



Request for Bids:

Construction of the Beaver Creek Reach 5 Fish Habitat Restoration Project

7/9/2019

Columbia River
Honor. Protect. Restore.

OFFICE
P.O. Box 151
401 Fort Road
Toppenish, WA 98948

PHONE
509-881-1462

EMAIL
johj@yakamafish-nsn.gov

Dear Contractor:

The Yakama Nation's Upper Columbia Habitat Restoration Project (UCHRP) is requesting bids for construction of the Beaver Creek Reach 5 project. This fish habitat restoration project is located approximately 10 miles from the town of Twisp, Washington. Construction is scheduled for this fall (2019) from September through October.

This project is located on property managed by the Washington State Department of Fish and Wildlife. The contractor must be able to meet insurance and bonding requirements and obtain a Right of Entry (ROE) permit through WDFW prior to commencing work. Insurance and bonding requirements are detailed in the attached Construction Services Agreement and an example ROE is provided as Exhibit D.

The Yakama Nation project manager and certifying engineer will host a pre-bid walkthrough on **Thursday, July 18, 2019 at 10:00 AM**. The walkthrough will begin at Beaver Creek Campground. See the map below for directions. Contractors are strongly encouraged to attend, as this will be the sole opportunity to ask questions on-site.

Competitive bids must be received in Toppenish by the close of business on **Wednesday, July 24, 2019** to be eligible for award of this contract. Please specify in writing on the bid sheets that all bid prices will be valid for at least 90 days. Bid materials must be either hand delivered, sent by parcel delivery service or postal mail to:

Yakama Nation
Attn: Jackie Olney, RE: Beaver Creek RM 2.6 Project
PO Box 151
Toppenish WA, 98948
(Shipping address: 401 Fort Road, Toppenish, WA 98948)

The winning contractor will demonstrate an understanding of the magnitude of this project and be equipped to perform all necessary work elements for a project of this type within a critical habitat stream. The winning contractor will have extensive experience in the following: building cofferdams, de-watering following NMFS fish screening protocols, constructing engineered log structures and engineered channels.

All contractors submitting bids for this project shall provide and/or demonstrate, at a minimum, the following:

- *A complete bid sheet.*
- *A list of key pieces of heavy equipment that will be used in the construction of the project and associated daily standby rates.*
- *A detailed Project Approach including at a minimum the construction timeline of proposed project sequencing and estimated beginning and end dates for significant work elements.*
- *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 cofferdam and water surface diversion plan.*

Please Note:

- All equipment working within 50 feet of the Beaver Creek are required to be outfitted with biodegradable hydraulic fluid.
- The contractor must provide “san-i-can” service.
- The contractor must follow Okanogan County road signage regulations.
- This project has adopted by reference in the Engineer's Planset the 2018 Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction. Please download a digital copy of the WSDOT 2018 Standard Specifications from <https://www.wsdot.wa.gov/publications/manuals/fulltext/M41-10/SS.pdf>.
- Sub-contracting will not be permitted under this contract
- The Yakama Nation is exempt from state taxes on this project. Please see the attached templates for Treaty Fishery Exempt Cover Letter and Treaty Fishery Exempt Certificate. The winning contractor will receive signed copies for their records.
- Davis Bacon Wages Apply to this contract. The winning contractor will adhere to the Davis Bacon Rules and comply and submit all necessary paperwork to the Yakama nation. Washington State Prevailing Wages will not apply to this project.

The attached template Construction Services Agreement provides the scope of work that will be incorporated into the awarded contract. Please make note of specific provisions provided in this Construction Services Agreement, including the detailed Exhibits, that may be in addition to the specifications and directions found in the Project Planset.

The following categories will be used to evaluate the competitiveness of bids received:

- Demonstrated experience with this type of work – 15%
- Demonstrated quality of work – 15%
- Cost – 15%
- Schedule – 10%
- Company integrity/references – 10%
- Demonstrated experience with permitting agencies in the Upper Columbia Region – 10%
- Adequacy/quality of staff and equipment proposed – 15%
- Completeness of Proposal (Based on RFP Submission Requirements) – 10%

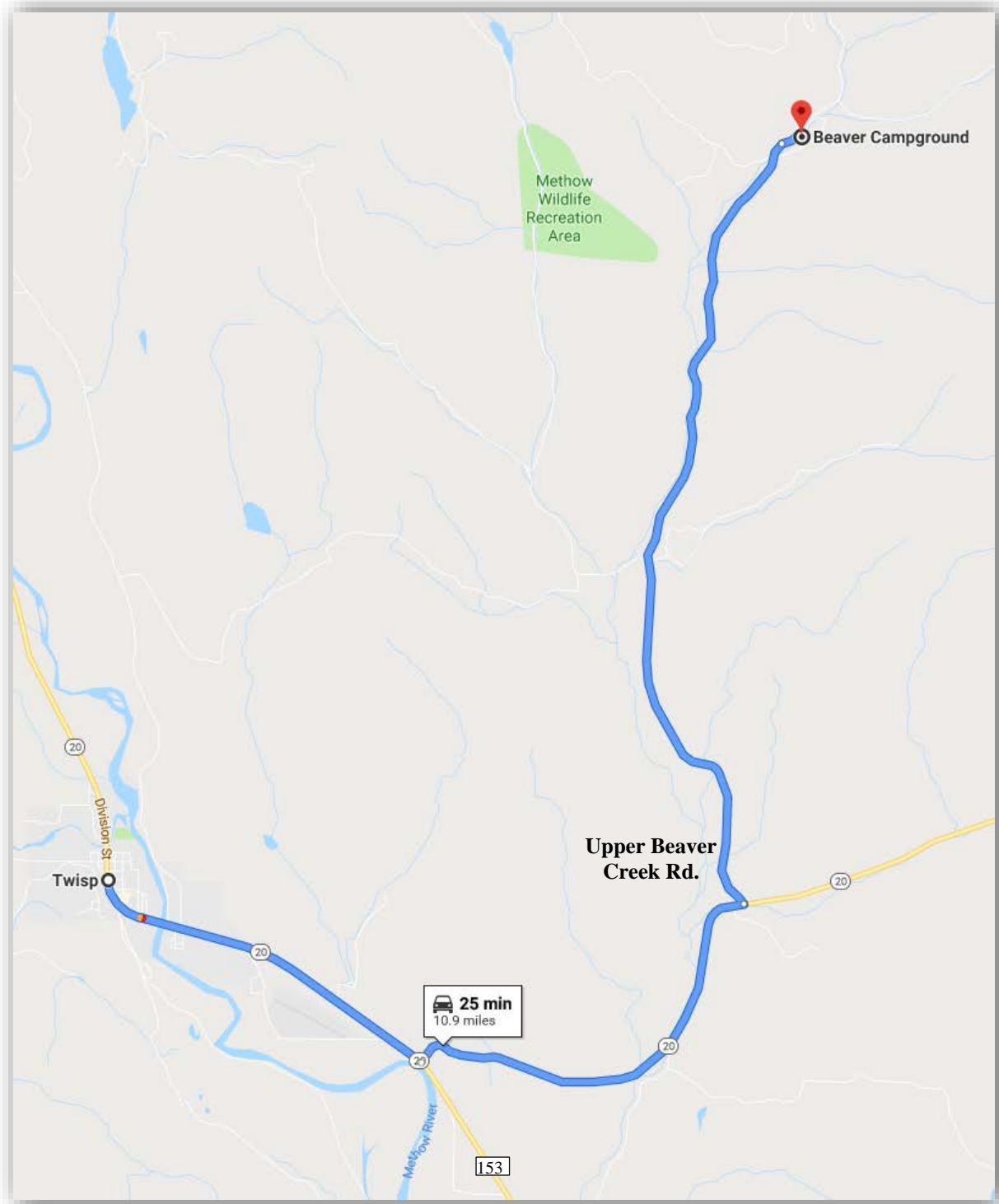
Also, please note that this project is pending acquisition of environmental permits and final landowner permission. The Yakama Nation reserves the right to accept or reject any and all of the proposals received as a result of this request, or to cancel in part or entirely this request if it is in the best interest of the Yakama Nation to do so. This request does not commit the Yakama Nation to pay any costs incurred in the preparation of a proposal.

For questions regarding the site visit, please contact me at the numbers provided below.

Sincerely,

A handwritten signature in blue ink that reads "Jarred Johnson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jarred Johnson
Yakama Nation Fisheries
2 Johnson Lane
Winthrop, WA 98862
509-881-1462
johj@yakamafish-nsn.gov



Driving directions to pre-bid walkthrough: From the Town of Twisp, travel south on State Route (SR) 20 for 1.5 miles, turn left to stay on SR 20. In 2.8 miles turn left onto Upper Beaver Creek Road. Travel north on Upper Beaver Creek Road for 6.0 miles to the Beaver Creek Campground.

Beaver Creek Reach 5 Restoration Project
Contractor Bid Form (7/9/19)

No.	Item	Unit	Quantity	Unit Price	Extended Price
General Construction Elements					
1	Mobilization	LS	1		
2	Clearing & Grubbing	LS	1		
3	TESC	LS	1		
4	Cofferdams	LF	1000		
5	Water Management/Pumping	LS	1		
Structure Construction incl. logs, boulders, excavation, backfill and haul					
6	Side Channel	EA	1		
7	Backwater Alcove	EA	2		
8	Piper Creek Realignment	EA	1		
9	Bank Cross Structure	EA	25		
10	Channel Spanning Structure	EA	42		
11	Log Retement Structure	EA	1		
12	Modified Log Retement Structure	EA	3		
13	Log Jam Structure	EA	3		
14	Single Habitat Log Placement	EA	98		
15	Whole Tree Salvage and Placement	EA	30		
16	Step Boulder Ribs w/ Footers	EA	16		
17	Habitat Boulder Clusters (3 ROCKS)	EA	30		
Road Repair					
18	Blading/Grading	LF	1		
19	Crushed Surface Top Course	Ton	1		
Campsite Construction					
20	Blading Access Rd & Parking Stalls	LS	1		
21	Crushed Surface Top Course	Ton	209		
22	Grade Tent Pad Locations	EA	4		
23	Procure and Install Fire Ring	EA	4		
24	Standby Time				
				Total Construction Cost	

Bid Form Signature Page

Construction Company's Full Name: _____

Authorized Signature: _____

Printed Name and Title of Person Signing: _____

Company Address: _____

Phone Number: _____

Email Address: _____

Bid Prices Valid For _____ Days



Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

Date:

Contractor
Address 1
Address 2

RE: Tax Exemption Restoration project

Attached please find an executed Treaty Fishery Tax Exemption Certificate concerning the Yakama Nation's contracting with Contractor for construction of salmon habitat which it undertakes as co-manager of fisheries resources pursuant to the Treaty with the Yakama of 1855 (12 Stat.951). The certificate is being provided to Contractor to assist it in complying with seller record keeping requirements in WAC 458-20-192(4). By executing the certificate, the Yakama Nation is certifying only that it is a federally recognized Indian tribe and that the contracted salmon habitat restoration work is part of its treaty fishery management program. The Yakama Nation does not waive sovereign immunity from suit, nor by executing the certificate, acknowledge or dispute the jurisdiction of the state of Washington over any governmental activities of the Yakama Nation or the applicability or non-applicability of any statutes or rules of the state of Washington to the exercise of tribal government operations or rights reserved to the Yakama Nation or its members by the Treaty of 1855. Contractor is advised to keep this letter on record with the attached certificate.

Sincerely,

JoDe L Goudy, Chairman
Yakama Tribal Council

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): <u>Construction of salmon habitat restoration</u> |
| <input type="checkbox"/> Operating Supplies | |

Provide one of the following:

- Federally recognized Tribe of the purchaser: Confederated Tribes and Bands of The Yakama Nation 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: JoDe L Goudy, Chairman, Yakama Nation Telephone number: (509) 865-5121

Signature: _____ Date: _____

Address: PO Box 151 City: Toppenish State: WA Zip code: 98948

***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.



CONSTRUCTION SERVICES AGREEMENT

BETWEEN:

THE CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION

on behalf of its Fisheries program or department

P.O. Box 151 / 401 Fort Road

Toppenish, WA 98948

General Phone: (509) 865-5121

Program Phone:

(HEREAFTER "YAKAMA NATION")

AND

[CONTRACTOR NAME]

Address Line 1

Address Line 1

Phone:

(HEREAFTER "CONTRACTOR")

This Construction Services Agreement ("Agreement") is executed by and between Contractor and Yakama Nation, a federally recognized sovereign Nation pursuant to the Treaty with the Yakamas of 1855 (12 Stat. 951). Contractor and Yakama Nation may be collectively referred to herein as the "Parties," and each may be referred to as a "Party."

1. TERM

The effective term of this Agreement shall be from _____, through _____, absent a valid termination action in accordance with the express terms of this Agreement.

2. PERFORMANCE

Contractor agrees to perform the services set forth in the attached scope of work, Exhibit "A" (collectively, the "Services"), which is incorporated by reference in this Agreement.

3. COMPENSATION

A. *Maximum Compensation.* The **total compensation amount** approved by Yakama Nation for this Agreement is limited to, and **shall not exceed** _____ (\$_____); which amount shall include any and all compensation for the Services as described herein and set forth in detail in the budget attached as Exhibit "B". If Exhibit "B" describes separate and specific maximum compensation amounts for services and expenses, then at the end of the term of this Agreement, any remaining balance in the amount allocated for expenses may be used by Yakama Nation, at its sole discretion, to cover fees for authorized services, so long as the total compensation amount set forth above is not exceeded.

B. *Invoicing, Progress Reports and Payment of Compensation.* Yakama Nation shall compensate Contractor according to the billing rate(s) and/or fee schedule(s) set forth in Exhibit "C" in an amount not to exceed that stated above. Contractor shall submit monthly invoices and appropriate supporting documentation to Yakama Nation, including a progress report that provides of brief summary of daily activities associated with services performed and completed by Contractor. Unless the Parties agree in writing to different terms, invoice periods shall begin on the first day of each month and end on the last day of each month. Invoices shall be submitted by Contractor to Yakama Nation's designated staff contact within fifteen (15) days after the end of the month in which the services were provided and/or expenses were incurred. Contractor waives the right to receive full payment on invoices submitted more than sixty (60) days following the end of the proper invoice period. If a question or concern arises regarding an item on an invoice, Yakama Nation shall notify Contractor of the question or concern. Within five (5) business days following such notification, Contractor shall take action to sufficiently explain or correct the item, or Contractor shall be deemed to have waived their right to demand payment for the item.

C. *Availability of Funds.* Notwithstanding any other provisions of this Agreement, Contractor understands and agrees that compensation for services and expenses under the terms of this Agreement shall be contingent upon the availability of funds (a) placed to the credit of Yakama Nation in the Treasury of the United States, (b) appropriated by Congress, or (c) from local funds maintained in the name of Yakama Nation.

D. *Federal & Grant Funds.* Contractor understands and agrees that agreements and contracts funded by federal funds or other grant funds may be subject to certain legal requirements. These may include, but are not limited to, those requirements set forth in the United States Office of Budget Management's Uniform Guidance, 2 C.F.R. Part 200, and/or the terms of an applicable source grant. Contractor agrees to comply with and utilize funds in accordance with all applicable laws, regulations, and guidelines, and with any applicable grant or contract terms, and further understands and agrees that the use of such funds may be subject to audit by the grantor agency. Contractor shall reimburse Yakama Nation for any costs of Contractor that are disallowed by a grantor.

4. PROPERTY DEVELOPED BY CONTRACTOR

Contractor agrees that it will retain no interest in the information, data, proposals, papers, copyrights, patents, or any other material or property developed, discovered, invented, and/or accumulated by Contractor in connection with the performance of this Agreement. Subject to applicable law, Contractor shall turn over such information, data, proposals, papers, copyrights, patents, discoveries, inventions, and other material or property to Yakama Nation upon the expiration or termination of this Agreement or upon request.

5. PUBLICATION OF INFORMATION

The dissemination or publication of documents, information material or other property developed or generated by Contractor during the course of this Agreement shall require the written approval of Yakama Nation.

6. RECORDS

A. *Access.* Subject to applicable law, Yakama Nation will provide Contractor with reasonable access to its personnel, facilities, and records necessary to the performance of this Agreement.

B. *Maintenance & Retention of Records; Financial Management for Accounting and Audits.* Contractor shall maintain and retain auditable records during the term of this Agreement and for a period of at least three (3) years following the expiration or termination of this Agreement. Contractor shall maintain its records to comply with the Audit Act of 1984, P.L. 98-502 (31 U.S.C. § 7501 et. seq., as amended) and the Office of Management and Budget's Uniform Guidance requirements set forth at, 2 C.F.R. part 200, Subpart F, as amended. Contractor shall adhere to a systematic accounting method that assures timely and appropriate resolution of audit findings and recommendations in compliance with the Uniform Guidance. Subject to applicable law, Contractor agrees that Yakama Nation, the grantor agency (if applicable), the Comptroller General of the United States, or any of their duly authorized representatives, shall have timely access to Contractor's records which are pertinent to the subject matter of this Agreement and the performance of obligations contained herein, for the purpose of conducting an audit and/or examination, and/or creating excerpts and/or transcriptions.

7. INDEPENDENT CONTRACTORS

Contractor shall employ, at its own expense, all personnel and equipment reasonably necessary to perform the Services called for by this Agreement. Such personnel shall not be considered Yakama Nation employees. Contractor shall be responsible to ensure that all personnel engaged in performing Services are fully qualified to undertake the work in accordance with applicable tribal, federal, state, and local laws. Contractor shall at all times in performance of this Agreement operate as, and have the status of, an independent contractor, and will not be an agent or employee of Yakama Nation; nor will Contractor or its personnel be entitled to any employee benefits provided by Yakama Nation. The Parties are not engaged in a joint venture or partnership. Neither party can represent or bind the other. Unless otherwise expressly agreed, Contractor shall be solely responsible to secure and pay for any necessary or appropriate permits, fees, licenses, inspections, or other prerequisites necessary for proper performance of the Services called for by this Agreement.

8. SUBCONTRACTING

A. Contractor shall not be permitted to hire a subcontractor to perform the Services called for by this Agreement without express prior written consent. Any unauthorized attempt by Contractor to subcontract for such Services shall be null and void, and Contractor shall be responsible for all expenses, fees, and costs associated with any such unauthorized subcontract.

B. An award of this Agreement based on a bid or proposal naming specific subcontractors and identifying the portions of the work to be performed by the subcontractors shall constitute prior written consent to the hiring of the named subcontractor(s). Subcontractor selection and subcontractor employment shall be subject to applicable TERO and Indian Preference

requirements described above. Contractor shall be responsible to ensure their subcontractors are in compliance with Yakama Nation TERO and Indian Preference requirements.

9. ASSIGNMENT OF INTEREST

Contractor shall not assign its interest in this Agreement, or any part thereof, including its right to receive payment for services performed, to another party. Any attempt by Contractor to assign any obligations, rights, or fees under this Agreement will be null and void, and Contractor shall be responsible for all expenses, fees, and or costs associated with any unauthorized assignment.

10. INDEMNIFICATION

Contractor shall, at its sole expense, hold harmless, indemnify, and defend Yakama Nation and the Washington State Department of Fish & Wildlife (“WDFW”), including the officials, officers, agents, employees, and assigns of each, against any and all losses, costs, damages, expenses or other liabilities whatsoever, including reasonable attorney’s fees and expenses, that arise out of or are connected with, directly or indirectly, Contractor’s actions or omissions, or Contractor’s agents’ or subcontractors’ acts or omissions related to this Agreement, including, but not limited to, accidents or injuries to persons or property.

11. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

A. Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to:

- (1) Conditions bearing upon transportation, disposal, handling, and storage of materials;
- (2) The availability of labor, water, electric power, and roads;
- (3) Uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- (4) The conformation and conditions of the ground; and
- (5) The character of equipment and facilities needed preliminary to and during work performance.

Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by Yakama Nation and information available to the public from local government agencies, as well as from the drawings and specifications made a part of this Agreement. Any failure of Contractor to take the actions described and acknowledged in this paragraph will not relieve Contractor from responsibility for properly estimating the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to Yakama Nation.

B. Yakama Nation assumes no responsibility for any conclusions or interpretations made by Contractor based on the information made available by Yakama Nation. Nor does Yakama

Nation assume responsibility for any understanding reached or representation made concerning conditions that can affect the work by any of its officers or agents before the execution of this Agreement, unless that understanding or representation is expressly stated in this Agreement.

12. PHYSICAL DATA

Data and information furnished or referred to below or in the attached exhibits is for Contractor's information. Yakama Nation shall not be responsible for any interpretation of or conclusion drawn from the data or information made available to Contractor. Further, Yakama Nation specifically does not warrant construction methodology that may be included in such documents.

(a) The indications of physical conditions on any drawings or specifications that have been provided are the result of general inspection of the site. [if applicable, insert a description of investigational methods used, such as surveys, auger borings, core borings, test pits, probing, test tunnels, etc.].

(b) [Write "n/a" or insert other pertinent information].

13. SCHEDULE FOR CONSTRUCTION

A. *Construction Schedule.* Unless the construction schedule is specifically addressed elsewhere in this Agreement, Contractor shall, within five (5) days after the work commences on the Agreement or another period of time determined by Yakama Nation, prepare and submit to Yakama Nation three (3) copies of a practicable schedule showing the order in which Contractor proposes to perform the work, and the dates on which Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion each week during the Agreement period. If Contractor fails to submit a schedule within the time prescribed, Yakama Nation may withhold approval of progress payments until Contractor submits the required schedule. Should Contractor fall behind its schedule, a revised schedule shall be forwarded with the next Contractor's request for progress payment. Additional schedules shall be furnished to Yakama Nation as soon as practicable if so requested.

B. *Rate of Progress.* With any and each partial payment request, Contractor shall submit a copy of the last submitted schedule annotated to indicate actual progress made to date. If at any time, in the opinion of Yakama Nation, Contractor has fallen behind the schedule to an extent which would jeopardize timely completion, Contractor shall take the steps necessary to improve its progress, including those that may be required, to enable timely completion without additional cost to Yakama Nation. Such steps may include, but are not limited to, increasing the number of shifts, the amount of overtime, days of work per week, and/or the amount of construction plant being utilized. Contractor shall submit any supplementary schedules Yakama Nation deems necessary to demonstrate how the rate of progress necessary for timely completion will be regained.

C. *Breach.* Failure of Contractor to comply with the requirements of this section shall be considered a material breach and grounds for a determination by Yakama Nation that Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Agreement. Upon making this determination, Yakama Nation may terminate Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this Agreement.

14. DIFFERING SITE CONDITIONS

Contractor shall promptly, and before the conditions are disturbed, give a written notice to Yakama Nation of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this Agreement, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent to the type of work provided for in the Agreement. Unless specifically identified in the Agreement, discoveries of archaeological or historical remains such as graves, fossils, skeletal materials and artifacts protected by the Archaeological Resources Protection Act (36 CFR 1214) are considered type 2 conditions.

15. LAYOUT OF WORK

Contractor shall lay out its work from Yakama Nation established base lines and bench marks indicated on the drawings or any other manner furnished by Yakama Nation. Contractor shall be responsible for all measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. Contractor shall be responsible for the execution of the work to the lines and grades that may be established or indicated by Yakama Nation. Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by Yakama Nation until authorized to remove them. If such marks are destroyed by Contractor or through its negligence before their removal is authorized, Yakama Nation may replace them and deduct the expense of the replacement from any amounts due or to become due to Contractor.

16. SPECIFICATIONS, DRAWINGS AND MATERIAL SUBMITTALS

A. Omissions from any drawings and specifications that have been provided, or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve Contractor from performing such omitted or misdescribed details of the work. Work shall be performed as if fully and correctly set forth and described in the drawings and specifications.

B. Contractor shall check all drawings furnished by Yakama Nation prior to starting work and shall promptly notify Yakama Nation of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large-scale drawings shall in general govern small-scale drawings. Contractor shall compare all drawings and verify the figures before laying out the work, and will be responsible for any errors which might have been avoided thereby.

17. MATERIAL & WORKMANSHIP

A. *Materials.* All equipment, material, and articles incorporated into the work covered by this Agreement shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this Agreement. Use of recycled materials for the manufacture of such products is encouraged. Equipment, material, or articles specified by trade name, make, or catalog number, shall be provided. Equivalent items are not acceptable unless specifically authorized in the specification.

B. *Professional Work.* All work under this Agreement shall be performed in a professional, thorough, skillful, and safe manner, and shall be consistent with relevant professional standards. Yakama Nation may require, in writing, that Contractor remove from the work any employee Yakama Nation deems incompetent, unsafe, or otherwise objectionable.

C. *Legally Compliant Work.* In performing its obligations under this Agreement, Contractor shall comply with all applicable tribal, federal, state and local laws, regulations, guidelines and policies in performance of services under this Agreement. Such laws may include, but are not limited to, the Davis Bacon Act and related federal labor law requirements associated with federally funded construction projects. Contractor represents that it has reviewed, and is familiar with, all laws relevant to the performance of services under this Agreement.

18. SUPERINTENDENCE BY THE CONTRACTOR

At all times during performance of this Agreement, and until the work is completed and accepted, Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to Yakama Nation and has authority to act for Contractor.

19. PERMITS AND RESPONSIBILITIES

Unless otherwise provided in this Agreement, Contractor shall, without additional expense to Yakama Nation, be responsible for obtaining any and all necessary licenses and permits, and for complying with any tribal, federal, state, and municipal laws, codes, and regulations applicable to the performance of the work. Contractor shall also be responsible for all damages to persons or property that occur as a result of Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of Yakama Nation and others. Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under this Agreement.

20. OTHER CONTRACTS

Yakama Nation may undertake or award other contracts for additional work, or may utilize in-house construction forces, at or near the site of the work. Contractor shall fully cooperate with

such other contractors and Yakama Nation employees, and carefully adapt scheduling and performance of the work under this Agreement to accommodate simultaneous performance, heeding any direction that may be provided by Yakama Nation. Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractors or by Yakama Nation employees.

21. USE AND POSSESSION PRIOR TO COMPLETION

Yakama Nation shall have the right to take possession of or use any completed or partially completed part of the work call for by this Agreement. Before taking possession of or using any work, Yakama Nation shall furnish Contractor a list of items of work remaining to be performed or corrected on those portions of the work that Yakama Nation intends to take possession of or use. However, failure of Yakama Nation to list any item of work shall not relieve Contractor of responsibility for complying with the terms of this Agreement. Yakama Nation's possession or use shall not be deemed an acceptance of any work under this Agreement.

22. CLEANING UP

A. Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the owner of the underlying real property. Upon completing the work, Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to Yakama Nation.

B. Unless specifically set forth in the Agreement, Contractor shall not burn any material on site, on the right-of-way or on the access roads to the sites. All material and debris shall be hauled to an appropriate disposal site.

23. ROAD MAINTENANCE

Contractor shall maintain all roads used by it, and upon completion of the job shall leave them in as good a condition as when first used. A road-grading machine (not a bulldozer) shall be used for maintenance and final grading. In no event shall Contractor interfere with the property owner's use of roads existing prior to Contractor's entry.

24. STOP WORK ORDER

A. Yakama Nation may order Contractor to suspend all or any part of the work call for by this Agreement for the period of time that Yakama Nation determines appropriate for the convenience of Yakama Nation.

B. Contractor shall immediately comply with Yakama Nation's order and take all reasonable steps to minimize the incurring of costs allocable to the work covered by the order.

25. PROTECTION OF EXISTING VEGETATION, STRUCTURES, AND IMPROVEMENTS

A. Contractor shall preserve and protect all structures, equipment, utilities, other improvements, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this Agreement. Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during performance of this Agreement, or by the careless operation of equipment, or by workers, Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by Yakama Nation's representative.

B. If Contractor fails or refuses to repair the damage promptly, Yakama Nation may have the necessary work performed and charge the cost to Contractor.

26. INSURANCE

A. The following minimum kinds and amounts of insurance are applicable in the performance of the work under this Agreement. Contractor shall (subject to applicable law) maintain such insurance, naming both Yakama Nation and WDFW as additional insureds on a primary and non-contributory basis:

(1) *Workers' compensation and employer's liability.* Contractor is required to comply with applicable Federal and State workers' compensation and occupational disease statutes. Contractor shall maintain workmen's compensation and employer's liability insurance with respect to any work by employees of Contractor on the Project. Employer's liability coverage of at least \$1,000,000 shall be required.

(2) *General liability.* Contractor shall provide general liability insurance of at least two million dollars (\$2,000,000) per occurrence and four million dollars (\$4,000,000) aggregate. Such limits may be achieved through the use of umbrella liability insurance sufficient to meet the requirements of this section. The policy shall name Yakama Nation and WDFW, and their respective officials, officers, employees and agents, as insureds with respect to Contractor's performance of services. Contractor's policy shall be primary to any insurance of Yakama Nation or WDFW.

(3) *Automobile liability.* Contractor shall provide automobile liability insurance covering the operation of all automobiles used in the performance of this Agreement. Policies shall provide limits of at least one million dollars (\$1,000,000) per accident and include coverage for all owned, non-owned and hired automobiles. Contractor's policy shall be primary to any insurance of Yakama Nation or WDFW.

(4) *Environmental impairment liability.* Contractor shall provide environmental impairment liability insurance of at least one million dollars (\$1,000,000) per occurrence. Such insurance will include coverage for the cleanup, removal, storage, disposal,

transportation and/or use of pollutants. The insurance policy shall name Yakama Nation and WDFW, and their respective officials, officers, employees and agents as insureds with respect to Contractor's performance of services. Contractor's policy shall be primary to any insurance of Yakama Nation or WDFW.

B. Contractor may, with the approval of Yakama Nation, maintain a self-insurance program; provided that, with respect to workers' compensation, Contractor is qualified pursuant to statutory authority.

C. Before commencing work under this Agreement, Contractor shall provide to Yakama Nation certificates of insurance from the insurance company stating the insurance required has been obtained and is in force. The certificate(s) shall identify Contractor and the contract(s) for which coverage is provided, and shall contain a statement that the insurer will give notice of cancellation or any material change to Yakama Nation and WDFW at least thirty (30) days before the effective date. In addition, Contractor shall provide certificates as the policies are renewed throughout the period of this Agreement. If Contractor's insurance does not cover the subcontractors involved in the work, Contractor shall provide certificates stating that the required insurance has been obtained by the subcontractors.

D. The policies shall contain an endorsement with an express waiver of any right of subrogation by the insurance company against Yakama Nation or WDFW, including their respective officials, officers, agents, and employees. The policies shall provide that the insurance proceeds of any loss will be payable notwithstanding any act or negligence of Contractor which might otherwise result in a forfeiture of said insurance. The policies shall expressly provide that Yakama Nation and WDFW shall not be required to give notice of accidents or claims, and that they shall have no liability for any applicable premiums.

27. INSPECTION - SERVICES AND CONSTRUCTION

A. Yakama Nation may inspect the work called for by this Agreement at any time and place. Where possible and practicable, Yakama Nation will perform inspections in a manner that will not unduly delay the work.

B. If any of the services do not conform with the requirements of this Agreement, or with applicable laws, regulations or governmental policies, Yakama Nation may require the Contractor to perform the services again in conformity at no cost to Yakama Nation. When the defects in services cannot be corrected by re-performance, Yakama Nation may deduct from the Agreement payments an amount which reflects the reduced value of the services performed.

C. Neither inspection, lack of inspection, acceptance, nor payment shall relieve the Contractor of any of its obligations under this Agreement. Contractor's duty to re-perform non-conforming work is intended to survive the expiration of this Agreement's term, and shall apply even where non-conformance is discovered following its expiration.

D. If Contractor does not promptly replace or correct rejected work, Yakama Nation may (without limiting any other legal or equitable remedies available to it) (1) by contract or

otherwise, replace or correct the work and charge the cost to Contractor, and may (2) terminate this Agreement for default.

E. Unless otherwise specified in the Agreement, acceptance by Yakama Nation will be in writing and shall be made as promptly as practicable after completion and inspection of all work called by this Agreement or that portion of the work Yakama Nation determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, non-compliance with applicable law, or Yakama Nation's rights under any warranty or guarantee.

