

Request for Bids

Chewuch River Mile 13-15.5 Fish Enhancement Project

Chewuch River - Okanogan County, WA

Dear Contractor:

April 2, 2015

The Yakama Nation's Upper Columbia Habitat Restoration Project is requesting bids for a **Fish Enhancement Project** to be implemented adjacent to the Chewuch River in July 2015. The project will involve several work elements that are shown and described in the Plans, Specifications, and LeRoy Pit Development.

The in-stream work window for this project will be July 1, 2015 through July 31, 2015. Implementation of this project is pending final Permit approvals.

The awarded contractor must comply with the following:

1. **Davis Bacon Wages Apply.** The winning contractor will adhere to the Davis Bacon rules and comply; and submit all necessary paperwork and certified payroll to the Yakama Nation upon completion of the contract.
2. The Yakama Nation is exempt from State taxes on this project. Please see the attached Treaty Fishery Exempt Cover Letter and Treaty Fishery Exempt Certificate. The winning contractor will receive signed copies for their records.
3. The winning contractor will have to complete a Right of Entry, (ROE) with a performance bond requirement. *See example ROE*
4. The winning contractor will adhere to a project Performance Measure, (ensures quality meets the specifications of Construction Contract). *See attached example*
5. The winning contractor will have all equipment cleaned and inspected prior to entering the Chewuch Water Shed.
6. The winning contractor will have demonstrated prior experience and success in the following:
 - a. building cofferdams
 - b. dewatering and control of turbidity
 - c. constructing engineered log structures (ELS)
 - d. Sediment control

Contractors responding with bids for this project **shall include submittals** that demonstrate, at a minimum, the following:

- A list of experienced equipment operators that will be on-site during project construction. Please provide details of their work on in-stream habitat enhancement structures within the past several years.
- A detailed construction timeline of how you proposed to complete all project tasks within the permitting work-window. *July 1, 2015 to July 31, 2015*
- Experience and examples of the ability to create cofferdam and pumping techniques.
- A list of key pieces of heavy equipment that will be used in construction of this project.
- Please be reminded that sub-contracting will not be allowed under the warded construction contract.

The Yakama Nation will be accepting bids for this project until the close of business on **Thursday, April 30, 2015** in hardcopy form. By the close of business, each contractor must have completed and submitted a signed copy of the attached Chewuch RM13-15.5 bid sheet and that all bid prices will be valid for 90 days. All competitive bid materials must be either hand delivered or sent by parcel delivery service or postal mail to:

Yakama Nation

Attn: Jackie Onley

RE: ChewuchRM13-15.5

PO Box 151

Toppenish WA, 98948.

(Shipping Address: 401 Fort Road, Toppenish, WA 98948)

Interested Contractors should attend a **site visit** on **April 22, 2015 at 8:30 a.m.** The site visit will meet at the Boulder Creek Camp Ground alongside the Chewuch River, Winthrop, WA 98862. Site visit will be conducted by the project manager. A licensed Engineer will be on site for the tour. Project site visit will leave the meeting location approximately at 8:45 am.

Driving Directions

- From 4-way stop in Winthrop, travel North, (straight through the town of Winthrop), on East Chewuch Rd. out of town.
- Travel 6.5 miles. Stay to the right and continue north, do not cross the Chewuch River.
- Continue straight on FS Road 37 for 0.7 miles, Camp Ground on the Left.
- Project tour will leave the meeting location at roughly 8:45 am.

This site visit will require walking across rough terrain and through watered areas.
The following equipment is suggested.

- Hiking Boots
- Hip Waders
- Rain Gear

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris Butler".

Chris Butler
Project Manager,
Habitat Fisheries Biologist II,
W - (509) 996-5005 ext. 2
C – (509) 449-8215

**BID PROPOSAL FOR
THE CHEWUCH RIVER MILE 13-15.5 FISH ENHANCEMENT PROJECT**

Please use the Engineer's Stamped Project Plans to produce your competitive bids.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED PRICE
001	TESC, SPCC PLAN AND IMPLEMENTATION	1	LS	\$	\$
002	MOBILIZATION	1	LS	\$	\$
003	CHANNEL EXCAVATION INCL. HAUL	1	995 CY	\$	\$
004	SITE ACCESS MEASURES	1	LS	\$	\$
005	COFFERDAMS	1	LS	\$	\$
006	PUMPING	1	LS	\$	\$
007	LOG STRUCTURES	1	LS	\$	\$
008	WHOLE TREES	4	EA	\$	\$
009	ROAD MAINTENANCE	1	LS	\$	\$
010	LEROY PIT DEVELOPMENT	1	LS	\$	\$
		Total			
		(do not include tax)			\$

Company Name:

Date Prepared:

Certification

Printed Name and Title

Signature

By signing and submitting this form you are agreeing to honor the completed competitive bid for a period of up to 90 days from the date this form was prepared.

CHEWUCH RM 13-15.5

FISH HABITAT ENHANCEMENT PROJECT



WASHINGTON STATE

UPSTREAM END OF PROJECT:
 LATITUDE 48°38'48.5" N
 LONGITUDE 120°09'06.5" W

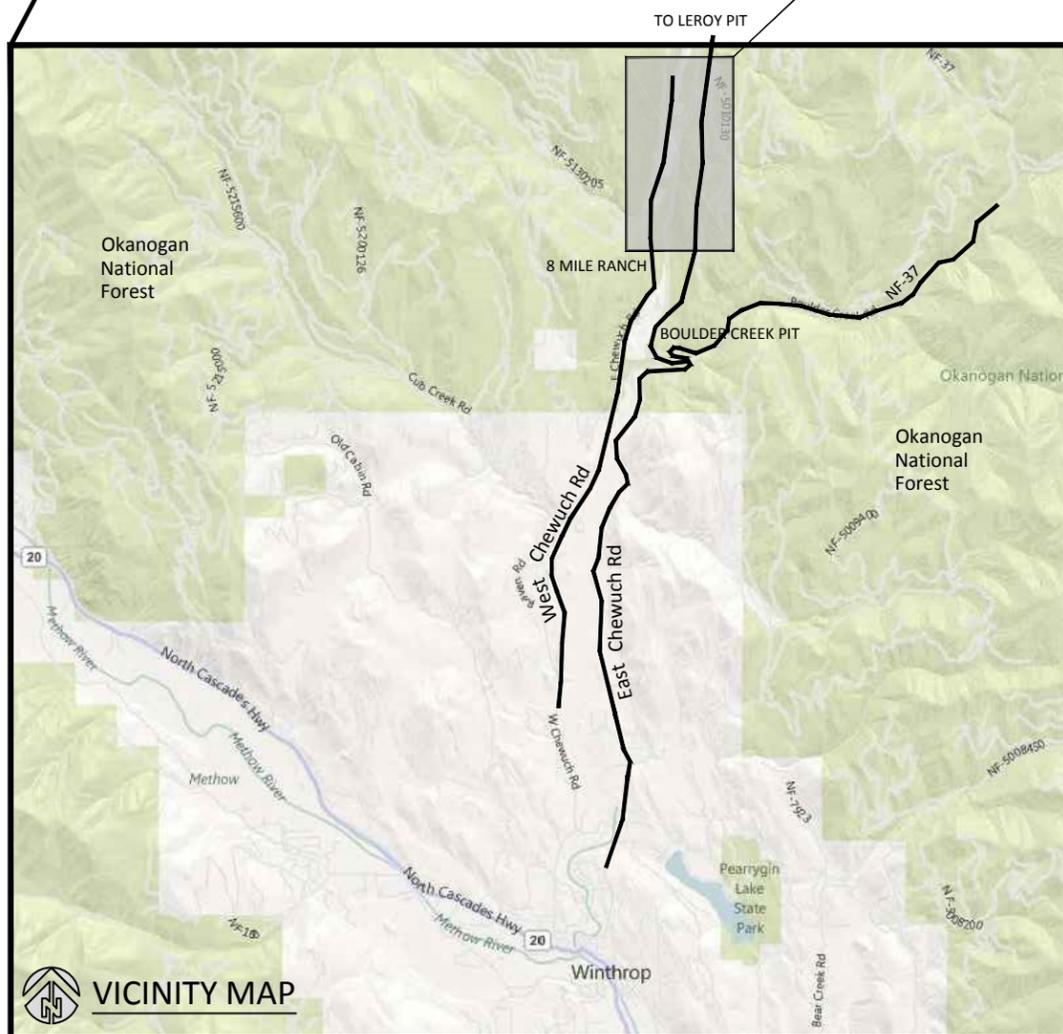
SECTION 1, TOWNSHIP 36N, RANGE 21E

DOWNSTREAM END OF PROJECT:
 LATITUDE 48°37'15.0" N
 LONGITUDE 120°09'45.0" W

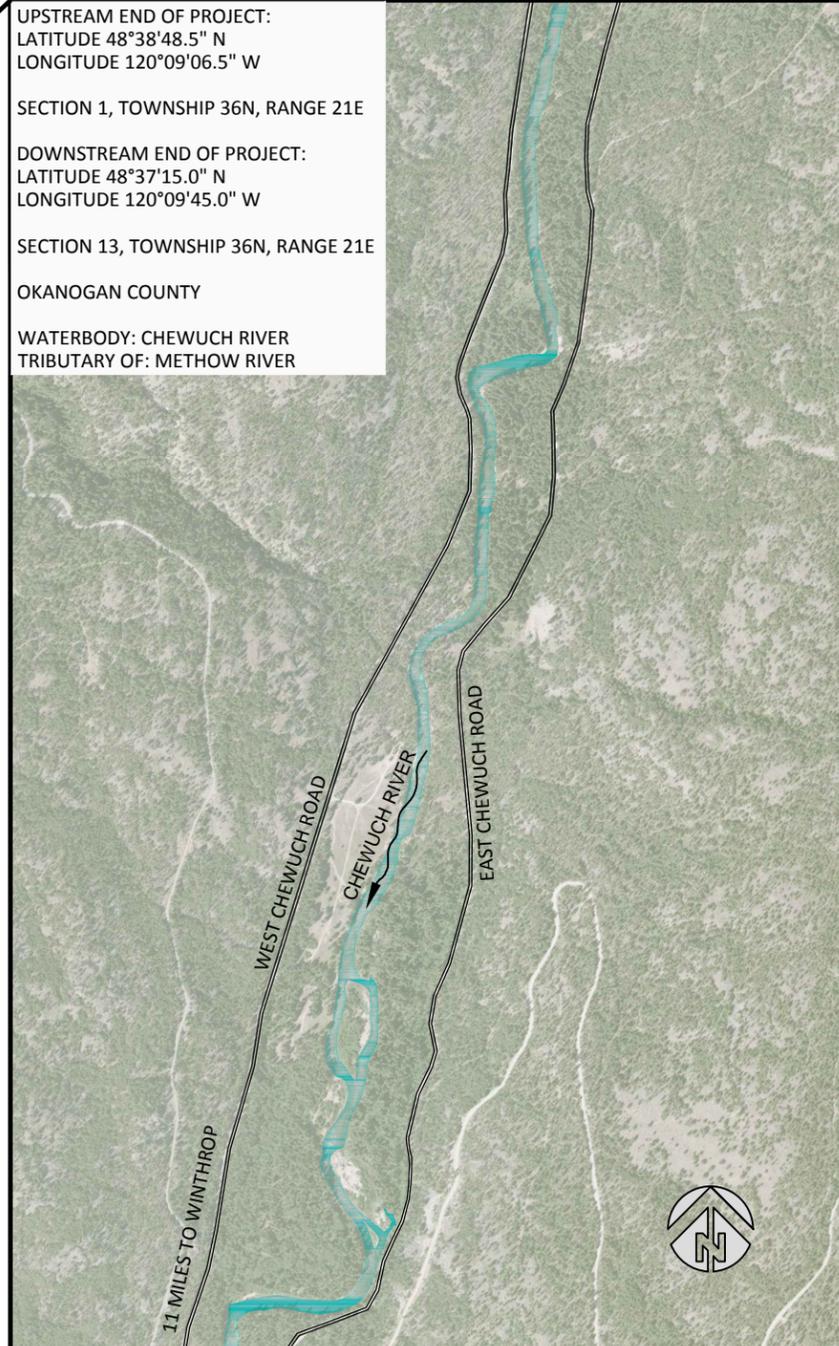
SECTION 13, TOWNSHIP 36N, RANGE 21E

OKANOGAN COUNTY

WATERBODY: CHEWUCH RIVER
 TRIBUTARY OF: METHOW RIVER



VICINITY MAP



LOCATION MAP

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20	Specifications
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22	Specifications



YAKAMA NATION FISHERIES
 2 JOHNSON LANE
 WINTHROP WA, 98862



NO.	BY	DATE	REVISION DESCRIPTION

RP,DF DRAWN	MB,MM DESIGNED	MB,MM CHECKED
MM APPROVED	04/01/15 DATE	PROJECT

Confederated Tribes and Bands of the Yakama Nation
 Chewuch RM 13-15.5
 Fish Habitat Enhancement Project



501 Portway Ave, Suite 101
 Hood River, OR 97031
 541.386.9003
 www.interfluve.com

COVER, SHEET LIST AND
 VICINITY MAP

THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH OWNER AND OWNER'S REPRESENTATIVE PRIOR TO MOBILIZING TO SITE AND BEGINNING CONSTRUCTION.

ALL WORK SHALL CONFORM TO THE CURRENT EDITIONS OF STANDARD PLANS AND SPECIFICATIONS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), AND LOCAL STANDARDS UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT WILL PREVAIL.

ALL WORK SHALL BE IN COMPLIANCE WITH REQUIREMENTS STATED IN PERMITS ISSUED FOR THIS PROJECT.

WDFW IN-WATER WORK PERIODS

WORK SHALL OCCUR DURING THE PERMITTED IN-WATER WORK PERIOD STATED IN THE HYDRAULIC PROJECT APPROVAL.

EXISTING DATA

TOPOGRAPHIC DATA WAS COLLECTED BY INTER-FLUVE USING RTK AND TOTAL STATION IN OCTOBER, 2010.

HORIZONTAL DATUM: STATE PLANE NAD83 WASHINGTON NORTH
VERTICAL DATUM: NAVD88

HYDROLOGY INFORMATION PROVIDED BY USBR.

HYDRAULIC MODELING BY INTER-FLUVE USING USACE HEC-RAS (4.1.0).

GIS DATA INCLUDING: AERIAL PHOTOGRAPHY, LIDAR, FISH USE, SURFACE SOILS INFORMATION, LAND OWNERSHIP, AND TRANSPORTATION ROUTES PROVIDED BY VARIOUS AGENCIES.

SOILS

NO SOILS INVESTIGATIONS HAVE BEEN PERFORMED. SUBSURFACE SOILS ARE EXPECTED TO BE SAND, GRAVEL, COBBLES, BOULDERS. CONTRACTOR SHALL CONDUCT OWN INVESTIGATIONS IF ADDITIONAL DATA IS REQUIRED AT NO ADDITIONAL COST.

UTILITIES

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVING UTILITIES LOCATED PRIOR TO CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL CALL (800-424-5555) FOR UTILITY LOCATE PRIOR TO CONSTRUCTION

THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE EFFECTED UTILITY SERVICE TO REPORT ANY DAMAGED OR DESTROYED UTILITIES.

THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND LABOR TO AID THE EFFECTED UTILITY SERVICE IN REPAIRING DAMAGED OR DESTROYED UTILITIES AT NO ADDITIONAL COST.

CONSTRUCTION STAKING

OWNER'S REPRESENTATIVE WILL PROVIDE STAKING OF PROJECT LIMITS, GRADE STAKES, AND ELEVATION CONTROL POINTS. SOME FIELD ADJUSTMENTS TO THE LINES AND GRADES ARE TO BE EXPECTED.

CONTRACTOR SHALL MEET WITH THE OWNER AND OWNER'S REPRESENTATIVE TO DEFINE AND MARK LIMITS OF DISTURBANCE PRIOR TO MOBILIZATION OF EQUIPMENT OR MATERIALS ONTO THE SITE.

THE CONTRACTOR SHALL REPLACE DAMAGED OR DESTROYED CONSTRUCTION STAKES AT NO ADDITIONAL COST.

CONSTRUCTION MATERIALS

ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY A PRE-PROJECT CONDITION SURVEY COMPARED AGAINST A PROJECT CONDITION SURVEY

CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL AT NO ADDITIONAL MEASURE OR COST. MEASUREMENT AND PAYMENT SHALL NOT BE BASED ON WEIGHT TICKETS OR TRUCK MEASURE WITHOUT PRIOR WRITTEN APPROVAL.

LOCATION, ALIGNMENT, AND ELEVATION OF LOGS AND LOGS WITH ROOT WADS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD CONDITIONS, AND MATERIAL SIZE.

ANY EXCESS MATERIAL SHALL BE STOCKPILED NEATLY IN AN APPROVED LOCATION OF THE STOCKPILE AND STAGING AREA. AT COMPLETION OF WORK, THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE FOR LEGAL DISPOSAL.

CONSTRUCTION ACCESS/TRAFFIC CONTROL

CONTRACTOR SHALL SUBMIT AN ACCESS, STAGING, AND STOCKPILE PLAN TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO MOBILIZATION.

PUBLIC ACCESS TO/ALONG ROADWAYS SHALL BE MAINTAINED AND KEPT CLEAN AT ALL TIMES.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ANY REQUIRED TRAFFIC CONTROL OR ACCESS PERMITS.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ANY REQUIRED TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO, SIGNAGE AND FLAGGERS.

ALL SAPLINGS AND TREES TO BE TRANSPLANTED OR REMOVED SHALL BE CLEARLY MARKED AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.

ALL EQUIPMENT, MATERIALS AND PERSONNEL SHALL REMAIN WITHIN THE LIMITS OF DISTURBANCE.

THE CONTRACTOR SHALL KEEP THE WORK AREAS IN NEAT CONDITION, FREE OF DEBRIS AND LITTER FOR THE DURATION OF THE PROJECT.

CONTRACTOR SHALL IMPLEMENT MEASURES TO CONTROL AND MINIMIZE WIND BLOWN DUST FROM THE SITE.

ALL DISTURBED AREAS INCLUDING ROADS, DRIVEWAYS AND ACCESS ROUTES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AND RE-VEGETATED PER PLANS.

ALL DISTURBED AREAS OUTSIDE THE LIMITS OF DISTURBANCE SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST.

ANY FENCES REMOVED FOR ACCESS OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

STAGING AND STOCKPILE AREAS

STAGING AND STOCKPILE AREAS WILL BE FLAGGED BY THE OWNER. STAGING AREAS USED FOR CONSTRUCTION EQUIPMENT STORAGE, VEHICLE STORAGE, FUELING, SERVICING, AND HAZARDOUS MATERIAL STORAGE SHALL BE 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND. NATURAL MATERIALS MAY BE STOCKPILED NEAR INSTALLATION AREAS.

EQUIPMENT

BIODEGRADABLE HYDRAULIC FLUID SHALL BE USED IN EACH EXCAVATOR WORKING WITHIN LIVE WATER. MECHANIZED EQUIPMENT AND VEHICLES SHALL BE INSPECTED DAILY FOR LEAKS, AND CLEANED THOROUGHLY BEFORE OPERATION NEAR WATER.

TREE SALVAGE

ALL TREES AND SLASH REMOVED FOR CONSTRUCTION SHALL TEMPORARILY BE STOCKPILED WITHIN LIMITS OF DISTURBANCE. STOCKPILED TREE/SLASH SHALL BE REINCORPORATED INTO FINISHED PROJECT.

ANY REMOVED VEGETATION GREATER THAN 6 INCHES DIAMETER AND 15 FEET LONG SHALL BE INCORPORATED INTO LOG STRUCTURES. CONTRACTOR IS RESPONSIBLE FOR REMOVING SMALLER CLEARING AND GRUBBING DEBRIS FROM THE SITE AND DISPOSING AT A LEGAL LOCATION AT THE END OF THE PROJECT UNLESS DIRECTED BY THE OWNER'S REPRESENTATIVE.

ALL TREES REMOVED WITHIN CLEARING LIMITS SHALL BE REMOVED WHOLE WITH ROOT WAD AND UTILIZED IN THE STREAM CONSTRUCTION AS DIRECTED BY OWNER'S REPRESENTATIVE.

LIVE TREES

ALL TREES NOT MARKED FOR REMOVAL SHALL BE LEFT STANDING UNDISTURBED. AVOID THE DRIPLINE IF POSSIBLE. CONSTRUCTION ACTIVITY SHALL NOT DEBARK OR DAMAGE LIVE TREES.

FISH RESCUE

ALL FISH RESCUE EFFORTS SHALL BE SUPERVISED BY A YAKAMA NATION FISHERIES/AQUATIC BIOLOGIST EXPERIENCED WITH THE COLLECTION AND HANDLING OF SALMONID FISHES FROM CONSTRUCTION SITES.

ALL FISH TRAPPED IN RESIDUAL POOLS WITHIN THE PROJECT AREA WILL BE CAREFULLY COLLECTED BY SEINE AND/OR DIP NETS AND PLACED IN CLEAN TRANSFER CONTAINERS WITH ADEQUATE VOLUME OF FRESH RIVER WATER.

CAPTURED FISH SHALL BE IMMEDIATELY RELEASED INTO RIVER AT AREAS SELECTED BY A YNF BIOLOGIST.



NO.	BY	DATE	REVISION DESCRIPTION

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MM APPROVED	04/01/15 DATE	PROJECT

Confederated Tribes and Bands of the Yakama Nation
Chewuch RM 13-15.5
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GENERAL NOTES

EROSION/SEDIMENTATION CONTROL (ESC) PLAN

THE EROSION AND SEDIMENT CONTROL (ESC) PLAN PROVIDED IS FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING EROSION CONTROL MEASURES TO COMPLY WITH APPLICABLE REGULATIONS.

THE RECOMMENDATIONS FOR AN ESC PLAN INCLUDED HEREIN WILL PROVIDE A GUIDELINE FOR THE CONTRACTOR TO DEVELOP AND IMPLEMENT AN ESC PLAN.

- THE IMPLEMENTATION OF AN ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- ESC FACILITIES AS APPROXIMATELY SHOWN ON THIS PLAN ARE TO BE CONSTRUCTED PRIOR TO CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT ENTER SURFACE WATERS, THE DRAINAGE SYSTEM, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED AT NO ADDITIONAL COST FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A WEEK OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
- STABILIZED CONSTRUCTION ENTRANCES AND ADDITIONAL MEASURES MAY BE REQUIRED AND SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT TO ENSURE ALL ACCESS ROADS ARE KEPT CLEAN AT NO ADDITIONAL COST.

INSPECTION AND MAINTENANCE

ALL ESC FACILITIES SHALL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ESC FACILITIES SHALL BE INSPECTED DAILY AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD AND AFTER EVENTS EXCEEDING 2 HOURS DURATION.

CONTRACTOR'S ESC RECORD

WEEKLY REPORTS SUMMARIZING THE SCOPE OF INSPECTIONS, THE PERSONNEL CONDUCTING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN, AND ACTIONS TAKEN AS A RESULT OF THESE INSPECTIONS SHALL BE PREPARED AND RETAINED ON SITE BY THE CONTRACTOR. IN ADDITION, A RECORD OF THE FOLLOWING DATES SHALL BE INCLUDED IN THE REPORTS:

- WHEN MAJOR GRADING ACTIVITIES OCCUR.
- DATES OF RAINFALL EVENTS EITHER EXCEEDING 2 HOURS DURATION OR MORE THAN 0.5 INCHES/24 HOURS.
- WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON SITE, OR ON A PORTION OF THE SITE.
- WHEN STABILIZATION MEASURES ARE INITIATED FOR PORTIONS OF THE SITE.
- ESC RECORDS SHALL BE MADE AVAILABLE TO THE OWNER AND OWNER'S REPRESENTATIVE ON REQUEST AND SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO APPLICATION FOR PAYMENT.

STABILIZE SOILS AND PROTECT SLOPES

FROM MAY 1 THROUGH SEPTEMBER 30, ALL EXPOSED SOILS SHALL BE PROTECTED FROM EROSION BY MULCHING, HYDROSEED COVERING, OR OTHER APPROVED MEASURES WITHIN THREE DAYS OF GRADING. FROM OCTOBER 1 THROUGH APRIL 30, ALL EXPOSED SOILS MUST BE PROTECTED WITHIN 2 DAYS OF GRADING. SOILS SHALL BE STABILIZED BEFORE A WORK SHUTDOWN, HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES. HYDROSEED ALL DISTURBED AREAS AS SOON AS PRACTICAL NOT INDICATED IN THE CONTRACT DOCUMENTS FOR OTHER PERMANENT STABILIZATION MEASURES.

DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. REDUCE SLOPE VELOCITIES ON DISTURBED SLOPES BY PROVIDING TEMPORARY BARRIERS. STORMWATER FROM OFF SITE SHOULD BE HANDLED SEPARATELY FROM STORMWATER GENERATED ON SITE.

AFTER FINAL SITE STABILIZATION

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BEST MANAGEMENT PRACTICES (BPMs) ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED FROM THE SITE OR INCORPORATED INTO FINISHED GRADING. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED

CONSTRUCTION DEWATERING

TEMPORARY COFFERDAMS SHALL BE USED TO ISOLATE IN-CHANNEL EXCAVATION AREAS FROM THE RIVER.

DEWATERING OF IN-CHANNEL WORK AREAS SHALL OCCUR CONCURRENT WITH FISH RESCUE. CONTRACTOR SHALL COORDINATE WITH THE YAKAMA NATION FISHERIES FOR FISH RESCUE. CONTRACTOR SHALL PROVIDE YAKAMA FISHERIES AMPLE TIME TO SCHEDULE FISH RESCUE. IF DIVERSION FAILS DUE TO CONTRACTOR NEGLIGENCE, FISH RESCUE SHALL BE REPEATED BY YAKAMA FISHERIES CREWS AT CONTRACTOR'S EXPENSE.

