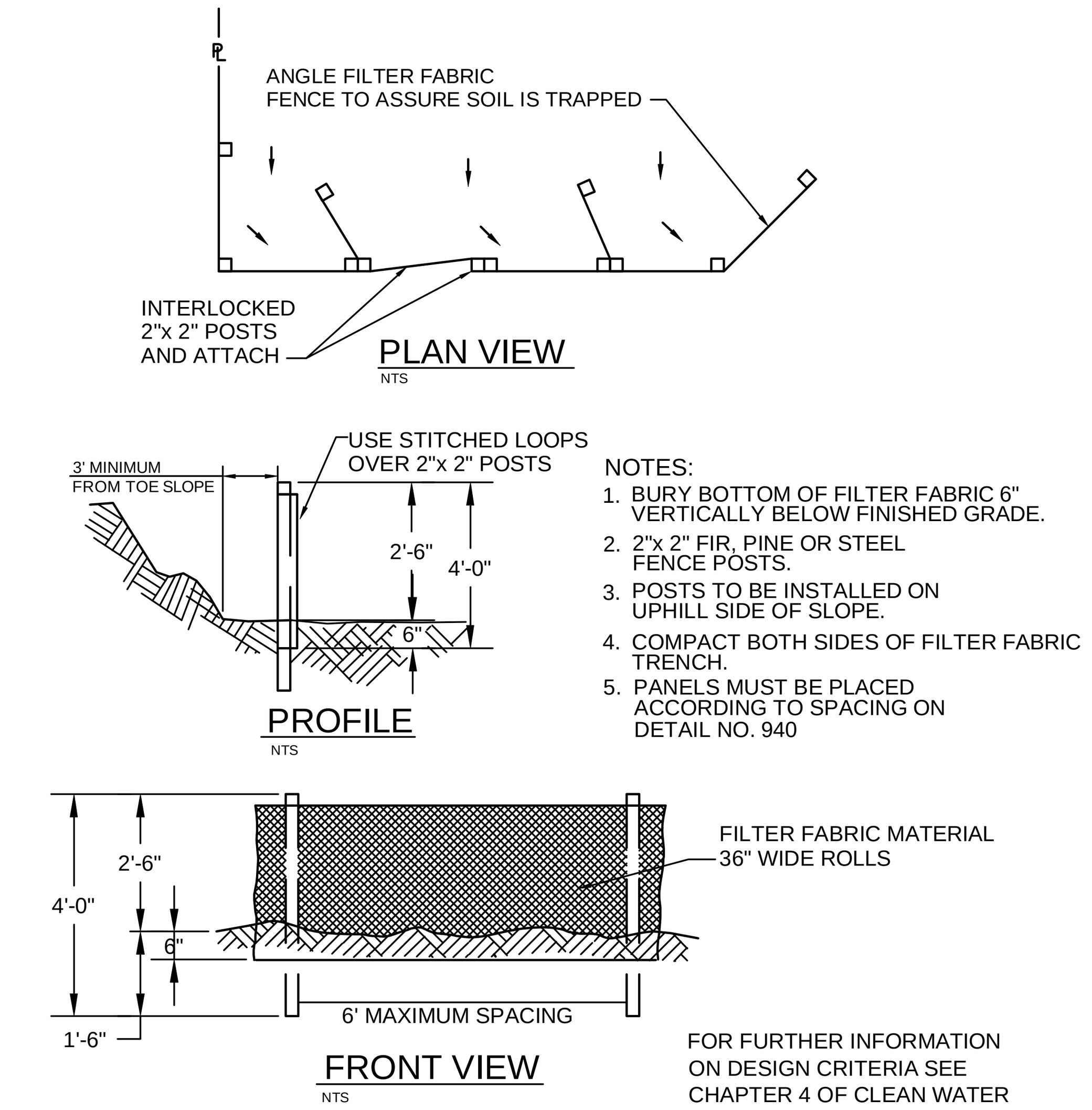
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

SECTIONS

SHEET IDENTIFICATION
C-004

A SEDIMENT FENCE (C-003)

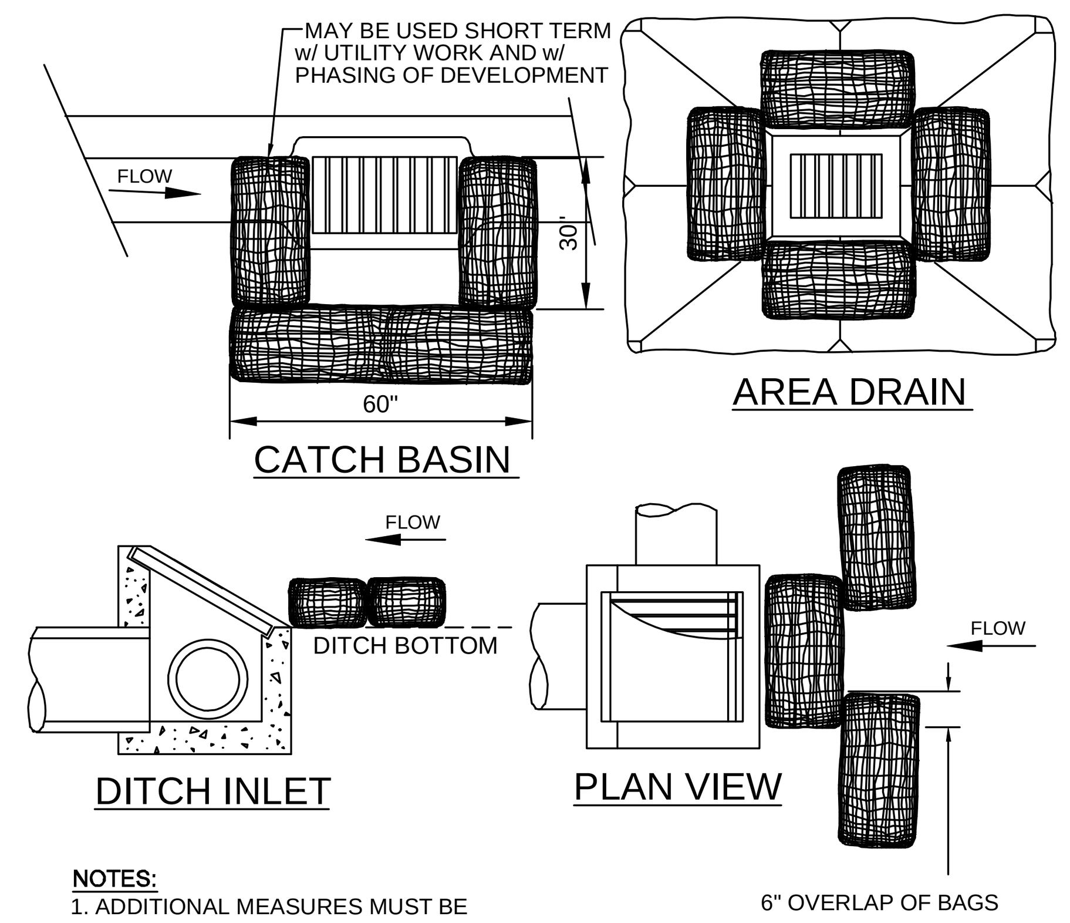


NOTES:
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
5. PANELS MUST BE PLACED ACCORDING TO SPACING ON DETAIL NO. 940

NOTES:
COMPOST BERM IS AN ACCEPTABLE ALTERNATIVE IF 1'-6" BURY DEPTH IS NOT ACHIEVABLE IN ROCK

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

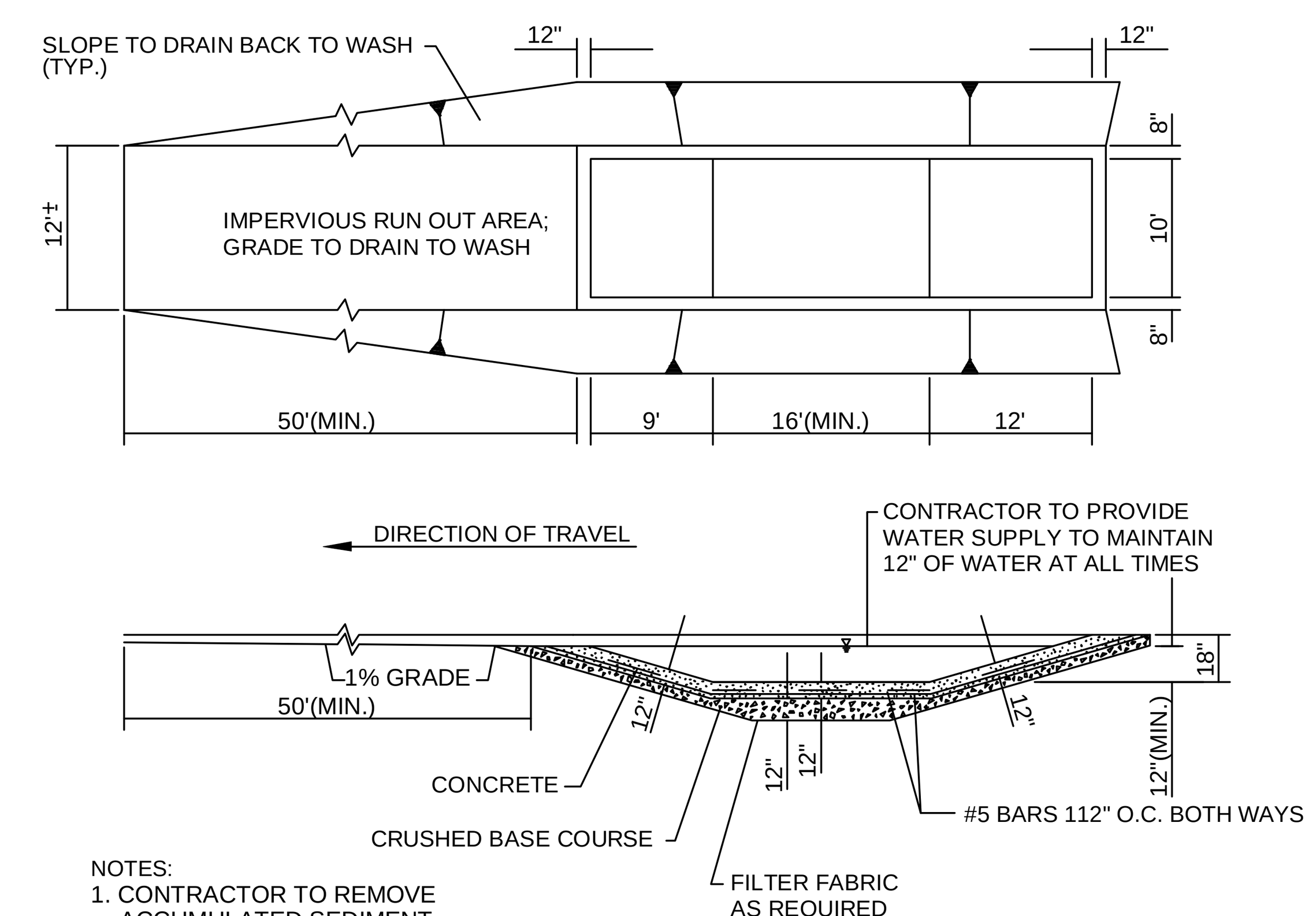
B INLET PROTECTION (C-003)



NOTES:
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

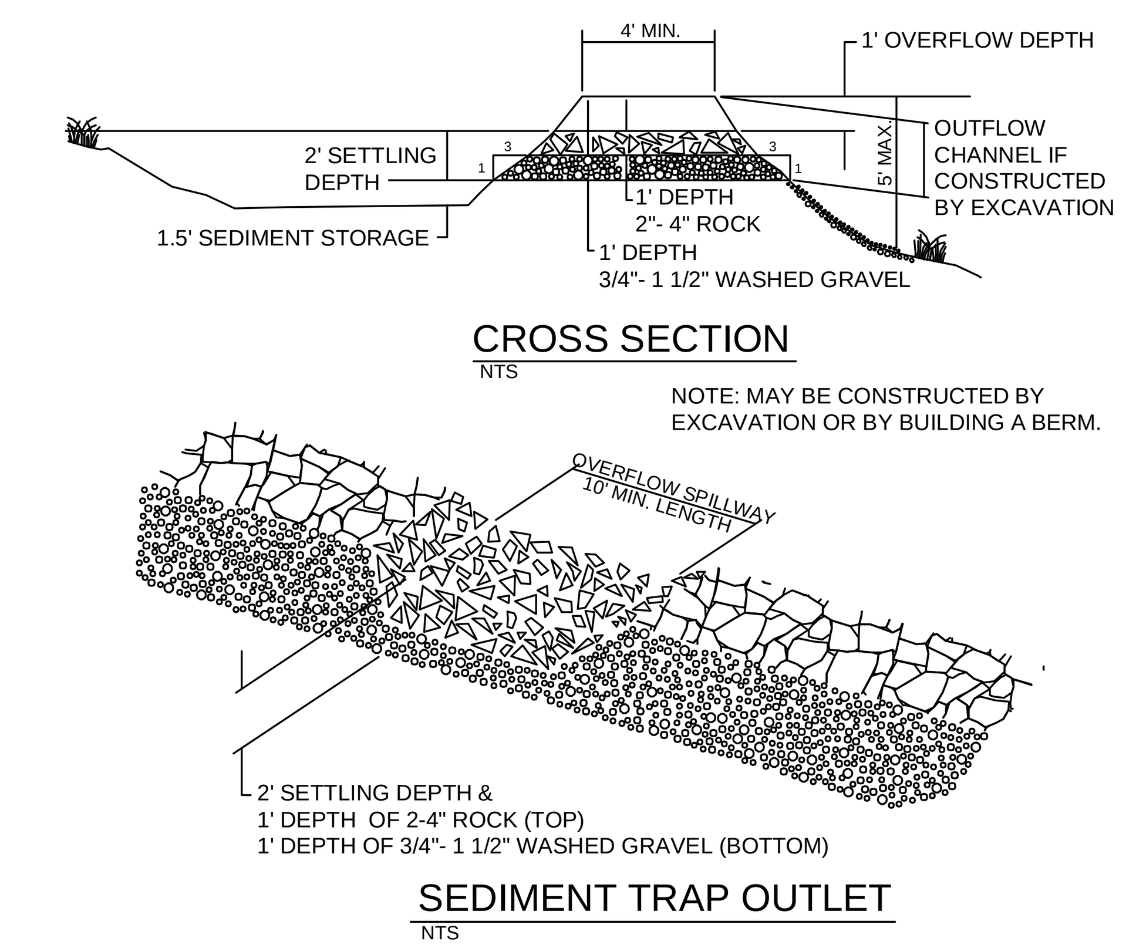
C TIRE WASH - DRIVE THROUGH (C-003)



NOTES:
1. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT FROM WHEEL WASH; MAY BE PIPED TO AN APPROVED SEDIMENT TRAP.
2. USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

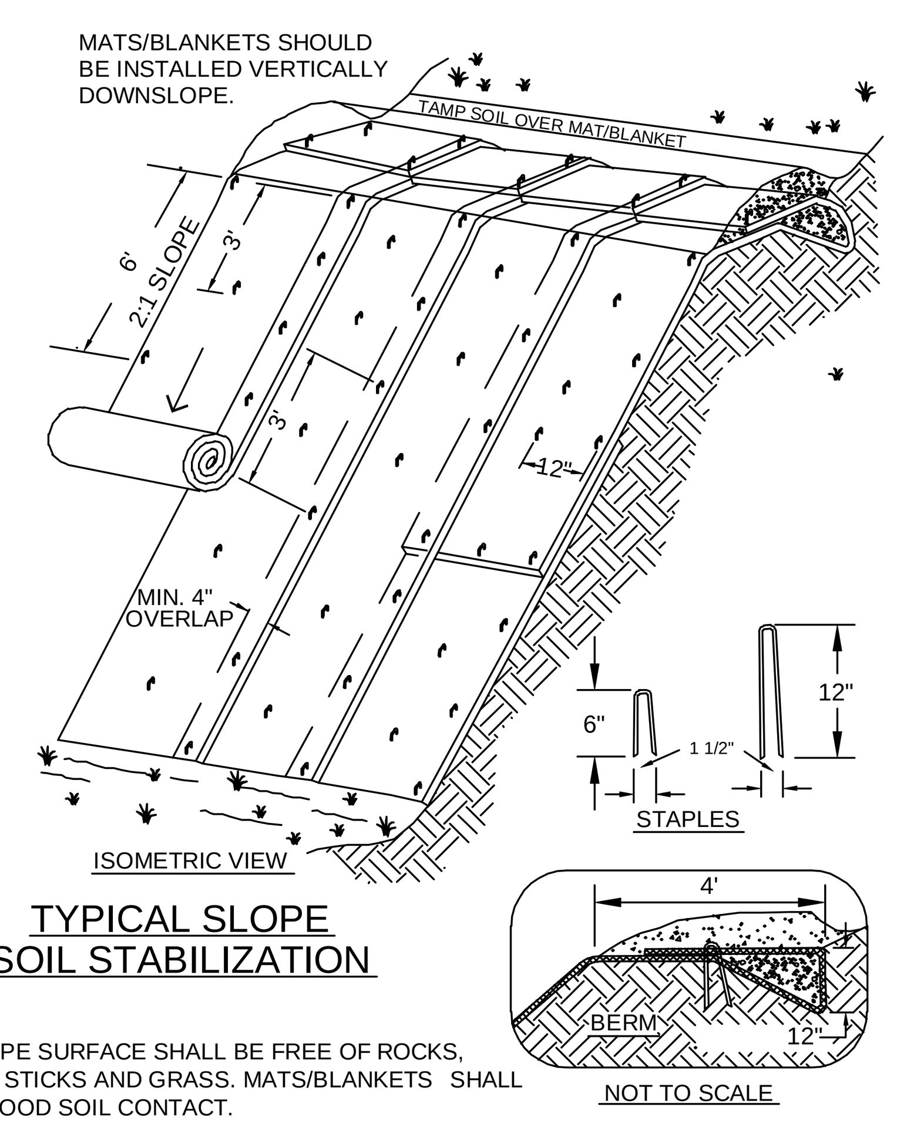
D SEDIMENT TRAP (C-003)



NOTE:
A FILTER FABRIC FENCE OR SIMILAR FILTER MUST BE CONSTRUCTED TO FILTER RUNOFF FROM THE SEDIMENT TRAP PRIOR TO DISCHARGE FROM THE CONSTRUCTION SITE.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

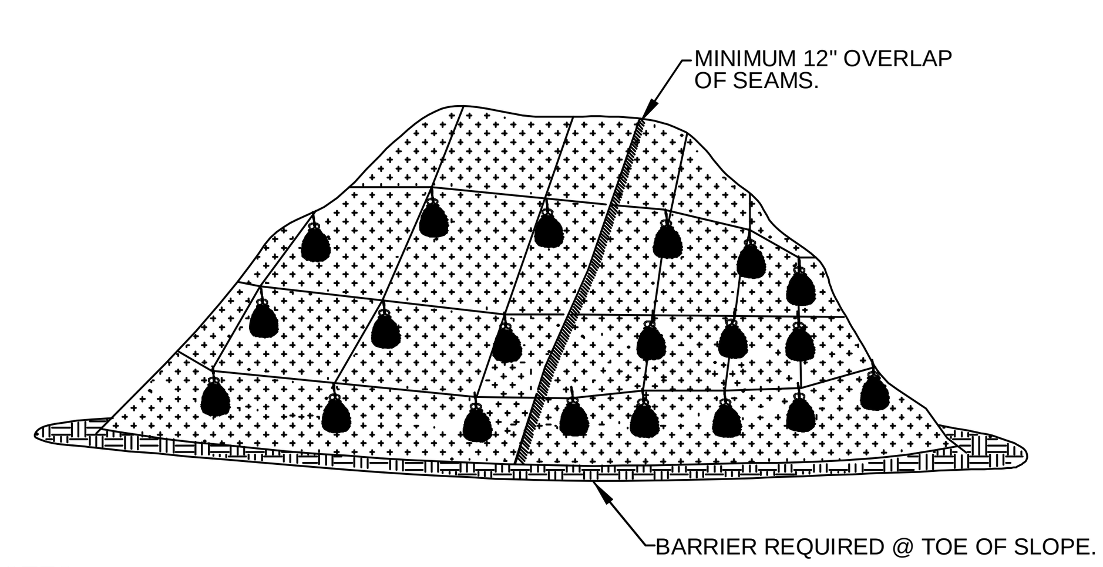
E MATTING SLOPE INSTALLATION (C-003)



NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

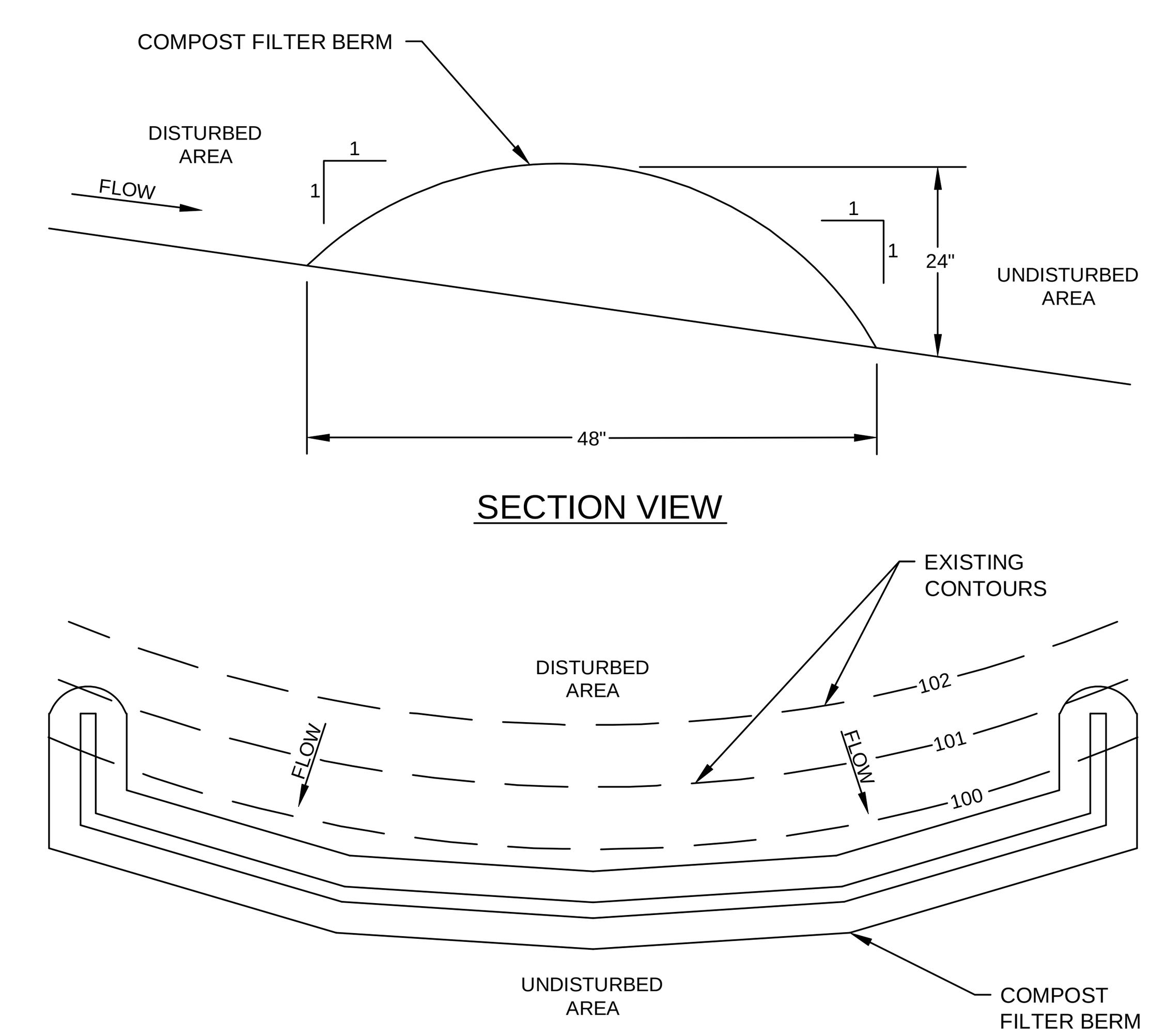
F PLASTIC SHEETING (C-003)

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

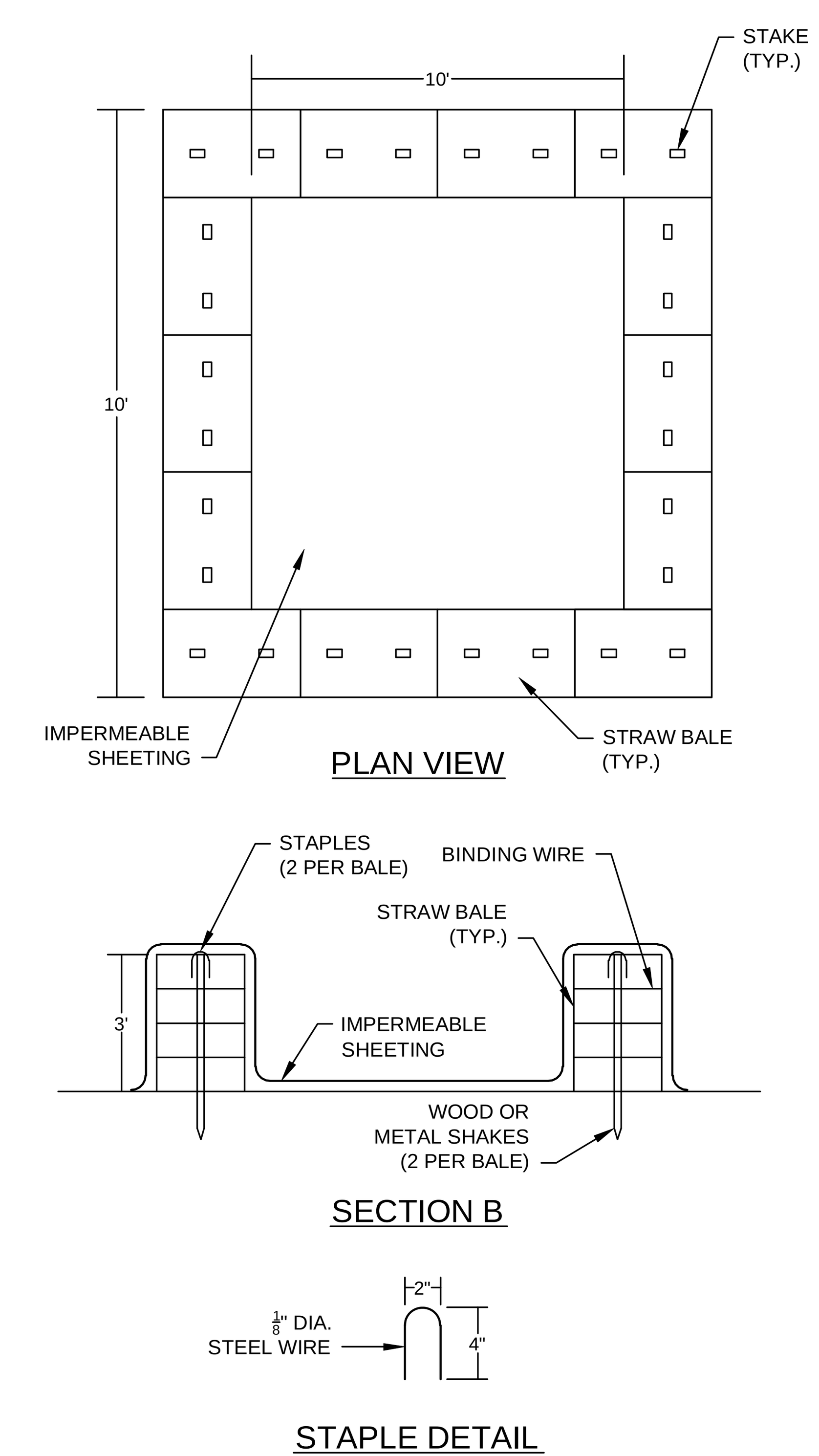


NOTES:
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED @ TOE OF STOCK PILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

G COMPOST BERM DETAIL (C-003)



H CONCRETE WASH-OUT DETAIL (C-003)



US Army Corps of Engineers
PORTLAND DISTRICT

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MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: DEREK R. MCCURDY, P.E.
DATE: 12/02/2013
DRAWN BY: G2ECDJNS
CHECKED BY:
SOLICITATION NO.:
SUBMITTED BY: MARK W. BRODESSER, P.E.
CONTRACT NO.:
PLOT SCALE: 1:1
PLOT DATE:
FILE NUMBER:
SIZE: ANSI F
FILE NAME: FLF1.102_C-005.dwg

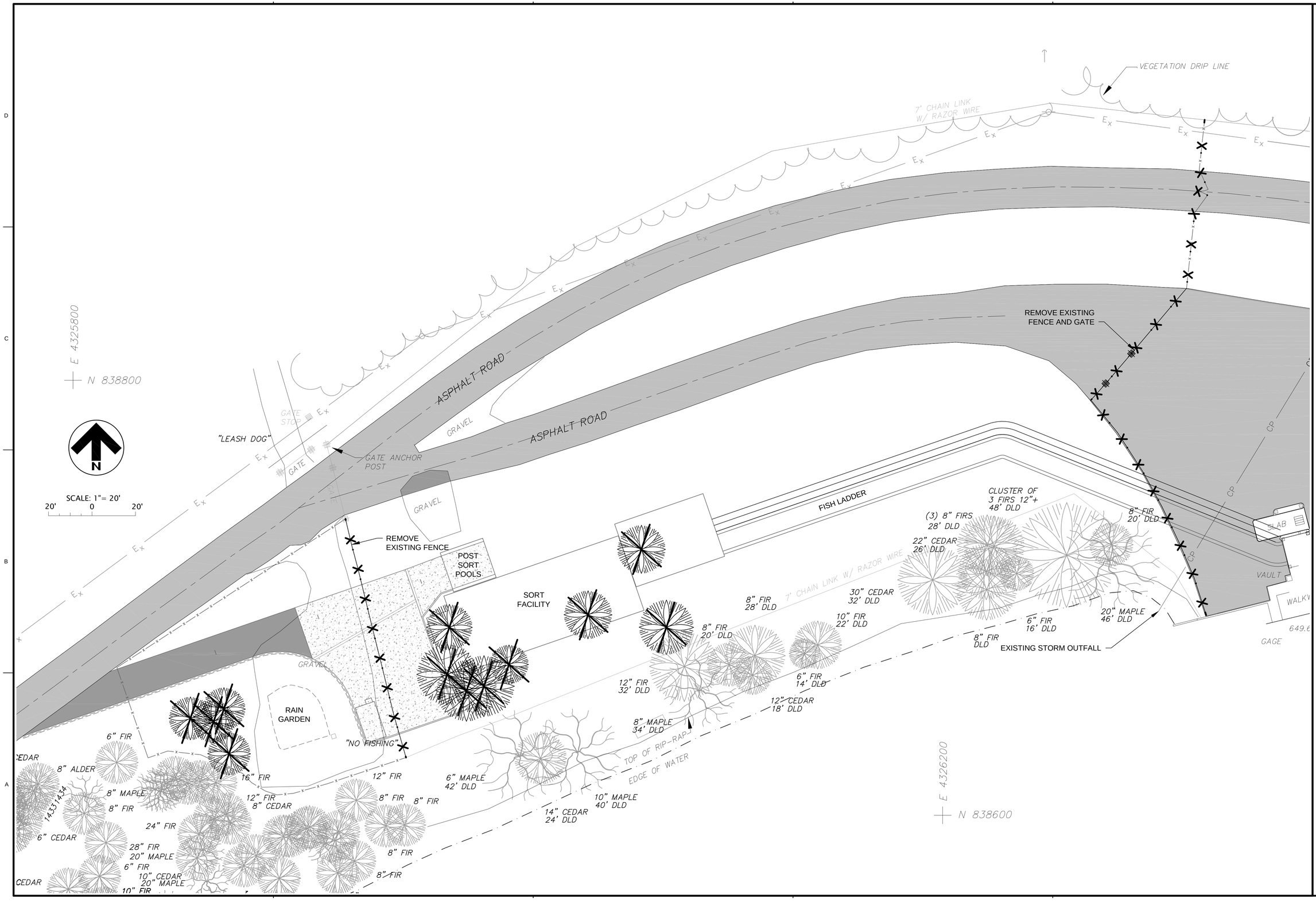
FALL CREEK DAM AND RESERVOIR FISH FACILITY UPGRADE

EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-005

BORDER VERSION UPDATE [07-2013]

File Last Saved By: G2ECDJNS



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PORTLAND DISTRICT
PORTLAND, OREGON

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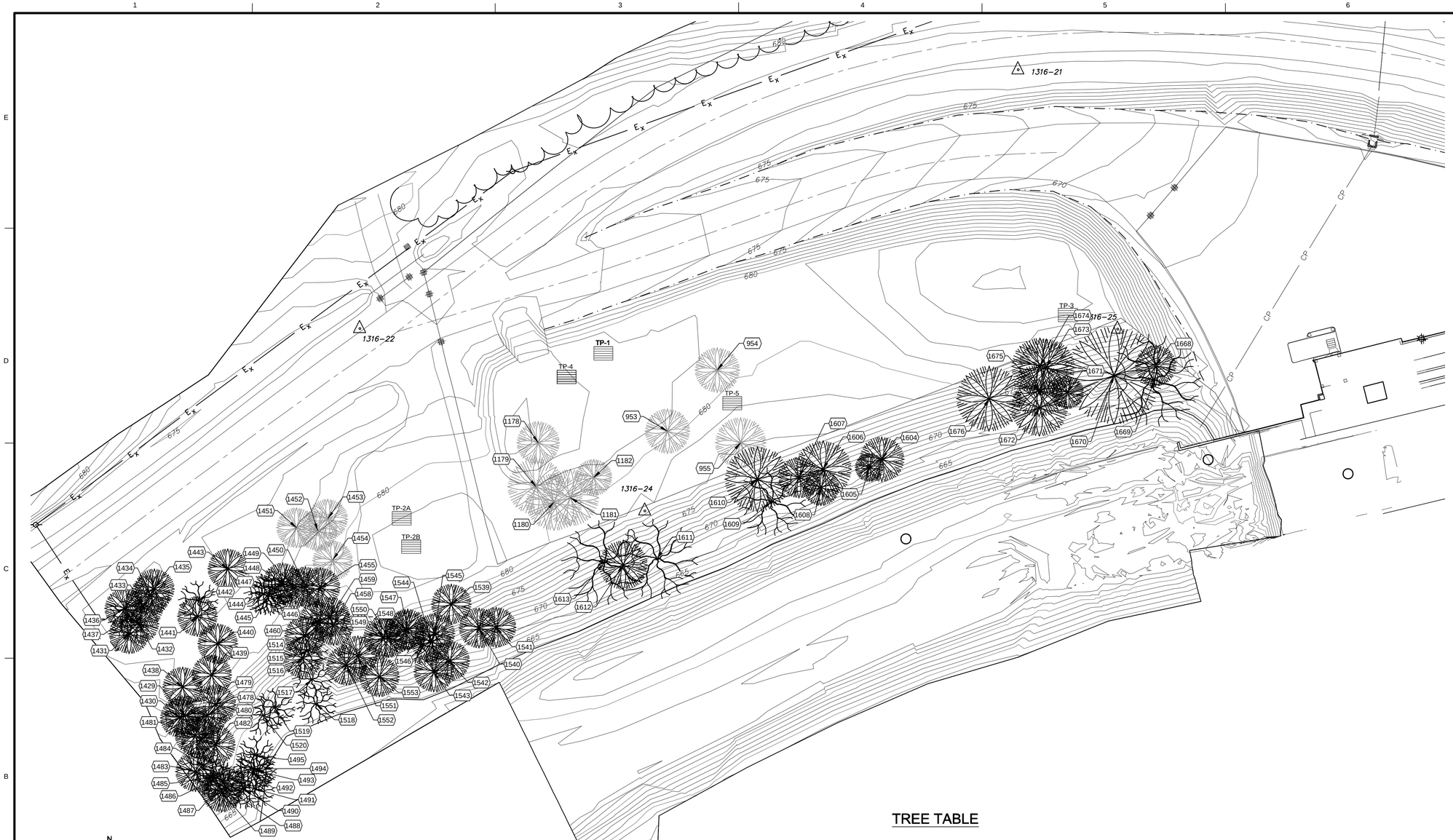
DRAWN BY: G2ECDJT9
CHECKED BY:
SUBMITTED BY: MARK W. BRODESSER, P.E.
PLOT SCALE: 1:1
PLOT DATE:
DATE:
SOLICITATION NO.:
CONTRACT NO.:
DRAWING NUMBER:
$$$$
FILE NAME: FLFI 10U_C-000DEMO.dwg
SIZE: ANSI D

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

DEMOLITION PLAN

SHEET IDENTIFICATION
C-006



LEGEND

- XXX — TREE TAG
- EVERGREEN TREE -TO BE REMOVED
- EVERGREEN TREE -TO REMAIN
- DECIDUOUS TREE -TO BE REMOVED
- DECIDUOUS TREE -TO REMAIN

TREE TABLE

TREE ID	DESCRIPTION	DRIPLINE DIA.	REMOVE
953	16" CEDAR	22'	X
954	(3) 8" & (2) 10" CEDAR	22'	X
955	18" CEDAR	25'	X
1178	18" CEDAR	21'	X
1179	(2) 14" CEDAR	28'	X
1180	18" CEDAR	28'	X
1181	12" CEDAR	28'	X
1182	12" CEDAR	18'	X
1429	16" FIR	NA	
1430	34" FIR	NA	
1431	14" CEDAR	NA	
1432	6" CEDAR	NA	
1433	XXX	NA	
1434	XXX	NA	
1435	14" CEDAR	NA	
1436	6" CEDAR	NA	
1437	6" MAPLE	NA	

TREE ID	DESCRIPTION	DRIPLINE DIA.	REMOVE
1438	8" CEDAR	NA	
1439	6" FIR	NA	
1440	28" FIR	NA	
1441	8" FIR	NA	
1442	8" ALDER	NA	
1443	6" FIR	NA	
1451	42" CEDAR	NA	X
1452	14" MADRONE	NA	X
1453	8" FIR	NA	X
1454	10" CEDAR	NA	X
1455	16" FIR	NA	
1458	30" CEDAR	NA	
1459	8" CEDAR	NA	
1460	12" CEDAR	NA	
1514	24" FIR	NA	
1515	12" MAPLE	NA	

TREE ID	DESCRIPTION	DRIPLINE DIA.	REMOVE
1516	10" CEDAR	NA	
1517	20" MAPLE	NA	
1518	16" ALDER	NA	
1519	12" ALDER	NA	
1520	40" MAPLE	NA	
1539	12" FIR	NA	
1540	8" FIR	NA	
1541	8" FIR	NA	
1542	8" FIR	NA	
1543	6" CEDAR	NA	
1544	8" MAPLE	NA	
1552	12" CEDAR	NA	
1553	8" CEDAR	NA	
1604	10" FIR	22'	
1605	6" FIR	14'	
1606	8" FIR	28'	

TREE ID	DESCRIPTION	DRIPLINE DIA.	REMOVE
1607	8" FIR	20'	
1608	12" CEDAR	18'	
1609	8" MAPLE	34'	
1610	12" FIR	32'	
1611	10" MAPLE	40'	
1612	14" CEDAR	24'	
1613	6" MAPLE	42'	
1668	8" FIR	20'	
1669	20" MAPLE	46'	
1670	(3) 12"+ FIR	48'	
1671	6" FIR	16'	
1672	8" FIR	28'	
1673	8" FIR	28'	
1674	8" FIR	28'	
1675	8" FIR	26'	
1676	22" CEDAR	32'	

*NOTE: THERE ARE AN ADDITIONAL 17 TREES OF MIXED VARIETY THAT ARE NOT LABELED.