28. WARRANTY - CONSTRUCTION

A. In addition to any other warranties in this Agreement, Contractor warrants, except as provided in paragraph (H)(1) of this clause, that work performed by it and/or its subcontractors under this Agreement conforms to applicable law and to the contract requirements, and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor or any subcontractor or supplier at any tier.

B. This warranty shall continue for a period of three (3) years from the date of final acceptance of the work. If Yakama Nation takes possession of any part of the work before final acceptance, this warranty shall continue for a period of three (3) years from the date Yakama Nation takes possession.

C. Contractor shall remedy at Contractor's expense any failure to conform, or any defect. In addition, Contractor shall remedy at Contractor's expense any damage to Yakama Nation-owned or controlled real or personal property, when that damage is the result of:

- (1) Contractor's failure to conform to applicable law or contract requirements; or
- (2) Any defect of equipment, material, workmanship, or design furnished by Contractor.

D. Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. Contractor's warranty with respect to work repaired or replaced will run for three (3) years from the date of repair or replacement.

E. Yakama Nation shall notify Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

F. If Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, Yakama Nation shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at Contractor's expense.

G. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Agreement, Contractor shall:

- (1) Obtain all warranties that would be given in normal commercial practice;
- (2) Require all warranties to be executed, in writing, for the benefit of Yakama Nation, if directed by Yakama Nation; and
- (3) Enforce all warranties for the benefit of Yakama Nation, if directed by Yakama Nation.

H. Unless a defect is caused by the negligence of Contractor or subcontractor or supplier at any tier, Contractor shall not be liable for the repair of any defects of material or design furnished by Yakama Nation nor for the repair of any damage that results from any defect in Yakama Nation-furnished material or design.

- (1) This warranty shall not limit Yakama Nation's rights under the Inspection and Acceptance clause of this Agreement with respect to latent defects, gross mistakes, or fraud.

29. TAXES

The compensation for Services performed under this Agreement shall include all applicable Tribal, Federal, State, and local taxes and duties. Depending on the location and nature of the Services provided, when applicable, Yakama Nation shall provide Contractor a single use Tax Exemption Certificate.

30. TERMINATION

A. *Notice.* Yakama Nation may terminate all or any part of this Agreement, at any time, with or without cause, upon written notice to Contractor. Upon receipt of the termination notice, Contractor shall promptly stop work on the terminated portion of the Agreement. Contractor obligations shall be consistent with those set forth above in the Stop Work Order clause of this Agreement.

B. *Breach.* In the event of termination for breach or violation of the terms and provisions of this Agreement, Yakama Nation, to the extent permitted by applicable law, shall be entitled to enforce its rights under this Agreement, and recover its court costs and reasonable attorney's fees, as determined by the court. The foregoing shall not in any way limit or restrict any right or remedy at law or equity which would otherwise be available to Yakama Nation, including, but not limited to, the right to contract with other qualified persons to complete the performance of services identified in or called for by this Agreement.

C. *Termination By Tribal Council Executive Committee.* Notwithstanding anything herein to the contrary, Contractor understands and agrees that the Yakama Nation Tribal Council Executive Committee may immediately terminate this Agreement by written notice.

D *Effect of Complete Termination.* Upon the complete termination of this Agreement, the liability of the Parties for the further performance of this Agreement shall cease, but the Parties shall not be relieved of the duty to perform their obligations up to the date of termination.

E. *Effect of Partial Termination.* The compensation amount shall be revised as a result of a partial termination under this section. On fixed-price contracts the revised amount shall not exceed the pre-termination contract price plus reasonable termination expenses. On cost-reimbursement contracts the revised amount shall not exceed the total of allowable and allocable costs of performance prior to termination plus termination expenses plus an adjustment of the fee on the terminated portion of the Agreement. No payment will be made for anticipated profits on the terminated portion, or consequential damages, of this Agreement. Contractor shall submit a settlement proposal within thirty (30) days of the notice of termination.

31. FORCE MAJEURE

This Agreement is subject to force majeure, and is contingent on strikes, accidents, acts of God, weather conditions, fire regulations, the actions of any government, including funding and/or budgetary decisions, and other circumstances which are beyond the control of the parties. If the terms and conditions of this Agreement are unable to be performed as a result of any cause of force majeure, then this Agreement shall be void, without penalty to any party for such non-performance.

32. NOTICE

Notice to Contractor shall consist of a letter, delivered postage prepaid, addressed to:

[Contractor's Legal Agent's Name]
[Contractor Name]
[Address No. 1]
[Address No. 2]

Notice to Yakama Nation shall consist of a letter, delivered postage prepaid, addressed to:

JoDe L. Goudy, Chairman
Yakama Tribal Council
PO Box 151 / 401 Fort Road
Toppenish, WA 98948

With courtesy copies to Yakama Nation's Designated Representative detailed below, and the Lead Attorney of Yakama Nation's Office of Legal Counsel at P.O. Box 150, Toppenish, WA 98948.

Either party may from time to time change its designated address for notice, or designated contact(s) for notice, by giving the other party reasonable notice of such change.

33. SUPERVISION OF CONTRACTOR/DESIGNATED REPRESENTATIVE

Contractor shall act under the supervision of the following Designated Representative of Yakama Nation in performing services under this Agreement:

Name:	Jarred Johnson, Fish Habitat Biologist
Address:	2 Johnson Lane, Winthrop, WA, 98862
Phone:	509-881-1462
Email:	johj@yakamafish-nsn.gov

The Designated Representative is designated for project management purposes only, and does not have authority to authorize any changes, modifications or addendums to this Agreement, nor does the Designated Representative have signing authority on behalf of Yakama Nation. Yakama Nation shall provide Contractor reasonable notice if there is a change in the Designated Representative.

34. COMPLIANCE PROVISIONS

A. *Discrimination.* Contractor shall not discriminate against any employee or applicant for employment because of handicap, race, age, religion, or sex. Contractor will take affirmative steps to ensure that applicants are employed, and that employees are treated fairly during employment, without regard to their handicap, race, age, religion, or sex.

B. *Indian Preference.* Notwithstanding the above, Contractor shall, for all work performed on or near the Yakama Reservation pursuant to this Agreement, and consistent with Section 703(i) of the 1964 Civil Rights Act, give preference in employment (including any authorized subcontracts) to equally qualified Indians regardless of their handicap, age, religion or sex. To the extent feasible and consistent with the efficient performance of this Agreement, Contractor shall provide employment and training opportunities to Indians that are not fully qualified to perform under this Agreement, regardless of their handicap, age, religion or sex. Further, Contractor shall comply with any and all applicable Indian preference laws and requirements established by Yakama Nation, including those set forth in the Yakama Nation Tribal Employment Rights Ordinance (“TERO”), as amended (Yakama Revised Law & Order Codes, Title 71).

35. JURISDICTION & VENUE

The validity, interpretation, and performance of this Agreement, and any and all written instruments, agreements, specifications and other writings of whatever nature which relate to or are part of this Agreement, shall be governed by and construed in accordance with the laws of Yakama Nation. Both Parties understand and agree that this Agreement establishes a consensual business relationship between the Parties for purposes of Yakama Tribal Court jurisdiction. Venue of any court action filed to enforce or interpret the provisions of this Agreement shall be exclusively in Yakama Nation Tribal Court(s). In the event of litigation to enforce the provisions of this Agreement, the prevailing party shall be entitled to reasonable legal fees and expenses in addition to any other relief allowed.

36. DISPUTE RESOLUTION

A. *Meet and Confer Meeting.* In the event that a dispute arises between the Parties over the performance, interpretation, or enforcement of this Agreement, the Parties in the first instance shall attempt in good faith to resolve the dispute informally by mutual Agreement in a face-to-face meet and confer meeting. All offers, promises, conduct and statements, whether oral or written, made in the course of the meet and confer meeting by any of the Parties, their agents, employees, experts and attorneys shall be considered confidential, privileged and inadmissible for any purpose, including impeachment, in any other proceeding involving the Parties, provided that evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of its use in the meet and confer meeting.

B. *By Tribal Council Chairman.* If the Parties are unable to resolve the dispute during the meet and confer meeting, the aggrieved party shall submit the matter, in writing, to the Chairman of the Yakama Nation Tribal Council. A copy of the aggrieved party's submission shall be served upon the other party in accordance with the notice provisions of this Agreement. The Chairman shall promptly convene a meeting of the Parties, which shall be held in Toppenish, Washington, to resolve the matter. The decision of the Chairman shall be final and binding upon both Parties. Provided, however, that nothing shall operate to limit or prohibit Yakama Nation from otherwise enforcing its rights under this Agreement. In the event that the Chairman has a conflict of interest that would prevent her/him from hearing the dispute, s/he may, at her/his sole discretion, either decline to hear the dispute, or appoint an alternate Tribal Leader or Elder to serve in his/her place.

C. Nothing in this section shall operate to prohibit Yakama Nation from enforcing its rights under this Agreement in a court of appropriate jurisdiction. Yakama Nation may at its own election seek recovery of monetary damages from Contractor's breach of any terms in this Agreement.

37. GENERAL TERMS

A. *Headings.* Headings are provided for convenience and do not affect the meaning of the provisions to which they are affixed.

B. *Severability.* If any term of this Agreement is to any extent illegal, otherwise invalid, or incapable of being enforced, such term shall be excluded to the extent of such invalidity or unenforceability; all other terms hereof shall remain in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term.

C. *Changes to the Agreement.* No change, amendment, modification, or addendum to this Agreement shall be valid unless it is in writing and executed by authorized representatives of both Parties.

D. *Additional Services.* Except as otherwise provided in this Agreement, no payment for additional services shall be made unless such services and the price therefore have been requested and authorized in advance in writing by Yakama Nation.

E. *Survival.* The requirements of Section 4 (Property Developed by Contractor), Section 6 (Maintenance & Retention of Records; Financial Management for Accounting & Audits), Section 10 (Indemnification), Section 28 (Warranty-Construction) and Section 36 (Dispute Resolution) of this Agreement shall survive termination of this Agreement.

F. *No General Waiver.* Any waiver or failure of the Parties to enforce or insist upon any term in this Agreement does not constitute a general waiver or relinquishment of that term.

G. *No Construction Against Drafter.* Each party has participated in negotiating and drafting this Agreement. If any ambiguity or question of intent or interpretation arises, this Agreement is to be construed as if the Parties had drafted it jointly, as opposed to being construed against one party because it was responsible for drafting one or more provisions.

H. *Execution.* This Agreement may be executed in counterparts, electronically, or by facsimile.

38. ENTIRE AGREEMENT

This Agreement incorporates all the agreements, covenants and understandings between the Parties. No agreement or understanding, verbal or otherwise, of the Parties regarding their responsibilities under this Agreement shall be valid or enforceable unless embodied in this Agreement.

The following Exhibits are incorporated by reference into this Agreement:

- Exhibit "A" – Project Overview and Scope of Work
- Exhibit "B" – Budget
- Exhibit "C" – Payment Schedule
- Exhibit "D" – Sample WDFW Right of Entry Permit
- Exhibit "E" – Project Planset

39. SOVEREIGN IMMUNITY

Notwithstanding any other terms or provisions of this Agreement, Contractor understands and agrees that Yakama Nation, by entering into this Agreement, does not waive its sovereign immunity from suit, nor does it waive, alter, or otherwise diminish its rights, privileges, remedies or services guaranteed by the Treaty with the Yakamas of 1855 (12 Stat. 951).

40. SPECIAL PROVISIONS

In addition to the forgoing terms and conditions, the following requirements are agreed to and shall apply to this Agreement:

A. Consistent with its obligations under Section 19 of this Agreement to obtain all necessary permits to implement the project, Contractor must obtain a Right of Entry permit from WDFW, and shall be responsible at its sole expense to comply with its terms and conditions. A sample Right of Entry permit provided to Yakama Nation by WDFW is attached as Exhibit D to this Agreement. Contractor states that it reviewed the sample Right of Entry Permit requirements in preparing its bid and certifies that it is willing and able to comply with WDFW's requirements.

B. Contractor shall deliver to Yakama Nation and WDFW a performance bond in an amount sufficient to complete the Project as set forth in the Project Design and associated post-construction obligations prior to operation under the finalized WDFW permit. This performance bond is for the purpose of guaranteeing completion of this Project. In the event that the Contractor does not complete this Project, the bond may be used by Yakama Nation or WDFW, in WDFW's sole discretion, to complete the Project, to return WDFW's property to its current condition, or to otherwise stabilize the premises, as WDFW deems necessary.

C. Contractor shall comply with any and all requirements of the Intergovernmental Master Agreement No. 56662 (hereafter "Master Agreement" or "IG-MA 56662"), as amended, between the Yakama Nation and the Bonneville Power Administration (hereafter "BPA") applicable to subcontractors. If Contractor is authorized under this Agreement to hire any subcontractors, Contractor shall ensure that its contracts also include requirements for compliance with the terms of the Master Agreement applicable to subcontractors. Contractor is responsible for reviewing the Master Agreement to determine which terms apply to Contractor's work.

The full text of the Master Agreement may be reviewed at:

1. http://yakamafish-nsn.gov/sites/default/files/projects/Master_Agreement_56662_Original-Terms-and-Conditions.pdf
2. http://yakamafish-nsn.gov/sites/default/files/projects/Master_Agreement_56662_Mod_01-Terms-and-Conditions.pdf
3. http://yakamafish-nsn.gov/sites/default/files/projects/Master_Agreement_56662_Mod_02-Terms-and-Conditions.pdf

Contractor hereby states and certifies that it has read the Master Agreement and agrees to be bound by the applicable terms. Contractor further states that it has the capacity to comply with the Master Agreement's applicable terms.

D. Funds for compensation of Contractor for the Services rendered to the Yakama Nation under this Agreement are provided by BPA through a particular IG-MA 56662 Funding Release No. 169 (hereafter "Funding Release"). The Yakama Nation's obligation under this Agreement to reimburse the Contractor is conditioned upon these necessary funds being made available to

the Yakama Nation. Contractor shall comply with any and all requirements of the Funding Release applicable to subcontractors. If Contractor is authorized under this Agreement to hire any subcontractors, Contractor shall ensure that their contracts also include requirements for compliance with the terms of the Funding Release applicable to subcontractors. These requirements include:

1. Compliance with federal Davis Bacon wage requirements, including without limitation the following:
 - a) DOL, DBA, General Decision WA180090, 09/21/2018 WA90, 09/21/2018, Heavy Construction Projects (including sewer/water line), Chelan County, WA;
 - b) DOL, DBA, General Decision WA180079 09/21/2018 WA79, 09/21/2018, Heavy Construction Projects (including sewer/water line), Okanogan County, WA;
 - c) Wage Determination No. 2015-5542, Revision 7, 12/26/2018 (Eight pages);
 - d) Wage Determination No. 2015-5543, Revision 7, 12/26/2018 (Eight pages); and
 - e) Wage Determination No. 2015-5558, Revision 9, 12/26/2018 (Eight pages).
2. Compliance with Service Labor Standards, Wage Determination Nos. 2015-5542, Revision 6, 08/07/2018, Chelan County, WA; 2015-5558, Revision 8, 07/03/2018, Okanogan County, WA; 2015-5543, Revision 6, 08/07/2018, Yakima County, WA.
3. Goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, as follows:
 - a) Goals for minority participation 7.2% for Chelan and Okanogan counties.
 - b) Goals for female participation 6.9% for Chelan and Okanogan counties.

IN WITNESS WHEREOF, we set our hands and seals:

[Signature page(s) to follow.]

CONFEDERATED TRIBES & BANDS OF THE YAKAMA NATION:

By: _____

Date: _____

Name: JoDe Goudy (or authorized designee)

Title: Yakama Nation Tribal Council Chairman

CONTRACTOR NAME:

EIN #

By: _____

Date: _____

Name:

Title:

EXHIBIT A

Project Overview and Statement/Scope of Work

1. Background:

Yakama Nation Fisheries (Owner) is constructing a salmon habitat restoration project along Beaver Creek known as the Beaver Creek Reach 5 Project. This project is funded through the 2008 Columbia River Fish Accords, which provides dedicated funding from Bonneville Power Administration to Yakama Nation Fisheries for the purposes of protecting and improving salmon habitat in the natal tributaries of the Upper Columbia Basin. This project has been developed under the 2007 Upper Columbia Salmon and Steelhead Recovery Plan framework and in coordination with the Methow Subbasin Watershed Action Team.

All work on this project will be directed by the Owner's Designated Representative(s) that produced the stamped (certified) engineered Construction Design Set. Project details including technical specifications, engineered plan sheets, materials standards and quantities are contained or referenced within Exhibit E, The Washington State Department of Transportation 2018 Standard Specifications Manual for Road, Bridge and Municipal Construction are adopted for defining standard specifications governing this contract. No changes to the Project Plans will be allowed without prior approval from the designated representative. Taken together, multiple accompanying exhibits to this Exhibit A provide the full Scope of Work to be executed per the terms of this contract.

The attached **Exhibit B** provides the contract Line Item Budget which is referenced to the work tasks defined in the Special Provisions. **Exhibit C** provides a payment schedule and invoicing requirements. Exhibit D is a sample Right of Entry Permit the Contractor is required to acquire prior to initiating any work. **Exhibit E** provides the Construction Plan Set and Special Provisions.

2. Location

The Project is located on Washington State Department of Fish and Wildlife Property between the Beaver Creek Campground near rivermile 8.9 downstream to the snowplow turnaround near rivermile 7.0.

3. Project Tasks:

All tasks will be completed as per **Exhibit E**.

4. Project Schedule and Key Deliverables:

This project will occur adjacent to private lands containing inhabited residences. Construction noise disturbances outside of normal work hours will not be allowed. Work producing construction noise should only be conducted between 6:30 am and 6:30 pm.

Environmental permits for this project require that the work be completed by November 1, 2019.

5. Contractor Obligations:

The Contractor shall furnish all supervision, labor, equipment and tools necessary to complete the project as described in **Exhibit E**.

6. Consistent Satisfactory Progress

Consistent satisfactory progress in this project will be required. Satisfactory progress will be measured by both the quality and quantity of work. If for any reason no work is performed, the Contractor may be given a notice of contract cancellation. Consistent satisfactory progress will also be determined by the Contractor's demonstrated ability to perform all work tasks described in **Exhibit E**. If it appears that the Contractor is unable to complete the project tasks within the permitting work window, the Contractor may be given a notice of contract cancellation. The Yakama Nation's designated representative will monitor progress closely.

7. Fish Removal

In-water construction activities will require fish removal of all isolated in-water work sites. Fish removal will be conducted in a timely manner by the Owner's Designated Representatives and the time taken to implement proper fish removal protocols will be considered incidental to the contractor's work tasks.

8. Fire Suppression

The contractor will be familiar with and prepared for the requirements associated with IFPL Levels II & III and the restrictions associated with those. The contractor may seek to acquire IFPL shut down exemptions to allow work to continue on schedule.

9. Road Signage

The Contractor will observe all road signage regulations regardless of the project location and as per Exhibit E if applicable.

10. Utilities Location

The Contractor will locate all utilities prior to any excavation.

11. Communication with Landowners

The Contractor expressly agrees that Contractor and his staff will not communicate with the Landowner in any manner, whether it be in regard to the project or otherwise, without express permission from, or the presence of the Designated Representative.

12. Exclusivity

During the term of this Agreement, including time taken for mobilization and demobilization of construction equipment, Contractor shall not conduct any work on the property designated in this Agreement unless so directed by the Designated Representative. Contractor shall require in all contracts with subcontractors that subcontractors not conduct any work on the property designated in this Agreement unless so directed by the Designated Representative. Any additional work conducted on the property designated in this Agreement by Contractor without the express consent of the Designated Representative shall constitute a material breach of this Agreement, thereby relieving the Yakama Nation from all payment obligations to the Contractor.

13. Applicable Documents:

[This is an optional section, which you may not need to include in your Project Overview. However, if the work involves the use of, or is subject to the terms of outside documents, you should list them here, and attach them to the Contract Agreement.]

[Use this space to insert other sections or information, if necessary.]

EXHIBIT B

Budget

[Attach the budget for the work to be performed. The total compensation amount shown in this budget must be consistent with the total compensation amount listed in Section 3 of the Agreement.]

[If there are separate subtotal amounts allocated for services and expenses, make sure to note these, along with any applicable hourly rate expectations, or item/activity cost expectations.]

EXHIBIT C

Payment

1. Payment Schedule

- Progress:** The Contractor shall submit a separate bill for each major project task element after the work has been completed, reviewed and accepted by Yakama Nation's Designated Representative. The Contractor is encouraged to invoice monthly when payment is necessary.
- Percentage:** The Contractor shall invoice monthly and will be allowed to submit a bill for percentage of work completed after the work has been reviewed and accepted by Yakama Nation's Designated Representative.
- Actual Work Completed:** The Contractor shall invoice monthly and will be allowed to submit a bill for actual work completed.
- Alternative Schedule:** The Contractor shall invoice and be allowed to submit a bill as follow: [alternate payment plan description, e.g., 30% deposit with balance due after work has been reviewed and accepted by Yakama Nation's Designated Representative]

Invoices must include appropriate supporting documentation, which may include, but is not limited to, detailed expense receipts, Davis Bacon compliance, and a brief summary of activities associated with the Work performed by Contractor.

2. Tax Exempt Certificate

Due to the location and nature of the Services being provided by Contractor:

- The Contractor **has not** been given a Tax Exemption Certificate
- The Contractor **has** been given a single use Tax Exemption Certificate. Due to the nature of this Agreement, as set forth below, the Contractor should be allowed to use the tax-exempt certificate that is included with this document.

The Contractor shall be exempt from paying state taxes for work performed on salmon habitat restoration projects which the Yakama Nation directs and undertakes as co-manager of fisheries resources pursuant to the Treaty with the Yakama of 1855 (12 Stat.951).

EXHIBIT D

Sample WDFW Right of Entry Permit

RIGHT OF ENTRY RIGHT OF ENTRY and CONSTRUCTION AGREEMENT for WDFW LAND

THIS AGREEMENT (hereinafter “permit”) is granted to _____ [INSERT CONTRACTOR], whose business address is INSERT, (collectively hereinafter “Permittee” or “Contractor”), in accordance with a Memorandum of Understanding with the Yakama Nation for habitat enhancement projects dated ____, 2019_ (MOU), by THE STATE OF WASHINGTON, THE DEPARTMENT OF FISH AND WILDLIFE (hereinafter “WDFW”). 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 to implement a construction project for habitat restoration using WDFW property located in _____[INSERT] County, Washington, as more particularly described in Exhibit A hereto (hereinafter “the Premises”) for the sole purpose of a habitat restoration project , as more particularly described in the design drawings and other materials attached as Exhibit B hereto (“the Project Design”). Performance Measures for successful completion of the Project are set forth in Exhibit C hereto.

THIS PERMIT IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

- 1. Term.** This permit is effective as of the date the last party signs this permit. Permittee shall not commence work on the Premises until the Yakama Nation has established the escrow required under the MOU, insurance and the performance bond are in place, and the contractor has obtained all necessary permits. The right to operate under the permit shall cease if any of the above requirements lapses during the term of the permit. .
- 2. Legal Description of the Premises.** WDFW is the owner of record of certain real property known as the INSERT Wildlife Area in INSERT County, located in Section INSERT, Township INSERT North, Range INSERT East, W.M., as recorded in INSERT under INSERT County Auditor’s File Number INSERT, of which approximately INSERT acres are the Premises for this Project. The legal description of the Premises 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 other 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, providing 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 so long as such activities do 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, the permittee shall restore the road area to its original condition, unless otherwise agreed by WDFW.

- 4. Project Manager.** Contractor acknowledges the Yakama Nation is solely responsible for contracting with and paying the Contractor to complete the Project described in the Project Design. That separate contract between the Yakama Nation and the Contractor creates no legal obligations upon WDFW. By contrast, Contractor 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. Contractor agrees the Yakama Nation and the Contractor are 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.
- 5. Project Design and Construction:** WDFW and Contractor have reviewed and approved the materials for the Project Design, which are dated _____[INSERT] and are attached as Exhibit B hereto. Contractor 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 agreement of the parties. The Project includes certain post-construction obligations set forth in Exhibit D-Adaptive Management Plan. During construction, Contractor shall use its best efforts to implement general construction practices designed to minimize surface disturbance during construction; shall undertake specific measures to lessen construction impacts to soils, and to restore disturbed land to its pre-construction state. The Yakama Nation or the Contractor if so assigned in the contract between the Yakama Nation and contractor 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 sites.
- 6. As-Built Plans.** Upon completion of a project, the Yakama Nation and the Contractor shall jointly be responsible to provide to WDFW as-built drawings and specifications for the Project in a form acceptable to WDFW. A Yakama Nation representative and Contractor representative 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 a construction contractor until seven (7) days after as-built drawings were sent to WDFW. Issuance of "as-builts" shall be deemed Project Completion for purposes of this Agreement.

7. **Permitting.** With respect to all of its activities on the premises, Contractor 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 regulations. Before commencing any work that involves disturbing the ground, Contractor 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:** Contractor 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 satisfactory to WDFW. Contractor 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 two Million Dollars (\$ 2,000,000) each occurrence, four Million Dollars (\$4,000,000) aggregate.
- Such limits may be achieved through the use of umbrella liability insurance sufficient to meet the requirements of this section.
- (b) **Workmen's Compensation Insurance.** Workmen's compensation and employer's liability insurance with respect to any work by employees of Contractor on or about the Property.
- (c) The policies shall name WDFW as additional insured, and Contractor shall, upon request, provide promptly to State certificates of insurance and copies of policies obtained by Lessee hereunder.
- (d) The policies shall be written as primary policies not contributing with and not in excess of coverage that State 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 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 Contractor 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.** The Contractor must deliver to WDFW a performance bond in an amount sufficient to complete the Project as set forth in the Project Design and the post-construction obligations set forth in Exhibit D prior to operation under the permit. This performance bond is for the purpose of guaranteeing completion of this Project. In the event that the Contractor does not complete this Project, the bond may be used by WDFW, in WDFW's sole discretion, to complete this Project, to return the Premises to its current condition, or to otherwise stabilize the Premises, as WDFW deems necessary. WDFW's rights and the Contractor's obligations shall survive suspension, cancellation, and termination of this permit and shall continue until Completion of this Project and performance of all post-construction obligations.
- 10. Licensed and Bonded Contractors.** Contractor shall, at its sole cost, ensure that all contractors and subcontractors performing work under this permit are licensed and bonded.
- 11. Completion of the 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 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 the Contractor. The post construction obligations are nevertheless subject to the bonding and escrow requirements. Upon completion, all improvements and all additions, alterations, and improvements thereto or replacements shall become the property of WDFW without cost to WDFW.
- 12. Indemnification.** To the fullest extent permitted by law, Contractor 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 under this Permit. "Claim," as used in this contract, 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 the RCW 4.24.115 applies, this indemnity shall not apply to the sole negligence of the indemnitee, and, in the event of concurrent negligence, the indemnity shall apply only to the extent of the Contractor's negligence. Contractor waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend, and hold harmless State and its agencies, officials, agents, 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.** Representatives of the Yakama Nation assigned to this project and the Contractor 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. The Permittee and its employees and 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, 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, failure to receive timely payments of administrative costs under the MOU or when WDFW is required to do so by another governmental authority. Contractor shall have no further rights to enter the Premises in the event of cancellation. Contractor’s obligations and WDFW’s rights concerning insurance and liability shall survive cancellation of this permit.
- 19. Termination.** Unless earlier canceled, this permit shall terminate upon performance of all Permittees obligation 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. 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.

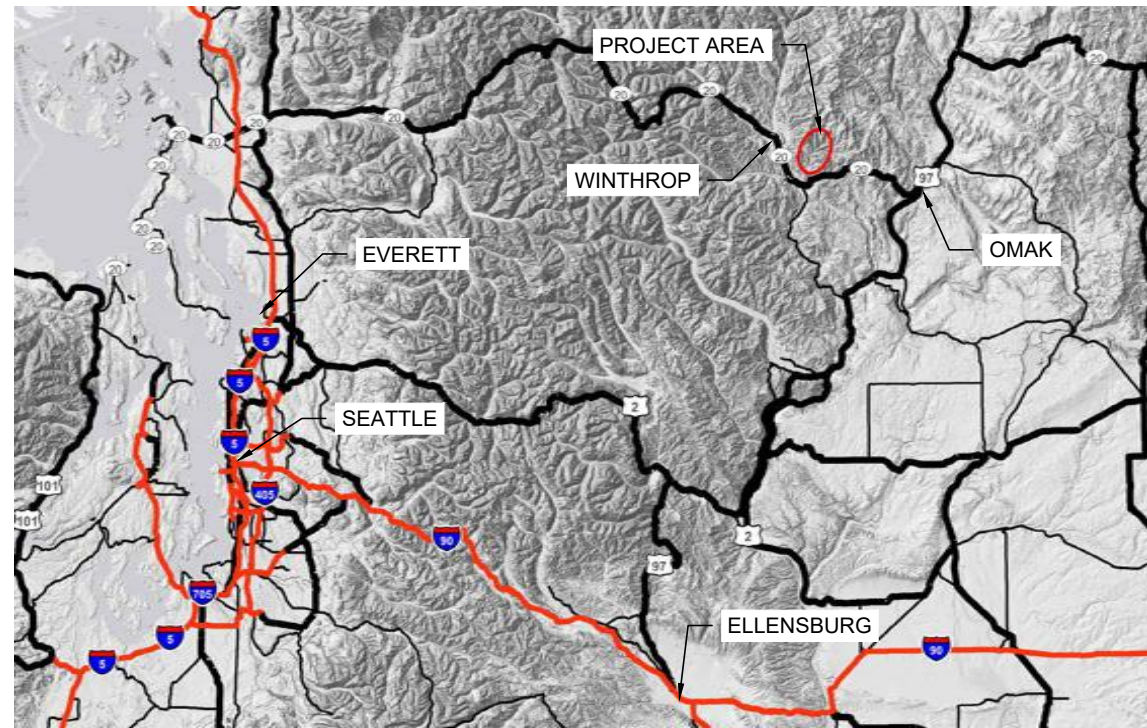
22. **No Waiver.** WDFW's forbearance to exercise its rights under this permit in the event of any default by Permittee shall not be deemed or construed to be a waiver by WDFW of such term or condition or of any of WDFW's rights under this permit. No delay or omission by WDFW in the exercise of any right 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, obligation, or performance 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.** This instrument and to the extent incorporated herein the MOU 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 right of entry, the terms of this right of entry 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:

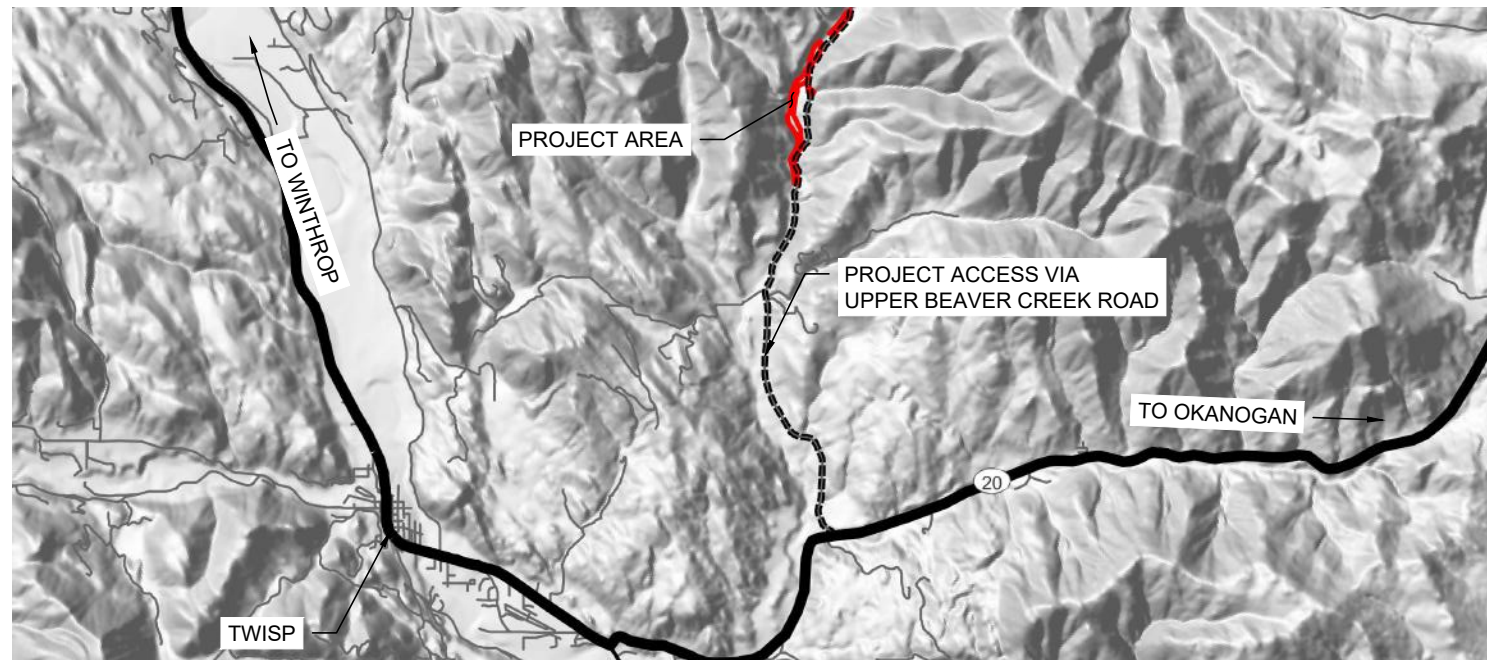
[SIGNATURE LINES]

- Exhibit A: Legal Description of the Premises
- Exhibit B: Project Design
- Exhibit C: Performance Measures for Completion
- Exhibit D: Adaptive Management Plan

YAKAMA NATION FISHERIES BEAVER CREEK REACH 5 DESIGN 100% DESIGN



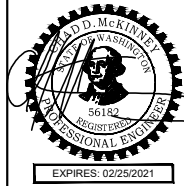
LOCATION MAP
SCALE: NTS



VICINITY MAP
SCALE: 1" = 2 MILES

DRAWING INDEX	
DWG #	TITLE
GENERAL	
G-001	COVER SHEET
G-002	GENERAL NOTES
CIVIL	
E-001	EXISTING CONDITIONS
C-001	DESIGN OVERVIEW
C-100 - C-105	PROPOSED CONDITIONS
C-106	PROPOSED CONDITIONS - ALCOVE 1
C-107 - C-110	PROPOSED CONDITIONS - PIPER CREEK
C-111 - C-112	PROPOSED CONDITIONS - SIDE CHANNEL
C-113	PROPOSED CONDITIONS - ALCOVE 2
C-114	PROPOSED CONDITIONS - EXCESS SPOILS BACKFILL
C-115	PROPOSED CONDITIONS - CAMPGROUND
C-201 - C-210	DETAILS - LWD CONSTRUCTION
C-301	DETAILS - TESC
C-302	TYPICAL FLOODPLAIN TOPOGRAPHICAL DETAILS
C-303 - C-304	DEWATERING AND REWATERING DETAILS
C-501 - C-504	SPECIAL PROVISIONS

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ISSUED FOR
CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

<p>YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN</p> <p style="font-size: 24px; font-weight: bold;">COVER SHEET</p>	<p>DWG. NO.: G-001</p> <p>CREATED: 6/21/2019</p> <p>SHEET: 1 OF 38</p>
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ABBREVIATIONS

1H:1V	HORIZONTAL TO VERTICAL EXAGGERATION	WA	WASHINGTON
%	PERCENT	WDFW	WA DEPARTMENT OF FISH AND WILDLIFE
BPA	BONNEVILLE POWER ADMINISTRATION	WSDOT	WA STATE DEPARTMENT OF TRANSPORTATION
DWG	DRAWING	XS	CROSS SECTION
EX.	EXISTING	YD	YARD
FT, '	FOOT	YR	YEAR
G	GRAM		
IN, "	INCH		
LBS	POUNDS		
LT, (L)	LEFT		
LWD	LARGE WOODY DEBRIS		
M	METER		
NTS	NOT TO SCALE		
OHW	ORDINARY HIGH WATER		
OZ	OUNCE		
RD	ROAD		
RT, (R)	RIGHT		
STA	STATION		
SQ	SQUARE		
TESC	TEMPORARY EROSION SEDIMENT CONTROL		
TYP	TYPICAL		
USFS	UNITED STATES FOREST SERVICE		
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE		

PROPOSED SEQUENCING:

1. PLACE TESC, WORK AREA ISOLATION, AND FISH SALVAGE MEASURES.
2. COMPLETE CLEARING AND GRUBBING.
3. EXCAVATE SIDE CHANNEL, ALCOVE AND PIPER CREEK CHANNEL.
4. INSTALL LWD STRUCTURES AND HABITAT BOULDERS IN SIDE CHANNEL AND MAIN CHANNEL.
5. RESTORE AND RE-VEGETATE WORK AREAS.
6. REMOVES TESC, WORK AREA ISOLATION, AND FISH SALVAGE MEASURES.