IF ADDITIONAL PUMPING IS REQUIRED TO DEWATER DURING CONSTRUCTION, PUMPED DISCHARGE SHALL RELEASE SEDIMENT-LADEN WATER AT AN UPLAND DISCHARGE LOCATION IN A MANNER THAT DOES NOT CAUSE EROSION, CONTAMINATION OR INCREASE TURBIDITY OF SURFACE WATERS. (SEE CONSTRUCTION DEWATERING).

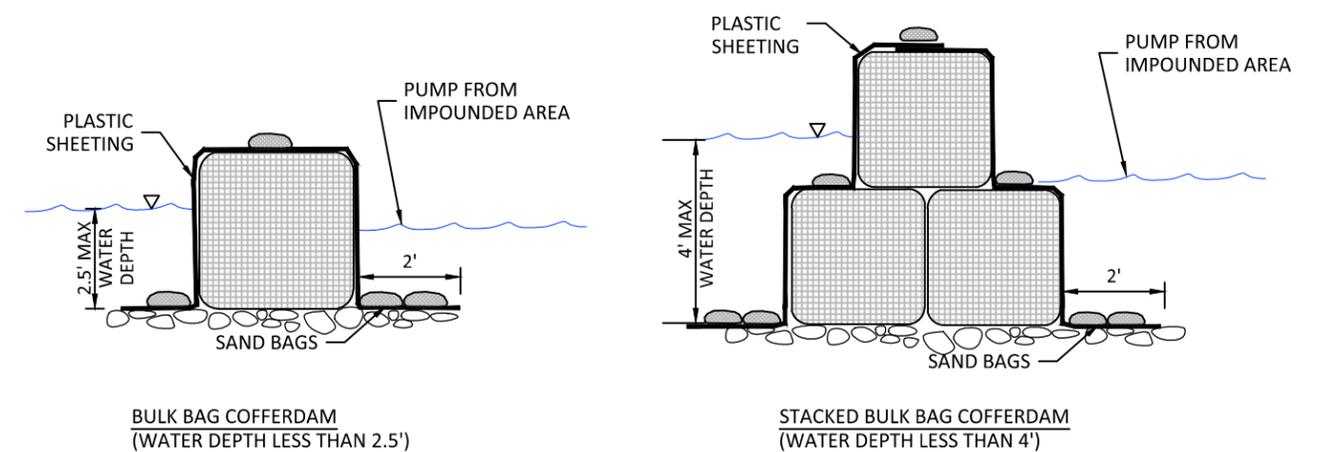
OWNER'S REPRESENTATIVE SHALL APPROVE DEWATERING DISCHARGE LOCATION PRIOR TO IMPLEMENTATION.

CONTRACTOR SHALL PERFORM CONSTRUCTION DEWATERING IN SUCH A MANNER AS TO AVOID THE RELEASE OF SEDIMENT-LADEN WATER TO SURFACE WATERS. SEDIMENT LADEN WATER MAY BE PUMPED TO AN UPLAND DISCHARGE LOCATION AND ALLOWED TO SHEET FLOW THROUGH EXISTING VEGETATION BEFORE INFILTRATING INTO THE GROUND. IF THIS METHOD IS NOT SUFFICIENT TO PREVENT RETURN OF TURBID WATER TO THE RIVER, A 'DIRT-BAG' OR SEDIMENT RETENTION STRUCTURE MAY BE REQUIRED AS NECESSARY TO COMPLY WITH LAWS AND PERMIT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL PROVIDE PLASTIC SHEETING OR GEOTEXTILE LINER OR PLYWOOD OR METAL PLATING AS NECESSARY TO DISSIPATE PUMP DISCHARGE JET TO PREVENT EROSION.

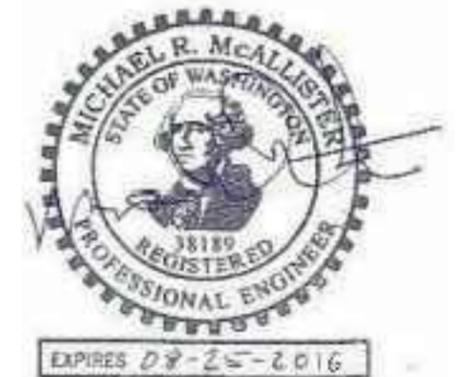
EQUIPMENT

BIODEGRADABLE HYDRAULIC FLUID SHALL BE USED IN EACH EXCAVATOR WORKING WITHIN LIVE WATER. MECHANIZED EQUIPMENT AND VEHICLES SHALL BE INSPECTED DAILY FOR LEAKS, AND CLEANED THOROUGHLY BEFORE OPERATION NEAR WATER.



BULK BAG NOTES:

- BULK BAG COFFERDAM SHALL BE CONSTRUCTED OF SEVERAL UNITS OF BULK BAGS FILLED WITH WASHED SPAWNING GRAVEL, AND ABUTTED SIDE BY SIDE TO CREATE A ROW THAT SEPARATES THE CONSTRUCTION SITE FROM THE RIVER.
- IF WATER DEPTH EXCEEDS 85% OF THE BULK BAG HEIGHT, AN ADDITIONAL TOP ROW OF BULK BAGS SHALL BE INSTALLED, SUPPORTED BY TWO BOTTOM ROWS OF BULK BAGS.
- BULK BAG COFFERDAM SHALL BE SEALED BY COVERING THE COFFERDAM WITH PLASTIC SHEETING HELD IN PLACE BY SANDBAGS FILLED WITH PEA GRAVEL. PLACED IN ROWS ON TOP OF COFFERDAM, AND AT TOE OF COFFERDAM. THE PLASTIC SHEETING SHALL BE DRAPED ALONG THE CHANNEL BOTTOM ON BOTH SIDES OF THE COFFERDAM WITH OUTWARD EDGE OF SHEETING MINIMUM 2- FEET FROM TOE OF COFFERDAM. THE DRAPED PORTION OF PLASTIC SHEETING SHALL BE PINNED TO THE CHANNEL BED BY MINIMUM TWO ROWS OF STANDARD SANDBAGS.
- IF POSSIBLE, THE ENDS OF THE COFFERDAM SHALL BE EXTENDED ONTO A DRY GRAVEL BAR. IF THE END MUST BE TERMINATED AT A WET RIVERBANK, THE COFFERDAM SHALL BE TIGHTLY SEALED TO THE GROUND BY PLASTIC SHEETING AND STANDARD SANDBAGS. MULTIPLE LAYERS OF SHEETING AND SANDBAGS MAY BE REQUIRED TO FORM A WATERTIGHT SEAL.
- BULK BAGS SHALL BE WATERPROOF CUBE-SHAPED POLYPROPYLENE WOVEN FABRIC BAGS WITH FULLY OPEN TOP, FLAT BOTTOM, FOUR LOOPS, MINIMUM 2-TON WEIGHT CAPACITY, MINIMUM 5:1 SAFETY FACTOR.
- PLASTIC SHEETING SHALL BE MINIMUM 6-MIL THICKNESS. ROLL LENGTH SHALL BE LONG ENOUGH TO ENSURE THAT ENTIRE LENGTH OF COFFERDAM WILL BE COVERED WITHOUT A SEAM. MINIMUM 12-FT WIDE ROLL SHALL BE USED FOR SINGLE LAYER BULK BAG COFFERDAM. TWO LENGTHS OF 12-FT WIDE ROLL SHALL BE USED FOR 2-LAYER STACKED BULK BAG COFFERDAM.
- CONTRACTOR SHALL PROVIDE PUMPING SUFFICIENT TO LOWER WATER SURFACE IN THE IMPOUNDED AREA IN ORDER TO CAUSE ANY LEAKS UNDER THE COFFERDAM TO PASS WATER TOWARD THE WORK AREA INSTEAD OF FROM THE WORK AREA TO THE RIVER. DISCHARGE TURBID WATER TO UPLAND FLOODPLAIN. PUMP SHALL BE POSITIONED SUFFICIENTLY DOWNSTREAMS TO INTERCEPT ALL TURBIDITY.
- BULK BAG COFFERDAM SHALL BE COMPLETELY REMOVED AFTER CONSTRUCTION IS COMPLETED AND TURBIDITY HAS BEEN REMOVED.
- ALTERNATE COFFERDAM MATERIALS AND CONFIGURATIONS MAY BE ALLOWED BUT SHALL NOT BE IMPLEMENTED WITHOUT REVIEW AND APPROVAL BY THE OWNER. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND/OR VENDOR CUT SHEETS FOR SUBSTITUTIONS.
- IF NECESSARY, GAPS BETWEEN BULK BAGS SHALL BE FILLED WITH WASHED GRAVEL TO SEAL AND IMPROVE COFFER DAM. DISPOSAL OF ROCK SHALL BE DETERMINED BY OWNER.



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Fish Habitat Enhancement Project

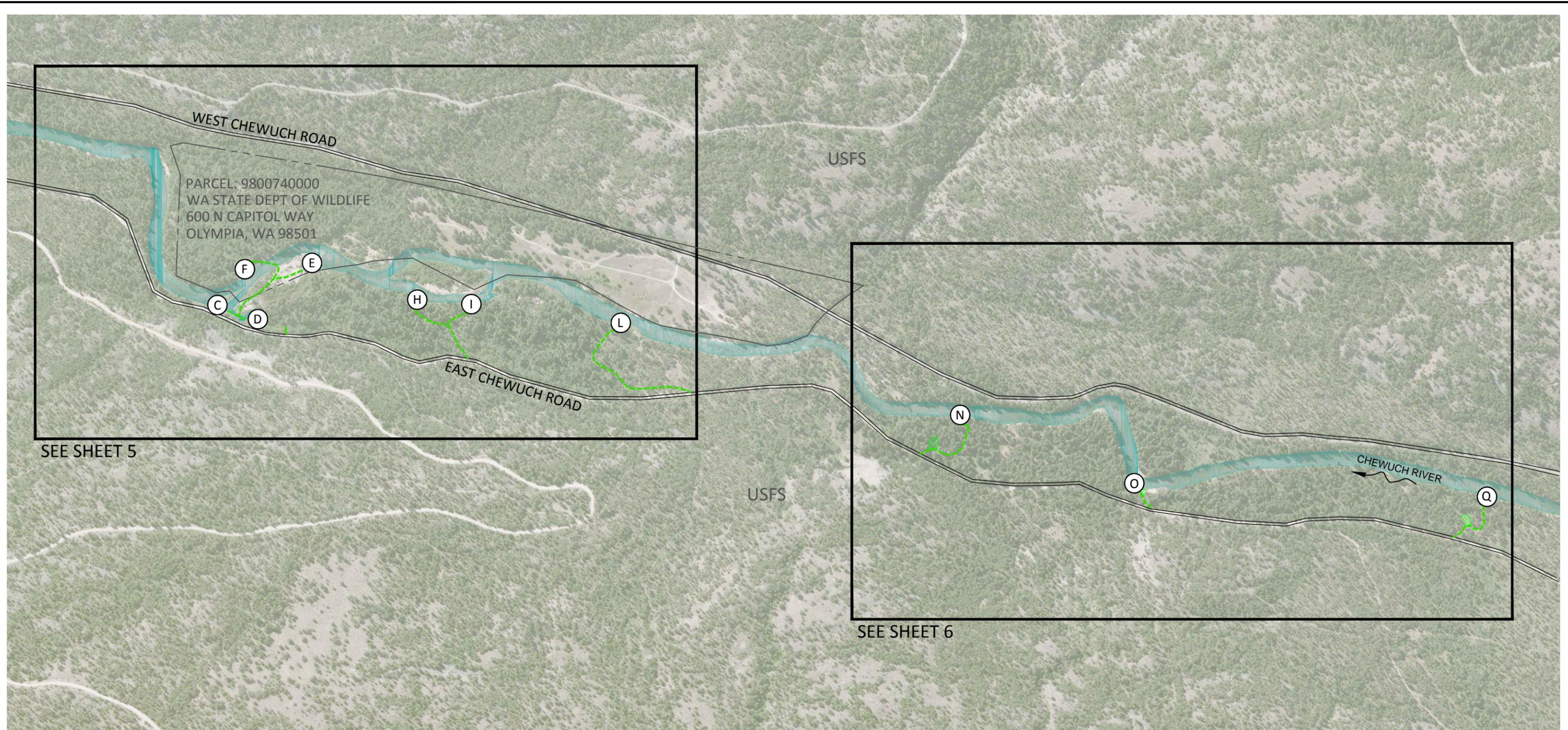


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EROSION CONTROL TYPICAL
DETAILS AND NOTES

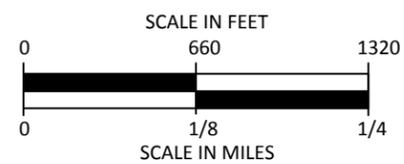
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3 OF 22

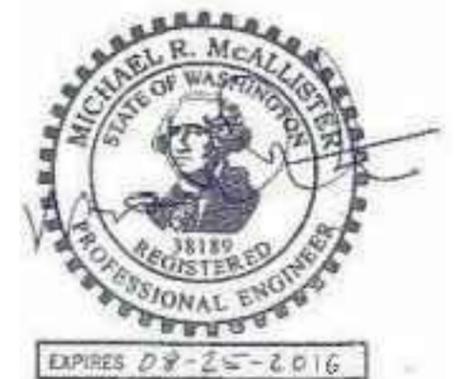


LEGEND

- PROPERTY LINES
- TEMPORARY ACCESS
- STAGING / STOCKPILE AREA
- (A) PROJECT SITE



SITE PLAN



NO.	BY	DATE	REVISION DESCRIPTION

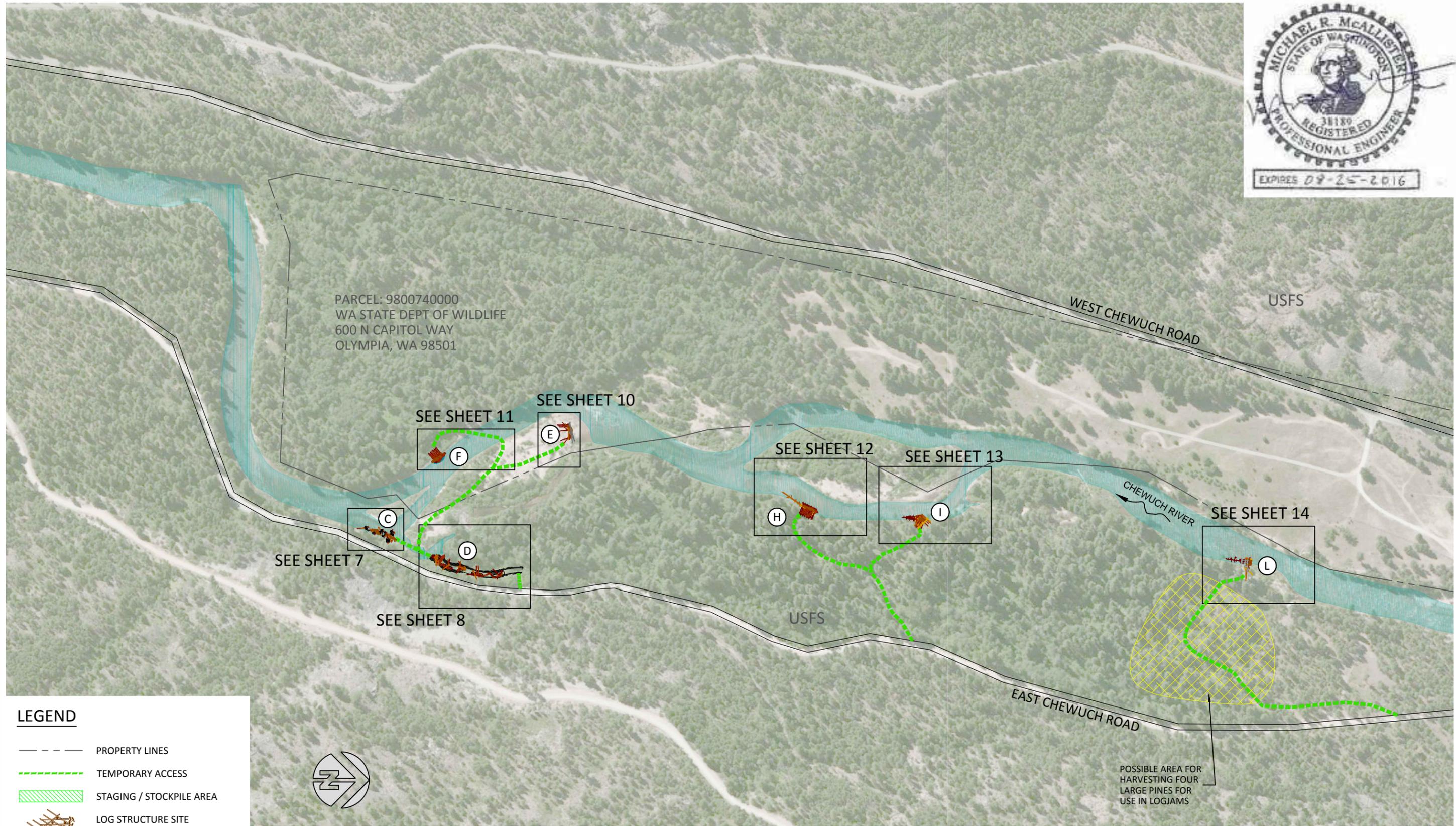
RP,DF DRAWN	MB,MM DESIGNED	MB,MM CHECKED
MM APPROVED	04/01/15 DATE	PROJECT

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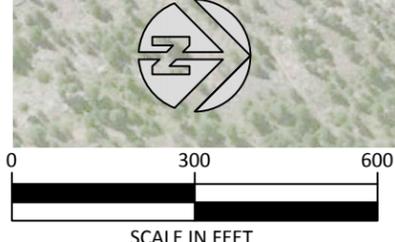
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OVERVIEW - SITE LOCATIONS



LEGEND

- PROPERTY LINES
- TEMPORARY ACCESS
- STAGING / STOCKPILE AREA
- LOG STRUCTURE SITE
- SITE NAME



SITE PLAN

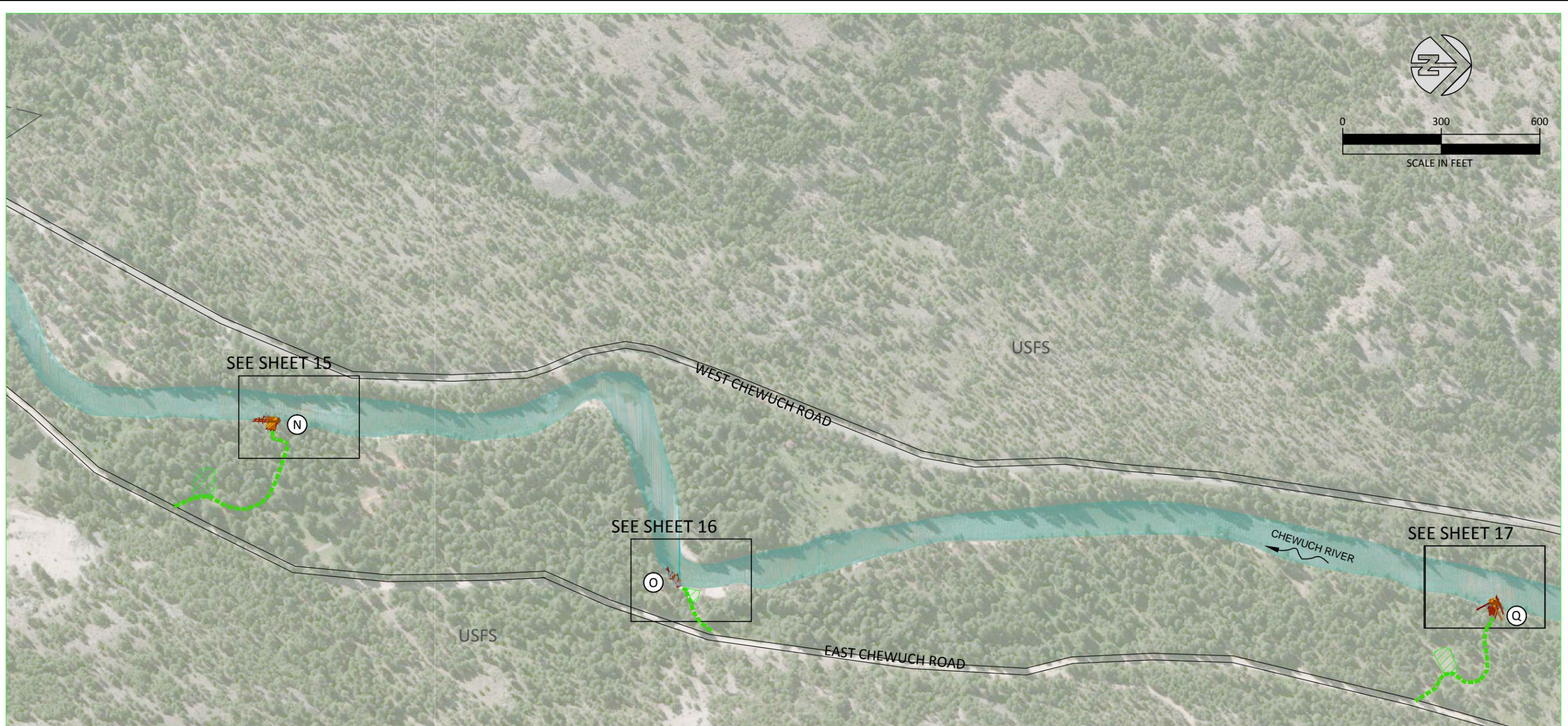
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PROJECT SITES A-L,
ACCESS, STAGING



LEGEND

-  PROPERTY LINES
-  TEMPORARY ACCESS
-  STAGING / STOCKPILE AREA
-  LOG STRUCTURE SITE
-  SITE NAME

SITE PLAN



NO.	BY	DATE	REVISION DESCRIPTION

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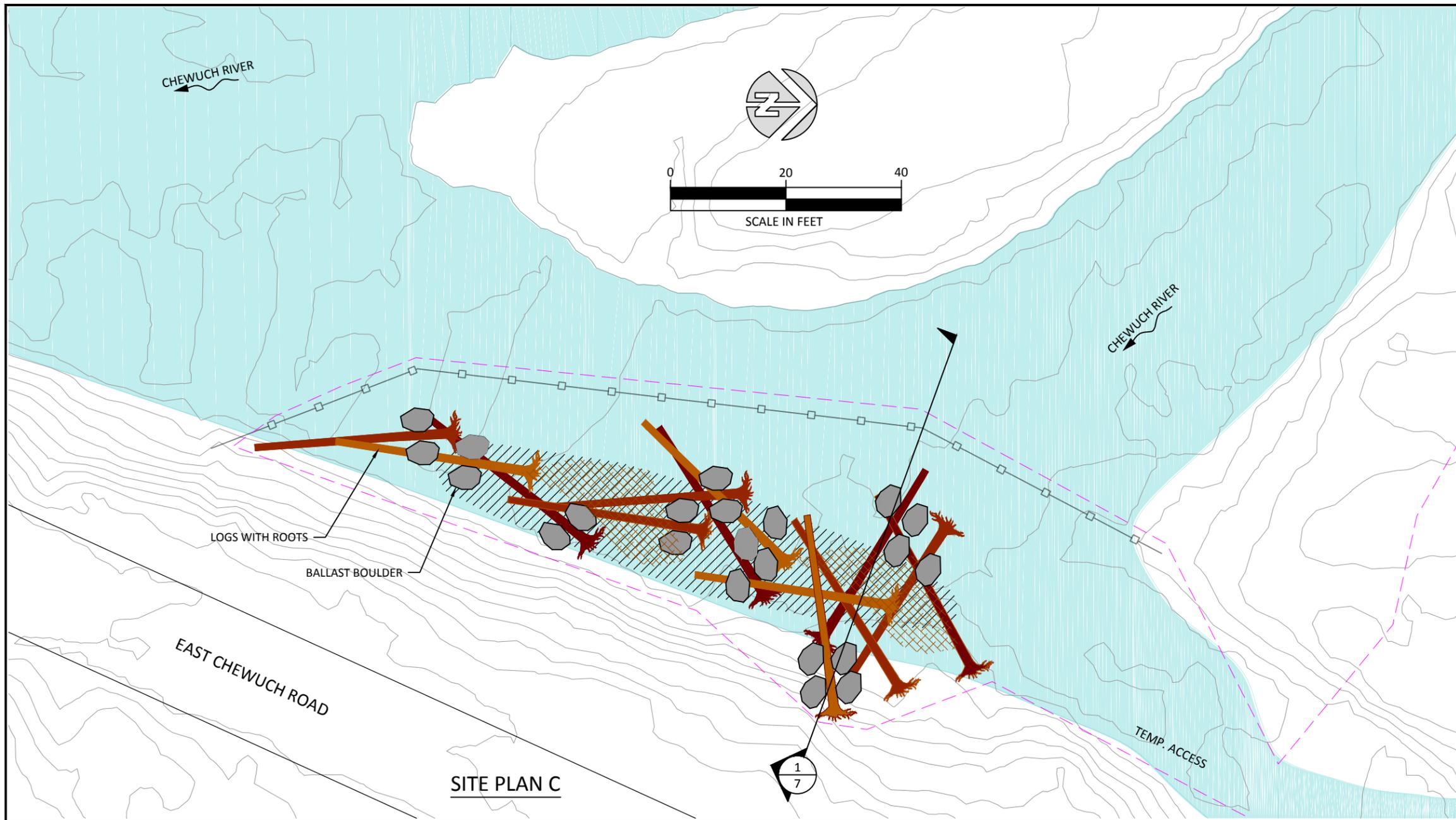
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PROJECT SITES N-Q,
 ACCESS, STAGING

SHEET
 6 OF 22

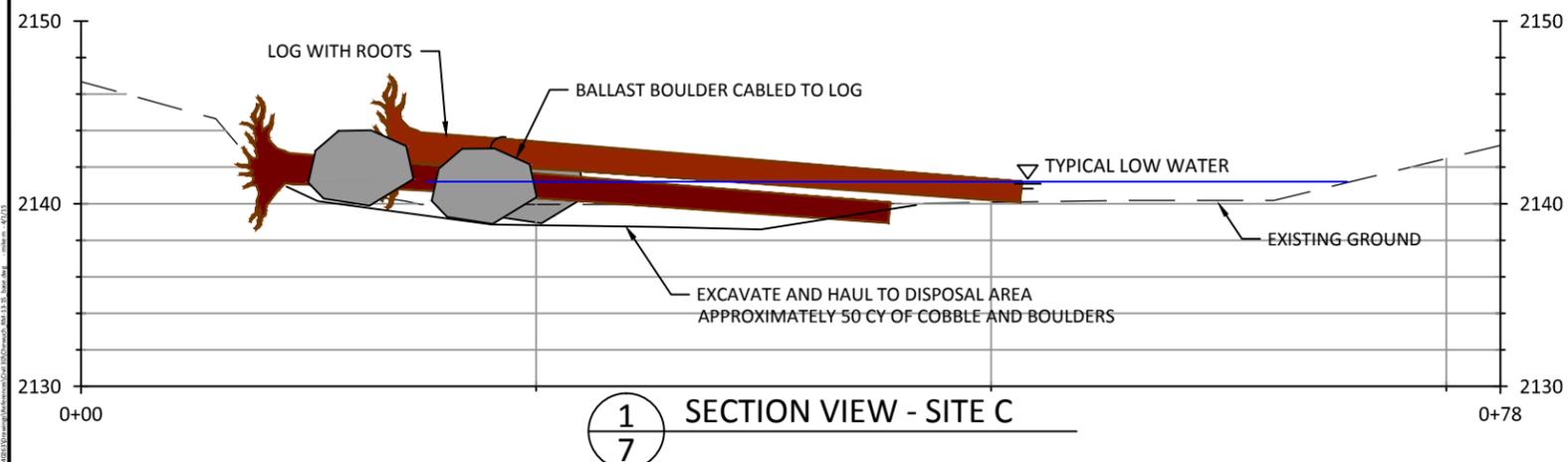


CONSTRUCTION QUANTITIES	
ITEM	QUANTITY
LOG WITH ROOTS	13
4' DIAMETER BOULDER	22
EXCAVATE AND HAUL TO LEROY PIT	50 CY
SILT FENCE	180 FT
IMPORTED SLASH	20 CY

- QUANTITIES NOTES:**
1. LOAD AND HAUL BOULDERS TO SITE FROM LEROY PIT.
 2. ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION.
 3. CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL WITH NO ADDITIONAL MEASUREMENT OR COST TO THE OWNER.
 4. TEMPORARY STOCKPILE OF EXCAVATED MATERIAL SHALL BE WITHIN DESIGNATED LIMITS OF DISTURBANCE.
 5. ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.