US Army Corps of Engineers
PORTLAND DISTRICT

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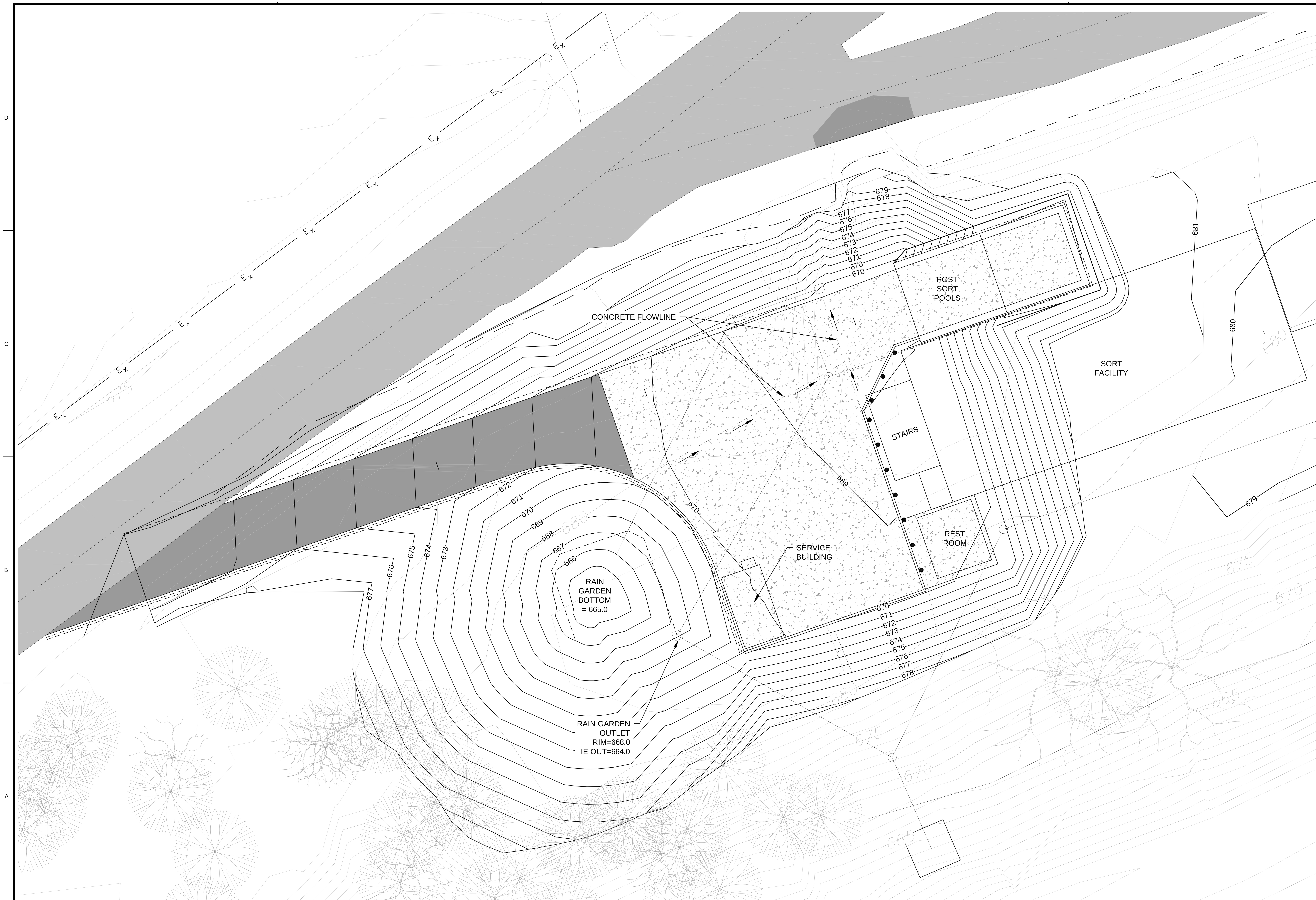
DRAWN BY: DEREK R. MCGINNIS, P.E.
SUBMITTED BY: DEREK R. MCGINNIS, P.E.
PLOT SCALE/PLOT DATE: 1:1
SIZE: ANSI D
DATE: 10/02/2023
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: C-007.dwg

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

TREE TABLE

SHEET IDENTIFICATION
C-007



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PORTLAND DISTRICT

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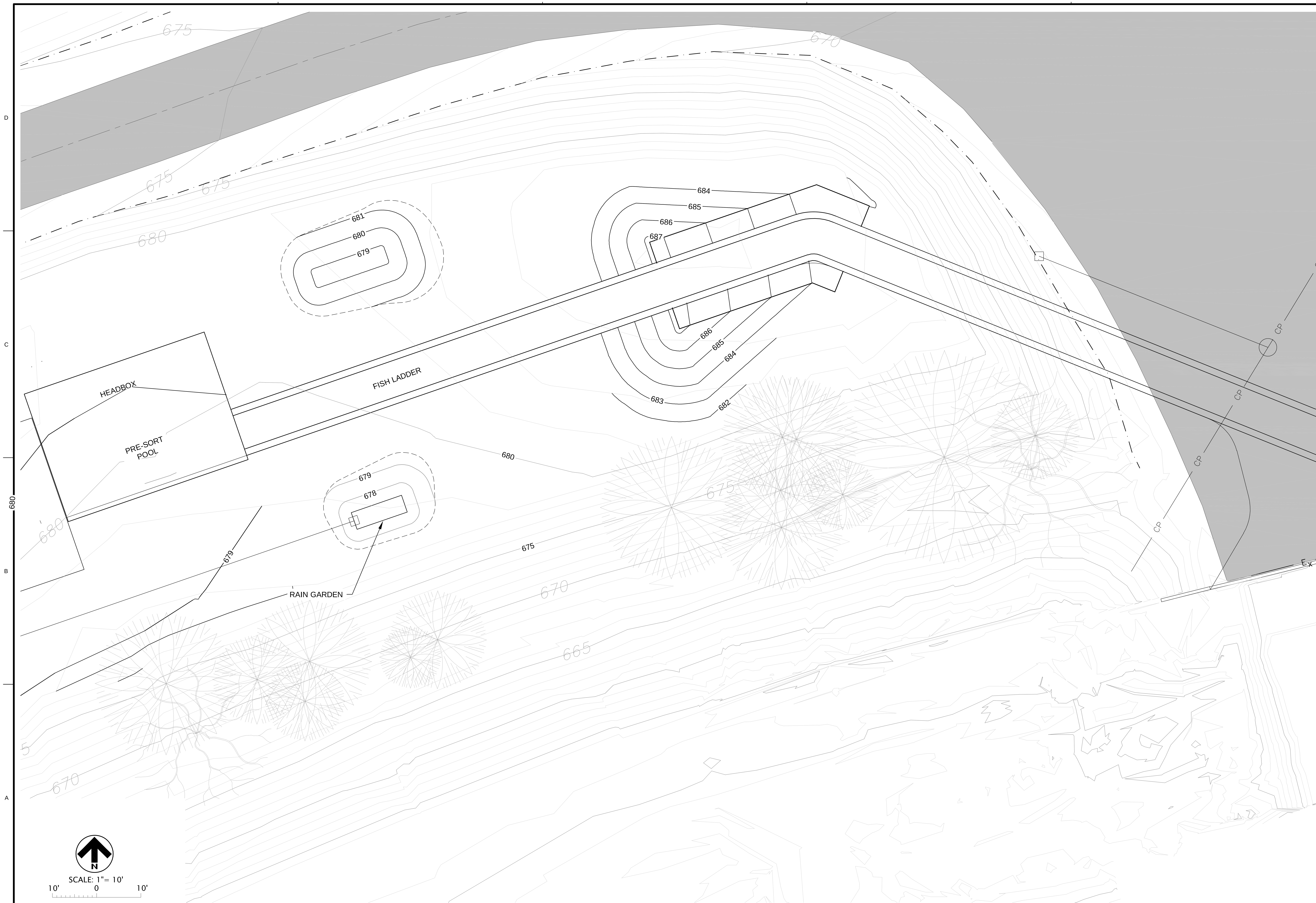
	SUBMITTED BY: MARK W. BRODESSER, P.E.	CONTRACT NO.:
	PLOT SCALE: 1:1 / PLOT DATE: $$$DATE$$$	DRAWING NUMBER:
	SIZE: ANSI D / FILE NAME: FLF1.102_C-100GRD1.dwg	

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

GRADING PLAN - WEST

SHEET IDENTIFICATION
C-100



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SUBMITTED BY: MARK W. BRODESSER, P.E. | CONTRACT NO.:
PLOT SCALE: 1:1 | PLOT DATE: $$$DATE$$$$ | DRAWING NUMBER:
SIZE: ANSI D | FILE NAME: FLF1.102_C-101GRD2.dwg

FALL CREEK DAM AND RESERVOIR FISH FACILITY UPGRADE

GRADING PLAN - EAST

SHEET IDENTIFICATION
C-101

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SUBMITTED BY: MARK W. BRODESSER, P.E.
PLOT SCALE: 1:1
SIZE: ANSI D
DATE:
SOLICITATION NO.:
CONTRACT NO.:
DRAWING NUMBER:
PLOT DATE: %%DATE$$$$
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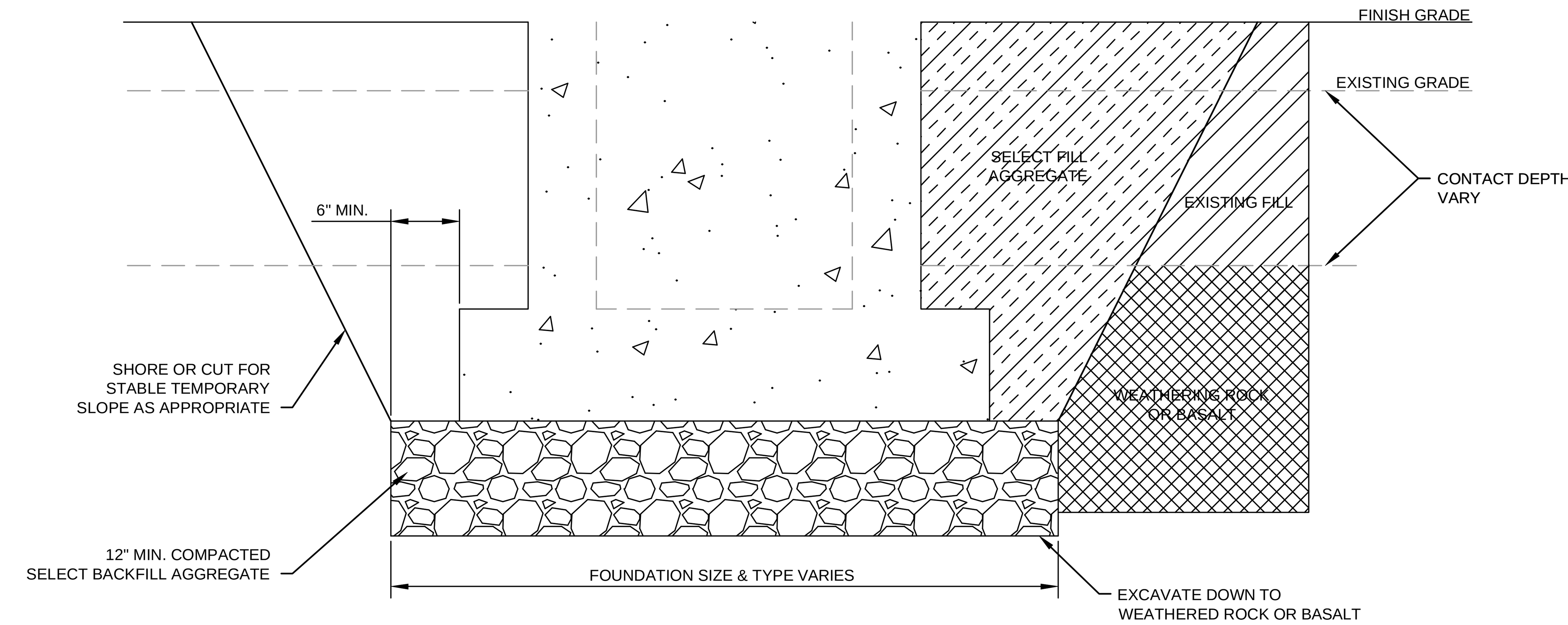
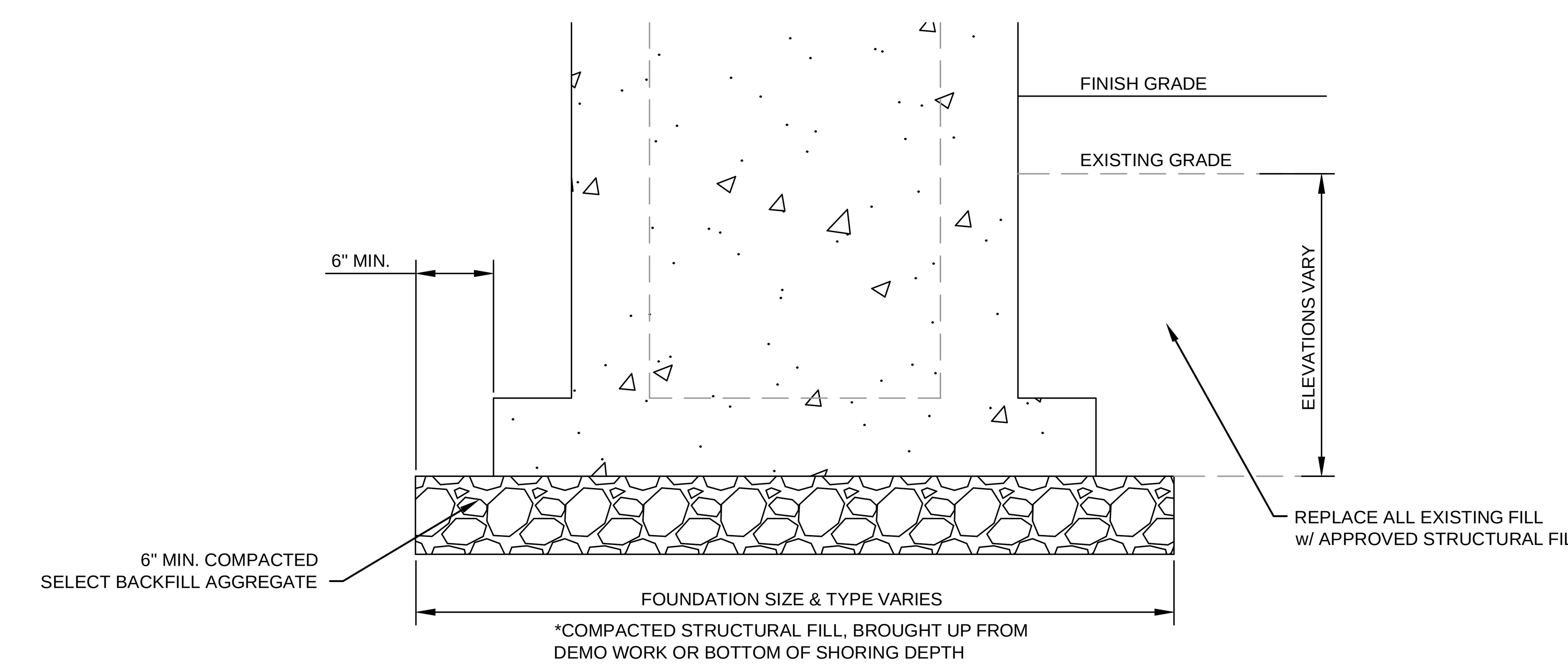
FALL CREEK DAM AND RESERVOIR FISH FACILITY UPGRADE

CHANNEL PLAN

SHEET IDENTIFICATION
C-102

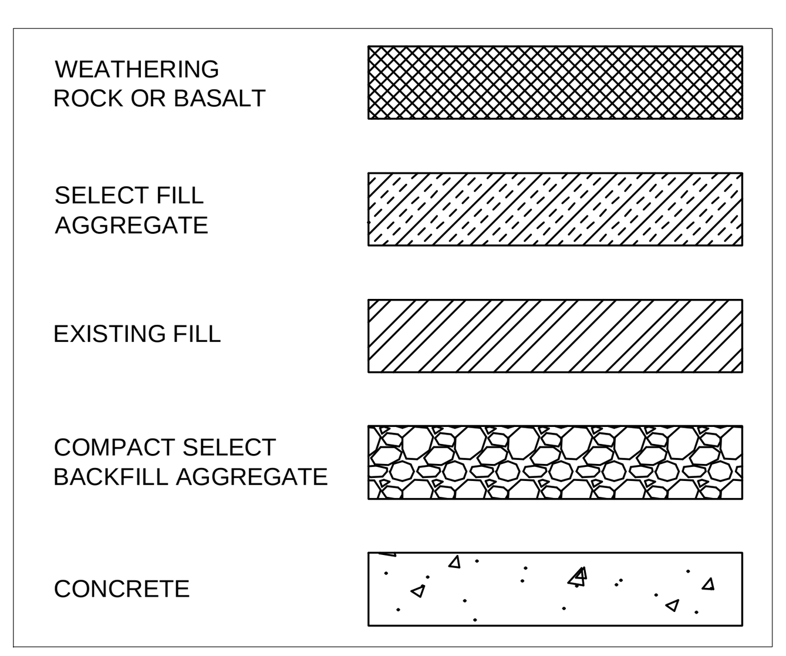


A C-101 EXCAVATION SECTION A



B C-101 EXCAVATION SECTION B

LEGEND



NOTES:

1. SUBSURFACE CONDITIONS ARE VARIABLE THROUGHOUT THE SITE, WITH MATERIALS GENERALLY CONSISTING OF EXISTING SAND AND GRAVEL FILL. BEDROCK DEPTHS VARY FROM NEAR THE GROUND SURFACE AT THE NORTHERN PART OF THE SITE, TO DEPTHS NEAR THAN 15-20 FEET NEAR THE SUBSTATION AND BRIDGE. SEE GEOTECHNICAL BASELINE REPORT (GBR) FOR MORE DETAILED SUBSURFACE INFORMATION (ATTACHMENT "XX" OF CONTRACT).

2. PRIOR TO EXCAVATION OF FOUNDATION AREAS, EXPLORATORY TEST PITS SHALL BE EXCAVATED TO VERIFY SUBSURFACE CONDITIONS, AS PER SECTION 31 00 00 (EARTHWORK).

3. WHERE FOUNDATION WILL EXTEND INTO WEATHERED ROCK OR BEDROCK, FOUNDATIONS SHALL BE POURED ON MIN. 12" OF COMPACTED SELECT BACKFILL AGGREGATE PLACED DIRECTLY ON THE NATIVE GRAVEL OR BEDROCK, AS SHOWN ON SECTION A.

4. THERE WILL VERY LIKELY BE PLACES OR SITUATIONS THAT WARRANT THE PLACEMENT OF CONCRETE FOUNDATIONS DIRECTLY ONTO COMPACTED ROCK. THESE SPECIFIC SITUATIONS WILL BE HANDLED ON A CASE BY CASE BASIS THROUGH THE COR AND DESIGN TEAM VIA PRE-ESTABLISHED COMMUNICATION CHANNELS DURING CONSTRUCTION.

5. WHERE FOUNDATIONS ARE PLACED FILL AREAS, POUR FOUNDATIONS ON A MIN. 6" COMPACTED SELECT BACKFILL AGGREGATE AND COMPACT STRUCTURAL FILL TO FINISH GRADE.

6. SOME STRUCTURES WILL REQUIRE BLASTING OF EXISTING ROCK TO ACCOMMODATE FOR REQUIRED DEPTHS OF EXCAVATION. REFER TO BLASTING SPEC SECTION 31 23 16.00.25 PER DETAILS.

7. STRUCTURES LIKELY TO BE CONSTRUCTED IN FILL AREAS (SECTION B):
- -LIGHT BUILDINGS ON SPREAD FOOTINGS
- -PORTIONS OF THE NEW FISH LADDER PLACED ABOVE DEMO AREAS OF EXISTING FISH LADDER
- -BRIDGE ABUTMENTS WILL BE PLACED ON MIN. 12" OF COMPACTED SELECT FILL AGGREGATE, EVEN THOUGH THESE STRUCTURES WILL BE PLACED ON STRUCTURAL FILL BROUGHT UP TO GRADE.

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PORTLAND DISTRICT

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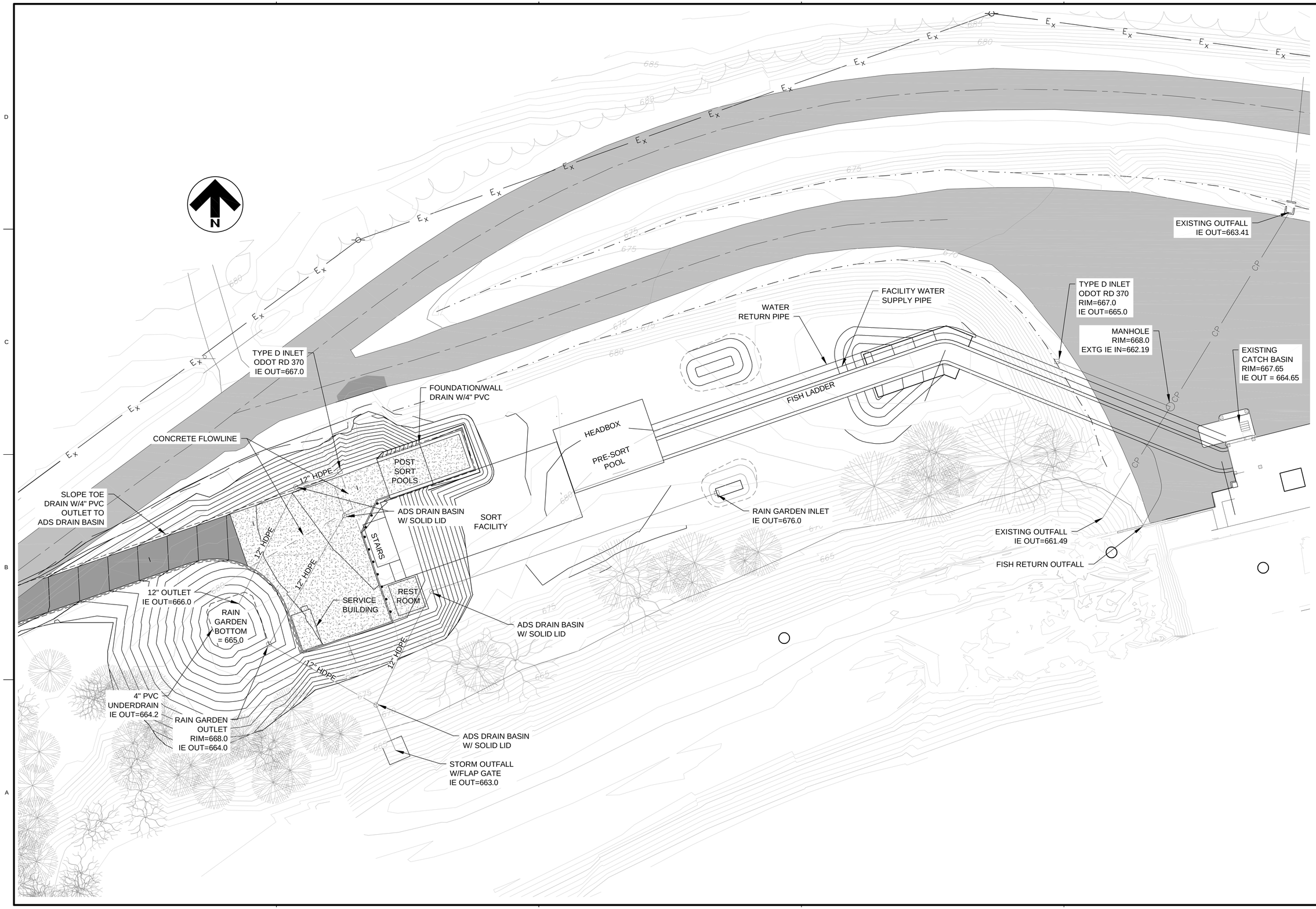
U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

EXCAVATION DETAILS

SHEET IDENTIFICATION
C-150



US Army Corps of Engineers
PORTLAND DISTRICT

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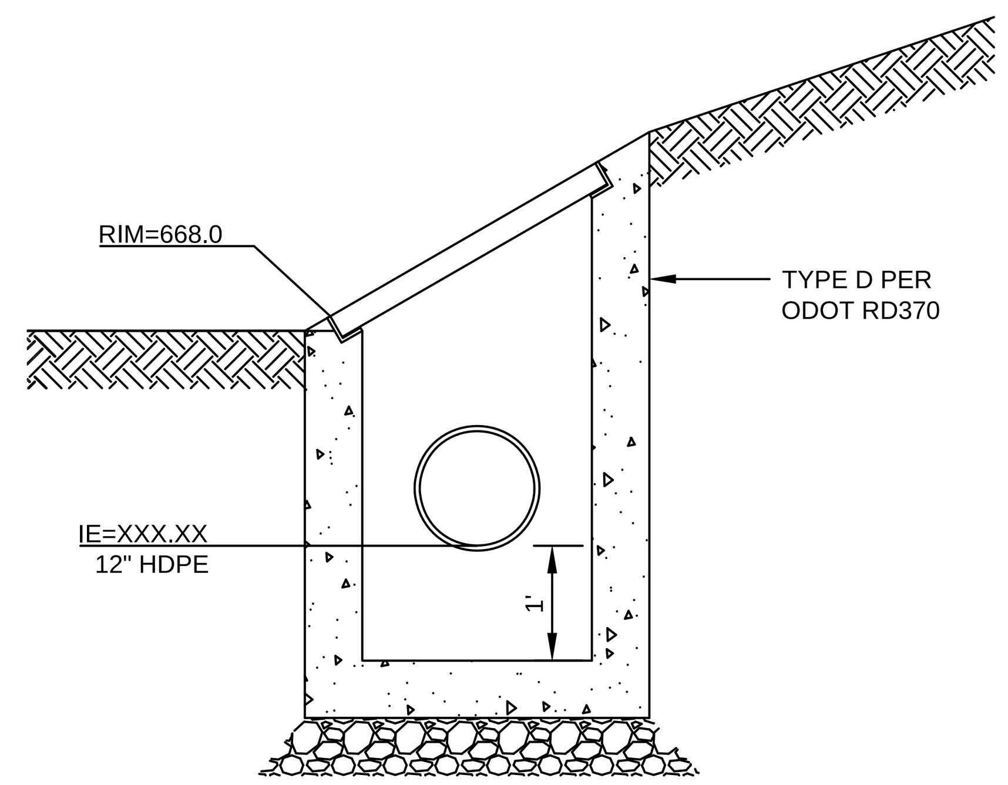
U.S. ARMY CORPS OF ENGINEERS PORTLAND DISTRICT PORTLAND, OREGON	DESIGNED BY: ROBERT E. KORICK, P.E.	DATE:	
	DRAWN BY: G2ECD3T9	CHECKED BY:	SOLICITATION NO.:
	SUBMITTED BY: MARK W. BRODESSER, P.E.		CONTRACT NO.:
	PLOT SCALE: 1:1	PLOT DATE: 8/15/2023$$$$	DRAWING NUMBER:
	SIZE: ANSI D	FILE NAME: FLFI L102_C-200UTL1.dwg	

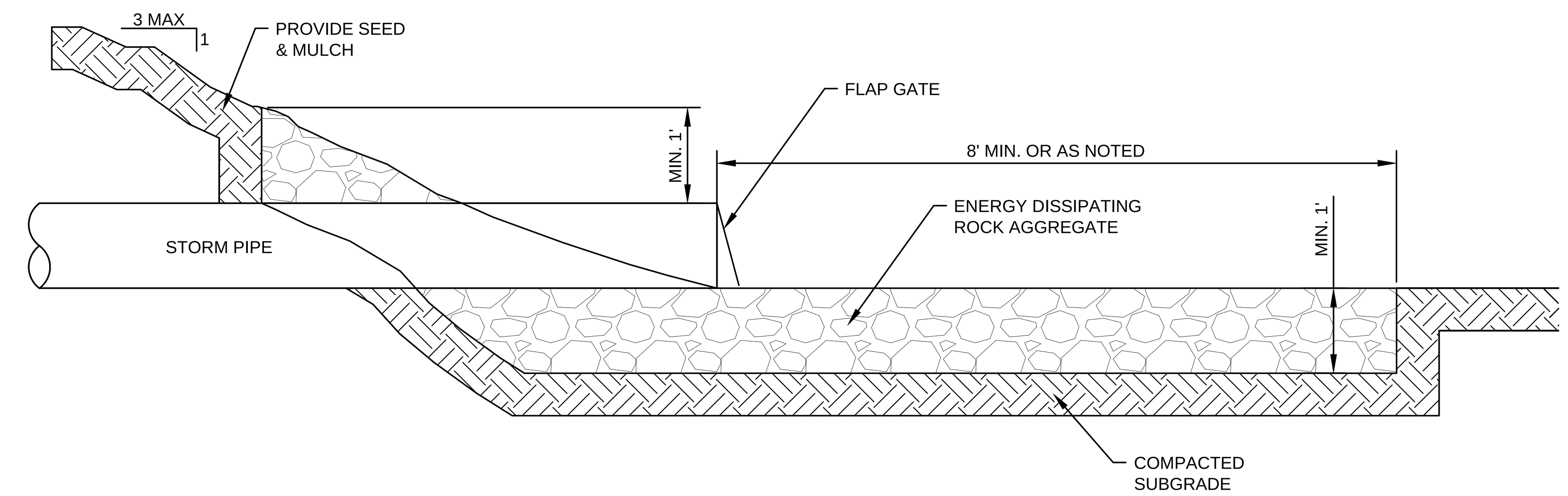
FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

UTILITY PLAN

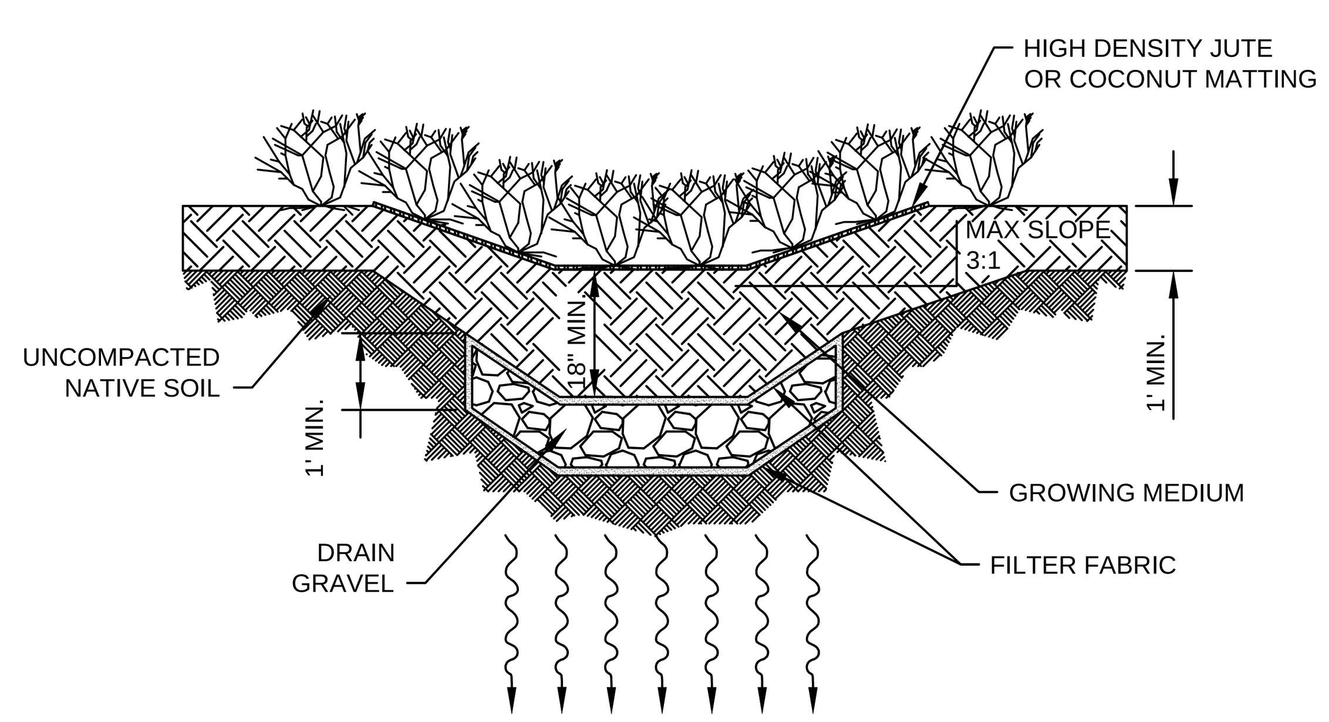
SHEET IDENTIFICATION
C-200



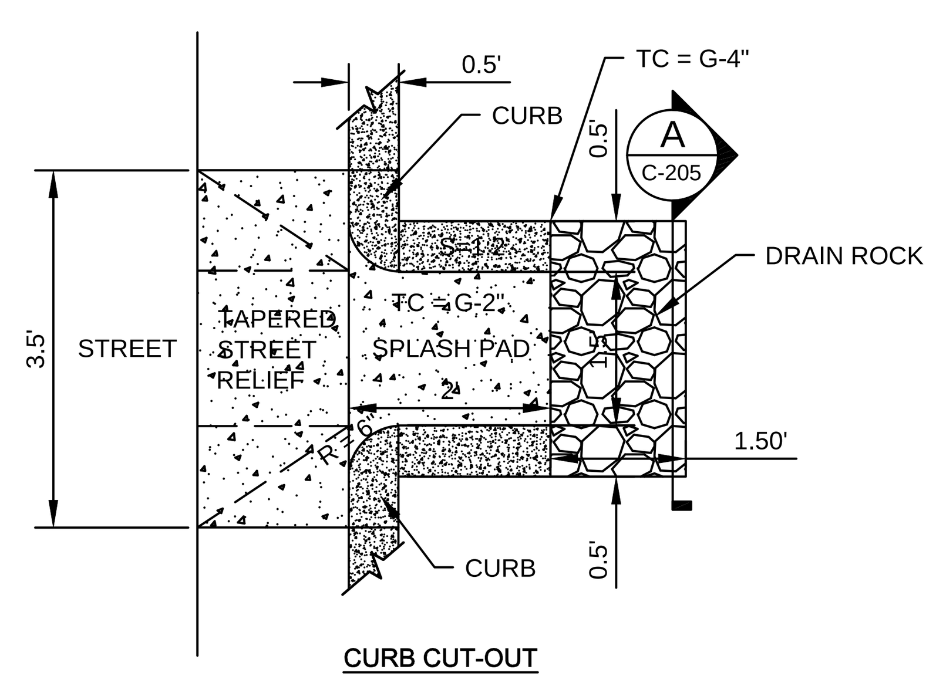
4 C-201 TYPE D INLET AT CONCRETE LOT
NTS

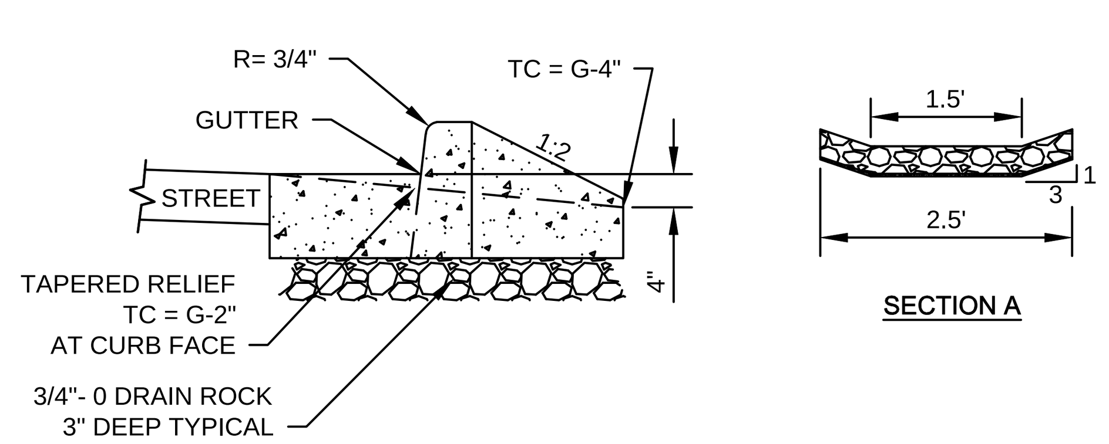


5 C-201 ROCK OUTFALL
NTS



6 C-200 RAINGARDEN DETAIL
NTS





7 C-200 CURB OPENING DETAIL
NTS

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PORTLAND DISTRICT

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PORTLAND DISTRICT
PORTLAND, OREGON

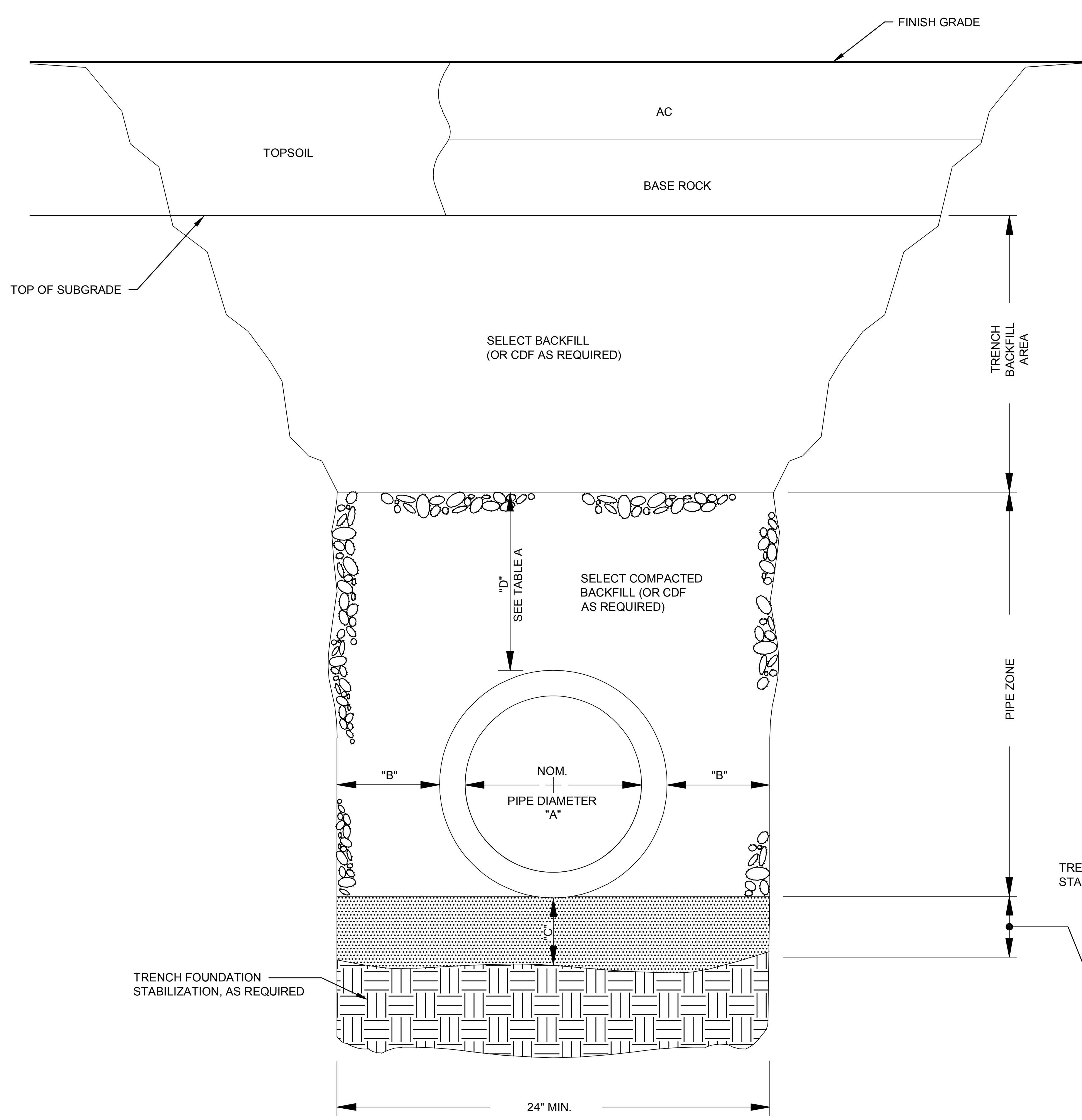
DESIGNED BY: ROBERT NORICK, P.E.		DATE:
DRAWN BY: G2ECDJT9	CHECKED BY:	SOLICITATION NO.:
SUBMITTED BY: MARK W. BRODESSER, P.E.		CONTRACT NO.:
PLOT SCALE: 1:1	PLOT DATE:	FILE NUMBER:
SIZE: ANSI F	FILE NAME: FLF1.102_C-201UTL2.dwg	

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

STORM PLAN AND PROFILE - EAST

SHEET
IDENTIFICATION
C-201

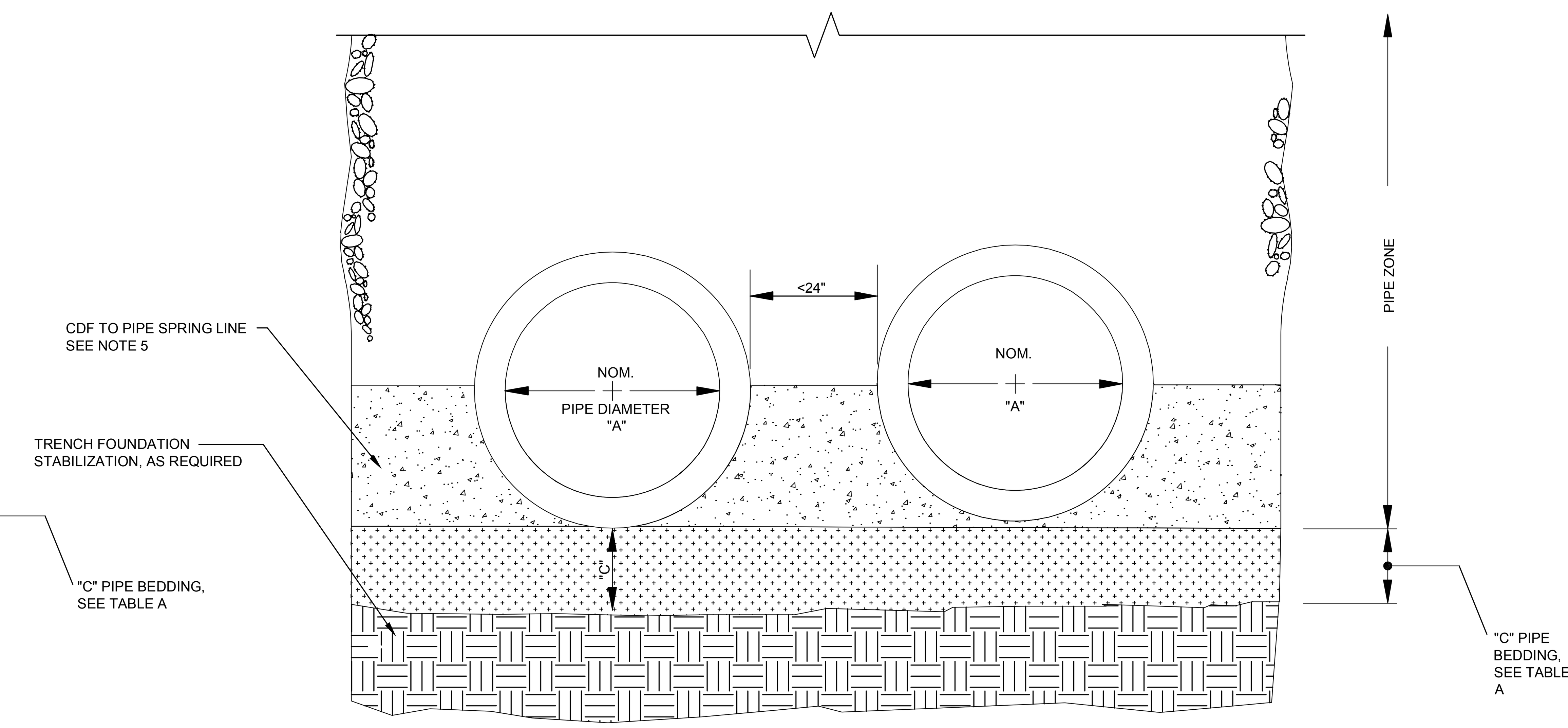
BORDER VERSION UPDATE [07-2013]



NOTE: TRENCH BACKFILL SECTION APPLIES TO ALL PIPES AND CONDUIT IN THIS PROJECT WHEN APPLICABLE.

1 TRENCH BACKFILL DETAIL

N.T.S.

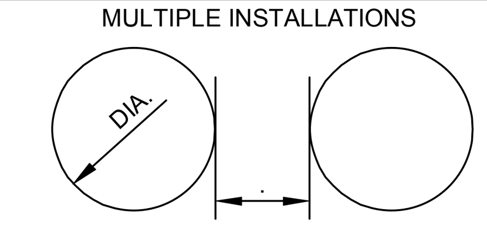


NOTE: CDF DETAIL APPLIES TO ALL PIPES AND CONDUIT IN THIS PROJECT WHEN APPLICABLE.

2 CDF DETAIL

N.T.S.

MULTIPLE INSTALLATIONS



DIAMETER	MIN. SPACE BETWEEN PIPES WITHOUT CDF BACKFILL
UP TO 48"	24"
48" TO 72"	ONE HALF (½) DIA. OF PIPE

GENERAL NOTES FOR ALL DETAILS:

1. SURFACING OF PAVED AREAS SHALL COMPLY WITH ODOT STREET CUT STD. DRG. RD302.

2. FOR PIPE INSTALLATION IN EMBANKMENT AREAS WHERE THE TRENCH METHOD WILL NOT BE USED AND THE PIPE IS ≥36" DIAMETER, INCREASE DIMENSION "B" TO NOMINAL PIPE DIAMETER.

3. PIPES OVER 72" DIAMETER ARE STRUCTURES, AND ARE NOT APPLICABLE TO THIS DRAWING.

4. SEE STD. ODOT RD336 FOR TRACER WIRE DETAILS.

5. WHEN MULTIPLE PIPES ARE LESS THAN 24 INCHES APART IN THE SAME TRENCH, BACKFILL WITH CDF TO SPRINGLINE OF LARGEST DIAMETER PIPE. ALLOW CDF TO SET A MINIMUM OF 24 HOURS BEFORE INSTALLING ANY FURTHER BACKFILL MATERIAL. SEE DETAIL 2

6. THE USE OF CDF VERSUS BACKFILL WILL BE AT THE DISCRETION OF THE CONTRACTOR AS TO THE APPLICABILITY OF THE USE OF THIS MATERIAL. CONTRACTOR IS TO VERIFY USE OF CDF WITH CONTRACTING OFFICER REPRESENTATIVE ONSITE. IT IS THE INTENT OF THE DESIGN TO ALLOW FOR THE USE OF EITHER OF THESE METHODS AS THEY ARE APPLICABLE ONSITE.

TABLE A

"A" (in)	"B" (in)	"C" (in)	"D" (in)
4	10	4	8
6	10	4	8
8	10	6	10
10	10	6	10
12	12	6	10
15	12	6	10
18	16	6	12
21	16	6	12
24	18	12	12
30	18	12	12
36	24	12	14
42	24	12	14
48	24	12	14
54	24	12	14
60	24	12	14
66	24	12	14
72	24	12	14

FOR PIPES OVER 72" DIAMETER, SEE GENERAL NOTE 3.