GENERAL NOTES:

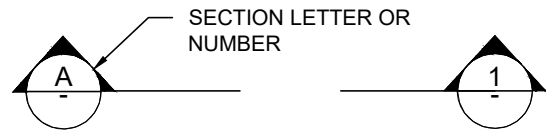
1. HORIZONTAL PROJECTION: NAD83 WASHINGTON STATE PLANES, NORTH ZONE, US FOOT.
2. VERTICAL PROJECTION: NAVD88.
3. PROJECT ALIGNMENT AND STATIONING REVISED FROM THE DRAFT BEAVER CREEK REACH ASSESSMENT (APRIL 2017) TO MATCH EXISTING CONDITION HYDRAULIC MODEL ALIGNMENT AND IS BASED ON 2015 AERIAL IMAGERY AND 2016 LIDAR TOPOGRAPHIC DATA AND 2017 FIELD SURVEYS COMPLETED BY TETRA TECH IN OCTOBER 2017.
4. PROPOSED PROJECT DESIGN, CONSTRUCTION ACTIVITIES, AND MATERIALS SUBJECT TO APPROVAL BY LANDOWNER.
5. ALL PROJECT WORK OCCURS WITHIN WDFW AND USFWS PROPERTY.

GENERAL CONSTRUCTION NOTES:

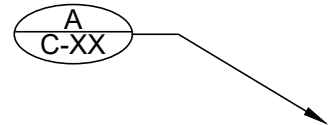
1. THE CONTRACTOR SHALL CONSTRUCT THE RESTORATION DESIGN ELEMENTS IN ACCORDANCE WITH THE PLANS STAMPED "ISSUED FOR CONSTRUCTION". THESE PLANS WILL BE PROVIDED TO THE CONTRACTOR BY THE CONTRACTING AGENCY PRIOR TO CONSTRUCTION. WORK SHALL NOT BE DONE WITHOUT THE CURRENT SET OF APPROVED CONSTRUCTION PLANS.
2. CONTRACTOR SHALL CONTACT THE NORTHWEST UTILITY NOTIFICATION CENTER 1-800-424-5555 (OR 811) BEFORE ANY EXCAVATION WORK BEGINS.
3. THE CONTRACTOR SHALL PURSUE WORK IN A CONTINUOUS AND EFFICIENT MANNER TO ENSURE TIMELY COMPLETION OF THE PROJECT.
4. ALL WORK WITHIN THE ACTIVE CHANNEL SHALL OCCUR WITHIN THE ALLOWABLE FISH WINDOW (JULY 1 - AUGUST 15) OR AS DIRECTED BY THE OWNER.
5. ALL CONSTRUCTION ACTIVITIES SHALL MINIMIZE DISTURBANCE TO AND MAXIMIZE RE-USE OF EXISTING RIPARIAN VEGETATION.
6. THE CONTRACTOR SHALL PROTECT ALL CONTROL POINTS DURING CONSTRUCTION ACTIVITIES.
7. CONTRACTOR SHALL PROVIDE AN EROSION AND SEDIMENT CONTROL AND DEWATERING PLAN TO OWNER AT LEAST TEN (10) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES.

SYMBOLS

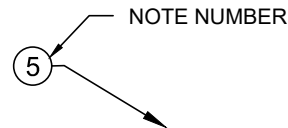
SECTIONS ARE REFERENCED IN THE FOLLOWING MANNER:



CONSTRUCTION DETAILS ARE REFERENCED IN THE FOLLOWING MANNER:



NOTES ARE REFERENCED IN THE FOLLOWING MANNER:

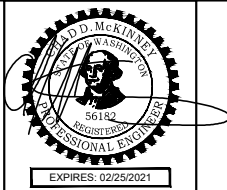


BEAVER CREEK QUANTITY SUMMARY

CONSTRUCTION ITEMS	UNITS	8+00 TO 17+00	17+00 TO 33+00	33+00 TO 49+00	49+00 TO 66+00	71+00 TO 78+00	88+00 TO 102+00	TOTALS
CUT	CY	460	108	0	602	0	2,368	3,538
FILL	CY	660	400	200	602	0	1,676	3,538
LARGE WOOD 18-24" (ROOTWAD)	EA	75	130	57	91	21	51	425
LARGE WOOD 18-24" (LOGS)	EA	51	4	2	0	0	18	75
BALLAST BOULDERS 2-3'	EA	75	28	14	170	0	42	329
HABITAT BOULDERS 3'	EA	0	6	0	12	0	69	87
TEMP. COFFERDAM	LF	193	303	206	96	0	50	848

* Cut/Fill quantities do not include quantities associated with structures except for the Modified Revetment, Revetment, and Log Jam Structures

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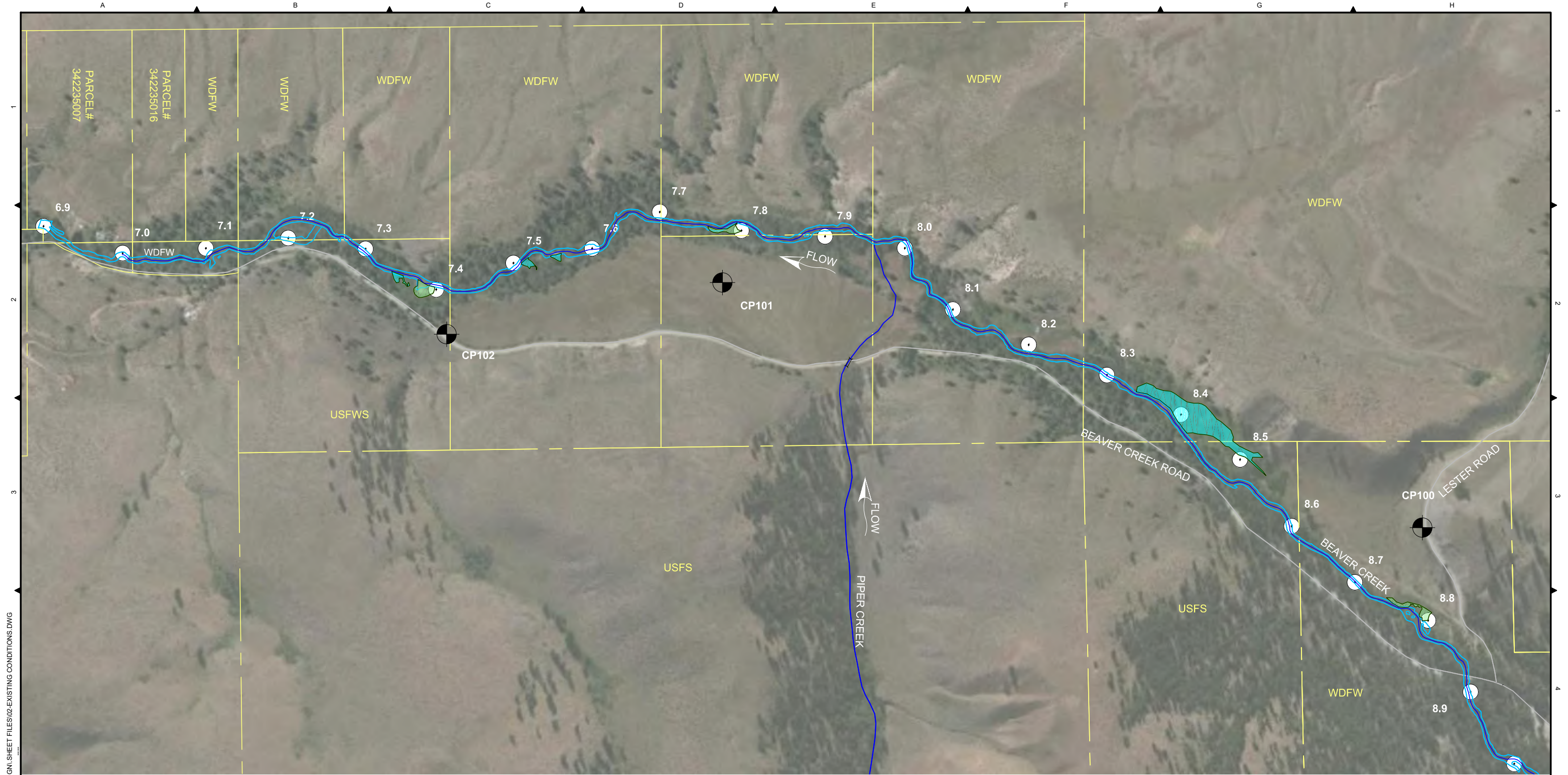
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REV.		DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
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0		5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

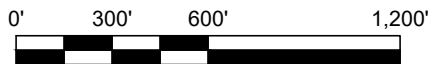
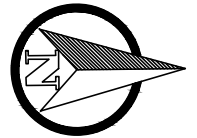
YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

GENERAL NOTES

DWG. NO.:	G-002
CREATED:	6/21/2019
SHEET:	2 OF 38



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 JUN 21, 2019 11:11 AM



BEAVER CREEK REACH 5 CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	522693.12	1834727.98	2727.19	CP 100
101	518336.16	1833201.40	2526.27	CP 101
102	516619.59	1833523.58	2455.26	CP 102

LEGEND:

- BEAVER/PIPER CREEK ALIGNMENTS
- PROPERTY BOUNDARY
- EXISTING ROAD
- RIVER MILE
- ⊕ SURVEY CONTROL POINT
- EXISTING 2-YEAR WSE
- CATEGORY II WETLAND
- CATEGORY III WETLAND

TETRA TECH
 www.tetrattech.com
 19803 North Creek Parkway
 Bothell, Washington 98011
 Phone: 425-482-7600 Fax: 425-482-7652



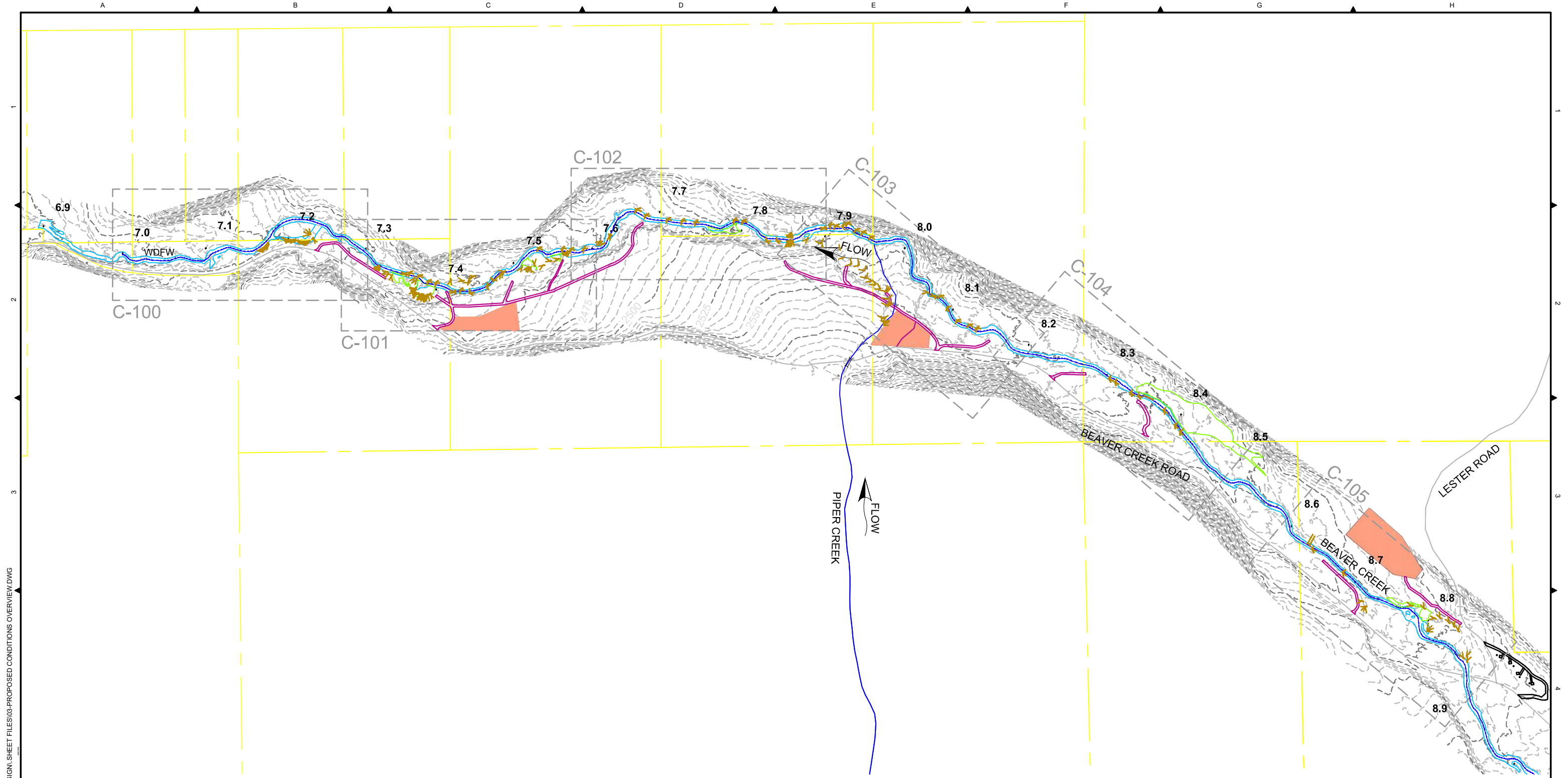
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CONSTRUCTION

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REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
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0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

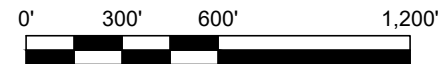
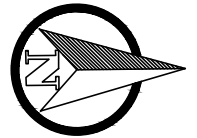
**YAKAMA NATION FISHERIES -
BEAVER CREEK REACH 5 DESIGN
100% DESIGN**

EXISTING CONDITIONS

DWG. NO.:	E-001
CREATED:	6/21/2019
SHEET:	3 OF 38

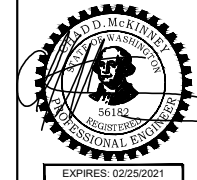


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 PLOT DETAILS: MCKINNEY.CHADT June 21, 2019 11:19 AM



- LEGEND:**
- BEAVER/PIPER CREEK ALIGNMENTS
 - EXISTING WETLANDS
 - - - SHEET BOUNDARY
 - - - PROPOSED LWD STRUCTURES
 - - - PROPERTY BOUNDARY
 - - - PROPOSED ACCESS ROUTES
 - - - EXISTING ROAD
 - - - PROPOSED STAGING AREA
 - RIVER MILE
 - - - PROPOSED CHANNEL EXCAVATION
 - - - EXISTING 2-YEAR WSE
 - - - PROPOSED FLOODPLAIN EXCAVATION
 - - - EXISTING 5-FT MINOR CONTOUR
 - - - PROPOSED FILL
 - - - EXISTING 25-FT MAJOR CONTOUR
 - - - PROPOSED CAMPGROUND MITIGATION

TETRA TECH
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 19803 North Creek Parkway
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 Phone: 425-482-7600 Fax: 425-482-7652



ISSUED FOR
CONSTRUCTION

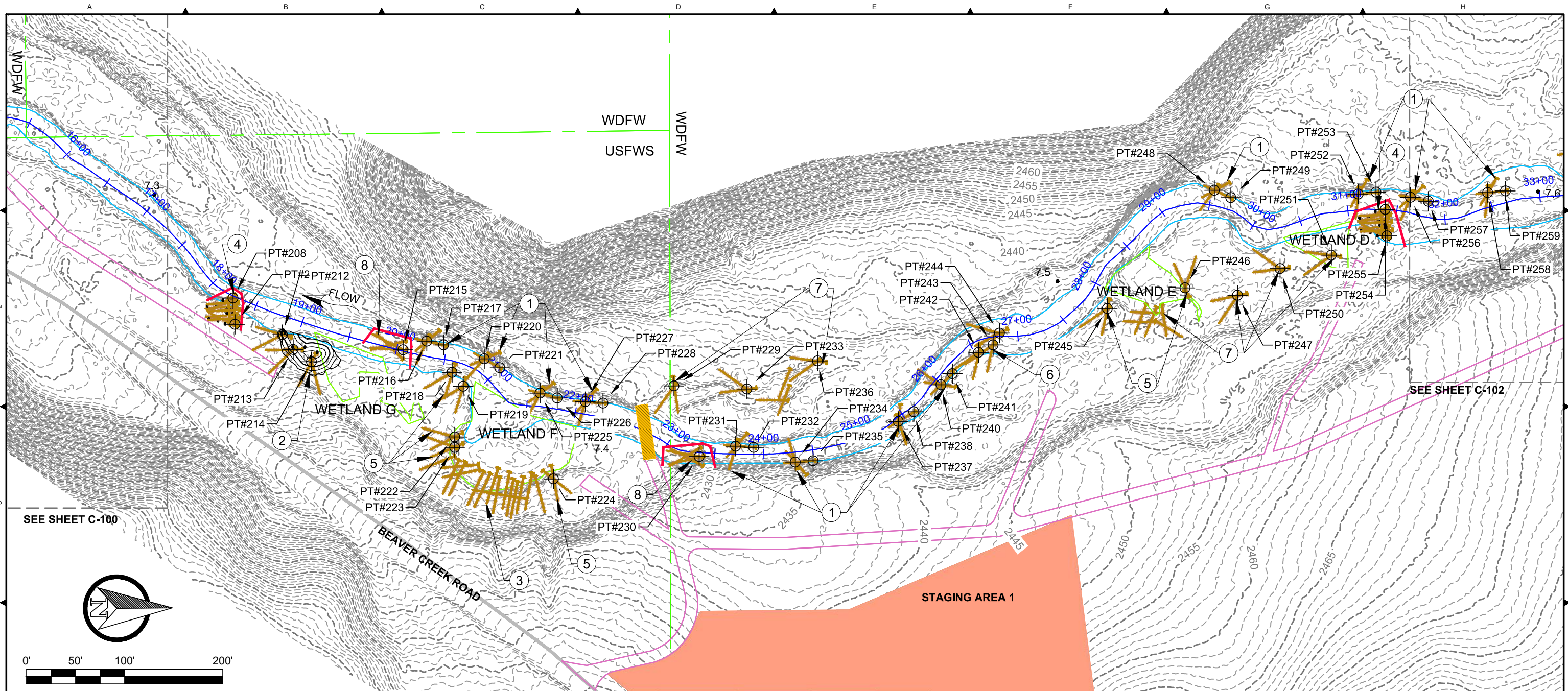
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YAKAMA NATION FISHERIES -
BEAVER CREEK REACH 5 DESIGN
100% DESIGN

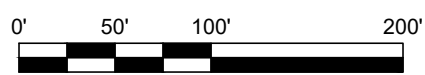
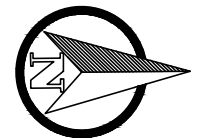
PROPOSED CONDITIONS
OVERVIEW

DWG. NO.:	C-001
CREATED:	6/21/2019
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SEE SHEET C-100

SEE SHEET C-102



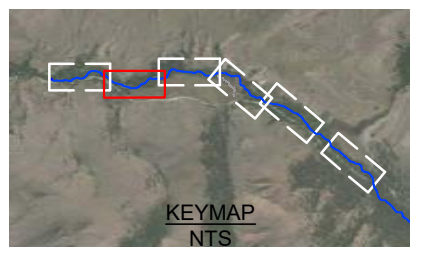
NOTES:

1. PLACE CHANNEL SPANNING LWD STRUCTURE TO INCREASE CHANNEL ROUGHNESS. SEE SHEET C-205 FOR DETAIL.
2. ENHANCE EXISTING GROUNDWATER ALCOVE BY EXCAVATING DEEP POOL AND ADDITIONAL LWD FOR COVER. SEE SHEET C-106 FOR DETAIL. SEE SHEETS C-303 AND C-304 FOR DEWATERING AND REWATERING TYPICAL DETAILS. SALVAGE EXCAVATED MATERIAL FOR FES LIFT.
3. ENHANCE HIGH FLOW SIDE CHANNEL BY PLACING 33 PIECES OF LWD ALONG BANK MARGIN AS DIRECTED. TRENCH AND BACKFILL TRUNKS OR INTERWEAVE WITH EXISTING MATURE VEGETATION FOR STABILITY. AVOID DISTURBANCE TO EXISTING WETLAND. IF FLOW IS PRESENT, PLACE COFFERDAM PER SHEET C-304.
4. INSTALL LOG JAM STRUCTURE. SEE SHEET C-201 FOR DETAIL. INSTALL COFFERDAM PER SHEET C-304.
5. INSTALL BANK CROSS STRUCTURE. SEE SHEET C-204 FOR DETAIL.
6. SUPPLEMENT EXISTING LOG JAM AND REMOVE OLD CABLE FROM STREAM.
7. PLACE LWD FOR COVER ON EXISTING HIGH FLOW SIDE CHANNEL.
8. PLACE MID-CHANNEL LWD USING SEVERAL SINGLE TREES WITH ROOTWADS AND BALLASTED WITH SURPLUS ALLUVIUM. STRUCTURE POSITIONED TO CAPTURE MOBILE WOOD FROM UPSTREAM.

CONSTRUCTION ITEMS	UNITS	17+00 TO 33+00
CUT	CY	108
FILL	CY	400
LARGE WOOD 18-24" (ROOTWAD)	EA	130
LARGE WOOD 18-24" (LOGS)	EA	4
BALLAST BOULDERS 2-3'	EA	28
HABITAT BOULDERS 3'	EA	6
TEMP. COFFERDAM	LF	303

LEGEND:

- SHEET BOUNDARY
- EXISTING WETLANDS
- EXISTING OHW WSE
- RIVER MILE
- PROPERTY BOUNDARY
- EXISTING ROAD
- BEAVER CREEK ALIGNMENT
- Y PROPOSED LWD
- ACCESS ROUTE
- PROPOSED ALCOVE
- EXCAVATION
- STAGING AREA
- TEMPORARY COFFERDAM
- TEMPORARY CROSSING



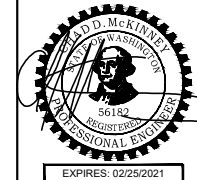
ISSUED FOR CONSTRUCTION

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

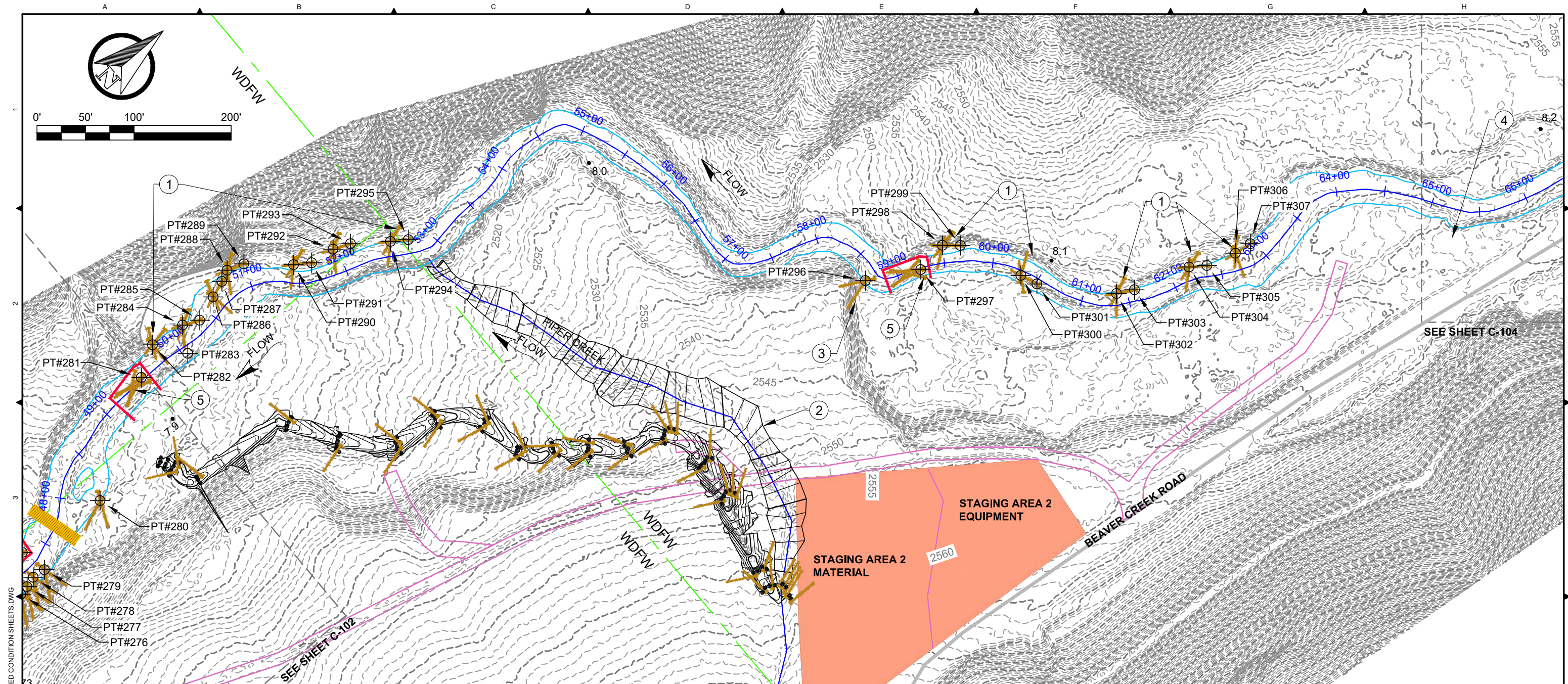
YAKAMA NATION FISHERIES -
BEAVER CREEK REACH 5 DESIGN
100% DESIGN

PROPOSED CONDITIONS

DWG. NO.:	C-101
CREATED:	6/21/2019
SHEET:	6 OF 38



Z:\PROJECTS\194-6193\YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\100% DESIGN\100% DESIGN\PROPOSED CONDITION SHEETS.DWG PLOT DETAILS: MCKINNEL, CHADWICK JUN 21, 2019 11:43 AM



NOTES:

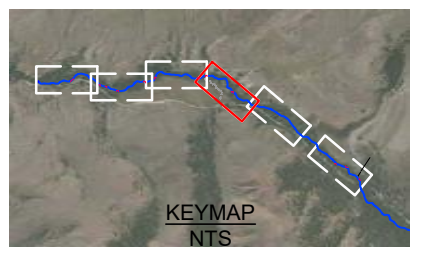
1. PLACE CHANNEL SPANNING LWD STRUCTURE TO INCREASE CHANNEL ROUGHNESS. SEE SHEET C-205 FOR DETAIL.
2. REMEANDER PIPER CREEK CONFLUENCE DOWNSTREAM. PLUG OLD PIPER CREEK CHANNEL. SEE SHEETS C-107 AND C-108 FOR DETAILS.
3. SUPPLEMENT EXISTING LWD WITH BANK CROSS STRUCTURE. SEE SHEET C-204 FOR DETAIL.
4. PRESERVE AND PROTECT EXISTING WASHINGTON DEPARTMENT OF ECOLOGY GAGING STATION.
5. PLACE MID-CHANNEL LWD USING SEVERAL SINGLE TREES WITH ROOTWADS AND BALLASTED WITH SURPLUS ALLUVIUM. STRUCTURE POSITIONED TO CAPTURE MOBILE WOOD FROM UPSTREAM.