LEGEND

- LIMITS OF DISTURBANCE
- SILT FENCE
- APPROXIMATE LOW WATER
- IMPORTED SLASH
- EXCAVATION AREA
- LOG LAYER 1
- LOG LAYER 2
- LOG LAYER 3
- BOULDER



- LOG NOTES:**
1. LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
 2. INSTALL SLASH LOOSELY BETWEEN/BENEATH LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.

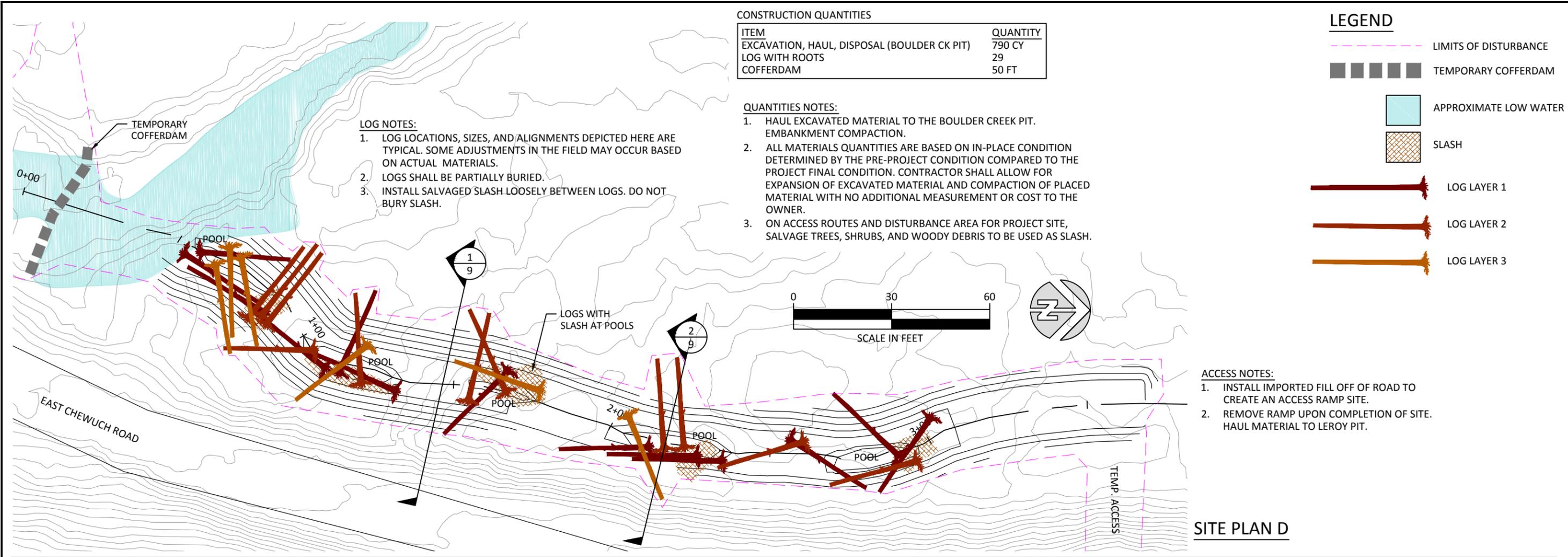


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CONSTRUCTION QUANTITIES

ITEM	QUANTITY
EXCAVATION, HAUL, DISPOSAL (BOULDER CK PIT)	790 CY
LOG WITH ROOTS	29
COFFERDAM	50 FT

- QUANTITIES NOTES:**
- HAUL EXCAVATED MATERIAL TO THE BOULDER CREEK PIT. EMBANKMENT COMPACTION.
 - ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION. CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL WITH NO ADDITIONAL MEASUREMENT OR COST TO THE OWNER.
 - ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.

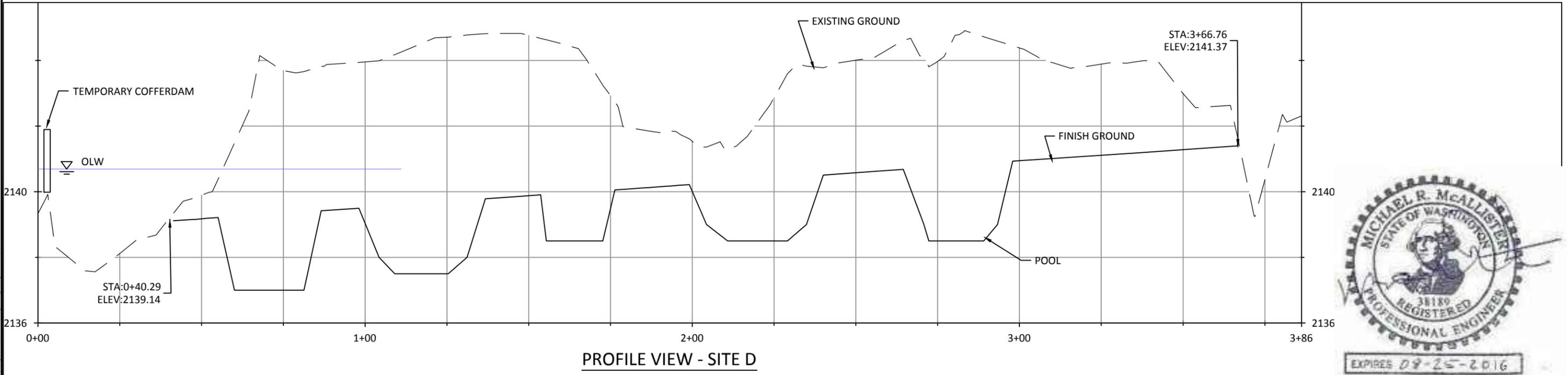
- LOG NOTES:**
- LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
 - LOGS SHALL BE PARTIALLY BURIED.
 - INSTALL SALVAGED SLASH LOOSELY BETWEEN LOGS. DO NOT BURY SLASH.

- LEGEND**
- LIMITS OF DISTURBANCE
 - ■ ■ ■ ■ TEMPORARY COFFERDAM
 - APPROXIMATE LOW WATER
 - SLASH
 - LOG LAYER 1
 - LOG LAYER 2
 - LOG LAYER 3



- ACCESS NOTES:**
- INSTALL IMPORTED FILL OFF OF ROAD TO CREATE AN ACCESS RAMP SITE.
 - REMOVE RAMP UPON COMPLETION OF SITE. HAUL MATERIAL TO LEROY PIT.

SITE PLAN D



PROFILE VIEW - SITE D

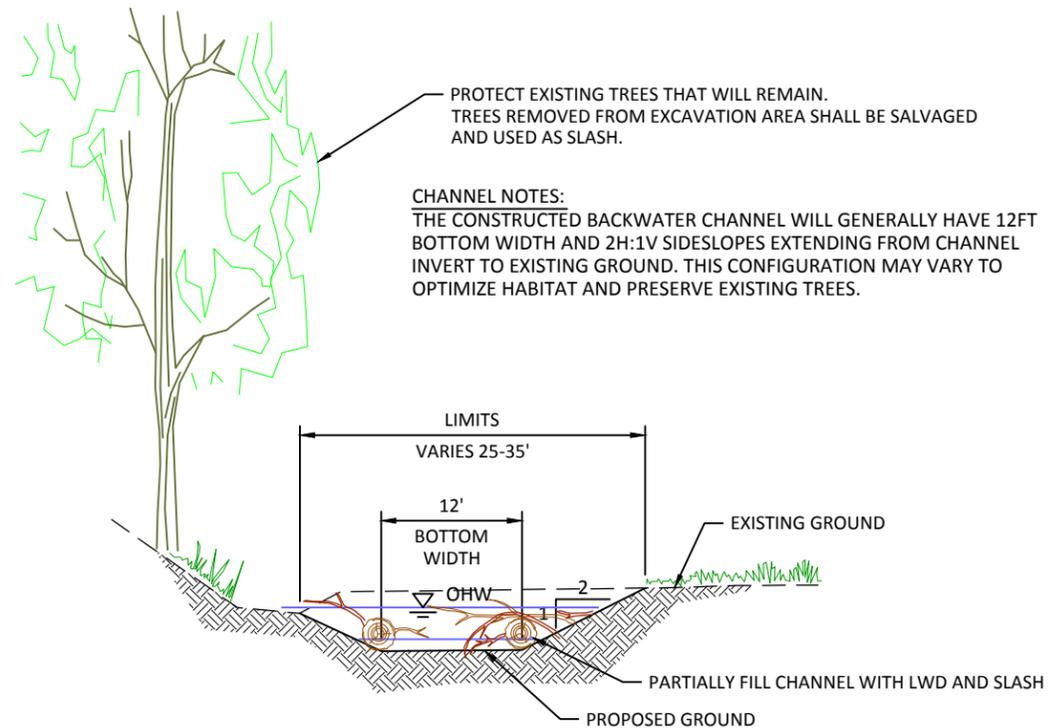
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RP,DF DRAWN	MB,MM DESIGNED	MB,MM CHECKED
MM APPROVED	04/01/15 DATE	PROJECT

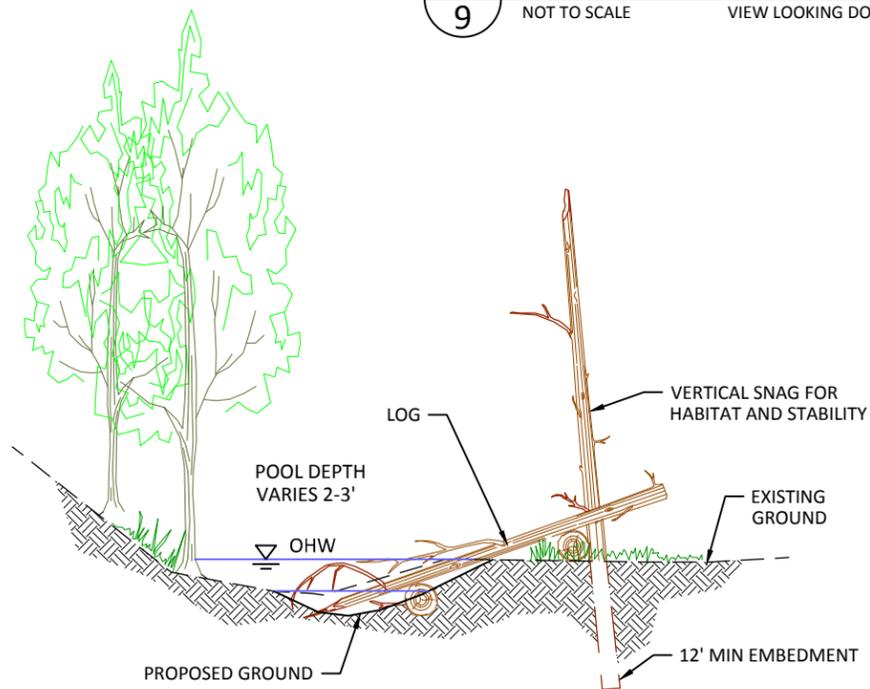
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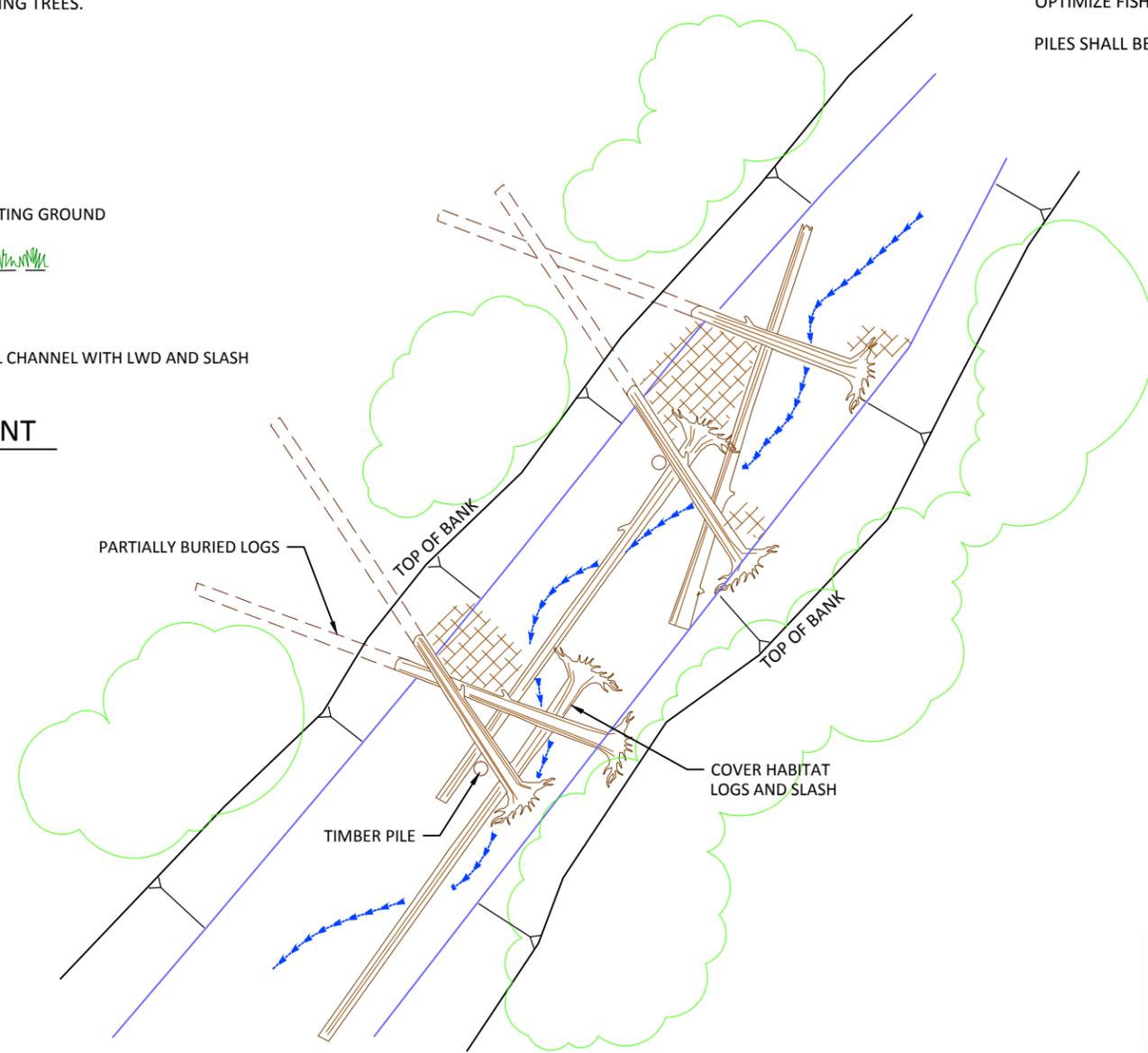
SITE D GRADING PLAN



1 SECTION - BACKWATER ENHANCEMENT
NOT TO SCALE VIEW LOOKING DOWNSTREAM



2 SECTION - BACKWATER ENHANCEMENT, POOL WITH LWD
NOT TO SCALE VIEW LOOKING DOWNSTREAM



3 PLAN VIEW - TYPICAL BACKWATER ALCOVE
NOT TO SCALE

LWD NOTES:

SPECIFIC ORIENTATION OF LOGS AND BALLAST MATERIALS MAY VARY FROM TYPICAL DRAWINGS DEPENDING ON SIZE AND SHAPE OF MATERIAL DELIVERED OR SALVAGED.

BRACING TO EXISTING TREES OR INSTALLED VERTICAL LOGS WILL OCCUR AT LOCATIONS IDENTIFIED IN THE FIELD TO PROVIDE HORIZONTAL STABILITY. SLASH AND TREE TOPS WILL BE INSTALLED AT "RACKING" LOCATIONS TO EMULATE NATURAL DEBRIS ACCUMULATIONS AND TO OPTIMIZE FISH HABITAT.

PILES SHALL BE INSTALLED BY VIBRATORY DRIVER.



NO.	BY	DATE	REVISION DESCRIPTION

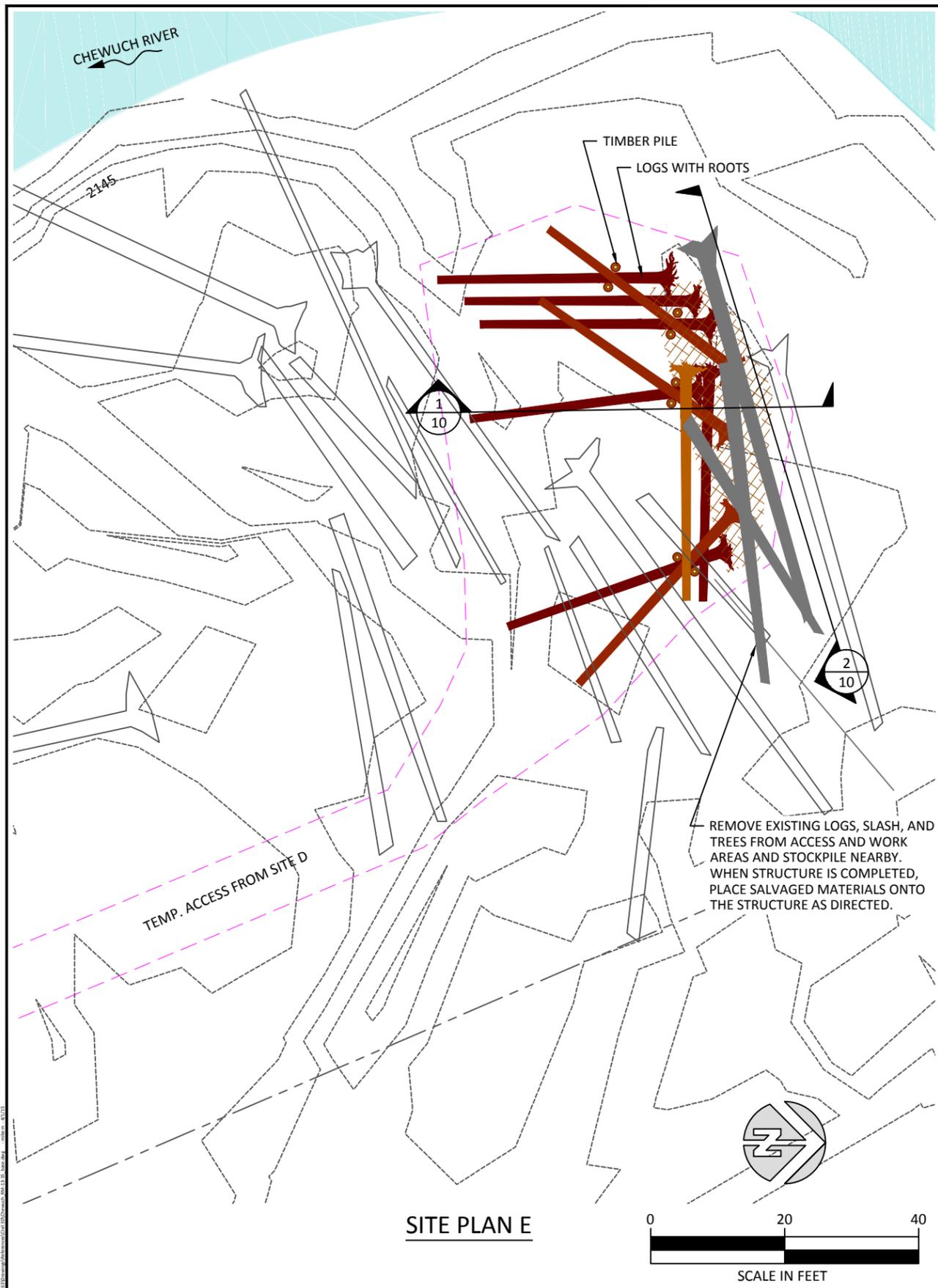
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SITE D TYPICAL DETAILS