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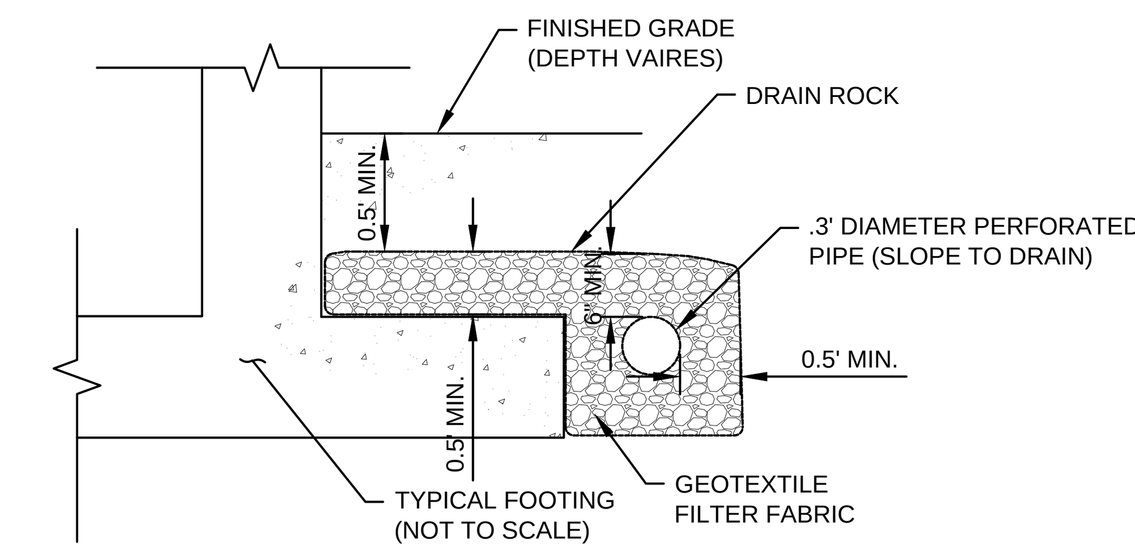
DRAWN BY: G2ECDJNS | CHECKED BY: | SOLICITATION NO.:
SUBMITTED BY: MARK W. BRODESSER, P.E. | CONTRACT NO.:
PLOT SCALE: 1:1 | PLOT DATE: | FILE NUMBER:
SIZE: ANSI F | FILE NAME: FLF1.102_C-202.dwg

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

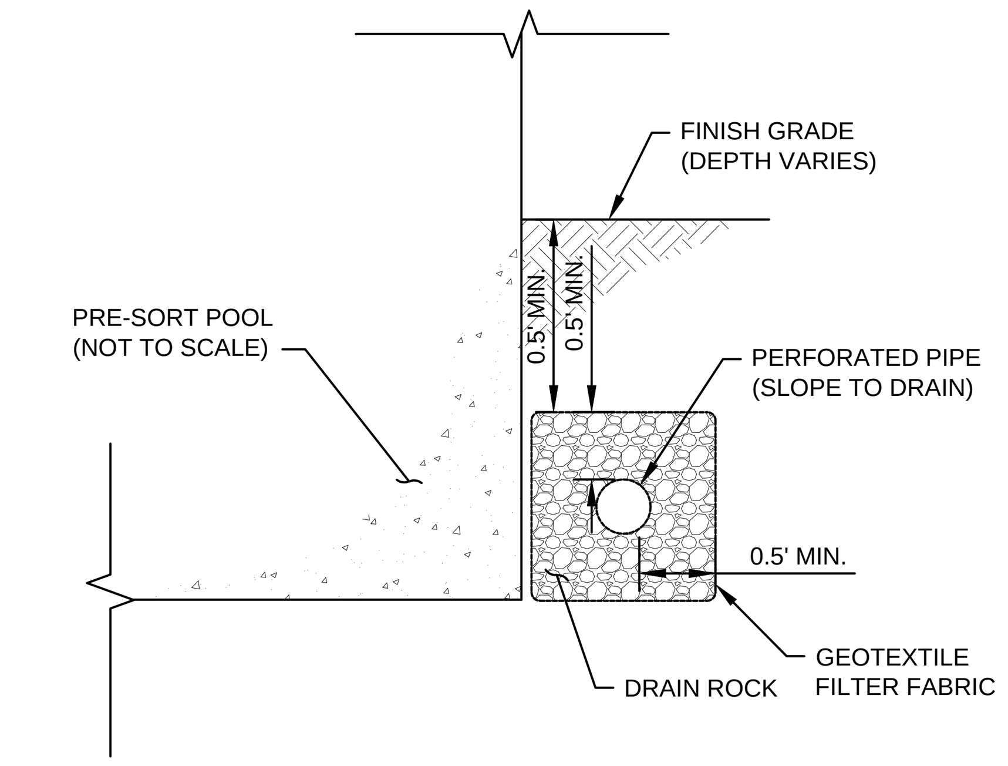
BACKFILL AND BEDDING DETAILS

SHEET IDENTIFICATION
C-202

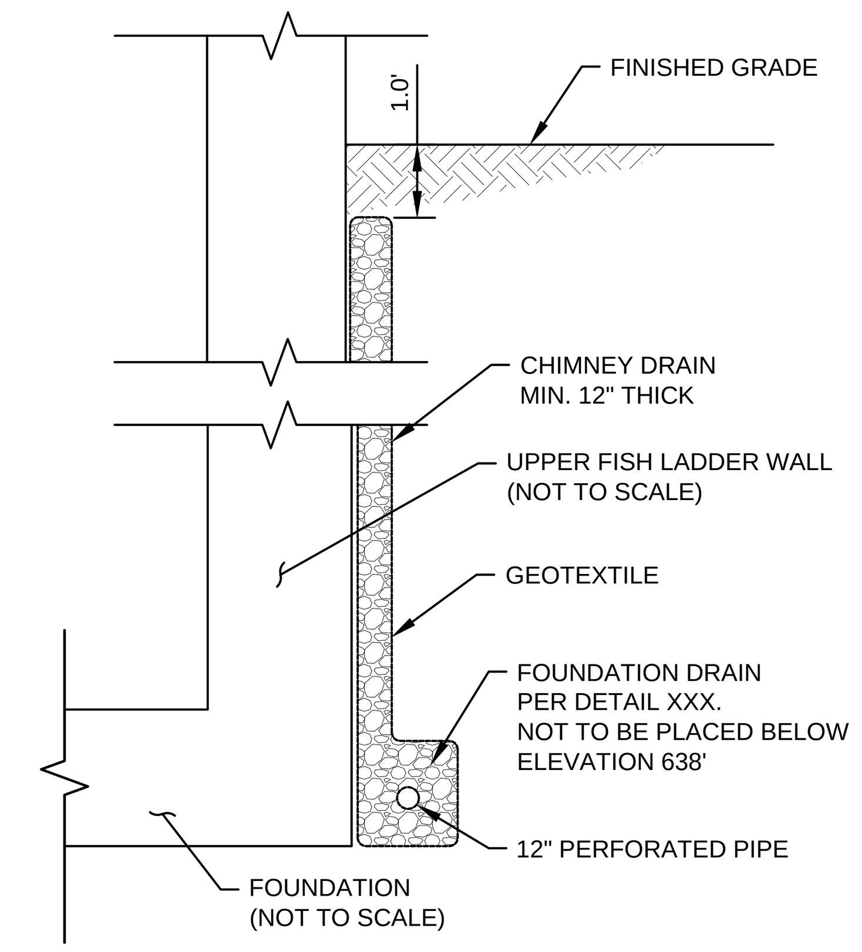
BORDER VERSION UPDATE [07-2013]



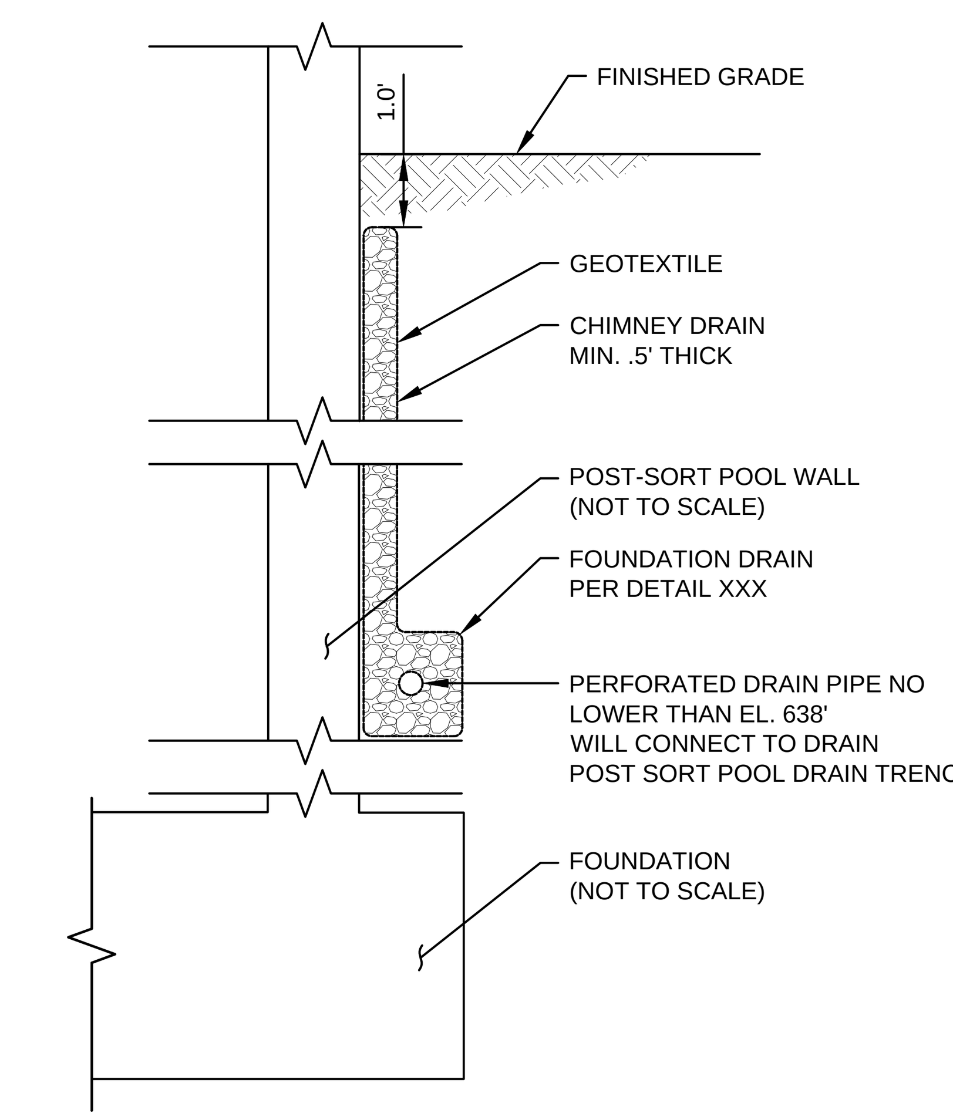
A TYPICAL FOUNDATION DRAIN DETAIL
NTS



B TYPICAL FOUNDATION DRAIN DETAIL
NTS



C FISH LADDER
FOUNDATION DRAIN DETAIL
NTS



D POST-SORT POOLS
FOUNDATION DRAIN DETAIL
NTS

NOTES

1. FOUNDATION DRAINS SHALL CONSIST OF PERFORATED DRAINAGE PIPE, SURROUNDED BY A MINIMUM OF 6 INCHES DRAIN ROCK PROTECTED BY LOW TO MEDIUM STRENGTH GEOTEXTILE FILTER FABRIC.

2. FOUNDATION DRAINS SHALL BE EMBEDDED A MINIMUM OF 6 INCHES BELOW FINISHED GRADES AND SLOPED TO DRAIN AT A MINIMUM 4 INCHES PER 100 FEET.

3. FOUNDATION/RETAINING WALLS SUPPORTING GREATER THAN 4 FEET OF BACKFILL SHALL HAVE CHIMNEY DRAINS. CHIMNEY DRAINS SHALL CONSIST OF A MINIMUM 6 INCHES OF DRAIN ROCK SURROUNDED/PROTECTED BY LOW TO MEDIUM STRENGTH GEOTEXTILE FILTER FABRIC. THE CHIMNEY DRAINS SHALL EXTEND TO WITHIN 1 FOOT OF FINISHED GRADES AND SHALL BE CONNECTED AT THEIR BASE WITH THE FOUNDATION DRAINS.

4. COLLECTED WATER FROM THE FOUNDATION DRAIN SYSTEMS SHALL BE TIGHTLINED TO THE SPECIFIED DISCHARGE POINTS. THE TIGHTLINED PIPES SHALL SLOPE TO DRAIN AT A MINIMUM OF 4 INCHES PER 100 FEET.

5. FOUNDATION DRAINS FOR EACH STRUCTURE SHALL BE AS FOLLOWS:
- DETAIL A: MAINTENANCE BUILDING, SOUTH HOPPER FOOTING, SERVICE BUILDING USING 4" DIAMTER PIPE.
- DETAIL B: SORTING STRUCTURE SLAB, USING 4" DIAMETER PIPE.
- DETAIL C: PRE-SORT POOL. USING 4" DIAMETER PIPE.
- DETAIL D: TRANSPORT CHANNEL AND HEAD BOX. TRANSPORT CHANNEL SHALL USE 6" DIAMETER PIPE, AND THE HEAD BOX SHALL USE 4" DIAMETER PIPE.
- DETAIL E: UPPER FISH LADDER. USING 6" DIAMETER PIPE.
- DETAIL F: POST-SORT POOLS. USING 6" DIAMETER PIPE.

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PLOT DATE:
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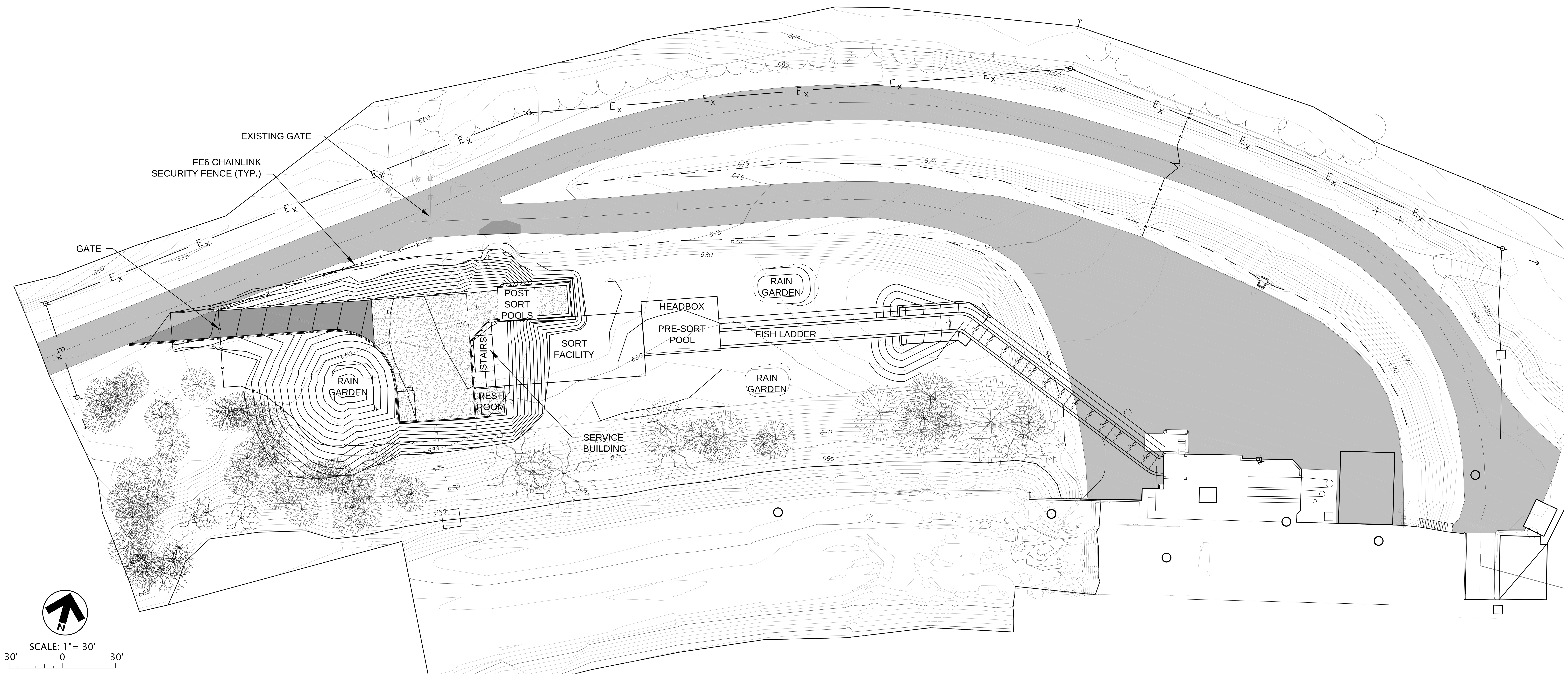
SIZE: ANSI F
FILE NAME: FLF1.102_C-203.dwg

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

FOUNDATION DRAIN DETAILS

SHEET IDENTIFICATION
C-203



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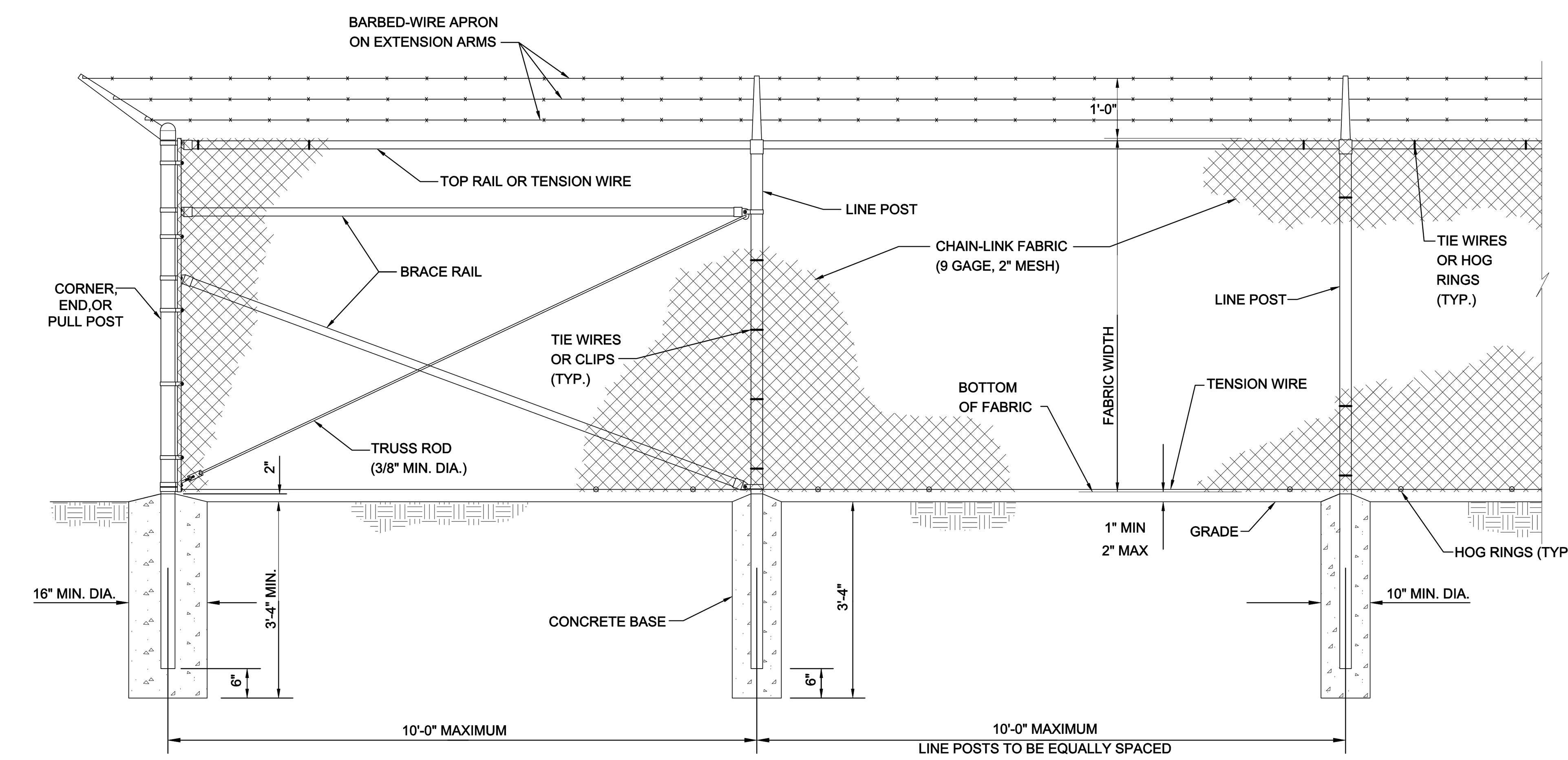
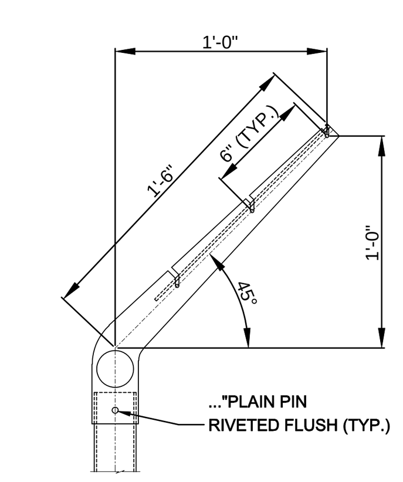
FALL CREEK DAM AND RESERVOIR FISH FACILITY UPGRADE

FENCING PLAN

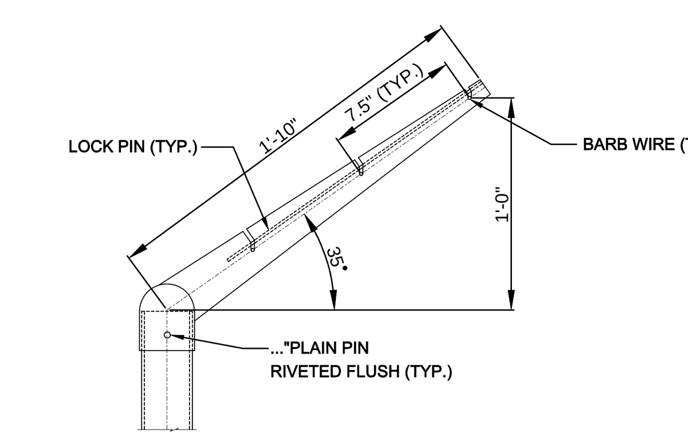
SHEET IDENTIFICATION
C-300



CHAIN-LINK SECURITY FENCE DETAIL
NO SCALE



LINE POST



CORNER POST

EXTENSION ARM DETAILS
NO SCALE

STEEL POST SCHEDULE			
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)		
	FABRIC WIDTH 72" INCHES OR LESS	FABRIC WIDTH 84" TO 96"	FABRIC WIDTH 108" AND OVER
CORNER, END & PULL POSTS			
TUBULAR - ROUND	2.375" O.D.	2.875" O.D.	4.00" O.D.
TUBULAR - SQUARE	2.00" SQ.	2.50" SQ.	3.00" SQ.
C-SECTION (ROLL-FORMED)	3.50" x 3.50"	3.50" x 3.50"	————
LINE POSTS			
TUBULAR - ROUND	1.90" O.D.	2.375" O.D.	2.875" O.D.
H-SECTION	2.25" x 1.70"	2.25" x 1.70"	2.25" x 1.70"
C-SECTION (ROLL-FORMED)	1.875" x 1.625"	2.25" x 1.70"	————
TOP, BOTTOM & BRACE RAILS			
TUBULAR - ROUND	1.66" O.D.		
TUBULAR - SQUARE	1.50" SQ.		
H-SECTION	1.625" x 1.50"		
C-SECTION (ROLL-FORMED)	1.625" x 1.25"		

NOTES:

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.
2. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE SIDE OPPOSITE THE SECURE AREA.
3. UNLESS SPECIFICALLY SHOWN OR SPECIFIED, ALL FE6 FENCE SHALL HAVE APRON EXTENDED OUTWARD FROM THE AREA BEING PROTECTED.
4. C-SECTION POSTS SHALL BE INSTALLED SO THAT THE VOID INSIDE THE POST IS COMPLETELY FILLED WITH CONCRETE UP TO THE TOP OF THE FOUNDATION.

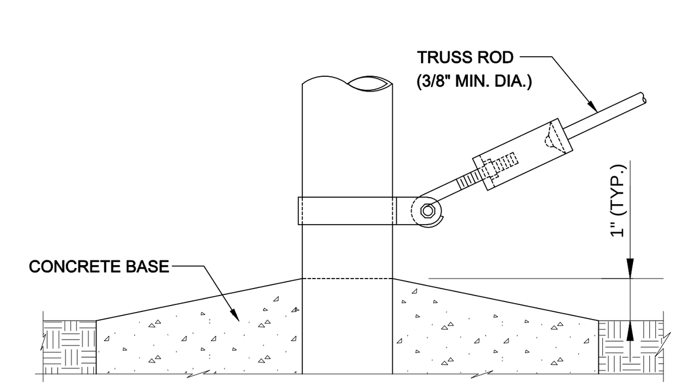
FENCE LEGEND:

TYPE FE5 - CHAIN-LINK FENCE WITHOUT BARBED-WIRE APRON
TYPE FE6 - CHAIN-LINK FENCE W/BARBED-WIRE ON SINGLE OUTRIGGER
TYPE FE7 - CHAIN-LINK FENCE W/BARBED-WIRE ON DOUBLE OUTRIGGER
TYPE FE8 - CHAIN-LINK FENCE W/BARBED-WIRE AND BARBED-TAPE ON DOUBLE OUTRIGGER
TR - FENCE WITH TOP RAIL AND TENSION WIRE AT BOTTOM
TBR - FENCE WITH TOP AND BOTTOM RAILS
TWB - TENSION WIRE TOP AND BOTTOM
TWBR - FENCE WITH TOP TENSION WIRE AND BOTTOM RAIL
FINAL NUMBER IS FABRIC WIDTH IN INCHES.

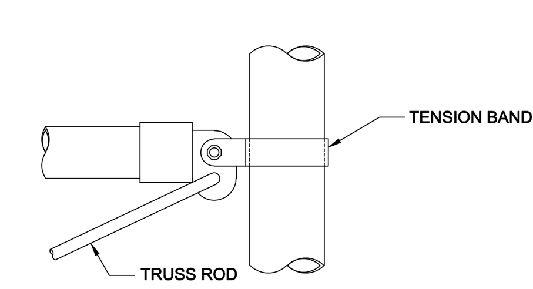
EXAMPLES:

FE6-TR-72 - CHAIN-LINK SECURITY FENCE WITH BARBED-WIRE ON SINGLE OUTRIGGER, TOP RAIL, AND 72 INCH FABRIC WIDTH.

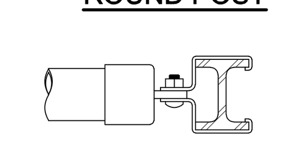
FE5-TWB-84 - CHAIN-LINK SECURITY FENCE WITH NO APRON, TOP AND BOTTOM TENSION WIRE, AND 84 INCH FABRIC WIDTH.



TRUSS ROD AND BAND

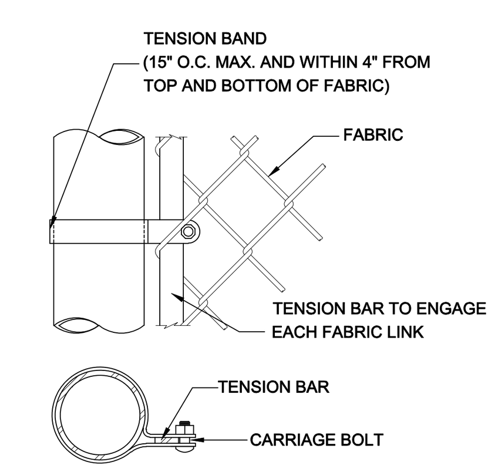


ROUND POST

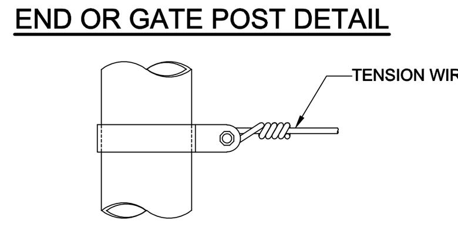


H-BEAM

BRACE RAIL CLAMP DETAILS

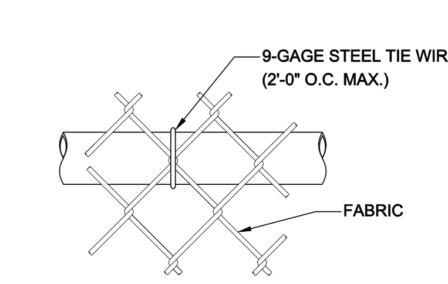


END OR GATE POST DETAIL

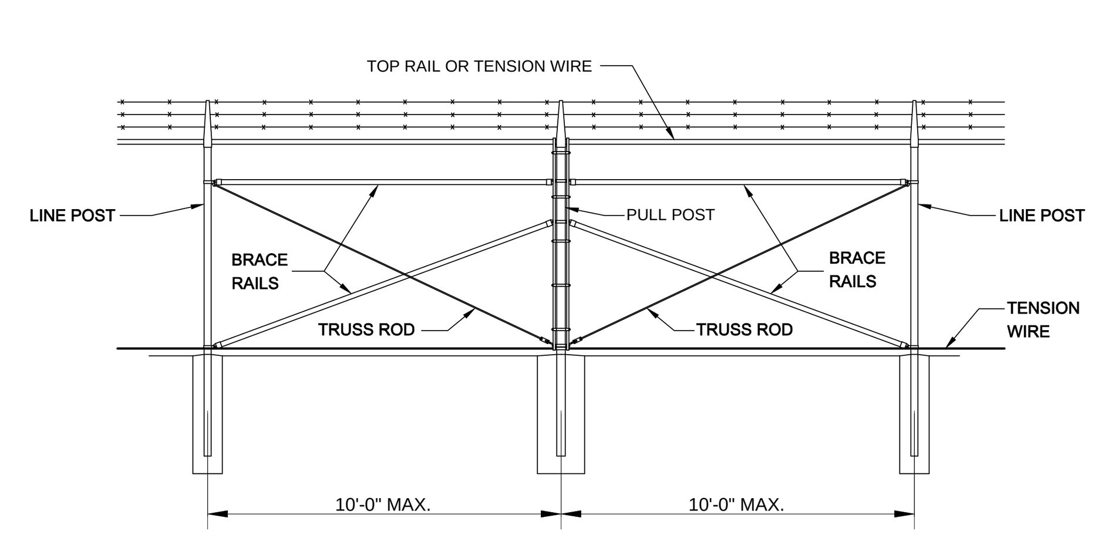


TENSION BAND DETAIL

FASTENING DETAILS
NO SCALE

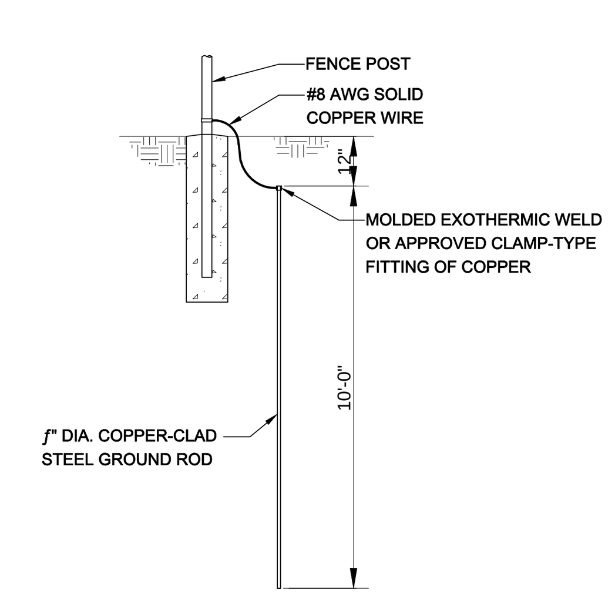


TOP OR BRACE RAIL ATTACHMENT

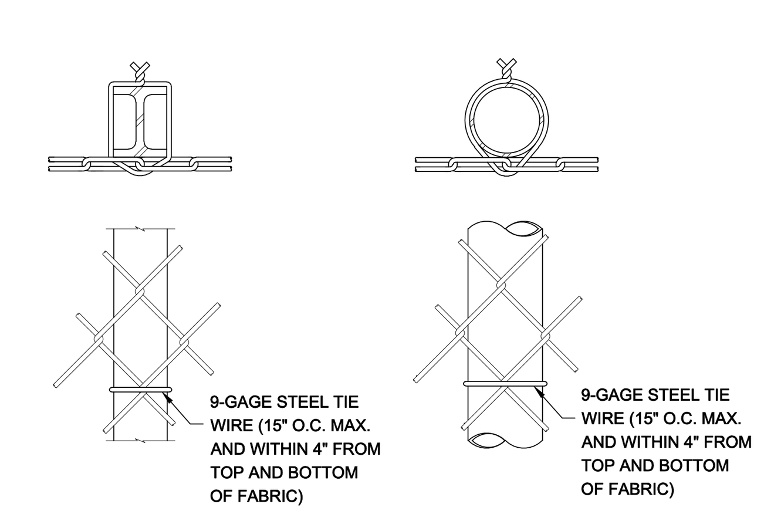


BRACE PANEL DETAIL
NO SCALE

NOTE:
PROVIDE BRACE PANEL WHENEVER STRAIGHT RUNS EXCEED 500 FEET.



GROUNDING DETAIL
NO SCALE



LINE POST ATTACHMENTS
NO SCALE

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SIZE: ANSI F
FILE NAME: C-001 EXISTING CONDITIONS.dwg

FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

FENCE DETAILS

SHEET IDENTIFICATION
C-301

EXISTING GATE

FE6 CHAINLINK SECURITY FENCE (TYP.)

GATE

POST SORT POOLS

SORT FACILITY

HEADBOX

PRE-SORT POOL

FISH LADDER

STAIRS

REST ROOM

SERVICE BUILDING

RAIN GARDEN

RAIN GARDEN

RAIN GARDEN

SCALE: 1"= 30'

30' 0 30'

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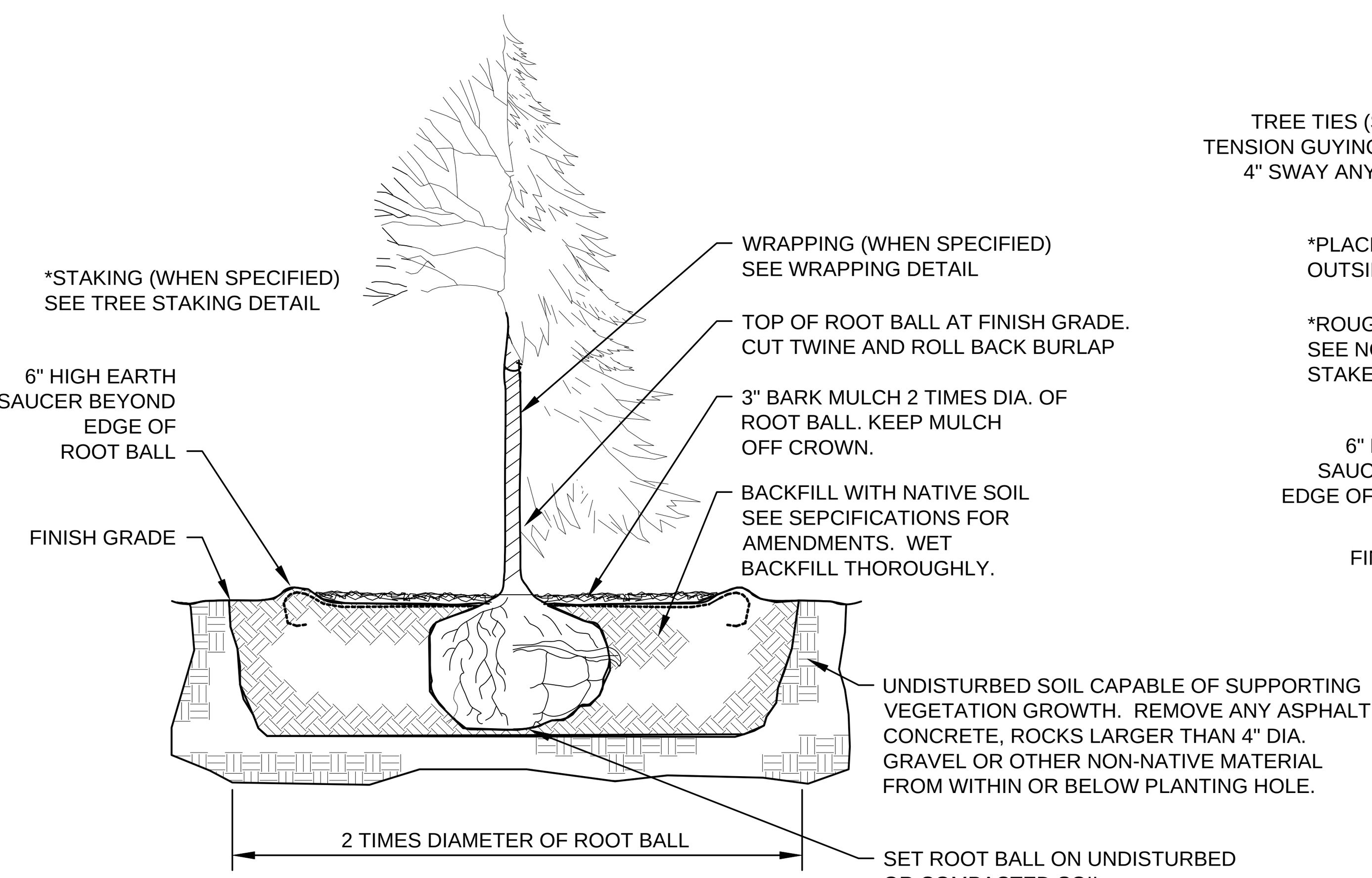
CONTRACT NO.:
DRAWING NUMBER:
PLOT DATE: $$$$$
FILE NAME: FLF1 102_L-001.dwg

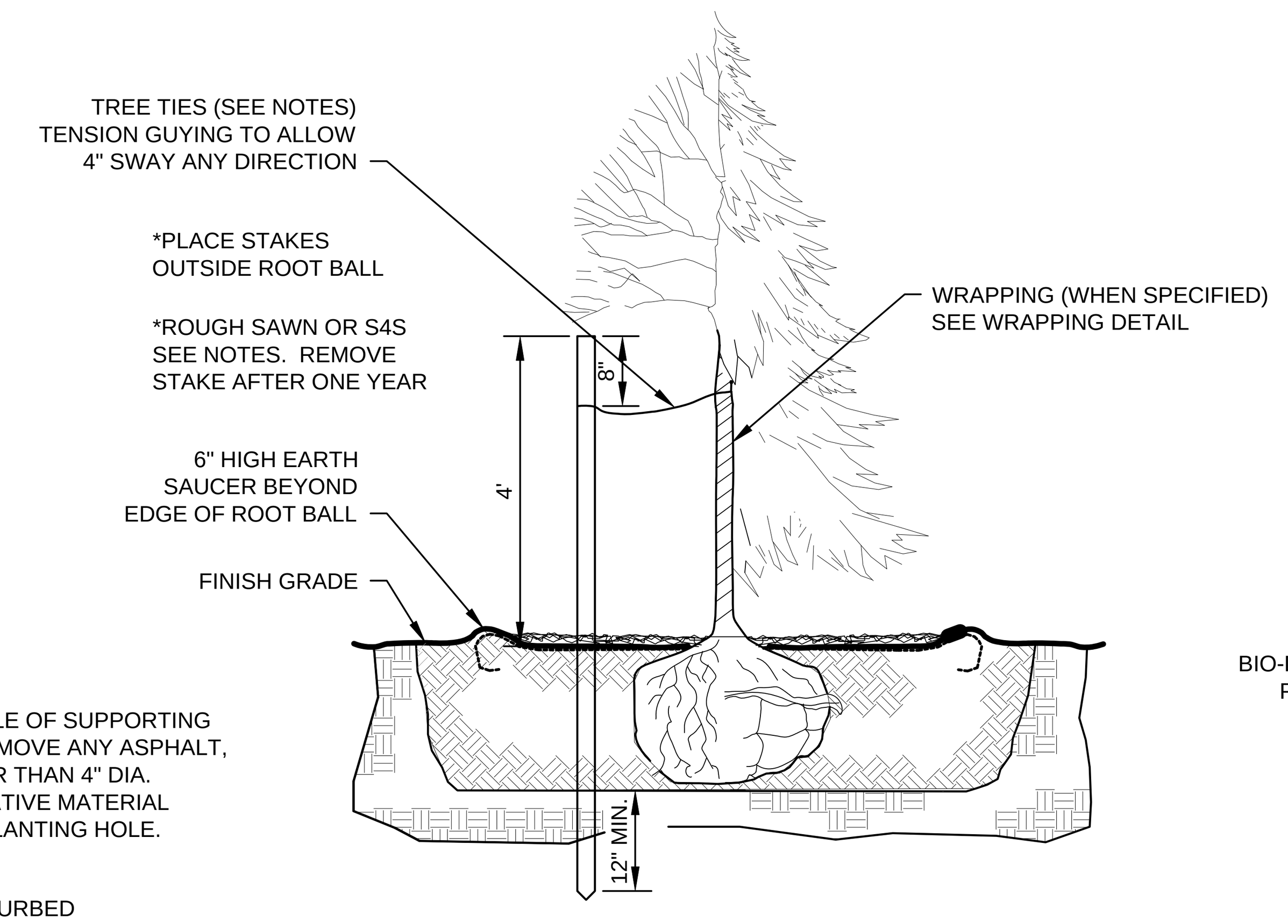
FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

LANDSCAPE PLAN

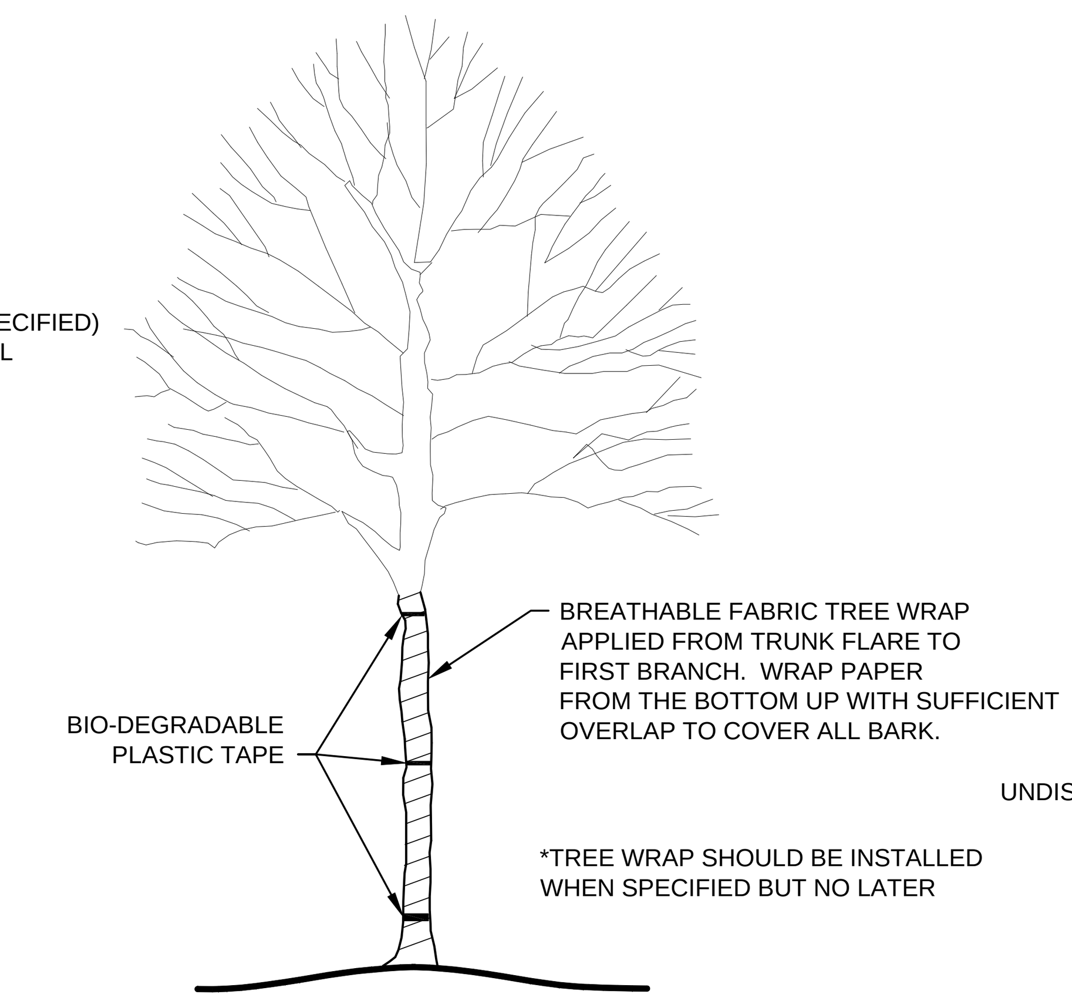
SHEET IDENTIFICATION
L-001



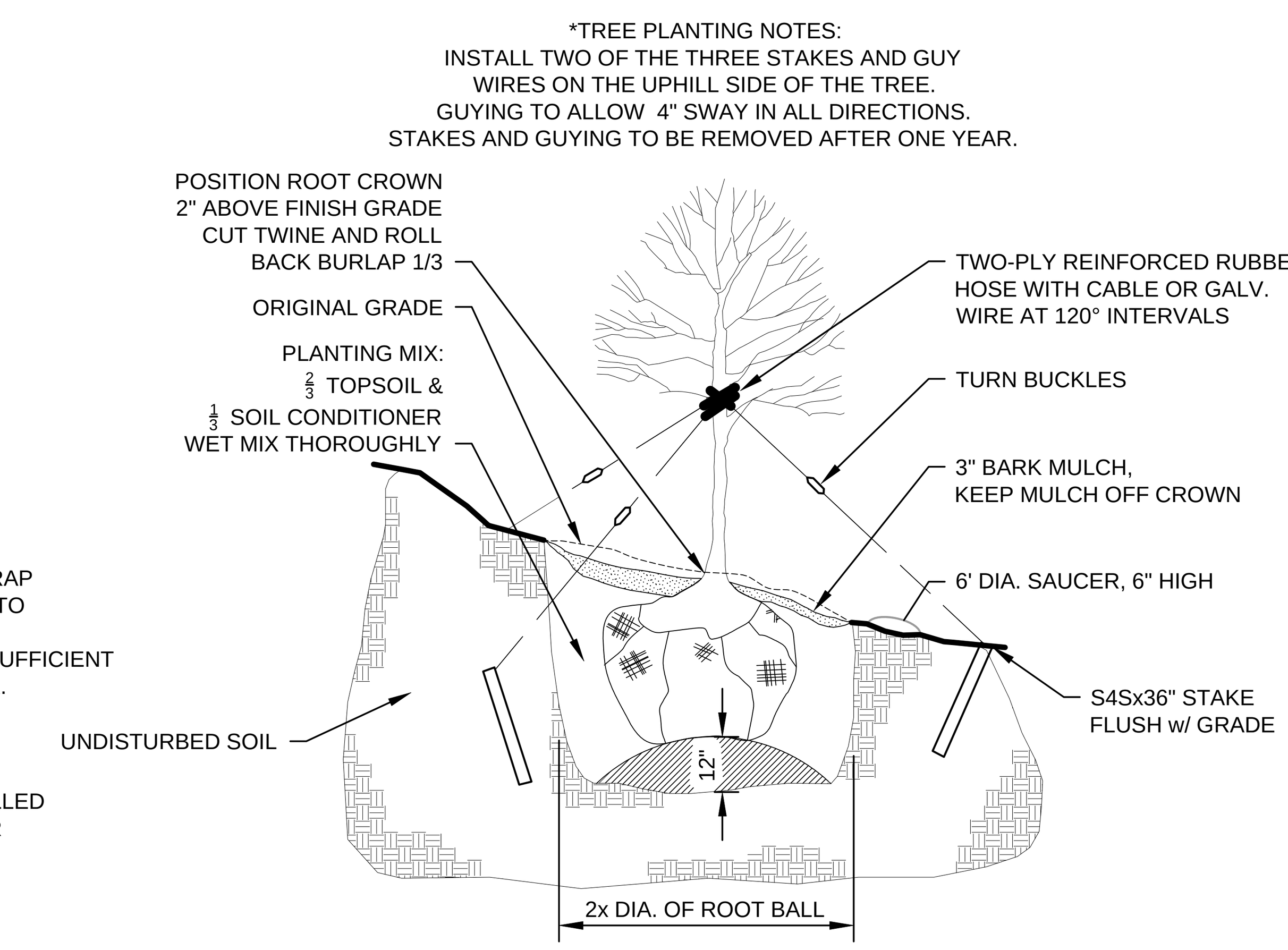
TREE PLANTING
(ALL FORMS EXCEPT BAREROOT)



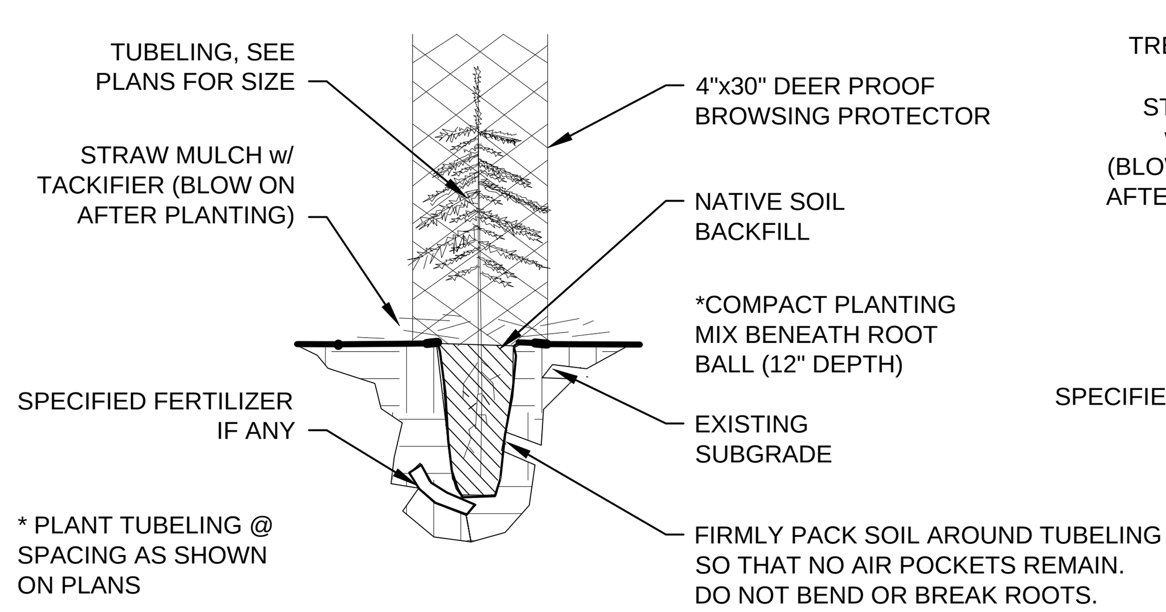
TREE STAKING DETAIL
(ALL FORMS EXCEPT BAREROOT)