CONSTRUCTION ITEMS	UNITS	49+00 TO 66+00
CUT	CY	0
FILL	CY	0
LARGE WOOD 18-24" (ROOTWAD)	EA	48
LARGE WOOD 18-24" (LOGS)	EA	0
BALLAST BOULDERS 2-3'	EA	0
HABITAT BOULDERS 3'	EA	0
TEMP. COFFERDAM	LF	96

* SEE SHEET C-109 FOR PIPER CREEK CONSTRUCTION QUANTITIES

LEGEND:

- SHEET BOUNDARY
- EXISTING WETLANDS
- EXISTING OHW WSE
- RIVER MILE
- PROPERTY BOUNDARY
- EXISTING ROAD
- BEAVER/PIPER CREEK ALIGNMENTS
- PROPOSED LWD
- ACCESS ROUTE
- PROPOSED EXCAVATION
- PROPOSED FILL
- TEMPORARY COFFERDAM
- TEMPORARY CROSSING
- STAGING AREA



Z:\PROJECTS\194-6193\YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\ SHEET FILES\104-PROPOSED CONDITION SHEETS.DWG
 PLOT DETAILS: MCKINNEY.CHAD
 JUN 21, 2019 11:45 AM

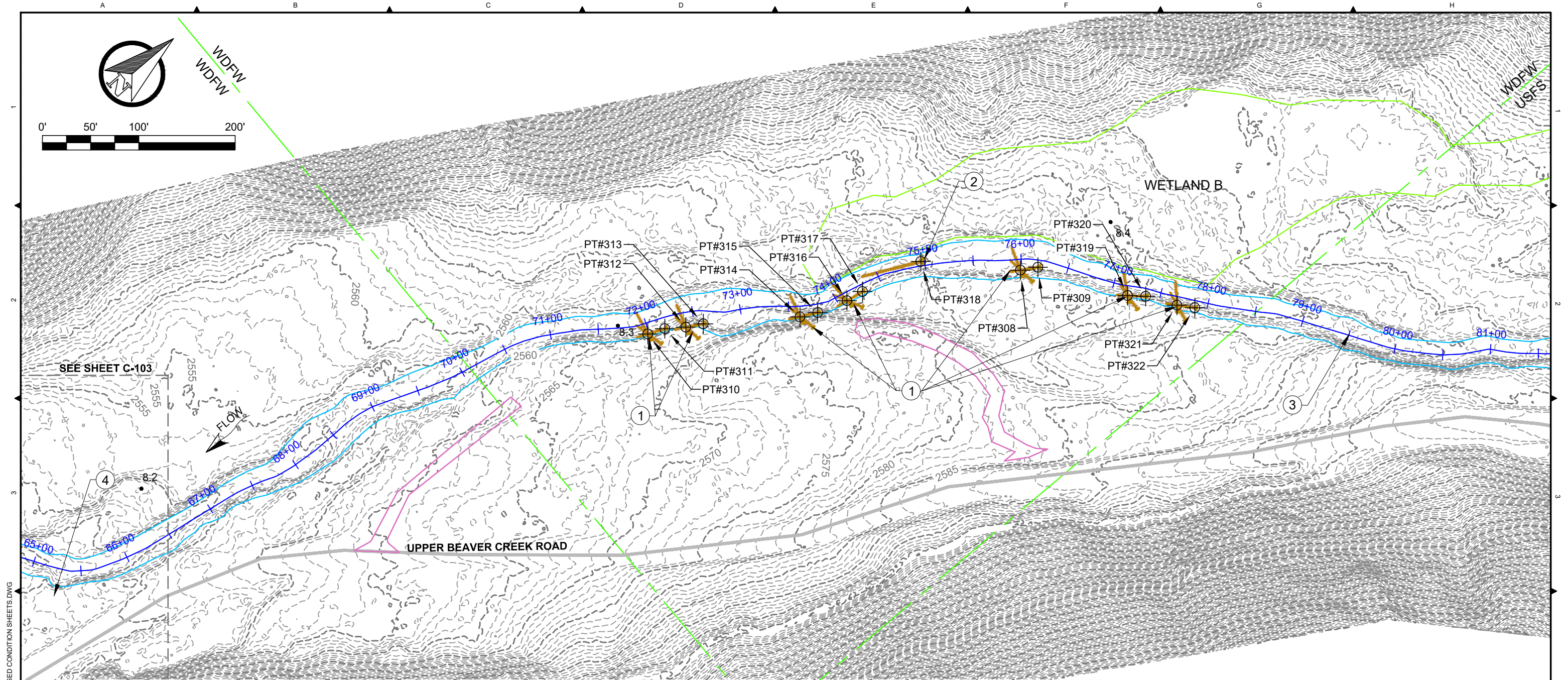


ISSUED FOR CONSTRUCTION

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
 100% DESIGN
PROPOSED CONDITIONS

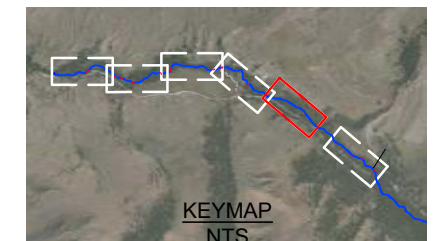
DWG. NO.: **C-103**
 CREATED: 6/21/2019
 SHEET: 8 OF 38



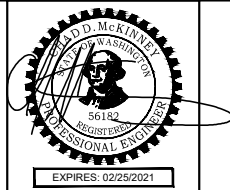
- NOTES:**
1. PLACE CHANNEL SPANNING LWD STRUCTURE TO INCREASE CHANNEL ROUGHNESS. SEE SHEET C-205 FOR DETAIL.
 2. MOVE EXISTING LARGE FALLEN CONIFER TO EXISTING ISLAND TO PROMOTE SPLIT FLOW AND SCOUR.
 3. IN ORDER TO AVOID USFS PROPERTY, NO WORK TO OCCUR BETWEEN 78+50 TO 89+00.
 4. PRESERVE AND PROTECT EXISTING WASHINGTON DEPARTMENT OF ECOLOGY GAGING STATION.

CONSTRUCTION ITEMS	UNITS	71+00 TO 78+00
CUT	CY	0
FILL	CY	0
LARGE WOOD 18-24" (ROOTWAD)	EA	21
LARGE WOOD 18-24" (LOGS)	EA	0
BALLAST BOULDERS 2-3'	EA	0
HABITAT BOULDERS 3'	EA	0
TEMP. COFFERDAM	LF	0

- LEGEND:**
- SHEET BOUNDARY
 - EXISTING WETLANDS
 - EXISTING OHW WSE
 - RIVER MILE
 - PROPERTY BOUNDARY
 - EXISTING ROAD
 - BEAVER CREEK ALIGNMENT
 - PROPOSED LWD
 - ACCESS ROUTE



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 PLOT DETAILS: MCKINNEY, CHAD
 JUNE 21, 2019 11:46 AM



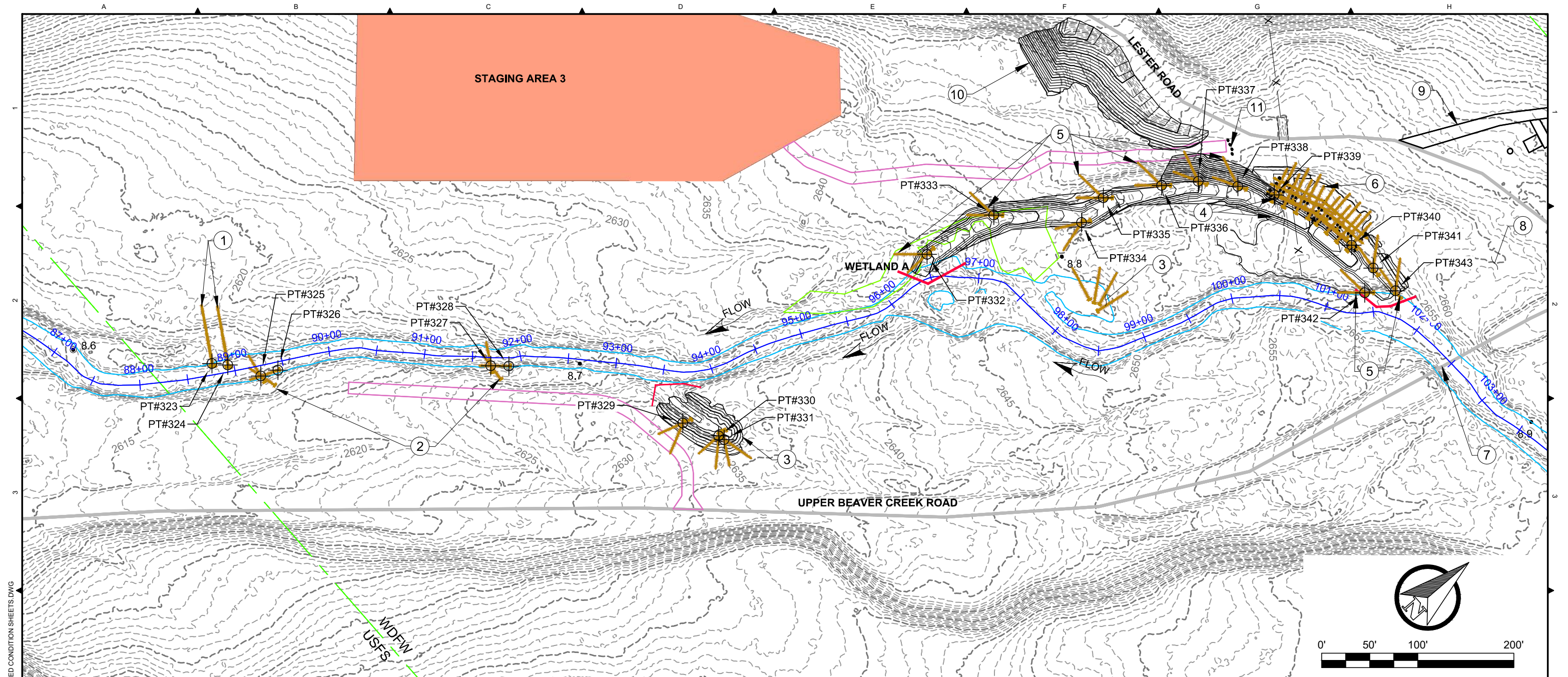
ISSUED FOR CONSTRUCTION

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES -
 BEAVER CREEK REACH 5 DESIGN
 100% DESIGN

PROPOSED CONDITIONS

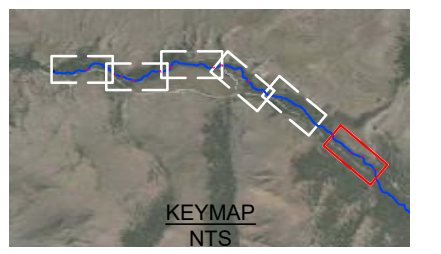
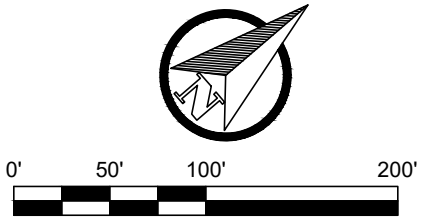
DWG. NO.:	C-104
CREATED:	6/21/2019
SHEET:	9 OF 38



- NOTES:**
1. PLACE LARGE CONIFER FROM FLOODPLAIN INTO STREAM FLOW TO PROMOTE SCOUR POOL.
 2. PLACE CHANNEL SPANNING LWD STRUCTURE TO INCREASE CHANNEL ROUGHNESS. SEE SHEET C-205 FOR DETAIL.
 3. ENHANCE EXISTING GROUNDWATER ALCOVE BY EXCAVATING DEEP POOL AND ADDITIONAL LWD FOR COVER. SEE SHEET C-113 FOR DETAIL. SEE SHEETS C-303 AND C-304 FOR DEWATERING AND REWATERING TYPICAL DETAILS.
 4. ENHANCE NEW SIDE CHANNEL AREA BY REMOVING EXISTING ROAD EMBANKMENT AND 2.5 FT DIAMETER CMP. EXISTING FENCELINE TO BE TEMPORARILY REMOVED AND REINSTALLED. SEE SHEET C-111 FOR DETAIL. SALVAGE EXCAVATED HYDRIC SOILS FOR GROWTH MEDIA.
 5. INSTALL BANK CROSS STRUCTURE. SEE SHEET C-204 FOR DETAIL.
 6. INSTALL BANK RETENTION STRUCTURE. SEE SHEET C-202 FOR DETAIL.
 7. PRESERVE AND PROTECT EXISTING ROADWAY AND BRIDGE.
 8. PRESERVE AND PROTECT EXISTING CAMPING AREA.
 9. PROPOSED CAMPGROUND MITIGATION SITES. SEE SHEET C-115 FOR DETAIL.
 10. PLACE EXCESS SPOILS (APPROX. 1800 CY BULK AND 1500 CY IN PLACE WITH 20% SHRINKAGE) ALONG SLOPE OF LESTER ROAD. SEE SHEET C-114 FOR DETAIL.
 11. PLACE LARGE BOULDERS AT ENTRANCE OF ACCESS TO STAGING AREA 3 DURING CLOSEOUT.

CONSTRUCTION ITEMS	UNITS	88+00 TO 102+00
CUT	CY	2,368
FILL	CY	1,676
LARGE WOOD 18-24" (ROOTWAD)	EA	51
LARGE WOOD 18-24" (LOGS)	EA	18
BALLAST BOULDERS 2-3'	EA	42
HABITAT BOULDERS 3'	EA	70
TEMP. COFFERDAM	LF	50

- LEGEND:**
- EXISTING WETLANDS
 - EXISTING OHW WSE
 - RIVER MILE
 - PROPERTY BOUNDARY
 - EXISTING ROAD
 - BEAVER CREEK ALIGNMENT
 - EXISTING FENCE
 - ACCESS ROUTE
 - PROPOSED LWD
 - PROPOSED SIDE CHANNEL EXCAVATION
 - PROPOSED FLOODPLAIN EXCAVATION
 - STAGING AREA
 - TEMPORARY COFFERDAM
 - PROPOSED CAMPGROUND
 - PROPOSED BACKFILL



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 PLOT DETAILS: MCKINNEY.CHAD
 JUN 21 2019 11:42 AM



ISSUED FOR CONSTRUCTION

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
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0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

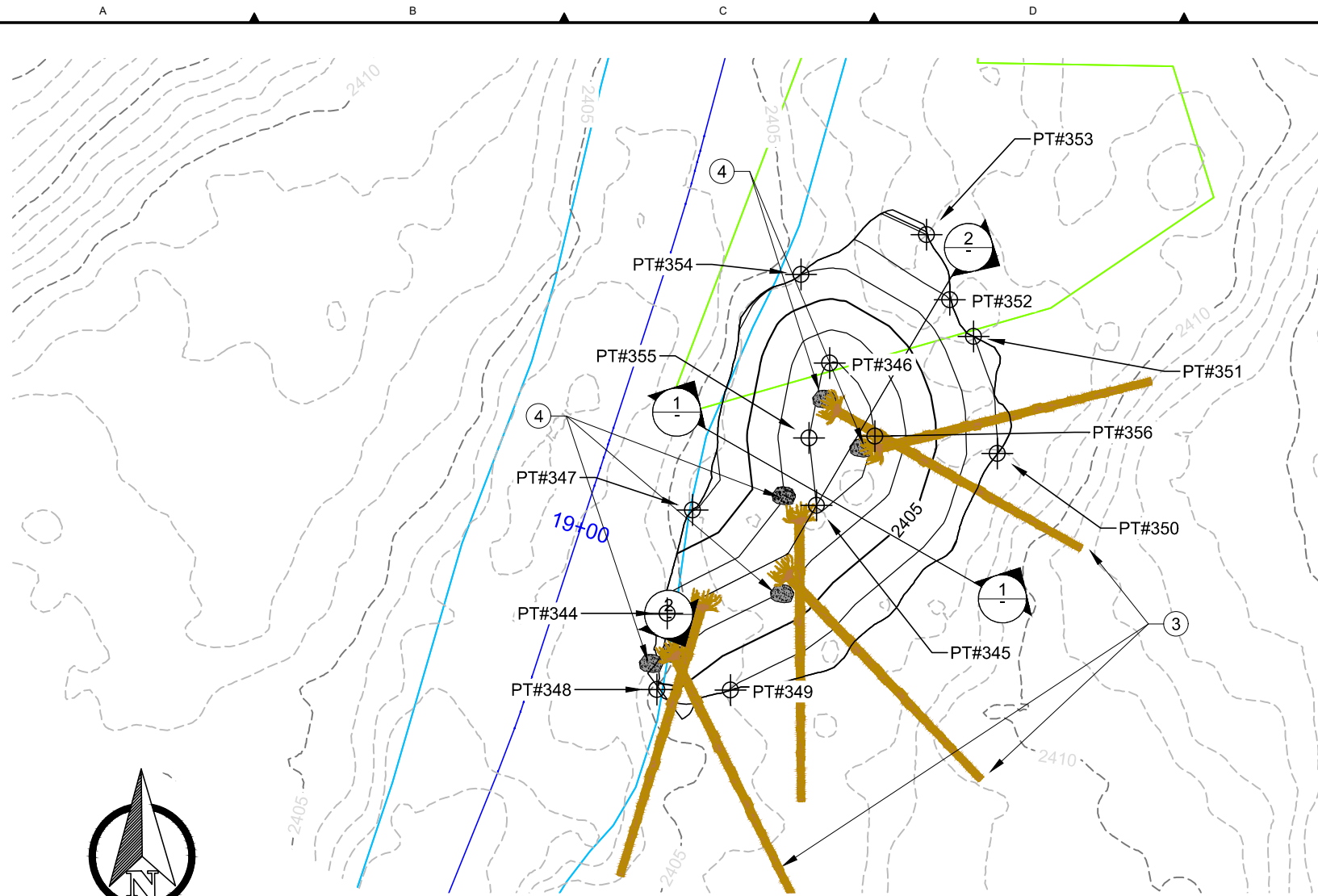
YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
 100% DESIGN

PROPOSED CONDITIONS

DWG. NO.: **C-105**

CREATED: 6/21/2019

SHEET: 10 OF 38



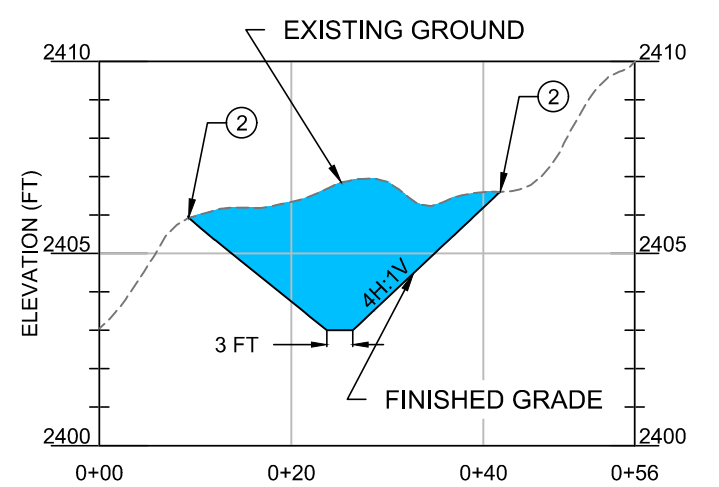
A ALCOVE 1
C-101 PLAN VIEW

- LEGEND:**
- BEAVER CREEK ALIGNMENT
 - EXISTING CONTOUR MINOR - 1FT
 - EXISTING CONTOUR MAJOR - 5FT
 - EXISTING OHW WSE
 - EXISTING WETLANDS
 - PROPOSED HABITAT BOULDERS
 - PROPOSED LWD
 - PROPOSED CHANNEL EXCAVATION
 - PROPOSED CONTOUR MINOR - 1FT
 - PROPOSED CONTOUR MAJOR - 5FT

- NOTES:**
- EXCAVATE ALCOVE TO THE EXTENTS AND ELEVATIONS SHOWN ON THE PLAN.
 - DAYLIGHT PROPOSED ALCOVE EXCAVATION TO MATCH EXISTING GRADE.
 - INSTALL BANK CROSS STRUCTURE PER DETAIL ON SHEET C-204.
 - INSTALL HABITAT BOULDERS WITHOUT FOOTER BOULDERS.

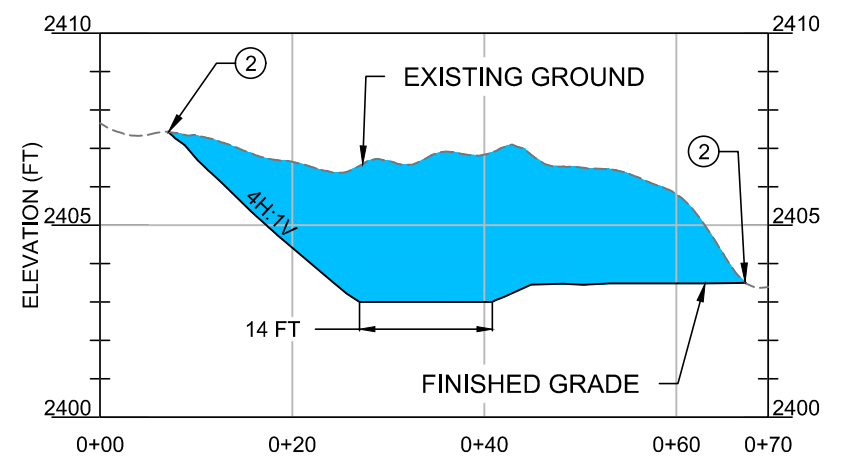
ALCOVE 1 CONSTRUCTION POINTS

POINT #	ELEV.	NORTHING	EASTING	DESC.
344	2403.49	516252.52	1833133.37	EXC
345	2403.00	516266.44	1833152.64	EXC
346	2403.00	516284.80	1833154.33	EXC
347	2406.00	516265.87	1833136.63	EXC
348	2405.29	516242.68	1833132.05	EXC
349	2406.02	516242.61	1833141.53	EXC
350	2407.00	516273.14	1833175.95	EXC
351	2407.00	516288.24	1833172.88	EXC
352	2407.00	516292.99	1833169.83	EXC
353	2408.00	516301.37	1833166.84	EXC
354	2406.00	516296.24	1833150.63	EXC
355	2403.00	516275.14	1833151.68	EXC
356	2403.00	516275.38	1833160.17	EXC



ALCOVE SECTION VIEW (FT)
(SCALE 1" = 20', 1H:5V)

1 ALCOVE 1
SECTION VIEW



ALCOVE SECTION VIEW (FT)
(SCALE 1" = 20', 1H:5V)

2 ALCOVE 1
SECTION VIEW

ALCOVE 1 CONSTRUCTION QUANTITIES

CONSTRUCTION ITEMS	UNITS	ALCOVE 1
CUT	CY	108
FILL	CY	0
LARGE WOOD 18-24" (ROOTWAD)	EA	6
LARGE WOOD 18-24" (LOGS)	EA	0
BALLAST BOULDERS 2-3'	EA	0
HABITAT BOULDERS 3'	EA	6
TEMP. COFFERDAM	LF	0



ISSUED FOR CONSTRUCTION

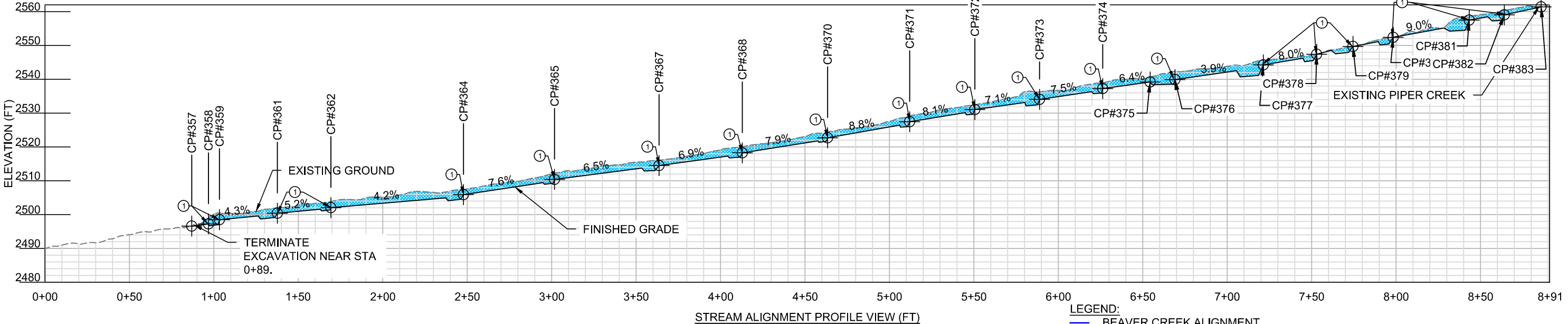
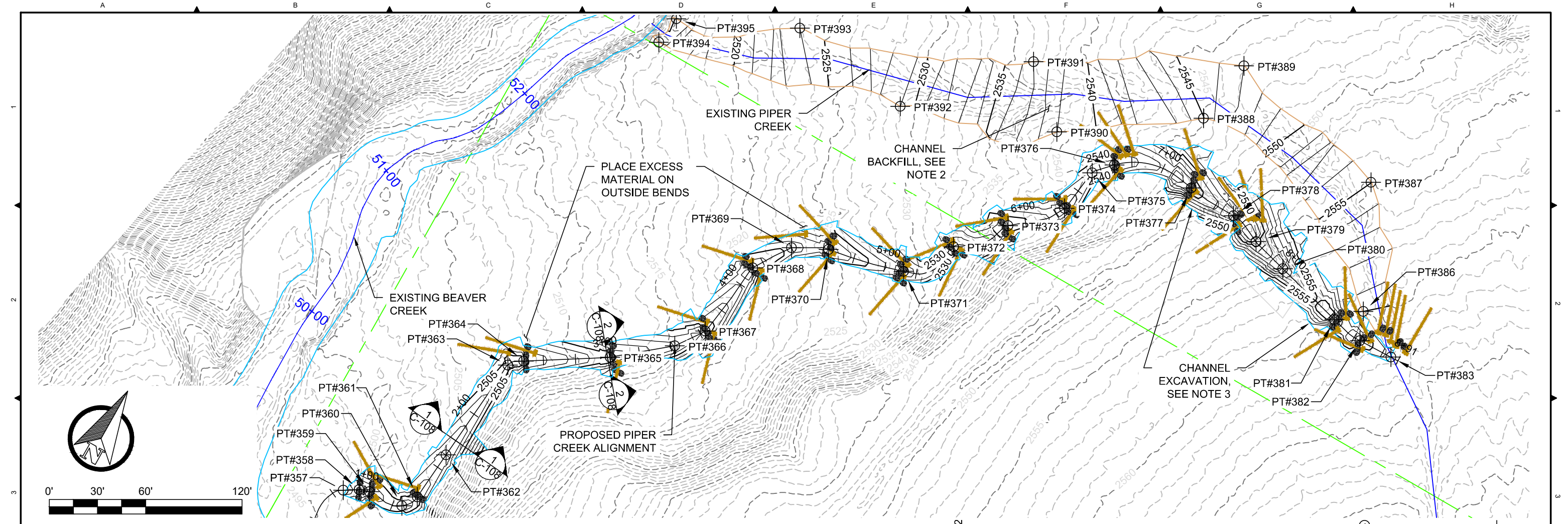
PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN
PROPOSED CONDITIONS ALCOVE 1

DWG. NO.: **C-106**
CREATED: 6/21/2019
SHEET: 11 OF 38

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- NOTES:**
1. CONSTRUCT STEP POOL STRUCTURE PER DETAIL A ON SHEET C-110.
 2. BACKFILL EXISTING PIPER CREEK CHANNEL WITH SURPLUS SPOILS MATERIAL PER DETAIL A ON SHEET C-108.
 3. MINIMIZE EXCAVATION TO STEP POOL STRUCTURE WITHIN RELIC FLOW CHANNEL BETWEEN STA. 7+00 TO 8+50.