LEGEND

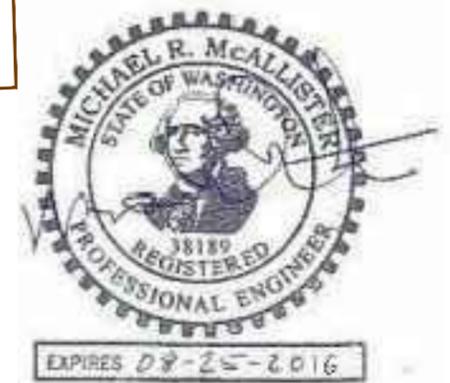
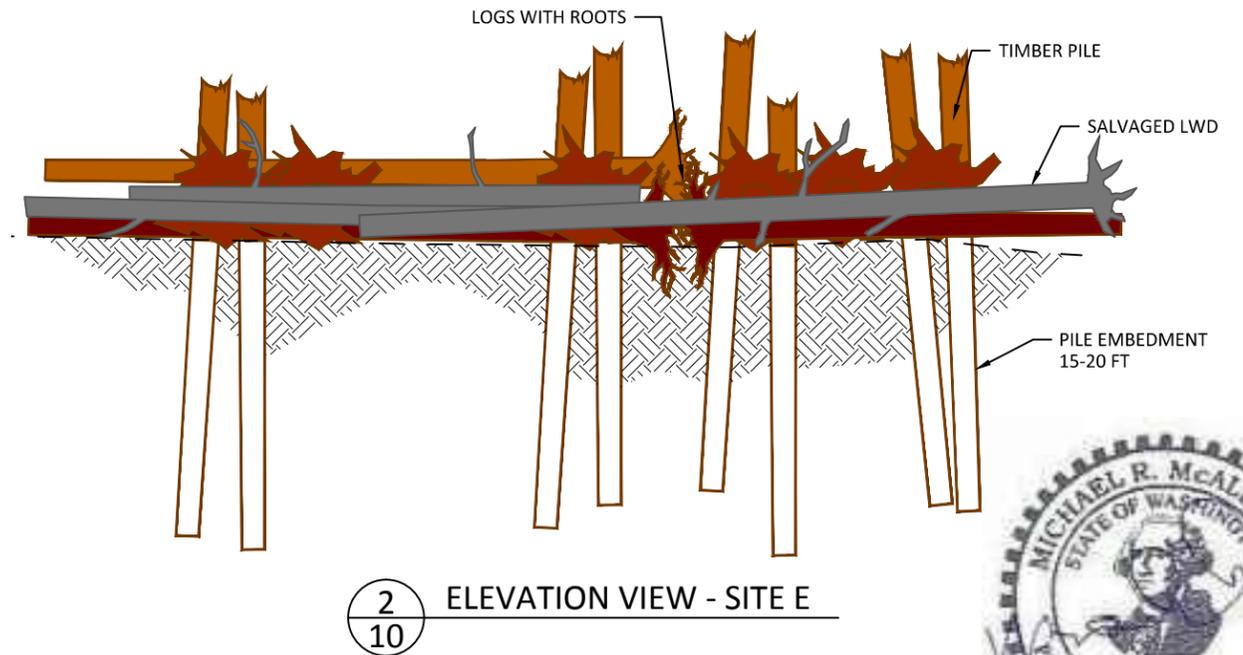
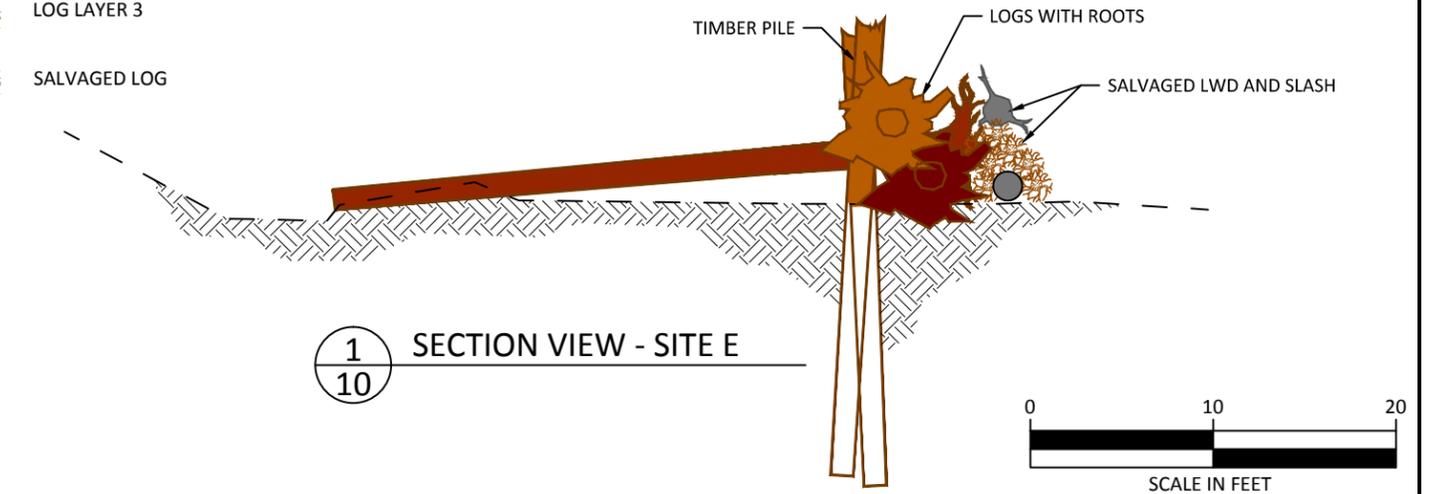
- LIMITS OF DISTURBANCE
- APPROXIMATE LOW WATER
- SLASH
- LOG LAYER 1
- LOG LAYER 2
- LOG LAYER 3
- SALVAGED LOG

CONSTRUCTION QUANTITIES

ITEM	QUANTITY
LOG WITH ROOTS	10
TIMBER PILE	8

NOTES:

1. WOOD PLACEMENTS SHOWN ON PLANS ARE APPROXIMATE AND SUBJECT TO CHANGE IN THE FIELD.
2. SALVAGE EXISTING WOOD ON THE GRAVEL BAR AND INCORPORATE INTO THE CONSTRUCTED STRUCTURE.
3. SHRUBS AND SLASH GENERATED FROM SITE ACCESS SHALL BE INCORPORATED INTO THE STRUCTURE.
4. VARY THE APPEARANCE OF TIMBER PILES BY INSTALLING THEM AT ANGLES AND WITH DIFFERENT TOP HEIGHTS. BREAK THE TOPS IF POSSIBLE.
5. PILES SHALL BE INSTALLED BY VIBRATORY DRIVER.



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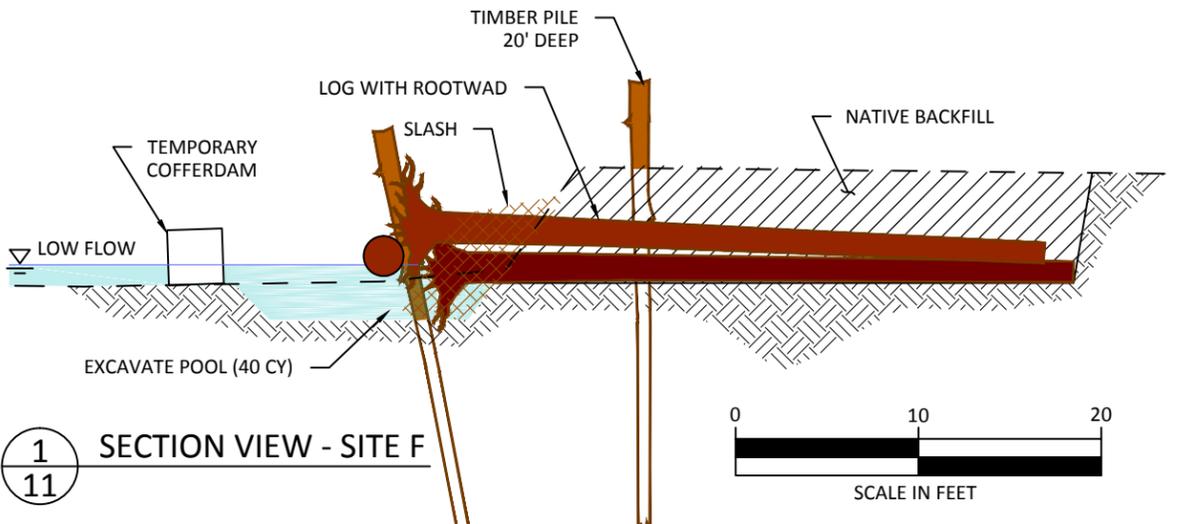
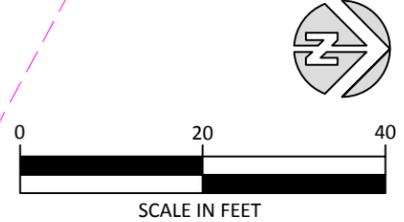
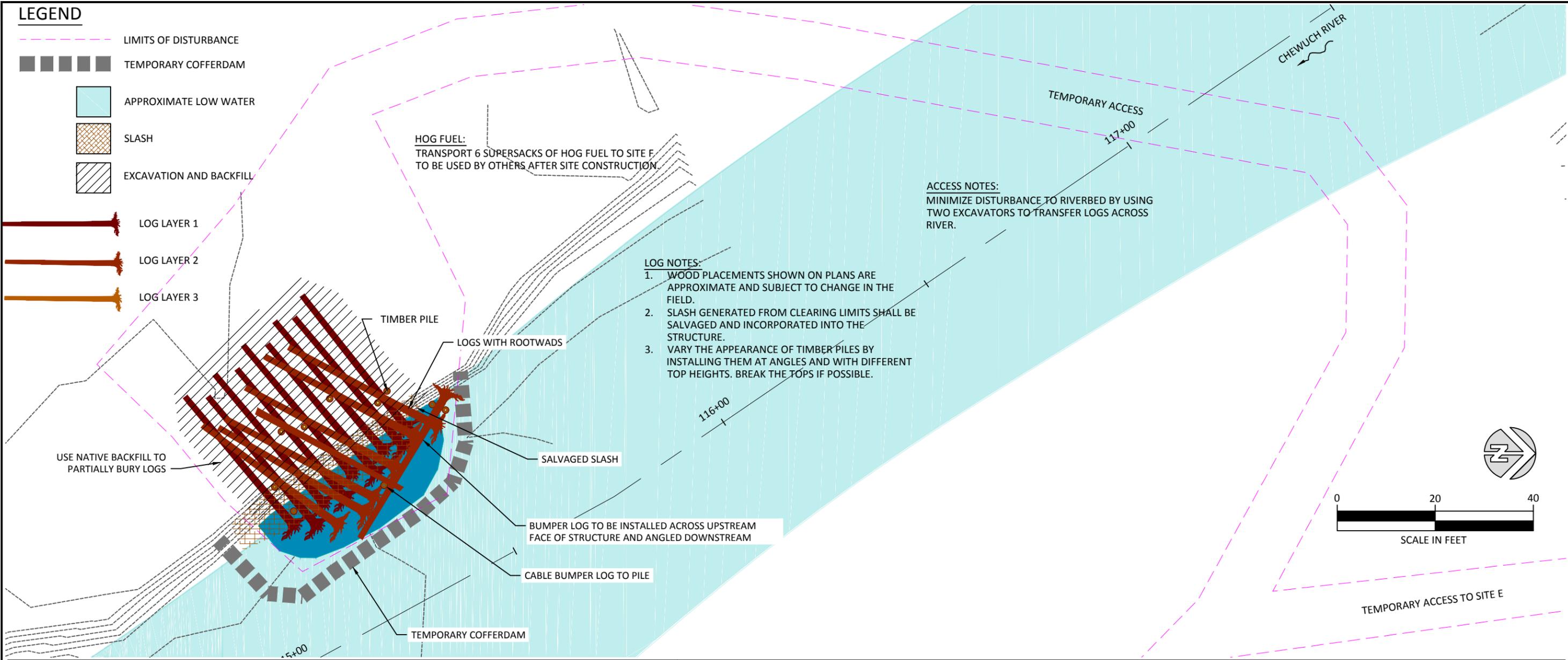
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SITE E

SHEET
10 OF 22

LEGEND

-  LIMITS OF DISTURBANCE
-  TEMPORARY COFFERDAM
-  APPROXIMATE LOW WATER
-  SLASH
-  EXCAVATION AND BACKFILL
-  LOG LAYER 1
-  LOG LAYER 2
-  LOG LAYER 3



CONSTRUCTION QUANTITIES

ITEM	QUANTITY
EXCAVATION	440CY
BACKFILL	440 CY
LOG WITH ROOTS	17
TIMBER PILE	10
COFFERDAM	85 FT

QUANTITIES NOTES:

1. ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION.
2. CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL WITH NO ADDITIONAL MEASUREMENT OR COST TO THE OWNER.
3. TEMPORARY STOCKPILE OF EXCAVATED MATERIAL SHALL BE WITHIN DESIGNATED LIMITS OF DISTURBANCE.
4. ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.
5. HAUL EXCESS FILL TO DESIGNATED DISPOSAL SITE AND EMBANKMENT COMPACT.

SITE PLAN F

NO.	BY	DATE	REVISION DESCRIPTION

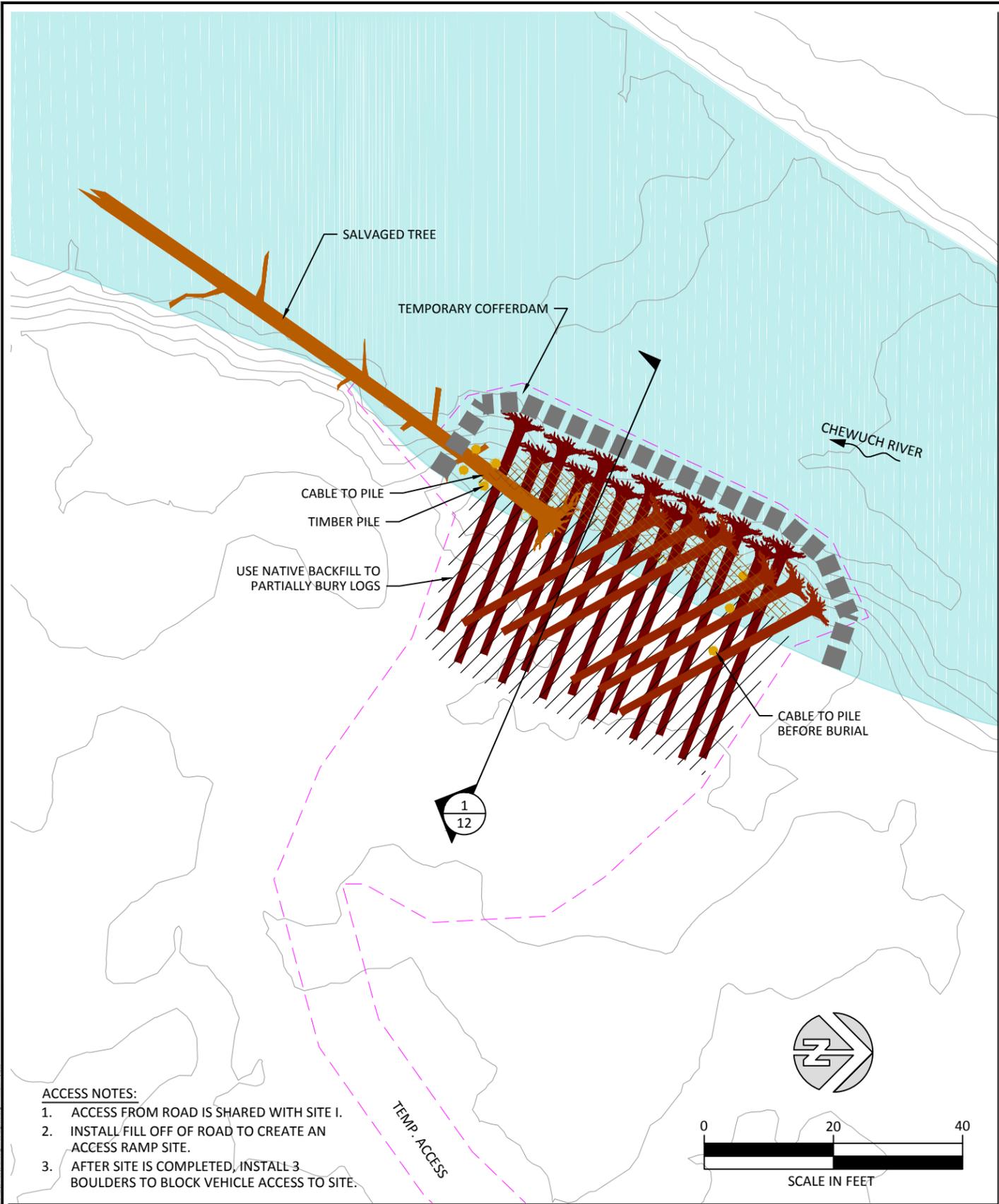
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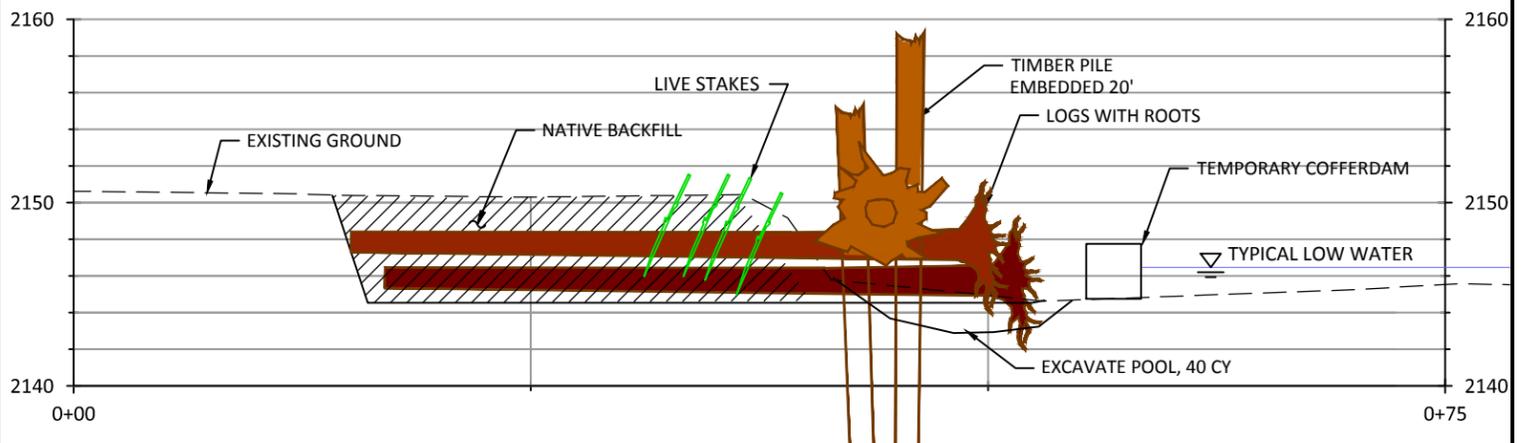
SITE F



ITEM	QUANTITY
EXCAVATION	320 CY
BACKFILL	240 CY
HAUL EXCESS TO BOULDER CK PIT	80 CY
LOG WITH ROOTS	19
TIMBER PILE	7
SALVAGED TREE WTH ROOTS	1
COFFERDAM	90 FT

- QUANTITIES NOTES:**
1. ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION.
 2. CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL WITH NO ADDITIONAL MEASUREMENT OR COST TO THE OWNER.
 3. TEMPORARY STOCKPILE OF EXCAVATED MATERIAL SHALL BE WITHIN DESIGNATED LIMITS OF DISTURBANCE.
 4. ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.
 5. REMOVE COFFERDAM BEFORE INSTALLING SALVAGED TREE.

- LOG NOTES:**
1. LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
 2. INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.



1/12 SECTION VIEW - SITE H

- LEGEND**
- LIMITS OF DISTURBANCE
 - TEMPORARY COFFERDAM
 - APPROXIMATE LOW WATER
 - SLASH
 - EXCAVATION AND BACKFILL
 - LOG LAYER 1
 - LOG LAYER 2
 - LOG LAYER 3

- ACCESS NOTES:**
1. ACCESS FROM ROAD IS SHARED WITH SITE I.
 2. INSTALL FILL OFF OF ROAD TO CREATE AN ACCESS RAMP SITE.
 3. AFTER SITE IS COMPLETED, INSTALL 3 BOULDERS TO BLOCK VEHICLE ACCESS TO SITE.

SITE PLAN H



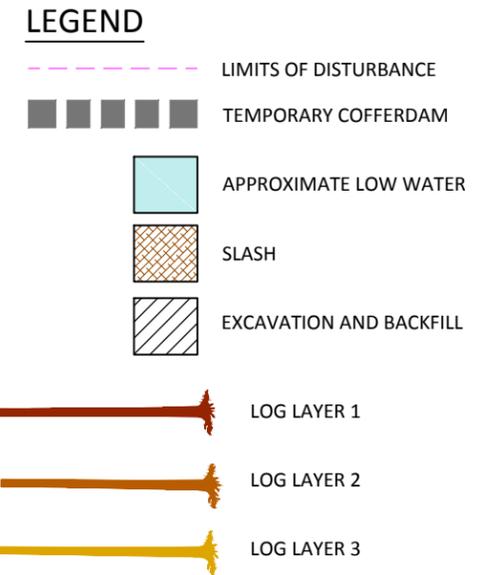
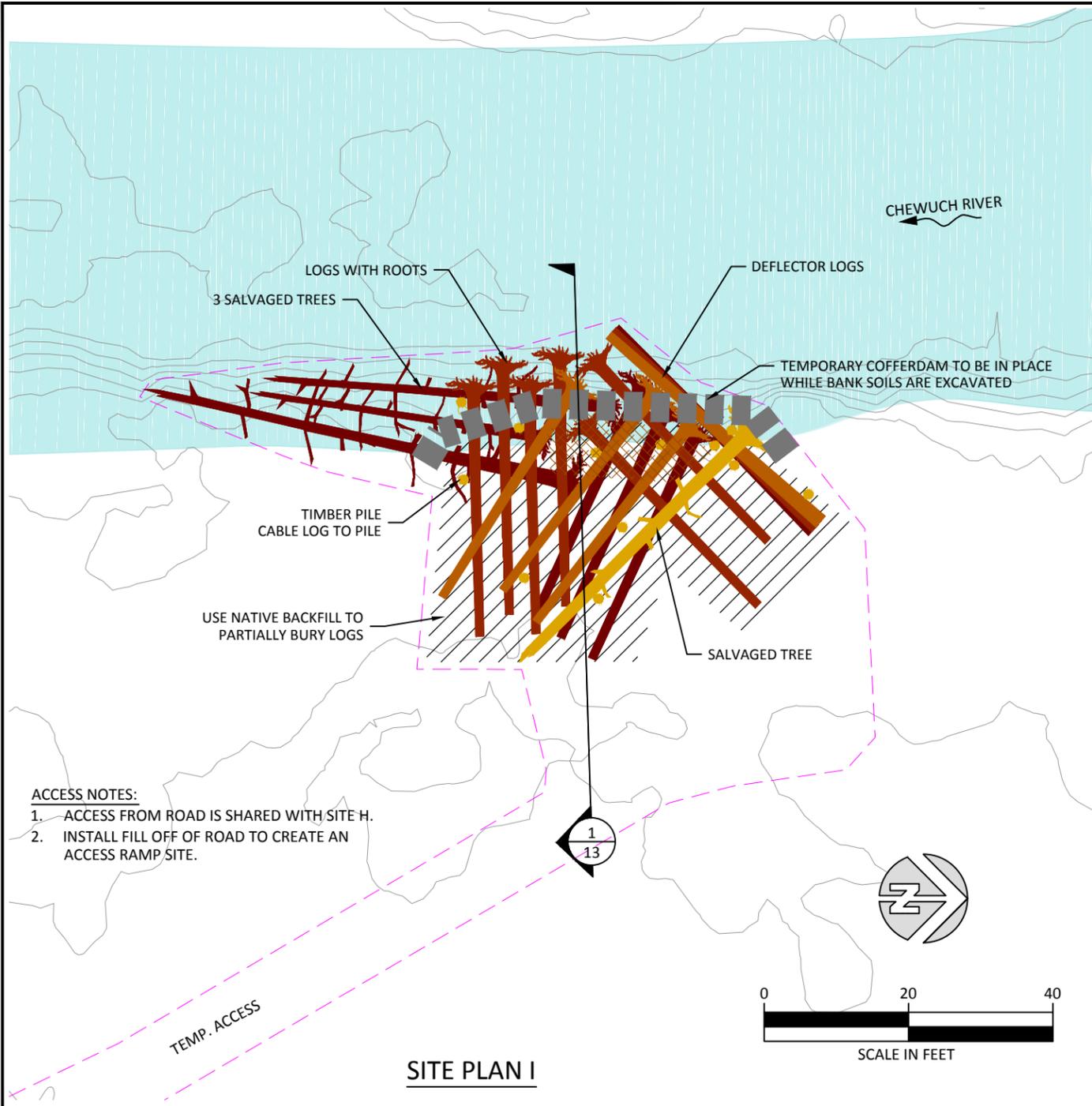
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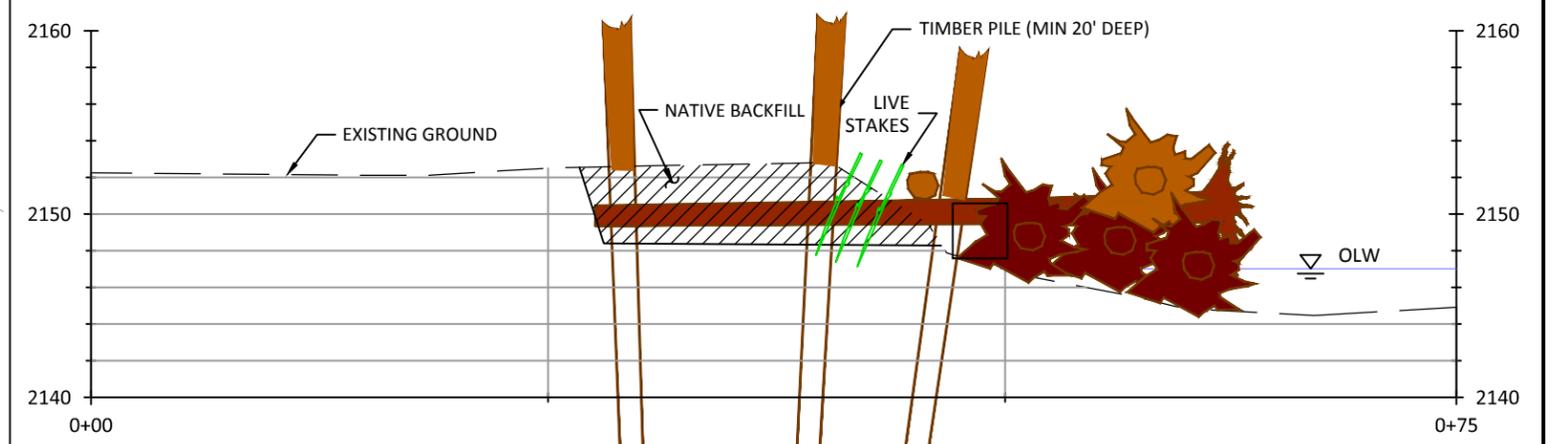
SITE H



CONSTRUCTION QUANTITIES	
ITEM	QUANTITY
EXCAVATION & BACKFILL	125 CY
LOG WITH ROOTS	15
LOGS	3
TIMBER PILE	12
SALVAGED TREE WITH ROOTS	4
COFFERDAM	60 FT

- QUANTITIES NOTES:**
- ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION.
 - CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL WITH NO ADDITIONAL MEASUREMENT OR COST TO THE OWNER.
 - TEMPORARY STOCKPILE OF EXCAVATED MATERIAL SHALL BE WITHIN DESIGNATED LIMITS OF DISTURBANCE.
 - ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.
 - TEMPORARY COFFERDAM SHALL BE INSTALLED BEFORE EXCAVATION AND BACKFILL OF LOGS. REMOVE COFFERDAM BEFORE INSTALLING SALVAGED TREES.