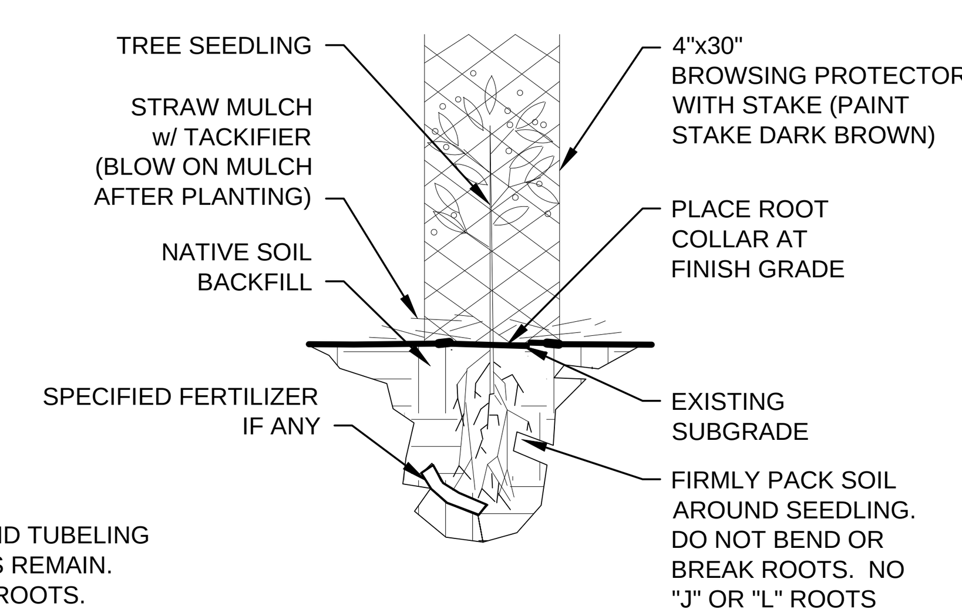
TREE WRAPPING DETAIL



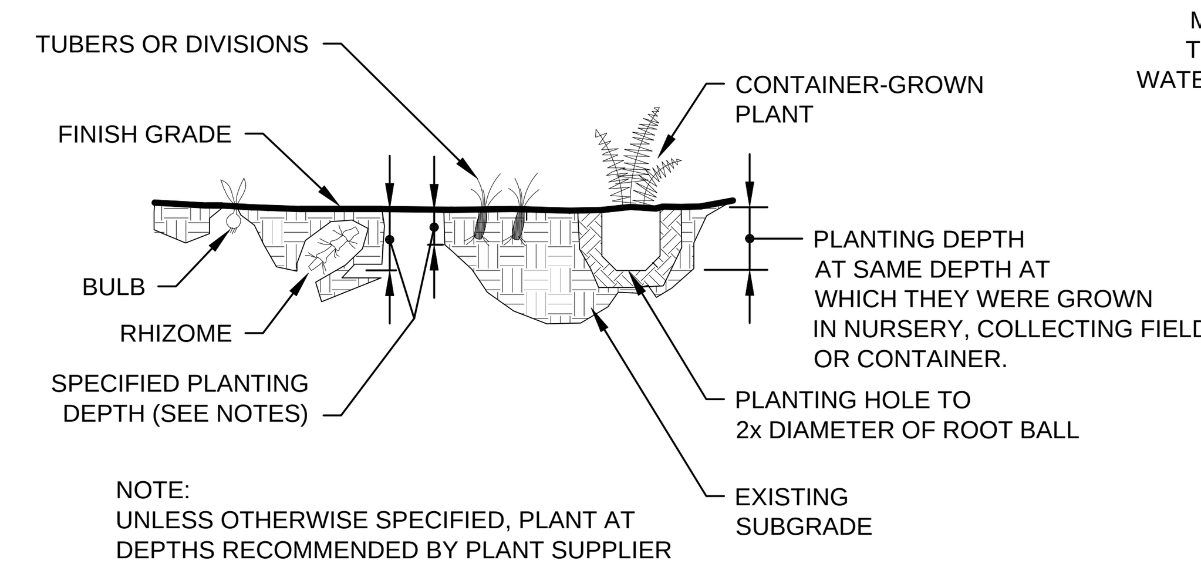
TREE PLANTING w/ GUYS ON SLOPE
(ALL FORMS EXCEPT BAREROOT)



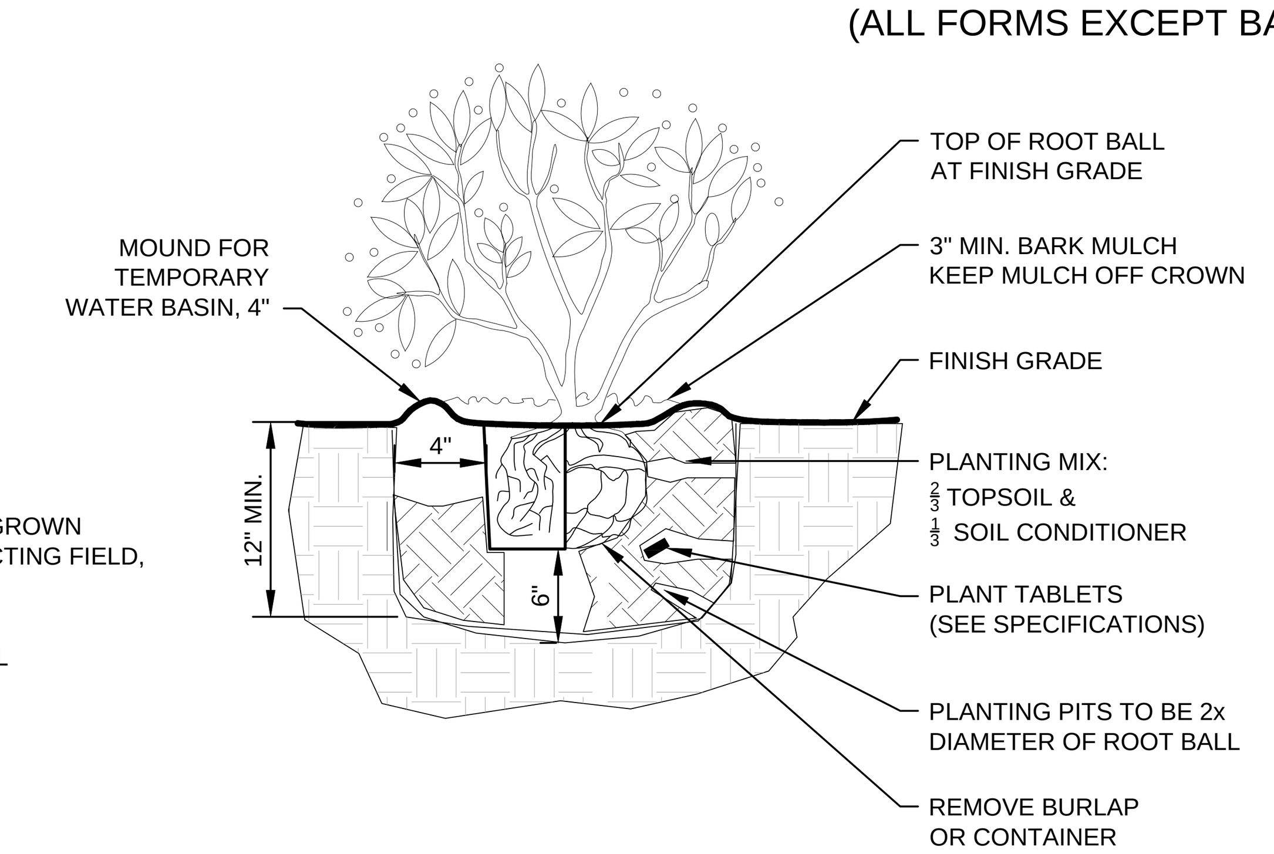
TUBELING PLANTING



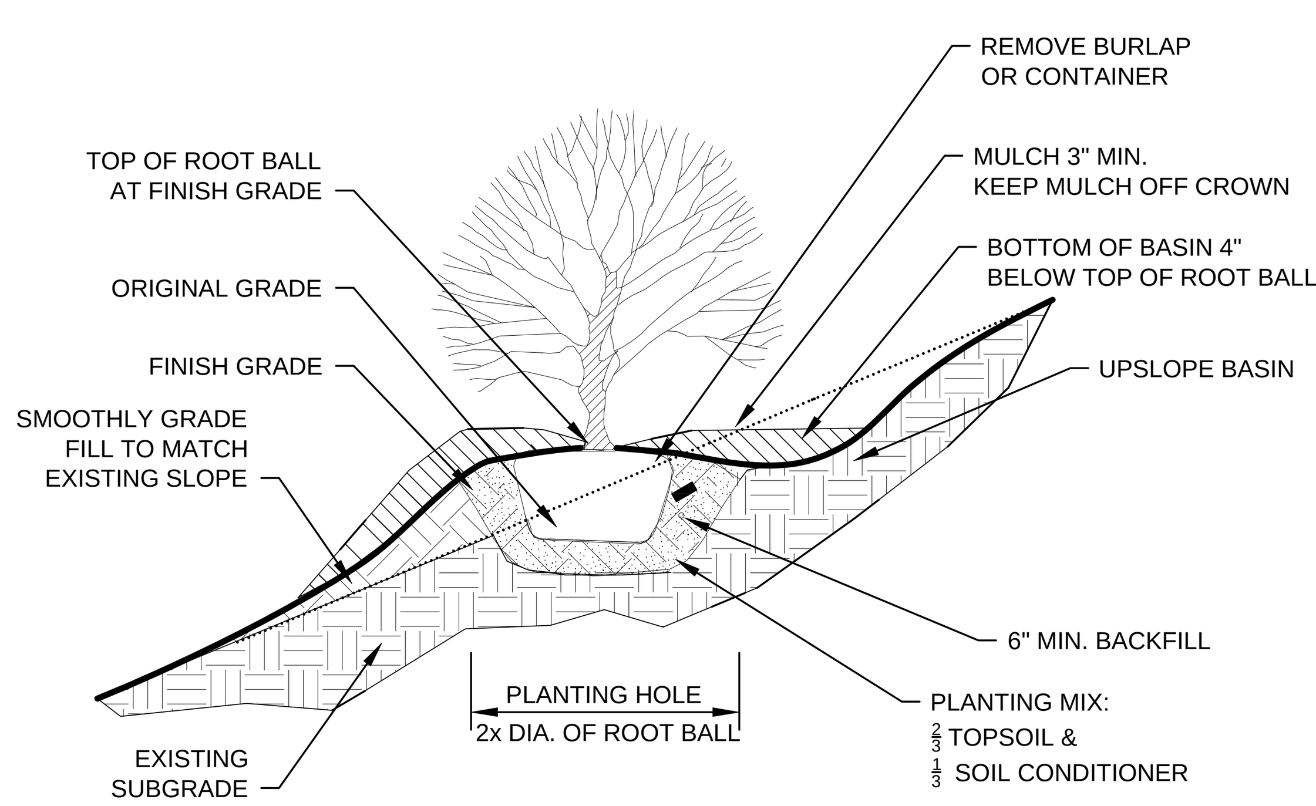
SEEDLING PLANTING



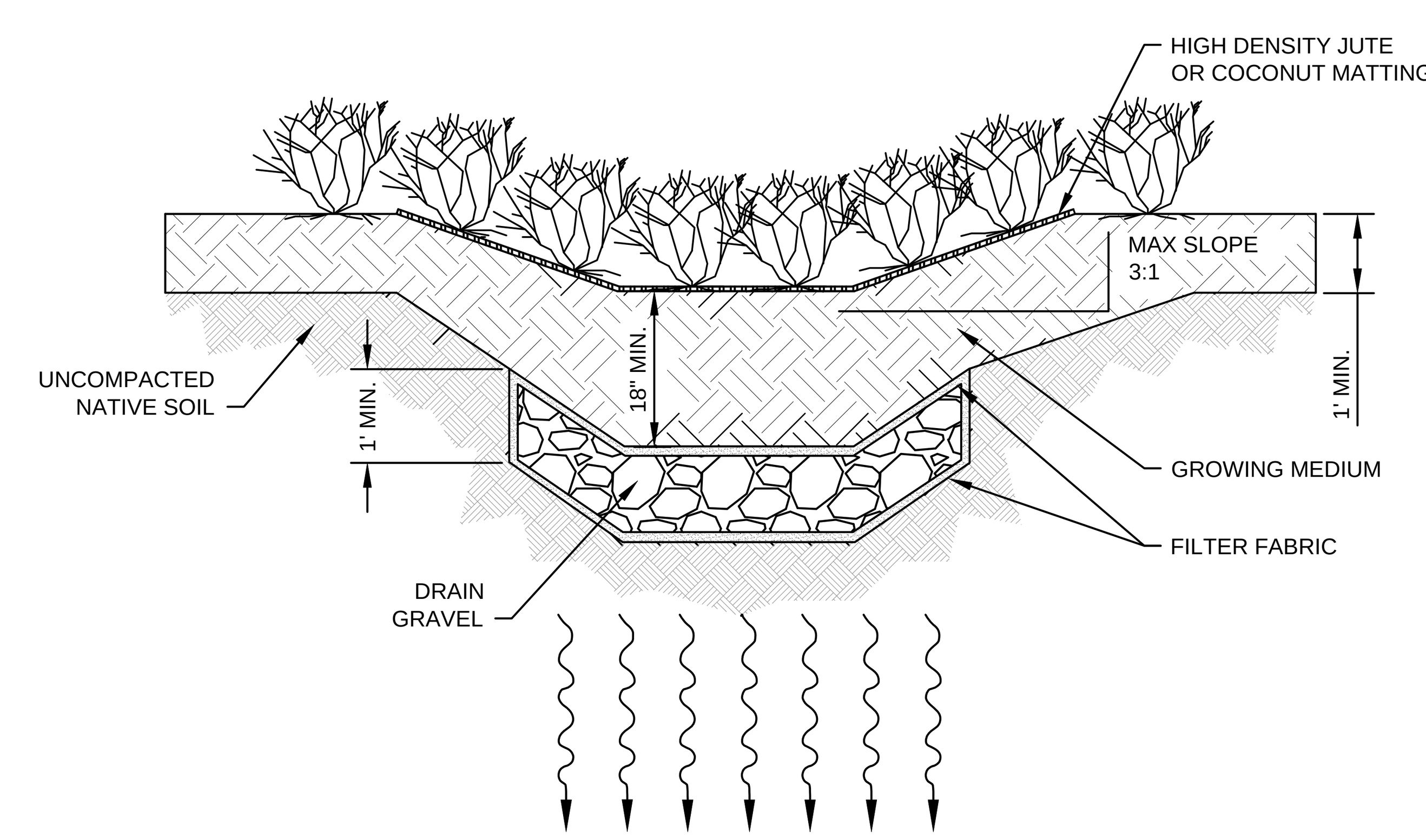
HERBACEOUS PLANTING



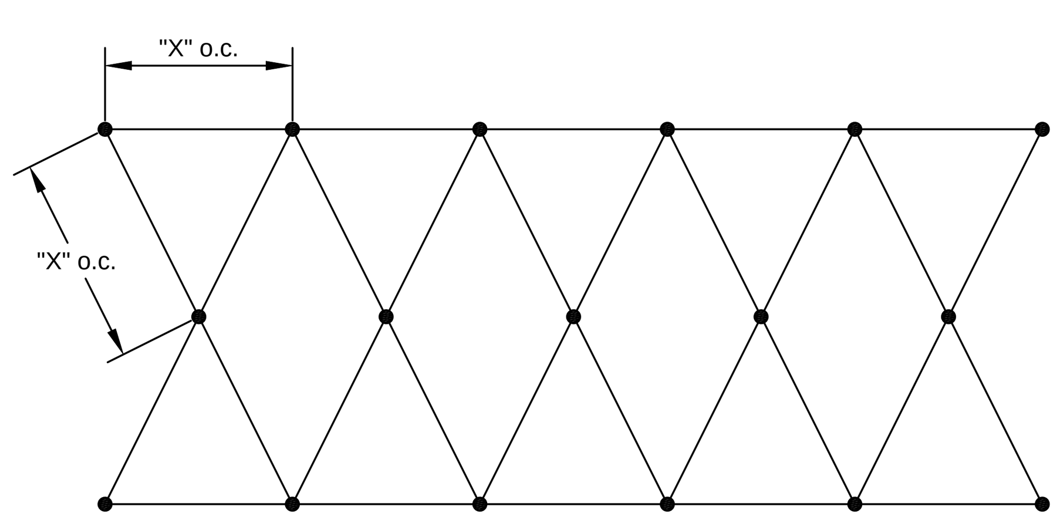
SHRUB PLANTING
(ALL FORMS EXCEPT BAREROOT)



SLOPE AREA SHRUB PLANTING



RAINGARDEN DETAIL



FOR "X" - SEE PLANT LIST

PLANT SPACING

GENERAL PLANTING NOTES:

* ADJUST PLANTING LOCATION SO THAT VEGETATION DOESN'T CONFLICT WITH ABOVE - OR BELOW-GROUND UTILITIES.

* LOCATE UNDERGROUND UTILITY LINES PRIOR TO DIGGING TREE HOLES.

* ADJUST PLANT LOCATIONS TO AVOID CONFLICT SIGNS OR OTHER APPURTENANCES.

* SEE 'AMERICAN STANDARD FOR NURSERY STOCK' FOR PLANT QUALITY MINIMUM STANDARDS SUCH AS SIZE OF ROOT BALL OR CALIPER OF TRUNK.

* ALL DIMENSIONS SHOWN ON DETAILS ARE MINIMUM DIMENSIONS.

* SEE PLANT LIST OR SPECIAL PROVISIONS FOR PLANT MATERIAL THAT MAY NEED TO BE WILD-COLLECTED OR CONTRACT-GROWN.

*MULCH AND SEED ALL DISTURBED AREAS, EXCEPT AS NOTED.

TREE STAKING NOTES:

-FURNISH TREE STAKES ON ALL TREE PLANTINGS. STAKES TO BE CONSTRUCTION GRADE, ROUGH SAWN OR FINISHED DOUGLAS FIR OR PINE. STAIN WITH AN APPROVED GREEN PENETRATING OIL.

STAKE SIZE IS TO BE 1½"x1½" BY THE FOLLOWING LENGTHS:

* TREES 36" AND SHORTER - USE ONE - 6' (APPROX.) STAKE

* TREES TALLER THAN 36" - USE TWO - 8' (APPROX.) STAKES

*TREES PLANTED ON SLOPE, USE THREE STAKES - 6' or 8' DEPENDING ON HEIGHT OF TREE

-DRIVE STAKES VERTICALLY AND AT LEAST 12" INTO UNDISTURBED SOIL. DO NOT DRIVE STAKES THRU ROOT BALL. LOCATE STAKES TO BEST RESIST PREVAILING WINDS WHERE POSSIBLE.

TREE TIES TO BE EITHER:

* PLASTIC CHAIN TYPE, APPROXIMATELY 1" WIDTH BY ⅛" DEPTH. WHERE TWO STAKES ARE REQUIRED, CROSS THE TIES BETWEEN STAKES AND WRAP TIE ONCE AROUND TREE. FASTEN SECURELY TO STAKE.

* RIGID GUY SYSTEM AS MANUFACTURED BY ALPINE NURSERY, BORING, OREGON, OR APPROVED EQUAL. THE GALVANIZED WIRE IS TO BE APPROXIMATELY ⅛" IN THICKNESS AND 24" IN LENGTH. THERE IS TO BE A PLASTIC SLEEVE OVER THE PORTION THAT GOES AROUND THE TREE. THE WIRE TIE IS TO GO THRU THE WOOD STAKE AND BE SECURELY FASTENED.

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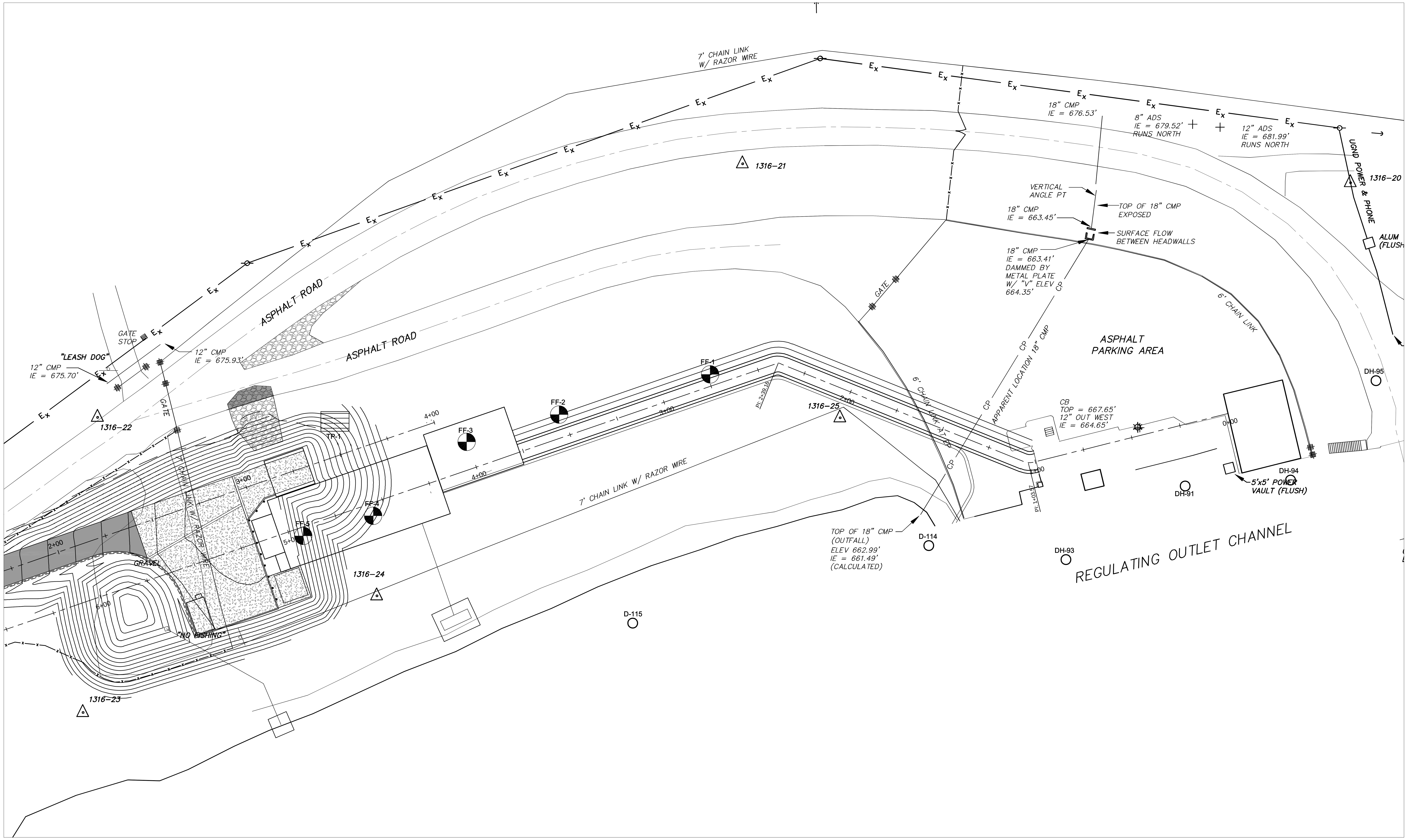
FALL CREEK DAM AND RESERVOIR
FISH FACILITY UPGRADE

LANDSCAPE DETAILS

SHEET IDENTIFICATION
L-002



NOTES:

1. LOCATIONS OF BORINGS ON THIS MAP ARE APPROXIMATE.

2. INDIVIDUAL BORING INFORMATION AND GEOTECHNICAL REPORTS WILL BE FOUND IN THE GEOTECHNICAL BASELINE REPORT.

3. HISTORICAL BORING INFORMATION WILL BE LOCATED IN THE GEOTECHNICAL BASELINE REPORT.

4. A SOIL PROFILE HAS BEEN COMPLETED FOR BOTH INVESTIGATIONS IN THIS AREA. REFER TO THE DDR APPENDIX.

N

SCALE: 1"= 20'
20' 0 20'

LEGEND

2013 BORINGS

HISTORICAL BORINGS (1962)

TEST PITS

APPROXIMATE LOCATIONS OF SOIL BORINGS

BORING #	ELEV.	NORTHING	EASTING
FF-1	684.14	838764.41	4326192.66
FF-2	680.41	838744.08	4326116.63
FF-3	680.84	838730.35	4326070.10
FF-4	681.37	838693.14	4326023.12
FF-5	682.15	838683.05	4325986.47

US Army Corps of Engineers
PORTLAND DISTRICT

P&S REVIEW 30%

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

DESIGNED BY: STEPHEN J. EAGAR
DATE:
DRAWN BY: G2ECDJNS
CHECKED BY:
SOLICITATION NO.:
SUBMITTED BY: JEREMY P. BRITTON, P.E.
CONTRACT NO.:
PLOT SCALE: 1:1
PLOT DATE: 10/7/2014
FILE NUMBER:
SIZE: ANSI F
FILE NAME: FLF1.101_B-100.dwg

FALL CREEK DAM AND RESERVOIR FISH FACILITY UPGRADE

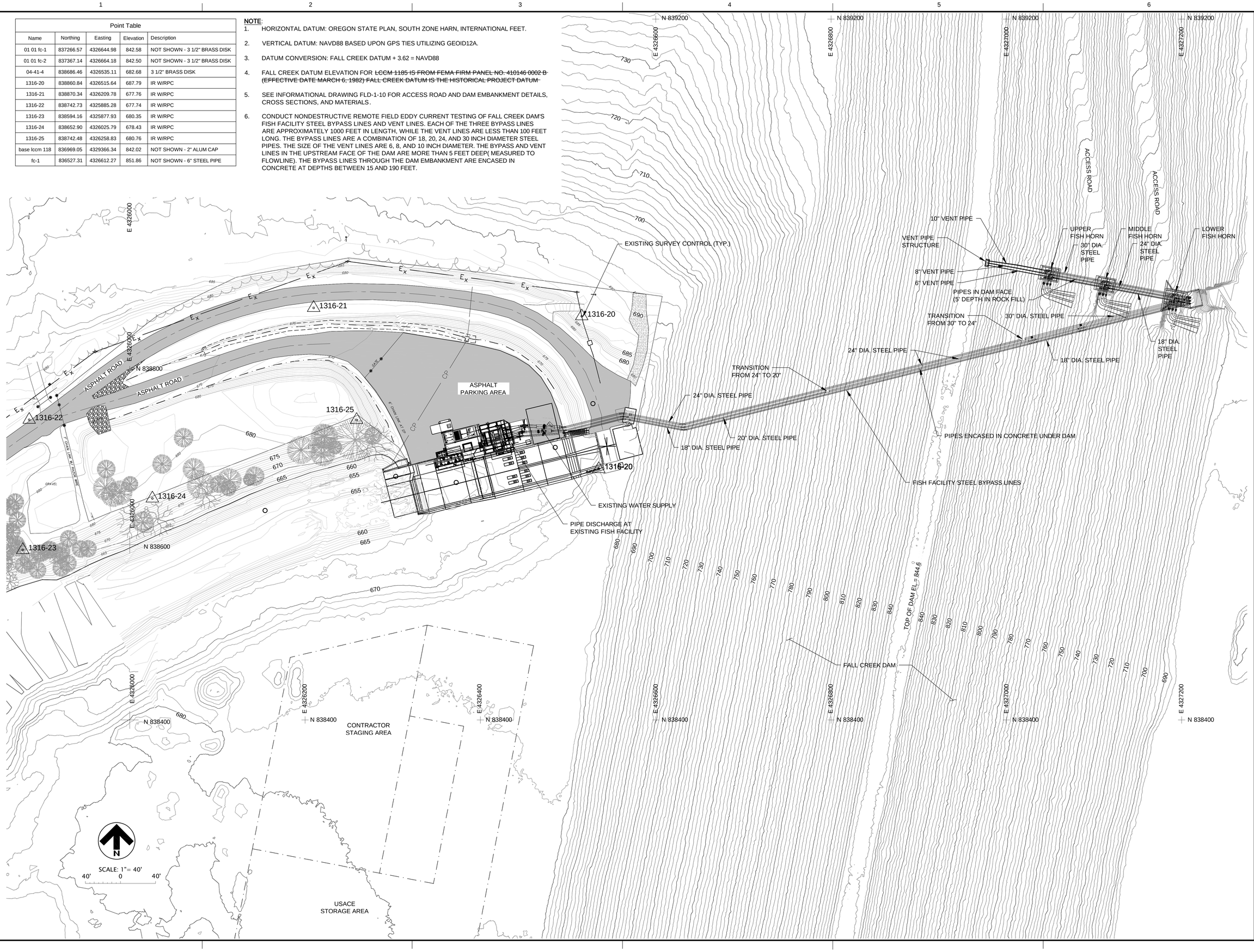
SOIL INVESTIGATION LOCATIONS

SHEET IDENTIFICATION
B-100

Point Table				
Name	Northing	Easting	Elevation	Description
01 01 fc-1	837266.57	4326644.98	842.58	NOT SHOWN - 3 1/2" BRASS DISK
01 01 fc-2	837367.14	4326664.18	842.50	NOT SHOWN - 3 1/2" BRASS DISK
04-41-4	838686.46	4326535.11	682.68	3 1/2" BRASS DISK
1316-20	838860.84	4326515.64	687.79	IR W/RPC
1316-21	838870.34	4326209.78	677.76	IR W/RPC
1316-22	838742.73	4325885.28	677.74	IR W/RPC
1316-23	838594.16	4325877.93	680.35	IR W/RPC
1316-24	838652.90	4326025.79	678.43	IR W/RPC
1316-25	838742.48	4326258.83	680.76	IR W/RPC
base lccm 118	836969.05	4329366.34	842.02	NOT SHOWN - 2" ALUM CAP
fc-1	836527.31	4326612.27	851.86	NOT SHOWN - 6" STEEL PIPE

NOTE:

1. HORIZONTAL DATUM: OREGON STATE PLAN, SOUTH ZONE HARN, INTERNATIONAL FEET.
2. VERTICAL DATUM: NAVD88 BASED UPON GPS TIES UTILIZING GEOID12A.
3. DATUM CONVERSION: FALL CREEK DATUM + 3.62 = NAVD88
4. FALL CREEK DATUM ELEVATION FOR ~~LCCM 1185 IS FROM FEMA FIRM PANEL NO. 410146 0002 B (EFFECTIVE DATE MARCH 6, 1982) FALL CREEK DATUM IS THE HISTORICAL PROJECT DATUM~~
5. SEE INFORMATIONAL DRAWING FLD-1-10 FOR ACCESS ROAD AND DAM EMBANKMENT DETAILS, CROSS SECTIONS, AND MATERIALS.
6. CONDUCT NONDESTRUCTIVE REMOTE FIELD EDDY CURRENT TESTING OF FALL CREEK DAM'S FISH FACILITY STEEL BYPASS LINES AND VENT LINES. EACH OF THE THREE BYPASS LINES ARE APPROXIMATELY 1000 FEET IN LENGTH, WHILE THE VENT LINES ARE LESS THAN 100 FEET LONG. THE BYPASS LINES ARE A COMBINATION OF 18, 20, 24, AND 30 INCH DIAMETER STEEL PIPES. THE SIZE OF THE VENT LINES ARE 6, 8, AND 10 INCH DIAMETER. THE BYPASS AND VENT LINES IN THE UPSTREAM FACE OF THE DAM ARE MORE THAN 5 FEET DEEP(MEASURED TO FLOWLINE). THE BYPASS LINES THROUGH THE DAM EMBANKMENT ARE ENCASED IN CONCRETE AT DEPTHS BETWEEN 15 AND 190 FEET.



US Army Corps of Engineers
PORTLAND DISTRICT

P&S REVIEW 90%

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: ROBERT E. BORICK, P.E.
DRAWN BY: GZECZOTKA
CHECKED BY: GZECZOTKA
QUALITY CONTROL BY: MARK W BROESSER, P.E.
SOLICITATION NO.:
CONTRACT NO.:
PLOT SCALE: 11
PLOT DATE:
FILE NUMBER:
SIZE: ANSI D
FILE NAME: FLFS 101, C-001SITE.dwg

U.S. ARMY CORPS OF ENGINEERS
PORTLAND DISTRICT
PORTLAND, OREGON

FALL CREEK DAM AND RESERVOIR
ADULT FISH FACILITY
WATER SUPPLY UPGRADE

EXISTING SITE PLAN

SHEET IDENTIFICATION
C-001
SHEET OF

Appendix C

Real Estate

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
PO BOX 2946
PORTLAND OR 97208-2946

REPLY TO
ATTENTION OF

JAN 30 2015

Real Estate Division (RE)

SUBJECT: Fall Creek Adult Fish Facility Upgrade, Fall Creek Lake Project

Ms. Lisa Van Laanen
Director, State of Oregon, Parks and Recreation Division
725 Summer NE Street, Suite C
Salem, Oregon 97301-1001

Dear Ms. Van Laanen:

As part of the upcoming Fall Creek Adult Fish Facility Upgrade Project at Fall Creek Lake Project, the Corps is anticipating issuing two contracts this year and one of them will impact an area that is under Lease to State of Oregon, Parks and Recreation Division (OPRD). The contract for rebuilding the Water Intake/Fish Horns will be the contract affecting the leased area.

North Shore Park and Boat Ramp is the affected area and is Leased to OPRD under Lease No. DACW57-1-99-0016. During the Water Intake/Fish Horn construction project, our contractor will need to use the entrance road, the boat trailer parking lot and the View Point parking lot as access, lay down and staging areas.

On January 12, 2015, John Nicholson of my staff discussed (via telephone) with Julie Whalen of your staff the upcoming construction project. Mr. Nicholson explained to Ms. Whalen the need to use the parking lot for Project purposes and the clause in the Lease that allows us to use it. They also discussed the dates that would affect the closure of the park. It is anticipated those dates will be from September 2015 thru June 2016.

The construction project will require access to, over, across and closure to the general public of the lands operated as North Shore Park State Park. To accomplish the work, the Corps is exercising the clause from the Lease (Enclosure 1):

14. RIGHT TO ENTER AND FLOOD

"The right is reserved to the United States, its officers, agents and employees to enter upon the premises at any time and for any government purpose necessary or convenient in connection with Government purposes; to make inspections; to remove timber or other material, except property of the Lessee; to flood the premises; to manipulate the level of the lake or pool in any manner whatsoever;

and/or to make any other use of the land as may be necessary in connection with project purposes, and the Lessee shall have no claim for damages on account thereof against the United States or any officer, agent, or employee thereof."

A site map showing the location of the Water Intake/Fish Horns, the parking lots and routes to be used has been enclosed as Enclosure 2.

A courtesy copy of this letter is being supplied to Julie Whalen, Northern Willamette Valley State Parks Manager, Erik Peterson, Operations Manager, Willamette Valley Projects and Natalie Richards, Project Manager, Fall Creek Fish Facility Upgrade Team.

If you have any questions concerning this matter, please call Mr. John C. Nicholson at 503-808-4671.

Sincerely,

Amanda Dethman

Amanda Dethman
Chief, Real Estate Division

2 Enclosure

ENCLOSURE 1

NO. DACW57-1-99-0016

DEPARTMENT OF THE ARMY

LEASE TO STATES

FOR PUBLIC PARK AND RECREATIONAL PURPOSES

Parks at Fall Creek Lake
(SITE)

Fall Creek Lake Project
(PROJECT NAME)

Lane County, Oregon
(COUNTY, STATE)

THIS LEASE is made on behalf of the United States, between the **SECRETARY OF THE ARMY**, hereinafter referred to as the Secretary, and **STATE OF OREGON**, hereinafter referred to as the Lessee,

WITNESSETH:

That the Secretary, by authority of Title 16, United States Code, Section 460d, and for the consideration hereinafter set forth, hereby leases to the Lessee, the property identified in Exhibit "A" and "A-1 to A-6", attached hereto and made a part hereof, hereinafter referred to as the premises, for public park and recreational purposes.

THIS LEASE is granted subject to the following conditions:

1. TERM

Said premises are hereby leased for a term of twenty five years, beginning January 1, 1999, and ending December 31, 2023.

2. CONSIDERATION

The consideration for this lease is the operation and maintenance of the premises by the Lessee for the benefit of the United States and the general public in accordance with the conditions herein set forth.

3. NOTICES

All correspondence and notices to be given pursuant to this lease shall be addressed, if to the Lessee, to State of Oregon, Parks and Recreation Department, 1115 Commercial Street Northeast, Salem, Oregon 97310-1001; and, if to the United States, to the District Engineer, ATTN: Chief, Real Estate Division, Post Office Box 2946, Portland, Oregon 97208-2946, or as may from time to time otherwise be directed by the parties. Notice shall be deemed to

have been duly given if and when enclosed in a properly sealed envelope, or wrapper, addressed as aforesaid, and deposited, postage prepaid, in a post office regularly maintained by the United States Postal Service.

4. AUTHORIZED REPRESENTATIVES

Except as otherwise specifically provided, any reference herein to "Secretary of the Army," "District Engineer," "said officer" or "Lessor" shall include their duly authorized representatives. Any reference to "Lessee" shall include sublessees, assignees, transferees, concessionaires, and its duly authorized representatives.

5. DEVELOPMENT PLANS

a. The Lessee shall be guided by an implementing Plan of Recreation Development and Management (Development Plan) attached as Exhibit "B" and "B-1" which shows the facilities and services necessary to meet the current and potential public demand and the management and development activities to be undertaken by the Lessee and any sublessees. The Lessee shall provide a copy of any amendment to the Development Plan before proceeding to implement any changes in the development or management of the leased premises. The use and occupation of the premises shall be subject to the general supervision and approval of the District Engineer.

b. During the term of the lease, the District Engineer will notify the Lessee of any updates to the existing project Master Plan affecting the premises and the Lessee may provide comments.

6. STRUCTURES AND EQUIPMENT

The Lessee shall have the right, during the term of the lease, to erect such structures and to provide such equipment upon the premises as may be necessary to furnish the facilities and services authorized. Those structures and equipment shall be and remain the property of the Lessee, except as otherwise provided in the Condition on **RESTORATION.**

7. APPLICABLE LAWS AND REGULATIONS

a. The Lessee shall comply with all applicable Federal laws and regulations and with all applicable laws, ordinances, and regulations of the state, county, and municipality wherein the premises are located, including, but not limited to, those regarding construction, health, safety, food service, water supply, sanitation, use of pesticides, and licenses or permits to do business. The Lessee shall make and enforce such regulations

as are necessary and within its legal authority in exercising the privileges granted in this lease, provided that such regulations are not inconsistent with those issued by the Secretary of the Army or with the provisions of 16 U.S.C. § 460d.

b. The Lessee will provide an annual certification that all water and sanitary systems on the premises have been inspected and comply with Federal, state and local standards. The Lessee will also provide a statement of compliance with the Rehabilitations Act and the Americans with Disabilities Act, as required in the condition on **NON-DISCRIMINATION**, noting any deficiencies and providing a schedule for correction.

8. CONDITION OF PREMISES

a. The Lessee acknowledges that it has inspected the premises, knows its condition, and understands that the same is leased without any representations or warranties whatsoever and without obligation on the part of the United States to make any alterations, repairs, or additions thereto.

b. As of the date of this lease, an inventory and condition report of all personal property and improvements of the United States included in this lease shall be made by the District Engineer and the Lessee to reflect the condition of said property and said improvements. A copy of said report is attached hereto as Exhibit "C" and made a part hereof. Upon the expiration, revocation, or termination of this lease, another inventory and condition report shall be similarly prepared. This report shall constitute the basis for settlement for property damaged or destroyed. Any such property must be either replaced or restored to the condition required by the Condition on **PROTECTION OF PROPERTY**.

9. FACILITIES AND SERVICES

The Lessee shall provide the facilities and services as agreed upon in the Development Plan referred to in the Condition on **DEVELOPMENT PLANS** either directly or through subleases or concession agreements that have been reviewed and accepted by the District Engineer. These subleases or agreements shall state: (1) that they are granted subject to the provisions of this lease; and (2) that the agreement will not be effective until the third party activities have been approved by the District Engineer. The Lessee will not allow any third party activities with a rental to the Lessee or prices to the public which would give the third party an undue economic advantage or circumvent the intent of the Development Plan. The rates and prices charged by the Lessee or its sublessees or concessionaires shall be reasonable and

comparable to rates charged for similar goods and services by others in the area. The use of sublessees and concessionaires will not relieve the Lessee from the primary responsibility for ensuring compliance with all of the terms and conditions of this lease.

10. TRANSFERS, ASSIGNMENTS, SUBLEASES

a. Without prior written approval of the District Engineer, the Lessee shall neither transfer nor assign this lease nor sublet the premises or any part thereof, nor grant any interest, privilege, or license whatsoever in connection with this lease.

b. The Lessee will not sponsor or participate in timeshare ownership of any structures, facilities, accommodations, or personal property on the premises. The Lessee will not subdivide nor develop the premises into private residential development.

11. FEES

Fees may be charged by the Lessee for the entrance to or use of the premises or any facilities, however, no user fees may be charged by the Lessee or its sublessees for use of facilities developed in whole or part with federal funds if a user charge by the Corps of Engineers for the facility would be prohibited under law.

12. ACCOUNTS, RECORDS AND RECEIPTS

All monies received by the Lessee from operations conducted on the premises, including, but not limited to, entrance, admission and user fees and rental or other consideration received from its concessionaires, may be utilized by the Lessee for the administration, maintenance, operation and development of the premises. Beginning 5 years from the date of this lease and continuing at 5-year intervals, any such monies not so utilized or programmed for utilization within a reasonable time shall be paid to the District Engineer. The Lessee shall provide an annual statement of receipts and expenditures to the District Engineer. Annual or weekly entrance fees not collected on the Project, which also are honored at other recreational areas operated by the Lessee, are excluded from this requirement. The District Engineer shall have the right to perform audits or to require the Lessee to audit the records and accounts of the Lessee, third party concessionaires and sublessees, in accordance with auditing standards and procedures promulgated by the American Institute of Certified Public Accountants or by the state, and furnish the District Engineer with the results of such an audit.

13. PROTECTION OF PROPERTY

The Lessee shall be responsible for any damage that may be caused to property of the United States by the activities of the Lessee under this lease and shall exercise due diligence in the protection of all property located on the premises against fire or damage from any and all other causes. Any property of the United States damaged or destroyed by the Lessee incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the Lessee to the satisfaction of the District Engineer, or, at the election of the District Engineer, reimbursement may be made therefor by the Lessee in an amount necessary to restore or replace the property to a condition satisfactory to the District Engineer.

14. RIGHT TO ENTER AND FLOOD

The right is reserved to the United States, its officers, agents, and employees to enter upon the premises at any time and for any purpose necessary or convenient in connection with Government purposes; to make inspections; to remove timber or other material, except property of the Lessee; to flood the premises; to manipulate the level of the lake or pool in any manner whatsoever; and/or to make any other use of the land as may be necessary in connection with project purposes, and the Lessee shall have no claim for damages on account thereof against the United States or any officer, agent, or employee thereof.

15. LIGHTS, SIGNALS AND NAVIGATION

There shall be no unreasonable interference with navigation by the exercise of the privileges granted by this lease. If the display of lights and signals on any work hereby authorized is not otherwise provided for by law, such lights and signals as may be prescribed by the Coast Guard or by the District Engineer shall be installed and maintained by and at the expense of the Lessee.

16. INSURANCE

a. At the commencement of this lease, the Lessee, unless self-insured, and its sublessees and concessionaires at the commencement of operating under the terms of this lease as third parties, shall obtain from a reputable insurance company or companies contracts of liability insurance. The insurance shall provide an amount not less than that which is prudent, reasonable and consistent with sound business practices, for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting therefrom, property damage, or both, suffered or alleged to have been suffered by any person or

persons, resulting from the operations of the sublessees and concessionaires under the terms of this lease. The Lessee shall require its insurance company to furnish to the District Engineer a copy of the policy or policies, or, if acceptable to the District Engineer, certificates of insurance evidencing the purchase of such insurance.

b. The insurance policy or policies shall specifically provide protection appropriate for the types of facilities, services and products involved; and shall provide that the District Engineer be given thirty (30) days notice of any cancellation or change in such insurance.

c. The District Engineer may require closure of any or all of the premises during any period for which the sublessees and concessionaires do not have the required insurance coverage.

17. RESTORATION

On or before the expiration of this lease or its termination by the Lessee, the Lessee shall vacate the premises, remove the property of the Lessee, and restore the premises to a condition satisfactory to the District Engineer. If, however, this lease is revoked, the Lessee shall vacate the premises, remove said property therefrom, and restore the premises to the aforesaid condition within such time as the District Engineer may designate. In either event, if the Lessee shall fail or neglect to remove said property and restore the premises, then, at the option of the District Engineer, said property shall either become the property of the United States without compensation therefor, or the District Engineer may cause the property to be removed and no claim for damages against the United States or its officers or agents shall be created by or made on account of such removal and restoration work. The Lessee shall also pay the United States on demand any sum which may be expended by the United States after the expiration, revocation, or termination of this lease in restoring the premises.

18. NON-DISCRIMINATION

a. The Lessee shall not discriminate against any person or persons or exclude them from participation in the Lessee's operations, programs or activities conducted on the leased premises, because of race, color, religion, sex, age, handicap, or national origin. The Lessee will comply with the Americans with Disabilities Act and attendant Americans with Disabilities Act Accessibility Guidelines (ADAAG) published by the Architectural And Transportation Barriers Compliance Board.

b. The Lessee, by acceptance of this lease, is receiving a type of Federal assistance and, therefore, hereby gives assurance that it will comply with the provisions of Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. § 2000d); the Age Discrimination Act of 1975 (42 U.S.C. § 6102); the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794); and all requirements imposed by or pursuant to the Directive of the Department of Defense (32 CFR Part 300) issued as Department of Defense Directives 5500.11 and 1020.1, and Army Regulation 600-7. This assurance shall be binding on the Lessee, its agents, successors, transferees, sublessees and assignees.

19. SUBJECT TO EASEMENTS

This lease is subject to all existing easements, easements subsequently granted, and established access routes for roadways and utilities located, or to be located, on the premises, provided that the proposed grant of any new easement or route will be coordinated with the Lessee, and easements will not be granted which will, in the opinion of the District Engineer, interfere with developments, present or proposed, by the Lessee. The Lessee will not close any established access routes without written permission of the District Engineer.