- LEGEND:**
- BEAVER CREEK ALIGNMENT
 - PROPOSED PIPER CREEK ALIGN.
 - PROPERTY BOUNDARY
 - EXISTING ROAD
 - EXISTING OHW WSE
 - EXISTING CONTOUR MINOR - 1FT
 - EXISTING CONTOUR MAJOR - 5FT
 - PROPOSED HABITAT BOULDERS
 - PROPOSED LWLD
 - PROPOSED CHANNEL EXCAVATION
 - PROPOSED FILL
 - PROPOSED CONTOUR MINOR - 1FT
 - PROPOSED CONTOUR MAJOR - 5FT

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\100% DESIGN FILES\06-PROPOSED PIPER CREEK_V2.DWG
 PLOT DETAILS: MCKINNEY, CHAD
 JUNE 21, 2019

TETRA TECH
 www.tetrattech.com
 19803 North Creek Parkway
 Bothell, Washington 98011
 Phone: 425-482-7600 Fax: 425-482-7652

EXPIRES: 02/25/2021



ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

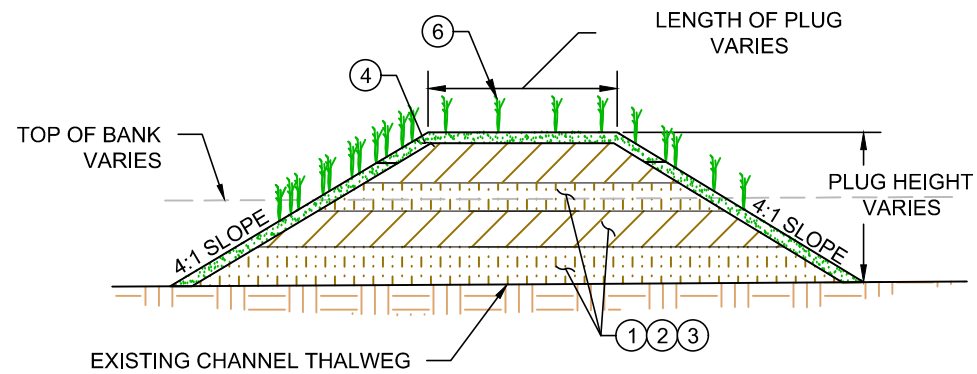
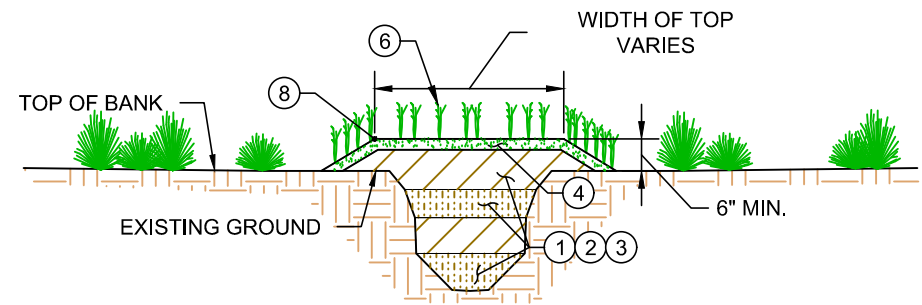
YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

PROPOSED CONDITIONS PIPER CREEK

DWG. NO.: **C-107**

CREATED: 6/21/2019

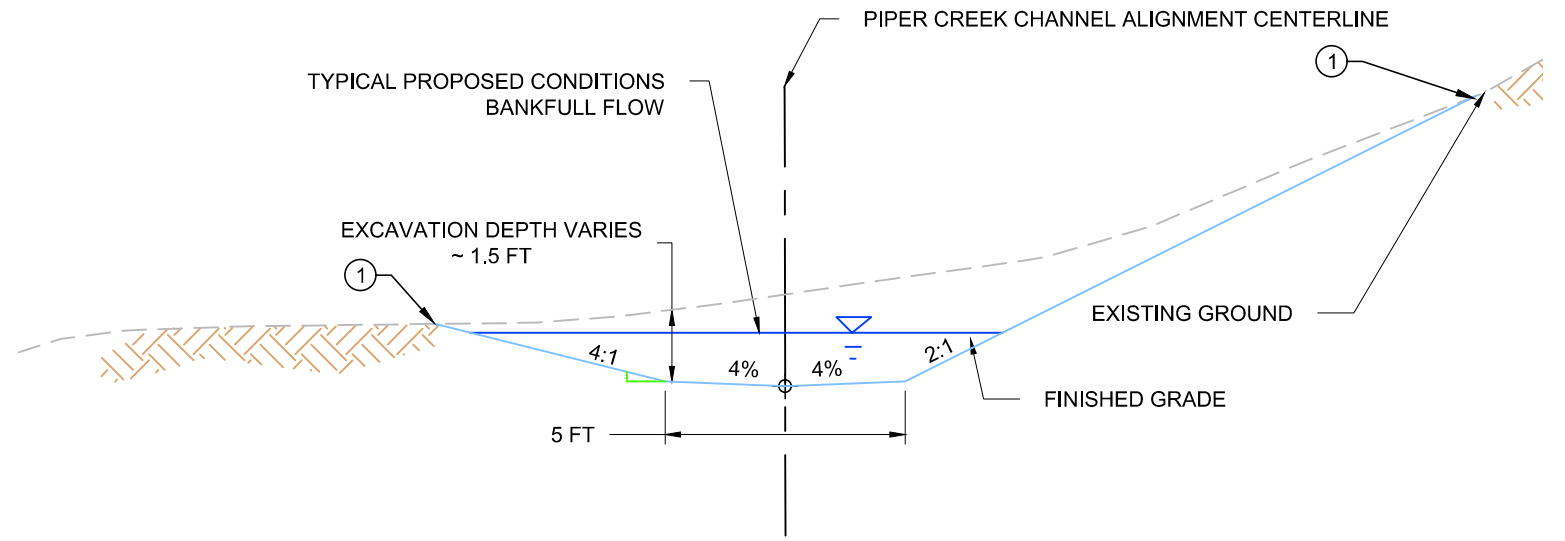
SHEET: 12 OF 38



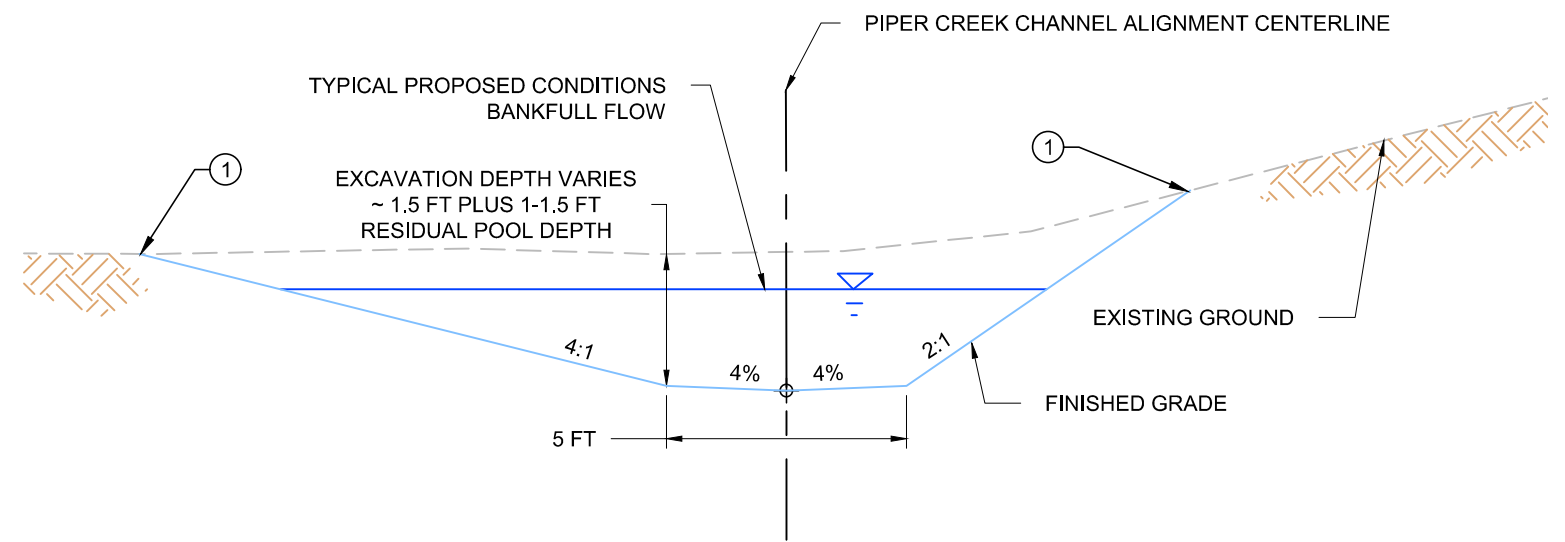
A PIPER CREEK CHANNEL BACKFILL TYPICAL
C-107 NTS

PIPER CREEK CHANNEL PLUG CONSTRUCTION NOTES:

1. FILL MATERIAL SHALL BE FROM PROPOSED CHANNEL EXCAVATION AND FREE OF ORGANIC AND OTHER UNSUITABLE MATERIAL. SIDE SLOPES SHALL VARY TO MATCH EXISTING TOPOGRAPHY.
2. AREA SHALL BE DEWATERED, STRIPPED OF TOPSOIL, VEGETATION, ORGANIC MATERIAL, AND UNSUITABLE MATERIAL.
3. BACKFILL SHALL BE COMPACTED WITH MECHANICAL EFFORT TO FIRM AND UNYIELDING SURFACE WITH MAXIMUM 6" LIFTS.
4. PLACE THE TOP 4-6" WITH ONSITE TOPSOIL/SOD MATS SALVAGED AND STOCKPILED DURING CHANNEL EXCAVATION. SOD AND TOPSOIL TO BE SAVED AT OWNER'S DIRECTION.
5. EXTENTS OF CHANNEL BACKFILL DEPENDING ON EXTENT OF POOL EXCAVATION AND SURPLUS MATERIAL AVAILABLE. EXTENT SHALL BE COORDINATED IN THE FIELD WITH OWNER'S REPRESENTATIVE OR ENGINEER.
6. COVER ALL EXPOSED SURFACES WITH SURPLUS WOODY MATERIAL TO INCREASE ROUGHNESS AND PLANT.



1 PIPER CREEK CHANNEL TYPICAL RIFFLE SECTION
C-107 NTS

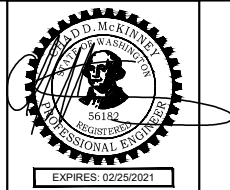


2 PIPER CREEK CHANNEL TYPICAL POOL SECTION
C-107 NTS

PIPER CREEK CHANNEL NOTES:

1. DAYLIGHT PROPOSED CHANNEL EXCAVATION TO MATCH EXISTING GRADE.
2. DEPTH OF EXCAVATION SIDE CHANNEL VARIES.

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\100% PROPOSED PIPER CREEK_V2.DWG
PLOT DETAILS: MCKINNEY, CHAD
JUNE 21, 2019 1:29 PM



ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
100% DESIGN
PROPOSED CONDITIONS
PIPER CREEK DETAIL

DWG. NO.: **C-108**
CREATED: 6/21/2019
SHEET: 13 OF 38

PIPER CONSTRUCTION POINT TABLE				
POINT #	ELEV.	NORTHING	EASTING	DESC.
357	2496.58	518934.48	1832937.24	CUT
358	2497.26	518939.70	1832945.68	CUT
359	2498.49	518941.85	1832951.81	CUT
360	2499.60	518944.37	1832973.71	CUT
361	2500.38	518953.91	1832979.26	CUT
362	2502.06	518985.52	1832981.72	CUT
363	2504.95	519053.19	1832987.03	CUT
364	2505.90	519060.25	1832994.41	CUT
365	2510.38	519089.32	1833039.80	CUT
366	2513.04	519115.54	1833071.08	CUT
367	2514.50	519132.96	1833082.87	CUT
368	2518.25	519181.82	1833088.89	CUT
369	2520.41	519204.74	1833103.46	CUT
370	2522.70	519215.37	1833124.05	CUT
371	2527.46	519226.90	1833171.26	CUT
372	2531.05	519255.74	1833190.58	CUT
373	2534.04	519283.95	1833213.33	CUT
374	2537.26	519310.97	1833238.41	CUT
375	2539.20	519338.68	1833242.34	CUT
376	2539.91	519349.84	1833251.84	CUT
377	2544.25	519361.42	1833300.40	CUT
378	2547.40	519359.52	1833331.85	CUT
379	2549.70	519352.59	1833351.97	CUT
380	2552.41	519346.32	1833374.92	CUT
381	2557.47	519335.04	1833418.47	CUT
382	2559.02	519331.58	1833438.83	CUT
383	2561.41	519332.32	1833460.64	CUT

PIPER BACKFILL POINT TABLE				
POINT #	ELEV.	NORTHING	EASTING	DESC.
386	2560.00	519348.33	1833431.62	FILL
387	2554.99	519420.33	1833395.62	FILL
388	2545.00	519402.80	1833285.33	FILL
389	2547.00	519443.56	1833290.84	FILL
390	2538.93	519349.80	1833210.50	FILL
391	2537.00	519380.33	1833176.04	FILL
392	2529.04	519314.77	1833118.07	FILL
393	2524.00	519325.71	1833039.69	FILL
394	2516.00	519274.18	1832968.06	FILL
395	2515.00	519292.24	1832970.15	FILL

PIPER CREEK CONSTRUCTION QUANTITIES		
CONSTRUCTION ITEMS	UNITS	PIPER CREEK REALIGNMENT
CUT	CY	602
FILL	CY	602
LARGE WOOD 18-24"(ROOTWAD)	EA	43
LARGE WOOD 18-24" (LOGS)	EA	0
BALLAST BOULDERS 2-3'	EA	170
HABITAT BOULDERS 3'	EA	12
TEMP. COFFERDAM	LF	0

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\100% DESIGN\100% DESIGN\PIPER CREEK_V2.DWG
 PLOT DETAILS: MCKINNEY, CHAD
 JUN 21, 2019 1:40 PM

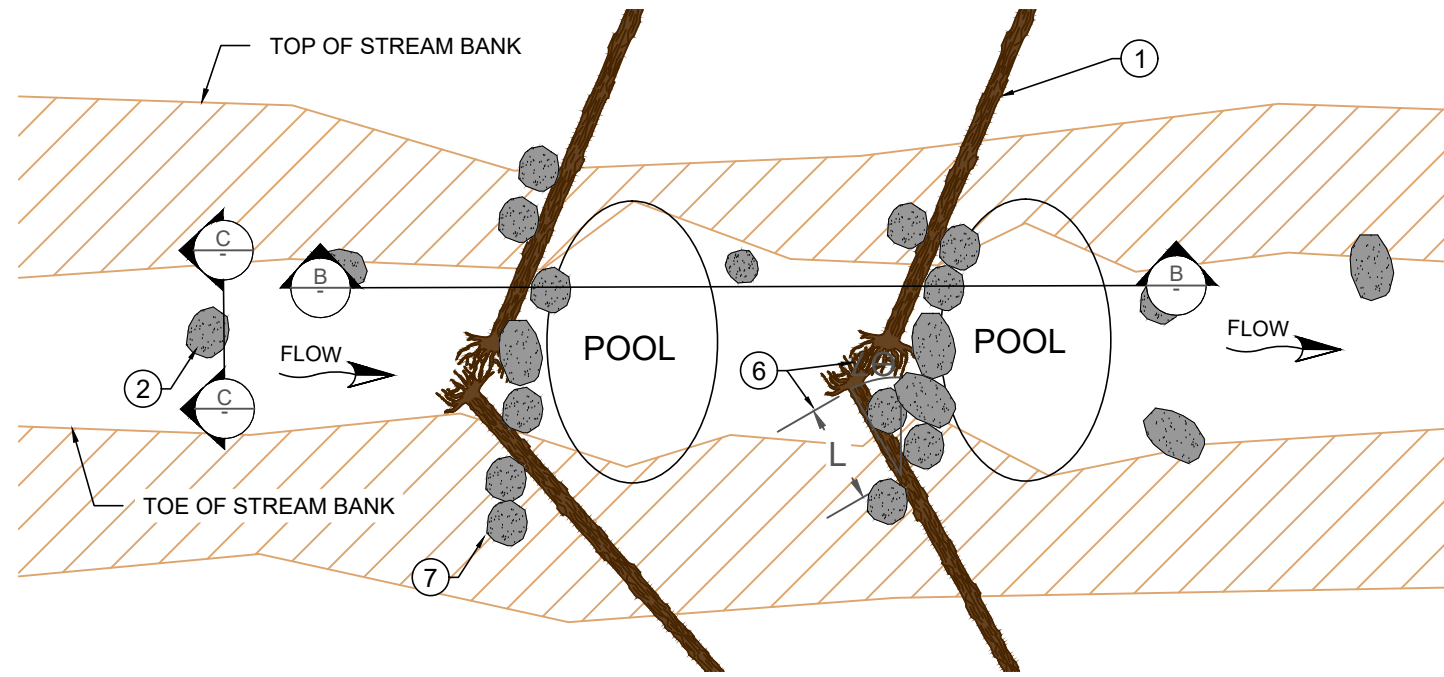


ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES -
 BEAVER CREEK REACH 5 DESIGN
 100% DESIGN
 PROPOSED CONDITIONS
 PIPER CREEK DETAIL

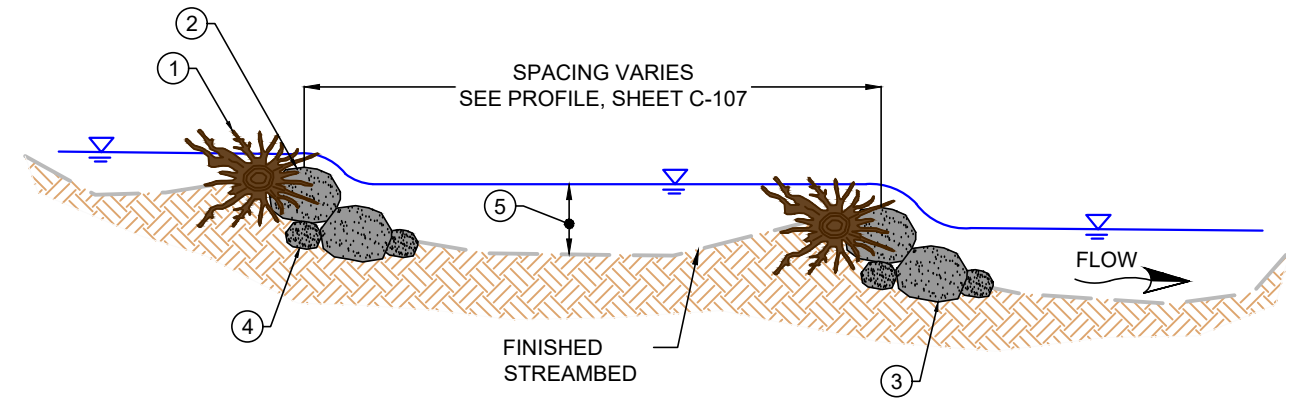
DWG. NO.: **C-109**
 CREATED: 6/21/2019
 SHEET: 14 OF 38



A STEP POOL TYPICAL PLAN VIEW
(NTS)
C-107

PLAN VIEW NOTE:

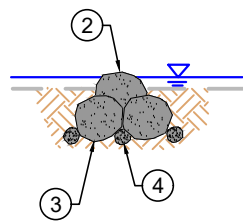
- FOOTER BOULDERS ARE NOT SHOWN IN PLAN VIEW FOR CLARITY PURPOSES ONLY.



B STEP POOL TYPICAL PROFILE VIEW
(NTS)

LEGEND:

- PROPOSED HABITAT BOULDERS
- PROPOSED STREAMBED COBBLE
- PROPOSED LWD
- EXISTING GROUND
- STREAM BANK



C TYPICAL HEADER AND FOOTER ROCK SECTION VIEW
(NTS)

GENERAL NOTES:

- INSTALLATION OF ALL HABITAT BOULDERS, STREAMBED COBBLE, WASHED-IN FINE MATERIAL, AND LWD SHALL BE COORDINATED IN THE FIELD WITH OWNER'S REPRESENTATIVE.

CONSTRUCTION NOTES:

- TREES MUST BE 18" DBH MIN. WITH AN INTACT ROOTWAD. LENGTH MAY VARY BETWEEN 25 TO 35 FEET, BUT SUITABLE IN LENGTH TO BE ANCHORED INTO THE SURROUNDING GROUND.
- HEADER HABITAT BOULDER TO BE EMBED INTO STREAMBED BETWEEN 50 AND 65% OF BOULDER DIA. PER SPECIFICATION SECTION 35 49 50.
- FOOTER HABITAT BOULDER, EMBED INTO STREAMBED SO THAT TOP BOULDER SITS ON TWO FOOTER HABITAT BOULDERS AS SHOWN IN PROFILE AND SECTION PER SPECIFICATION SECTION 35 49 50.
- STREAMBED COBBLE EMBEDDED TO SUPPORT FOOTER AND HEADER HABITAT BOULDERS AS NEEDED. WASH IN FINE SEDIMENT MATERIAL INTO STREAMBED VOIDS PER SPECIFICATION SECTION 35 49 50.
- EXCAVATE MINIMUM POOL DEPTH = 12 INCHES, MAX DEPTH = 28 INCHES. ELEVATION OF POOL BOTTOM SHALL BE HIGHER THAN BASE OF UPSTREAM FOOTER HABITAT BOULDER.
- LWD SHALL BE SURFACE PLACED ON BANKS SUCH THAT THE ANGLE ($\angle\theta$) OF THE LWD IS BETWEEN 60 AND 75 DEGREES UPSTREAM FROM A LINE PERPENDICULAR TO THE DIRECTION OF FLOW, AND THE LENGTH OF PROTRUSION (L) DOES NOT EXCEED 1/3 OF THE CHANNEL BOTTOM WIDTH. FINAL PLACEMENT SHALL BE COORDINATED IN THE FIELD WITH OWNER'S REPRESENTATIVE.
- KEY BOULDER STEPS INTO CHANNEL BANKS, MINIMUM 4 FEET EITHER SIDE. BACKFILL CHANNEL SLOPE AND PLANT.

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\SHEET FILES\07-STEP POOL DETAIL.DWG JUN 21 2019 1:38 PM

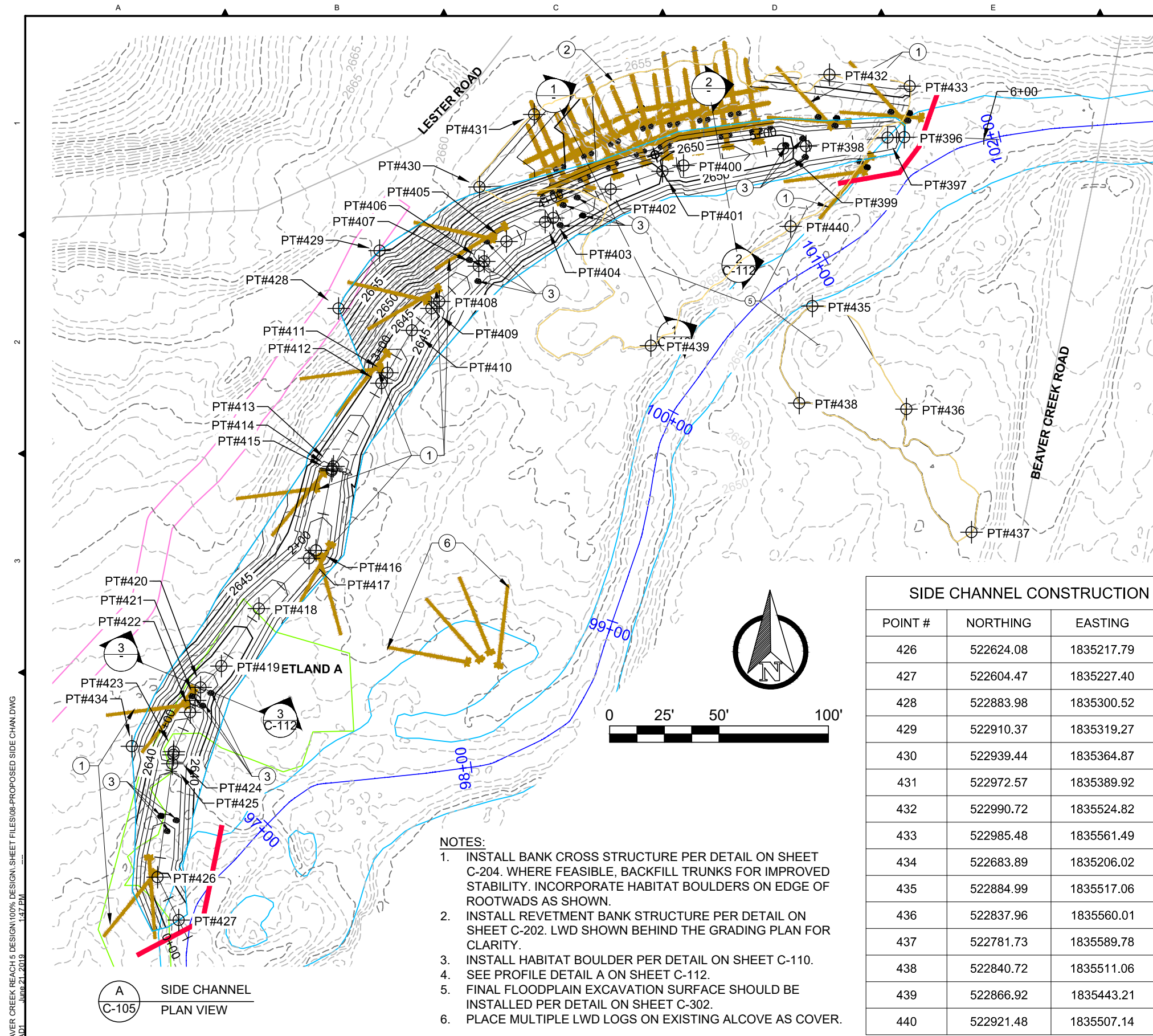


ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
100% DESIGN
PROPOSED CONDITIONS
PIPER CREEK
STEP POOL DETAILS

DWG. NO.: C-110
CREATED: 6/21/2019
SHEET: 15 OF 38



LEGEND:

	BEAVER CREEK ALIGNMENT		PROPOSED HABITAT BOULDERS
	EXISTING WETLANDS		PROPOSED LWD
	SIDE CHANNEL ALIGNMENT		PROPOSED SIDE CHANNEL EXCAVATION
	EXISTING ROAD		PROPOSED FLOODPLAIN EXCAVATION
	EXISTING OHW WSE		PROPOSED CONTOUR MINOR - 1FT
	EXISTING CONTOUR MINOR - 1FT		PROPOSED CONTOUR MAJOR - 5FT
	EXISTING CONTOUR MAJOR - 5FT		PROPOSED TEMP. COFFERDAM

SIDE CHANNEL CONSTRUCTION POINT TABLE				
POINT #	NORTHING	EASTING	ELEV.	DESC.
396	522962.16	1835559.02	2652.08	CUT
397	522962.00	1835551.47	2651.74	CUT
398	522958.10	1835514.10	2650.97	CUT
399	522956.90	1835503.68	2649.22	CUT
400	522949.24	1835458.10	2648.55	CUT
401	522946.62	1835448.51	2650.00	CUT
402	522938.41	1835424.86	2649.24	CUT
403	522925.24	1835398.58	2648.35	CUT
404	522923.40	1835394.92	2647.27	CUT
405	522914.52	1835377.21	2646.71	CUT
406	522905.46	1835367.05	2646.32	CUT
407	522903.23	1835364.55	2647.29	CUT
408	522887.10	1835346.46	2646.32	CUT
409	522883.90	1835342.88	2644.76	CUT
410	522873.97	1835333.95	2644.32	CUT
411	522854.55	1835322.78	2643.59	CUT
412	522849.77	1835320.03	2644.68	CUT
413	522811.76	1835298.18	2642.95	CUT
414	522810.52	1835297.47	2642.12	CUT
415	522809.75	1835297.32	2641.67	CUT
416	522773.34	1835290.17	2640.52	CUT
417	522769.82	1835287.00	2641.61	CUT
418	522746.82	1835264.08	2640.39	CUT
419	522720.51	1835246.95	2639.20	CUT
420	522710.79	1835237.42	2638.69	CUT
421	522704.84	1835234.95	2638.45	CUT
422	522699.38	1835232.68	2637.11	CUT
423	522681.42	1835225.20	2636.43	CUT
424	522679.96	1835225.01	2636.38	CUT
425	522675.84	1835224.48	2637.15	CUT

SIDE CHANNEL CONSTRUCTION POINT TABLE				
POINT #	NORTHING	EASTING	ELEV.	DESC.
426	522624.08	1835217.79	2634.92	CUT
427	522604.47	1835227.40	2633.99	CUT
428	522883.98	1835300.52	2658.65	CUT
429	522910.37	1835319.27	2660.09	CUT
430	522939.44	1835364.87	2657.00	CUT
431	522972.57	1835389.92	2658.00	CUT
432	522990.72	1835524.82	2656.99	CUT
433	522985.48	1835561.49	2656.48	CUT
434	522683.89	1835206.02	2643.70	CUT
435	522884.99	1835517.06	2655.00	CUT
436	522837.96	1835560.01	2655.01	CUT
437	522781.73	1835589.78	2655.32	CUT
438	522840.72	1835511.06	2655.00	CUT
439	522866.92	1835443.21	2653.50	CUT
440	522921.48	1835507.14	2653.50	CUT

- NOTES:**
1. INSTALL BANK CROSS STRUCTURE PER DETAIL ON SHEET C-204. WHERE FEASIBLE, BACKFILL TRUNKS FOR IMPROVED STABILITY. INCORPORATE HABITAT BOULDERS ON EDGE OF ROOTWADS AS SHOWN.
 2. INSTALL REVETMENT BANK STRUCTURE PER DETAIL ON SHEET C-202. LWD SHOWN BEHIND THE GRADING PLAN FOR CLARITY.
 3. INSTALL HABITAT BOULDER PER DETAIL ON SHEET C-110.
 4. SEE PROFILE DETAIL A ON SHEET C-112.
 5. FINAL FLOODPLAIN EXCAVATION SURFACE SHOULD BE INSTALLED PER DETAIL ON SHEET C-302.
 6. PLACE MULTIPLE LWD LOGS ON EXISTING ALCOVE AS COVER.

A SIDE CHANNEL PLAN VIEW C-105

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EXPIRES: 02/25/2021



ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

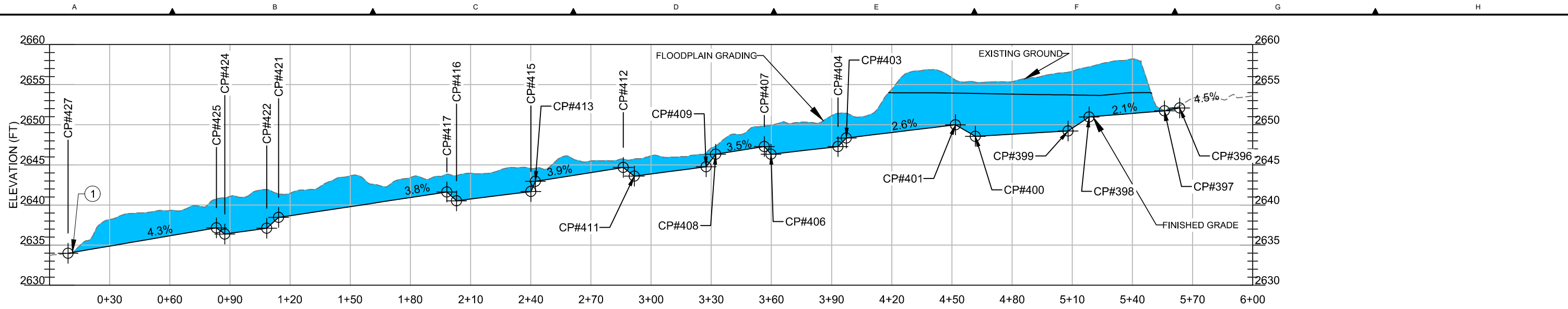
YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

PROPOSED CONDITIONS SIDE CHANNEL

DWG. NO.: **C-111**

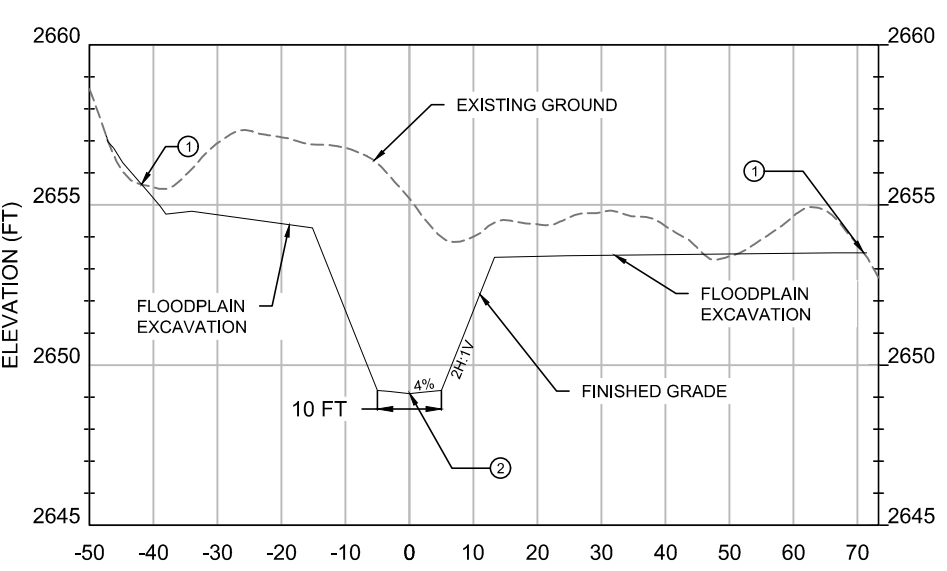
CREATED: 6/21/2019

SHEET: 16 OF 38



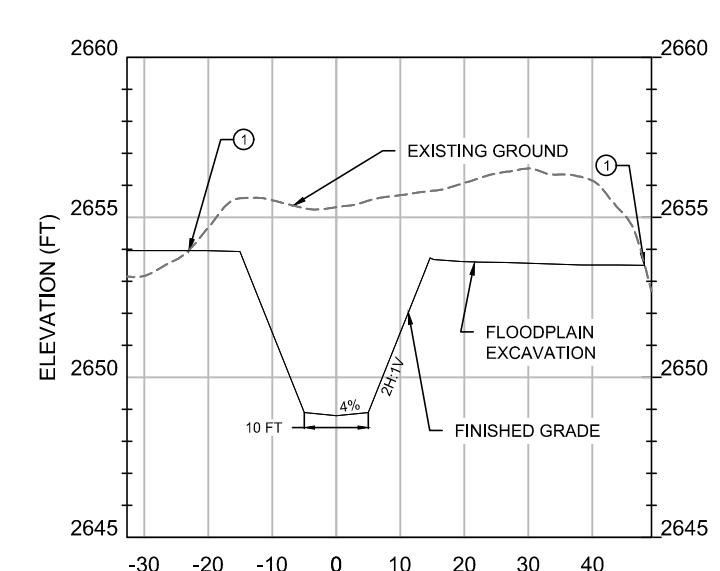
STREAM ALIGNMENT PROFILE VIEW (FT)
(SCALE 1" = 30', 1H:5V)

A SIDE CHANNEL
C-111 PROFILE



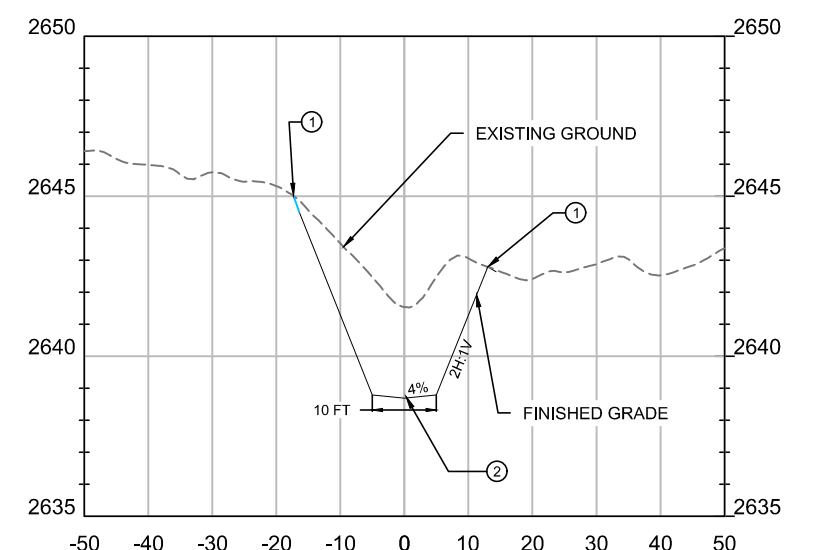
SIDE CHANNEL SECTION VIEW (FT)
(SCALE 1" = 30', 1H:5V)

1 RIFFLE & FLOODPLAIN
C-111 SECTION VIEW



SIDE CHANNEL SECTION VIEW (FT)
(SCALE 1" = 30', 1H:5V)

2 POOL & FLOODPLAIN
C-111 SECTION VIEW

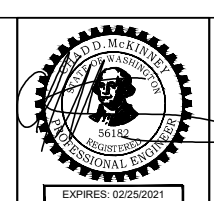


SIDE CHANNEL SECTION VIEW (FT)
(SCALE 1" = 30', 1H:5V)

3 RIFFLE
C-111 SECTION VIEW

SIDE CHANNEL CONSTRUCTION QUANTITIES		
CONST. ITEMS	UNITS	SIDE CHANNEL
CUT	CY	2,178
FILL	CY	83
LARGE WOOD 18-24" (ROOTWAD)	EA	39
LARGE WOOD 18-24" (LOGS)	EA	18
BALLAST BOULDERS 2-3'	EA	42
HABITAT BOULDERS 3'	EA	56
TEMP. COFFERDAM	LF	150

- NOTES:
- DAYLIGHT PROPOSED CHANNEL AND FLOODPLAIN EXCAVATION TO MATCH EXISTING GRADE.
 - INSTALL LOW FLOW CHANNEL IN PROPOSED RIFFLES.



ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

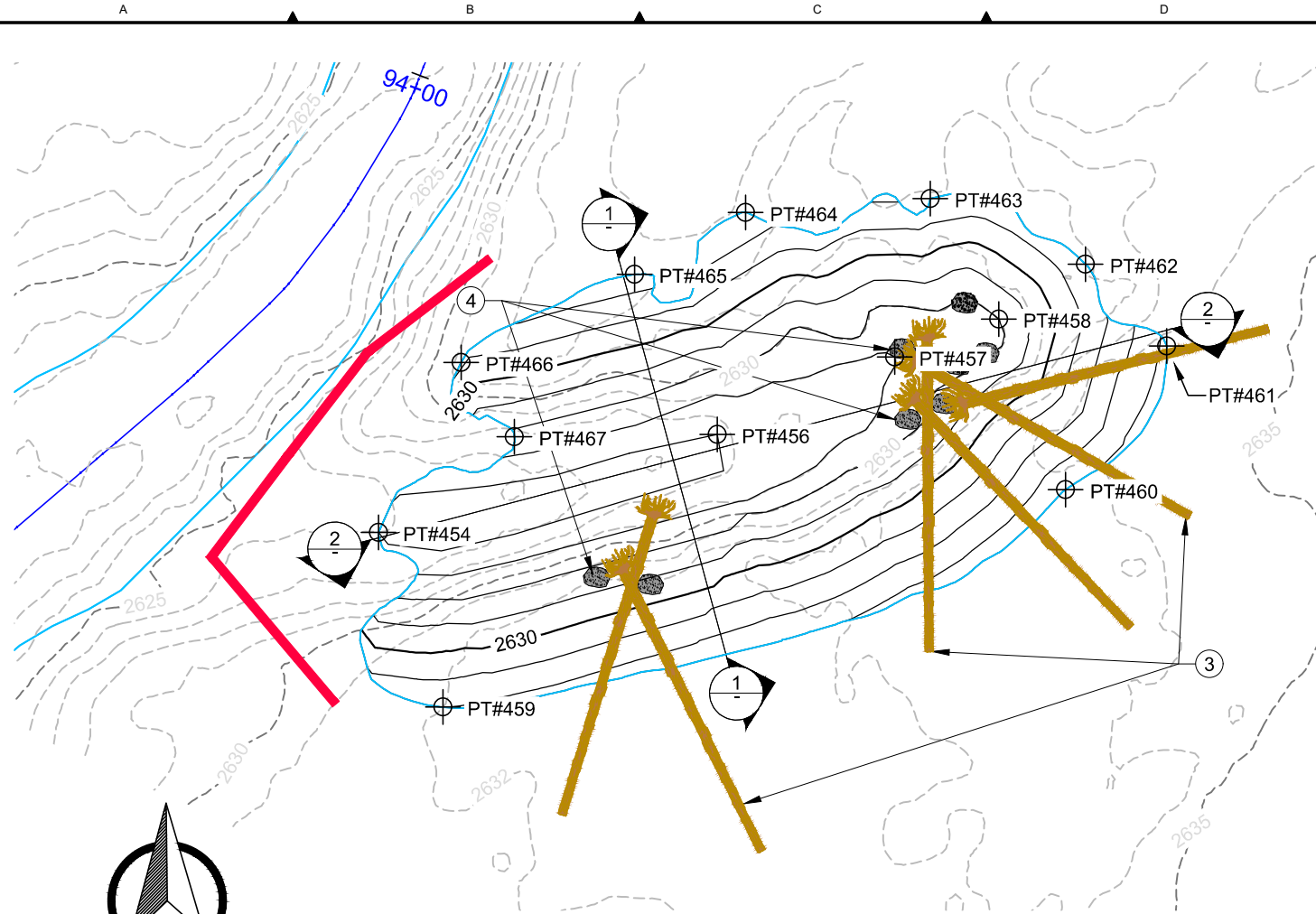
PROPOSED CONDITIONS SIDE CHANNEL

DWG. NO.: C-112

CREATED: 6/21/2019

SHEET: 17 OF 38

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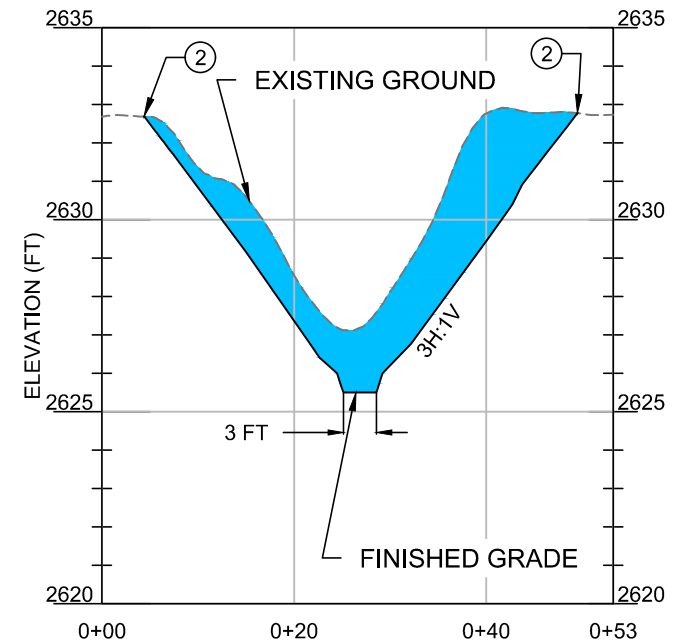


A
C-105
ALCOVE 2
PLAN VIEW

ALCOVE 2 CONSTRUCTION QUANTITIES		
CONSTRUCTION ITEMS	UNITS	ALCOVE 2
CUT	CY	190
FILL	CY	0
LARGE WOOD 18-24" (ROOTWAD)	EA	6
LARGE WOOD 18-24" (LOGS)	EA	0
BALLAST BOULDERS 2-3'	EA	0
HABITAT BOULDERS 3'	EA	8
TEMP. COFFERDAM	LF	70

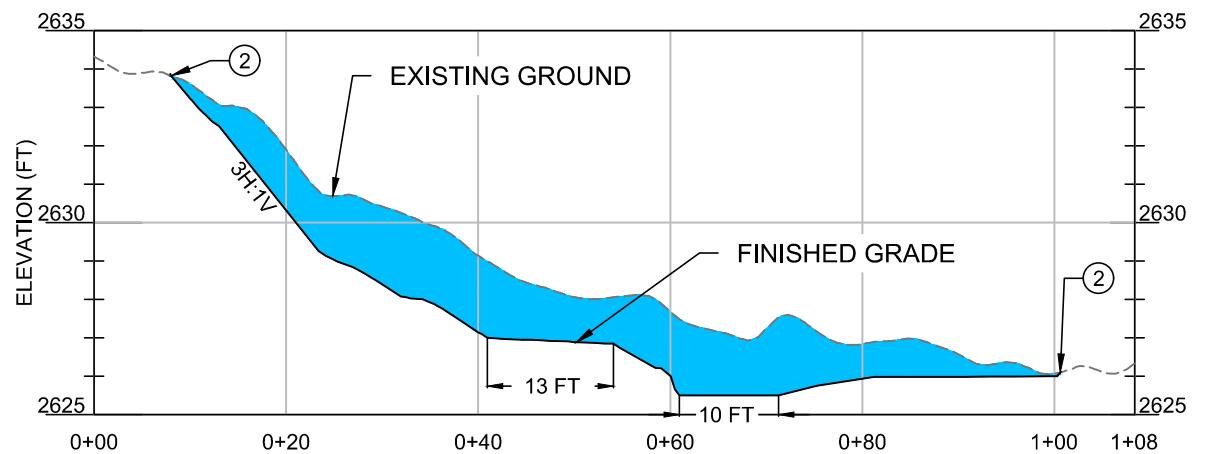
- NOTES:**
- EXCAVATE ALCOVE 2 TO THE EXTENTS AND ELEVATIONS SHOWN ON THE PLAN.
 - DAYLIGHT PROPOSED ALCOVE EXCAVATION TO MATCH EXISTING GRADE.
 - INSTALL BANK CROSS STRUCTURE PER DETAIL ON SHEET C-204.
 - INSTALL HABITAT BOULDERS WITHOUT FOOTER BOULDERS IF COARSE SUBSTRATE NOT EXPOSED DURING EXCAVATION.

ALCOVE 2 CONSTRUCTION POINTS				
POINT #	ELEV.	NORTHING	EASTING	DESC.
454	2626.00	522322.18	1835156.37	EXC
456	2626.00	522333.48	1835195.42	EXC
457	2627.00	522342.41	1835215.87	EXC
458	2628.00	522346.79	1835227.87	EXC
459	2632.00	522302.03	1835163.78	EXC
460	2633.88	522327.10	1835235.59	EXC
461	2634.25	522343.68	1835247.24	EXC
462	2631.94	522353.10	1835237.87	EXC
463	2631.89	522360.68	1835219.97	EXC
464	2632.82	522359.07	1835198.66	EXC
465	2632.68	522351.95	1835185.89	EXC
466	2631.20	522341.78	1835165.87	EXC
467	2627.71	522333.20	1835172.03	EXC



ALCOVE SECTION VIEW (FT)
(SCALE 1" = 30', 1H:5V)

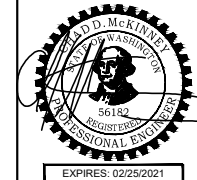
1
ALCOVE 2
SECTION VIEW



ALCOVE SECTION VIEW (FT)
(SCALE 1" = 30', 1H:5V)

2
ALCOVE 2
SECTION VIEW

- LEGEND:**
- BEAVER CREEK ALIGNMENT
 - EXISTING CONTOUR MINOR - 1FT
 - EXISTING CONTOUR MAJOR - 5FT
 - EXISTING OHW WSE
 - PROPOSED HABITAT BOULDERS
 - PROPOSED LWD
 - PROPOSED CHANNEL EXCAVATION
 - PROPOSED CONTOUR MINOR - 1FT
 - PROPOSED CONTOUR MAJOR - 5FT
 - PROPOSED TEMP. COFFERDAM



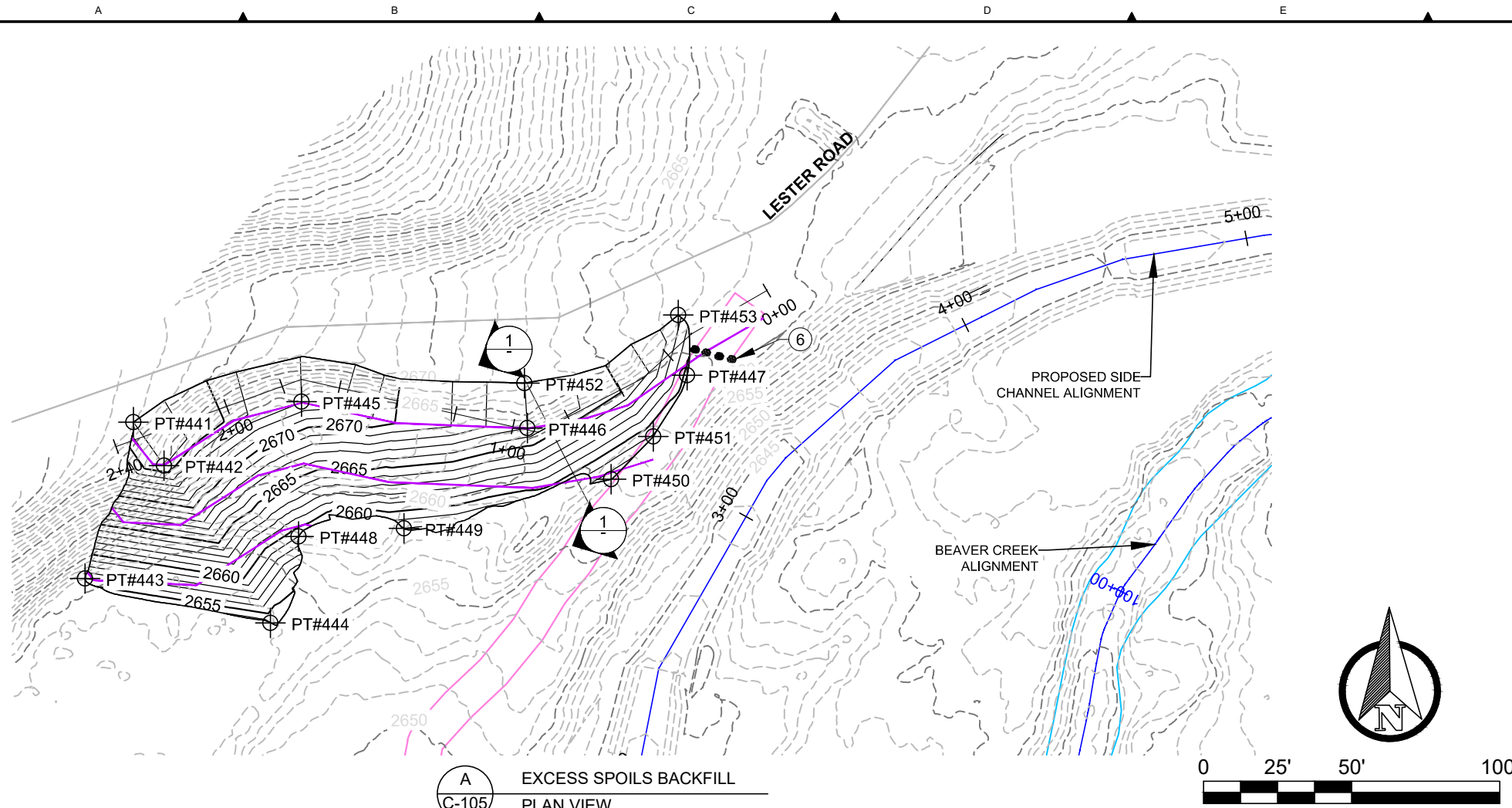
ISSUED FOR CONSTRUCTION

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
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0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

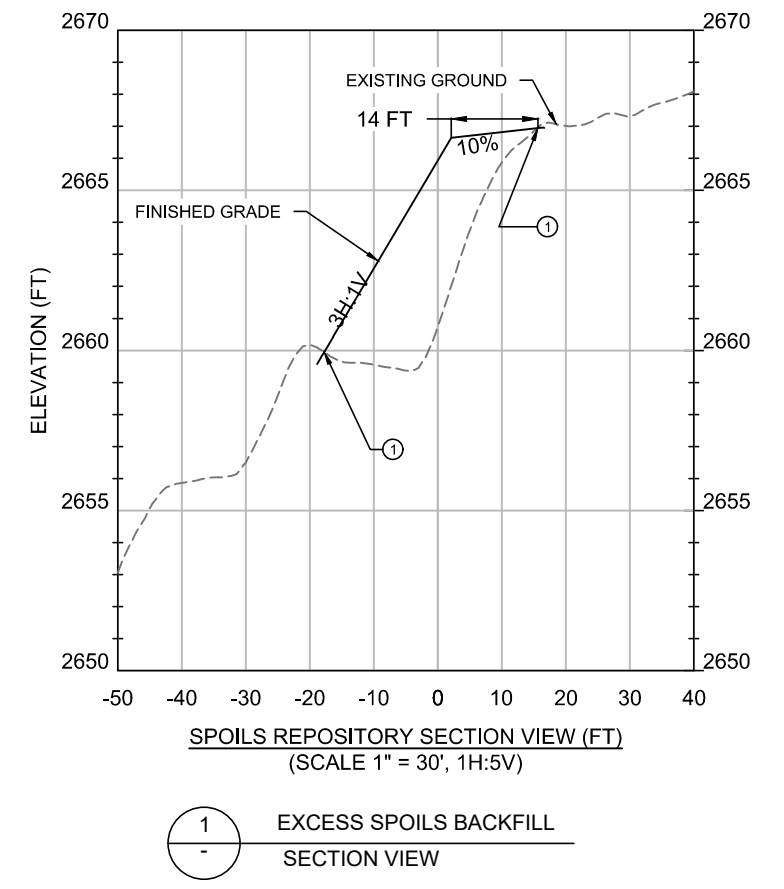
YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN
PROPOSED CONDITIONS ALCOVE 2

DWG. NO.: C-113
CREATED: 6/21/2019
SHEET: 18 OF 38

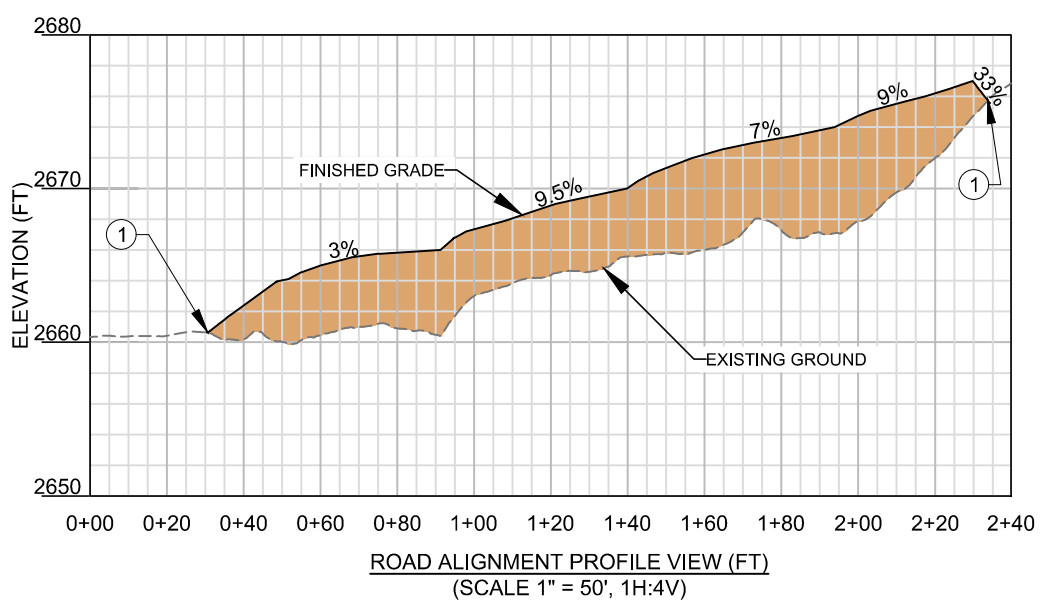
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A EXCESS SPOILS BACKFILL
C-105 PLAN VIEW



1 EXCESS SPOILS BACKFILL
SECTION VIEW
SPOILS REPOSITORY SECTION VIEW (FT)
(SCALE 1" = 30', 1H:5V)



ROAD ALIGNMENT PROFILE VIEW (FT)
(SCALE 1" = 50', 1H:4V)

SPOILS CONSTRUCTION POINT TABLE				
POINT #	ELEV.	NORTHING	EASTING	DESC.
441	2677.00	522893.68	1835120.20	FILL
442	2676.00	522879.03	1835130.52	FILL
443	2656.00	522840.94	1835103.88	FILL
444	2653.99	522825.97	1835166.46	FILL
445	2673.00	522900.54	1835176.91	FILL
446	2667.00	522891.64	1835253.20	FILL
447	2659.79	522909.52	1835307.10	FILL
448	2659.00	522855.12	1835175.95	FILL
449	2658.00	522857.83	1835211.49	FILL
450	2657.24	522874.46	1835281.37	FILL
451	2658.86	522888.87	1835295.67	FILL
452	2667.00	522906.83	1835252.18	FILL
453	2662.03	522929.83	1835304.07	FILL

- NOTES:**
- DAYLIGHT PROPOSED EXCESS SPOILS BACKFILL TO MATCH EXISTING GRADE.
 - PLACE EXCESS SPOILS (APPROX. 1309 CY BULK AND 1223 CY IN PLACE WITH 7% SHRINKAGE) ALONG SLOPE OF LESTER ROAD.
 - HEIGHT AND WIDTH OF EXCESS SPOILS BACKFILL TO BE DETERMINED IN THE FIELD BASED ON THE QUANTITY OF SPOILS MATERIAL AVAILABLE.
 - EXCESS SPOILS BACKFILL SHALL FOLLOW THE 2018 WSDOT STANDARD SPECIFICATIONS, OR MOST CURRENT, FOR EARTH EMBANKMENTS 2-03.3(14)B AND 2-03.3(14)C METHOD A. AT A MINIMUM EMBANKMENT MATERIAL SHALL MEET REQUIREMENTS FOR COMMON BORROW UNDER 9-03.14(3).
 - MAINTAIN EXISTING LESTER ROAD GRADE AND POSITIVE DRAINAGE.
 - DURING CLOSEOUT, PLACE SURPLUS LARGE BOULDERS AT ENTRANCE OF ACCESS TO STAGING AREA.

SPOILS REPOSITORY CONSTRUCTION QUANTITIES		
CONSTRUCTION ITEMS	UNITS	REPOSITORY
CUT	CY	0
FILL	CY	1,223

- LEGEND:**
- BEAVER CREEK ALIGNMENT
 - PROPERTY BOUNDARY
 - EXISTING ROAD
 - EXISTING OHW WSE
 - EXISTING CONTOUR MINOR - 1 FT
 - EXISTING CONTOUR MAJOR - 5 FT
 - SURPLUS LARGE BOULDERS
 - PROPOSED BACKFILL
 - PROPOSED CONTOUR MINOR - 1 FT
 - PROPOSED CONTOUR MAJOR - 5 FT
 - PROPOSED TESC/WATTLE

Z:\PROJECTS\194-6193\YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\100% DESIGN\100% PROPOSED BACKFILL.DWG
PLOT DETAILS: MCKINNEY, CHAD
JUNE 21, 2019

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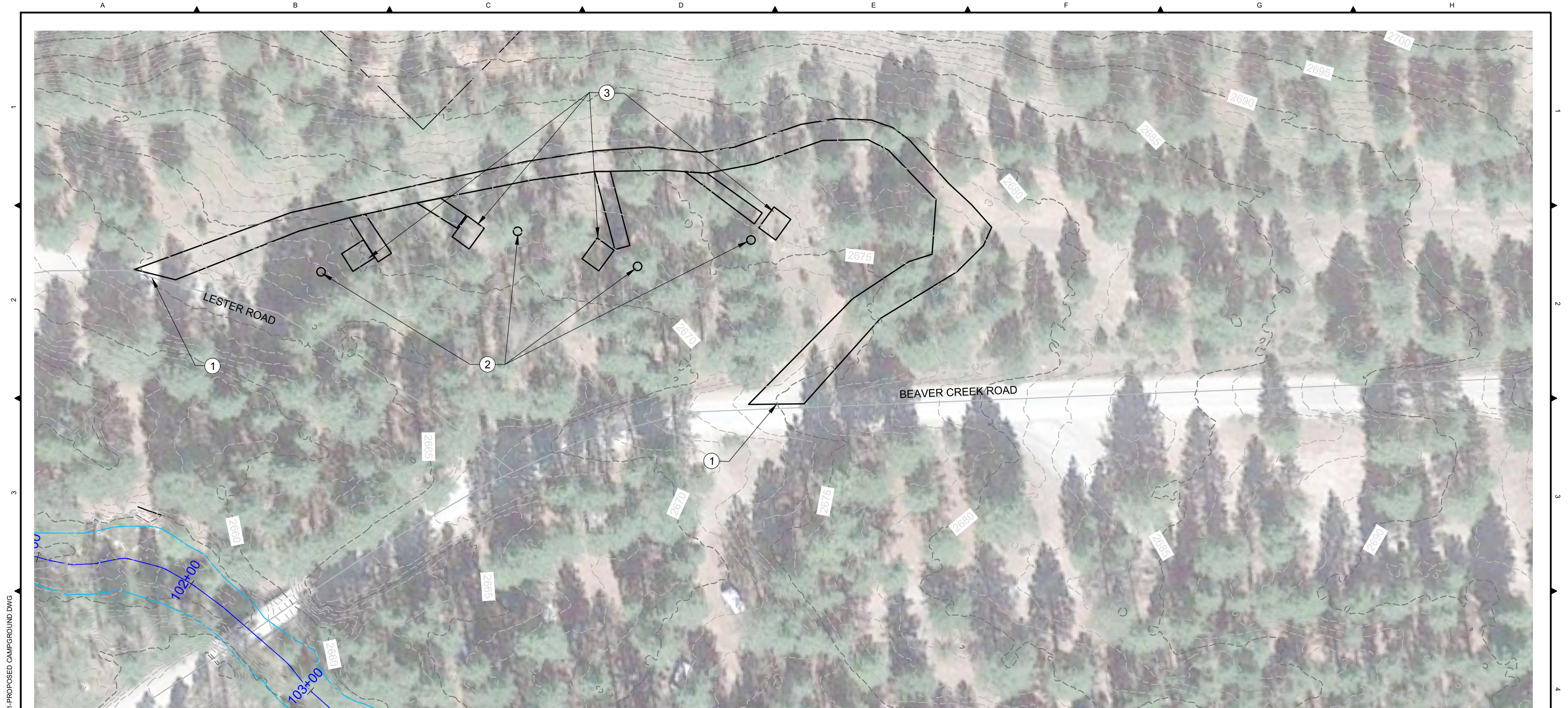
PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

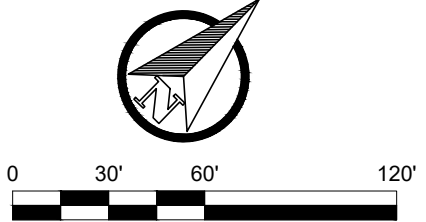
PROPOSED CONDITIONS EXCESS SPOILS BACKFILL

DWG. NO.: **C-114**
CREATED: 6/21/2019
SHEET: 19 OF 38



A
C-105 CAMPGROUND MITIGATION
PLAN VIEW

- LEGEND:**
- BEAVER CREEK ALIGNMENT
 - EXISTING CONTOUR MINOR - 1FT
 - EXISTING CONTOUR MAJOR - 5FT
 - EXISTING OHW WSE
 - PROPOSED CAMPGROUND FEATURES



- NOTES:**
1. PROPOSED CAMPGROUND ACCESS ROAD TO BE CLEARED AND GRADED TO RECOMMENDED SLOPES AND WIDTHS, AS DIRECTED BY THE OWNER.
 2. PROPOSED STEEL FIRE PIT RINGS (FS-30 TYP.)
 3. PROPOSED TENT PAD AREAS TO BE GRADED FLAT WITH 2% DRAIN SLOPE (13' X 16' TYP.)