- ACCESS NOTES:**
- ACCESS FROM ROAD IS SHARED WITH SITE H.
 - INSTALL FILL OFF OF ROAD TO CREATE AN ACCESS RAMP SITE.



1/13 SECTION VIEW - SITE I

- LOG NOTES:**
- LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
 - INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.
 - INSTALL PILES MINIMUM 20 FEET DEEP BELOW GROUND SURFACE. PILES SHALL BE INSTALLED BY VIBRATORY DRIVER.



NO.	BY	DATE	REVISION DESCRIPTION

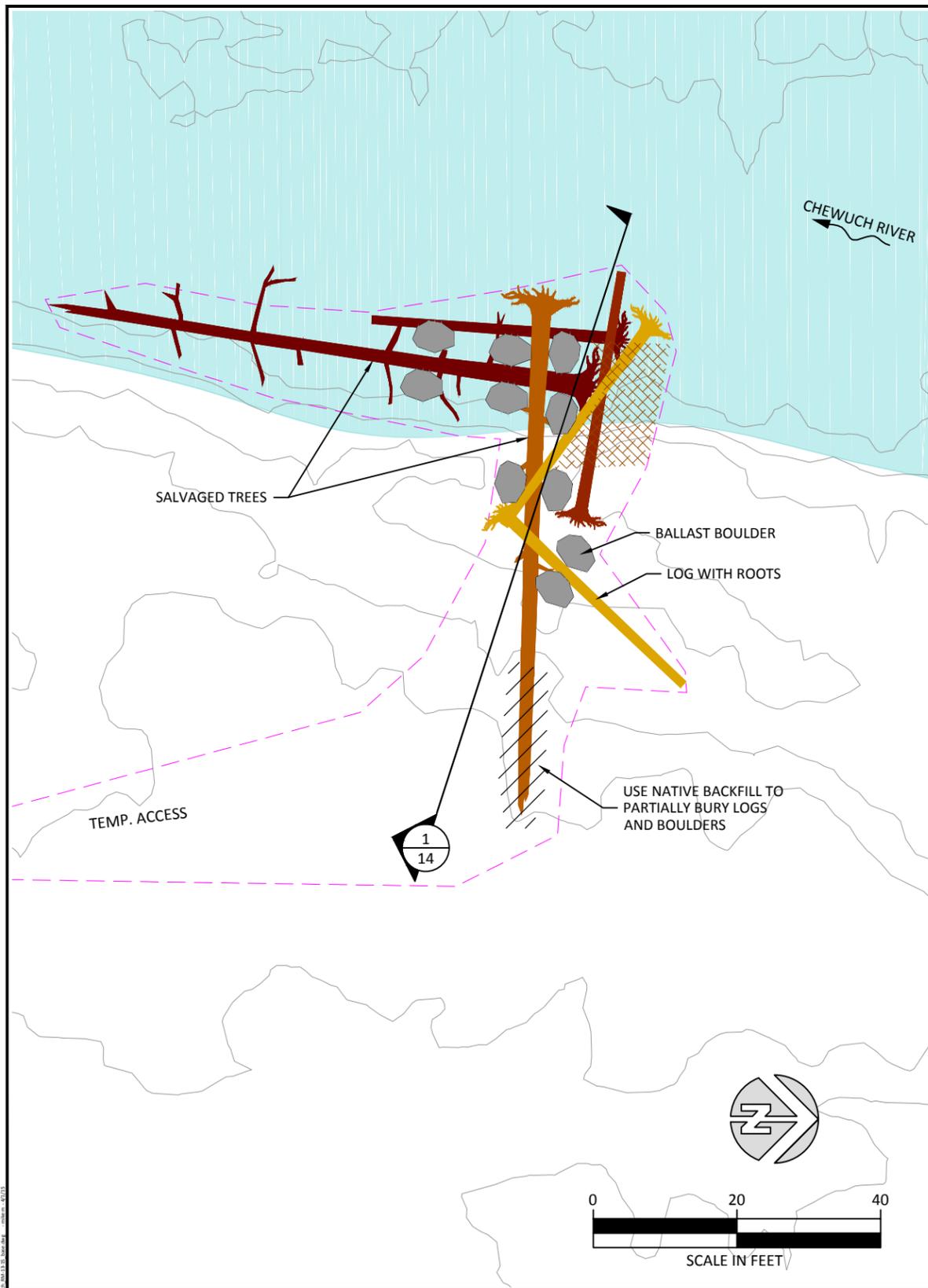
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SITE I



SITE PLAN L

LEGEND

- LIMITS OF DISTURBANCE
- APPROXIMATE LOW WATER
- SLASH
- EXCAVATION AND BACKFILL
- LOG LAYER 1
- LOG LAYER 2
- LOG LAYER 3

SALVAGED TREE NOTES:

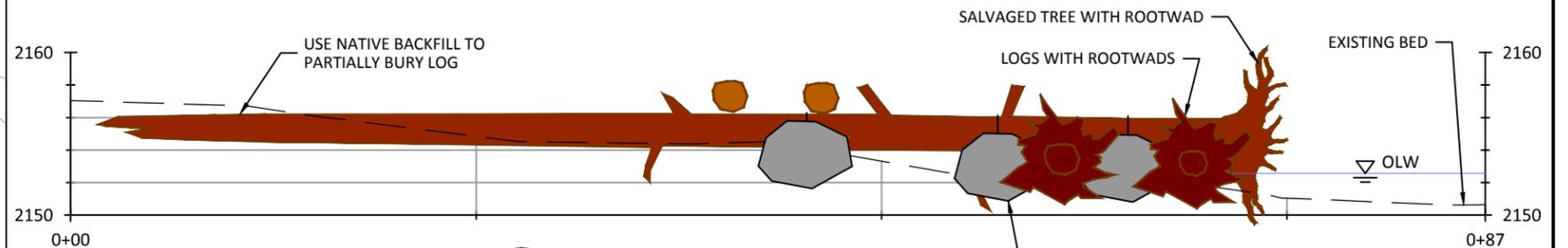
1. THREE TREES SHALL BE SALVAGED FROM THIS SITE. USE TWO SALVAGED TREES AT SITE L.
2. HAUL ONE SALVAGED TREE TO SITE Q.

LOG NOTES:

1. LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
2. SALVAGE ALL REMOVED TREES AND SHRUBS ALONG ACCESS ROUTE TO BE USED AS SLASH IN LOG STRUCTURE.
3. INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.

CONSTRUCTION QUANTITIES

ITEM	QUANTITY
EXCAVATION & BACKFILL	5 CY
LOG WITH ROOTS	4
4' DIAMETER BOULDER	10
SALVAGED TREE WITH ROOTS	2



SECTION VIEW - SITE L



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MM APPROVED	04/01/15 DATE	PROJECT

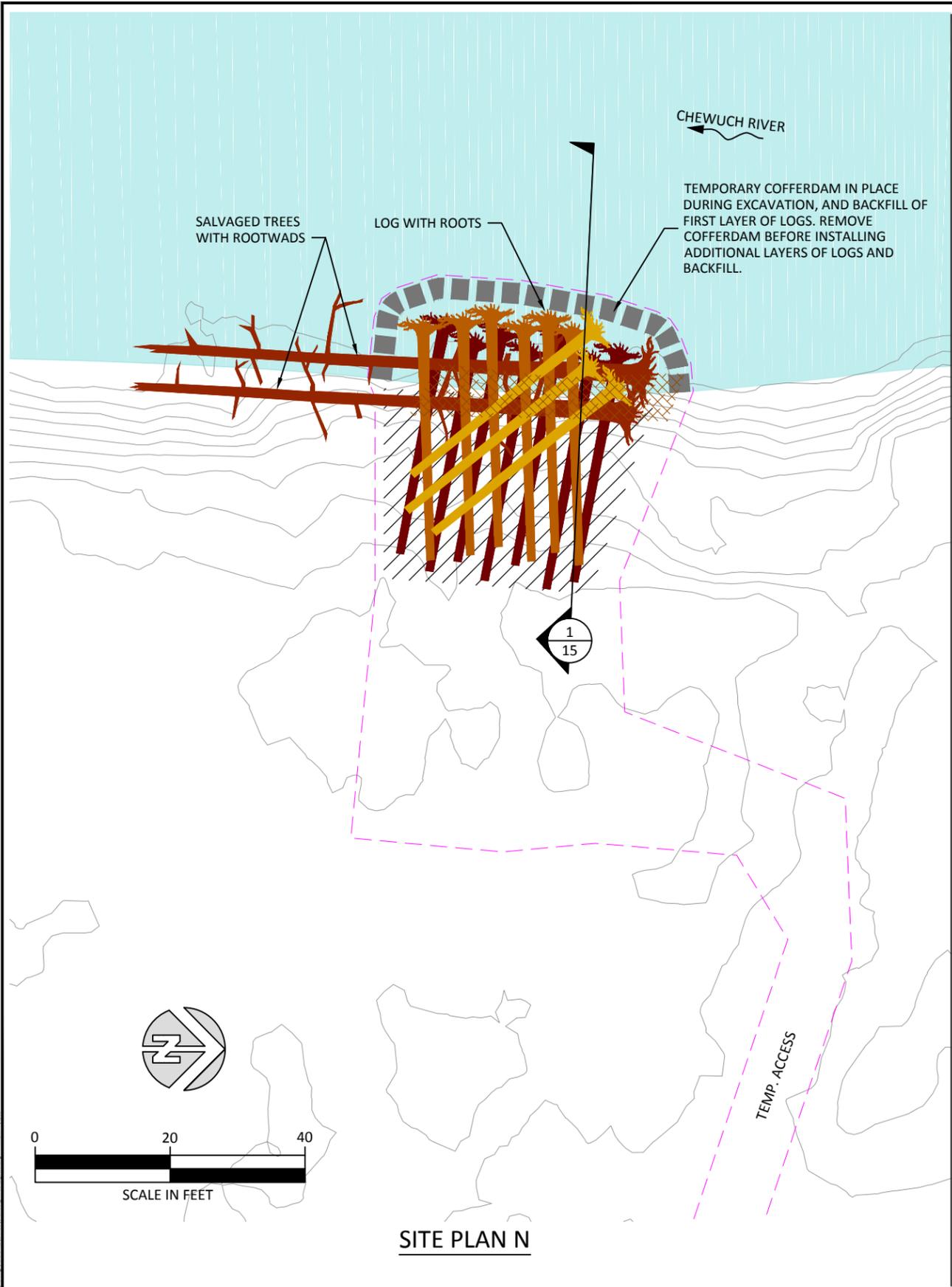
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SITE L

SHEET
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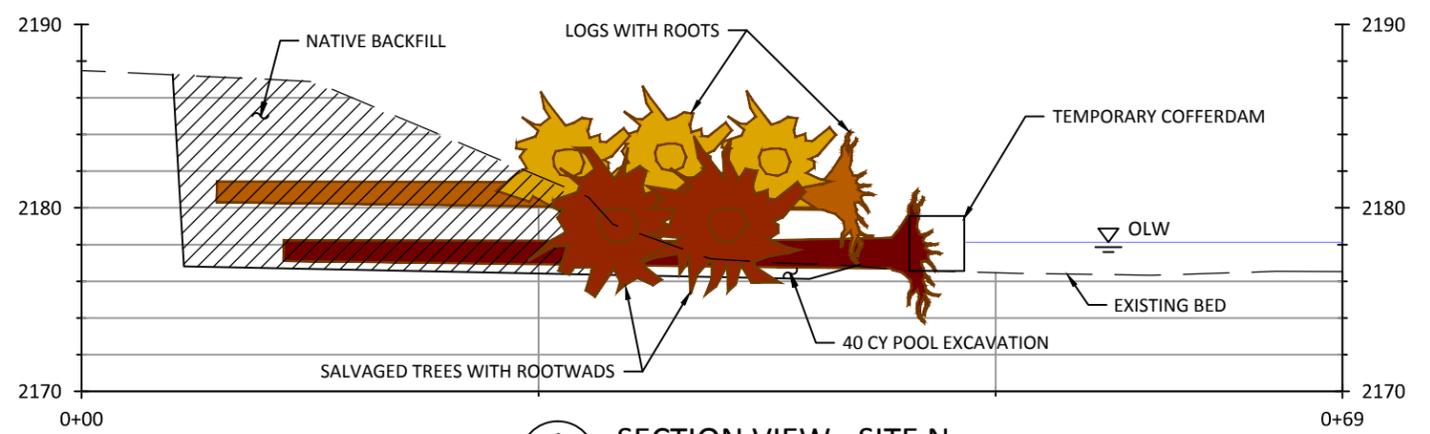
LEGEND

- LIMITS OF DISTURBANCE
- TEMPORARY COFFERDAM
- APPROXIMATE LOW WATER
- SLASH
- EXCAVATION AND BACKFILL
- LOG LAYER 1
- LOG LAYER 2
- LOG LAYER 3
- LOG LAYER 4

CONSTRUCTION QUANTITIES

ITEM	QUANTITY
EXCAVATION	290 CY
BACKFILL	230 CY
HAUL EXCESS FILL TO BOULDER CK PIT	60 CY
LOG WITH ROOTS	16
SALVAGED TREE WITH ROOTS	2
COFFERDAM	70 FT

- QUANTITIES NOTES:**
- ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION.
 - CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL WITH NO ADDITIONAL MEASUREMENT OR COST TO THE OWNER.
 - TEMPORARY STOCKPILE OF EXCAVATED MATERIAL SHALL BE WITHIN DESIGNATED LIMITS OF DISTURBANCE.
 - ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.
 - TEMPORARY COFFERDAM SHALL BE INSTALLED BEFORE EXCAVATION AND BACKFILL OF FIRST LAYER OF LOGS. REMOVE COFFERDAM BEFORE INSTALLING SALVAGED TREES, AND ADDITIONAL LAYERS OF LOGS AND BACKFILL.



1/15 SECTION VIEW - SITE N

NOISE LIMITS:
CAMPGROUND IS NEARBY. WORK SHALL OCCUR BETWEEN 8AM AND 5PM MON-THU.

- LOG NOTES:**
- LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
 - INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.



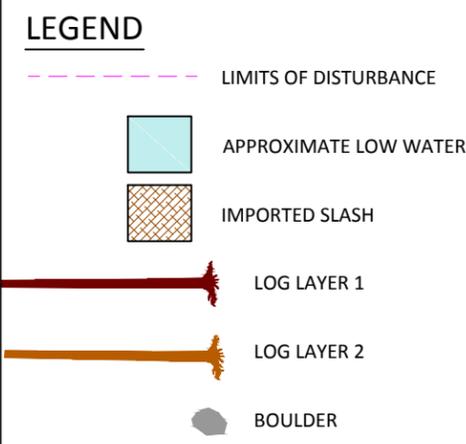
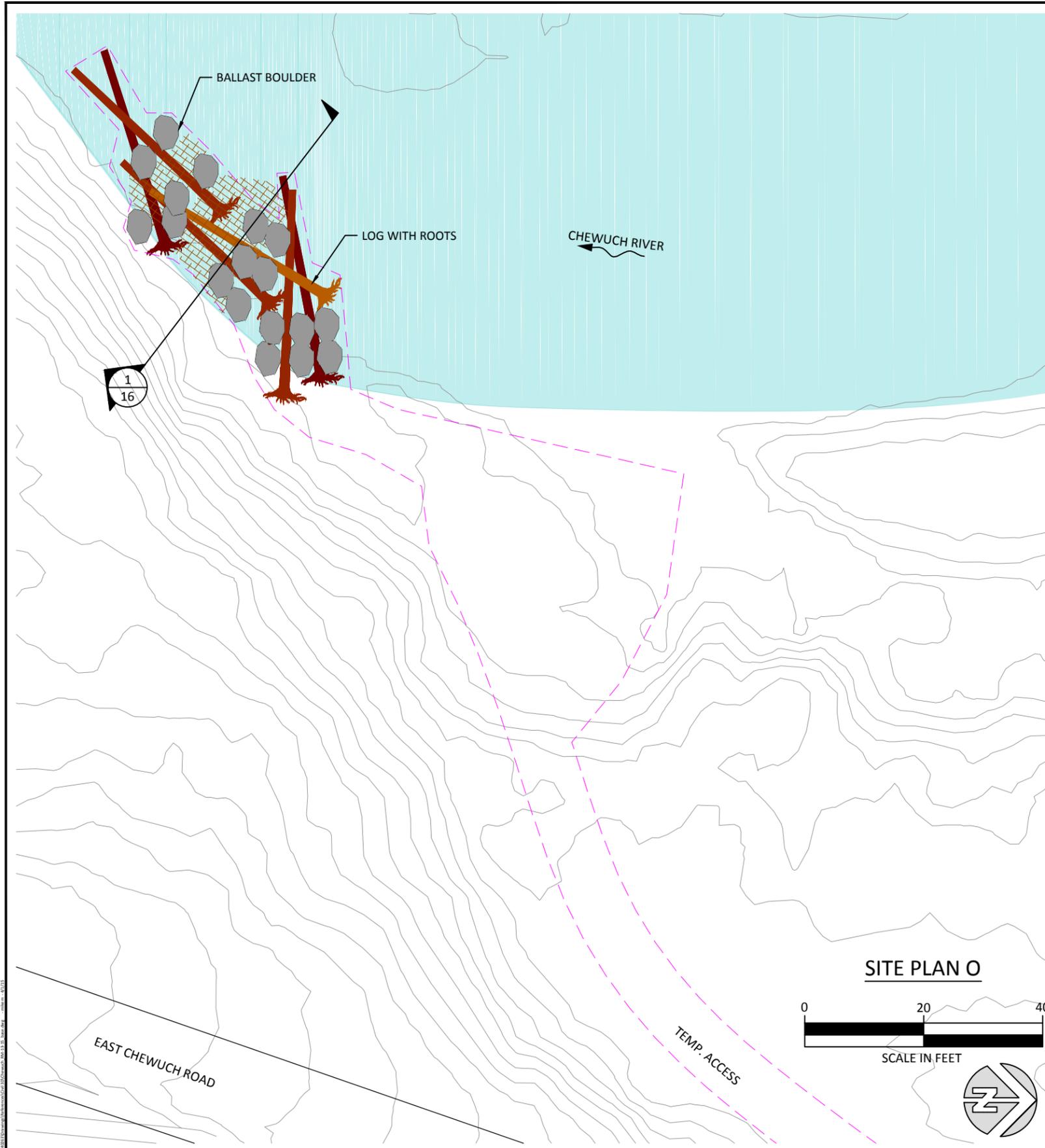
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SITE N

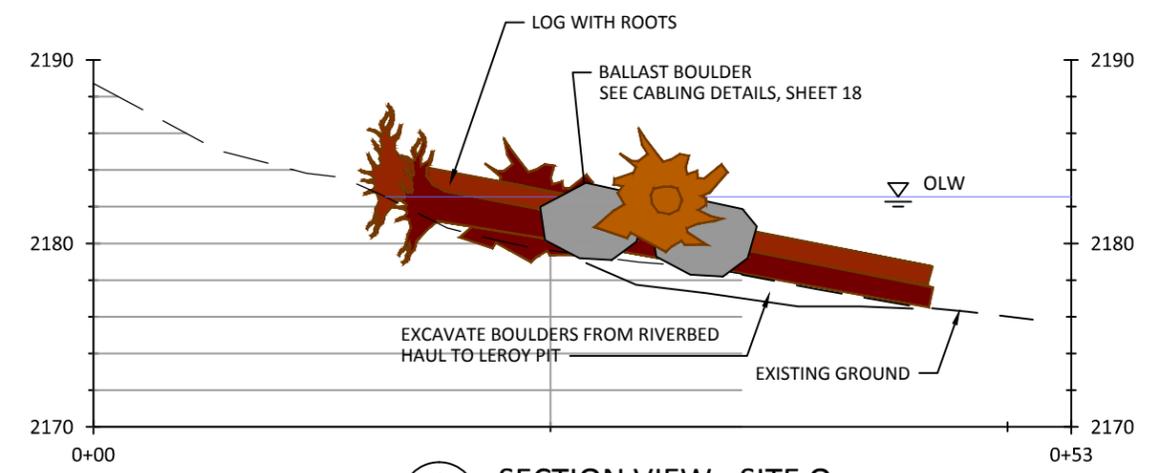


CONSTRUCTION QUANTITIES

ITEM	QUANTITY
EXCAVATE AND HAUL BOULDERS TO LEROY PIT	12 CY
LOG WITH ROOTS	6
BOULDER	18
IMPORTED SLASH	20 CY

- ### QUANTITIES NOTES:
- ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION.
 - TEMPORARY STOCKPILE OF EXCAVATED MATERIAL SHALL BE WITHIN DESIGNATED LIMITS OF DISTURBANCE.
 - ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.

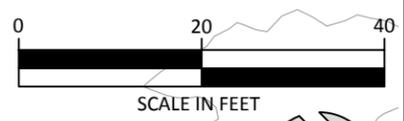
- ### NOTES:
- LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
 - BEFORE WOOD AND BALLAST BOULDER PLACEMENT, EXISTING SMALL BOULDERS SHALL BE REMOVED TO DEEPEN EXISTING POOL HABITAT. HAUL EXCAVATED MATERIAL FOR DISPOSAL AT THE LEROY PIT.
 - INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.
 - AVOID EXISTING TREES.



1/16 SECTION VIEW - SITE O

NOISE LIMITS:
CAMPGROUND IS NEARBY. WORK SHALL OCCUR BETWEEN 8AM AND 5PM MON-THU.

SITE PLAN O



NO.	BY	DATE	REVISION DESCRIPTION

RP,DF DRAWN	MB,MM DESIGNED	MB,MM CHECKED
MM APPROVED	04/01/15 DATE	PROJECT

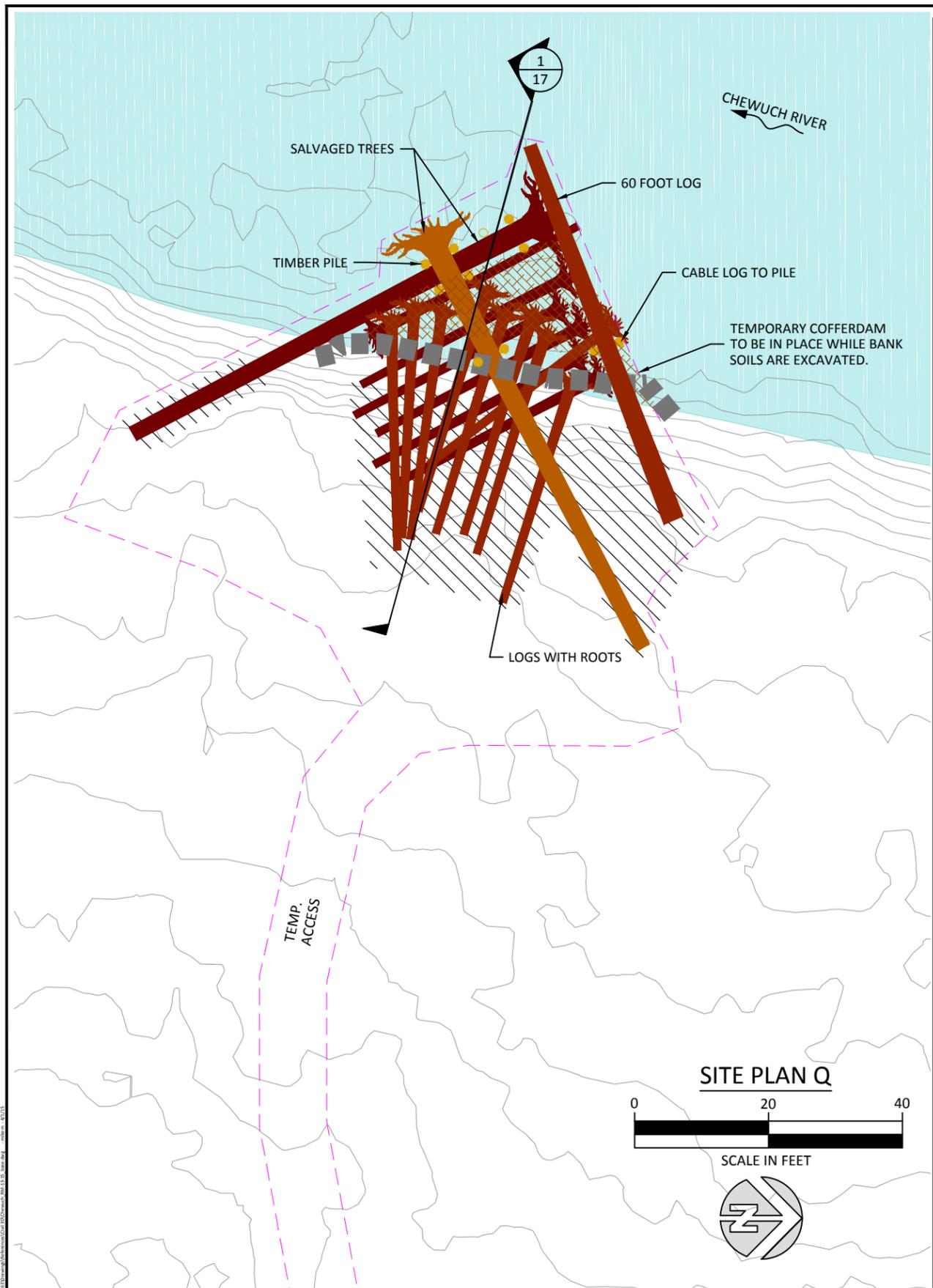
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SITE O

SHEET
16 OF 22



LEGEND

- LIMITS OF DISTURBANCE
- TEMPORARY COFFERDAM
- APPROXIMATE LOW WATER
- SLASH
- EXCAVATION AND BACKFILL
- LOG LAYER 1
- LOG LAYER 2
- LOG LAYER 3

SALVAGED TREE NOTES:

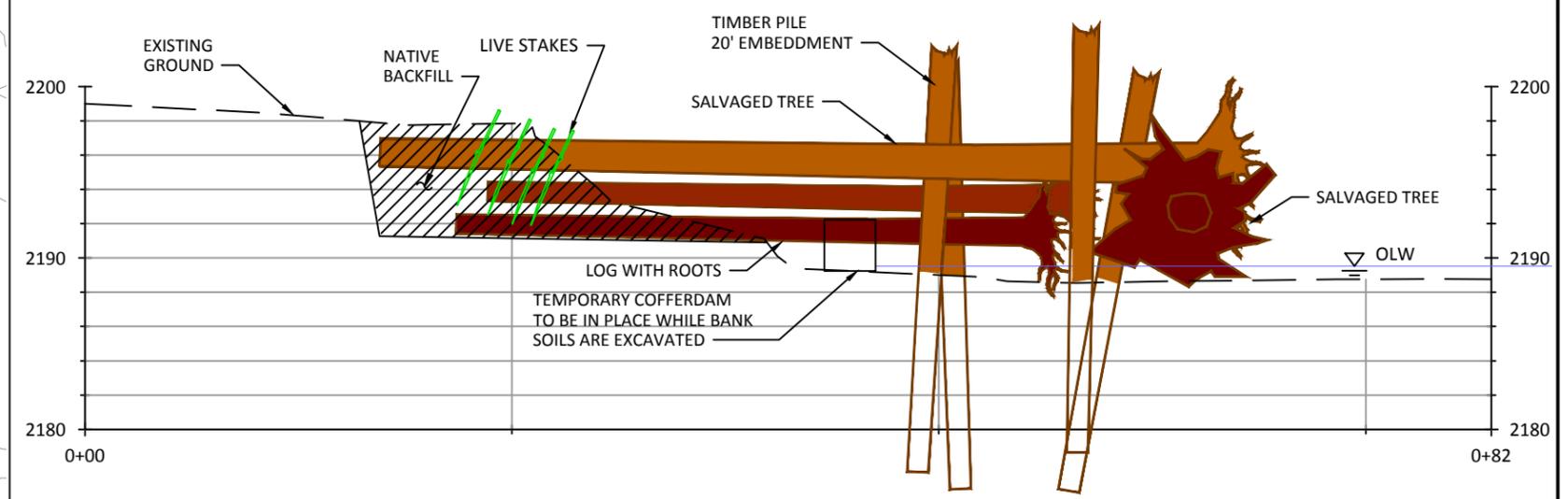
1. ONE SALVAGED SHALL BE FROM SITE Q LIMITS OF DISTURBANCE.
2. ONE SALVAGED TREE FROM SITE L.