20. SUBJECT TO MINERAL INTERESTS

This lease is subject to all outstanding mineral interests. As to federally owned mineral interests, it is understood that they may be included in present or future mineral leases issued by the Bureau of Land Management (BLM), which has responsibility for mineral development on Federal lands. The Secretary will provide lease stipulations to BLM for inclusion in such mineral leases that are designed to protect the premises from activities that would interfere with the Lessee's operations or would be contrary to local laws.

21. COMPLIANCE, CLOSURE, REVOCATION AND RELINQUISHMENT

a. The Lessee and/or any sublessees or licensees are charged at all times with full knowledge of all the limitations and requirements of this lease, and the necessity for correction of deficiencies, and with compliance with reasonable requests by the District Engineer. This lease may be revoked in the event the Lessee violates any of the terms and conditions and continues and persists in such non-compliance. The Lessee will be notified of any non-compliance, which notice shall be in writing or shall be confirmed in writing, giving a period of time in which to correct the non-compliance. Failure to satisfactorily correct any substantial or persistent non-compliance within the specified time

is grounds for closure of all or part of the premises, temporary suspension of operation, or revocation of the lease, after notice in writing of such intent. Future requests by the Lessee to extend the lease, expand the premises, modify authorized activities, or assign the lease shall take into consideration the Lessee's past performance and compliance with the lease terms.

b. This lease may be relinquished by the Lessee by giving one (1) year prior written notice to the District Engineer in the manner prescribed in the Condition on **NOTICES**.

22. HEALTH AND SAFETY

a. The Lessee shall keep the premises in good order and in a clean, sanitary, and safe condition and shall have the primary responsibility for ensuring that any sublessees and concessionaires operate and maintain the premises in such a manner.

b. In addition to the rights of revocation for non-compliance, the District Engineer, upon discovery of any hazardous conditions n the premises that presents an immediate threat to health and/or danger to life or property, will so notify the Lessee and will require that the affected part or all of the premises be closed to the public until such condition is corrected and the danger to the public eliminated. If the condition is not corrected, the District Engineer will have the option to: (1) correct the hazardous conditions and collect the cost of repairs from the Lessee; or, (2) revoke the lease. The Lessee and its assignees or sublessees shall have no claim for damages against the United States, or any officer, agent, or employee thereof on account of action taken pursuant to this condition.

23. PUBLIC USE

No attempt shall be made by the Lessee, or any of its sublessees or concessionaires, to forbid the full use by the public of the premises and of the water areas of the project, subject, however, to the authority and responsibility of the Lessee to manage the premises and provide safety and security to the visiting public.

24. PROHIBITED USES

a. The Lessee shall not permit gambling on the premises or install or operate, or permit to be installed or operated thereon, any device which is illegal, or use the premises or permit them to be used for any illegal business or purpose. There shall not be

conducted on or permitted upon the premises any activity which would constitute a nuisance.

b. As an exception, some games of chance, such as raffles, games and sporting events, may be conducted by nonprofit organizations under special use permits issued in conjunction with special events, if permissible by state and local law. Any request to conduct such activities must be submitted in writing to the District Engineer.

c. In accordance with state and local laws and regulations, the Lessee may sell, store, or dispense, or permit the sale, storage, or dispensing of beer, malt beverages, light wines or other intoxicating beverages on the premises in those facilities where such service is customarily found. Bar facilities will only be permitted if offered in connection with other approved activities. Advertising of such beverages outside of buildings is not permitted. Carry out package sales of hard liquor is prohibited.

25. NATURAL RESOURCES

The Lessee shall cut no timber, conduct no mining operations, remove no sand, gravel, or kindred substances from the ground, commit no waste of any kind, nor in any manner substantially change the contour or condition of the premises, except as may be authorized under and pursuant to the Development Plan described in the Condition on **DEVELOPMENT PLANS** herein. The Lessee may salvage fallen or dead timber; however, no commercial use shall be made of such timber. Except for timber salvaged by the Lessee when in the way of construction of improvements or other facilities, all sales of forest products will be conducted by the United States and the proceeds therefrom shall not be available to the Lessee under the provisions of this lease.

26. DISPUTES CLAUSE

a. Except as provided in the Contract Disputes Act of 1978 (41 U.S.C. 601-613) (the Act), all disputes arising under or relating to this lease shall be resolved under this clause and the provisions of the Act.

b. "Claim," as used in this clause, means a written demand or written assertion by the Lessee seeking, as a matter of right, the payment of money in a sum certain, the adjustment of interpretation of lease terms, or other relief arising under or relating to this lease. A claim arising under this lease, unlike a claim relating to the lease, is a claim that can be resolved under a lease clause that provides for the relief sought by the

Lessee. However, a written demand or written assertion by the Lessee seeking the payment of money exceeding $100,000 is not a claim under the Act until certified as required by subparagraph c.(2) below.

c. (1) A claim by the Lessee shall be made in writing and submitted to the District Engineer for a written decision. A claim by the Government against the Lessee shall be subject to a written decision by the District Engineer.

(2) For Lessee claims exceeding $100,000, the Lessee shall submit with the claim a certification that:

(i) The claim is made in good faith;

(ii) Supporting data are accurate and complete to the best of the Lessee's knowledge and belief; and

(iii) The amount requested accurately reflects the lease adjustment for which the Lessee believes the Government is liable.

(3) If the Lessee is an individual. the certificate shall be executed by that individual. If the Lessee is not an individual, the certification shall be executed by:

(i) A senior company official in charge at the Lessee's location involved; or

(ii) An officer or general partner of the Lessee having overall responsibility of the conduct of the Lessee's affairs.

d. For Lessee claims of $100,000 or less, the District Engineer must, if requested in writing by the Lessee, render a decision within 60 days of the request. For Lessee-certified claims over $100,000, the District Engineer must, within 60 days, decide the claim or notify the Lessee of the date by which the decision will be made.

e. The District Engineer's decision shall be final unless the Lessee appeals or files a suit as provided in the Act.

f. At the time a claim by the Lessee is submitted to the District Engineer or a claim by the Government is presented to the Lessee, the parties, by mutual consent, may agree to use alternative means of dispute resolution. When using alternate dispute resolution procedures, any claim, regardless of amount, shall be accompanied by the certificate described in paragraph

c.(2) of this clause, and executed in accordance with paragraph c.(3) of this clause.

g. The Government shall pay interest on the amount found due and unpaid by the Government from (1) the date the District Engineer received the claim (properly certified if required), or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury, as provided in the Act, which is applicable to the period during which the District Engineer receives the claim, and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

h. The Lessee shall proceed diligently with the performance of the lease, pending final resolution of any request for relief, claim, appeal, or action arising under the lease, and comply with any decision of the District Engineer.

27. ENVIRONMENTAL PROTECTION

a. Within the limits of their respective legal powers, the parties to this lease shall protect the project against pollution of its air, ground, and water. The Lessee shall comply promptly with any laws, regulations, conditions or instructions affecting the activity hereby authorized, if and when issued by the Environmental Protection Agency, or any Federal, state, interstate or local governmental agency having jurisdiction to abate or prevent pollution. The disposal of any toxic or hazardous materials within the premises is specifically prohibited. Such regulations, conditions, or instructions in effect or prescribed by the Environmental Protection Agency, or any Federal, state , interstate or local governmental agency, are hereby made a condition of this lease. The Lessee shall require all sanitation facilities on boats moored at the Lessee's facilities, including rental boats, to be sealed against any discharge into the lake. Services for waste disposal, including sewage pump-out of watercraft, shall be provided by the Lessee as appropriate. The Lessee shall not discharge waste or effluent from the premises in such a manner that the discharge will contaminate streams or other bodies of water or otherwise become a public nuisance.

b. The Lessee will use all reasonable means available to protect the environment and natural resources, and where damage nonetheless occurs from the Lessee's activities, the Lessee shall be liable to restore the damaged resources.

c. The Lessee must obtain approval in writing from the District Engineer before any pesticides or herbicides are applied to the premises.

28. PRELIMINARY ASSESSMENT SCREENING

A Preliminary Assessment Screening (PAS) documenting the known history of the property with regard to the storage, release or disposal of hazardous substances thereon is attached hereto and made a part hereof as Exhibit "D". Upon expiration, revocation or termination of this lease, another PAS shall be prepared which will document the environmental condition of the property at that time. A comparison of the two assessments will assist the District Engineer in determining any environmental restoration requirements. Any such requirements will be completed by the Lessee in accordance with the condition on **RESTORATION.**

29. HISTORIC PRESERVATION

The Lessee shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archaeological, architectural or other cultural artifacts, relics, remains, or objects of antiquity. In the event such items are discovered on the premises, the Lessee shall immediately notify the District Engineer and protect the site and the material from further disturbance until the District Engineer gives clearance to proceed.

30. SOIL AND WATER CONSERVATION

The Lessee shall maintain, in a manner satisfactory to the District Engineer, all soil and water conservation structures that may be in existence upon said premises at the beginning of, or that may be constructed by the Lessee during the term of, this lease, and the Lessee shall take appropriate measures to prevent or control soil erosion within the premises. Any soil erosion occurring outside the premises resulting from the activities of the Lessee shall be corrected by the Lessee as directed by the District Engineer.

31. TRANSIENT USE

a. Camping, including transient trailers or recreational vehicles, at one or more campsites for a period longer than thirty (30) days during any sixty (60) consecutive day period is prohibited. The Lessee will maintain a ledger and reservation system for the use of any such campsites.

b. Occupying any lands, buildings, vessels or other facilities within the premises for the purpose of maintaining a full- or part-time residence is prohibited, except for employees residing on the premises for security purposes, if authorized by the District Engineer.

32. COVENANT AGAINST CONTINGENT FEES

The Lessee warrants that no person or selling agency has been employed or retained to solicit or secure this lease upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Lessee for the purpose of securing business. For breach or violation of this warranty, the United States shall have the right to annul this lease without liability or, in its discretion, to require the Lessee to pay, in addition to the lease rental or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

33. OFFICIALS NOT TO BENEFIT

No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this lease or to any benefits to arise therefrom. However, nothing herein contained shall be construed to extend to any incorporated company if the lease be for the general benefit of such corporation or company.

34. MODIFICATIONS

This lease contains the entire agreement between the parties hereto, and no modification of this agreement, or waiver, or consent hereunder shall be valid unless the same be in writing, signed by the parties to be bound or by a duly authorized representative; and this provision shall apply to this clause as well as all other conditions of this lease.

35. DISCLAIMER

This lease is effective only insofar as the rights of the United States in the premises are concerned; and the Lessee shall obtain such permission as may be required on account of any other existing rights. It is understood that the granting of this lease does not eliminate the necessity of obtaining any Department of the Army permit which may be required pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 3 March 1899 (30 Stat. 1151; 33 U.S.C. § 403), or Section 404 of the Clean Water Act (33 U.S.C. § 1344).

IN WITNESS WHEREOF I have hereunto set my hand by authority/direction of the Secretary of the Army this 11th day of January, 1999.

John S. Minger
Chief, Real Estate Division

THIS LEASE is also executed by the Lessee this 7th day of January, 1999.

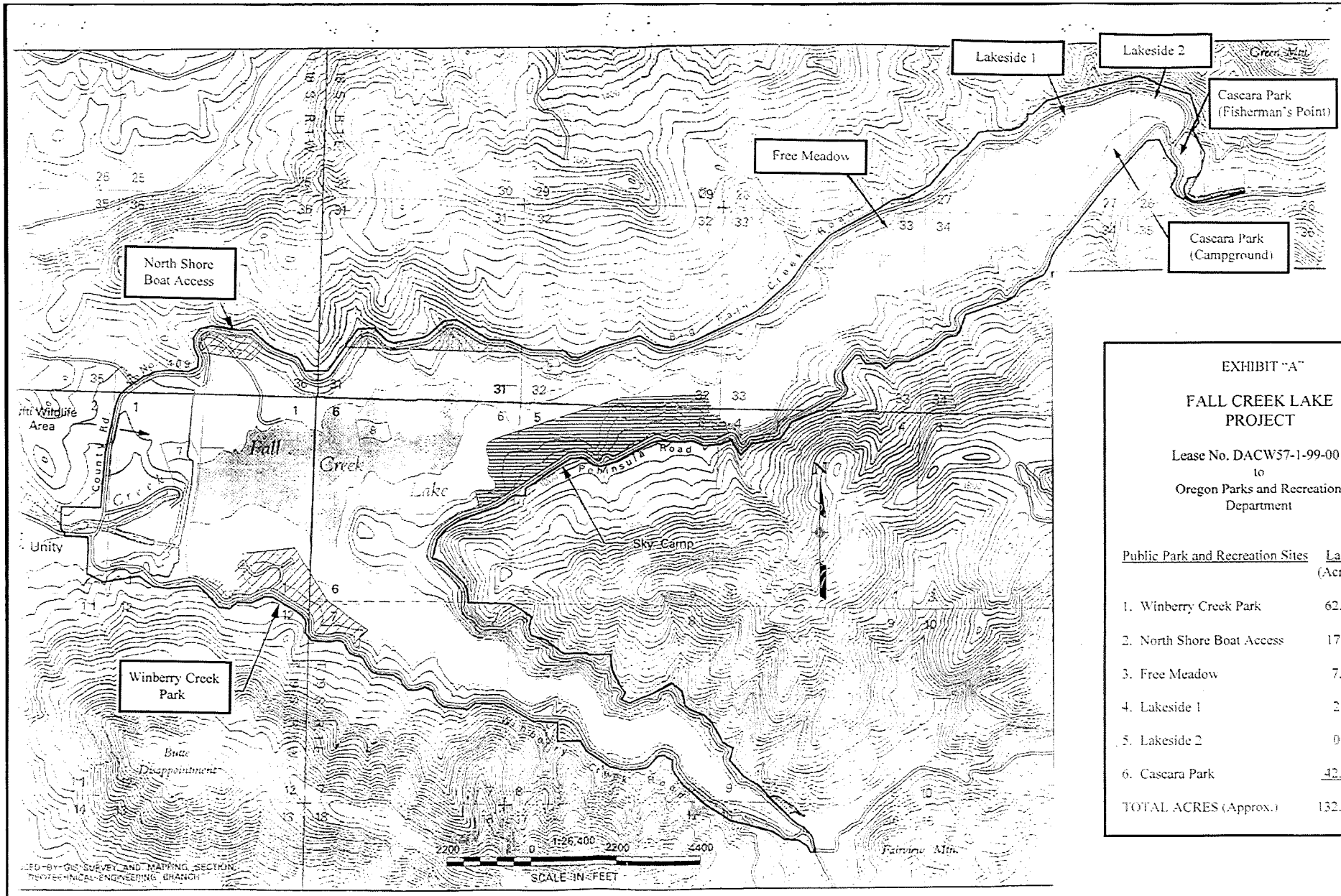


EXHIBIT "A"

FALL CREEK LAKE PROJECT

Lease No. DACW57-1-99-0016
to
Oregon Parks and Recreation Department

Public Park and Recreation Sites	Land (Acres)	Water (Acres)
1. Winberry Creek Park	62.10	19.40
2. North Shore Boat Access	17.20	1.84
3. Free Meadow	7.89	1.54
4. Lakeside 1	2.01	3.00
5. Lakeside 2	0.41	0.62
6. Cascara Park	42.99	8.34
TOTAL ACRES (Approx.)	132.60	34.74

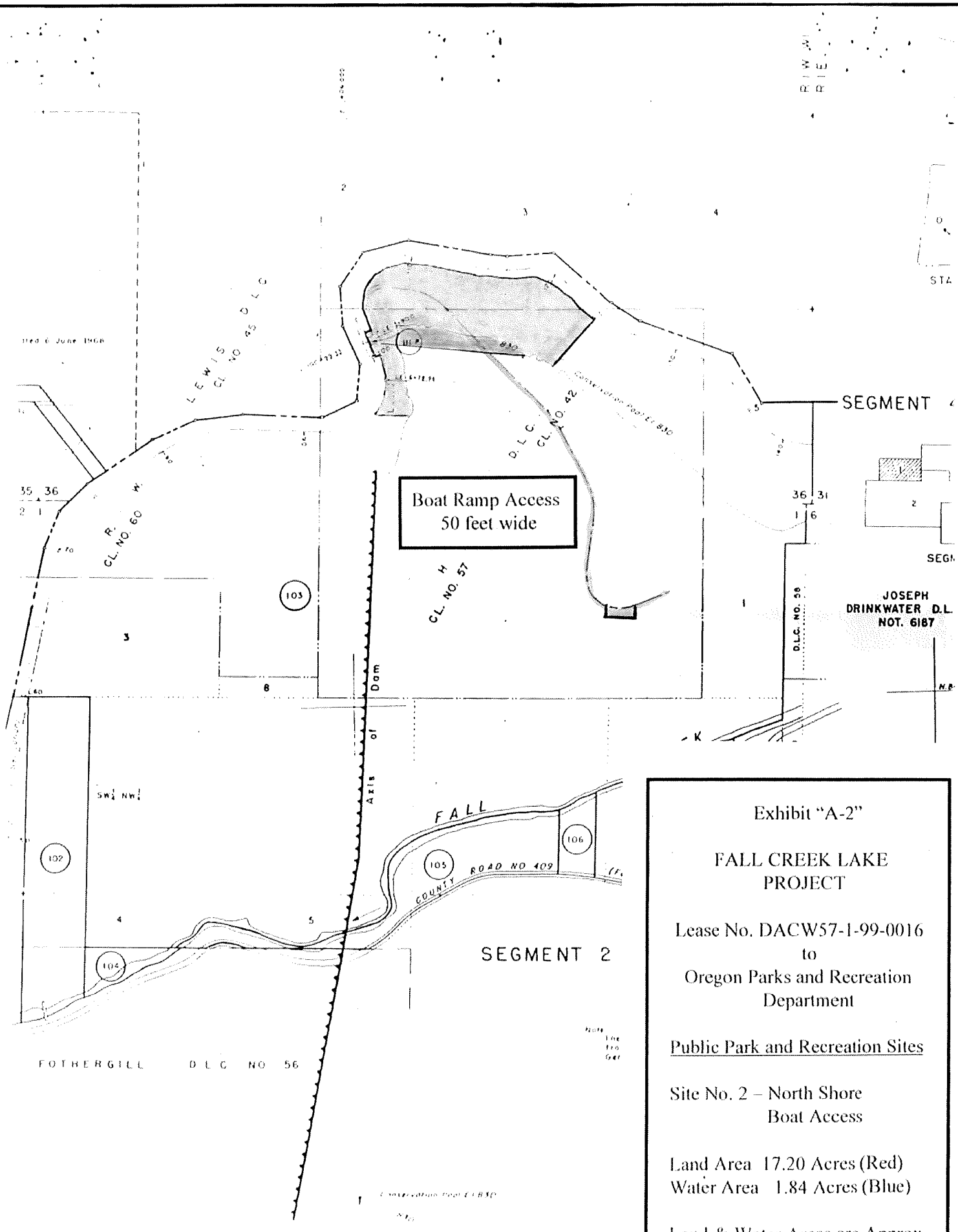


Exhibit "A-2"

FALL CREEK LAKE PROJECT

Lease No. DACW57-1-99-0016
to
Oregon Parks and Recreation Department

Public Park and Recreation Sites

Site No. 2 – North Shore Boat Access

Land Area 17.20 Acres (Red)
Water Area 1.84 Acres (Blue)

Land & Water Areas are Approx.

Fall Creek Lake North Shore Boat Ramp

Red shaded area is the area Leased to the State by Lease No. DACW57-1-99-0016. This is also the area that the Corps contractor will need to use for Project purposes during the construction project.

ENCLOSURE 2

Appendix D

Agency Project Review and Public Comments

Only one comment was received during the public review period and is summarized below:

It was requested that the cost estimate for improving the fish collection facility at Fall Creek Dam be disclosed in the draft EA.

> *Response:* The cost estimate for the facility upgrade is procurement sensitive information and cannot be disclosed, per Corps policy. However, the order of magnitude for construction is between $5,000,000 and $10,000,000.

Appendix E

401 Water Quality Certificate
Nationwide Permit #7
NPDES Permit 1200-CA (construction)
NPDES Permit 300J (operation)
Removal – Fill Permit

Oregon
Kate Brown, Governor

Department of Environmental Quality
Northwest Region Portland Office/Water Quality
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
FAX (503) 229-6957
TTY 711

February 24, 2015

Ms. Joyce Casey
Environmental Resources Branch Chief
US Army Corps of Engineers
P.O. Box 2946
333 SW First Ave.
Portland, OR 97208-4510

RE: CENWP-PM-E-14-01 401 Water Quality Certification for Fall Creek Fish Facility Upgrade, Lowell, Lane County, Oregon

Dear Ms. Casey:

The Department of Environmental Quality (DEQ) has reviewed the U.S. Army Corps of Engineers (USACE) Permit Application, received by DEQ on May 29, 2014. The applicant, the Army Corps of Engineers, proposes rebuilding the existing fish collection facility. The project is located at 40801 Winberry Creek Road, in the City of Lowell, Lane County, Oregon (Section 1, T19S/R1W).

Project Description: The purpose of the project is to provide a new, replacement fish collection facility to comply with a 2008 National Marine Fisheries Service (NMFS) Biological Opinion. Replacing the existing fish facility to safely handle, sort, and load adult fish will likely decrease pre-spawning mortality of all fish handled at the facility. This should result in improvements in survival of fish released upstream of the Fall Creek Dam. The fish facility would be constructed on the northwest side of the existing fish facility in an area of existing asphalt. The new Fall Creek fish collection facility would be rebuilt while the existing facility would continue to be operated. The applicant proposes to remove rip rap to install an outfall structure, and replace a portion of this rip rap for bank stabilization. This will result in an area of impact of approximately 1,000 square feet with a discharge of 111 cubic yards of rip rap. Additionally, the applicant proposes to impact 400 square feet to install a smaller outfall structure, resulting in a discharge of 50 cubic yards of rip rap. River substrate in an area of approximately 400 square feet will be excavated to create a plunge pool for fish return.

Status of Affected Water of the State: Fall Creek is classified as water quality limited under the federal CWA, and has a US Environmental Protection Agency approved Total Maximum Daily Load developed for temperature.

The above listed parameter impairs the following beneficial uses in Fall Creek: resident fish and aquatic life. Other beneficial uses include: public and private water supply, industrial water supply, irrigation, livestock watering, wildlife and hunting, fishing, boating, water contact recreation, aesthetic quality, hydro power, and commercial navigation and transportation.

Based on the application materials, DEQ is reasonably assured that implementation of the Project will be consistent with applicable provisions of Section 301, 302, 303, 306, and 307 of the federal Clean Water Act, state water quality standards set forth in OAR Chapter 340 Division 41, and other appropriate requirements of state law, provided the following conditions are incorporated into the USACE permit and strictly adhered to by the applicant.

401 CERTIFICATION CONDITIONS

1) **Duration of Certification:** This 401 WQC is valid for five years from the date on this letterhead. A new 401 WQC must be obtained prior to any substantial modification of the USACE permit.

2) **Fish protection/Oregon Department of Fish and Wildlife timing:** In-water work is allowed only within the Oregon Department of Fish and Wildlife (ODFW) preferred time window as specified in Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources, June 2008, or most current version. Exceptions to the timing window must be reviewed and recommended in writing in advance by ODFW and coordinated with the National Marine Fisheries Service (NMFS).

3) **Aquatic life movements:** Any activity that may substantially disrupt the movement of those species of aquatic life indigenous to the water body, including those species that normally migrate through the area, is prohibited. Unobstructed fish passage must be provided at all times during any authorized activity. Exceptions must be reviewed and approved in writing in advance by ODFW and the NMFS.

4) **Isolation of in-water work areas:** Isolation of in-water work areas from the active flowing stream must be accomplished to the maximum extent practicable. Methods of isolation include, but are not limited to: timing work at low water so as to effectively work in the dry or using silt curtains, cofferdams, inflatable bags, geo blocks, sandbags, sheet pilings, or similar materials. The applicants are referred to Appendix D of DEQ's *Oregon Sediment and Erosion Control Manual*, April 2005, for isolation techniques.
http://www.deq.state.or.us/wq/stormwater/docs/escmanual/appxd.pdf

5) **Cessation of Work:** Cease project operations under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize turbidity or other resource damage as a result of the exposed project area.

6) **Turbidity:** All practical Best Management Practices (BMPs) on disturbed banks and within waters must be implemented to minimize turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural turbidities is prohibited except as specifically provided below.
    a. **Monitoring:** Visual turbidity monitoring must be conducted and recorded as described below. Monitoring must occur each day during daylight hours when in-water work is being conducted. *Turbidity that is visible over background is considered an exceedance of the standard.*
        i. Representative Background Point: a sample or observation must be taken every two hours at a relatively undisturbed area approximately 100 feet upcurrent from in-water disturbance to establish background turbidity levels for each monitoring cycle. Background turbidity, location, date, and time must be recorded prior to monitoring downcurrent.
        ii. Compliance Point: Visual monitoring must occur every two hours, at the dredge site and approximately 300 feet downcurrent from the disturbance, at approximately mid-depth and within any visible plume, and be compared against the background measurement or observation. The turbidity, location, date, and time must be recorded for each sample or observation.
    b. **Compliance:** Results from the compliance points must be compared to the background levels taken during each monitoring interval. Exceedances are allowed as follows:

VISUAL MONITORING		
No plume observed	Continue to monitor every 2 hours	Continue to monitor every 2 hours
Plume observed	Modify BMPs & continue to monitor every 2 hours	Stop work after 4 hours with an observed plume

A visible plume is considered an exceedance.

c. If an exceedance over the background level occurs at any time, the applicant must modify the activity and continue to monitor every two hours. **If an exceedance over the background level continues after the second monitoring interval, the activity must stop.** If, however, turbidity levels return to background at or after second monitoring level due to implementation of BMPs or natural attenuation, work may continue with appropriate monitoring as above.

d. **Reporting:** The applicant must make available copies of daily logs for turbidity monitoring to DEQ, NMFS, USFWS, and ODFW upon request. The log must include: calibration documentation (if using an instrument); background NTUs or observation; compliance point NTUs or observation' comparison of the points in NTUs or narrative; and location; date; time; and tidal stage (if applicable) for each reading. Additionally, a narrative must be prepared discussing all exceedances with subsequent monitoring, actions taken, and the effectiveness of the actions.

7) **Erosion Control**: Projects that disturb one acre or more require an NPDES 1200C Storm Water Discharge Permit. During construction, the following erosion control measures, or comparable measures as specified in the DEQ's *Construction Stormwater Erosion and Sediment Control Manual*, January 2013 http://www.deq.state.or.us/wq/wqpermit/docs/general/npdes1200c/ErosionSedimentControl.pdf, must be implemented to prevent or control movement of soil into waters of the state.

a. Filter bags, sediment traps or catch basins, vegetative strips, berms, Jersey barriers, fiber blankets, bonded fiber matrices, geotextiles, mulches, wattles, sediment fences, or other measures used in combination must be deployed to prevent movement of soil from uplands into waterways or wetlands;
b. An adequate supply of materials needed to control erosion must be maintained at the project construction site;
c. To prevent stockpile erosion, compost berms, impervious materials or other equally effective methods must be deployed during rain events or when the stockpile site is not moved or reshaped for more than 48 hours;
d. Erosion control measures must be inspected and maintained daily, or more frequently as necessary, to ensure their continued effectiveness and must remain in place until all exposed soil is stabilized;
    i. If monitoring or inspection shows that the erosion and sediment controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.
    ii. Remove sediment from erosion and sediment controls once it has reached 1/3 of the exposed height of the control.

e. Unless part of the authorized permanent fill, all construction access points through, and staging areas in, riparian or wetland areas must use removable pads or mats to prevent soil compaction.
f. Avoided wetlands and planted areas must be flagged or fenced off to protect from disturbance and/or erosion.
g. Dredged or other excavated material must be placed on upland areas with stable slopes to prevent materials from eroding back into waterways or wetlands;
h. Sediment from disturbed areas or able to be tracked by vehicles onto pavement must not be allowed to leave the site in amounts that would reasonably be expected to enter waters of the state and impair water quality. Placement of clean aggregate at all construction entrances, and other best management practices; such as truck or wheel washes if needed, must be used when earth moving equipment will be leaving the site and traveling on paved surfaces.

8) **Deleterious waste materials**: Biologically harmful materials and construction debris including, but not limited to: petroleum products, chemicals, cement cured less than 24 hours, welding slag and grindings, concrete saw cutting by-products, sandblasted materials, chipped paint, tires, wire, steel posts, asphalt and waste concrete may not be placed in or where they could enter waterways or wetlands.

a. Concrete, cement, or grout must be cured for at least 24 hours prior to any contact with flowing waters;
b. Only clean fill, free of waste and polluted substances, may be used;
c. Best Management Practices must be employed to prevent discharges of spills of deleterious materials to surface or ground water;
d. An adequate supply of materials needed to contain deleterious materials during a weather event must be maintained at the project construction site and deployed as necessary; and
e. All foreign materials, refuse, and waste must be removed from the area.

9) **Spill Prevention:** Vehicles must be fueled, operated, maintained, and stored and construction materials must be stored in areas that minimize disturbance to habitat and prevent adverse effects from potential discharges. In addition, the following specific requirements apply:

a. Vehicle staging, cleaning, maintenance, refueling, and fuel storage must take place in a vehicle staging area placed 150 feet or more from any waters of the state.
b. All vehicles operated within 150 feet of any waters of the state must be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected must be repaired before the vehicle resumes operation;
c. Before operations begin and as often as necessary during operation, equipment must be steam cleaned (or undergo an approved equivalent cleaning) until all visible external oil, grease, mud, and other visible contaminates are removed if the equipment will be used below the bank of the water body; and,
d. An adequate supply of materials (such as straw matting/bales, geotextiles, booms, diapers, and other absorbent materials) needed to contain spills must be maintained at the project construction site and deployed as necessary.

10) **Spill and Incident Reporting:**

a. In the event that petroleum products, chemicals, or any other deleterious materials are discharged into state waters, or onto land with a potential to enter state waters, the discharge must be promptly reported to the Oregon Emergency Response Service (OERS, 1-800-452-0311). Containment and cleanup must begin immediately and be completed as soon as possible.
b. If the project operations cause a water quality problem that results in distressed or dying fish, the operator must immediately: cease operations; take appropriate corrective measures to prevent further environmental damage; collect fish specimens and water samples, and notify DEQ, ODFW and other appropriate regulatory agencies.

11) **Vegetation Protection and Restoration:**

a. Riparian, wetland, and shoreline vegetation in the authorized project area must be protected from disturbance to the maximum extent practicable through one or more of the following:
    i. Minimization of project and impact footprint;
    ii. Designation of staging areas and access points in open, upland areas;
    iii. Fencing and other barriers demarking construction areas; and,
    iv. Use of alternative equipment (e.g., spider hoe or crane).

b. If authorized work results in unavoidable vegetative disturbance and the disturbance has not been accounted for in planned mitigation actions, riparian, wetland and shoreline vegetation must be successfully reestablished to a degree that it functions (for water quality purposes) at least as well as it did before the disturbance. The vegetation must be reestablished by the completion of authorized work.

12) The applicant must notify DEQ of any change in ownership and obtain DEQ review and approval before undertaking any change to the project that might affect water quality.

13) DEQ may modify or revoke this 401 WQC, in accordance with OAR 340-048-0050, in the event of project changes or new information indicating that the project activities are having an adverse impact on state water quality or beneficial uses.

14) A copy of this 401 WQC letter shall be kept on site and readily available for reference by the applicant and its contractors, DEQ, and other appropriate state and local government inspectors.

15) This 401 WQC is invalid if the project is operated in a manner not consistent with the project description contained in the permit application materials.

16) The applicant and its contractors must allow DEQ site access at reasonable times as necessary to monitor compliance with these 401 WQC conditions.

If the applicant is dissatisfied with the conditions contained in this certification, a contested case hearing may be requested in accordance with OAR 340-048-0045. Such request must be made in writing to the DEQ Office of Compliance and Enforcement at 811 SW 6th Avenue, Portland Oregon 97204 within 20 days of the mailing of this certification.

The DEQ hereby certifies this project in accordance with the Clean Water Act and state rules, with the above conditions. If you have any questions, please contact Mindi English at english.mindi@deq.state.or.us, by phone at 541 686-7763, or by mail at DEQ Western Region, 165 East 7th Avenue, Suite 100, Eugene, OR 97401.

Sincerely,

Steve Mrazik
Water Quality Manager
Northwest Region

Cc: Tyler Krug, USACE – North Bend
Bob Lobdell, DSL
Heather Wade, DLCD
Jim Muck, NOAA

US Army Corps of Engineers
Portland District

2012 Nationwide (NWP) Regional Permit Conditions Portland District

The following Nationwide Permit (NWP) regional conditions are for the Portland District Regulatory Branch boundary. Regional conditions are placed on NWPs to ensure projects result in less than minimal adverse impacts to the aquatic environment and to address local resource concerns.

ALL NWPs –

1. **High Value Aquatic Resources:** Except for NWPs 3, 20, 27, 32, 38, and 48, any activity that would result in a loss of waters of the United States (U.S.) in a high value aquatic resource is not authorized by NWP. High value aquatic resources in Oregon include bogs, fens, wetlands in dunal systems along the Oregon coast, native eel grass (*Zostera marina)* beds, kelp beds, rocky substrate in tidal waters, marine reserves, marine gardens, vernal pools, alkali wetlands, and Willamette Valley wet prairie wetlands.

   NOTE: There are other types of wetlands in Oregon, such as mature wooded wetlands and tidal swamps, which are also considered as providing high value and functions to the State's aquatic ecosystems. Impacts to these waters will be evaluated on a case-by-case basis for potential authorization under a Nationwide Permit. For more information about the State's Wetlands of Conservation Concern" please visit http://www.oregon.gov/dsl/PERMITS/docs/wetland_cons_concern.pdf.

2. **Cultural Resources and Human Burials-Inadvertent Discovery Plan**: In addition to the requirements in NWP General Conditions 20 and 21 permittee shall immediately notify the Portland District Engineer if at any time during the course of the work authorized, human burials, cultural items, or historic properties, as identified by the National Historic Preservation Act and Native American Graves and Repatriation Act, are discovered. The permittee shall implement the following procedures:

   a. Immediately cease all ground disturbing activities.

   b. Project Located in Oregon: Notify the Oregon State Historic Preservation Office (503-986-0674).

   c. Project Located in Washington: Notify the Washington Department of Archaeology and Historic Preservation (360-586-3077).

   d. Notify the Portland District Engineer. Notification shall be made by fax (503-808-4375) as soon as possible following discovery but in no case later than 24 hours. The fax shall clearly specify the purpose is to report a cultural resource discovery. Follow up the fax notification by contacting the Portland District Engineer representative (by email and telephone) identified in the verification letter.

   e. Failure to stop work immediately and until such time as the Portland District Engineer has coordinated with all appropriate agencies and Native American tribes, and complied with the provisions of 33 CFR 325 (Appendix C), the National Historic Preservation Act, Native American Graves and Repatriation Act, and other pertinent regulations could result in violation of state and federal laws. Violators are subject to civil and criminal penalties.

3. **In-water Work:** In order to minimize potential impacts to water quality, aquatic species and habitat, in-water work will be limited by the following timing considerations:

   a. Permittee shall complete all in-water work within the preferred work window specified in Oregon Department of Fish and Wildlife's (ODFW) "Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources," June 2008, or most current version, available at: http://www.dfw.state.or.us/lands/inwater/Oregon_Guidelines_for_Timing_of_%20InWater_Work2008.pdf.

b. If work cannot be completed within the preferred timing window, despite every attempt to do so, permittee shall submit a request to work out side of the preferred window to the Portland District Engineer in writing. Permittee shall not begin any in-water work outside of the preferred window until they have received written approval from the District Engineer. The District Engineer will coordinate with the appropriate agencies prior to finalizing a decision.

4. **Fish and Aquatic Life passage:** In addition to the requirements of NWP General Conditions 2 and 9, all activities authorized by a NWP shall not restrict passage of aquatic life beyond the necessary construction period. Aquatic life shall be interpreted to include amphibians, reptiles, and mammals whose natural habitat includes waters of the U.S. and which are generally present in and/or around waters of the U.S.

a. Activities such as the installation of culvert, intake structures, diversion structures, or other modifications to stream channel morphology must conform to fish passage standards developed by the ODFW and the National Marine Fisheries Service (NMFS). ODFW's standards can be found at OAR 635-412-0035; ODFW provides an overview at http://www.dfw.state.or.us/fish/passage/ and NMFS provides an overview at http://www.nwr.noaa.gov/hydropower/hydropower_northwest/hydropower_in_the_nw.html.

5. **Fish Screening:** The permittee shall ensure that all intake pipes utilize fish screening that complies with standards developed by NMFS and ODFW ("Anadromous Salmonid Passage Facility Design", July 2011). http://www.nwr.noaa.gov/hydropower/hydropower_northwest/hydropower_in_the_nw.html or the most current version.

6. **Work Area Isolation and Dewatering**: Appropriate best management practices shall be implemented to prevent erosion and sediments from entering wetlands or waterways.

a. All in-water work shall be isolated from the active channel or conducted during low seasonal stream flows.

b. Permittee shall provide for fish passage upstream and downstream of the worksite.

c. Cofferdams shall be constructed of non-erosive material, such as concrete jersey barriers, sand and gravel bag dams, or water bladders. Constructing a cofferdam by pushing material from the streambed or sloughing material from the streambanks is not authorized.

d. Sand and gravel bag dams shall be lined with a plastic liner or geotextile fabric to reduce permeability and prevent sediments and/or construction materials from entering the active stream channel.

e. Upstream and downstream flows shall be maintained by routing flows around the construction site with a pump, bypass pipe, or diversion channel.

f. A sediment basin shall be used to settle sediments in return water prior to release back into the waterbody. Settled water shall be returned to the waterbody in such a manner as to avoid erosion of the streambank. Settlement basins shall be placed in uplands.

g. Fish and other aquatic species must be salvaged prior to dewatering. The State of Oregon requires a Scientific Take Permit be obtained to salvage fish and wildlife. Permittee is advised to contact the nearest ODFW office. For further information contact ODFW at http://www.dfw.state.or.us.

7. **Dredging:** For any NWP-authorized activities, including but not limited to NWP 3, 12, 13, 19, 27, 35, 36, 40, and 41 that involve removal of sediment from waters of the U.S. permittee shall ensure that:

a. Any necessary sediment characterization regarding size, composition, and potential contaminants is conducted prior to dredging and the material is suitable for in-water disposal per the Sediment Evaluation Framework for the Pacific Northwest, 2009 (available at: http://www.nwp.usace.army.mil/Missions/Envi

ronment/DMM.aspx) or the most current version.

b. The least impactful methodology and activity sequencing is used to ensure impacts to the aquatic system are minimized to the maximum extent practicable. Examples include using a hydraulic, closed-lipped clamshell bucket, toothed clamshell bucket, dragline and/or excavator.

c. Dredged or excavated material is placed where sediment-laden water cannot enter waterways or wetlands in an uncontrolled manner. The discharge associated with the return of sediment-laden water into a water of the U.S. from an upland disposal site requires separate authorization from the District Engineer under NWP 16.

8. Chemically Treated Wood: Permittee shall not allow wood products treated with biologically harmful leachable chemical components (e.g. copper, arsenic, zinc, creosote, chromium, chloride, fluoride, and pentachlorophenol) to be placed over or come in contact with waters or wetlands.

a. **New structures:** Wood may be permanently or temporarily sealed with non-toxic products such as water-based silica or soy-based water repellants or sealers to prevent or limit leaching. Acceptable alternatives to chemically treated wood include untreated wood, steel (painted, unpainted or coated with epoxy-petroleum compound or plastic), concrete and plastic lumber.

b. **Removal of existing chemically treated wood:** Permittee shall prevent chemically treated wood debris from entering any waters or wetlands. In the event chemically treated wood debris inadvertently enters a water or wetland, permittee shall remove the material as soon as practicable and dispose of the material at an approved upland facility.

1) Permittee shall make every practicable effort to remove chemically treated wood piles in their entirety using a vibratory hammer.

i) In uncontaminated sediment, piling that breaks off during extraction shall be cut off at least three (3) feet below the surface of the sediment.

ii) In contaminated sediment, piling that breaks off above the surface shall be cut off at the sediment line. If the break occurs within contaminated sediment, no further effort shall be made to remove the pile. Any resulting hole shall be filled with clean, native substrate.

9. Mechanized Equipment: In addition to the requirements in NWP General Condition 11, permittee shall implement the following to prevent or limit aquatic impacts from mechanized equipment:

a. In all events use the type of equipment that minimizes aquatic impacts spatially and temporally.

b. Use existing roads, paths, and drilling pads where available. Temporarily place mats or pads onto wetlands or tidal flats to provide site access. Temporary mats or pads shall be removed upon completion of the authorized work.

c. Operate equipment from the top of a streambank and conduct work outside of the active stream channel, unless specifically authorized by the District Engineer.

d. Isolate storage, staging, and fueling areas, and operate and maintain equipment in isolation from waters, wetlands, and riparian areas.

e. Maintain spill prevention and containment materials with ready access at vehicle staging areas. Permittee and staff shall be trained to effectively deploy the measures. Spill response materials include straw matting/bales, geotextiles, booms, diapers, and other absorbent materials, shovels, brooms, and containment bags. In the event of a spill of petroleum products or other chemicals with potential to affect waters or wetlands, permittee shall immediately report the spill to the Oregon Emergency Response Service (OERS) at 1-800-452-0311 and shall

implement containment and cleanup measures, as directed.

10. **Deleterious Waste:** In addition to the requirements in NWP General Condition 6, permittee shall not dispose of biologically harmful or waste materials into waters or wetlands. These materials include but are not limited to the following:

a. Petroleum products, chemicals, cement cured less than 24 hours, welding slag and grindings, concrete saw cutting by-products, sandblasted materials, chipped paint, tires, wire, steel posts, asphalt and waste concrete.

b. Discharge water created during construction activities (such as but not limited to concrete wash out, pumping for work area isolation, vehicle wash water, drilling fluids, dredging return flows, and sediment laden runoff) shall be treated to remove debris, sediment, petroleum products, metals, and other pollutants and discharged in a controlled fashion to avoid erosion. A separate Department of the Army permit and/or a National Pollutant Discharge Elimination System (NPDES) permit from Oregon Department of Environmental Quality's (DEQ) may be required prior to discharge. Permittee is directed to contact the nearest DEQ office (http://www.deq.state.or.us/about/locations.htm) for more information about the NPDES program.

11. **Stormwater Discharge Pollution Prevention:** Activities that result in stormwater runoff passing over disturbed areas and impervious surfaces must include reduction measures, controls, treatment techniques and management practices to avoid discharge of soil, debris, toxics and other pollutants to waterways and wetlands.

a. **Erosion Control:** During construction and until the site is stabilized, the permittee shall ensure all practicable measures are implemented and maintained to prevent erosion and runoff. For proper erosion control measure selection and implementation, the permittee is referred to DEQ "Oregon Sediment and Erosion Control Manual," April 2005, available at: http://www.deq.state.or.us/wq/stormwater/escmanual.htm. Appropriate control measures and maintenance include, but are not limited to the following:

1) Permittee shall inspect and maintain control measures in good condition throughout construction and until permanent measures are well established. Permittee shall repair or replace any damages such as rips, broken stakes that result in loss of intended function. Permittee shall install additional control measures and reseed or replant with native and/or non-competitive species as necessary to achieve stabilization of the site. Spray-on mulches imbedded with benign sterile species may be used to temporarily stabilize the area until permanent controls are in place.

2) Once soils or slopes have been stabilized, permittee shall completely remove and properly dispose of or re-use all components of installed control measures.

b. **Post-Construction Stormwater Management:** If the activity will result in creation of new impervious surfaces and federally listed aquatic species or their habitat may be affected by the proposed activity permittee shall forward a copy of the post-construction stormwater management plan (SWMP) to the Portland District Engineer for our consultation under the Endangered Species Act. A copy of the SWMP must be submitted to the DEQ for their review and approval prior to initiating construction.

1) Submittal of the post-construction stormwater management plan to DEQ at the same time the application is submitted to the Corps will streamline the project review. DEQ's Stormwater Management Plan Submission Guidelines for Removal/Fill Permit Applications which involve impervious surfaces can be found at http://www.deq.state.or.us/wq/sec401cert/docs/stormwaterGuidlines.pdf. This document provides information to determine the level of detail required for the plan based on project type, scope,

location, and other factors, as well as references to assist in designing the plan and a checklist for a complete submission.

12. Upland Disposal: Material disposed of in uplands shall be placed in a location and manner that prevents discharge of the material and/or return water into waters or wetlands unless otherwise authorized by the Portland District Engineer.

a. Final disposition of materials removed from waters and wetlands to uplands may require separate approvals under Oregon State Solid Waste Rules. For more information please visit DEQ's Solid Waste program at http://www.deq.state.or.us/lq/sw/index.htm.

b. Temporary upland stockpiles of excavated or dredged materials shall be isolated from waterways, wetlands, and floodwaters; stabilized prior to wet weather; and maintained using best management practices unless specifically authorized by the District Engineer.

13. Restoration of Temporary Impacts: To minimize temporal losses of waters of the U.S. construction activities within areas identified as temporary impacts shall not exceed two construction seasons or 24 months, whichever is less. For all temporary impacts, permittee shall provide the Portland District Engineer a description, photos, and any other documentation which demonstrates pre-project conditions with the Preconstruction Notification.

b. Site restoration of temporarily disturbed areas shall include returning the area to pre-project ground surface contours. Permittee shall revegetate temporarily disturbed areas with native, noninvasive herbs, shrubs, and tree species sufficient in number, spacing, and diversity to replace affected aquatic functions.

c. Site restoration shall be completed within 24 months of the initiation of impacts (unless otherwise required by the specific NWP). However, if the temporary impact requires only one construction season, site restoration shall be completed within that same construction season before the onset of seasonal rains.

14. Permittee-responsible Compensatory Mitigation: When permittee-responsible compensatory mitigation is required by the Portland District Engineer to replace lost or adversely affected aquatic functions, the permittee shall provide long-term protection for the mitigation site through real estate instruments (e.g., deed restriction or conservation easement) or other available mechanisms. The appropriate long-term protection mechanism will be determined by the Portland District Engineer based on project-specific review and must be in place prior to initiating the permitted activity.