Z:\PROJECTS\194-6193\YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\ SHEET FILES\01-PROPOSED CAMPGROUND.DWG
DATE: 06/21/2019 3:21 PM

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Bothell, Washington 98011
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ISSUED FOR
CONSTRUCTION

		PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")				
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

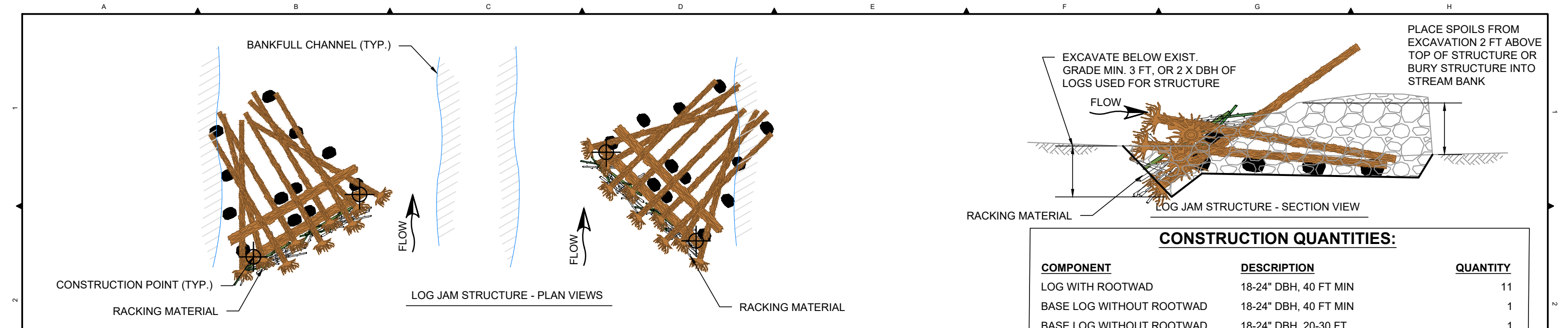
**YAKAMA NATION FISHERIES -
BEAVER CREEK REACH 5 DESIGN
100% DESIGN**

**PROPOSED CONDITIONS
CAMPGROUND**

DWG. NO.: **C-115**

CREATED: 6/21/2019

SHEET: 20 OF 38

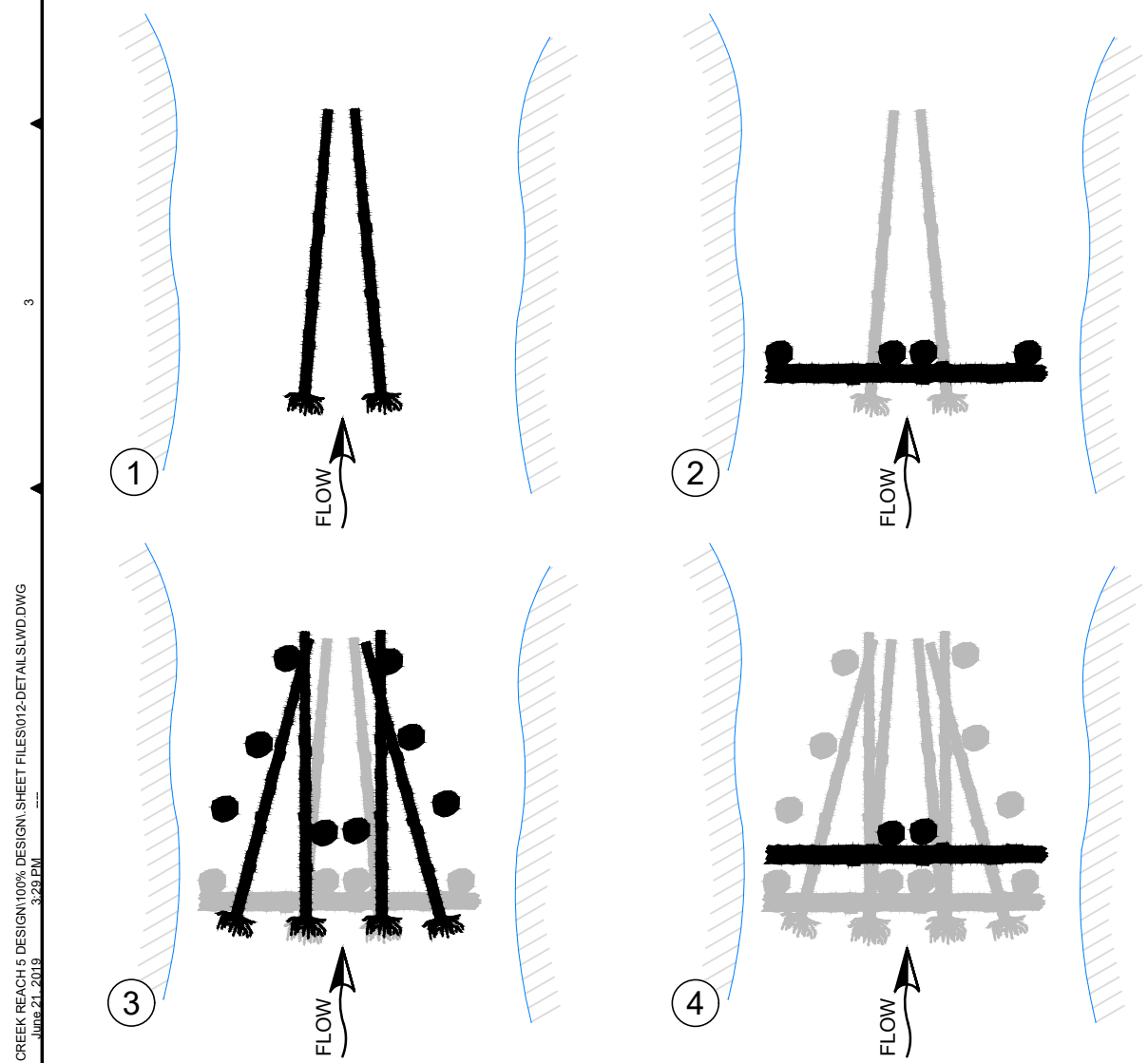


CONSTRUCTION QUANTITIES:

COMPONENT	DESCRIPTION	QUANTITY
LOG WITH ROOTWAD	18-24" DBH, 40 FT MIN	11
BASE LOG WITHOUT ROOTWAD	18-24" DBH, 40 FT MIN	1
BASE LOG WITHOUT ROOTWAD	18-24" DBH, 20-30 FT	1
BOULDER	2-3 FT DIA	14
BALLAST	SPOILS/FLOODPLAIN ALLUVIUM	200 CY

LOG JAM STRUCTURE NOTES:

1. INSTALL TEMPORARY COFFERDAM TO ISOLATE WORK AREA.
2. FISH SALVAGE TO BE SUPERVISED BY QUALIFIED FISH BIOLOGIST.
3. EXCAVATE TRENCH A MINIMUM OF 3 FT TO COMPLETELY BURY BOTTOM LAYER OF STRUCTURE. EXCAVATE UPSTREAM PORTION OF TRENCH TO PROVIDE ELEVATED TIPS OF TREES IN SEQUENCE #1 WHEN ROOTWADS ARE PLACED IN TRENCH.
4. PLACE MEDIUM TREES IN SEQUENCE #1. ROOTWADS PLACED IN DEEPEST PORTION OF TRENCH UPSTREAM.
5. LARGE BASE LOG PLACED IN SEQUENCE #2 DOES NOT REQUIRE ROOTWAD. PLACE LOG DOWNSTREAM OF SEQUENCE #1 ROOTWADS. PLACE BOULDERS TO LOCK LARGE BASE LOG IN PLACE.
6. SMALL TREES PLACED IN SEQUENCE #3 DO NOT REQUIRE BRANCHES. PLACE BOULDER AROUND PERIMETER OF SMALL TREES TO LOCK IN PLACE.
7. LARGE RISER LOG PLACED IN SEQUENCE #4 SHALL BE PLACED AT BACK OF STRUCTURE AND PUSHED FORWARD INTO PLACE TIPS OF TREES IN SEQUENCE #1 SHALL BE LIFTED ON TOP OF LARGE RISER LOG. TIPS OF SEQUENCE #1 TREES WILL ELEVATE AS LARGE RISER LOG IS PUSHED INTO PLACE.
7. MEDIUM TREES PLACED IN SEQUENCE #5 SHALL BE PLACED SO TIPS OF TREES ARE UNDER ELEVATED SEQUENCE #1 TREE TIPS.
8. PLACE LARGE TREES IN SEQUENCE #6.
9. SPOILS FROM EXCAVATION SHALL BE USED TO BACKFILL STRUCTURE AS CONSTRUCTION PROGRESSES. MATERIAL SHALL BE COMPACTED WITH EXCAVATOR BUCKET. ADDITIONAL ALLUVIAL FLOODPLAIN MATERIAL MAY BE NEEDED TO BURY STRUCTURE AS SHOWN. BALLAST MATERIAL INCIDENTAL TO STRUCTURE COST.
10. RACKING MATERIAL MAY BE ADDED TO FRONT OF STRUCTURE WHEN AVAILABLE.
11. PLANT 15 TO 25 WILLOW STAKES IN STRUCTURE TO COMPLETE CONSTRUCTION. OWNER SHALL BE RESPONSIBLE FOR PLANTING WILLOW STAKES.
12. BANKFULL LOCATION WITH RESPECT TO STRUCTURE LOCATION IS A TYPICAL REPRESENTATION AND MAY VARY AT EACH STRUCTURE LOCATION. FINAL CONFIGURATION OF STRUCTURE SHALL BE AS DIRECTED IN FIELD.
13. RACKING MATERIAL MAY CONSIST OF TOPS AND LIMBS OF WHOLE TREES, AND/OR SMALL WHOLE TREES WITH ROOTWADS.



LOG JAM STRUCTURE - LOG PLACEMENT SEQUENCING

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN SHEET FILES\012-DETAIL SLWD.DWG
 3/29/2019
 PLOT DETAILS: MCKINNEY, CHAD

TETRA TECH
 www.tetrattech.com
 19803 North Creek Parkway
 Bothell, Washington 98011
 Phone: 425-482-7600 Fax: 425-482-7652

Professional Engineer
 D.D. McKINNEY
 56182
 EXPIRES: 02/25/2021

Yakama Nation Fisheries

ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")

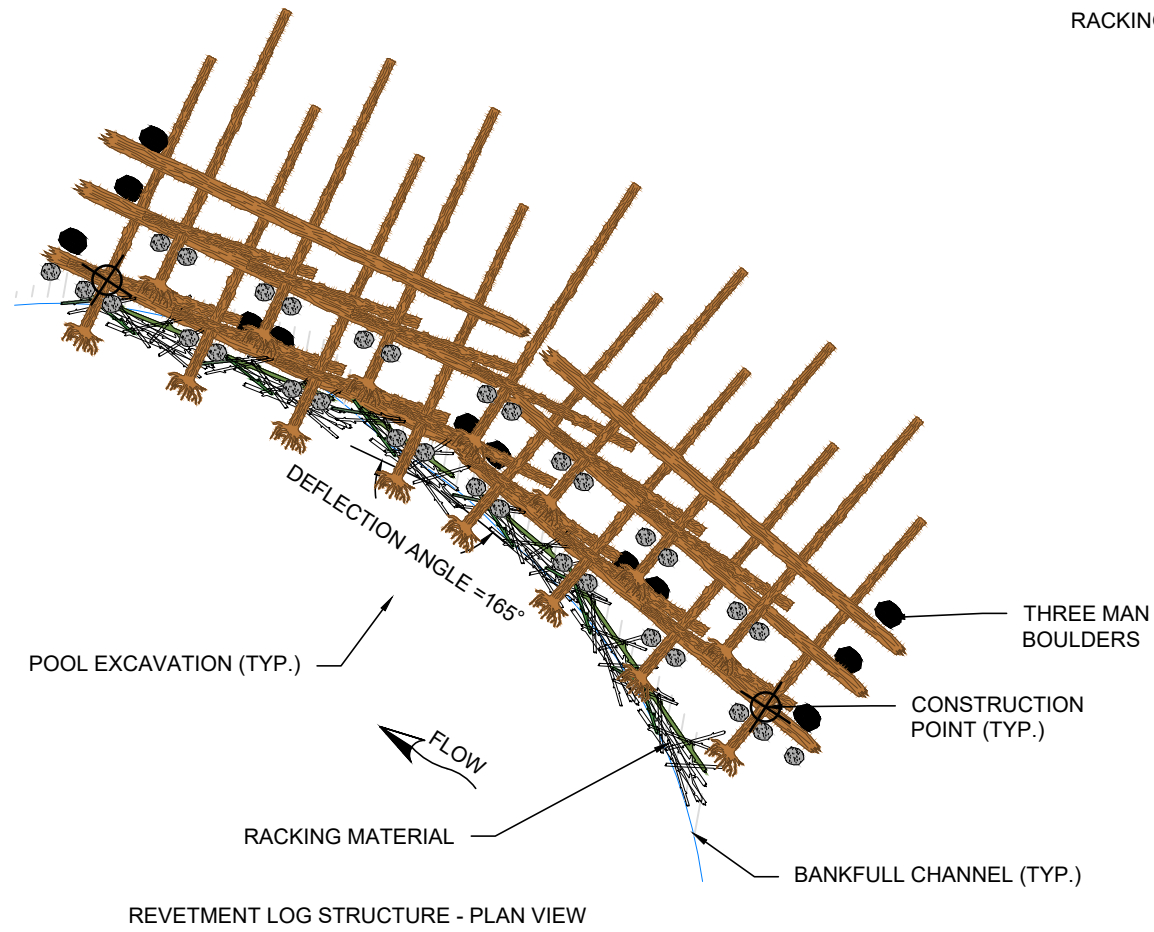
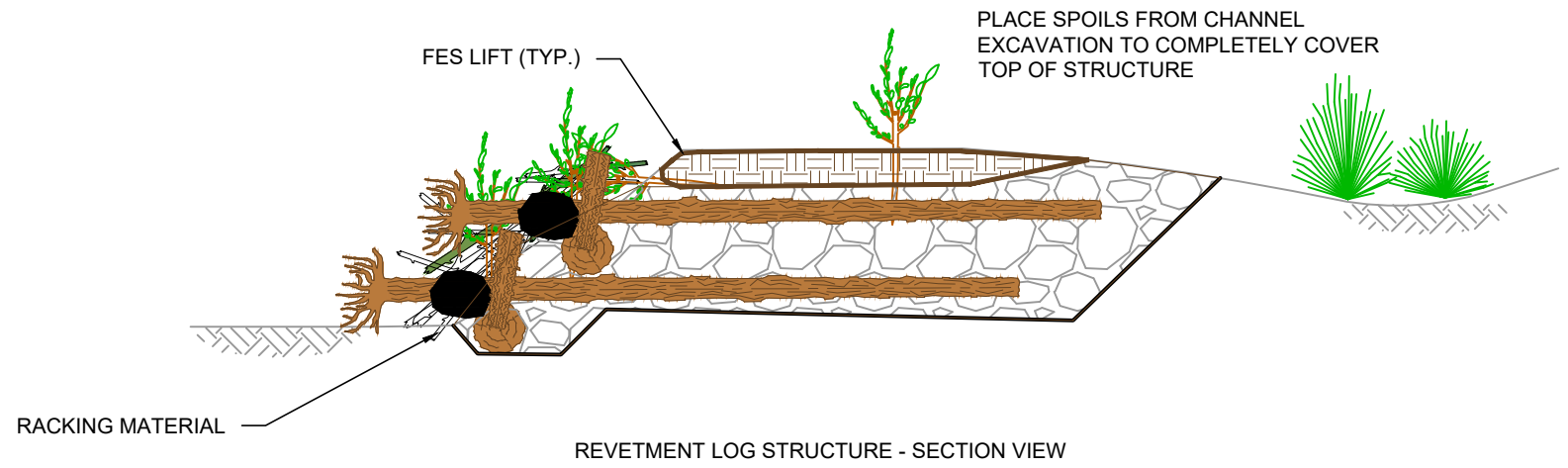
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
 100% DESIGN
DETAILS
 LWD CONSTRUCTION

DWG. NO.: **C-201**
 CREATED: 6/21/2019
 SHEET: 21 OF 38

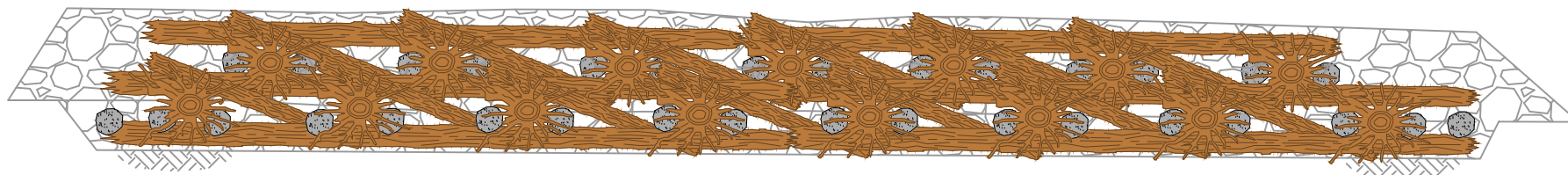
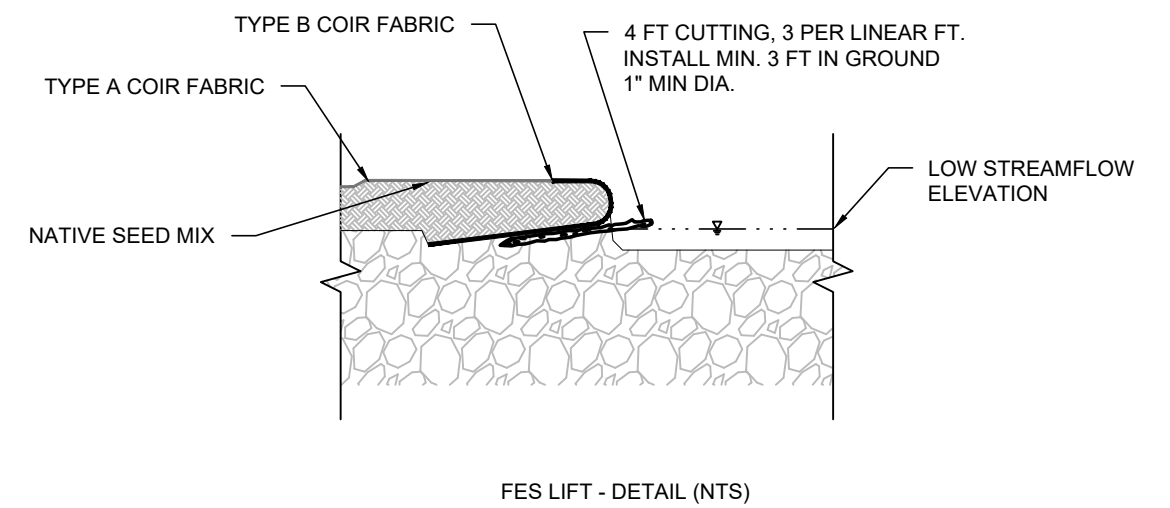
CONSTRUCTION QUANTITIES:

COMPONENT	DESCRIPTION	QUANTITY
LOG WITH ROOTWAD	18-24" DBH, 40 FT MIN	15
LOGS WITHOUT ROOTWAD	18-24" DBH, 20-30 FT	18
BOULDER	2 FT DIA	42
BALLAST	SPOILS/FLOODPLAIN ALLUVIUM	370 CY



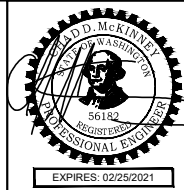
REVTMENT LOG STRUCTURE NOTES:

1. SEE SHEET C-203 FOR REVTMENT LOG STRUCTURE CONSTRUCTION SEQUENCE.
2. SUITABLE SPOILS FROM EXCAVATION SHALL BE USED TO BACKFILL STRUCTURE AS CONSTRUCTION PROGRESSES. MATERIAL SHALL BE COMPACTED WITH EXCAVATOR BUCKET. ADDITIONAL ALLUVIAL FLOODPLAIN MATERIAL MAY BE NEEDED TO BURY STRUCTURE AS SHOWN. BALLAST MATERIAL INCIDENTAL TO STRUCTURE COST.
3. RACKING MATERIAL MAY BE ADDED TO FRONT OF STRUCTURE WHEN AVAILABLE. LIVE STAKES TO BE PLACED IN REVTMENT STRUCTURE DURING CONSTRUCTION.
4. IF BANKFULL IS LESS THAN THE 2 LAYERS SHOWN, INSTALL REVTMENT LOG STRUCTURE AS A SINGLE LAYER AND BACKFILL AS SHOWN.
5. EXCAVATE MINIMUM 2-FOOT DEPTH POOLS AROUND REVTMENT STRUCTURES.
6. BANKFULL LOCATION WITH RESPECT TO STRUCTURE LOCATION IS A TYPICAL REPRESENTATION AND MAY VARY AT EACH STRUCTURE LOCATION. FINAL CONFIGURATION OF STRUCTURE SHALL BE AS DIRECTED IN FIELD.
7. INSTALL ENCAPSULATED SOIL LIFT ON TOP OF REVTMENT WITH WILLOW CUTTINGS.
8. RACKING MATERIAL MAY CONSIST OF TOPS AND LIMBS OF WHOLE TREES, AND/OR SMALL WHOLE TREES WITH ROOTWADS.



REVTMENT LOG STRUCTURE - SECTION VIEW (FRONT)

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN SHEET FILES\012-DETAIL SLWD.DWG 3:29 PM JUN 21 2019



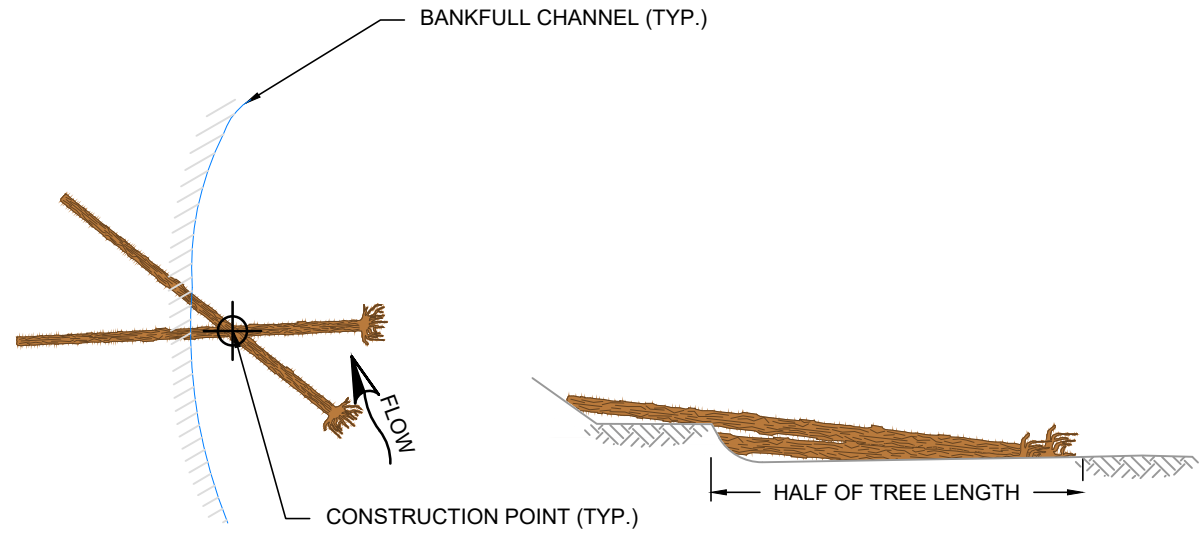
ISSUED FOR CONSTRUCTION

REV.		DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19		ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19		ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

DETAILS
LWD CONSTRUCTION

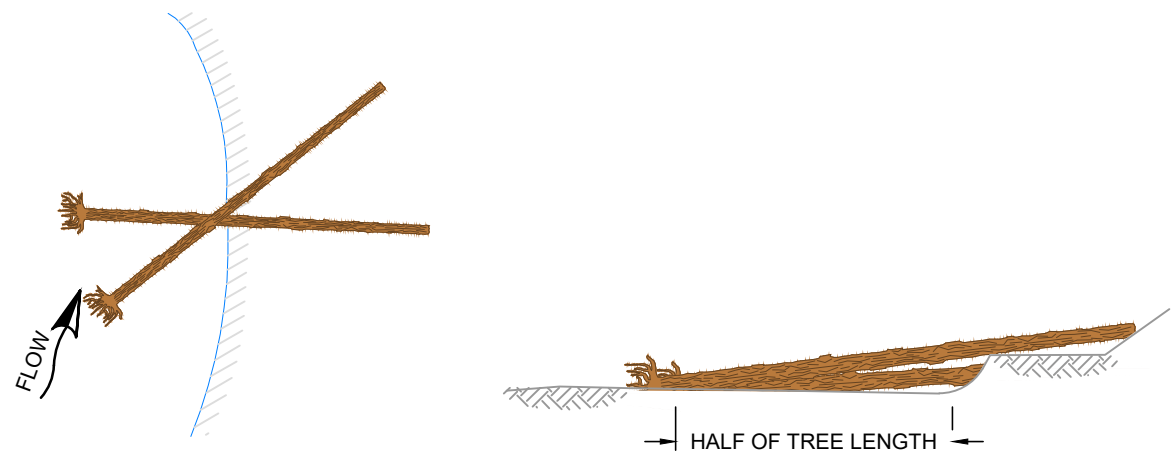
DWG. NO.:	C-202
CREATED:	6/21/2019
SHEET:	22 OF 38



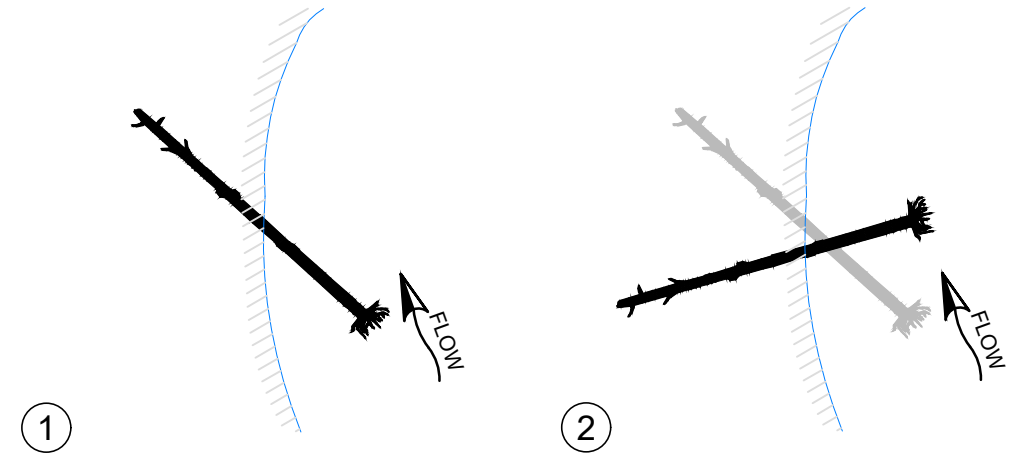
BANK CROSS STRUCTURE - LEFT BANK PLAN AND SECTION VIEWS

BANK CROSS STRUCTURE NOTES:

1. PLACE HALF OF THE LENGTH OF THE LARGE TREE IN SEQUENCE #1 WITHIN BANKFULL CHANNEL WITH TIP OF TREE DOWNSTREAM OF STANDING TREE, IF PRESENT.
2. BURY BOTTOM HALF OF SEQUENCE #1 ROOTWAD IN CHANNEL.
3. PLACE QUARTER TO HALF OF THE LENGTH OF THE LARGE TREE IN SEQUENCE #2 WITHIN BANKFULL CHANNEL WITH TIP OF TREE UPSTREAM OF STANDING TREE, IF PRESENT.
4. BURY BOTTOM HALF OF SEQUENCE #2 ROOTWAD IN CHANNEL.
5. IF NO STANDING TREES PRESENT, TRENCH AND BURY TOP HALF OF SEQUENCE #2 TREE IN BANK WITH 3 FT MIN. OF BALLAST. AVOID DISTURBANCE TO MATURE VEGETATION OR ANY DELINEATED WETLANDS.
6. BANKFULL LOCATION WITH RESPECT TO STRUCTURE LOCATION IS A TYPICAL REPRESENTATION AND MAY VARY AT EACH STRUCTURE LOCATION. FINAL CONFIGURATION OF STRUCTURE SHALL BE AS DIRECTED IN FIELD.

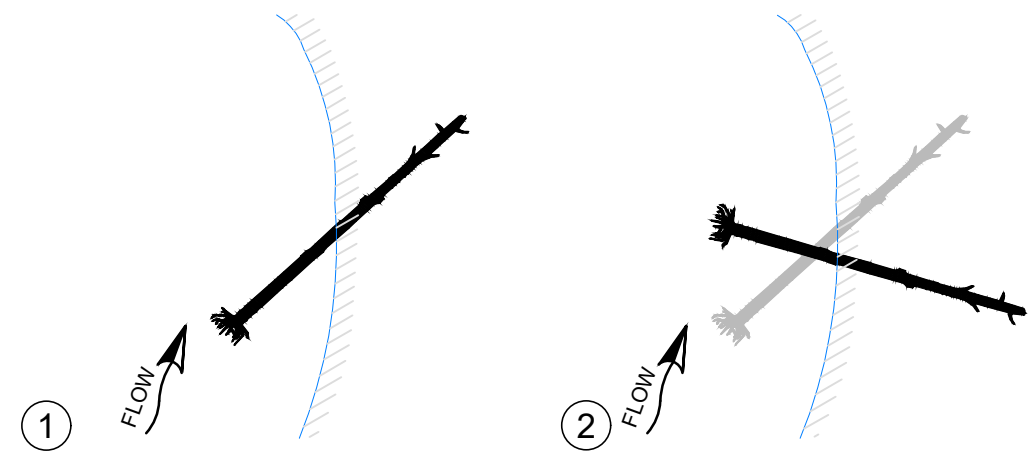


BANK CROSS STRUCTURE - RIGHT BANK PLAN AND SECTION VIEWS



BANK CROSS STRUCTURE - LEFT BANK LOG PLACEMENT SEQUENCING

CONSTRUCTION QUANTITIES:		
<u>COMPONENT</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
LOG WITH ROOTWAD	18-24" DBH, 40 FT MIN	2



BANK CROSS STRUCTURE - RIGHT BANK LOG PLACEMENT SEQUENCING

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\ SHEET FILES\012-DETAIL SLWD.DWG PLOT DETAILS: MCKINNEY.CHADT JUN 21, 2019 3:29 PM



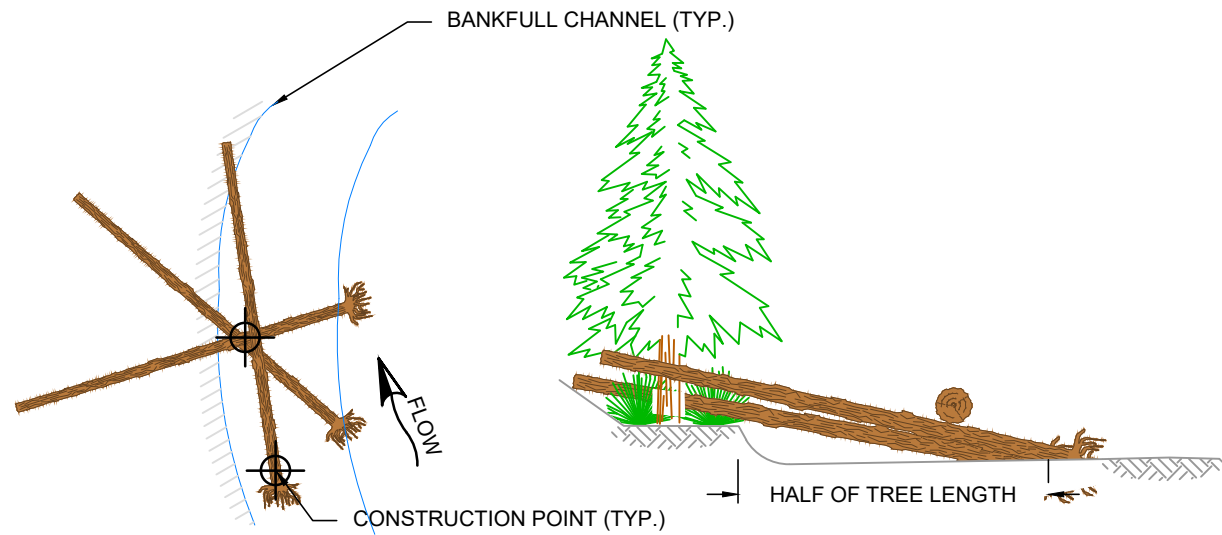
ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

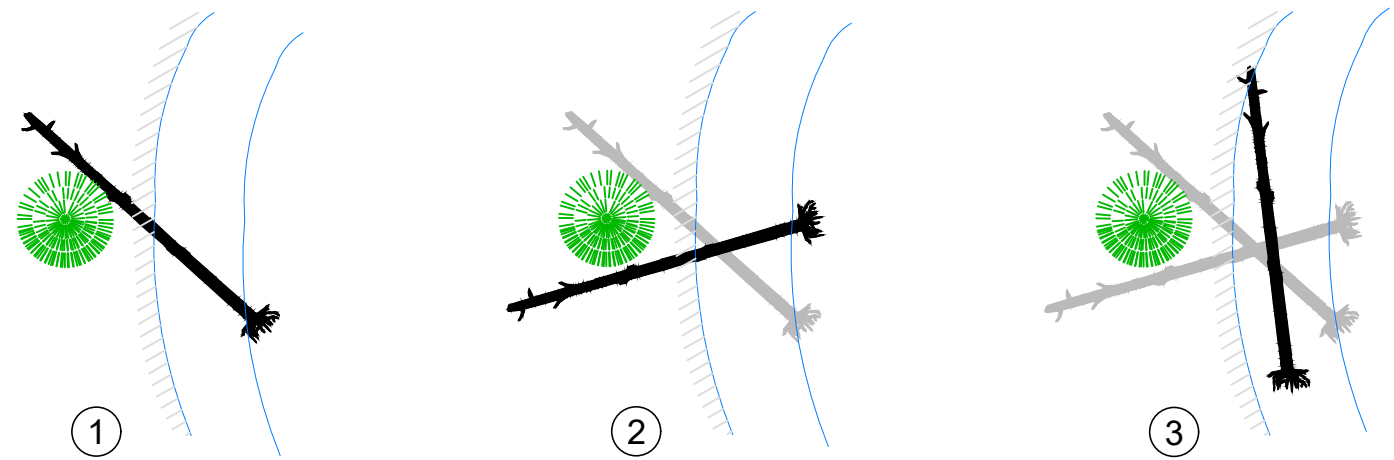
YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

DETAILS
LWD CONSTRUCTION

DWG. NO.:	C-204
CREATED:	6/21/2019
SHEET:	24 OF 38



CHANNEL SPANNING STRUCTURE - LEFT BANK PLAN AND SECTION VIEWS

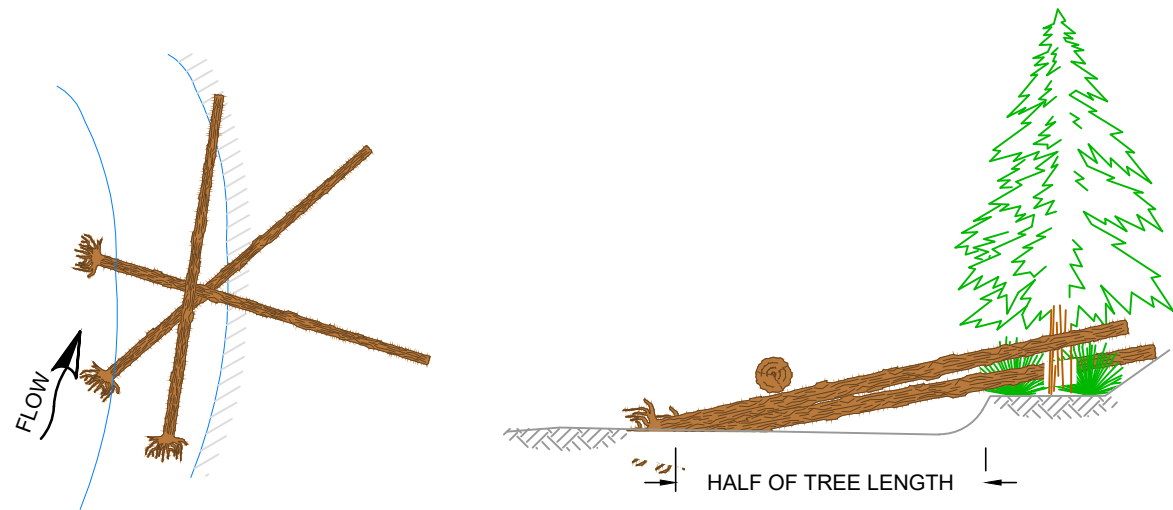


CHANNEL SPANNING STRUCTURE - LEFT BANK LOG PLACEMENT SEQUENCING

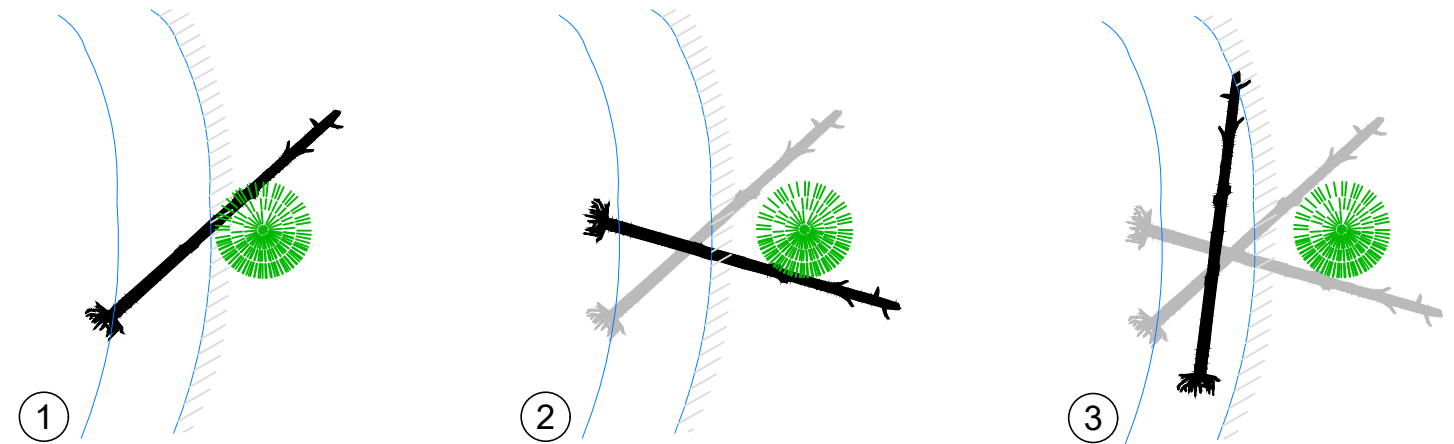
CHANNEL SPANNING STRUCTURE NOTES:

1. PLACE HALF OF THE LENGTH OF THE LARGE TREE IN SEQUENCE #1 WITHIN BANKFULL CHANNEL WITH TIP OF TREE DOWNSTREAM OF STANDING TREE, IF PRESENT.
2. BURY BOTTOM HALF OF SEQUENCE #1 ROOTWAD IN CHANNEL.
3. PLACE QUARTER TO HALF OF THE LENGTH OF THE LARGE TREE IN SEQUENCE #2 WITHIN BANKFULL CHANNEL WITH TIP OF TREE UPSTREAM OF STANDING TREE, IF PRESENT. IF NO STANDING TREES PRESENT, TRENCH AND BURY TOP HALF OF SEQUENC #2 TREE IN BANK WITH 3 FT MIN. BALLAST. AVOID DISTURBANCE TO MATURE VEGETATION AND DELINEATED WETLANDS.
4. BURY BOTTOM HALF OF SEQUENCE #2 ROOTWAD IN CHANNEL.
5. PLACE ROOTWAD OF LARGE TREE IN SEQUENCE #3 15 FEET UPSTREAM OF SEQUENCE #1 AND #2 TREES AND PLACE STEM OF TREE ON TOP OF SEQUENCE #1 AND #2 TREE CROSSING LOCATION.
6. BURY BOTTOM HALF OF SEQUENCE #3 ROOTWAD IN CHANNEL.
7. BANKFULL LOCATION WITH RESPECT TO STRUCTURE LOCATION IS A TYPICAL REPRESENTATION AND MAY VARY AT EACH STRUCTURE LOCATION. FINAL CONFIGURATION OF STRUCTURE SHALL BE AS DIRECTED IN FIELD.