CONSTRUCTION QUANTITIES

ITEM	QUANTITY
EXCAVATION & BACKFILL	125 CY
LOG WITH ROOTS	15
TIMBER PILE	10
OVERSIZE LOG (60')	1
SALVAGED TREE WITH ROOTS	2
COFFERDAM	60 FT

QUANTITIES NOTES:

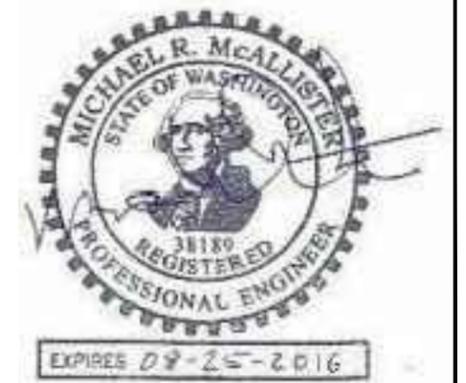
1. OWNER SUPPLIED LOGS WILL BE DECKED NEAR WEST CHEWUCH ROAD ROAD AT THE TEMPORARY ACCESS ROUTE.
2. ALL MATERIALS QUANTITIES ARE BASED ON IN-PLACE CONDITION DETERMINED BY THE PRE-PROJECT CONDITION COMPARED TO THE PROJECT FINAL CONDITION.
3. CONTRACTOR SHALL ALLOW FOR EXPANSION OF EXCAVATED MATERIAL AND COMPACTION OF PLACED MATERIAL WITH NO ADDITIONAL MEASUREMENT OR COST TO THE OWNER.
4. TEMPORARY STOCKPILE OF EXCAVATED MATERIAL SHALL BE WITHIN DESIGNATED LIMITS OF DISTURBANCE.
5. ON ACCESS ROUTES AND DISTURBANCE AREA FOR PROJECT SITE, SALVAGE TREES, SHRUBS, AND WOODY DEBRIS TO BE USED AS SLASH.
6. TIMBER PILES SHALL BE INSTALLED BY VIBRATORY DRIVER.



1
17 SECTION VIEW - SITE Q

LOG NOTES:

1. LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
2. INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.

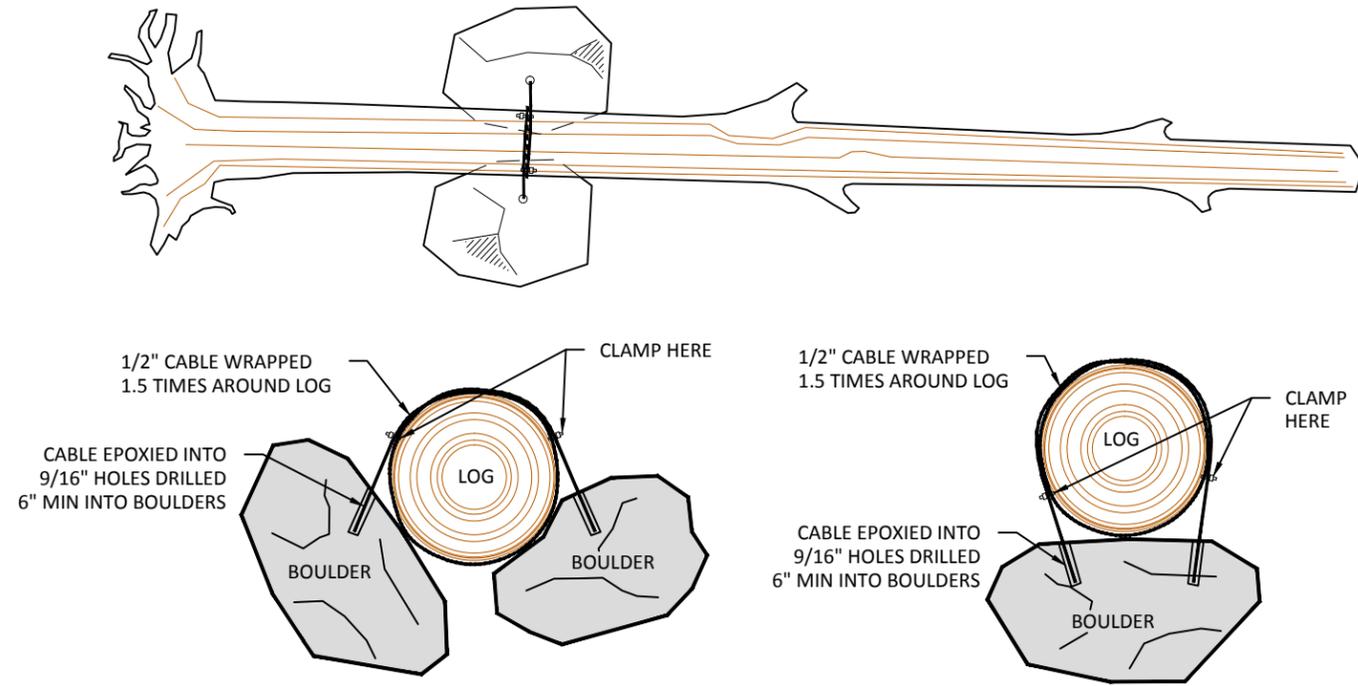
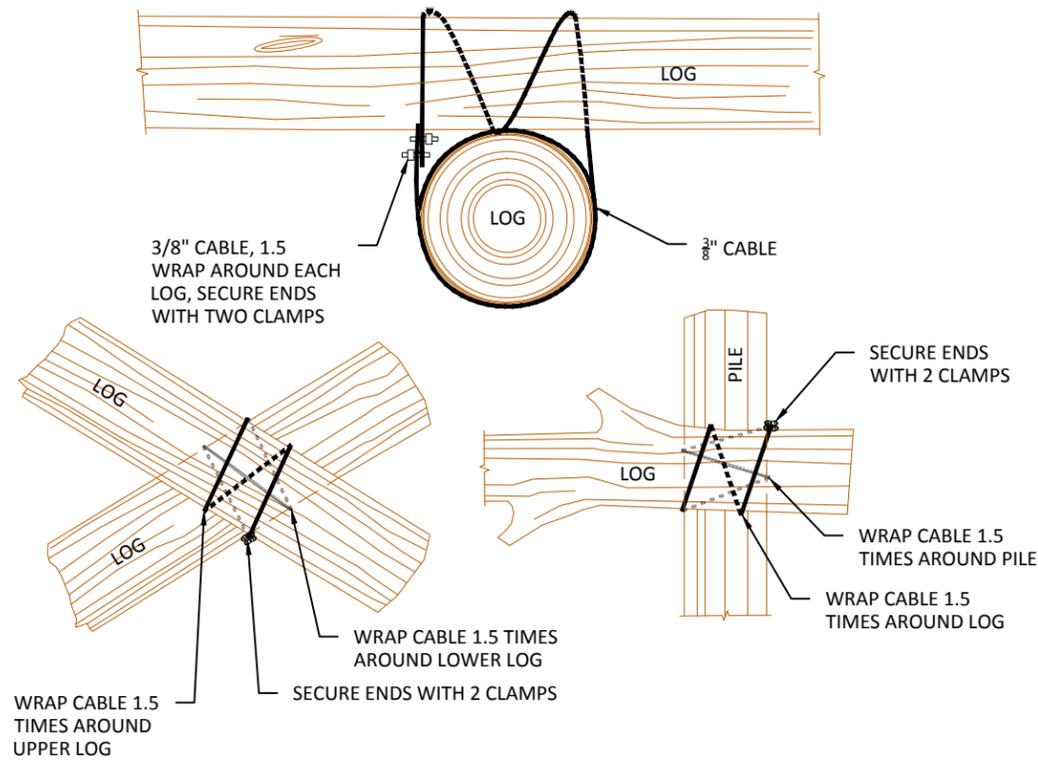


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LOG CABLING

DESCRIPTION

THIS WORK CONSISTS OF ANCHORING LARGE WOOD WITH CABLE AND PILES AS REQUIRED TO PROVIDE ADEQUATE BALLAST FOR STRUCTURAL STABILITY.

MATERIALS

CABLE SHALL BE 3/8 INCH GALVANIZED, STEEL CORE WIRE ROPE.

CLAMPS SHALL BE CROSBY CLIPS, G-450, OR APPROVED EQUAL. MINIMUM OF 2 CLAMPS PER CONNECTION.

CONSTRUCTION

FINAL POSITIONING OF THE ANCHORED STRUCTURES SHALL BE IN THE APPROXIMATE LOCATION AS SHOWN ON THE PLANS.

LOGS SHALL BE TOUCHING. CABLE SHALL BE WRAPPED ONE AND ONE HALF WRAP AROUND EACH LOG. PULL TIGHT AND INSTALL CLAMPS. CLAMPS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED CLAMP SIZE AND SPACING FOR THE SIZE AND LOAD RATING OF THE CABLE BEING USED.

VIBRATORY PILE DRIVING

DESCRIPTION

THIS WORK CONSISTS OF INSTALLING LOGS VERTICALLY AS WOODEN PILES WHERE SHOWN ON THE PLANS. INSTALLATION SHALL BE WITH VIBRATORY PILE DRIVER.

MATERIALS

LOG PILES SHALL BE 12-18" DIAMETER AT BUTT END AND MINIMUM 10" DIAMETER AT SCALED END. EACH LOG PILE SHALL BE MINIMUM 30' LONG.

CONSTRUCTION

FINAL POSITIONING OF LOG PILES SHALL BE IN THE APPROXIMATE LOCATIONS SHOWN ON THE PLANS.

EACH PILE SHALL BE INSTALLED BY VIBRATORY PILE DRIVER TO A DEPTH OF 20' BELOW GROUND SURFACE. IF PILES CANNOT MEET THE DEPTH REQUIREMENT, BOULDERS SHALL BE USED IN LIEU OF PILES.

TESTING

AT EACH PROJECT SITE WHERE PILES ARE TO BE INSTALLED, ONE PILE SHALL BE TESTED FOR PULLOUT RESISTANCE. THE OWNER WILL PROVIDE THE PULL TEST EQUIPMENT.

BOULDER BALLAST

DESCRIPTION

THIS WORK CONSISTS OF ANCHORING LARGE WOOD WITH CABLE AND BOULDERS AS REQUIRED TO PROVIDE ADEQUATE BALLAST FOR STRUCTURAL STABILITY.

MATERIALS

BOULDERS SHALL BE NON-FRACTURED STONE WITH A MINIMUM SPECIFIC GRAVITY OF 2.65.

CABLE SHALL BE 1/2 INCH GALVANIZED, STEEL CORE, WIRE ROPE.

CLAMPS SHALL BE CROSBY CLIPS, G-450, OR APPROVED EQUAL. MINIMUM OF 2 CLAMPS PER CONNECTION.

EPOXY FOR ANCHORING SHALL BE HILTI HIT RE 500 ADHESIVE OR APPROVED EQUAL IF SUBMERGED DURING INSTALLATION, OR HILTI HIT-HY150 OR APPROVED EQUAL IF DRY INSTALLATION.

CONSTRUCTION

DRILL HOLES IN SOLID ROCK AND AVOID ANY CRACKS OR FRACTURES. HOLES SHALL BE 9/16 INCH IN DIAMETER. HOLES SHALL BE DRILLED 6 INCHES, MINIMUM, INTO ROCK.

HOLES SHALL BE CLEANED OF LOOSE ROCK FRAGMENTS AND DUST WITH A BRUSH AND AIR BLASTS. INSTALL EPOXY PER MANUFACTURER'S RECOMMENDATIONS.

CABLE SHALL BE WRAPPED A MINIMUM OF ONE FULL WRAP AROUND LOG BEFORE ENDS ARE INSERTED INTO THE DRILLED HOLES FILLED WITH EPOXY. DIP CABLE INTO ACETONE AND WIPE CABLE WITH CLEAN RAG TO REMOVE OIL AND RESIDUE. ALLOW ACETONE TO AIR-DRY PRIOR TO INSERTION INTO EPOXY FILLED HOLE. FILL HOLES WITH ENOUGH EPOXY TO ENSURE COMPLETE COVERAGE WITH EPOXY. INSERT CABLE INTO HOLE SO THAT END OF CABLE HITS THE BOTTOM OF THE HOLE. AS AN INDICATOR THAT ENOUGH EPOXY WAS INJECTED, A SMALL AMOUNT OF EXCESS EPOXY SHALL BE PUSHED OUT OF THE TOP OF THE HOLE AS CABLE IS SEATED IN HOLE. REFER TO MANUFACTURER'S RECOMMENDATION FOR CURE TIME.

LOGS AND BOULDERS SHALL BE TOUCHING. PULL CABLE TIGHT AND INSTALL CLAMPS. CLAMPS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED CLAMP SIZE AND SPACING FOR THE SIZE AND LOAD RATING OF THE CABLE BEING USED.



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TYPICAL LOG AND BOULDER
CABLING DETAILS

SHEET
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Special Provisions

INTRODUCTION

The Washington State Department of Transportation's Standard Specifications for Road, Bridge and Municipal Construction 2014 (WSDOT Standard Specifications) shall apply unless otherwise noted in the following Special Provisions. The "Contracting Agency" or "Owner" shall be the Confederated Tribes and Bands of the Yakama Nation. Additional specifications in the following contract sections are included for items not covered by the WSDOT Standard Specifications.

DIVISION 1 - GENERAL REQUIREMENTS

Sections 1-02, 1-03, and 1-08 (except 1-08.6, 1-08.7, 1-08.8) of the Standard Specifications do not apply.

ITEM 001- TESC, SPCC PLAN AND IMPLEMENTATION

Description

This work shall provide for preparation, implementation, and removal of a Temporary Erosion Sediment Control (TESC) plan and for the preparation and implementation of a Spill Prevention Control and Countermeasure (SPCC) plan in accordance with Section 1-07.15 of the Standard Specifications, and as amended by these Special Provisions.

- The Contractor shall submit a TESC for the project to the Owner for approval. The TESC must satisfy the requirements of the Washington Department of Ecology NPDES Stormwater General Permit for Construction Activity and all other applicable permits. The TESC included in the Drawings and described herein is intended to provide a baseline for sediment and erosion control and does not ensure that the standards established by any applicable permits will be met. The Contractor may use these measures or alternative measures of his own design to ensure satisfactory performance and that the erosion control requirements of all applicable permits are met. The contractor shall be named as the permit holder. The contractor shall be responsible for implementing, inspecting and filing reports, maintaining, replacing, and removing TESC and SPCC measures. The plan shall include the name, address and 24-hour contact number of the person responsible for erosion prevention and sediment control measures.
- Work will be in a sensitive environmental area. Biodegradable Hydraulic Fluid shall be installed into each piece of heavy machinery working within 50 feet of river. The Contractor shall submit proof of installation of biodegradable hydraulic fluid.
- A spill Containment Kit shall be on site and crews shall be trained in its use.

Measurement

"TESC, SPCC Plan and Implementation," including the above amendments to the item will be measured by lump sum.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section 1-04.1 for the following bid items: "TESC, SPCC Plan and Implementation" per lump sum.

ITEM 002 - MOBILIZATION

This item shall consist of preparation work and operations performed by the Contractor in accordance with the provisions of Section 1-09.7 of the Washington Department of Transportation Standard Specifications (Standard Specifications).

Measurement and Payment

Payment for Mobilization shall be by the lump sum contract price for, 'Mobilization', partial payments will be made as in accordance with Section 1-09.9 of the Standard Specifications. Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

DIVISION 2 - EARTHWORK

ITEM 003 - CHANNEL EXCAVATION INCL. HAUL

This item consists of excavating, loading, hauling, placing, and embankment compacting, or otherwise disposing of the material in accordance with Section 2-03 of the Standard Specifications, and as amended by these Special Provisions.

- This item includes clearing at work areas as needed to facilitate hauling between excavation and fill areas.
- Portions of work will be in water.
- This item includes hauling of excavated material to embankment (fill) areas designated in the Plans. The unit contract price per cubic yard shall include "Haul".
- This item includes earth embankment construction at designated fill areas. Embankment compaction shall be per Section 2-03.3(14)C Method A. Payment for Embankment Compaction will not be made as a separate item. All costs for embankment compaction shall be included in this item.
- No work shall occur outside of the limits of disturbance shown in the Plans unless authorized by the Owner.
- The Contractor shall provide minimum 5 days advance notice to the Owner before work at Site D. The Contractor shall understand that coordination with the Owner and only after the Owner has completed Hurtle rescue can work begin.

Sources of fill include these areas:

- Site D - Excavation of channel, load, haul, and embankment compact at Boulder Creek Pit.
- Sites H, I, and N - Load and haul excess fill and embankment compact at Boulder Creek Pit.
- Sites C and O - Excavate, load, and haul riverbed material (boulders, cobbles) to Leroy Pit.

Boulder Creek Pit

- Locations within the Boulder Creek Pit limits will be staked for placement of waste material.
- Upon completion of Haul, the Contractor shall shape the material to blend with surrounding topography.

Measurement

"Channel Excavation Incl. Haul" will be measured by cubic yard. All excavated material will be measured in the position it occupied before the excavation was performed. An original ground measurement was taken using digital terrain modeling survey techniques. The original ground will be compared with the planned finished section shown in the Plans. Slope/ground intercept points defining the limits of the measurement will be as staked by the Owner. No additional compensation will be made for excavated material that is stockpiled, re-excavated, and moved again.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section 1-04.1 for the following bid items: "Channel Excavation Incl. Haul" per cubic yard.

DIVISION 8 - MISCELLANEOUS CONSTRUCTION

The following sections are added.

ITEM 004 - SITE ACCESS MEASURES

Description

This item includes construction, maintenance, and decommissioning of access roads, and staging and stockpile areas; temporary traffic control; utilities locates; and site cleanup.

Materials

The Contractor shall provide all required materials for site access measures.

Construction Requirements

- Site Access

Temporary site access shall be along alignments shown in the plans. Minor deviations to the alignments may occur as directed by the Owner to preserve sensitive areas or trees, or to avoid damage to fence posts or other features identified in the field. Deviations from the alignments shown in the plans shall be approved by Owner prior to use. If fence is removed to facilitate access or construction, the Contractor shall replace or repair fence at no additional cost to the Owner. Site access routes shall be maintained and restored to original or better condition.

- Clearing and Grubbing

Site access will require the removal of trees and shrubs. Only trees designated for removal by the Owner shall be removed. Removed trees and shrubs shall be salvaged for reuse in Log Structures.

- Traffic Control

Temporary traffic control requirements shall include construction signage any other measures required by State or local regulations at the entrance of each project site and fill disposal site.

"Site Access Measures," will be measured by lump sum.

- Ramps

Sites D and H/I require access ramps from the road to floodplain. The Contractor may elect to load and haul Owner provided ramp material from the Leroy Pit.

The Contractor shall remove the ramp to site D and haul the material to LeRoy Pit. Embankment compact fill at LeRoy Pit.

- Boulder Barricades

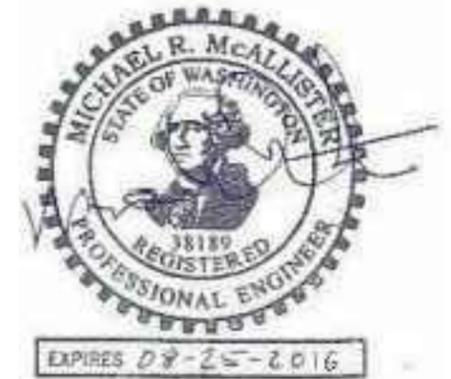
The Contractor shall block access to Sites H/I. Boulders shall be inset into the ground to provide a natural appearance and resist movement. The Contractor may elect to load and haul Owner provided Boulders from the Leroy Pit.

Measurement

The unit contract prices for "Site Access Measures" shall be full compensation for all costs incurred for equipment, materials and labor for Site Access Measures as described in this section.

Payment

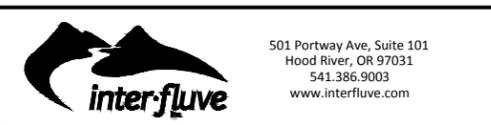
Payment will be made in accordance with Section 1-09.9 for the following bid items: "Site Access Measures" per lump sum.



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Chewuch RM 13-15.5
Fish Habitat Enhancement Project



SPECIFICATIONS

North Leroy Creek Pit Operating Plan

Reviewed and Approved by:


DANA BARDSLEY
North Zone Engineer

Reviewed and Approved by:


JOHN E. NEWCOM
District Ranger

Purpose

Development of the North Leroy Creek borrow site is necessary to provide the size, quantity, and quality of rock necessary for use on fish passage improvement projects within the Methow River sub-basin.

Location

The North Leroy Creek borrow site is located on National Forest System land in Section 6, Township 36 North, Range 22 East and Section 31, Township 37 North, Range 22 East about 12.5 miles north of Winthrop, Washington. Access to this site is from Forest road 5010 and then right on Forest road 5010-436. The potential borrow site is about 0.51 miles north on road 5010-436 and the talus slope is about 50 yards to the east. It is anticipated that material from this site will be used for a variety of purposes including rip-rap and landscape rock for small and large commercial entries. The base area is large enough to accommodate some rock storage.

Site Geology

The North Leroy Creek site is situated within a north-northwest-elongate pluton of the Okanogan Range batholith that is separated from the sedimentary rocks of the Methow graben to the west by the Pasayten fault. The Okanogan Range batholith is the southern segment of a north-northwest-trending belt of Early Cretaceous volcanic and plutonic rocks that extend from southern British Columbia into northern Washington. Locally, the North Leroy Creek site is within a pluton differentiated as a "Trondhjemite of Doe Mountain." These rocks are generally homogeneous trondhjemites and granodiorites that have intruded into and chilled against other plutons that are elements of the Okanogan Range batholith. The North Leroy Creek site is located along the eastern wall of the Chewuch River valley. Glacial erosion during the Pleistocene by alpine glaciers and the continental ice-sheet has resulted in the over-steepening of the valley walls. As a consequence of the glaciers, the competent rocks that were glacially eroded form steep cliffs that have since built-up broad talus cones.

Surface Disturbance and Reclamation

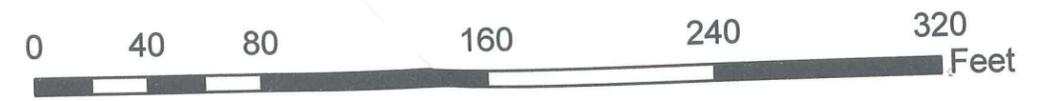
Other than the 2-3 acres cleared for the base and rock storage area, little to no surface disturbance will occur at the site. The access road was already there, and a timber harvest landing was located where the rock storage area is now. Potential drainage will remain onsite; the rock storage area slopes slightly toward the toe of the rock slope. Some surface rock may need to be placed on the entry road to limit puddling. Upon pit closure, grass seeding at the rock storage area will be sufficient.