15. Inspection of the Project Site: The permittee shall allow representatives of the Portland District Engineer and/or DEQ to inspect the authorized activity to confirm compliance with nationwide permit terms and conditions. A request for access to the site will normally be made sufficiently in advance to allow a property owner or representative to be on site with the agency representative making the inspection.

16. Sale of Property/Transfer of Permit: Permittee shall obtain the signature(s) of the new owner(s) and transfer this permit in the event the permittee sells the property associated with this permit. To validate the transfer of this permit authorization, a copy of this permit with the new owner(s) signature shall be sent to the Portland District Engineer at the letterhead address on the verification letter.

NATIONWIDE SPECIFIC CONDITIONS:

NWP 3 – Maintenance

1. Permittee shall implement measures necessary to prevent streambed gradient alterations and streambank erosion.

NWP 5 – Scientific Measurement Devices

1. Permittee shall remove all scientific measurement devices including all associated structures and fills including anchoring devices, buoys, and cable within 30 days after research is completed.

NWP 6 – Survey Activities

1. Use of in-water explosives is not authorized.

2. Permittee shall isolate all in-stream exploratory trenching from the active channel.

NWP 12 – Utility Line Activities

1. Permittee shall install trench-blockers of a type and design sufficient to prevent the drainage of the wetland areas (e.g. bentonite clay plugs, compacted sand bags, etc.) where utility lines are buried within or immediately adjacent to wetlands and other waters.

2. Permittee shall remove and separately reserve the topsoil from the subsurface soils during trenching. Permittee shall place the reserved topsoil as the final surface layer in backfilling the trench.

3. Agency coordination, per Nationwide Permit General Condition 31 (d), is required where utility lines are proposed in estuaries to ensure there are no impacts to native shellfish beds.

4. Manholes placed in streams or other waterways require specific approval by the District Engineer.

NWP 13 – Bank Stabilization

1. Permittee shall include the use of bioengineering techniques and natural products (e.g. vegetation and organic material such as root wads) in the project design to the maximum extent practicable and shall minimize the use of rock, except when it is anchoring large woody debris. Non-biodegradable materials, such as plastic netting, that may entrap wildlife or pose a safety concern shall not be used for soil stabilization. Riparian plantings shall be included in all project designs unless the permittee can demonstrate that such plantings are not practicable.

2. Riprap shall be clean (i.e. free of toxic contaminants and invasive species), durable, angular rock.

NWP 23 – Approved Categorical Exclusions

1. Pre-construction notification or other Corps-approved documentation is required for all activities which require a permit from the Portland District Engineer.

NWP 29 – Residential Developments

1. Wetland impacts associated with the construction or expansion of a single residence including attendant features (utility lines, roads, yards, etc) shall not exceed one-fourth (¼) acre.

NWP 41 – Reshaping Existing Drainage Ditches

1. All in-water work shall be isolated from the active stream channel or conducted during low seasonal stream flows.

NWP 43- Stormwater Management Facilities

1. All in-water work shall be isolated from the active stream channel or conducted during low seasonal stream flows.

2. This NWP does not authorize the retention of water in excess of that required to meet stormwater management requirements for purposes such as recreational lakes, reflecting pools, irrigation, etc.

NWP 44 - Mining Activities

1. Reclamation, when required, must be achieved within 24 months of completing the mining activity.

2. In-stream mining including bar scalping is not authorized by this NWP.

3. Permittee shall ensure site includes appropriate grade controls to prevent headcutting of streams or bank erosion.

4. The use of in-water explosives is prohibited under this nationwide.

5. Excavated materials may be temporarily stockpiled within the channel above the plane of the water surface for up to seven (7) days. Excavated materials shall not be stockpiled in wetlands or flowing water.

NWP 48 – Commercial Shellfish Aquaculture Activities

1. Agency coordination, per NWP General Condition 31 (d), is required for all activities proposed under this NWP.

NOTE: For projects involving commercial aquaculture or mariculture cultivation of oysters, clams, and mussels on state submerged and submersible lands permittee is advised authorization may be required from the Oregon Department of Agriculture. For more information go to http://www.oregon.gov/ODA/FSD/program_shellfish.shtml

NWP 51– Land-Based Renewable Energy Generation Facilities

1. Agency coordination, per NWP General Condition 31 (d), is required for activities where aerial power transmission lines cross navigable waters.

NWP 52 – Water Based Renewable Energy Generation Pilot Projects

1. Agency coordination, per NWP General Condition 31 (d), is required for all activities proposed for verification under this NWP.

2. Activities authorized under this NWP shall comply with the siting requirements of the Oregon Territorial Sea Plan, which designates areas as suitable for such activities. For more information go to http://www.oregon.gov/LCD/OCMP/Pages/Ocean_TSP.aspx.

DECISION DOCUMENT
NATIONWIDE PERMIT 7

This document discusses the factors considered by the Corps of Engineers (Corps) during the issuance process for this Nationwide Permit (NWP). This document contains: (1) the public interest review required by Corps regulations at 33 CFR 320.4(a)(1) and (2); (2) a discussion of the environmental considerations necessary to comply with the National Environmental Policy Act; and (3) the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230). This evaluation of the NWP includes a discussion of compliance with applicable laws, consideration of public comments, an alternatives analysis, and a general assessment of individual and cumulative impacts, including the general potential effects on each of the public interest factors specified at 33 CFR 320.4(a).

1.0 Text of the Nationwide Permit

Outfall Structures and Associated Intake Structures. Activities related to the construction or modification of outfall structures and associated intake structures, where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted by, or otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (Section 402 of the Clean Water Act). The construction of intake structures is not authorized by this NWP, unless they are directly associated with an authorized outfall structure.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 31.) (Sections 10 and 404)

1.1 Requirements

General conditions of the NWPs are in the Federal Register notice announcing the issuance of this NWP. Pre-construction notification requirements, additional conditions, limitations, and restrictions are in 33 CFR part 330.

1.2 Statutory Authority

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 404 of the Clean Water Act (33 U.S.C. 1344)

1.3 Compliance with Related Laws (33 CFR 320.3)

1.3.1 General

NWPs are a type of general permit designed to authorize certain activities that have minimal individual and cumulative adverse effects on the aquatic environment and generally comply with the related laws cited in 33 CFR 320.3. Activities that result in more than minimal

individual and cumulative adverse effects on the aquatic environment cannot be authorized by NWPs. Individual review of each activity authorized by an NWP will not normally be performed, except when pre-construction notification to the Corps is required or when an applicant requests verification that an activity complies with an NWP. Potential adverse impacts and compliance with the laws cited in 33 CFR 320.3 are controlled by the terms and conditions of each NWP, regional and case-specific conditions, and the review process that is undertaken prior to the issuance of NWPs.

The evaluation of this NWP, and related documentation, considers compliance with each of the following laws, where applicable: Sections 401, 402, and 404 of the Clean Water Act; Section 307(c) of the Coastal Zone Management Act of 1972, as amended; Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the National Environmental Policy Act of 1969; the Fish and Wildlife Act of 1956; the Migratory Marine Game-Fish Act; the Fish and Wildlife Coordination Act, the Federal Power Act of 1920, as amended; the National Historic Preservation Act of 1966; the Interstate Land Sales Full Disclosure Act; the Endangered Species Act; the Deepwater Port Act of 1974; the Marine Mammal Protection Act of 1972; Section 7(a) of the Wild and Scenic Rivers Act; the Ocean Thermal Energy Act of 1980; the National Fishing Enhancement Act of 1984; the Magnuson-Stevens Fishery and Conservation and Management Act, the Bald and Golden Eagle Protection Act; and the Migratory Bird Treaty Act. In addition, compliance of the NWP with other Federal requirements, such as Executive Orders and Federal regulations addressing issues such as floodplains, essential fish habitat, and critical resource waters is considered.

1.3.2 Terms and Conditions

Many NWPs have pre-construction notification requirements that trigger case-by-case review of certain activities. Two NWP general conditions require case-by-case review of all activities that may adversely affect Federally-listed endangered or threatened species or historic properties (i.e., general conditions 18 and 20). General condition 16 restricts the use of NWPs for activities that are located in Federally-designated wild and scenic rivers. None of the NWPs authorize the construction of artificial reefs. General condition 28 prohibits the use of an NWP with other NWPs, except when the acreage loss of waters of the United States does not exceed the highest specified acreage limit of the NWPs used to authorize the single and complete project.

In some cases, activities authorized by an NWP may require other federal, state, or local authorizations. Examples of such cases include, but are not limited to: activities that are in marine sanctuaries or affect marine sanctuaries or marine mammals; the ownership, construction, location, and operation of ocean thermal conversion facilities or deep water ports beyond the territorial seas; activities that result in discharges of dredged or fill material into waters of the United States and require Clean Water Act Section 401 water quality certification; or activities in a state operating under a coastal zone management program approved by the Secretary of Commerce under the Coastal Zone Management Act. In such cases, a provision of the NWPs states that an NWP does not obviate the need to obtain other

authorizations required by law. [33 CFR 330.4(b)(2)]

Additional safeguards include provisions that allow the Chief of Engineers, division engineers, and/or district engineers to: assert discretionary authority and require an individual permit for a specific activity; modify NWPs for specific activities by adding special conditions on a case-by-case basis; add conditions on a regional or nationwide basis to certain NWPs; or take action to suspend or revoke an NWP or NWP authorization for activities within a region or state. Regional conditions are imposed to protect important regional concerns and resources. [33 CFR 330.4(e) and 330.5]

1.3.3 Review Process

The analyses in this document and the coordination that was undertaken prior to the issuance of the NWP fulfill the requirements of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, and other acts promulgated to protect the quality of the environment.

All NWPs that authorize activities that may result in discharges into waters of the United States require water quality certification. NWPs that authorize activities within, or affecting land or water uses within a state that has a Federally-approved coastal zone management program, must also be certified as consistent with the state's program. The procedures to ensure that the NWPs comply with these laws are described in 33 CFR 330.4(c) and (d), respectively.

1.4 Public Comment and Response

For a summary of the public comments received in response to the February 16, 2011, Federal Register notice, refer to the preamble in the Federal Register notice announcing the reissuance of this NWP. The substantive comments received in response to the February 16, 2011, Federal Register notice were used to improve the NWP by changing NWP terms and limits, pre-construction notification requirements, and/or NWP general conditions, as necessary.

The Corps did not propose any changes to NWP. One commenter objected to the reissuance of this NWP, stating that these activities adversely affect aquatic vegetation or areas designated as critical habitat for fish foraging and spawning, through increases in turbidity, discharges of nutrients and contaminants, alteration of near-shore areas, and scouring vegetation within the plume. Another commenter recommended that outfall structures not be placed in wetlands or constructed in such a manner that would create shoreline pockets capable of trapping debris. One commenter recommended conditioning this NWP to ensure that the outfall structure not extend into the receiving water and impair navigation. One commenter suggested that for activities proposed to occur on state-owned submerged lands, a separate authorization would be required from that state.

In waters that have been designated as Essential Fish Habitat in accordance with the

Magnuson-Stevens Fishery Conservation and Management Act, consultation with the National Marine Fisheries Service will be conducted for proposed activities that may adversely affect Essential Fish Habitat. That consultation will often result in conservation recommendations that will protect habitat for fish foraging and spawning. General condition 22, designated critical resource waters, will also reduce adverse effects to fish foraging and spawning areas caused by NWP activities in those critical resource waters. Division engineers may regionally condition this NWP to restrict or prohibit its use in specific waters, including those that provide important habitat. In response to a pre-construction notification, district engineers may also exercise discretionary authority if the proposed activity would result in more than minimal adverse effects on the aquatic environment, including vegetated shallows and fish spawning and feeding areas. These structures may be designed so that they do not trap debris. General condition 14, proper maintenance, requires authorized structures and fills to be properly maintained, which may include periodic removal of debris from outfall structures and associated intake structures, to ensure that these structures continue to function properly, do not trap debris, and do not cause more than minimal adverse effects to nearshore aquatic environments. Compliance with general condition 1, navigation, will prevent adverse impacts to navigation. Permittees are responsible for obtaining any other Federal, state or local permits that may be required.

2.0 Alternatives

This evaluation includes an analysis of alternatives based on the requirements of NEPA, which requires a more expansive review than the Clean Water Act Section 404(b)(1) Guidelines. The alternatives discussed below are based on an analysis of the potential environmental impacts and impacts to the Corps, Federal, Tribal, and state resource agencies, general public, and prospective permittees. Since the consideration of off-site alternatives under the 404(b)(1) Guidelines does not apply to specific projects authorized by general permits, the alternatives analysis discussed below consists of a general NEPA alternatives analysis for the NWP.

2.1 No Action Alternative (No Nationwide Permit)

The no action alternative would not achieve one of the goals of the Corps Nationwide Permit Program, which is to reduce the regulatory burden on applicants for activities that result in minimal individual and cumulative adverse effects on the aquatic environment. The no action alternative would also reduce the Corps ability to pursue the current level of review for other activities that have greater adverse effects on the aquatic environment, including activities that require individual permits as a result of the Corps exercising its discretionary authority under the NWP program. The no action alternative would also reduce the Corps ability to conduct compliance actions.

If this NWP is not available, substantial additional resources would be required for the Corps to evaluate these minor activities through the individual permit process, and for the public and Federal, Tribal, and state resource agencies to review and comment on the large number

of public notices for these activities. In a considerable majority of cases, when the Corps publishes public notices for proposed activities that result in minimal adverse effects on the aquatic environment, the Corps typically does not receive responses to these public notices from either the public or Federal, Tribal, and state resource agencies. Another important benefit of the NWP program that would not be achieved through the no action alternative is the incentive for project proponents to design their projects so that those activities meet the terms and conditions of an NWP. The Corps believes the NWPs have significantly reduced adverse effects to the aquatic environment because most applicants modify their projects to comply with the NWPs and avoid the delays and costs typically associated with the individual permit process.

In the absence of this NWP, Department of the Army (DA) authorization in the form of another general permit (i.e., regional or programmatic general permits, where available) or individual permits would be required. Corps district offices may develop regional general permits if an NWP is not available, but this is an impractical and inefficient method for activities with minimal individual and cumulative adverse effects on the aquatic environment that are conducted across the Nation. Not all districts would develop these regional general permits for a variety of reasons. The regulated public, especially those companies that conduct activities in more than one Corps district, would be adversely affected by the widespread use of regional general permits because of the greater potential for lack of consistency and predictability in the authorization of similar activities with minimal individual and cumulative adverse effects on the aquatic environment. These companies would incur greater costs in their efforts to comply with different regional general permit requirements between Corps districts. Nevertheless, in some states Corps districts have issued programmatic general permits to take the place of this and other NWPs. However, this approach only works in states with regulatory programs comparable to the Corps Regulatory Program.

2.2 National Modification Alternatives

Since the Corps Nationwide Permit program began in 1977, the Corps has continuously strived to develop NWPs that authorize activities that result only in minimal individual and cumulative adverse effects on the aquatic environment. Every five years the Corps reevaluates the NWPs during the reissuance process, and may modify an NWP to address concerns for the aquatic environment. Utilizing collected data and institutional knowledge concerning activities authorized by the Corps regulatory program, the Corps reevaluates the potential impacts of activities authorized by NWPs. The Corps also uses substantive public comments on proposed NWPs to assess the expected impacts. This NWP was developed to authorize activities in waters of the United States related to the construction of outfall structures and associated intake structures that have minimal individual and cumulative adverse effects on the aquatic environment. The Corps has considered suggested changes to the terms and conditions of this NWP, as well as modifying or adding NWP general conditions, as discussed in the preamble of the Federal Register notice announcing the reissuance of this NWP.

In the February 16, 2011, Federal Register notice, the Corps requested comments on the proposed reissuance of this NWP. The Corps did not propose any changes to this NWP.

2.3 Regional Modification Alternatives

An important aspect for the NWPs is the emphasis on regional conditions to address differences in aquatic resource functions, services, and values across the nation. All Corps divisions and districts are expected to add regional conditions to the NWPs to enhance protection of the aquatic environment and address local concerns. Division engineers can also revoke an NWP if the use of that NWP results in more than minimal individual and cumulative adverse effects on the aquatic environment, especially in high value or unique wetlands and other waters.

Corps divisions and districts also monitor and analyze the cumulative adverse effects of the NWPs, and if warranted, further restrict or prohibit the use of the NWPs to ensure that the NWPs do not authorize activities that result in more than minimal individual and cumulative adverse effects on the aquatic environment. To the extent practicable, division and district engineers will use regulatory automated information systems and institutional knowledge about the typical adverse effects of activities authorized by NWPs, as well as substantive public comments, to assess the individual and cumulative adverse effects on the aquatic environment resulting from regulated activities.

2.4 Case-specific On-site Alternatives

Although the terms and conditions for this NWP have been established at the national level to authorize most activities that have minimal individual and cumulative adverse effects on the aquatic environment, division and district engineers have the authority to impose case-specific special conditions on NWP authorizations to ensure that the authorized activities will result in minimal individual and cumulative adverse effects.

General condition 23 requires the permittee to minimize and avoid impacts to waters of the United States to the maximum extent practicable on the project site. Off-site alternatives cannot be considered for activities authorized by NWPs. During the evaluation of a pre-construction notification, the district engineer may determine that additional avoidance and minimization is practicable. The district engineer may also condition the NWP authorization to require compensatory mitigation to offset losses of waters of the United States and ensure that the net adverse effects on the aquatic environment are minimal. As another example, the NWP authorization can be conditioned to prohibit the permittee from conducting the activity during specific times of the year to protect spawning fish and shellfish. If the proposed activity will result in more than minimal adverse effects on the aquatic environment, then the district engineer will exercise discretionary authority and require an individual permit. Discretionary authority can be asserted where there are concerns for the aquatic environment, including high value aquatic habitats. The individual permit review process requires a project-specific alternatives analysis, including the consideration of off-site alternatives, and a public interest review.

3.0 Affected Environment

The affected environment consists of terrestrial and aquatic ecosystems. The total land area in the United States is approximately 2,300,000,000 acres, and the total land area in the contiguous United States is approximately 1,894,000,000 acres (Lubowski et al. 2006). Land uses in 48 states of the contiguous United States as of 2002 is provided in Table 3.1 (Lubowski et al. 2006). In the contiguous United States, approximately 67 percent of the land is privately owned, 31 percent is held by the United States government, and two percent is owned by state or local governments (Dale et al. 2000). Developed non-federal lands comprise 4.4 percent of the total land area of the contiguous United States (Dale et al. 2000).

Table 3.1. Agricultural and non-agricultural land uses in the 48 states (Lubowski et al. 2006).

Land Use	Acres	Percent of Total
Agriculture	1,171,000,000	61.8
Forest land	425,000,000	22.4
Transportation use	27,000,000	1.4
Recreation and wildlife areas	100,000,000	5.3
National defense areas	15,000,000	0.8
Urban land	59,000,000	3.1
Miscellaneous use	97,000,000	5.1
Total land area	1,894,000,000	100.0

The Federal Geographic Data Committee has established the Cowardin system developed by the U.S. Fish and Wildlife Service (USFWS) (Cowardin et al. 1979) as the national standard for wetland mapping, monitoring, and data reporting (Dahl 2011) (see also http://www.fgdc.gov/standards/projects/FGDC-standards-projects/wetlands/fgdc-announce , accessed December 12, 2011). The Cowardin system is a hierarchical system which describes various wetland and deepwater habitats, using structural characteristics such as vegetation, substrate, and water regime as defining characteristics. Wetlands are defined by plant communities, soils, or inundation or flooding frequency. Deepwater habitats are permanently flooded areas located below the wetland boundary. In rivers and lakes, deepwater habitats are usually more than two meters deep.

There are five major systems in the Cowardin classification scheme: marine, estuarine, riverine, lacustrine, and palustrine (Cowardin et al. 1979). The marine system consists of open ocean on the continental shelf and its high energy coastline. The estuarine system consists of tidal deepwater habitats and adjacent tidal wetlands that are usually partially enclosed by land, but may have open connections to open ocean waters. The riverine system generally consists of all wetland and deepwater habitats located within a river channel. The lacustrine system generally consists of wetland and deepwater habitats located within a topographic depression or dammed river channel, with a total area greater than 20 acres.

The palustrine system generally includes all non-tidal wetlands and wetlands located in tidal areas with salinities less than 0.5 parts per thousand; it also includes ponds less than 20 acres in size. Approximately 95 percent of wetlands in the conterminous United States are freshwater wetlands, and the remaining 5 percent are estuarine or marine wetlands (Dahl 2011).

The Emergency Wetlands Resources Act of 1986 (Public Law 99-645) requires the USFWS to submit wetland status and trends reports to Congress (Dahl 2011). The latest status and trends report, which covers the period of 2004 to 2009, is summarized in Table 3.2.

Table 3.2. Estimated aquatic resource acreages in the conterminous United States in 2009 (Dahl 2011).

Aquatic Habitat Category	Estimated Area in 2009 (acres)
Marine intertidal	227,800
Estuarine intertidal non-vegetated	1,017,700
Estuarine intertidal vegetated	4,539,700
All intertidal waters and wetlands	5,785,200
Freshwater ponds	6,709,300
Freshwater vegetated	97,565,300
• Freshwater emergent wetlands	27,430,500
• Freshwater shrub wetlands	18,511,500
• Freshwater forested wetlands	51,623,300
All freshwater wetlands	104,274,600
Lacustrine deepwater habitats	16,859,600
Riverine deepwater habitats	7,510,500
Estuarine subtidal habitats	18,776,500
All wetlands and deepwater habitats	153,206,400

The acreage of lacustrine deepwater habitats does not include the open waters of Great Lakes (Dahl 2011).

According to Hall et al. (1994), there are more than 204 million acres of wetlands and deepwater habitats in the State of Alaska, including approximately 174.7 million acres of wetlands. Wetlands and deepwater habitats comprise approximately 50.7 percent of the surface area in Alaska (Hall et al. 1994).

The National Resources Inventory (NRI) is a statistical survey conducted by the Natural Resources Conservation Service (NRCS) (USDA 2009) of natural resources on non-federal land in the United States. The NRCS defines non-federal land as privately owned lands, tribal and trust lands, and lands under the control of local and State governments. The land

use determined by 2007 NRI is summarized in Table 3.3. The 2007 NRI estimates that there are 110,671,500 acres of palustrine and estuarine wetlands on non-Federal land and water areas in the United States (USDA 2009). The 2007 NRI estimates that there are 48,471,100 acres of open waters on non-Federal land in the United States, including lacustrine, riverine, and marine habitats, as well as estuarine deepwater habitats.

Table 3.3. The 2007 National Resources Inventory acreages for palustrine and estuarine wetlands on non-federal land, by land cover/use category (USDA 2009).

National Resources Inventory Land Cover/Use Category	Area of Palustrine and Estuarine Wetlands (acres)
cropland, pastureland, and Conservation Reserve Program land	16,790,300
forest land	66,043,100
rangeland	7,940,300
other rural land	14,744,800
developed land	1,571,900
water area	3,581,100
Total	110,671,500

The land cover/use categories used by the 2007 NRI are defined below (USDA 2009). Croplands are areas used to produce crops adapted for harvest. Pastureland is land managed for livestock grazing, through the production of introduced forage plants. Conservation Reserve Program land is under a Conservation Reserve Program contract. Forest land is comprised of at least 10 percent single stem woody plant species that will be at least 13 feet tall at maturity. Rangeland is land on which plant cover consists mostly of native grasses, herbaceous plants, or shrubs suitable for grazing or browsing, and introduced forage plant species. Other rural land consists of farmsteads and other farm structures, field windbreaks, marshland, and barren land. Developed land is comprised of large urban and built-up areas (i.e., urban and built-up areas 10 acres or more in size), small built-up areas (i.e., developed lands 0.25 to 10 acres in size) , and rural transportation land (e.g., roads, railroads, and associated rights-of-way outside urban and built-up areas). Water areas are comprised of waterbodies and streams that are permanent open waters.

The wetlands data from the Fish and Wildlife Service's Status and Trends study and the Natural Resources Conservation Service's National Resources Inventory should not be compared, because they use different methods and analyses to produce their results (Dahl 2011).

Leopold, Wolman, and Miller (1964) estimated that there are approximately 3,250,000 miles of river and stream channels in the United States. This estimate is based on an analysis of 1:24,000 scale topographic maps, by stream order. This estimate does not include many small streams. Many small streams are not mapped on 1:24,000 scale U.S. Geological

Survey topographic maps (Leopold 1994) or included in other analyses (Meyer and Wallace 2001). In a study of stream mapping in the southeastern United States, only 20% of the stream network was mapped on 1:24,000 scale topographic maps, and nearly none of the observed intermittent or ephemeral streams were indicated on those maps (Hansen 2001). For a 1:24,000 scale topographic map, the smallest tributary found by using 10-foot contour interval has drainage area of 0.7 square mile and length of 1,500 feet, and smaller channels are common throughout the United States (Leopold 1994). Due to the difficulty in mapping small streams, there are no accurate estimates of the total number of river or stream miles in the conterminous United States that may be classified as "waters of the United States."

The USFWS status and trends study does not assess the condition or quality of wetlands and deepwater habitats (Dahl 2011). The Nation's aquatic resource base is underestimated by the USFWS status and trends study, the National Wetland Inventory (NWI), and studies that estimate the length or number of stream channels within watersheds (see above). The status and trends study does not include Alaska and Hawaii. The underestimate by the status and trends study and the NWI results from the minimum size of wetlands detected through remote sensing techniques and the difficulty of identifying certain wetland types through those remote sensing techniques. The NWI maps do not show small or linear wetlands (Tiner 1997) that may be directly impacted by activities authorized by NWPs. For the latest USFWS status and trends study, most of the wetlands identified are larger than 1 acre, but the minimum size of detectable wetlands varies by wetland type (Dahl 2011). Some wetland types less than one acre in size can be identified; the smallest wetland detected for the most recent status and trends report was 0.1 acre (Dahl 2011). Because of the limitations of remote sensing techniques, certain wetland types are not included in the USFWS status and trends study: seagrass beds, submerged aquatic vegetation, submerged reefs, and certain types of forested wetlands (Dahl 2011). Therefore, activities authorized by NWPs will adversely affect a smaller proportion of the Nation's wetland base than indicated by the wetlands acreage estimates provided in the most recent status and trends report, or the NWI maps for a particular region.

Information on water quality in waters and wetlands, as well as the causes of water quality impairment, is collected by the U.S. Environmental Protection Agency (U.S.EPA) under sections 305(b) and 303(d) of the Clean Water Act. Table 3.4 provides U.S. EPA's most recent national summary of water quality in the Nation's waters and wetlands.

Table 3.4. The 2010 national summary of water quality data (U.S. EPA 2012).

Category of water	Total waters	Total waters assessed	Percent of waters assessed	Good waters	Threatened waters	Impaired waters
Rivers and streams	3,533,205 miles	965,693 miles	27.3	445,079 miles	6,369 miles	514,246 miles
Lakes, reservoirs and ponds	41,666,049 acres	18,796,765 acres	45.1	5,833,964 acres	38,681 acres	12,924,120 acres
Bays and estuaries	87,791 square miles	32,830 square miles	37.4	11,045 square miles	17 square miles	21,768 square miles
Coastal shoreline	58,618 miles	9,143 miles	15.6	1,746 miles	0 miles	7,396 miles
Ocean and near coastal waters	54,120 square miles	1,275 square miles	2.4	968 square miles	0 square miles	307 square miles
Wetlands	107,700,000 acres	1,311,645 acres	1.2	208,944 acres	805 acres	1,101,895 acres
Great Lakes shoreline	5,202 miles	4,431 miles	85.2	78 miles	0 miles	4,353 miles
Great Lakes open waters	60,546 square miles	53,332 square miles	88.1	62 square miles	0 square miles	53,270 square miles

According to the 2010 national summary (U.S. EPA 2012), 53% of assessed rivers and streams, 66% of assessed bays and estuaries, 81% of assessed coastal shoreline, 24% of assessed ocean and near coastal waters, and 84% of assessed wetlands are impaired.

For rivers and streams, 34 causes of impairment were identified, and the top 10 causes were pathogens, sediment, nutrients, organic enrichment/oxygen depletion, polychlorinated biphenyls, habitat alterations, metals (excluding mercury), mercury, flow alterations, and temperature. The primary sources of impairment for the assessed rivers and streams were agriculture, atmospheric deposition, unknown sources, hydrology modification, urban-related runoff/stormwater, wildlife, municipal discharges/sewage, unspecified non-point sources, habitat alterations, and resource extraction.

For bays and estuaries, 28 causes of impairment were identified, and the top 10 causes of impairment were mercury, pathogens, polychlorinated biphenyls, organic enrichment/oxygen depletion, dioxins, metals (excluding mercury), noxious aquatic plants, pesticides, algal growth, and unknown causes of impaired biota. The primary sources of impairment of bays and estuaries were atmospheric deposition, "unknown," municipal discharges/sewage, wildlife, industrial, other sources, agriculture, unspecified non-point sources, hydrologic modifications, and habitat alterations.

For coastal shorelines, 17 causes of impairment were listed, led by mercury, pathogens, organic enrichment/oxygen depletion, metals (excluding mercury), pesticides,

polychlorinated biphenyls, turbidity, nutrients, algal growth, and unknown causes of impaired biota. The top 10 sources of impairment for coastal shorelines were "unknown," atmospheric deposition, urban-related runoff/stormwater, municipal discharges/sewage, agriculture, hydrologic modifications, industrial, unspecified non-point sources, wildlife, and recreational boating and marinas.

For ocean and near coastal waters, 16 causes of impairment were identified, and the top 10 causes of impairment were mercury, pathogens, organic enrichment/oxygen depletion, nuisance exotic species, toxics, polychlorinated biphenyls, turbidity, pesticides, metals, and toxic organics. Habitat alterations were ranked eleventh. The primary sources of impairment of ocean and near coastal waters were "unknown," atmospheric deposition, recreational boating and marinas, municipal discharges/sewage, unspecified non-point sources, urban-related runoff/stormwater, recreation and tourism (non-boating), industrial, hydrologic modifications, and construction.

For wetlands, 27 causes of impairment were identified, and the top 10 causes were organic enrichment/oxygen depletion, pathogens, mercury, metals (excluding mercury), habitat alterations, nutrients, flow alterations, toxic inorganics, total toxics, and sediment. The primary sources for wetland impairment were "unknown," wildlife, municipal discharges/sewage, agriculture, atmospheric deposition, industrial, hydrology modifications, resource extraction, other, and unspecified non-point sources.

Most causes and sources of impairment are not due to activities regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Habitat alterations as a cause or source of impairment may be the result of activities regulated under section 404 and section 10 because they involve discharges of dredged or fill material or structures or work in navigable waters, but habitat alterations may also occur as a result of activities not regulated under those two statutes, such as the removal of vegetation from upland riparian areas. Hydrologic modifications may or may not be regulated under section 404 or section 10.

Not all of the Nation's aquatic resources are subject to regulatory jurisdiction under Section 404 of the Clean Water Act. Waters of the United States subject to Section 404 of the Clean Water Act are defined at 33 CFR part 328. Some wetlands are not subject to Clean Water Act jurisdiction because they do not meet the criteria at Part 328. In its decision in *Solid Waste County of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001), the U.S. Supreme Court ruled that Clean Water Act jurisdiction does not apply to isolated, intrastate, non-navigable waters based on their use as habitat for migratory birds. Tiner (2003) estimated that in some areas of the country, the proportion of wetlands that are geographically isolated, and may not be subject to Clean Water Act jurisdiction is approximately 20 to 50 percent of the wetland area, and there are other areas where more than 50 percent of the wetlands are geographically isolated. Geographically isolated wetlands comprise a substantial proportion of the wetlands found in regions with arid, semi-arid, and semi-humid climates, as well as areas with karst topography (Tiner 2003). However, it is difficult to determine from maps or aerial photographs whether wetlands are

hydrologically isolated from other waters, because there may be small surface hydrologic connections that are not included on those maps or detected by those photographs (Tiner 2003). The scope of waters subject to Clean Water Act jurisdiction has also been affected by the U.S. Supreme Court decision in the consolidated cases of *Rapanos v. U.S.* and *Carabell v. U.S.*, but there have been no formal studies to estimate the proportion of wetlands, streams, and other aquatic resources that may have been affected by that decision.

This NWP authorizes activities in all waters of the United States. These waters are included in the marine, estuarine, palustrine, lacustrine, and riverine systems of the Cowardin classification system.

Wetland functions are the biophysical processes that occur within a wetland (King et al. 2000). Wetlands provide many functions, such as habitat for fish and shellfish, habitat for waterfowl and other wildlife, habitat for rare and endangered species, food production, plant production, flood conveyance, flood-peak reduction, flood storage, shoreline stabilization, water supply, ground water recharge, pollutant removal, sediment accretion, and nutrient uptake (NRC 1992).

Functions provided by streams include sediment transport, water transport, transport of nutrients and detritus, habitat for many species of plants and animals (including endangered or threatened species), and maintenance of biodiversity (NRC 1992). Streams also provide hydrologic functions, nutrient cycling functions, food web support, and corridors for movement of aquatic organisms (Allan and Castillo 2007).

Freshwater ecosystems provide services such as water for drinking, household uses, manufacturing, thermoelectric power generation, irrigation, and aquaculture; production of finfish, waterfowl, and shellfish; and non-extractive services, such as flood control, transportation, recreation (e.g., swimming and boating), pollution dilution, hydroelectric generation, wildlife habitat, soil fertilization, and enhancement of property values (Postel and Carpenter 1997).

Marine ecosystems provide a number of ecosystem services, including fish production; materials cycling (e.g., nitrogen, carbon, oxygen, phosphorous, and sulfur); transformation, detoxification, and sequestration of pollutants and wastes produced by humans; support of ocean-based recreation, tourism, and retirement industries; and coastal land development and valuation, including aesthetics related to living near the ocean (Peterson and Lubchenco 1997).

Activities authorized by this NWP will support the production of a variety of goods and services that are valued by society. For example, outfall structures and associated intake structures may be integral components of manufacturing facilities. They may also be parts of energy production facilities.

4.0 Environmental Consequences

4.1 General Evaluation Criteria

This document contains a general assessment of the foreseeable effects of the individual activities authorized by this NWP and the anticipated cumulative effects of those activities. In the assessment of these individual and cumulative effects, the terms and limits of the NWP, pre-construction notification requirements, and the standard NWP general conditions are considered. The supplemental documentation provided by division engineers will address how regional conditions affect the individual and cumulative effects of the NWP.

The following evaluation comprises the NEPA analysis, the public interest review specified in 33 CFR 320.4(a)(1) and (2), and the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230).

The issuance of an NWP is based on a general assessment of the effects on public interest and environmental factors that are likely to occur as a result of using this NWP to authorize activities in waters of the United States. As such, this assessment must be speculative or predictive in general terms. Since NWPs authorize activities across the nation, projects eligible for NWP authorization may be constructed in a wide variety of environmental settings. Therefore, it is difficult to predict all of the indirect impacts that may be associated with each activity authorized by an NWP. For example, the NWP that authorizes 25 cubic yard discharges of dredged or fill material into waters of the United States may be used to fulfill a variety of project purposes. Indication that a factor is not relevant to a particular NWP does not necessarily mean that the NWP would never have an effect on that factor, but that it is a factor not readily identified with the authorized activity. Factors may be relevant, but the adverse effects on the aquatic environment are negligible, such as the impacts of a boat ramp on water level fluctuations or flood hazards. Only the reasonably foreseeable direct or indirect effects are included in the environmental assessment for this NWP. Division and district engineers will impose, as necessary, additional conditions on the NWP authorization or exercise discretionary authority to address locally important factors or to ensure that the authorized activity results in no more than minimal individual and cumulative adverse effects on the aquatic environment. In any case, adverse effects will be controlled by the terms, conditions, and additional provisions of the NWP. For example, Section 7 Endangered Species Act consultation will be required for activities that may affect endangered or threatened species or critical habitat.

4.2 Impact Analysis

This NWP authorizes structures or work in navigable waters of the United States, as well as discharges of dredged or fill material into waters of the United States for activities related to the construction of outfall structures and associated intake structures that are in compliance with Section 402 of the Clean Water Act.

Pre-construction notification is required for all activities authorized by this NWP. The pre-

construction notification requirement allows district engineers to review proposed activities on a case-by-case basis to ensure that the individual and cumulative adverse effects of those activities on the aquatic environment are minimal. If the district engineer determines that the adverse effects of a particular project are more than minimal after considering mitigation, then discretionary authority will be asserted and the applicant will be notified that another form of DA authorization, such as a regional general permit or individual permit, is required (see 33 CFR 330.4(e) and 330.5).

Additional conditions can be placed on proposed activities on a regional or case-by-case basis to ensure that the activities have minimal individual and cumulative adverse effects on the aquatic environment. Regional conditioning of this NWP will be used to account for differences in aquatic resource functions, services, and values across the country, ensure that the NWP authorizes only those activities with minimal individual and cumulative adverse effects on the aquatic environment, and allow each Corps district to prioritize its workload based on where its efforts will best serve to protect the aquatic environment. Regional conditions can prohibit the use of an NWP in certain waters (e.g., high value waters or specific types of wetlands or waters), lower pre-construction notification thresholds, or require pre-construction notification for some or all NWP activities in certain watersheds or types of waters. Specific NWPs can also be revoked on a geographic or watershed basis where the individual and cumulative adverse effects resulting from the use of those NWPs are more than minimal.

In high value waters, division and district engineers can: 1) prohibit the use of the NWP in those waters and require an individual permit or regional general permit; 2) impose an acreage limit on the NWP; 3) add regional conditions to the NWP to ensure that the individual and cumulative adverse environmental effects are minimal; or 4) for those NWP activities that require pre-construction notification, add special conditions to NWP authorizations, such as compensatory mitigation requirements, to ensure that the adverse effects on the aquatic environment are minimal. NWPs can authorize activities in high value waters as long as the individual and cumulative adverse effects on the aquatic environment are minimal.

The construction and use of fills for temporary access for construction may be authorized by NWP 33 or regional general permits issued by division or district engineers. The related activity must meet the terms and conditions of the specified permit(s). If the discharge is dependent on portions of a larger project that require an individual permit, this NWP will not apply. [See 33 CFR 330.6(c) and (d)]

4.3 Cumulative Effects

The Council on Environmental Quality's NEPA regulations define cumulative effects as: "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place

over a period of time." [40 CFR 1508.7.] Therefore, the NEPA cumulative effects analysis for an NWP is not limited to activities authorized by the NWP or other DA permits and includes Federal and non-Federal activities that affect the Nation's wetlands, streams, and other aquatic resources. The cumulative effects analysis should focus on specific categories of resources instead of the environmental effects caused by a particular action, and it requires identification of the stressors that cause degradation of those resources, including those caused by actions unrelated to the proposed action (CEQ 1997). The geographic scope of the cumulative impacts analysis is the United States and its territories, where the NWP may be used to authorize specific activities that require DA authorization. The temporal scope of the cumulative effects analysis includes past actions that have affected the Nation's wetlands, streams, and other aquatic resources, as well as present actions and reasonably foreseeable future actions that are affecting, or will affect, wetlands, streams, and other aquatic resources. The present effects of past federal, non-federal, and private actions are included in the affected environment, which is described in Section 3.0. The affected environment includes current aggregate effects of past actions, which are captured in recent national information on the quantity and quality of wetlands, streams, and other aquatic resources that is summarized in Section 3.0.

In addition to the activities authorized by this NWP, there are many activities that contribute to cumulative effects on wetlands, streams, and other aquatic resources in the United States, and alter the quantity of those resources and the functions they provide. Activities authorized by past versions of NWP 7, as well as other NWPs, individual permits, letters of permission, and regional general permits have resulted in direct and indirect impacts to wetlands, streams, and other aquatic resources. Those activities may have legacy effects that have added to the cumulative effects and affected the quantity of those resources and the functions they provide. Discharges of dredged or fill material that do not require DA permits because they are exempt from section 404 permit requirements can also adversely affect the quantity of the Nation's wetlands, streams, and other aquatic resources and the functions they provide. Discharges of dredged or fill material that convert wetlands, streams, and other aquatic resources to upland areas result in permanent losses of aquatic resource functions. Temporary fills and fills that do not convert waters or wetlands to dry land may cause short-term or partial losses of aquatic resource functions.

Cumulative effects to wetlands, streams, and other aquatic resources in the United States are not limited to the effects caused by activities regulated and authorized by the Corps under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Other federal, non-federal, and private activities also contribute to the cumulative effects to wetlands, streams, and other aquatic resources, by changing the quantity of those resources and the functions they provide. Cumulative effects to wetlands, streams, and other aquatic resources are the result of landscape-level processes (Gosselink and Lee 1989). As discussed in more detail below, cumulative effects to aquatic resources are caused by a variety of activities (including activities that occur entirely in uplands) that take place within a landscape unit, such as the watershed for a river or stream (e.g., Allan 2004, Paul and Meyer 2001, Leopold 1968) or the contributing drainage area for a wetland (e.g., Wright et al. 2006, Brinson and Malvárez 2002, Zedler and Kercher 2005).

The ecological condition of rivers and streams is dependent on the state of their watersheds (NRC 1992), because they are affected by activities that occur in those watersheds, including agriculture, urban development, deforestation, mining, water removal, flow alteration, and invasive species (Palmer et al. 2010). Land use changes affect rivers and streams through increased sedimentation, larger inputs of nutrients (e.g., nitrogen, phosphorous) and pollutants (e.g., heavy metals, synthetic chemicals, toxic organics), altered stream hydrology, the alteration or removal of riparian vegetation, and the reduction or elimination of inputs of large woody debris (Allen 2004). Agriculture is the primary cause of stream impairment, followed by urbanization (Paul and Meyer 2001). Agricultural land use adversely affects stream water quality, habitat, and biological communities (Allan 2004). Urbanization causes changes to stream hydrology (e.g., higher flood peaks, lower base flows), sediment supply and transport, water chemistry, and aquatic organisms (Paul and Meyer 2001). Leopold (1968) found that land use changes affect the hydrology of an area by altering stream flow patterns, total runoff, water quality, and stream structure. Changes in peak flow patterns and runoff affect stream channel stability. Stream water quality is adversely affected by increased inputs of sediments, nutrients, and pollutants, many of which come from non-point sources (Paul and Meyer 2001, Allan and Castillo 2007).

The construction and operation of water-powered mills in the 17th to 19th centuries substantially altered the structure and function of streams in the eastern United States (Walter and Merritts 2008) and those effects have persisted to the present time. In urbanized and agricultural watersheds, the number of small streams has been substantially reduced, in part by activities that occurred between the 19th and mid-20th centuries (Meyer and Wallace 2001). Activities that affect the quantity and quality of small streams include residential, commercial, and industrial development, mining, agricultural activities, forestry activities, and road construction (Meyer and Wallace 2001), even if those activities are located entirely in uplands.

Activities that affect wetland quantity and quality include: land use changes that alter local hydrology (including water withdrawal), clearing and draining wetlands, constructing levees that sever hydrologic connections between rivers and floodplain wetlands, constructing other obstructions to water flow (e.g., dams, locks), constructing water diversions, inputs of nutrients and contaminants, and fire suppression (Brinson and Malvárez 2002). Upland development adversely affects wetlands and reduces wetland functionality because those activities change surface water flows and alter wetland hydrology, contribute stormwater and associated sediments, nutrients, and pollutants, cause increases in invasive plant species abundance, and decrease the diversity of native plants and animals (Wright et al. 2006). Many of the remaining wetlands in the United States are degraded (Zedler and Kercher 2005). Wetland degradation and losses are caused by changes in water movement and volume within a watershed or contributing drainage area, altered sediment transport, drainage, inputs of nutrients from non-point sources, water diversions, fill activities, excavation activities, invasion by non-native species, land subsidence, and pollutants (Zedler and Kercher 2005).

Coastal waters are also affected by a wide variety of activities. Most inland waters in the United States drain to coastal areas, and therefore activities that occur in inland watersheds affect coastal waters (NRC 1994). Adverse effects to coastal waters are caused by habitat modifications, point source pollution, non-point source pollution, changes to hydrology and hydrodynamics, exploitation of coastal resources, introduction of non-native species, global climate change, shoreline erosion, and pathogens and toxins (NRC 1994). Eutrophication of coastal waters is caused by nutrients contributed by waste treatment systems, non-point sources, and the atmosphere, and may cause hypoxia or anoxia in coastal waters (NRC 1994). Inland land uses, such as agriculture, urban development, and forestry, adversely affect coastal waters by diverting fresh water from estuaries and by acting as sources of nutrients and pollutants to coastal waters (Millennium Ecosystem Assessment 2005). Habitat modifications are the result of dredging or filling coastal waters, inputs of sediment via non-point sources, changes in water quality, or alteration of coastal hydrodynamics (NRC 1994). Coastal development activities, including those that occur in uplands, affect marine and estuarine habitats (Millennium Ecosystem Assessment 2005). The introduction of non-native species may change the functions and structure of coastal wetlands and other habitats (Millennium Ecosystem Assessment 2005). Substantial alterations of coastal hydrology and hydrodynamics are caused by land use changes in watersheds draining to coastal waters, the channelization or damming of streams and rivers, water consumption, and water diversions (NRC 1994). Changes in water movement through watersheds may also alter sediment delivery to coastal areas, which affects the sustainability of wetlands and intertidal habitats and the functions they provide (NRC 1994). Fishing activities may also modify coastal habitats by changing habitat structure and the biological communities that inhabit those areas (NRC 1994).

There is also little information on the ecological condition or the Nation's wetlands, streams, and other aquatic resources, or the amounts of functions they provide, although reviews have acknowledged that most of these resources are degraded (Zedler and Kercher 2005, Allan 2004) or impaired (U.S. EPA 2012) because of various activities and other stressors. These data deficiencies make it more difficult to characterize the affected environment to assess cumulative effects.

As discussed in Section 3.0 of this document there is a wide variety of causes and sources of impairment of the Nation's rivers, streams, wetlands, lakes, estuarine waters, and marine waters (U.S. EPA 2012), which also contribute to cumulative effects to aquatic resources. Many of those causes of impairment are point and non-point sources of pollutants that are not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Two common causes of impairment for rivers and streams, habitat alterations and flow alterations, may be due in part to activities regulated by the Corps under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. Habitat and flow alterations may also be the caused by activities that do not involve discharges of dredged or fill material or structures or work in navigable waters. For wetlands, impairment due to habitat alterations, flow alterations, and hydrology modifications may involve activities regulated under section 404, but these causes of impairment may also be due to unregulated activities, such as changes in upland land use

that affects the movement of water through a watershed or contributing drainage area or the removal of vegetation.