Construction Material and Borrow Site Development

The North Leroy Creek site consists of broad talus cones at the foot of a prominent cliff. The rock is predominantly a hard (H3), medium-grained granitic rock that is weakly foliated. The rock is slightly weathered to fresh (W2); the fresh rock is white, and the slightly weathered rock is brownish-orange due to iron oxide staining. The talus pile consists of mostly 1- to 4-foot-diameter angular boulders with about 25 percent greater than 4-foot diameter. The maximum size boulder observed was about 20-foot-diameter at the base of the talus slope. To maximize the volume of material borrowed and still provide a safe position to work a bench shall be constructed as shown on the attached map. Start material removal at the slope/bedrock (cliff) intersection and start working the material down from that point, excavating all material to the cliff face.

Pit Development Plan

- (1) Excavation shall be limited to about 36,000 cubic yards. The preferred design will excavate the site back to a 1:1 slope with one 20-foot bench located about 1/3 of the distance upslope from the base. If practical, material removal would start at the slope/bedrock (cliff) intersection and work downslope to excavate material to the cliff face. Access (dozer) routes leading to bench levels of the rock pit shall be maintained in a condition for safe and efficient transport of heavy equipment.
- (2) Any blasting shall be controlled to avoid damage to landscape features located outside the limits of the existing pit development.
- (3) Stockpiling of rock materials (crushed rock aggregate and riprap) during this planned entry shall be limited to designated areas.
- (4) Adequate measures shall be taken to prevent gully erosion and/or ponding of surface water runoff on the pit floor. Such measures may include grading, re-contouring, or construction of ditches or sediment traps, as conditions may require.
- (5) Operator (contractor) shall take all necessary precautions to prevent diesel fuel leakage, regardless of amount.
- (6) All debris resulting from operations (e.g., metal, rubber, plastic, glass, paper, etc.) shall be cleaned up and removed from the site for disposal off Forest administered lands.
- (7) All operations relating to the development of rock materials, including the use of explosives shall conform to any requirements that may be implemented for the protection of threatened and endangered species.
- (8) Prior to final mobilization (move out) from the rock pit, the contractor shall contact the Forest Service and set up an on-site meeting to discuss any final conditions that need to be addressed.
- (9) Public safety signing for blasting operations and rock haul shall conform to the requirements of the Manual of Uniform Traffic Control Devices (MUTCD).

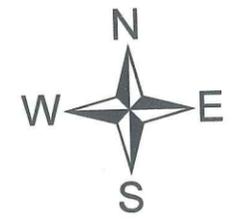


NORTH LEROY BORROW SITE

-  Bench Construction
-  Current Rock Source
-  Future Rock Source
-  Preservation Site
-  Staging Area

LEGEND

-  CONTROL POINT - REBAR AND CAP
-  CONTROL POINT - SPIKE
-  CONTROL POINT - SPOT ON ROCK
-  SPRUCE > 12" DIA.
-  DOUG. FIR > 12" DIA.
-  P.PINE > 12" DIA.
-  BOULDER > 6' DIA.



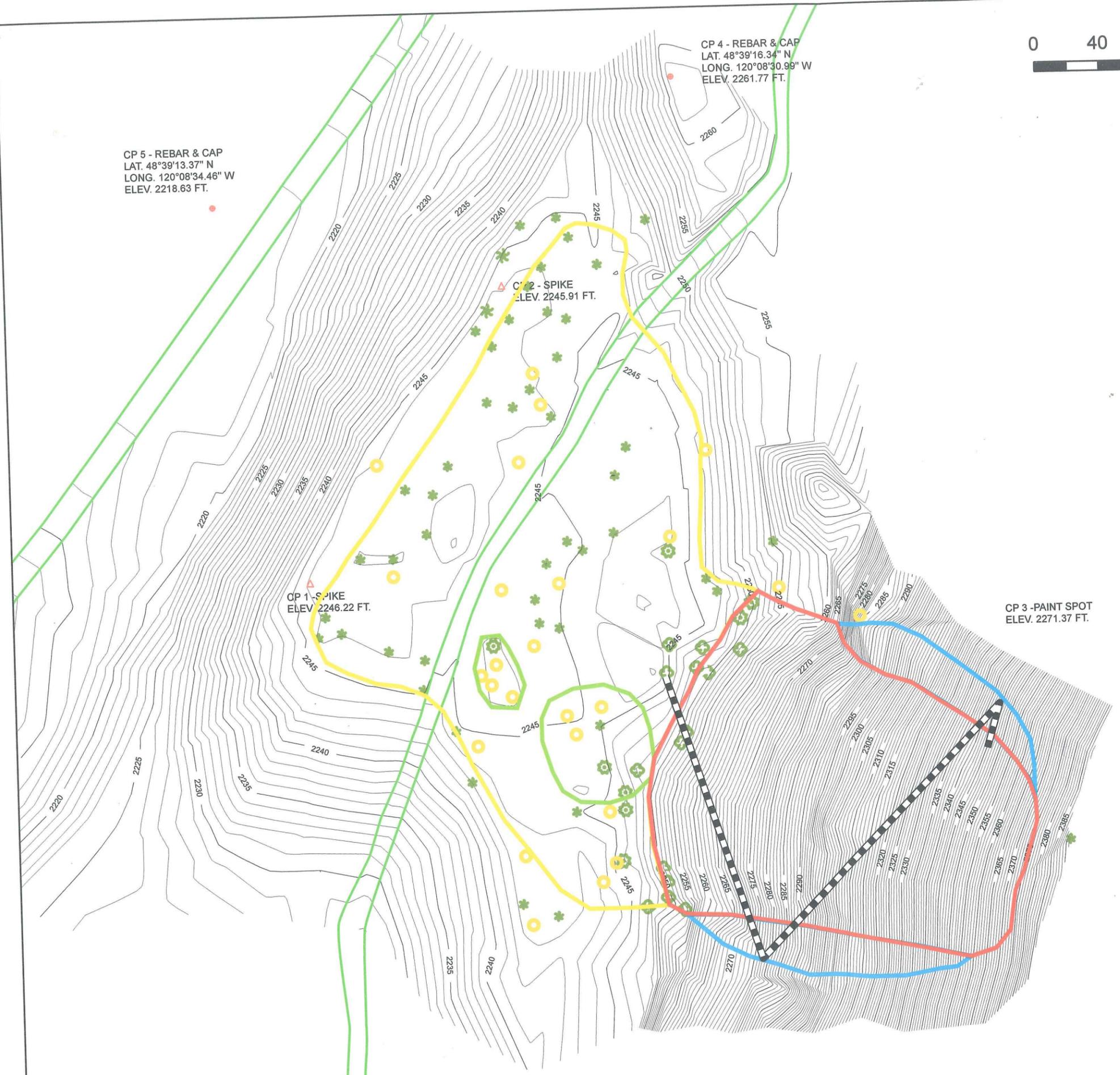
CP 5 - REBAR & CAP
LAT. 48°39'13.37" N
LONG. 120°08'34.46" W
ELEV. 2218.63 FT.

CP 4 - REBAR & CAP
LAT. 48°39'16.34" N
LONG. 120°08'30.99" W
ELEV. 2261.77 FT.

CP 2 - SPIKE
ELEV. 2245.91 FT.

CP 1 - SPIKE
ELEV. 2246.22 FT.

CP 3 - PAINT SPOT
ELEV. 2271.37 FT.



Section 205. — ROCK BLASTING

Description

205.01 This work consists of fracturing rock and constructing stable final rock cut faces using controlled blasting and production blasting techniques.

Controlled blasting uses explosives to form a shear plane in the rock along a specified backslope. Controlled blasting includes presplitting and cushion blasting.

Production blasting uses explosives to fracture rock.

Material

205.02 Conform to the following Subsection:

Explosives and blasting accessories	725.25
-------------------------------------	--------

Construction Requirements

205.03 Regulations. Furnish copies or other proof of all-applicable permits and licenses. Comply with Federal, State, and local regulations on the purchase, transportation, storage, and use of explosive material. Federal regulations include the following:

(a) **Safety and health.** OSHA, 29 CFR Part 1926, Subpart U.

(b) **Storage, security, and accountability.** Bureau of Alcohol, Tobacco, and Firearms (BATF), 27 CFR Part 181.

(c) **Shipment.** DOT, 49 CFR Parts 171-179, 390-397.

(d) **National Park Service regulations.** For projects in National Parks, also comply with NPS Director's Order #65, Explosives Use and Blasting Safety.

205.04 Blaster-in-Charge. Designate in writing a blaster-in-charge. Submit evidence that the blaster-in-charge has a valid State blaster's license or other license accepted by the State where the project is located and issued by an equivalent licensing body for the type of blasting required.

205.05 Blasting Plans. Blasting plans are for quality control and record keeping purposes and are to be signed by the blaster-in-charge. The review and acceptance of blasting plans does not relieve the Contractor of the responsibility for using existing drilling and blasting technology, and for obtaining the required results.

Do not deliver explosives to the project until the general blasting plan is accepted.

(a) General blasting plan. Submit a general blasting plan for acceptance at least 14 days before drilling operations begin. Include, as a minimum, the following safety and procedural details:

- (1) Working procedures and safety precautions for storing, transporting, handling, and detonating explosives.
- (2) Proposed product selection for both dry and wet holes. Furnish Manufacturer's Material Safety Data Sheets for all explosives, primers, initiators, and other blasting devices.
- (3) Typical plan and section views for both production and controlled blasting, including maximum length of the shot, burden, hole spacing, hole inclination, hole depth, hole diameter, subdrill depth, and powder factor.
- (4) Proposed initiation and delay methods and delay times.
- (5) Proposed format for providing all the required information for the site specific blasting plans.

(b) Site-specific blasting plans. After the general blasting plan is accepted, submit site-specific blasting plans for acceptance before drilling operations begin. Allow up to three days for review of these plans. Include the following information in the site-specific blasting plan.

- (1) Site drawings showing a scaled map of the blast area and cross-sectional views which indicate beginning and ending stations, free face location, hole spacing, hole diameter, hole depth, burden, hole inclination, and subdrill depth. Include on the drawings any significant joints or bedding planes within the blast zone and incorporate this geology into the blast design.
- (2) Where blasting may affect nearby structures or utilities, provide method of monitoring and controlling blast vibrations according to Subsection 205.06.
- (3) Loading pattern diagram showing the location and amount of each type of explosive to be used in the holes including primer and initiators and the location, type, and depth of stemming, column heights, and overall powder factor for each type of loading.
- (4) Delay and initiation diagram showing delay pattern, sequence, and delay times.

205.06 Preblast condition survey and vibration monitoring and control. When blasting near buildings, structures, or utilities that may be subject to damage from ground or airblast vibrations, provide a blast vibration specialist. Provide a specialist with at least 5 consecutive years experience in vibration monitoring for at least 3 projects. Fourteen days before blasting, submit the name and qualifications of the blast vibration specialist including the following:

(a) Project names, locations, and services performed.

(b) Name and phone number of owner/agency contact who can verify the experience of the specialist.

Before blasting, arrange for a preblast condition survey of nearby buildings, structures, or utilities, which could be at risk from blasting damage. Use a survey method acceptable to the Contractor's insurance company. Damage resulting from blasting is the Contractor's responsibility. Make all preblast condition survey records available to the CO. Notify the CO and occupants of nearby buildings at least 24 hours before blasting.

Control vibrations with properly designed delay sequences and allowable charge weights per delay when blasting near buildings, structures, or utilities that may be subject to damage from blast-induced vibrations. Base allowable charge weights per delay by carrying out trial blasts and measuring vibration levels. Conduct test blasts with blast plan modifications that limit ground and airblast vibrations to a level that will not cause damage to nearby buildings, structures, or utilities as determined by the blast vibration specialist.

When vibration damage to buildings, structures, or utilities is possible, monitor each blast with approved seismographs and airblast monitoring equipment located at acceptable locations. Use seismographs capable of recording particle velocity for three mutually perpendicular components of vibration. The blast vibration specialist shall interpret the seismograph records and airblast records to ensure that the data is effectively used in the control of the blasting operations.

205.07 Test Blasting. Drill, blast, and excavate one or more test sections as proposed in the blasting plan before full-scale drilling and blasting. Test blasts may be made away from or at the final slope line.

Space blast holes for the cushion (trim) method of controlled blasting no more than 60 inches apart for the initial test blast. Space blast holes for the presplitting method of controlled blasting no more than 30 inches apart for the initial test blast. Adjust the spacing as approved. Use the approved spacing in the full-scale blasting or subsequent test blasts if necessary.

A test blast is unacceptable when it results in fragmentation beyond the final rock face, fly rock, excessive vibration, air blast, overbreak, damage to the final rock face, or overhang. When a test blast is unacceptable, revise the blasting plan and make an additional test blast.

205.08 Blasting.

(a) **General.** Drill and blast according to the blasting plan.

Before drilling, remove overburden soil and loose rock along the top of the excavation for at least 30 feet beyond the hole drilling limits or to the end of the cut.

Cap all holes to prevent unwanted backfill. Place a stake next to each hole with hole number and total depth drilled.

Use the types of explosives and blasting accessories necessary to obtain the required results. A bottom charge may be larger than the line charges if no overbreak results.

Free blast holes of obstructions for their entire depth. Place charges without caving the blast hole walls. Stem the upper portion of all blast holes with dry sand or other granular material passing the 3/8-inch sieve. Do not stem the hole with drill cuttings.

Following a blast, stop work in the entire blast area, and check for misfires before allowing worker to return to excavate the rock.

Remove or stabilize all cut face rock that is loose, hanging, or potentially dangerous. Scale by hand or machine methods as approved by the CO. Leave minor irregularities or surface variations in place if they do not create a hazard. Drill the next lift only after the cleanup work and stabilization work is complete.

If blasting operations cause fracturing of the final rock face, repair or stabilize it in an approved manner at no cost to the Government. Repair or stabilization may include removal, rock bolting, rock dowels, or other stabilization techniques.

Halt blasting operations when any of the following occur and perform additional test blast:

- (1) Slopes are unstable;
- (2) Slopes exceed tolerances or overhangs are created;
- (3) Backslope damage occurs;
- (4) Safety of the public is jeopardized;
- (5) Property or natural features are endangered;
- (6) Fly rock is generated; or
- (7) Excessive ground or airblast vibrations occur in an area where damage to buildings, structures, or utilities is possible.

(b) Drill logs. Submit drill logs. Include the following:

- (1) Blast plan map showing designated hole numbers; and
- (2) Individual hole logs completed and signed by the driller that show total depth drilled, depths and descriptions of significant conditions encountered during drilling that may affect loading such as water or voids, and date drilled.

(c) Controlled blasting. When test blasts indicate the need for controlled blasting, use controlled blasting methods to form the final rock cut faces when the rock height is more than 10 feet above ditch grade and the staked slope is 2V:1H or steeper.

Controlled blasting includes only those holes drilled on the row furthest from the free face and that are drilled on the design slope.

Use downhole angle or fan drill blast holes for pioneering the tops of rock cuts or preparing a working platform for controlled blasting. Use the blast hole diameter and hole spacing established for controlled blasting during the test blasts.

Drill controlled blast holes not greater than 4 inches in diameter along the final rock face line. Drill controlled blast holes within 3 inches of the proposed surface location. Drill controlled blast holes at least 30 feet beyond the production holes to be detonated or to the end of the cut.

Use drilling equipment with mechanical or electrical-mechanical devices that accurately control the angle the drill enters the rock. Select a lift height and conduct drilling operations so the blast hole spacing and downhole alignment does not vary more than 9 inches from the proposed spacing and alignment. When more than 5 percent of the holes exceed the variance, reduce the lift height and modify the drilling operations until the blast holes are within the allowable variance. Maximum lift height is 50 feet.

A 12-inch offset is allowed for a working bench at the bottom of each lift for drilling the next lower controlled blasting hole pattern. Adjust the drill inclination angle or the initial drill collar location so the required ditch cross-section is obtained when the bench is used.

Drilling 20 inches below the ditch bottom is allowed for removing the toe.

Do not use bulk ammonium nitrate and fuel oil for controlled blasting.

Where presplitting, delay the nearest production blast row at least 25 milliseconds after blasting the presplit line. Presplit a minimum of 30 feet ahead of production blasting zone.

Where cushion (trim) blasting, delay the cushion blast row from 25 to 75 milliseconds after blasting the nearest production row.

(d) Production blasting. Drill the row of production blast holes closest to the controlled blast line parallel and no closer than 6 feet to the controlled blast line. Do not drill production blast holes lower than the bottom of the controlled blast holes.

Detonate production holes on a delay sequence toward a free face.

205.09 After Blast Reports. Within 3 days after a blast and before the next blast, submit an after-blast report that includes the following:

- (a) Results of the blast and whether or not blasting objectives were met. If blasting objectives were not met, submit proposed changes to future site-specific blasting plans that will produce acceptable results and proposed repair or stabilization plan for unstable or blast damaged backslopes.
- (b) Blasting logs that include the following:
 - (1) All actual dimensions of the shot including blast hole depths, hole diameter, burden, spacing, subdrilling, stemming, powder loads, and timing; and
 - (2) A drawing or sketch showing the direction of the face, or faces, and the physical shot layout.
- (c) If a seismograph was used, provide the following:
 - (1) Identification of instrument used;
 - (2) Name of qualified observer and interpreter;
 - (3) Distance and direction of recording station from blast area;
 - (4) Type of ground recording station and material on which the instrument is sitting;
 - (5) Maximum particle velocity in each direction;
 - (6) A dated and signed copy of the seismograph readings; and
 - (7) Post-blast condition survey.
- (d) Results of airblast monitoring.
- (e) Results of post blast condition survey.

205.10 Acceptance. Material for rock blasting will be evaluated under Subsections 106.02 and 106.03.

Rock blasting work and services will be evaluated under Subsections 106.02 and 106.04.

Measurement

~~205.11 Measure the Section 205 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.~~

~~Measure controlled blasting by the square foot of face shot as shown in the blasting plan. Measure controlled blast hole by the linear foot based on the actual length of drilling as recorded in the blasting log. Do not measure vertical holes or horizontal holes.~~

~~Do not measure production blasting.~~

Payment

~~205.12 The accepted quantities will be paid at the contract price per unit of measurement for the Section 205 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.~~

Section 205. — ROCK BLASTING

Description

205.1 This work consists of fracturing rock and constructing stable final rock cut faces using controlled blasting and production blasting techniques.

Controlled blasting uses explosives to form a shear plane in the rock along a specified backslope. Controlled blasting includes presplitting and cushion blasting.

Production blasting uses explosives to fracture rock.

Material

205.2 Conform to the following Subsection:

Explosives and blasting accessories	725.25
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Construction Requirements

205.3 Regulations. Furnish copies or other proof of all-applicable permits and licenses. Comply with Federal, State, and local regulations on the purchase, transportation, storage, and use of explosive material. Federal regulations include the following:

(a) **Safety and health.** OSHA, 29 CFR Part 1926, Subpart U.

(b) **Storage, security, and accountability.** Bureau of Alcohol, Tobacco, and Firearms (BATF), 27 CFR Part 181.

(c) **Shipment.** DOT, 49 CFR Parts 171-179, 390-397.

(d) **National Park Service regulations.** For projects in National Parks, also comply with NPS Director's Order #65, Explosives Use and Blasting Safety.

205.4 Blaster-in-Charge. Designate in writing a blaster-in-charge. Submit evidence that the blaster-in-charge has a valid State blaster's license or other license accepted by the State where the project is located and issued by an equivalent licensing body for the type of blasting required.

205.5 Blasting Plans. Blasting plans are for quality control and record keeping purposes and are to be signed by the blaster-in-charge. The review and acceptance of blasting plans does not relieve the Contractor of the responsibility for using existing drilling and blasting technology, and for obtaining the required results.

Do not deliver explosives to the project until the general blasting plan is accepted.

(a) General blasting plan. Submit a general blasting plan for acceptance at least 14 days before drilling operations begin. Include, as a minimum, the following safety and procedural details:

- (1) Working procedures and safety precautions for storing, transporting, handling, and detonating explosives.
- (2) Proposed product selection for both dry and wet holes. Furnish Manufacturer's Material Safety Data Sheets for all explosives, primers, initiators, and other blasting devices.
- (3) Typical plan and section views for both production and controlled blasting, including maximum length of the shot, burden, hole spacing, hole inclination, hole depth, hole diameter, subdrill depth, and powder factor.
- (4) Proposed initiation and delay methods and delay times.
- (5) Proposed format for providing all the required information for the site specific blasting plans.

(b) Site-specific blasting plans. After the general blasting plan is accepted, submit site-specific blasting plans for acceptance before drilling operations begin. Allow up to three days for review of these plans. Include the following information in the site-specific blasting plan.

- (1) Site drawings showing a scaled map of the blast area and cross-sectional views which indicate beginning and ending stations, free face location, hole spacing, hole diameter, hole depth, burden, hole inclination, and subdrill depth. Include on the drawings any significant joints or bedding planes within the blast zone and incorporate this geology into the blast design.
- (2) Where blasting may affect nearby structures or utilities, provide method of monitoring and controlling blast vibrations according to Subsection 205.06.
- (3) Loading pattern diagram showing the location and amount of each type of explosive to be used in the holes including primer and initiators and the location, type, and depth of stemming, column heights, and overall powder factor for each type of loading.
- (4) Delay and initiation diagram showing delay pattern, sequence, and delay times.

205.6 Preblast condition survey and vibration monitoring and control. When blasting near buildings, structures, or utilities that may be subject to damage from ground or airblast vibrations, provide a blast vibration specialist. Provide a specialist with at least 5 consecutive years experience in vibration monitoring for at least 3 projects. Fourteen days before blasting, submit the name and qualifications of the blast vibration specialist including the following:

(a) Project names, locations, and services performed.

(b) Name and phone number of owner/agency contact who can verify the experience of the specialist.

Before blasting, arrange for a preblast condition survey of nearby buildings, structures, or utilities, which could be at risk from blasting damage. Use a survey method acceptable to the Contractor's insurance company. Damage resulting from blasting is the Contractor's responsibility. Make all preblast condition survey records available to the CO. Notify the CO and occupants of nearby buildings at least 24 hours before blasting.

Control vibrations with properly designed delay sequences and allowable charge weights per delay when blasting near buildings, structures, or utilities that may be subject to damage from blast-induced vibrations. Base allowable charge weights per delay by carrying out trial blasts and measuring vibration levels. Conduct test blasts with blast plan modifications that limit ground and airblast vibrations to a level that will not cause damage to nearby buildings, structures, or utilities as determined by the blast vibration specialist.

When vibration damage to buildings, structures, or utilities is possible, monitor each blast with approved seismographs and airblast monitoring equipment located at acceptable locations. Use seismographs capable of recording particle velocity for three mutually perpendicular components of vibration. The blast vibration specialist shall interpret the seismograph records and airblast records to ensure that the data is effectively used in the control of the blasting operations.

205.7 Test Blasting. Drill, blast, and excavate one or more test sections as proposed in the blasting plan before full-scale drilling and blasting. Test blasts may be made away from or at the final slope line.

Space blast holes for the cushion (trim) method of controlled blasting no more than 60 inches apart for the initial test blast. Space blast holes for the presplitting method of controlled blasting no more than 30 inches apart for the initial test blast. Adjust the spacing as approved. Use the approved spacing in the full-scale blasting or subsequent test blasts if necessary.

A test blast is unacceptable when it results in fragmentation beyond the final rock face, fly rock, excessive vibration, air blast, overbreak, damage to the final rock face, or overhang. When a test blast is unacceptable, revise the blasting plan and make an additional test blast.

205.8 Blasting.

(a) **General.** Drill and blast according to the blasting plan.

Before drilling, remove overburden soil and loose rock along the top of the excavation for at least 30 feet beyond the hole drilling limits or to the end of the cut.

Cap all holes to prevent unwanted backfill. Place a stake next to each hole with hole number and total depth drilled.

Use the types of explosives and blasting accessories necessary to obtain the required results. A bottom charge may be larger than the line charges if no overbreak results.

Free blast holes of obstructions for their entire depth. Place charges without caving the blast hole walls. Stem the upper portion of all blast holes with dry sand or other granular material passing the 3/8-inch sieve. Do not stem the hole with drill cuttings.

Following a blast, stop work in the entire blast area, and check for misfires before allowing worker to return to excavate the rock.

Remove or stabilize all cut face rock that is loose, hanging, or potentially dangerous. Scale by hand or machine methods as approved by the CO. Leave minor irregularities or surface variations in place if they do not create a hazard. Drill the next lift only after the cleanup work and stabilization work is complete.

If blasting operations cause fracturing of the final rock face, repair or stabilize it in an approved manner at no cost to the Government. Repair or stabilization may include removal, rock bolting, rock dowels, or other stabilization techniques.

Halt blasting operations when any of the following occur and perform additional test blast:

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- (7) Excessive ground or airblast vibrations occur in an area where damage to buildings, structures, or utilities is possible.

(b) Drill logs. Submit drill logs. Include the following:

- (1) Blast plan map showing designated hole numbers; and
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Use downhole angle or fan drill blast holes for pioneering the tops of rock cuts or preparing a working platform for controlled blasting. Use the blast hole diameter and hole spacing established for controlled blasting during the test blasts.

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A 12-inch offset is allowed for a working bench at the bottom of each lift for drilling the next lower controlled blasting hole pattern. Adjust the drill inclination angle or the initial drill collar location so the required ditch cross-section is obtained when the bench is used.

Drilling 20 inches below the ditch bottom is allowed for removing the toe.

Do not use bulk ammonium nitrate and fuel oil for controlled blasting.