Many of the activities discussed in this cumulative effects section that affect wetlands, streams, and other aquatic resources are not subject to regulation under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899.

Dahl (1990) estimates that approximately 53 percent of the wetlands in the conterminous United States were lost in the 200-year period covering the 1780s to 1980s. The annual rate of wetland loss has decreased substantially since the 1970s (Dahl 2011), when wetland regulation became more prevalent (Brinson and Malvárez 2002). Between 2004 and 2009, there was no statistically significant difference in wetland acreage in the conterminous United States (Dahl 2011). According to the 2011 wetland status and trends report, during the period of 2004 to 2009 urban development accounted for 11% of wetland losses (61,630 acres), rural development resulted in 12% of wetland losses (66,940 acres), silviculture accounted for 56% of wetland losses (307,340 acres), and wetland conversion to deepwater habitats caused 21% of the loss in wetland area (115,960 acres) (Dahl 2011). Some of the losses occurred to wetlands that are not subject to Clean Water Act jurisdiction and some losses are due to activities not regulated under Section 404 of the Clean Water Act, such as unregulated drainage activities, exempt forestry activities, or water withdrawals. From 2004 to 2009, approximately 100,020 acres of wetlands were gained as a result of wetland restoration and conservation programs on agricultural land (Dahl 2011). Another source of wetland gain is conversion of other uplands to wetlands (389,600 acres during 2004 to 2009) (Dahl 2011). Inventories of wetlands, streams, and other aquatic resources are incomplete because the techniques used cannot identify some of those resources (e.g., Dahl (2011) for wetlands; Meyer and Wallace (2001) for streams).

Compensatory mitigation required by district engineers for specific activities authorized by this NWP will help reduce the contribution of those activities to the cumulative effects on the Nation's wetlands, streams, and other aquatic resources, by providing ecological functions to partially or fully replace some or all of the aquatic resource functions lost as a result of those activities. Compensatory mitigation requirements for the NWPs are described in general condition 23 and compensatory mitigation projects must also comply with the applicable provisions of 33 CFR part 332. District engineers will establish compensatory mitigation requirements on a case-by-case basis, after evaluating pre-construction notifications. Compensatory mitigation requirements for individual NWP activities will be specified through permit conditions added to NWP authorizations. When compensatory mitigation is required, the permittee is required to submit a mitigation plan prepared in accordance with the requirements of 33 CFR 332.4(c). Credits from approved mitigation banks or in-lieu fee programs may also be used to satisfy compensatory mitigation requirements for NWP authorizations. Monitoring is required to demonstrate whether the permittee-responsible mitigation project, mitigation bank, or in-lieu fee project is meeting its objectives and providing the intended aquatic resource structure and functions. If the compensatory mitigation project is not meeting its objectives, adaptive management will be required. Adaptive management may involve taking actions, such as site modifications,

remediation, or design changes, to ensure the compensatory mitigation project meets its objectives (see 33 CFR 332.7(c)).

The estimated contribution of this NWP to the cumulative effects to aquatic resources in the United States during the five year period that the NWP would be in effect, in terms of the estimated number of time this NWP would be used until it expires and the projected impacts and compensatory mitigation, is provided in Section 6.2.2. The activities authorized by this NWP will result in minor contributions to the cumulative effects that have occurred to wetlands, streams, and other aquatic resources in the United States because, as discussed in this section, they are one of many activities that affect those resources. The causes of cumulative effects discussed in this section include past, present, and reasonably foreseeable future federal, non-federal, and private activities. For the national-scale cumulative effects analysis presented in this section, it is not possible to quantify the relative contributions of the various activities that affect the quantity of wetlands, streams, and other aquatic resources and the functions they provide, because such data are not available at the national scale.

In a specific watershed, division or district engineers may determine that the cumulative adverse effects of activities authorized by this NWP are more than minimal. Division and district engineers will conduct more detailed assessments for geographic areas that are determined to be potentially subject to more than minimal cumulative adverse effects. Division and district engineers have the authority to require individual permits in watersheds or other geographic areas where the cumulative adverse effects are determined to be more than minimal, or add conditions to the NWP either on a case-by-case or regional basis to require mitigation measures to ensure that the cumulative adverse effects are minimal. When a division or district engineer determines, using local or regional information, that a watershed or other geographic area is subject to more than minimal cumulative adverse effects due to the use of this NWP, he or she will use the revocation and modification procedure at 33 CFR 330.5. In reaching the final decision, the division or district engineer will compile information on the cumulative adverse effects and supplement this document.

The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP rather than request individual permits for projects which could result in greater adverse impacts to the aquatic environment. The minimization encouraged by the issuance of this NWP, as well as compensatory mitigation that may be required for specific activities authorized by this NWP, will help reduce cumulative effects to the Nation's wetlands, streams, and other aquatic resources.

5.0 Public Interest Review

5.1 Public Interest Review Factors (33 CFR 320.4(a)(1))

For each of the 20 public interest review factors, the extent of the Corps consideration of expected impacts resulting from the use of this NWP is discussed, as well as the reasonably foreseeable cumulative adverse effects that are expected to occur. The Corps decision-making process involves consideration of the benefits and detriments that may result from the activities authorized by this NWP.

(a) Conservation: The activities authorized by this NWP may result in slight changes in the natural resource characteristics of the project area, because most outfall and intake structures occupy a small amount of land area . Compensatory mitigation, if required for activities authorized by this NWP, will result in the restoration, enhancement, establishment, or preservation of aquatic habitats that will offset losses of conservation values. The adverse effects of activities authorized by this NWP on conservation will be minor.

(b) Economics: The activities authorized by this NWP will have positive impacts on the local economy. These activities will generate jobs and revenue for local contractors as well as revenue to building supply companies that sell construction materials.

(c) Aesthetics: The visual character of some waters of the United States will be altered by the activities authorized by this NWP. The extent and perception of these changes will vary, depending on the size and configuration of the outfall or intake structures, the nature of the surrounding area, and the public uses of the area. During construction, activities authorized by this NWP will modify other aesthetic characteristics, such as air quality and the amount of noise.

(d) General environmental concerns: Activities authorized by this NWP will affect general environmental concerns, such as water, air, noise, and land pollution. The authorized activity will also affect the physical, chemical, and biological characteristics of the environment. The adverse effects of the activities authorized by this NWP on general environmental concerns will be minor. Adverse effects to the chemical composition of the aquatic environment will be controlled by general condition 6, which states that the material used for construction must be free from toxic pollutants in toxic amounts. General condition 23 requires mitigation to minimize adverse effects to the aquatic environment through avoidance and minimization at the project site. Compensatory mitigation may be required by district engineers to ensure that the net adverse effects on the aquatic environment are minimal. Specific environmental concerns are addressed in other sections of this document.

(e) Wetlands: The construction of outfall structures and associated intake structures may result in the loss or alteration of wetlands. In most cases, the affected wetlands will be permanently filled, resulting in the permanent loss of aquatic resource functions and values. However, since most of these structures are relatively small in size, these wetland losses will be minor. Some wetlands may be temporarily impacted by the activity through the use of

temporary staging areas and access roads. These wetlands will be restored, unless the district engineer authorizes another use for the area, but the plant community may be different, especially if the site was originally forested. Since all activities authorized by this NWP require pre-construction notification, district engineers may require compensatory mitigation to offset the loss of wetlands and ensure that the adverse effects to the aquatic environment are minimal.

Wetlands provide habitat, including foraging, nesting, spawning, rearing, and resting sites for aquatic and terrestrial species. The loss or alteration of wetlands may alter natural drainage patterns. Wetlands reduce erosion by stabilizing the substrate. Wetlands also act as storage areas for stormwater and flood waters. Wetlands may act as groundwater discharge or recharge areas. The loss of wetland vegetation will adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland vegetation also provides habitat for microorganisms that remove nutrients and pollutants from water. Wetlands, through the accumulation of organic matter, act as sinks for some nutrients and other chemical compounds, reducing the amounts of these substances in the water.

General condition 23 requires avoidance and minimization of impacts to waters of the United States, including wetlands, at the project site. Compensatory mitigation may be required by the district engineer to ensure that the net adverse effects on the aquatic environment are minimal. Division engineers can regionally condition this NWP to restrict or prohibit the use of this NWP in high value wetlands. General condition 22 prohibits the use of this NWP to discharge dredged or fill material in designated critical resource waters and adjacent wetlands, which may include high value wetlands. District engineers will also exercise discretionary authority to require an individual permit if high value wetlands will be adversely affected by the activity and the activity will result in more than minimal adverse effects on the aquatic environment. District engineers can also add case-specific special conditions to the NWP authorization to reduce impacts to wetlands or require compensatory mitigation to offset losses of wetlands.

(f) Historic properties: General condition 20 states that in cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act have been satisfied.

(g) Fish and wildlife values: This NWP authorizes activities in all waters of the United States, which provide habitat to many species of fish and wildlife. Activities authorized by this NWP may alter the habitat characteristics of open waters, streams, and wetlands, decreasing the quantity and quality of fish and wildlife habitat. Wetland and riparian vegetation provides food and habitat for many species, including foraging areas, resting areas, corridors for wildlife movement, and nesting and breeding grounds. Open waters provide habitat for fish and other aquatic organisms. Fish and other motile animals will avoid areas where there is maintenance dredging of outfall and intake structures and canals. Woody riparian vegetation shades streams, which reduces water temperature fluctuations

and provides habitat for fish and other aquatic animals. Riparian vegetation provides organic matter that is consumed by fish and aquatic invertebrates. Woody riparian vegetation creates habitat diversity in streams when trees and large shrubs fall into the channel, forming snags that provide habitat and shade for fish. Submerged aquatic vegetation, which may be removed by maintenance dredging activities, also provides habitat for fish and shellfish. Pre-construction notification is required for all activities authorized by this NWP, which provides the district engineer with an opportunity to review the proposed activities, assess potential impacts on fish and wildlife values, and ensure that the authorized activity results in no more than minimal adverse effects on the aquatic environment. Compensatory mitigation may be required by district engineers to restore, enhance, establish, and/or preserve wetlands to offset losses of jurisdictional wetlands. Stream rehabilitation, enhancement, and preservation activities may be required as compensatory mitigation for impacts to streams.. These compensatory mitigation activities will provide fish and wildlife habitat values.

General condition 2 will reduce adverse effects to fish and other aquatic species by prohibiting activities that substantially disrupt the movement of indigenous aquatic species. Compliance with general conditions 3 and 5 will ensure that the authorized activity has minimal adverse effects on spawning areas and shellfish beds, respectively. The authorized activity cannot have more than minimal adverse effects on breeding areas for migratory birds, due to the requirements of general condition 4.

Compliance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668(a)-(d)), the Migratory Bird Treaty Act (16 U.S.C. 703; 16 U.S.C. 712), and the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.), including any requirements to obtain take permits, is the responsibility of the project proponent for a particular NWP activity. General condition 19 states that the permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act.

Consultation pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act will occur as necessary for proposed NWP activities that may adversely affect essential fish habitat. Consultation may occur on a case-by-case or programmatic basis. Division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in minimal adverse effects on essential fish habitat.

(h) Flood hazards: The activities authorized by this NWP will have negligible adverse effects on the flood-holding capacity of the 100-year floodplain since most outfall and associated intake structures are relatively small. Compliance with general conditions 9 and 10 will also reduce flood hazards. General condition 9 requires the permittee to maintain, to the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters, except under certain circumstances. Much of the land area within 100-year floodplains is upland, and outside of the Corps scope of review.

(i) Floodplain values: Activities authorized by this NWP will have minimal adverse effects on floodplain values because most outfall and intake structures are relatively small. The fish and wildlife habitat values of floodplains may be adversely affected by activities authorized by this NWP, by modifying or eliminating areas used for nesting, foraging, resting, and reproduction.

Compensatory mitigation may be required for activities authorized by this NWP, which will offset losses of waters of the United States and provide water quality functions and wildlife habitat. General condition 23 requires avoidance and minimization of impacts to waters of the United States to the maximum extent practicable at the project site, which will reduce losses of floodplain values. Compliance with general conditions 9 and 10 will ensure that activities on floodplains will not cause more than minimal adverse effects on floodplain values, especially flood storage and conveyance.

(j) Land use: Activities authorized by this NWP will result in minor changes in land use, since outfall and intake structures occupy a relatively small amount of land area. Since the primary responsibility for land use decisions is held by state, local, and Tribal governments, the Corps scope of review is limited to significant issues of overriding national importance, such as navigation and water quality (see 33 CFR 320.4(j)(2)).

(k) Navigation: Activities authorized by this NWP will not adversely affect navigation, because these activities must comply with general condition 1. This NWP requires pre-construction notification for all authorized activities, which will allow district engineers to review each proposed activity and determine if there will be any adverse effects on navigation.

(l) Shore erosion and accretion: The activities authorized by this NWP will have minor effects on shore erosion and accretion processes. Outfall and intake structures occupy only a small area of the shore or open waters, if they are constructed in coastal areas.

(m) Recreation: Activities authorized by this NWP will have negligible adverse effects on the recreational uses of the area because outfall and intake structures occupy a relatively small amount of land area.

(n) Water supply and conservation: Activities authorized by this NWP will have minor adverse effects on surface water and groundwater supplies. Intake structures are not authorized by this NWP, unless they are associated with outfall structures, so that water cannot be withdrawn from a waterbody without most of the water returning to the waterbody via outfall structures. Activities authorized by this NWP may also affect the quality of water supplies by adding pollutants to surface waters and groundwater, but the permittee must comply with Section 402 of the Clean Water Act (i.e., National Pollutant Discharge Elimination System requirements). Division and district engineers can prohibit the use of this NWP in watersheds for public water supplies, if it is in the public interest to do so. General condition 7 prohibits discharges in the vicinity of public water supply intakes. Compensatory mitigation may be required for activities authorized by this NWP, which will

help improve the quality of surface waters.

(o) Water quality: The construction of outfall and intake structures and maintenance excavation in the vicinity of these structures may have adverse effects on water quality. The permittee must comply with Section 402 of the Clean Water Act and may have to obtain a National Pollutant Discharge Elimination System permit. The loss of wetland and riparian vegetation will adversely affect water quality because these plants trap sediments, pollutants, and nutrients and transform chemical compounds. Wetland and riparian vegetation also provides habitat for microorganisms that remove nutrients and pollutants from water. During construction or maintenance dredging, there will be temporary increases in suspended sediments, which will degrade water quality for a short period of time. Compensatory mitigation may be required for activities authorized by this NWP, to ensure that the activities do not have more than minimal adverse effects on the aquatic environment, including water quality. Wetlands and riparian areas restored, established, enhanced, or preserved as compensatory mitigation will provide local water quality benefits.

During construction small amounts of oil and grease from construction equipment may be discharged into the waterway. Because most of the construction will occur during a relatively short period of time, the frequency and concentration of these discharges are not expected to have more than minimal adverse effects on overall water quality.

This NWP requires Section 401 water quality certification, if the activity involves discharges of dredged or fill material into waters of the United States. Most water quality concerns are addressed by the state or Tribal Section 401 agency.

(p) Energy needs: The activities authorized by this NWP may be associated with activities that increase energy consumption in the area, but those associated activities are likely to be outside of the Corps scope of review. During construction there will be temporary increases in energy consumption.

(q) Safety: The activities authorized by this NWP will be subject to Federal, state, and local safety laws and regulations. Therefore, this NWP will not adversely affect the safety of the project area.

(r) Food and fiber production: Activities authorized by this NWP will have minor effects on food and fiber production, some of which may be beneficial. The construction of outfall and intake structures may be associated with irrigation projects to improve agricultural production or the construction and operation of food production facilities.

(s) Mineral needs: Activities authorized by this NWP may increase demand for aggregates and stone, which may be used to construct outfall and intake structures. The construction of outfall and intake structures may increase the demand for other building materials, such as steel, aluminum, and copper, which are made from mineral ores and may be used to construct pipe used for outfall and intake structures.

(t) Considerations of property ownership: The NWP complies with 33 CFR 320.4(g), which states that an inherent aspect of property ownership is a right to reasonable private use. The NWP provides expedited DA authorization for the construction of outfall and intake structures in waters of the United States, provided the activity complies with the terms and conditions of the NWP and results in minimal adverse effects on the aquatic environment.

5.2 Additional Public Interest Review Factors (33 CFR 320.4(a)(2))

5.2.1 Relative extent of the public and private need for the proposed structure or work

This NWP authorizes activities in all waters of the United States, for the construction of outfall structures and associated intake structures that are in compliance with Section 402 of the Clean Water Act. These activities satisfy public and private needs, and are associated with manufacturing, energy production, and other commercial activities. The need for this NWP is based upon the number of these activities that occur annually with minimal individual and cumulative adverse effects on the aquatic environment.

5.2.2 Where there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work

Most situations in which there are unresolved conflicts concerning resource use arise when environmentally sensitive areas are involved (e.g., special aquatic sites, including wetlands) or where there are competing uses of a resource. The nature and scope of the activity, when planned and constructed in accordance with the terms and conditions of this NWP, reduce the likelihood of such conflict. In the event that there is a conflict, the NWP contains provisions that are capable of resolving the matter (see Section 1.2 of this document).

General condition 23 requires permittees to avoid and minimize adverse effects to waters of the United States to the maximum extent practicable on the project site. Consideration of off-site alternative locations is not required for activities that are authorized by general permits. General permits authorize activities that have minimal individual and cumulative adverse effects on the aquatic environment and overall public interest. District engineers will exercise discretionary authority and require an individual permit if the proposed activity will result in more than minimal adverse environmental effects on the project site. The consideration of off-site alternatives can be required during the individual permit process.

5.2.3 The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited

The nature and scope of the activities authorized by the NWP will most likely restrict the extent of the beneficial and detrimental effects to the area immediately surrounding the outfall structures and associated intake structures. Activities authorized by this NWP will have minimal individual and cumulative adverse effects on the aquatic environment.

The terms, conditions, and provisions of the NWP were developed to ensure that individual and cumulative adverse environmental effects are minimal. Specifically, NWPs do not obviate the need for the permittee to obtain other Federal, state, or local authorizations required by law. The NWPs do not grant any property rights or exclusive privileges (see 33 CFR 330.4(b) for further information). Additional conditions, limitations, restrictions, and provisions for discretionary authority, as well as the ability to add activity-specific or regional conditions to this NWP, will provide further safeguards to the aquatic environment and the overall public interest. There are also provisions to allow suspension, modification, or revocation of the NWP.

6.0 Clean Water Act Section 404(b)(1) Guidelines Analysis

The 404(b)(1) compliance criteria for general permits are provided at 40 CFR 230.7.

6.1 Evaluation Process (40 CFR 230.7(b))

6.1.1 Alternatives (40 CFR 230.10(a))

General condition 23 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. The consideration of off-site alternatives is not directly applicable to general permits.

6.1.2 Prohibitions (40 CFR 230.10(b))

This NWP authorizes discharges of dredged or fill material into waters of the United States, which require water quality certification. Water quality certification requirements will be met in accordance with the procedures at 33 CFR 330.4(c).

No toxic discharges will be authorized by this NWP. General condition 6 states that the material must be free from toxic pollutants in toxic amounts.

This NWP does not authorize activities that jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of critical habitat. Reviews of pre-construction notifications, regional conditions, and local operating procedures for endangered species will ensure compliance with the Endangered Species Act. Refer to general condition 18 and to 33 CFR 330.4(f) for information and procedures.

This NWP will not authorize the violation of any requirement to protect any marine sanctuary. Refer to section 6.2.3(j)(1) of this document for further information.

6.1.3 Findings of Significant Degradation (40 CFR 230.10(c))

Potential impact analysis (Subparts C through F): The potential impact analysis specified in Subparts C through F is discussed in section 6.2.3 of this document. Mitigation required by the district engineer will ensure that the adverse effects on the aquatic environment are minimal.

Evaluation and testing (Subpart G): Because the terms and conditions of the NWP specify the types of discharges that are authorized, as well as those that are prohibited, individual evaluation and testing for the presence of contaminants will normally not be required. If a situation warrants, provisions of the NWP allow division or district engineers to further specify authorized or prohibited discharges and/or require testing.

Based upon Subparts B and G, after consideration of Subparts C through F, the discharges authorized by this NWP will not cause or contribute to significant degradation of waters of the United States.

6.1.4 Factual determinations (40 CFR 230.11)

The factual determinations required in 40 CFR 230.11 are discussed in section 6.2.3 of this document.

6.1.5 Appropriate and practicable steps to minimize potential adverse impacts (40 CFR 230.10(d))

As demonstrated by the information in this document, as well as the terms, conditions, and provisions of this NWP, actions to minimize adverse effects (Subpart H) have been thoroughly considered and incorporated into the NWP. General condition 23 requires permittees to avoid and minimize discharges of dredged or fill material into waters of the United States to the maximum extent practicable on the project site. Compensatory may be mitigation required by the district engineer to ensure that the net adverse effects on the aquatic environment are minimal.

6.2 Evaluation Process (40 CFR 230.7(b))

6.2.1 Description of permitted activities (40 CFR 230.7(b)(2))

As indicated by the text of this NWP in section 1.0 of this document, and the discussion of potential impacts in section 4.0, the activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization under a single general permit. Specifically, the purpose of the NWP is to authorize activities related to the construction of outfall structures and associated intake structures that are in compliance with Section 402 of the Clean Water Act. The nature and scope of the impacts are controlled by the terms and conditions of the NWP.

The activities authorized by this NWP are sufficiently similar in nature and environmental impact to warrant authorization by a general permit. The terms of the NWP authorize a

specific category of activity (i.e., the construction of outfall structures and associated intake structures that are in compliance with Section 402 of the Clean Water Act) in a specific category of waters (i.e., waters of the United States). The restrictions imposed by the terms and conditions of this NWP will result in the authorization of activities that have similar impacts on the aquatic environment, namely the replacement or modification of aquatic habitats, such as open waters and wetlands, with outfall structures and associated intake structures.

If a situation arises in which the activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

6.2.2 Cumulative effects (40 CFR 230.7(b)(3))

The 404(b)(1) Guidelines at 40 CFR 230.11(a) define cumulative effects as "...the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material." For the issuance of general permits, such as this NWP, the 404(b)(1) Guidelines require the permitting authority to "set forth in writing an evaluation of the potential individual and cumulative impacts of the categories of activities to be regulated under the general permit." [40 CFR 230.7(b)] If a situation arises in which cumulative effects are likely to be more than minimal and the proposed activity requires further review, or is more appropriately reviewed under the individual permit process, provisions of the NWPs allow division and/or district engineers to take such action.

Based on reported use of this NWP during the period of August 1, 2009, to July 31, 2010, the Corps estimates that this NWP will be used approximately 410 times per year on a national basis, resulting in impacts to approximately 15 acres of waters of the United States, including jurisdictional wetlands. The Corps estimates that approximately 13 acres of compensatory mitigation will be required to offset these impacts. The demand for these types of activities could increase or decrease over the five-year duration of this NWP. Using the current trend, approximately 2,050 activities could be authorized over a five year period until this NWP expires, resulting in impacts to approximately 75 acres of waters of the United States, including jurisdictional wetlands. Approximately 65 acres of compensatory mitigation would be required to offset those impacts. Compensatory mitigation is the restoration (re-establishment or rehabilitation), establishment, enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. [33 CFR 332.2]

Wetland restoration, enhancement, and establishment projects can provide wetland functions, as long as the wetland compensatory mitigation project is placed in an appropriate landscape position, has appropriate hydrology for the desired wetland type, and the watershed condition will support the desired wetland type (NRC 2001). The success of wetland restoration, enhancement, and establishment is dependent on the technical expertise of the mitigation provider, allowing sufficient time for wetland structure and functions to

develop, and recognizing the ability for ecosystems to undergo self-design during their development (Mitsch and Gosselink 2007). Most studies of compensatory mitigation success have focused solely on the ecological attributes of the compensatory mitigation projects, and few studies have also evaluated the aquatic resources impacted by permitted activities (Kettlewell et al. 2008), so it is difficult to assess whether compensatory mitigation has fully or partially offset the lost functions provided by the aquatic resources that are impacted by permitted activities. In its review, the NRC (2001) concluded that some wetland types can be successfully restored or established (e.g., non-tidal emergent wetlands, some forested and scrub-shrub wetlands, sea grasses, and coastal marshes), while other wetland types (e.g., vernal pools, bogs, and fens) are difficult to restore and should be avoided where possible. Because of its greater potential to successfully provide wetland functions, restoration is the preferred compensatory mitigation mechanism (33 CFR 332.3(a)(2)). Bogs, fens, and springs are considered to be difficult-to-replace resources and compensatory mitigation should be provided through in-kind rehabilitation, enhancement, or preservation of these wetlands types (33 CFR 332.3(e)(3)).

In its review of outcomes of wetland compensatory mitigation activities, the NRC (2001) stated that wetland functions can be replaced by wetland restoration and establishment activities. They discussed five categories of wetland functions: hydrology, water quality, maintenance of plant communities, maintenance of animal communities, and soil functions. Wetland functions develop at different rates in wetland restoration and establishment projects (NRC 2001). It is difficult to restore or establish natural wetland hydrology, and water quality functions are likely to be different than the functions provided at wetland impact sites (NRC 2001). Reestablishing or establishing the desired plant community may be difficult because of invasive species colonizing the mitigation project site (NRC 2001). The committee also found that establishing and maintaining animal communities depends on the surrounding landscape. Soil functions can take a substantial amount of time to develop, because they are dependent on soil organic matter and other soil properties (NRC 2001). The NRC (2001) concluded that the success of replacing wetland functions depends on the particular function of interest, the restoration or establishment techniques used, and the extent of degradation of the compensatory mitigation project site and its watershed.

The ecological success of wetland restoration and enhancement activities is affected by the amount of changes to hydrology and inputs of pollutants, nutrients, and sediments within the watershed or contributing drainage area (Wright et al. 2006). Wetland restoration is becoming more successful, especially in cases where monitoring and adaptive management are used to correct deficiencies in these efforts (Zedler and Kercher 2005). Irreversible changes to landscapes, especially those that affect hydrology within contributing drainage areas or watersheds , cause wetland degradation and impede the success of wetland restoration efforts (Zedler and Kercher 2005).

Streams are difficult-to-replace resources and compensatory mitigation should be provided through stream rehabilitation, enhancement, and preservation since those techniques are most likely to be successful (see 33 CFR 332.3(e)(3)). Stream rehabilitation is usually the most effective compensatory mitigation mechanism since restoring a stream to a historic

state is not possible because of changes in land use and other activities in a watershed (Roni et al. 2008). Stream rehabilitation and enhancement projects, including the restoration and preservation of riparian areas, provide riverine functions (e.g., Allan and Castillo (2007) for rivers and streams, NRC (2002) for riparian areas). Non-structural and structural techniques can be used to rehabilitate and enhance streams, and restore riparian areas (NRC 1992). Non-structural practices include removing disturbances to allow passive recovery of streams and riparian areas, reducing or eliminating activities that have altered stream flows to restore natural flows, preserving or restoring floodplains, and restoring and protecting riparian areas, including fencing those areas to exclude livestock and people (NRC 1992). Structural rehabilitation and enhancement techniques include channel, bank, and/or riparian area modifications to improve habitat and dam removal (NRC 1992). Road improvements, riparian rehabilitation, reconnecting floodplains to their rivers, and installing in-stream habitat structures have had varying degrees of success in stream rehabilitation activities (Roni et al. 2008). Success of these rehabilitation activities is strongly dependent on addressing impaired water quality and insufficient water quantity, since those factors usually limit the biological response to stream rehabilitation efforts (Roni et al. 2008). Ecologically successful stream rehabilitation and enhancement activities depend on addressing the factors that most strongly affect stream functions, especially water quality, water flow, and riparian quality, and not focusing solely on rehabilitating or enhancing the physical habitat of streams (Palmer et al. 2010).

The compensatory mitigation required by district engineers in accordance with general condition 23 and activity-specific conditions will provide aquatic resource functions and services to offset some or all of the losses of aquatic resource functions caused by the activities authorized by this NWP, and reduce the contribution of those activities to the cumulative effects on the Nation's wetlands, streams, and other aquatic resources. The required compensatory mitigation must be conducted in accordance with the applicable provisions of 33 CFR part 332, which requires development and implementation of approved mitigation plans, as well as monitoring to assess success in accordance with ecological performance standards established for the compensatory mitigation project. The district engineer will evaluate monitoring reports to determine if the compensatory mitigation project has fulfilled its objectives and is ecological successful. [33 CFR 332.6] If the monitoring efforts indicate that the compensatory mitigation project is failing to meet its objectives, the district engineer may require additional measures, such as adaptive management or alternative compensatory mitigation, to address the compensatory mitigation project's deficiencies. [33 CFR 332.7(c)]

According to Dahl (2011), during the period of 2004 to 2009 approximately 489,620 acres of former upland were converted to wetlands as a result of wetland reestablishment and establishment activities. Efforts to reestablish or establish wetlands have been successful in increasing wetland acreage in the United States.

The individual and cumulative adverse effects on the aquatic environment resulting from the activities authorized by this NWP will be minimal. The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design

their projects within the scope of the NWP, including its limits, rather than request individual permits for projects that could result in greater adverse impacts to the aquatic environment. Division and district engineers will restrict or prohibit this NWP on a regional or case-specific basis if they determine that these activities will result in more than minimal individual and cumulative adverse effects on the aquatic environment.

6.2.3 Section 404(b)(1) Guidelines Impact Analysis, Subparts C through F

(a) Substrate: Discharges of dredged or fill material into waters of the United States will alter the substrate of those waters, usually replacing the aquatic area with dry land, and changing the physical, chemical, and biological characteristics of the substrate. The original substrate will be removed or covered by other material, such as concrete, soil, gravel, etc. Temporary fills may be placed upon the substrate, but must be removed upon completion of the activity (see general condition 13). Higher rates of erosion may result during construction, but general condition 12 requires the use of appropriate measures to control soil erosion and sediment.

(b) Suspended particulates/turbidity: Depending on the method of construction, soil erosion and sediment control measures, equipment, composition of the bottom substrate, and wind and current conditions during construction, dredged or fill material placed in open waters will temporarily increase water turbidity. Pre-construction notification is required for all activities authorized by this NWP, which will allow district engineers to review each activity and ensure that the adverse effects on the aquatic environment are minimal. Particulates will be resuspended in the water column during removal of temporary fills. The turbidity plume will normally be limited to the immediate vicinity of the disturbance and should dissipate shortly after each phase of the construction activity. General condition 12 requires the permittee to stabilize exposed soils and other fills, which will reduce turbidity. NWP activities cannot create turbidity plumes that smother important spawning areas downstream (see general condition 3).

(c) Water: The construction of outfall and associated intake structures can affect some characteristics of water, such as water clarity, chemical content, dissolved gas concentrations, pH, and temperature. These activities can change the chemical and physical characteristics of the waterbody by introducing suspended or dissolved chemical compounds or sediments into the water. Changes in water quality can affect the species and quantities of organisms inhabiting the aquatic area. Water quality certification is required for discharges into waters of the United States, which will ensure that the activity does not violate applicable water quality standards. A Section 402 permit may be required to ensure compliance with the requirements of the National Pollutant Discharge Elimination System program.

(d) Current patterns and water circulation: Activities authorized by this NWP may adversely affect the movement of water in the aquatic environment, but these effects will be minimal. All activities authorized by this NWP require pre-construction notification to the district engineer, which will ensure that adverse effects to current patterns and water circulation are

minimal. General condition 9 requires the authorized activity to be designed to withstand expected high flows and to maintain the course, condition, capacity, and location of open waters to the maximum extent practicable. General condition 10 requires activities to comply with applicable FEMA-approved state or local floodplain management requirements, which will reduce adverse effects to surface water flows.

(e) Normal water level fluctuations: The activities authorized by this NWP will have little or no adverse effects on normal patterns of water level fluctuations due to tides and flooding. Outfall and intake structures occupy a relatively small area and are unlikely to affect tidal or flooding patterns. To ensure that the NWP does not authorize activities that adversely affect normal flooding patterns, general condition 10 requires NWP activities to comply with applicable FEMA-approved state or local floodplain management requirements. General condition 9 requires the permittee to maintain the pre-construction course, condition, capacity, and location of open waters, to the maximum extent practicable.

(f) Salinity gradients: The activities authorized by this NWP will have minor effects on salinity gradients. The construction of outfall structures may allow release of fresh water into marine or estuarine waters, which will reduce the salinity of those waters in the vicinity of the outfall structure.

(g) Threatened and endangered species: The Corps believes that the procedures currently in place result in proper coordination under Section 7 of the Endangered Species Act (ESA) and ensure that activities authorized by this NWP will not jeopardize the continued existence or any listed threatened and endangered species or result in the destruction or adverse modification of critical habitat. The Corps also believes that current local procedures in Corps districts are effective in ensuring compliance with ESA.

Under general condition 18, no activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

Each activity authorized by an NWP is subject to general condition 18, which states that "[n]o activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species." In addition, general condition 18 explicitly states that the NWP does not authorize the taking of threatened or endangered species, which will ensure that permittees do not mistake the NWP authorization as a Federal authorization to take threatened or endangered species. General condition 18 also requires a non-federal permittee to submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat. This general condition also states that, in such cases, non-federal permittees shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized.

Under the current Corps regulations (33 CFR 325.2(b)(5)), the district engineer must review all permit applications for potential impacts on threatened and endangered species or critical habitat. For the NWP program, this review occurs when the district engineer evaluates the pre-construction notification or request for verification. Based on the evaluation of all available information, the district engineer will initiate consultation with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS), as appropriate, if he or she determines that the proposed activity may affect any threatened and endangered species or critical habitat. Consultation may occur during the NWP authorization process or the district engineer may exercise discretionary authority to require an individual permit for the proposed activity and initiate consultation through the individual permit process. If ESA consultation is conducted during the NWP authorization process without the district engineer exercising discretionary authority, then the applicant will be notified that he or she cannot proceed with the proposed activity until ESA consultation is complete. If the district engineer determines that the activity will have no effect on any threatened and endangered species or critical habitat, then the district engineer will notify the applicant that he or she may proceed under the NWP authorization.

Corps districts have, in most cases, established informal or formal procedures with local offices of the USFWS and NMFS, through which the agencies share information regarding threatened and endangered species and their critical habitat. This information helps district engineers determine if a proposed activity may affect listed species or their critical habitat and, if necessary, initiate ESA consultation. Corps districts may utilize maps or databases that identify locations of populations of threatened and endangered species and their critical habitat. Where necessary, regional conditions are added to NWPs to require pre-construction notification for NWP activities that occur in known locations of threatened and endangered species or critical habitat. For activities that require agency coordination during the pre-construction notification process, the USFWS and NMFS will review the proposed activities for potential impacts to threatened and endangered species and their critical habitat. Any information provided by local maps and databases and any comments received during the pre-construction notification review process will be used by the district engineer to make a "no effect" or "may affect" decision.

Based on the safeguards discussed above, especially general condition 18 and the NWP regulations at 33 CFR 330.4(f), the Corps has determined that the activities authorized by this NWP will not jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitat. Although the Corps continues to believe that these procedures ensure compliance with the ESA, the Corps has taken some steps to provide further assurance. Corps district offices meet with local representatives of the USFWS and NMFS to establish or modify existing procedures, where necessary, to ensure that the Corps has the latest information regarding the existence and location of any threatened or endangered species or their critical habitat. Corps districts can also establish, through local procedures or other means, additional safeguards that ensure compliance with the ESA. Through formal consultation under Section 7 of the Endangered Species Act, or through other coordination with the USFWS

and/or the NMFS, as appropriate, the Corps will establish procedures to ensure that the NWP will not jeopardize any threatened and endangered species or result in the destruction or adverse modification of designated critical habitat. Such procedures may result in the development of regional conditions added to the NWP by the division engineer, or in special conditions to be added to an NWP authorization by the district engineer.

(h) Fish, crustaceans, molluscs, and other aquatic organisms in the food web. All activities authorized by this NWP require pre-construction notification to the district engineer, which will allow case-by-case review to ensure that adverse effects to fish and other aquatic organisms in the food web are minimal. Fish and other motile animals will avoid the project site during construction. Sessile or slow-moving animals in the path of discharges, equipment, and building materials will be destroyed. Some aquatic animals may be smothered by the placement of fill material. Motile animals will return to those areas that are temporarily impacted by the activity and restored or allowed to revert back to preconstruction conditions. Aquatic animals will not return to sites of permanent fills. Benthic and sessile animals are expected to recolonize sites temporarily impacted by the activity, after those areas are restored.

Division and district engineers can place conditions on this NWP to prohibit discharges during important stages of the life cycles of certain aquatic organisms. Such time of year restrictions can prevent adverse effects to these aquatic organisms during reproduction and development periods. General conditions 3 and 5 address protection of spawning areas and shellfish beds, respectively. General condition 3 states that activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. In addition, general condition 3 also prohibits activities that result in the physical destruction of important spawning areas. General condition 5 prohibits activities in areas of concentrated shellfish populations. General condition 9 requires the maintenance of pre-construction course, condition, capacity, and location of open waters to the maximum extent practicable, which will help minimize adverse impacts to fish, shellfish, and other aquatic organisms in the food web.

(i) Other wildlife: Activities authorized by this NWP will result in adverse effects to other wildlife associated with aquatic ecosystems, such as resident and transient mammals, birds, reptiles, and amphibians, through the destruction of aquatic habitat, including breeding and nesting areas, escape cover, travel corridors, and preferred food sources. These impacts will be minor, since outfall and intake structures typically occupy a relatively small area and the removal of accumulated sediments is a maintenance activity. This NWP does not authorize activities that jeopardize the continued existence of Federally-listed endangered and threatened species or result in the destruction or adverse modification of critical habitat. Compensatory mitigation, including riparian areas, may be required for activities authorized by this NWP, which will help offset losses of aquatic habitat for wildlife. General condition 4 states that activities in breeding areas for migratory birds must be avoided to the maximum extent practicable.

(j) Special aquatic sites: The potential impacts to specific special aquatic sites are discussed

below:

(1) Sanctuaries and refuges: The activities authorized by this NWP will have minimal adverse effects on waters of the United States within sanctuaries or refuges designated by Federal or state laws or local ordinances. General condition 22 prohibits the use of this NWP to discharge dredged or fill material in NOAA-managed marine sanctuaries and marine monuments and National Estuarine Research Reserves. Division engineers can regionally condition the NWP to restrict or prohibit its use in sanctuaries and refuges. District engineers will also exercise discretionary authority and require individual permits for specific projects in waters of the United States in sanctuaries and refuges if those activities will result in more than minimal adverse effects on the aquatic environment.

(2) Wetlands: The activities authorized by this NWP will have minimal adverse effects on wetlands. District engineers will review pre-construction notifications for all activities authorized by this NWP to ensure that the adverse effects to the aquatic environment are minimal. Division engineers can regionally condition this NWP to restrict or prohibit its use in certain high value wetlands. See paragraph (e) of section 5.1 for a more detailed discussion of impacts to wetlands.

(3) Mud flats: The activities authorized by this NWP will have minor adverse effects on mud flats, since outfall and intake structures usually are constructed within relatively small areas. Some mud flats may have developed in the vicinity of outfall and intake structures, which may be destroyed by maintenance activities, but these adverse effects will be minimal. Pre-construction notification is required for all activities authorized by this NWP and the pre-construction notification must include a delineation of special aquatic sites, including mud flats.

(4) Vegetated shallows: The activities authorized by this NWP may affect vegetated shallows in tidal waters, especially where submerged aquatic vegetation inhabits the waterbody near an intake or outfall structure or associated canal. Pre-construction notification is required for all activities authorized by this NWP and the pre-construction notification must include a delineation of special aquatic sites, including vegetated shallows. District engineers will review all proposed activities to determine if those activities will result in minimal adverse effects on the aquatic environment. District engineers will exercise discretionary authority to require the project proponent to obtain an individual permit if the vegetated shallows are high value and the activity will result in more than minimal adverse effects on the aquatic environment.

(5) Coral reefs: Pre-construction notification is required for all activities authorized by this NWP and the pre-construction notification must include a delineation of special aquatic sites, including coral reefs. District engineers will review pre-construction notifications for all activities authorized by this NWP, to ensure that those activities will have minimal adverse effects on special aquatic sites, including coral reefs.

(6) Riffle and pool complexes: Activities in riffle and pool complexes may be

authorized by this NWP, but district engineers will review all proposed activities to determine if those activities will result in minimal adverse effects on the aquatic environment. If the riffle and pool complexes are high value and the activity will result in more than minimal adverse effects on the aquatic environment, the district engineer will exercise discretionary authority to require the project proponent to obtain an individual permit.

(k) Municipal and private water supplies: See paragraph (n) of section 5.1 for a discussion of potential impacts to water supplies.

(l) Recreational and commercial fisheries, including essential fish habitat: The activities authorized by this NWP may adversely affect waters of the United States that act as habitat for populations of economically important fish and shellfish species. Division and district engineers can condition this NWP to prohibit discharges during important life cycle stages, such as spawning or development periods, of economically valuable fish and shellfish. All activities authorized by this NWP require pre-construction notification to the district engineer, which will allow review of each activity to ensure that adverse effects to economically important fish and shellfish are minimal. Compliance with general conditions 3 and 5 will ensure that the authorized activity does not adversely affect important spawning areas or concentrated shellfish populations. As discussed in paragraph (g) of section 5.1, there are procedures to help ensure that individual and cumulative impacts to essential fish habitat are minimal. For example, division and district engineers can impose regional and special conditions to ensure that activities authorized by this NWP will result in minimal adverse effects on essential fish habitat.

(m) Water-related recreation: See paragraph (m) of section 5.1 above.

(n) Aesthetics: See paragraph (c) of section 5.1 above.

(o) Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar areas: General condition 22 prohibits the use of this NWP to authorize discharges of dredged or fill material in designated critical resource waters and adjacent wetlands, which may be located in parks, national and historical monuments, national seashores, wilderness areas, and research sites. This NWP can be used to authorize activities in parks, national and historical monuments, national seashores, wilderness areas, and research sites if the manager or caretaker wants to conduct activities in waters of the United States and those activities result in minimal adverse effects on the aquatic environment. Division engineers can regionally condition the NWP to prohibit its use in designated areas, such as national wildlife refuges or wilderness areas.

7.0 Determinations

7.1 Finding of No Significant Impact

Based on the information in this document, the Corps has determined that the issuance of this NWP will not have a significant impact on the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement is not required.

7.2 Public Interest Determination

In accordance with the requirements of 33 CFR 320.4, the Corps has determined, based on the information in this document, that the issuance of this NWP is not contrary to the public interest.

7.3 Section 404(b)(1) Guidelines Compliance

This NWP has been evaluated for compliance with the 404(b)(1) Guidelines, including Subparts C through G. Based on the information in this document, the Corps has determined that the discharges authorized by this NWP comply with the 404(b)(1) Guidelines, with the inclusion of appropriate and practicable conditions, including mitigation, necessary to minimize adverse effects on affected aquatic ecosystems. The activities authorized by this NWP will result in minimal individual and cumulative adverse effects on the aquatic environment.

7.4 Section 176(c) of the Clean Air Act General Conformity Rule Review

This NWP has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities authorized by this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility and generally cannot be

practicably controlled by the Corps. For these reasons, a conformity determination is not required for this NWP.

FOR THE COMMANDER

Dated:
13 FEB 2012

Michael J. Walsh
Major General, US Army
Deputy Commanding General
for Civil and Emergency Operations

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GENERAL PERMIT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORM WATER DISCHARGE PERMIT

Oregon Department of Environmental Quality
811 SW Sixth Avenue, Portland, OR 97204, (503) 229-5279
Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

ISSUED TO:

All public agencies responsible for construction activities with storm water discharges that are covered by this permit. The submittal of an approved application and payment of applicable fees are required.

SOURCES COVERED BY THIS PERMIT:

All Construction activities including clearing, grading, excavation, and stockpiling activities under the authority or jurisdiction of a public agency that will result in the disturbance of five or more acres. Also included are activities that disturb a total of five or more acres if part of a larger common plan of development.

Effective December 1, 2002 the previously described construction activities will include land disturbance of one acre or more, and will also include activities that disturb a total of one or more acres if part of a larger common plan of development.

This permit does not authorize in-water or riparian work. These activities are regulated by the Oregon Division of State Lands, US Army Corp of Engineers, and/or the DEQ Section 401 certification program.

Michael T. Llewelyn, Administrator
Water Quality Division

Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate erosion and sediment control measures, and storm water treatment and control facilities, and to discharge storm water to public waters in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

Unless specifically authorized by this permit, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharges to an underground injection control system.

SCHEDULE A
LIMITATIONS AND CONTROLS FOR STORM WATER DISCHARGES

1. **Performance Limitations** An Erosion and Sediment Control Plan (ESCP) shall be developed and implemented to prevent the discharge of significant amounts of sediment to surface waters. The following conditions describe significant amounts of sediment and shall be prevented from occurring.

   a. Earth slides or mud flows that leave the construction site and are likely to discharge to surface waters.

   b. Evidence of concentrated flows* of water causing erosion when such flows are not filtered or settled to remove sediment prior to leaving the construction site and are likely to discharge to surface waters. Evidence includes the presence of rills, rivulets or channels.

   c. Turbid flows* of water that are not filtered or settled to remove turbidity prior to leaving the construction site and are likely to discharge to surface waters.

   d. Deposits of sediment at the construction site in areas that drain to unprotected storm water inlets or catch basins that discharge to surface waters. Inlets and catch basins with failing sediment controls due to lack of maintenance or inadequate design will be considered unprotected.

   e. Deposits of sediment from the construction site on public or private streets outside of the permitted construction activity that are likely to discharge to surface waters.

   f. Deposits of sediment from the construction site on any adjacent property outside of the permitted construction activity that are likely to discharge to surface waters.

   * Flow to storm water inlets or catch basins located on the site will be considered “leaving the site” if there are no sediment control structures designed for expected construction flows downstream of the inlets or catch basins that are under the permittee’s control.

2. **Erosion and Sediment Control Plan Preparation and Submittal** The permittee shall ensure that a comprehensive ESCP is prepared and implemented for the construction activity regulated by this permit.

   a. A copy of the ESCP shall be retained on-site and made available to the Department upon request. During inactive periods of greater than seven (7) consecutive calendar days, the ESCP shall be retained by the permittee.

   b. The Department may request modifications to the ESCP at any time if the ESCP is ineffective at preventing the discharge of significant amounts of sediment and turbidity to surface waters.

   c. The ESCP shall include any procedures necessary to meet local erosion and sediment control requirements or storm water management requirements.

   d. If possible, during the period of October through May, construction activities should avoid or minimize excavation and bare ground activities. If the operator chooses to continue land disturbance activities within this period, additional wet weather requirements (refer to A.3.d) are required in the ESCP. Specifically, if construction activity occurs during the winter season where slopes are greater than five (5) percent and the soils have medium to high erosion potential additional erosion controls will be required.

e. The following non-storm water discharges are allowed as long as they are identified in the ESCP and all necessary controls are implemented to minimize sediment transport. These include: firefighting activity, hydrant flushing and potable waterline flushing (DEQ guidance must be followed), air conditioning condensate, dewatering activities of uncontaminated groundwater or spring water, and uncontaminated foundation or footer drain water.

3. **Erosion and Sediment Control Plan Requirements** The ESCP shall, at a minimum, include the following elements.

a. Site Description A description of the following:
   i. Nature of the construction activity, including a proposed timetable for major activities.
   ii. Estimates of the total area of the permitted site and the area of the site that is expected to undergo clearing, grading and/or excavation.
   iii. Nature of the fill material to be used, the insitu soils, and the erosion potential of such soils.
   iv. Names of the receiving water(s) for storm water runoff.

b. Site Map Indicating the following: (Note: In order to provide all the required information, a general location map in addition to the site map is required.)
   i. Areas of total development
   ii. Drainage patterns
   iii. Areas of total soil disturbance (including, but not limited to, showing cut and fill areas and pre and post development elevation contours)
   iv. Areas used for the storage of soils or wastes
   v. Areas where vegetative practices are to be implemented. Include type of vegetation seed mix.
   vi. Location of all erosion and sediment control measures or structures
   vii. Location of impervious structures after construction is completed. Include buildings, roads, parking lots, outdoor storage areas, etc., if any.
   viii. Springs, wetlands and other surface waters located on-site
   ix. Boundaries of the 100-year flood plain if determined
   x. Location of storm drainage outfalls to receiving water(s) if applicable
   xi. Location of drinking water wells and underground injection controls
   xii. Details of sediment and erosion controls
   xiii. Details of detention ponds, storm drain piping, inflow and outflow details

c. Required Controls and Practices The following controls and practices are required:
   i. Each site shall have graveled, paved, or constructed entrances, exits and parking areas, prior to beginning any other work, to reduce the tracking of sediment onto public or private roads.
   ii. All unpaved roads located on-site shall be graveled. Other effective erosion and sediment control measures either on the road or down gradient may be used in place of graveling.
   iii. When trucking saturated soils from the site, either water-tight trucks shall be used or loads shall be drained on-site until dripping has been reduced to minimize spillage on roads.
   iv. A description of procedures that describe controls to prevent the discharge of all wash water from concrete trucks.
   v. A description of procedures for correct installation or use of all erosion and sediment control measures.
   vi. A description of procedures for prompt maintenance or repair of erosion and sediment control measures utilized on-site (refer to A.4).

d. Additional Controls and Practices Additional controls and practices shall be developed that are appropriate for the site. At a minimum the following shall be considered:

i. A description of clearing and grading practices, including a schedule of implementation, that will minimize the area of exposed soil throughout the life of the project. Whenever practicable, clearing and grading shall be done in a phased manner to prevent exposed inactive areas from becoming a source of erosion.

ii. A description of vegetative erosion control practices, including a schedule of implementation, designed to preserve existing vegetation where practicable and re-vegetate open areas when practicable after grading or construction.

In developing vegetative erosion control practices, at a minimum the following shall be considered: temporary seeding, permanent seeding, mulching, sod stabilization, vegetative buffer strips, and protection of trees with protective construction fences.

iii. A description of additional erosion control practices, including a schedule of implementation, designed to protect exposed areas and prevent soil from being eroded by storm water.

In developing additional erosion control practices, at a minimum the following shall be considered: mulching with straw or other vegetation, use of erosion control blankets, and application of soil tackifiers.

iv. A description of sediment control practices, including a schedule of implementation, that will be used to divert flows from exposed soil, store flows to allow for sedimentation, filter flows, or otherwise reduce soil laden runoff. All temporary sediment control practices shall not be removed until permanent vegetation or other cover of exposed areas is established.

In developing sediment control practices, at a minimum the following shall be considered: use of silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drains, pipe slope drains, rock outlet protection, sediment traps, and temporary or permanent sedimentation basins.

v. A description of erosion and sediment control practices that will be used to prevent stockpiles from becoming a source of erosion. Stockpiles located away from the construction activity but still under the control of the permittee shall also be protected to prevent significant amounts of sediment from discharging to surface waters. At the end of each workday the soil stockpiles must be stabilized or covered.

In developing these practices, at a minimum the following shall be considered: diversion of uncontaminated flows around stockpiles, use of cover over stockpiles, and installation of silt fences around stockpiles.

vi. A description of the best management practices that will be used to prevent or minimize storm water from being exposed to pollutants from spills, 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. The reuse and recycling of construction wastes should be promoted.

In developing these practices, at a minimum the following shall be considered: written spill prevention and response procedures; employee training on spill prevention and proper disposal procedures; regular maintenance schedule for vehicles and machinery; and covered storage areas for waste and supplies.

4. **Maintenance Requirements** The following maintenance activities shall be implemented.

   a. Significant amounts of sediment that leave the site shall be cleaned up within 24 hours and placed back on the site or properly disposed. Any in-stream clean up of sediment shall be performed according to Oregon Division of State Lands' required timeframe.

   b. Under no conditions shall sediment be intentionally washed into storm sewers or drainageways unless it is captured by a BMP before entering receiving waters.

   c. For a filter fence, the trapped sediment shall be removed before it reaches one third of the above ground fence height.

   d. For catch basin protection, cleaning must occur when design capacity has been reduced by fifty percent.

   e. For a sediment basin, removal of trapped sediments shall occur when design capacity has been reduced by fifty percent.

   f. All erosion and sediment controls not in the direct path of work shall be installed before any land disturbance.

   g. If fertilizers are used to establish vegetation, the application rates shall follow manufacture's guidelines and the application shall be done in such a way to minimize nutrient-laden runoff to receiving waters.

   h. If construction activities cease for thirty (30) days or more, the entire site must be stabilized, using vegetation or a heavy mulch layer, temporary seeding, or another method that does not require germination to control erosion.

   i. Any use of toxic or other hazardous materials shall include proper storage, application, and disposal.

   j. The permittee shall manage abandoned hazardous wastes, used oils, contaminated soils or other toxic substances discovered during construction activities in a manner approved by the Department.

   k. If a storm water treatment system for construction activities is employed, the operation and maintenance plan shall be submitted to the Department for approval.

5. **Additional Requirements**
   a. Water Quality Standards:
   The ultimate goal for permittees is to comply with water quality standards in OAR 340-41. In instances where a storm water discharge adversely impacts water quality, the Department may require the facility to implement additional management practices, apply for an individual permit, or take other appropriate action.

   b. Turbidity (Nephelometric Turbidity Units, NTU) Water Quality Standard:
   No more than a ten percent cumulative increase in natural stream turbidities shall be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity. However, limited duration activities necessary to address an emergency or to accommodate essential dredging, construction or other legitimate activities and which cause the standard to be

exceeded may be authorized provided all practicable turbidity control techniques have been applied and one of the following has been granted:

(A) Emergency activities: Approval coordinated by DEQ with the Department of Fish and Wildlife under conditions they may prescribe to accommodate response to emergencies or to protect public health and welfare;

(B) Dredging, Construction or other Legitimate Activities: Permit or certification authorized under terms of Section 401 or 404 (Permits and Licenses, Federal Water Pollution Control Act) or OAR 14l-085-0100 et seq. (Removal and Fill Permits, Division of State Lands), with limitations and conditions governing the activity set forth in the permit or certificate.

[see OAR 340-041-(basin)(2)(c)]

c. Water Quality Limited Streams:
The Department may establish additional controls on construction activities that discharge storm water runoff to water quality limited streams if Total Maximum Daily Loads are established and construction activities are determined to be a significant contributor to these loads. The Department may also require application for individual permit or develop a watershed-based general permit for the activity.

SCHEDULE B
MINIMUM MONITORING REQUIREMENTS

All Sites

1. A person with knowledge and experience in construction storm water controls and management practices shall conduct the inspections. The ESCP shall identify the person(s) and/or title of the personnel that will conduct the inspections and provide a contact phone number for such person(s).

Active Sites

2. Frequency of inspections shall be daily during storm water runoff or snowmelt runoff and at least once every seven (7) calendar days and within 24 hours after any storm event of greater than 0.5 inches of rain per 24-hour period.

Inactive Sites

3. During inactive periods of greater than seven (7) consecutive calendar days, inspections shall only be required once every two (2) weeks.

4. Prior to discontinuing activities at the site, any exposed area shall be stabilized to prevent erosion. Stabilization may occur by applying appropriate cover (mulch, erosion control blanket, soil tackifier, etc.) or establishing adequate vegetative cover.

5. When a site is inaccessible due to adverse weather conditions, inspections shall not be required. Adverse weather condition shall be recorded on the inspection sheet.

6. Prior to leaving an inactive site or in anticipation of site inaccessibility, existing erosion and sediment control measures shall be inspected to ensure that they are in working order. Any necessary maintenance or repair shall be made prior to leaving the site.

Written Records

7. All visual inspections must document the following information:

    a. Inspection date, inspector's name, weather conditions, and rainfall amount for past 24 hours (inches). (Rainfall information can be obtained from the nearest weather recording station.)

    b. List observations of all BMPs: erosion and sediment controls, chemical and waste controls, locations where vehicles enter and exit the site, status of areas that employ temporary or final stabilization control, soil stockpile area, and nonstormwater controls.

    c. At representative discharge location(s) from the construction site conduct observation and document the quality of the discharge for any turbidity, color, sheen, or floating materials. If possible, in the receiving stream, observe and record color and turbidity or clarity upstream and downstream within 30 feet of the discharge from the site. For example, a sheen or floating material could be noted as present/absent, if observation is yes, it could indicate concern about a possible spill and/or leakage from vehicles or materials storage. For turbidity and color an observation would describe any apparent color and the clarity of the discharge, and any apparent difference in comparison with the receiving stream.

d. If significant amounts of sediment are leaving the property, briefly explain the corrective measures taken to reduce the discharge and/or clean it up and describe efforts to prevent future releases. The ESCP shall be amended accordingly.

e. If a site is inaccessible due to inclement weather the inspection shall include observations at a relevant discharge point or downstream location, if practical.

8. All inspection records for an active site shall be kept on-site or be maintained with the permittee, and shall made available to the Department, its Agent, or local municipality upon request.

9. A written record of inspections for an inactive site shall be maintained with the permittee and made available to the Department, its Agent, or local municipality upon request.

10. Retention of all inspection records shall be for a period of one year from project completion.

SCHEDULE C
COMPLIANCE SCHEDULE

1. Registration of Underground Injection Systems (40 CFR 144 and OAR 340-044). The permittee shall submit to DEQ a registration form if construction activities include disposal of storm water or other wastewater discharges to an injection system. These types of disposal systems are classified under the Underground Injection Control Program as a Class V well, require registration, and must meet Division 44 standards.

    a. A new permittee shall register any applicable underground treatment systems **prior to** the construction of a new facility.

    b. For facilities covered by the previous 1200-CA permit the registration form is due within **thirty (30) days** after receipt of this new 1200-CA permit.

SCHEDULE D
SPECIAL CONDITIONS

1. Issuance of this permit does not relieve the permittee from all other permitting and licensing requirements. Prior to beginning construction activities, all other necessary approvals shall be obtained.

2. The permit will remain in effect after the expiration date or until another permit is issued if the permittee has paid all fees and has filed a renewal application.

3. Any permittee that does not want to be covered or limited by this general permit may make application for an individual NPDES permit in accordance with the procedures in OAR 340-45-030.

4. Permit Specific Definitions:

Best Management Practices (BMPs) Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, erosion and sediment control, source control, and operating procedures and practices to control: site runoff, spillage or leaks, and waste disposal.

Dewatering The removal and disposal of surface water or groundwater for purposes of preparing a site for construction.

Erosion The movement of soil particles resulting from the tracking, flow or pressure from storm water or wind.

Grade Construction activity that causes the disturbance of the earth. This shall include but not be limited to any excavating, filling, stockpiling of earth materials, grubbing, root mat or topsoil disturbance, or any combination of them.

Hazardous Materials As defined in 40 CFR 302 Designation, Reportable Quantities, and Notification. Available on the web at http://www.epa.gov.

Phasing Clearing a parcel of land in distinct phases, with the stabilization of each phase before clearing of the next phase; including soil stockpiling.

Stabilization The completion of all soil disturbance activities at the site and the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as riprap, gabions, geotextiles, or bioengineering methods) that will prevent erosion.

Start of Construction The first land-disturbing activity associated with a development, including land preparation such as clearing, grading, excavation, and filling; installation of streets and walkways; erection of temporary forms; and installation of accessory buildings such as garages.

Storm Water Storm water runoff, snow melt runoff, and surface runoff associated with a storm event.

Turbidity An expression of the optical property of a sample which causes light to be scattered and absorbed rather than transmitted in a straight line through the sample. It is caused by the presence of suspended matter in a liquid.

SCHEDULE F
NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Water Pollution and Permit Condition Violations
Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to $10,000 per day for violation of a term, condition, or requirement of a permit.

Under ORS 468.943, unlawful water pollution, if committed by a person with criminal negligence, is punishable by a fine of up to $25,000 or by imprisonment for not more than one year, or by both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, a person who knowingly discharges, places or causes to be placed any waste into the waters of the state or in a location where the waste is likely to escape into the waters of the state, is subject to a Class B felony punishable by a fine not to exceed $200,000 and up to 10 years in prison.

3. Duty to Mitigate
The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittee shall correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application shall be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions
This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;
b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or
c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants
The permittee shall comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights
The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References
Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance
The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary

facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity
For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities
   a. Definitions
      (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
      (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

   b. Prohibition of bypass.
      (1) Bypass is prohibited unless:
         (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;
         (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
         (c) The permittee submitted notices and requests as required under General Condition B.3.c.
      (2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).

   c. Notice and request for bypass.
      (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, if possible at least ten days before the date of the bypass.
      (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset
   a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

   b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of General Condition B.4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

   c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      (1) An upset occurred and that the permittee can identify the causes(s) of the upset;
      (2) The permitted facility was at the time being properly operated;
      (3) The permittee submitted notice of the upset as required in General Condition D.5, hereof (24-hour notice); and
      (4) The permittee complied with any remedial measures required under General Condition A.3 hereof.

   d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Treatment of Single Operational Event
For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission),

temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations
   a. Definitions
      (1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.
      (2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.
      (3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

   b. Prohibition of overflows. Overflows are prohibited unless:
      (1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;
      (2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and
      (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.

   c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

   d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow
   If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee shall take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances
   Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Inspection and Entry
   The permittee shall allow the Director, or an authorized representative upon the presentation of credentials to:

   a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
   d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes
   The permittee shall comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers shall be commenced until the plans and specifications are submitted to and approved by the Department. The permittee shall give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers
This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittee shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule
Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting
The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permittee becomes aware of the circumstances. During normal business hours, the Department's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. If the permittee is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission shall contain:
a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected;
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
e. Public notification steps taken, pursuant to General Condition B.7.

The following shall be included as information which must be reported within 24 hours under this paragraph:
a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
b. Any upset which exceeds any effluent limitation in this permit.
c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance
The permittee shall report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports shall contain:
a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected; and
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information
The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements
All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

9. Falsification of Reports
Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed $100,000 per violation and up to 5 years in prison.

10. Changes to Indirect Dischargers - **[Applicable to Publicly Owned Treatment Works (POTW) only]**

The permittee must provide adequate notice to the Department of the following:
a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants and;
b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
c. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

11. Changes to Discharges of Toxic Pollutant - **[Applicable to existing manufacturing, commercial, mining, and silvicultural dischargers only]**
The permittee must notify the Department as soon as they know or have reason to believe of the following:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:
(1) One hundred micrograms per liter (100 g/l);
(2) Two hundred micrograms per liter (200 g/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 g/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
(4) The level established by the Department in accordance with 40 CFR 122.44(f).

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
(1) Five hundred micrograms per liter (500 g/l);
(2) One milligram per liter (1 mg/l) for antimony;
(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
(4) The level established by the Department in accordance with 40 CFR 122.44(f).

SECTION E. DEFINITIONS

1. BOD means five-day biochemical oxygen demand.
2. TSS means total suspended solids.
3. mg/l means milligrams per liter.
4. kg means kilograms.
5. m^3/d means cubic meters per day.
6. MGD means million gallons per day.
7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
8. FC means fecal coliform bacteria.
9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-41.
10. CBOD means five day carbonaceous biochemical oxygen demand.
11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
12. Quarter means January through March, April through June, July through September, or October through December.
13. Month means calendar month.
14. Week means a calendar week of Sunday through Saturday.
15. Total residual chlorine means combined chlorine forms plus free residual chlorine.
16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
17. POTW means a publicly owned treatment works.

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GENERAL PERMIT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT

Oregon Department of Environmental Quality
811 SW Sixth Avenue, Portland, OR 97204, (503) 229-6962
Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

ISSUED TO:

All owners or operators of facilities discharging pollutants that are covered by this permit. The submittal of an approved application and payment of applicable fees are required.

SOURCES COVERED BY THIS PERMIT:

Treated discharges from aquatic animal production facilities which produce at least 20,000 pounds of fish per year, but have less than 300,000 pounds on hand at any time. Offsite discharge of water associated with the release of fish. Facilities which produce less than 20,000 pounds of fish per year and feed less than 5000 pounds of food during the month of maximum feeding or facilities that hold fish, including fish monitoring or fish acclimation, do not require a NPDES permit unless required by the Department on a case-by-case basis.

For a new or increased discharge from facilities on 303(d) water quality listed streams for temperature, the applicant or permittee shall follow provisions in Oregon Administrative Rule 340-041-0026.

Michael T. Llewelyn, Administrator
Water Quality Division

Issued: October 3, 2002
Effective: October 16, 2002

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to discharge to waters of the state adequately treated wastewaters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

Unless specifically authorized by this permit, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharges to an underground injection control system.

SUMMARY OF APPLICATION REQUIREMENTS FOR PERMIT COVERAGE

1. New Facilities Can Obtain Coverage By The Following Steps.

   a. Notify the Department by submitting a completed application form requesting coverage under this permit at least 180 days prior to the planned activity that will result in the discharge to waters of the state.

   b. Submit all required fees with the application.

   c. Submit a Pollution Prevention Plan with the permit application (refer to 300-J permit, Schedule C).

   d. The Department will review the application information and will either request additional information in writing or will notify the applicant by mail that it has received coverage and is authorized to operate under the conditions of this permit. If the applicant's operation cannot be approved for coverage under the general permit, the applicant may need to obtain an individual permit.

2. Existing Facilities Requiring Renewal Can Renew Coverage By The Following Steps.

   a. Notify the Department by submitting a completed application form at least 180 days prior to permit expiration.

   b. Submit all required fees with the application.

   c. The Department will review the application for any substantial changes at the facility or any site-specific requirements such as waste load allocations that could affect coverage. The applicant will be notified if coverage cannot continue under the general permit in the event that the applicant may need to obtain an individual permit.

   d. The existing permit will continue to be effective through administrative extension after the permit expiration date if the permittee submits a complete renewal application.

   e. The Department will notify the applicant by mail that it has received coverage and is authorized to operate under the conditions of the new permit.

SCHEDULE A
WASTE DISCHARGE LIMITATIONS AND CONTROLS

1. Normal Operations: Discharges shall not exceed the following limitations.

Parameter	Monthly Average	Daily Maximum
TSS[1]	5 mg/l	10 mg/l
Settleable Solids	0.1 ml/l	--
Temperature	--	77° F
pH	Within the range of 6.0 - 9.0 S.U.	

2. Cleaning Operations: Discharges shall not exceed the following limitations.

Parameter	Daily Maximum
TSS[1]	15 mg/l
Settleable Solids	0.2 ml/l
Temperature	77° F
pH	Within the range of 6.0 - 9.0 S.U.

Notes:

1. When surface water is used as supply water, the influent total suspended solids (TSS) may be monitored on the day an effluent TSS sample has been collected and for up to two days prior. The maximum daily influent TSS value can be used to derive the net TSS effluent value.

3. Operating Requirements:

   a. Sand, silt, mud, solids, filter backwash, debris, or other pollutants deposited or removed in the aquatic animal production or treatment process shall be disposed of in a manner that prevents such materials from entering waters of the state.

   b. Discharge of untreated waste from cleaning operations to waters of the state is prohibited.

   c. Dead fish, fish eggs, or processing waste shall be disposed of in a manner that prevents such materials from entering the waters of the state.

4. Except as provided for in OAR 340-045-0080, no wastes shall be discharged and no activities shall be conducted which violate Water Quality Standards as adopted in OAR 340-041 except in the following defined mixing zone:

   The allowable mixing zone shall not exceed a maximum distance of 30 feet in the downstream direction from the point of discharge and shall not exceed half of the receiving stream width.

5. The effluent limitations and other conditions (Schedule B and C) in this permit related to temperature constitute the surface water temperature management plan (temperature management plan) required by OAR 340-041-0026(3)(a)(D) applicable to the permittee, unless otherwise notified in writing by the Department. Provided that the permittee complies with this temperature management plan, the permittee will be deemed to be in compliance with the state temperature water quality standard and not to be causing or contributing to a violation of the water quality standards for temperature. If a

TMDL analysis or other monitoring information indicates the discharge has potential to affect the receiving water that is water quality limited for temperature, the Department may require specific corrective actions and/or application for an individual or basin-specific permit.

6. Chemical Use:

   a. Unless approved in writing by the Department before use, permittee must use chemicals approved or allowed for hatchery use by the US Food and Drug Administration (USFDA) or the US Environmental Protection Agency (USEPA). USFDA approved chemicals include: Investigational New Animal Drugs (INADs), Low Regulatory Priority (LRP) listed drugs, Deferred Regulatory Status (DRS) drugs and veterinary Extra-Labeled drugs. The permittee shall follow the conditions detailed in a facility's INAD permit application, treatment restrictions for LRP and DRS drugs, product label instructions for environmental protection, and precautions on labels of chemicals that are Extra-labeled by prescription.

      The current USFDA LRP drugs are: acetic acid, calcium chloride, calcium oxide, carbon dioxide gas, Fuller's Earth, Garlic (whole form), hydrogen peroxide, ice, magnesium sulfate, onion (whole form), papain, potassium chloride, povidone iodine, sodium bicarbonate, sodium chloride, sodium sulfite, urea and tannic acid. The DRS chemicals are potassium permanganate and copper sulfate.

      All chemical use shall be reported on the chemical use log and included in the annual report. Permittee shall document the disposal of all spent chemical dip treatment solutions according to the procedure described in the permittee's Pollution Prevention Plan.

   b. When seeking Department approval of drugs and chemicals not approved or allowed by USFDA or USEPA, the permittee must show all of the following:

      i) The drug or disease control chemical used and/or method of its application could not have reasonably been anticipated;

      ii) Written or facsimile notification is provided to the appropriate DEQ Regional Office 24 hours prior to administering the drug or disease control chemical and approval from the Department is received; and

      iii) Adequate precautions and procedures are followed and documented to ensure that the quality of the receiving water is not impaired.

   c. The use of any chemical shall not violate any applicable water quality standard.

7. Biomass: Permittee's maximum monthly biomass shall not exceed _____ pounds for this facility. (If not specified, the facility shall not exceed 300,000 pounds.)

8. Off site discharge of water incidential to the release of healthy fish into waters of the state is permitted.

9. Water Quality Limited Streams - If Total Maximum Daily Loads are established and the discharge from a permitted source is determined to be a significant contributor for a stream that is water quality limited, coverage may be terminated and application for an individual permit or different general permit may be required that would include waste load allocations.

SCHEDULE B
MINIMUM MONITORING AND REPORTING REQUIREMENTS

1. Effluent Discharge Normal Operations:

Item or Parameter	Minimum Frequency	Type of Sample
Flow	Weekly[a]	Estimate
Total Suspended Solids	Weekly[a]	Composite[b]
Settleable Solids	Weekly[a]	Grab
pH	Quarterly[a]	Grab[c]
Total Phosphorus	Quarterly[a, d]	Grab
Ammonia-N	Quarterly[a, d]	Grab
Temperature	Monthly [e]	Measurement(s)

2. Effluent Discharge Cleaning Operations (monitoring to be conducted during active cleaning operations within the month of highest production during each calendar quarter; "per event" means any time cleaning operations occur during the quarter):

Parameter	Minimum Frequency	Type of Sample
Flow	Per Event[a]	Estimate
Total Suspended Solids	Per Event[a]	Composite[b]
Settleable Solids	Per Event[a]	Grab
Total Phosphorus	Per Event[a, d]	Grab
Ammonia-N	Per Event[a, d]	Grab
Temperature	Per Event [e]	Measurement(s)

3. Receiving Stream Monitoring:

Parameter	Minimum Frequency	Type of Sample
Temperature	Monthly[f]	Measurement(s)

4. Influent Supply Water (optional for net TSS compliance calculation; refer to Schedule A):

Parameter	Minimum Frequency	Type of Sample
TSS	Optional – Per Event	Composite[g]

Notes for Monitoring Requirements:

a. During the month of highest production for each calendar quarter.

b. A representative composite sample shall consist of at least 4 grab samples collected during daylight hours of a single day and composited for analysis. For a facility that has multiple outfalls, only one outfall is required to be sampled during normal operations and cleaning operations, provided the other outfalls all have substantially identical effluents.

c. The following may be used for the measurement of pH: pH paper that has the capability of determining pH to one-tenths (0.1) standard units or a proper calibrated pH meter.

d. Monitoring is required only during the first four quarters after the permit is assigned to the permittee.

e. Effluent temperature monitoring must be conducted from April 1 through October 31. Effluent measurement shall be conducted at approximately the same time as the receiving stream temperature monitoring during the afternoon hours. For multiple outfalls, monitoring is required at only one outfall, provided that the outfalls have substantially identical effluents.

f. Receiving stream temperature monitoring must be conducted from April 1 through October 31. Measurements must be collected at three distinct locations during the afternoon hours. Sample locations shall include a point 10 feet upstream from the intake structure, a point 10 feet above the outfall, and at a point 30 feet downstream from the outfall. For multiple outfalls, monitoring is required at only one outfall, provided that the outfalls have substantially identical effluents.

g. A representative sample of the supply water shall be a daily composite sample (as defined in Note b).

5. Chemicals Record Keeping:

The permittee shall keep a written record on all chemicals used at the facility for three (3) years and these records shall be available for review upon request by the Department. These records shall include:

a. Person(s) responsible for administering the chemicals.

b. The trade name of the chemicals used.

c. The date of application(s).

d. The reason for chemical usage and method of application.

e. The location (e.g., hatch house, raceway or pond) of chemical use, estimated or measured concentration of active ingredient in the hatchery or rearing facility effluent at the point of discharge to the receiving waters, and a comparison of the estimated effluent chemical concentration to the chemical label dilution requirement.

f. The quantity, trade name, method of disposal, and location of any disposed spent chemical dip solutions.

6. Reporting Procedures and Schedules:

a. Permittee shall collect and record the monitoring data according to the frequency in Schedule B. Permittee must submit the results to the Department on approved forms by the 15th of the month following the end of each quarter. Monitoring during cleaning operations shall be accomplished during active cleaning operations within the month of highest production during the calendar quarter.

If the facility did not discharge during any quarterly period, the Discharge Monitoring Report (DMR) must still be submitted. The DMR shall describe the status of operations (i.e., no discharge).

b. Permittee shall submit a summary of chemical use annually or more often if requested by the Department. The annual report covers the previous calendar year and is due by February 15th. The annual summary report shall describe the monthly quantity of each chemical used, the reason for application, and the total annual quantity of each chemical used.

SCHEDULE C
COMPLIANCE CONDITIONS AND SCHEDULES

1. Pollution Prevention Plan:

   a. For an existing facility, **within one (1) year** after assignment of this permit, the permittee shall develop, implement, and submit a copy of the Pollution Prevention Plan (Plan) to the Department. The submittal of the Plan shall include a certification statement and signature by the hatchery manager or other responsible person stating that the permittee is employing all reasonable best management practices, the Plan is being implemented, the Plan will be evaluated if a compliance problem occurs, and updates to the Plan will occur as necessary.

   b. For a new facility, the Plan shall be developed **prior** to starting operations and submitted with the application for permit assignment.

   c. The permittee shall maintain a copy of the Plan at the facility for review by the Department. The permittee shall assure that appropriate staff are familiar with the Plan and have been adequately trained to follow the applicable procedures and practices. The permittee shall review the Plan following any significant discharge of pollutants and revise it as needed to comply with the permit limitations and conditions.

   d. The content of the required Plan shall include, but not be limited to, the following:

      (1) A flow diagram of the production operations, wastewater collection and treatment, and monitoring locations that are required in Schedule B.

      (2) A description of how fish feeding will be conducted to minimize the discharge of unconsumed food.

      (3) The frequency of pond and raceway cleaning and the procedures that will be used to determine when cleaning is necessary to prevent the discharge of accumulated to waters of the state.

      (4) A description of how pond and raceway cleaning will be performed to reduce the disturbance and discharge of settled solids during cleaning events.

      (5) A description of how grading, harvesting, fish release, and other activities within ponds or raceways will be conducted to minimize disturbance and discharge of accumulated solids.

      (6) A description of how all chemicals will be used within the facility to ensure that the amounts and frequency of application are the minimum necessary for effective disease treatment and control. Include procedures that describe how the concentration of disease control chemicals, drugs, and other chemicals in the facility's discharge will be

minimized to the maximum extent practicable and comply with the chemical labeling for dilution requirements.

(7) A description of how all chemicals will be stored and disposed.

(8) A description of how solid and biological wastes will be collected, stored, and ultimately disposed. Wastes to be included are cleaning waste from production or treatment areas. The land application of solid waste shall be at appropriate agronomic rates.

(9) Procedures to prevent spills, spill response procedures, and notification plan for any unplanned discharge of waste materials, oil, disease chemicals, and other hazardous materials.

(10) Procedures to identify and prevent storm water pollution. The procedures shall consider management practices or treatment controls, materials exposure, and spill prevention to prevent discharge quality problems resulting from storm water runoff.

(11) Provide an evaluation of the receiving stream water quality limited status and the parameter(s) of concern, and determine potential impacts to these parameters from the fish hatchery discharge and any additional measures needed to prevent the excessive discharge of pollutants.

2. Updated Temperature Management Plan:

   a. **Within three and a half (3.5) years** after permit issuance, the permittee shall submit a report that analyzes the data from the first three years of monitoring to determine compliance with the temperature standard and if necessary proposes control strategies. The report must include an evaluation of operational thermal load impacts outside the defined mixing zone. The report shall also describe existing and/or proposed temperature reduction control strategies to comply with the numeric water quality temperature standard (i.e., 64^{o} F, 55^{o} F, 50^{o} F, or no measurable increase; applicable criteria for salmonid spawning, rearing, or threatened and endangered). The report will be considered an updated temperature management plan.

   b. At the time the temperature monitoring report is submitted the permittee may request a discontinuation of Schedule B temperature monitoring frequency if there is no reasonable potential to exceed applicable criteria.

SCHEDULE D
SPECIAL CONDITIONS

1. Any permittee not wishing to be covered or limited by this general permit may make application for an individual NPDES permit in accordance with NPDES procedures in OAR 340-045-0030.

SCHEDULE F
NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Water Pollution and Permit Condition Violations
Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to $10,000 per day for violation of a term, condition, or requirement of a permit.

Under ORS 468.943, unlawful water pollution, if committed by a person with criminal negligence, is punishable by a fine of up to $25,000 or by imprisonment for not more than one year, or by both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, a person who knowingly discharges, places or causes to be placed any waste into the waters of the state or in a location where the waste is likely to escape into the waters of the state, is subject to a Class B felony punishable by a fine not to exceed $200,000 and up to 10 years in prison.

3. Duty to Mitigate
The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittee shall correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply to have the permit renewed. The application shall be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions
This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;

b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

d. The permittee shall pay the fees required to be filed with this permit application and to be paid annually for permit compliance determination as outlined in the Oregon Administrative Rules, Chapter 340, Division 45.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants
The permittee shall comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References
Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance
The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity
For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities
   a. Definitions
      (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
      (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

   b. Prohibition of bypass.
      (1) Bypass is prohibited unless:
         (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;
         (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
         (c) The permittee submitted notices and requests as required under General Condition B.3.c.

      (2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).

   c. Notice and request for bypass.
      (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, if possible at least ten days before the date of the bypass.
      (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset

a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of General Condition B.4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
   (1) An upset occurred and that the permittee can identify the causes(s) of the upset;
   (2) The permitted facility was at the time being properly operated;
   (3) The permittee submitted notice of the upset as required in General Condition D.5, hereof (24-hour notice); and
   (4) The permittee complied with any remedial measures required under General Condition A.3 hereof.

d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Treatment of Single Operational Event

For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

a. Definitions
   (1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.
   (2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.
   (3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

b. Prohibition of overflows. Overflows are prohibited unless:

   (1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;
   (2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and
   (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.

c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the

permittee becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow
If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee shall take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances
Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling
Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements
Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures
Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering
The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than $20,000 per day of violation, or by imprisonment of not more than four years or both.

5. Reporting of Monitoring Results
Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency shall also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value shall be recorded unless otherwise specified in this permit.

7. Averaging of Measurements
Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for bacteria which shall be averaged as specified in this permit.

8. Retention of Records
Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents
Records of monitoring information shall include:
a. The date, exact place, time and methods of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

10. Inspection and Entry
The permittee shall allow the Director, or an authorized representative upon the presentation of credentials to:
a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes
The permittee shall comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers shall be commenced until the plans and specifications are submitted to and approved by the Department. The permittee shall give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance
The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers
This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittee shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule
Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting
The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit,

from the time the permittee becomes aware of the circumstances. During normal business hours, the Department's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. If the permittee is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission shall contain:

a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected;
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
e. Public notification steps taken, pursuant to General Condition B.7.

The following shall be included as information which must be reported within 24 hours under this paragraph:

a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
b. Any upset which exceeds any effluent limitation in this permit.
c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports shall contain:

a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected; and
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

9. Falsification of Reports

Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed $100,000 per violation and up to 5 years in prison.

10. Changes to Indirect Dischargers - **[Applicable to Publicly Owned Treatment Works (POTW) only]**

The permittee must provide adequate notice to the Department of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants and;
b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
c. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

11. Changes to Discharges of Toxic Pollutant - **[Applicable to existing manufacturing, commercial, mining, and silvicultural dischargers only]**

The permittee must notify the Department as soon as they know or have reason to believe of the following:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:
   (1) One hundred micrograms per liter (100 ug/l);
   (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
   (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
   (4) The level established by the Department in accordance with 40 CFR 122.44(f).

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
   (1) Five hundred micrograms per liter (500 ug/l);
   (2) One milligram per liter (1 mg/l) for antimony;
   (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
   (4) The level established by the Department in accordance with 40 CFR 122.44(f).

SECTION E. DEFINITIONS

1. BOD means five-day biochemical oxygen demand.
2. TSS means total suspended solids.
3. Mg/l means milligrams per liter.
4. Kg means kilograms.
5. M^3/d means cubic meters per day.
6. MGD means million gallons per day.
7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
8. FC means fecal coliform bacteria.
9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-41.
10. CBOD means five day carbonaceous biochemical oxygen demand.
11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
12. Quarter means January through March, April through June, July through September, or October through December.
13. Month means calendar month.
14. Week means a calendar week of Sunday through Saturday.
15. Total residual chlorine means combined chlorine forms plus free residual chlorine.
16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
17. POTW means a publicly owned treatment works.

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
☎ 503-986-5200

Permit No.:	**56525-RF**
Permit Type:	**Removal/Fill**
Waterway:	**Fall Creek**
County:	**Lane**
Expiration Date:	**August 25, 2015**

US ARMY CORPS OF ENGINEERS – PORTLAND DISTRICT

IS AUTHORIZED IN ACCORDANCE WITH ORS 196.800 TO 196.990 TO PERFORM THE OPERATIONS DESCRIBED IN THE ATTACHED COPY OF THE APPLICATION, SUBJECT TO THE SPECIAL CONDITIONS LISTED ON ATTACHMENT A AND TO THE FOLLOWING GENERAL CONDITIONS:

1. This permit does not authorize trespass on the lands of others. The permit holder shall obtain all necessary access permits or rights-of-way before entering lands owned by another. For new linear facility projects, the removal-fill activity cannot occur until the permit holder obtains either the landowner's consent, a right, title or interest with respect to the property that is sufficient to undertake the removal or fill activity, or a court order or judgment authorizing the use of the property.
2. This permit does not authorize any work that is not in compliance with local zoning or other local, state, or federal regulation pertaining to the operations authorized by this permit. The permit holder is responsible for obtaining the necessary approvals and permits before proceeding under this permit.
3. All work done under this permit must comply with Oregon Administrative Rules, Chapter 340; Standards of Quality for Public Waters of Oregon. Specific water quality provisions for this project are set forth on Attachment A.
4. Violations of the terms and conditions of this permit are subject to administrative and/or legal action, which may result in revocation of the permit or damages. The permit holder is responsible for the activities of all contractors or other operators involved in work done at the site or under this permit.
5. Employees of the Department of State Lands and all duly authorized representatives of the Director shall be permitted access to the project area at all reasonable times for the purpose of inspecting work performed under this permit.
6. Any permit holder who objects to the conditions of this permit may request a hearing from the Director, in writing, within twenty-one (21) calendar days of the date this permit was issued.
7. In issuing this permit, the Department of State Lands makes no representation regarding the quality or adequacy of the permitted project design, materials, construction, or maintenance, except to approve the project's design and materials, as set forth in the permit application, as satisfying the resource protection, scenic, safety, recreation, and public access requirements of ORS Chapters 196, 390, and related administrative rules.
8. Permittee shall defend and hold harmless the State of Oregon, and its officers, agents, and employees from any claim, suit, or action for property damage or personal injury or death arising out of the design, material, construction, or maintenance of the permitted improvements.
9. Authorization from the U.S. Army Corps of Engineers may also be required.

NOTICE: If removal is from state-owned submerged and submersible land, the applicant must comply with leasing and royalty provisions of ORS 274.530. If the project involves creation of new lands by filling on state-owned submerged or submersible lands, you must comply with ORS 274.905 to 274.940. This permit does not relieve the permittee of an obligation to secure appropriate leases from the Department of State Lands, to conduct activities on state-owned submerged or submersible lands. Failure to comply with these requirements may result in civil or criminal liability. For more information about these requirements, please contact the Department of State Lands at 503-986-5200.

Eric D. Metz, Southern Region Manager
Wetlands & Waterways Conservation Div.
Oregon Department of State Lands

Authorized Signature

August 25, 2014
Date Issued

ATTACHMENT A

Permittee: US Army Corps of Engineers

Project Name: Fall Creek Fish Facility Upgrade

Special Conditions for Removal/Fill Permit No. 56525-RF

READ AND BECOME FAMILIAR WITH CONDITIONS OF YOUR PERMIT.

The project site may be inspected by the Department of State Lands (DSL) as part of our monitoring program. DSL has the right to stop or modify the project at any time if you are not in compliance with these conditions. A copy of this permit shall be available at the work site whenever authorized operations are being conducted.

1. **Responsible Party:** By signature on the application, Joyce Casey is acting as the representative of US Army Corps of Engineers. By proceeding under this permit, US Army Corps of Engineers agrees to comply with and fulfill all terms and conditions of this permit, unless the permit is officially transferred to another party as approved by DSL.

2. **Authorization to Conduct Removal and/or Fill:** This permit authorizes the placement of up to 161cubic yards and removal of up to 50 cubic yards of material in T19S R01W Section 01, Tax Lot 33 within Fall Creek in Lane County, as described in the attached permit application, map and drawings, received May 29, 2014. In the event information in the application conflicts with the permit conditions, the permit conditions prevail.

3. **Work Period in Jurisdictional Areas:** Fill or removal activities below the ordinary high water elevation of Fall Creek shall be conducted between July 1 and August 31, unless otherwise coordinated with Oregon Department of Fish and Wildlife and approved in writing by DSL.

4. **Authorization to Conduct Compensatory Mitigation:** This permit also authorizes removal and fill activities necessary to complete the required compensatory mitigation.

5. **Changes to the Project or Inconsistent Requirements from Other Permits:** It is the permittee's responsibility to ensure that all state, federal and local permits are consistent and compatible with the final approved project plans and the project as executed. Any changes made in project design, implementation and/or operating conditions to comply with conditions imposed by other permits must be approved by DSL prior to implementation.

6. **DSL May Halt or Modify:** DSL retains the authority to temporarily halt or modify the project in case of unforeseen damage to natural resources.

7. **DSL May Modify Conditions Upon Permit Renewal:** DSL retains the authority to modify conditions upon renewal, as appropriate, pursuant to the applicable rules in effect at the time of the request for renewal or to protect waters of this state.

Pre-Construction

8. **Local Government Approval Required Before Beginning Work:** Issuance of this permit is contingent upon acquisition of a Development Permit from Lane County for development within the FEMA 100-Year Flood Zone.

General Construction Conditions

9. Water **Quality Certification:** The Department of Environmental Quality (DEQ) may evaluate this project for a Clean Water Act Section 401 Water Quality Certification (WQC). If the evaluation results in issuance of a Section 401 WQC, that turbidity condition will govern any allowable turbidity exceedance and monitoring requirements.

10. **Erosion Control Methods:** The following erosion control measures (and others as appropriate) shall be installed prior to construction and maintained during and after construction as appropriate, to prevent erosion and minimize movement of soil into waters of this state.

    a. All exposed soils shall be stabilized during and after construction in order to prevent erosion and sedimentation.
    b. Filter bags, sediment fences, sediment traps or catch basins, leave strips or berms, or other measures shall be used to prevent movement of soil into waterways and wetlands.
    c. To prevent erosion, use of compost berms, impervious materials or other equally effective methods, shall be used to protect soil stockpiled during rain events or when the stockpile site is not moved or reshaped for more than 48 hours.
    d. Unless part of the authorized permanent fill, all construction access points through, and staging areas in, riparian and wetland areas shall use removable pads or mats to prevent soil compaction. However, in some wetland areas under dry summer conditions, this requirement may be waived upon approval by DSL. At project completion, disturbed areas with soil exposed by construction activities shall be stabilized by mulching and native vegetative plantings/seeding. Sterile grass may be used instead of native vegetation for temporary sediment control. If soils are to remain exposed more than seven days after completion of the permitted work, they shall be covered with erosion control pads, mats or similar erosion control devices until vegetative stabilization is installed.
    e. Where vegetation is used for erosion control on slopes steeper than 2:1, tackified seed mulch shall be used so the seed does not wash away before germination and rooting.
    f. Dredged or other excavated material shall be placed on upland areas having stable slopes and shall be prevented from eroding back into waterways and wetlands.
    g. Erosion control measures shall be inspected and maintained as necessary to ensure their continued effectiveness until soils become stabilized.
    h. All erosion control structures shall be removed when the project is complete and soils are stabilized and vegetated.

11. **Hazardous, Toxic, and Waste Material Handling:** Petroleum products, chemicals, fresh cement, sandblasted material and chipped paint, wood treated with leachable preservatives or other deleterious waste materials shall not be allowed to enter waters of this state. Machinery refueling is to occur at least 150 feet from waters of this state and confined in a designated area to prevent spillage into waters of this state. Barges shall have containment system to effectively prevent petroleum products or other deleterious material from entering waters of this state. Project-related spills into waters of this state or onto land with a potential to enter waters of this state shall be reported to the Oregon Emergency Response System (OERS) at 1-800-452-0311.

12. **Federally Listed Endangered or Threatened Species:** When listed species are present, the authorization holder must comply with the Federal Endangered Species Act. If previously unknown listed species are encountered during construction, all construction activity shall immediately cease and the permit holder must contact DSL.

13. **Archaeological Resources**: If any archaeological resources and/or artifacts are encountered during construction, all construction activity shall immediately cease. The State Historic Preservation Office shall be contacted at (503) 986-0674.

14. **Hazards to Recreation, Navigation or Fishing:** The activity shall be timed so as not to interfere with or create a hazard to recreational or commercial navigation or fishing.

15. **Construction Corridor:** There shall be no removal of vegetation or heavy equipment operating or traversing outside the designated construction corridor or footprint (Figure G-003).

16. **Work Area Isolation:** The work area shall be isolated from the water during construction according to the Work Area Isolation Plan contained in the application. All structures and materials used to isolate the work area shall be removed immediately following construction and water flow returned to pre-construction conditions.

17. **Stream Diversion Prohibited:** The stream shall not be diverted from the natural bed.

18. **Trenching in Wetlands:** During trenching or excavation, the top layer of soil shall be separated from the rest of the excavated material and put back on top when the trench or pit is back-filled. If the native underlying soils are not used as bedding material, and a coarser, non-native soil or other material is used, preventative measures such as clay or concrete plugs shall be used so that underground hydraulic piping does not dewater the site and adjacent wetlands.

19. **Temporary Ground Disturbances:** All temporarily disturbed areas shall be returned to original ground contours at project completion, as proposed in the Site Restoration Plan in the application.

20. **Operation of Equipment in the Water:** Work must be conducted from top of bank. Heavy equipment may not be positioned on or traverse areas below ordinary high water at any time.

21. **Fish Passage Required:** The project shall meet Oregon Department of Fish and Wildlife requirements for fish passage.

22. **Riprap Placement Methods:** Riprap/rock shall be placed under the following conditions:

    a. Only clean, erosion resistant rock from an upland source shall be used as riprap. No broken concrete or asphalt shall be used.
    b. Riprap rock shall be placed in a manner that does not increase the upland surface area.
    c. Riprap shall be placed in a way as to minimize impacts to the active stream channel.
    d. Gravel or filter fabric should be placed behind the riprap rock, including the toe trench rock, as a filter blanket.
    e. All riprap rock shall be placed, not dumped, from above the bank line.

23. **Planting in Riprap Required:** Riprap shall be placed in a manner that allows for woody vegetation establishment.

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