Where presplitting, delay the nearest production blast row at least 25 milliseconds after blasting the presplit line. Presplit a minimum of 30 feet ahead of production blasting zone.

Where cushion (trim) blasting, delay the cushion blast row from 25 to 75 milliseconds after blasting the nearest production row.

(d) Production blasting. Drill the row of production blast holes closest to the controlled blast line parallel and no closer than 6 feet to the controlled blast line. Do not drill production blast holes lower than the bottom of the controlled blast holes.

Detonate production holes on a delay sequence toward a free face.

205.9 After Blast Reports. Within 3 days after a blast and before the next blast, submit an after-blast report that includes the following:

- (a) Results of the blast and whether or not blasting objectives were met. If blasting objectives were not met, submit proposed changes to future site-specific blasting plans that will produce acceptable results and proposed repair or stabilization plan for unstable or blast damaged backslopes.
- (b) Blasting logs that include the following:
 - (1) All actual dimensions of the shot including blast hole depths, hole diameter, burden, spacing, subdrilling, stemming, powder loads, and timing; and
 - (2) A drawing or sketch showing the direction of the face, or faces, and the physical shot layout.
- (c) If a seismograph was used, provide the following:
 - (1) Identification of instrument used;
 - (2) Name of qualified observer and interpreter;
 - (3) Distance and direction of recording station from blast area;
 - (4) Type of ground recording station and material on which the instrument is sitting;
 - (5) Maximum particle velocity in each direction;
 - (6) A dated and signed copy of the seismograph readings; and
 - (7) Post-blast condition survey.
- (d) Results of airblast monitoring.
- (e) Results of post blast condition survey.

205.10 Acceptance. Material for rock blasting will be evaluated under Subsections 106.02 and 106.03.

Rock blasting work and services will be evaluated under Subsections 106.02 and 106.04.

Measurement

~~205.11 Measure the Section 205 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.~~

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~~Do not measure production blasting.~~

~~**Payment**~~

~~**205.12** The accepted quantities will be paid at the contract price per unit of measurement for the Section 205 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.~~

After Signature, Please Return Original To:
Washington Department of Fish & Wildlife
Real Estate Services Office
600 Capitol Way North
Olympia, Washington 98501-1091
Attn: Elyse Kane

Agency Control Nos. for the Property: _____
WDFW Property Name: Portion of _____ Wildlife Area
Landowner: Washington Dept. of Fish & Wildlife
Permittee: _____
County Assessor's Parcel Nos.: _____

RIGHT OF ENTRY ONTO WDFW LAND

[NAME OF PROJECT]

_____ COUNTY, WASHINGTON

This Right of Entry (hereinafter "this permit") is granted by: **THE STATE OF WASHINGTON, THE DEPARTMENT OF FISH AND WILDLIFE** ("WDFW") to:

_____, a Washington non-profit organization, whose business address is _____, ("Permittee").

Pursuant to the authority set forth in RCW 77.12.210 and subject to the terms and conditions set forth below, WDFW hereby grants to Permittee the right to enter, along existing roads, that certain property of WDFW located in the _____ Wildlife Area in _____ County, Washington, as more particularly described below and as depicted in Exhibit A ("the Premises") for the sole purpose of a habitat restoration project ("the Project"), as more particularly described in Exhibit B ("the Project Design").

If this permit is only for a portion of the Project, that portion is described as: [INSERT]

Performance Measures for completion of the work to be performed by Permittee are set forth in Exhibit C. The Adaptive Management Plan for the Project is attached as Exhibit D. By this reference, these Exhibits are incorporated herein.

THIS PERMIT IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

- Term:** This permit is not valid and no work may begin on the Premises until this permit is signed by WDFW, the insurance and performance bond requirements have been met, and Permittee has obtained all necessary permits. The right to operate under the permit shall cease if the insurance or bond lapses during the term of the permit. The term of this permit includes _____ months for the construction period and three years thereafter for the Adaptive Management Period. Permittee's right to enter the Premises is from _____ to _____.
- Legal Description of the Premises:** WDFW is the owner of record of certain real property known as the _____ Wildlife Area in _____ County, a portion of which is located in Section ____ North, Range ____ East, W.M., and in Section _____, Township ____ North, Range ____ East, W.M., as recorded on _____ under Okanogan County Auditor's File Numbers _____ and _____, of which approximately ____ acres are the Premises of this permit. The legal description of the Premises for this permit is set forth in Exhibit A hereto.

3. **Limited Rights.** Permittee expressly recognizes that the Premises are located within lands owned and operated by WDFW for wildlife habitat and public recreation. WDFW makes no warranty of quiet enjoyment of the Premises. Interruption of public recreational use of the property can only occur by specific, prior written permission from WDFW. No provision of this permit is intended, nor may be deemed, to transfer any real property from WDFW to Permittee. WDFW retains jurisdiction over its property in all respects. WDFW retains the right of access to the Premises at all times. This permit shall not be deemed or construed to be an exclusive right; it does not prohibit WDFW from granting rights to other entities, provided that these agreements do not unreasonably interfere with the operations of Permittee during the term of this permit. WDFW expressly reserves the rights to any trees, minerals, oil and gas resources, or any other valuable materials on the Premises, however, WDFW's activities with respect to these valuable materials shall not unreasonably interfere with construction of the Project. This permit does not convey the right to build roads or store any materials, vehicles, or equipment on WDFW property, except as necessary during periods of construction. In the event a road is necessary for construction, Permittee shall restore the road area to its original condition, unless otherwise agreed by WDFW. This permit is subject to easements and other rights of third parties over, under, and across the Premises, which are listed on Exhibit A.1. Permittee is solely responsible for ensuring that its work does not interfere with these third-party rights.

WDFW's original purchase of the Premises was funded by the Washington State Legislature through a grant program operated by the state's Recreation and Conservation Office ("RCO"). The grant requires that the land be used for its approved purposes forever. In addition, the property was obligated under a U.S. Fish and Wildlife Service grant of federal funds for endangered species protection, Section 6 of the Endangered Species Act, which also requires that the land be used for its approved purposes forever. **Prior to signing this permit, WDFW will need to determine whether the Project triggers the conversion rules that accompany these state and federal grants. Non-conversion is a prerequisite of this permit. In the event that the Project would trigger the conversion and replacement requirements of any one of these grants, the parties agree to either amend the Project Design accordingly, or not implement the Project on the Premises.**

4. **Project Manager:** [CHOOSE THE APPROPRIATE BULLET AND DELETE THE OTHER, ALSO DELETING THESE BRACKETED INSTRUCTIONS.]

- [FOR USE IF THIS IS NOT A YN MOU PROJECT] Permittee is the Project Manager for the Project, but shall at all times cooperate with WDFW in its role as property owner. Permittee agrees to comply with and implement all work and monitoring described in the Design Plan and the Adaptive Monitoring Plan, unless otherwise agreed in writing by the parties. As Project Manager, Permittee is solely responsible for: (a) all costs of the Project; (b) fulfilling all obligations imposed by the Project's funding sources and grants; (c) Completion of the Project as set forth below; and, (d) compliance with all of the terms and conditions of this document. The Project is not a joint venture of WDFW and Permittee. Permittee, its employees and contractors are not employees or agents of WDFW and shall not hold themselves out as such.
- [FOR USE IF THIS IS A YN MOU PROJECT] Permittee acknowledges that the Yakama Nation is solely responsible for contracting with and paying Permittee to complete the Project Design. That separate contract between the Yakama Nation and Permittee creates no legal obligations upon WDFW. By contrast, Permittee herein does bind itself to WDFW to fulfill all the obligations of this Permit. Notwithstanding the foregoing, the Yakama Nation shall be the Project Manager for the Project, but shall at all times cooperate with WDFW in its role as property owner. Permittee agrees that Yakama Nation and Permittee (not WDFW) have all responsibility for: (a) all costs of the Project; (b) fulfilling all obligations imposed by the Project's funding sources and grants; (c) Completion of Permittee's work and the Project as set forth below; and, (d) compliance with all of the terms and conditions of this document. The Project is not a joint venture of WDFW and Permittee. Permittee, its employees, and contractors are not employees or agents of WDFW and shall not hold themselves out as such.

5. Project Design and Construction:

WDFW and Permittee have reviewed and approved the materials for the Project Design which are dated _____ and are attached as Exhibit B hereto. Permittee shall complete the Project in strict compliance with the design materials which are incorporated herein. All references to the Project Design are to these materials. Changes to the Project Design require mutual written agreement of the parties. The Project includes certain post-construction obligations set forth in Exhibit D – Adaptive Management Plan. During construction, Permittee: shall use its best efforts to implement general construction practices designed to minimize surface disturbance during construction; shall undertake specific measures to reduce construction impacts to soils; and shall restore disturbed land to its pre-construction state.

[FOR USE IF THIS IS A YN PROJECT] The Yakama Nation (or the Permittee if so assigned in the contract between the Yakama Nation and the Permittee) shall, under the terms of the Adaptive Management Plan, monitor and maintain mitigation control measures for three (3) years following completion of construction, for any site disturbed by construction, including, but not limited to, roads, trails, parking areas, and construction sties.

6. As-Built Drawings and Specifications:

- [FOR USE IF THIS IS NOT A YN MOU PROJECT] Upon completion of the construction phase of the Project, Permittee shall provide to WDFW as-built drawings and specifications for the work performed by Permittee in a form acceptable to WDFW. Permittee and WDFW shall meet on site for a post-construction meeting prior to demobilization to discuss next steps for Completion of the Project as set forth below.
- [FOR USE IF THIS IS A YN MOU PROJECT] Upon completion of Permittee’s portion of the Project, the Yakama Nation and Permittee shall jointly be responsible to provide to WDFW as-built drawings and specifications for the work performed by Permittee in a form acceptable to WDFW. A Yakama Nation representative and Permittee will meet with WDFW on site for a post-construction meeting prior to demobilization to discuss any issues related to completion and post-construction follow-up. The Yakama Nation will not make final payment to Permittee until seven (7) days after as-built drawings were sent to WDFW. Issuance of as-built drawings shall be deemed Completion of Permittee’s portion of the Project.

7. Permitting: With respect to all of its activities on the premises, Permittee shall, at its sole cost, meet all of the applicable governmental laws, rules, regulations, and permitting requirements, including, but not limited to, those for the State Environmental Policy Act (SEPA), hydraulic projects, hazardous substances, cultural resources protection, and payment of prevailing wages for public works under RCW 39.12. This permit is not a substitute for SEPA, a Hydraulic Project Approval, or any other permit. This obligation includes causing all work to be performed in compliance with federal and state cultural resources protection laws and regulation. Before commencing any work that involves disturbing the ground, Permittee shall provide proof to WDFW that it has complied with the legal requirements involving cultural and archaeological resources and has received a clearance letter from the State Historic Protection Officer.

8. Insurance: Permittee shall, at its sole cost and expense, procure and maintain, or cause to be procured and maintained during the entire Term, the insurance described in this section (or if not available, then its available equivalent) issued by an insurance company or companies licensed to do business in the State of Washington and satisfactory to WDFW. Permittee shall procure and maintain the following:

(a) Commercial General Liability Insurance. Commercial liability insurance including contractual liability covering all claims with respect to injuries or damages to persons or property sustained in or about the Premises and the Project with limits of liability no less than the following:

Bodily Injury and Property Damage Liability: __ Million Dollars (\$__,000,000) each occurrence, __ Million Dollars (\$__,000,000) aggregate.

Such limits may be achieved through the use of umbrella liability insurance sufficient to meet the requirements of this section.

(b) **Workers' Compensation Insurance:** Workers' compensation and employer's liability insurance with respect to any work by employees of Permittee on or about the Premises.

(c) The policies shall name WDFW as an additional insured and Permittee shall, upon request, promptly provide to WDFW certificates of insurance.

(d) The policies shall be written as primary policies, not as contributing to or in excess of coverage that WDFW may carry.

(e) The policies shall contain an endorsement providing that such insurance may not be materially changed, amended or canceled with respect to WDFW except after forty-five (45) days' prior written notice from the insurance company to WDFW.

(f) The policies shall contain an endorsement with an express waiver of any right of subrogation by the insurance company against WDFW, its elected officials, agents, and employees.

(g) The policies shall provide that the insurance proceeds of any loss will be payable notwithstanding any act or negligence of Permittee which might otherwise result in a forfeiture of said insurance.

(h) the policies shall expressly provide that WDFW shall not be required to give notice of accidents or claims, and that WDFW shall have no liability for premiums.

9. **Performance Bond:** Prior to WDFW's signature on this permit, Permittee shall deliver to WDFW a performance bond in an amount sufficient to complete the work of the Permittee on the Project as set forth in the Project Design (Exhibit B) and the post-construction obligations set forth in Exhibit D. This performance bond is for the purpose of guaranteeing completion of Permittee's work. In the event that Permittee does not complete its work, the bond may be used by WDFW, in WDFW's sole discretion, to complete the Project, to return the Premises to its current condition, or to otherwise stabilize the Premises, as WDFW deems necessary. WDFW's rights and Permittee's obligations shall survive suspension, cancellation, and termination of this permit and shall continue until completion of the work under this permit and performance of all post-construction obligations.

10. **Licensed and Bonded Contractors:** Permittee shall, at its sole cost, ensure that all contractors and subcontractors performing work under this permit are licensed and bonded.

11. **Completion:**

- [FOR USE IF THIS IS NOT A YN MOU PROJECT] Completion of the Project is defined as: (a) WDFW-approved completion of all elements of the Project Design; (b) WDFW-approved demonstration of the Performance Measures in Exhibit C; (c) delivery to WDFW of as-built drawings; and (d) WDFW-approved completion of the elements of the Adaptive Management Plan in Exhibit D. Upon completion, all improvements, additions, alterations, and replacements shall become the property of WDFW without cost to WDFW.
- [FOR USE IF THIS IS A YN MOU PROJECT] Completion of the work under this Permit is defined as: (a) WDFW-approved completion of all elements of Permittee's work as set forth in the Project Design; (b) WDFW-approved demonstration of the pertinent Performance Measures set forth in Exhibit C; and, (c) delivery to WDFW of as-built drawings. Post-construction obligations under Exhibit D will be deemed the separate obligation of the Yakama Nation unless otherwise assigned to Permittee. Upon completion, all improvements, additions, alterations, and replacements shall become the property of WDFW without cost to WDFW.

12. **Indemnification:** To the fullest extent permitted by law, Permittee shall indemnify, defend and hold harmless WDFW, and its officials, agents, and employees, from and against all claims for injuries or death or property damage arising out of or resulting from the performance or non-performance of the work under this Permit. "Claim," as used in this permit means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease, or death, or injury

to or destruction of tangible property including loss of use resulting therefrom. To the extent that RCW 4.24.115 applies, this indemnity shall not apply to the sole negligence of WDFW, and, in the event of concurrent negligence, the indemnity shall apply only to the extent of the Permittee's negligence. Permittee waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend, and hold harmless WDFW and its agents, officials, or employees.

13. **No Liens:** Permittee may not allow any lien for work, labor, services, materials, or any other reason related to the Project to be recorded or filed as an interest against the Premises or WDFW. If any such lien is recorded or filed, Permittee shall obtain, at its sole cost, a complete release of such lien.
14. **No Hazardous Substances:** Permittee shall not allow in or around the Premises any substance now or hereinafter regulated by any governmental authority as hazardous, toxic, dangerous, or harmful (hereinafter "hazardous substance"), unless said hazardous substance is necessary to carry out the Project and is handled in compliance with all applicable legal requirements. Permittee shall reimburse WDFW immediately upon demand for any and all cleanup costs and any and all other charges, fees, costs, fines, and penalties (civil and criminal) imposed on WDFW by any governmental authority for hazardous substances related to the Project.
15. **Vehicle Parking:** All vehicles on state land must comply with the state Discover Pass law.
 - [FOR USE IF THIS IS A YN MOU PROJECT] Representatives of the Yakama Nation assigned to this Project and Permittee and its employees, subcontractors, and agents are not required to purchase the Discover Pass or obtain a Day Use Permit so long as they are operating under the terms of this permit. Permittee, its employees and its subcontractors shall, nevertheless, obtain from WDFW and display in the vehicle window a WDFW-issued contractor's placard.
16. **No Assignment:** Neither this permit, nor the rights and obligations set forth herein, may be assigned or sublet by Permittee in whole or in part.
17. **Suspension:** In the event of an emergency during the term of this permit, WDFW may suspend this permit, including Permittee's right to enter the Premises. Reentry by Permittee shall be only by written permission of WDFW. Permittee's obligations and WDFW's rights concerning insurance, the performance bond, and liability, shall survive suspension of this permit.
18. **Cancellation:** WDFW may cancel this permit for Permittee's failure to comply with any of the terms and conditions of this permit,

[USE THIS LINE ONLY IF THIS IS A YN MOU PROJECT] for the Yakama Nation's failure to deliver to WDFW timely payments of administrative costs under the Yakama Nation MOU,

or when WDFW is required to do so by another governmental authority. Permittee shall have no further rights to enter the Premises in the event of cancellation. Permittee's obligations and WDFW's rights concerning the performance bond and liability shall survive cancellation of this permit.

19. **Termination:** Unless earlier canceled, this permit shall terminate upon performance of all of Permittee's obligations relating to the Project, including construction, monitoring, and restoration. Permittee shall have no further rights to enter the Premises at termination. Permittee's obligations and WDFW's rights concerning the performance bond and liability shall survive termination of this permit.
20. **Jurisdiction and Venue:** Jurisdiction and venue concerning this permit are proper in the county in which the work occurred.
21. **Scope of Relief:** WDFW shall be entitled to injunctive relief, both prohibitive and mandatory, in addition to other relief, including, without limitation, specific performance of the terms and conditions of this permit. These remedies are cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity.

- 22. **No Waiver:** WDFW’s forbearance to exercise its rights under this permit in the event of any default by Permittee shall not be deemed or construed to be a waiver by WDFW of such term or condition or of any of WDFW’s rights under this permit. No delay or omission by WDFW in the exercise of any right or remedy shall impair such right or remedy, or be construed to be a waiver.
- 23. **Severability:** If any covenant or provision of this permit shall be adjudged void, such adjudication shall not affect the validity or obligations of any other covenant or provision, or part thereof.
- 24. **Signatories:** Each person executing this permit represents that he or she is authorized to sign this permit on behalf of his or her respective party, and that this permit is a legal, valid, and binding obligation upon his or her respective party.
- 25. **Entire Agreement:**
 - [FOR USE IF THIS IS NOT A YN MOU PROJECT] This instrument contains the entire agreement between the parties and no other statement made by either party, or its respective officers, employees or agents shall be valid, binding or enforceable.
 - [FOR USE IF THIS IS A YN MOU PROJECT] This instrument and the Yakama Nation/WDFW MOU, to the extent incorporated herein, contain the entire agreement between the parties and no other statement made by either party, or its respective officers, employees or agents, shall be valid, binding or enforceable. To the extent there is an inconsistency between the MOA and this permit, the terms of this permit shall prevail.

IN WITNESS WHEREOF, the parties hereto have mutually agreed upon the terms and conditions of this instrument and have caused it to be executed as below subscribed:

PERMITTEE

 Date By/Title:

WASHINGTON DEPARTMENT OF FISH & WILDLIFE

 Date By: Clay Sprague, Lands Division Manager

Approved _____ Date _____
 WDFW Regional Director

- Attachments:
 Exhibit A – The Premises
 Exhibit A.1 – Third Party Encumbrances
 Exhibit B – Project Design
 Exhibit C – Performance Measures for Permittee
 Exhibit D – Adaptive Management Plan

Treaty Fishery Tax Exemption Certificate

This document is to be completed by the Tribe, Tribal member, or Intertribal organization whenever claiming an exemption from sales tax for purchases of Treaty Fishery items.

Type of Certificate:

- Blanket Certificate** (*Blanket certificates are valid for as long as the buyer and seller have a recurring business relationship. A "recurring business relationship" means at least one sale transaction within a period of twelve months. RCW 82.08.050 (7)(c).*)
- Single Use Certificate**

Seller's name: _____ Date: _____

Address: _____ City: _____ State ____ Zip code: _____

The purchaser is claiming exemption for the following Treaty Fishery item(s) or service(s):

Check Applicable Boxes

- | | |
|---|---|
| <input type="checkbox"/> Boat, Boat Trailer | <input type="checkbox"/> Motor |
| <input type="checkbox"/> Gear, Net | <input type="checkbox"/> Specialized Clothing |
| <input type="checkbox"/> Boat/Engine Repair | <input type="checkbox"/> Hatchery Equipment |
| <input type="checkbox"/> Laboratory Equipment | <input type="checkbox"/> Processing Equipment |
| <input type="checkbox"/> Smoking Equipment | <input type="checkbox"/> Other (explain): _____ |
| <input type="checkbox"/> Operating Supplies | |

Provide one of the following:

- Federally recognized Tribe of the purchaser: _____ and
Treaty Indian Fishing Identification Card number: _____ **or**
- Name of Intertribal Organization: _____

Note: This exclusion from tax is limited to those businesses wholly owned and operated by Indians/Tribes who have Treaty fishing rights and to Intertribal organizations for the protection of Indian Treaty Fisheries. Treaty Fishery means the fishing and shellfish rights preserved in a Tribe's treaty, a federal executive order, or an act of Congress. It includes activities such as harvesting, processing, transporting, or selling, as well as activities such as management and enforcement.

Sellers must document the buyer's name, address, item(s) purchased, and dollar amount of purchase.
Reference: RCW 82.08.0254 and WAC 458-20-192.

I, the undersigned buyer, understand that by completing and signing this certificate I am certifying that I qualify for the tax-exempt purchase(s) indicated above. I understand that I am required to keep records to verify eligibility for the exemption(s) and that I will be required to pay sales or use tax on purchases that do not qualify for the exemption(s) in addition to any applicable interest and penalties. This certificate is given with full knowledge of, and subject to, the legally prescribed penalties for fraud and tax evasion per RCW 82.32.090.

Buyer's name: _____ Telephone number: _____

Signature: _____ Date: _____

Address: _____ City: _____ State ____ Zip code: _____

***Seller must retain a copy of this certificate.
Do not send to Department of Revenue.***

For tax assistance or to request this document in an alternate format, visit <http://dor.wa.gov> or call 1-800-647-7706. Teletype (TTY) users may call (360) 705-6718.

Draft Performance Measures Exhibit

Introduction

The Confederated Tribes and Bands of the Yakama Nation (YN) have established the following procedures to ensure that the Chewuch River Right Project (Project) is constructed according to engineered designs and specifications. These procedures include performance measures that are intended to ensure that the Construction Contractor (Contractor) methods, quantities, and quality meet the specifications of the Construction Contract (Contract) and the intent of the design at each stage of construction.

Documentation assembled during the construction period and at final inspection will serve as the baseline condition for the Adaptive Management Plan. Deviations, changes, or omissions from the original Project plans and specifications will be documented in final Project As-built drawings, which will become part of the Performance Measures package.

Project Performance Measures

Key Performance Measures have been identified for Project construction to monitor progress and identify any issues that might interfere with planned Project objectives or Project completion. These Performance Measures are listed below:

1. **Daily Construction Observation:** The Design Engineer or Engineer's Authorized Representative will be onsite during construction and will be present during the construction of major elements. The Engineer will be responsible for populating a daily log of construction activities. In terms of the Adaptive Management Agreement, construction observation and documentation provides a resource that can be reviewed to determine potential causes in the event an adaptive management concern is identified at a later period.
2. **Performance-Based Pay Schedule:** Contractor compensation will be based on the adequate completion of contracted work tasks. Requests for payment must demonstrate completion or owner established percentage completion for each defined task prior to payment. Satisfactory demonstration of completion or percent completion will be determined by the Engineer or Engineer's Authorized Representative.
3. **As-built Drawings and Survey Field Records:** The Contractor will be required to maintain two sets of full-size prints of the contract drawings on site throughout construction. During construction, the Contractor must mark up the drawings to show variations between actual construction details and the specifications, including any changes between actual existing conditions and those shown on the drawings, actual materials used when a choice of materials or methods is allowed, or where any variations in the scope and character of the work are authorized during construction. The Contractor must then provide marked and signed copies of the contract drawings to YN within two weeks of substantial completion of the Project. The Design Engineer or Engineer's Authorized Representative will provide certified As-Built drawings within six months of project completion. These drawings and field records, along with the daily observer reports, document the baseline condition of the Project following completion.
4. **Final Inspection and Acceptance:** The Contractor will not be authorized to demobilize until YN has completed a final site review. All design elements must be completed before the final site review will take place. Performance will be tracked on a project checklist that will document completion on each of the key project actions/elements. Final site approval is contingent on successful completion of all Project elements and tasks, site cleaning, removal of temporary access routes and staging areas, and restoration of areas disturbed by construction with areas to be re-vegetated left in a condition suitable for planting. YN must accept Project completion in writing. Once the Project has been inspected and accepted by YN, the Adaptive Management period will begin.

Performance Tracking Table – Individual project elements:

Project Element	Completion Date	Acceptance (YN Representative's Signature)	Performance Requirement
Construction Phase (Contractor #1)			
Bank Buried Engineered Log Structure			Built as designed
Engineered Large Wood Cover Habitat			Built as designed
Side Channel Creation			Built as designed
Wetland Creation			Built as designed
Campsite Development			Built as designed
Site Restoration Phase (Contractor #2)			
Temporary Access and Staging Areas Soil Protection			All equipment removed from the project site, black matting and straw mulch placed in construction impact areas to protect soil until fall restoration effort begins
Access and Staging Areas Restoration			Access and staging areas decompacted, seeded, and planted with native shrubs. Woody material replaced within access route.
Deer Exclusion Fence			Fence is erected as designed