CONSTRUCTION QUANTITIES:		
COMPONENT	DESCRIPTION	QUANTITY
LOG WITH ROOTWAD	18-24" DBH, 40 FT MIN	3

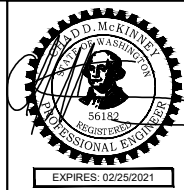


CHANNEL SPANNING STRUCTURE - RIGHT BANK PLAN AND SECTION VIEWS



CHANNEL SPANNING STRUCTURE - RIGHT BANK LOG PLACEMENT SEQUENCING

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\100% DESIGN SHEET FILES\012-DETAIL SLWD.DWG 3:29 PM JUN 21 2019



ISSUED FOR CONSTRUCTION

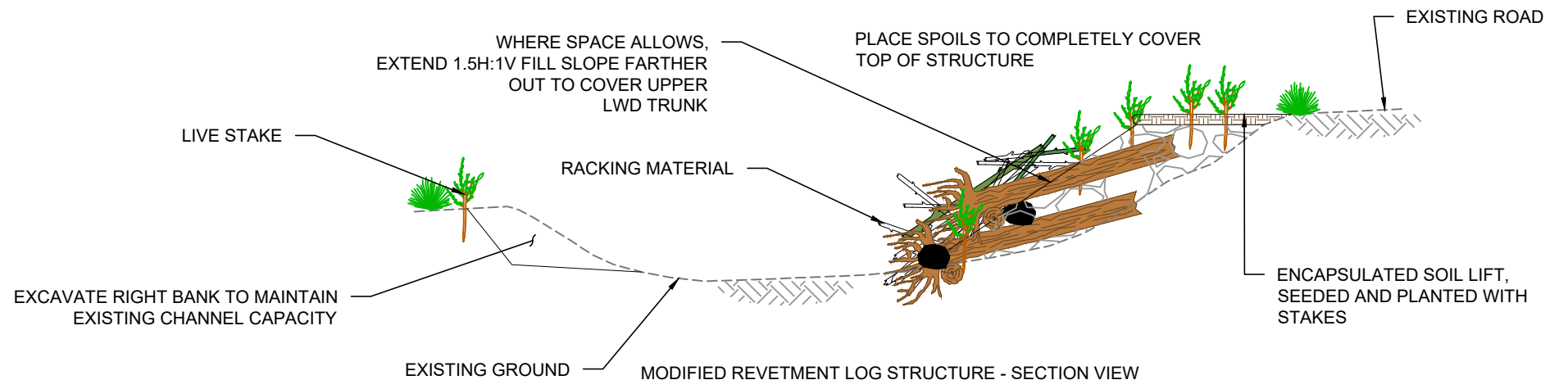
PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN
DETAILS
LWD CONSTRUCTION

DWG. NO.: **C-205**
CREATED: 6/21/2019
SHEET: 25 OF 38

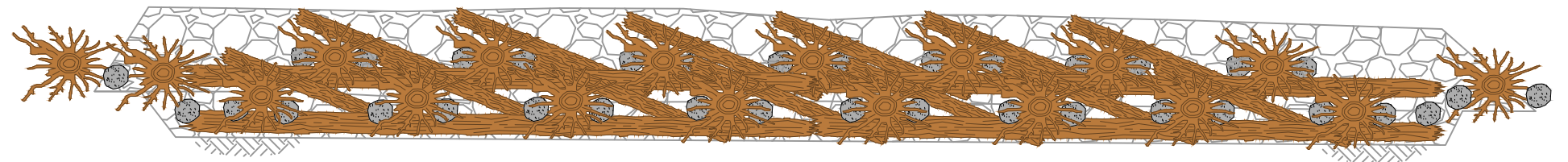
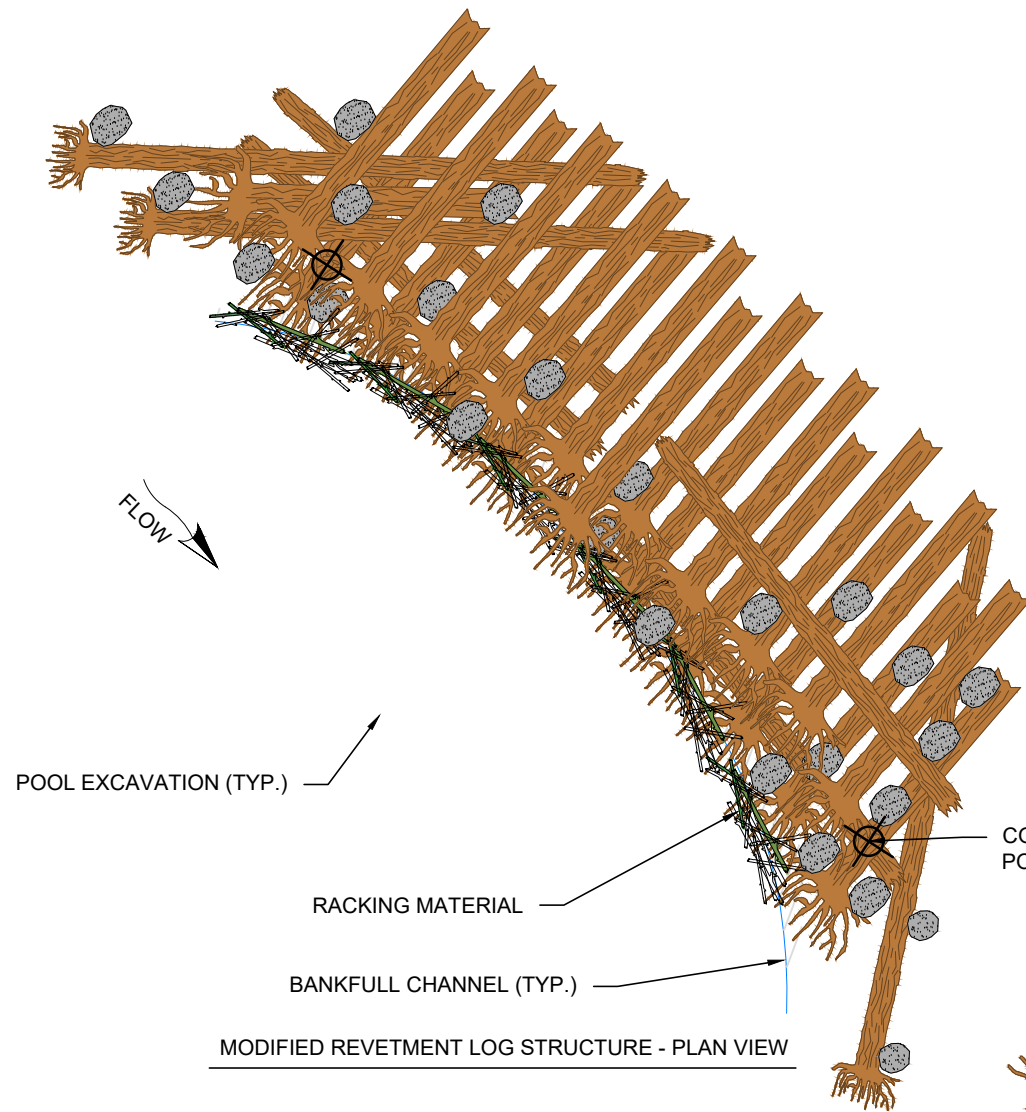
CONSTRUCTION QUANTITIES:

COMPONENT	DESCRIPTION	QUANTITY
LOGS WITH ROOTWAD	18-24" DBH, 20-30 FT	23
LOG WITHOUT ROOTWAD	18-24" DBH, 20-30 FT	17
BOULDER	2 FT DIA	25
BALLAST	SPOILS/FLOODPLAIN ALLUVIUM	220 CY



MODIFIED REVETMENT LOG STRUCTURE NOTES:

1. SEE SHEET C-207 FOR REVETMENT LOG STRUCTURE CONSTRUCTION SEQUENCE.
2. SUITABLE SPOILS FROM EXCAVATION SHALL BE USED TO BACKFILL STRUCTURE AS CONSTRUCTION PROGRESSES. MATERIAL SHALL BE COMPACTED WITH EXCAVATOR BUCKET. ADDITIONAL ALLUVIAL FLOODPLAIN MATERIAL MAY BE NEEDED TO BURY STRUCTURE AS SHOWN. BALLAST MATERIAL INCIDENTAL TO STRUCTURE COST.
3. RACKING MATERIAL MAY BE ADDED TO FRONT OF STRUCTURE WHEN AVAILABLE. LIVE STAKES TO BE PLANTED DURING CONSTRUCTION.
4. IF BANKFULL HEIGHT IS LESS THAN THE 2 LAYERS SHOWN, INSTALL REVETMENT LOG STRUCTURE AS A SINGLE LAYER AND BACKFILL AS SHOWN.
5. EXCAVATE MINIMUM 2-FOOT DEPTH POOLS AROUND REVETMENT STRUCTURES.
6. BANKFULL LOCATION WITH RESPECT TO STRUCTURE LOCATION IS A TYPICAL REPRESENTATION AND MAY VARY AT EACH STRUCTURE LOCATION. FINAL CONFIGURATION OF STRUCTURE SHALL BE AS DIRECTED IN FIELD.
7. INSTALL ENCAPSULATED SOIL LIFT ON TOP OF REVETMENT, INCLUDING SEEDING WITH NATIVE VEGETATION AND LIVE STAKES. PLANTING PLAN TO BE PROVIDED BY OTHERS.
8. RACKING MATERIAL MAY CONSIST OF TOPS AND LIMBS OF WHOLE TREES, AND/OR SMALL WHOLE TREES WITH ROOTWADS.



MODIFIED REVETMENT LOG STRUCTURE - SECTION VIEW (FRONT)

Z:\PROJECTS\194-6193\YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\ SHEET FILES\012-DETAIL SLWD.DWG
 PLOT DETAILS: MCKINNEY.CHADT
 JUN 21, 2019 3:29 PM



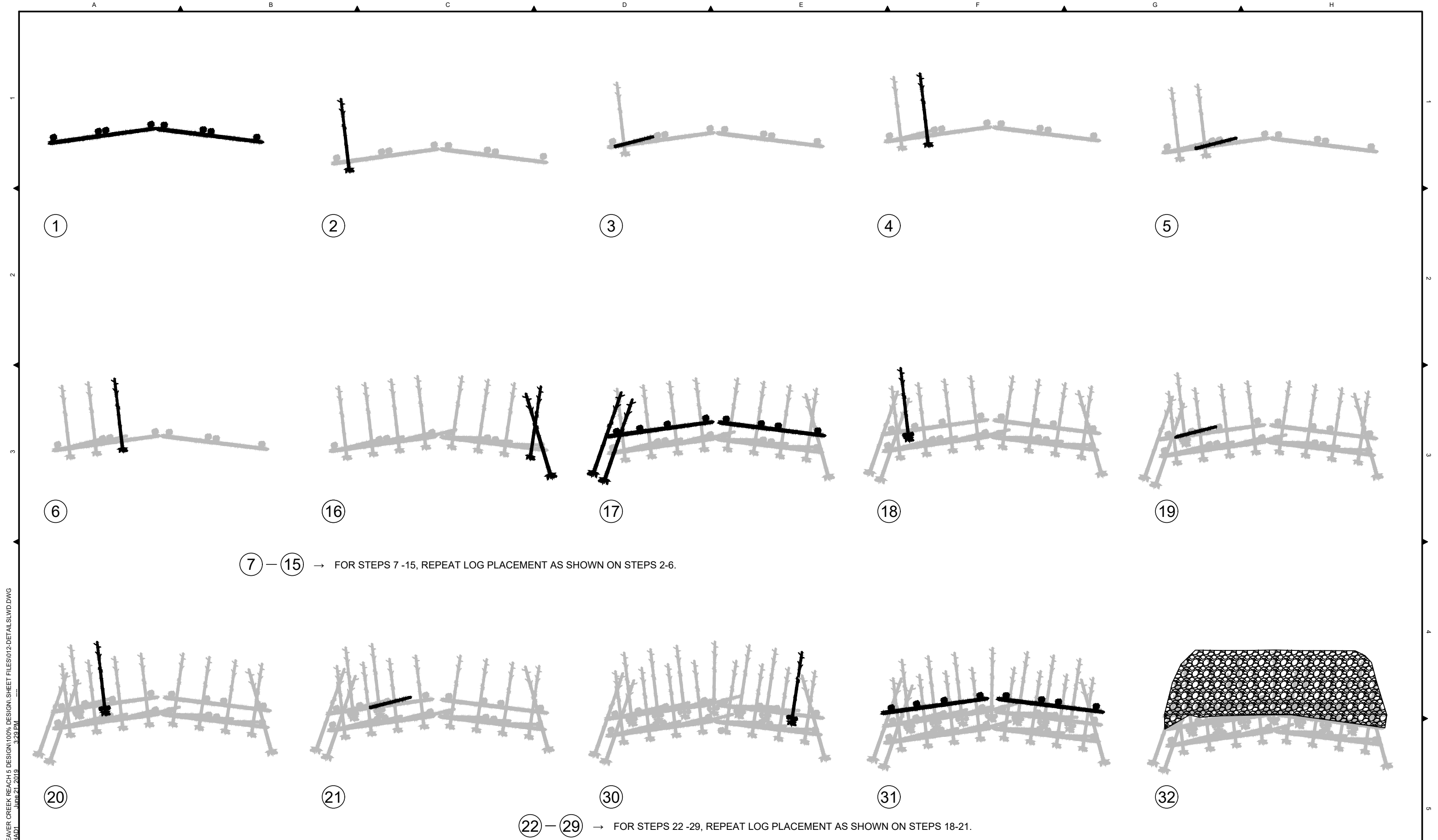
ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
 100% DESIGN

DETAILS
 LWD CONSTRUCTION

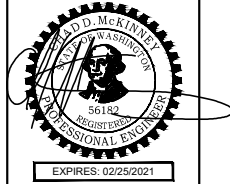
DWG. NO.:	C-206
CREATED:	6/21/2019
SHEET:	26 OF 38



7 — 15 → FOR STEPS 7 -15, REPEAT LOG PLACEMENT AS SHOWN ON STEPS 2-6.

22 — 29 → FOR STEPS 22 -29, REPEAT LOG PLACEMENT AS SHOWN ON STEPS 18-21.

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN SHEET FILES\012-DETAIL SLWD.DWG
 JUN 21 2019 3:29 PM



ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")			
REV.	DATE	REVISION DESCRIPTION	
1	6/21/19	ISSUED FOR CONSTRUCTION	CM CM JA JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB CB CM JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
 100% DESIGN
 DETAILS
 LWD CONSTRUCTION

DWG. NO.: C-207
 CREATED: 6/21/2019
 SHEET: 27 OF 38

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\ SHEET FILES\012-DETAIL SLWD.DWG
 PLOT DETAILS: MCKINNEY.CHADT
 JUN 21 2019 3:29 PM

LWD CONSTRUCTION POINT TABLE			
POINT #	NORTHING	EASTING	DESC.
201	515452.91	1833000.95	LWD
202	515497.04	1832967.82	LWD
203	515611.35	1832935.11	LWD
204	515665.41	1832938.89	LWD
205	515695.76	1832947.97	LWD
206	515749.99	1832950.00	LWD
207	515793.17	1832936.69	LWD
208	516194.47	1833098.04	LWD
209	516196.45	1833124.82	LWD
212	516244.69	1833135.34	LWD
213	516255.68	1833150.49	LWD
214	516274.39	1833163.08	LWD
215	516367.71	1833150.95	LWD
216	516391.81	1833142.12	LWD
217	516408.97	1833145.83	LWD
218	516417.70	1833173.90	LWD
219	516428.97	1833188.12	LWD
220	516450.58	1833160.02	LWD
221	516466.43	1833169.20	LWD
222	516420.31	1833239.76	LWD

LWD CONSTRUCTION POINT TABLE			
POINT #	NORTHING	EASTING	DESC.
223	516420.31	1833250.28	LWD
224	516521.07	1833282.55	LWD
225	516507.32	1833195.11	LWD
226	516524.83	1833200.08	LWD
227	516553.45	1833203.75	LWD
228	516571.43	1833205.22	LWD
229	516643.84	1833187.71	LWD
230	516669.52	1833259.75	LWD
231	516706.68	1833249.12	LWD
232	516725.19	1833250.36	LWD
233	516718.07	1833190.92	LWD
234	516767.46	1833265.33	LWD
235	516785.64	1833264.08	LWD
236	516790.14	1833162.29	LWD
237	516872.46	1833223.86	LWD
238	516888.34	1833214.11	LWD
240	516915.87	1833186.60	LWD
241	516927.54	1833175.14	LWD
242	516954.29	1833153.52	LWD
243	516969.15	1833145.88	LWD

LWD CONSTRUCTION POINT TABLE			
POINT #	NORTHING	EASTING	DESC.
244	516975.60	1833133.82	LWD
245	517085.65	1833108.73	LWD
246	517164.79	1833087.81	LWD
247	517218.30	1833095.30	LWD
248	517194.57	1832988.24	LWD
249	517211.40	1832995.75	LWD
250	517261.53	1833068.15	LWD
251	517313.88	1833054.48	LWD
252	517341.21	1832992.10	LWD
253	517359.28	1832990.17	LWD
254	517368.80	1833007.70	LWD
255	517370.59	1833034.74	LWD
256	517394.52	1832995.41	LWD
257	517412.75	1832999.38	LWD
258	517473.15	1832990.55	LWD
259	517491.24	1832988.89	LWD
260	517594.08	1832959.86	LWD
261	517636.69	1832904.55	LWD
262	517805.46	1832747.33	LWD
263	517826.03	1832756.56	LWD



**ISSUED FOR
 CONSTRUCTION**

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")							
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP	
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT	
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT	

**YAKAMA NATION FISHERIES -
 BEAVER CREEK REACH 5 DESIGN
 100% DESIGN**

**DETAILS
 LWD CONSTRUCTION**

DWG. NO.: **C-208**

CREATED: 6/21/2019

SHEET: 28 OF 38

Z:\PROJECTS\194-6193 YNF BEAVER CREEK REACH 5 DESIGN\100% DESIGN\ SHEET FILES\012-DETAIL SLWD.DWG
 PLOT DETAILS: MCKINNEY.CHADT
 JUN 21 2019 3:29 PM

LWD CONSTRUCTION POINT TABLE			
POINT #	NORTHING	EASTING	DESC.
264	517861.11	1832782.46	LWD
265	517878.25	1832788.40	LWD
266	518410.80	1832813.85	LWD
267	518429.39	1832814.56	LWD
268	518467.94	1832818.77	LWD
269	518485.22	1832824.74	LWD
270	518613.54	1832944.32	LWD
271	518632.43	1832943.77	LWD
272	518678.08	1832943.79	LWD
273	518696.52	1832942.94	LWD
274	518760.05	1832894.63	LWD
275	518768.36	1832920.69	LWD
276	518739.50	1832952.51	LWD
277	518749.50	1832950.54	LWD
278	518760.48	1832947.44	LWD
279	518774.27	1832948.71	LWD
280	518863.71	1832931.07	LWD
281	518977.42	1832861.57	LWD
282	519007.75	1832843.07	LWD
283	519029.79	1832873.21	LWD

LWD CONSTRUCTION POINT TABLE			
POINT #	NORTHING	EASTING	DESC.
284	519044.48	1832847.54	LWD
285	519061.22	1832855.10	LWD
286	519087.15	1832845.59	LWD
287	519104.29	1832839.04	LWD
288	519115.73	1832833.75	LWD
289	519133.05	1832839.94	LWD
290	519171.66	1832873.38	LWD
291	519187.14	1832883.78	LWD
292	519213.04	1832887.17	LWD
293	519230.35	1832894.36	LWD
294	519263.20	1832919.00	LWD
295	519278.46	1832929.40	LWD
296	519611.06	1833263.27	LWD
297	519661.90	1833291.22	LWD
298	519694.96	1833286.34	LWD
299	519708.97	1833298.33	LWD
300	519736.73	1833361.88	LWD
301	519743.75	1833379.22	LWD
302	519800.03	1833439.18	LWD
303	519816.61	1833448.22	LWD

LWD CONSTRUCTION POINT TABLE			
POINT #	NORTHING	EASTING	DESC.
304	519874.69	1833466.21	LWD
305	519889.64	1833476.96	LWD
306	519920.16	1833486.03	LWD
307	519938.19	1833488.37	LWD
308	521086.43	1834002.39	LWD
309	521102.35	1834011.79	LWD
310	520747.84	1833804.64	LWD
311	520764.88	1833811.82	LWD
312	520782.56	1833824.67	LWD
313	520798.71	1833833.59	LWD
314	520880.13	1833892.52	LWD
315	520897.06	1833900.90	LWD
316	520928.30	1833911.01	LWD
317	520946.75	1833914.15	LWD
318	521013.05	1833929.07	LWD
319	521154.74	1834094.08	LWD
320	521168.64	1834106.75	LWD
321	521187.61	1834134.67	LWD
322	521200.04	1834148.66	LWD
323	521980.16	1834823.24	LWD



ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")							
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP	
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT	
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT	

YAKAMA NATION FISHERIES -
 BEAVER CREEK REACH 5 DESIGN
 100% DESIGN

DETAILS
 LWD CONSTRUCTION

DWG. NO.: **C-209**

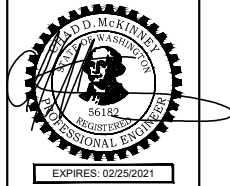
CREATED: 6/21/2019

SHEET: 29 OF 38

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 PLOT DETAILS: MCKINNEY.CHADT
 JUN 21 2019 3:29 PM

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325	522010.68	1834865.85	LWD
326	522028.40	1834872.60	LWD
327	522200.89	1835011.44	LWD
328	522215.15	1835023.88	LWD
329	522315.52	1835185.59	LWD
330	522335.66	1835219.83	LWD
331	522337.53	1835226.44	LWD
332	522623.14	1835214.44	LWD
333	522702.53	1835227.83	LWD
334	522767.58	1835292.45	LWD
335	522801.40	1835287.25	LWD
336	522856.18	1835316.43	LWD
337	522888.25	1835337.69	LWD
338	522916.40	1835368.12	LWD
339	522939.61	1835399.22	LWD
340	522967.61	1835491.03	LWD
341	522969.44	1835523.81	LWD
342	522946.29	1835537.80	LWD
343	522972.00	1835556.81	LWD

LWD CONSTRUCTION POINT TABLE			
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502	518086.03	1832817.73	LWD
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504	518168.70	1832826.14	LWD
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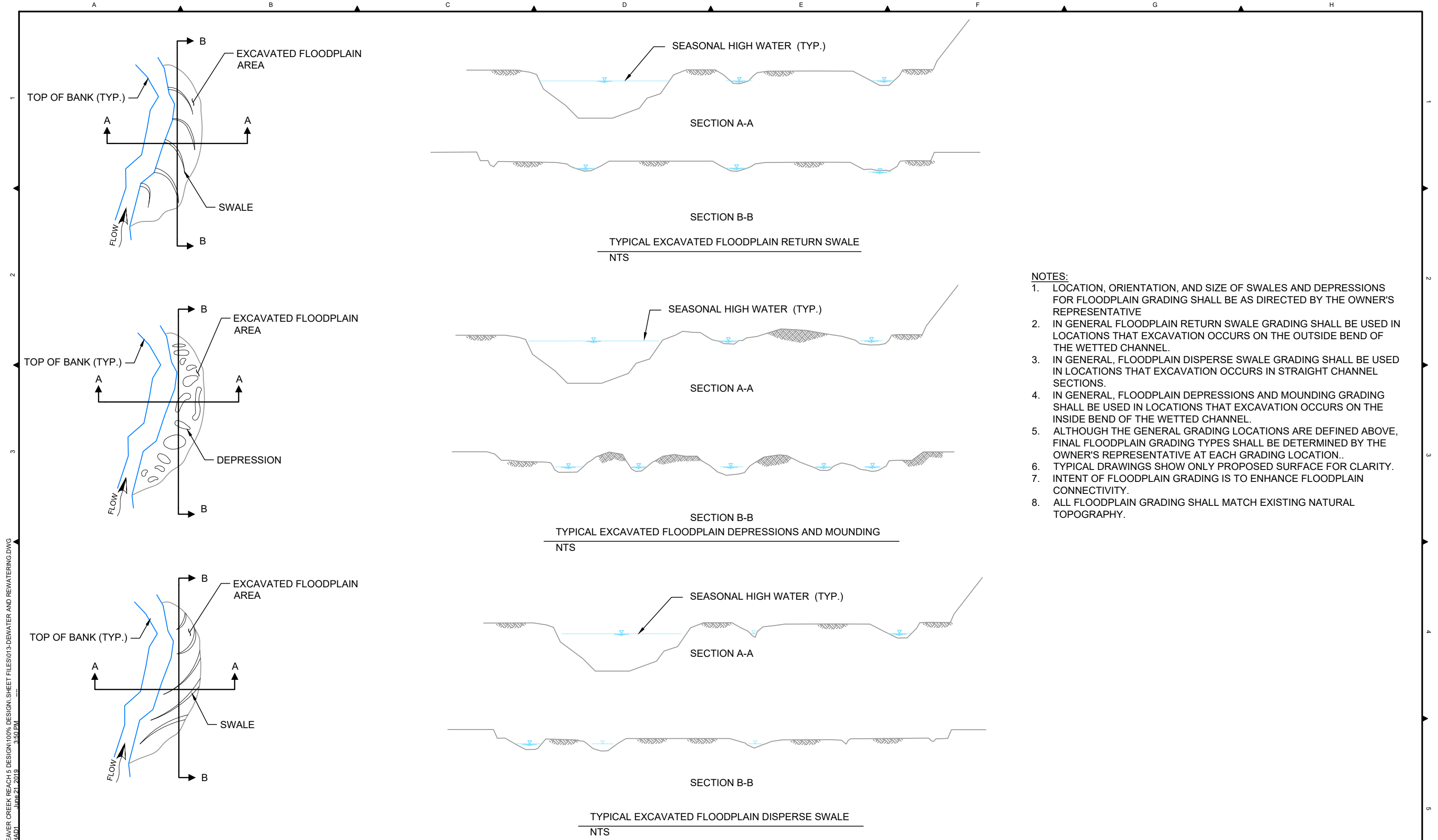
ISSUED FOR CONSTRUCTION

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0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT	

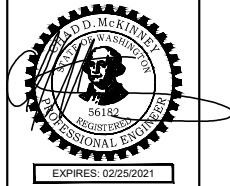
YAKAMA NATION FISHERIES -
 BEAVER CREEK REACH 5 DESIGN
 100% DESIGN

DETAILS
 LWD CONSTRUCTION

DWG. NO.:	C-210
CREATED:	6/21/2019
SHEET:	30 OF 38



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 PLOT DETAILS: MCKINNEY.CHADT
 JUN 21, 2019 3:30 PM



ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")			
REV.	DATE	REVISION DESCRIPTION	
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0	5/31/19	ISSUED FOR CONSTRUCTION	CB CB CM JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

TYPICAL FLOODPLAIN TOPOGRAPHICAL DETAILS

DWG. NO.: **C-302**

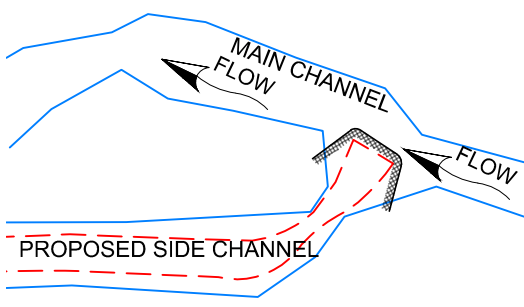
CREATED: 6/21/2019

SHEET: 32 OF 38

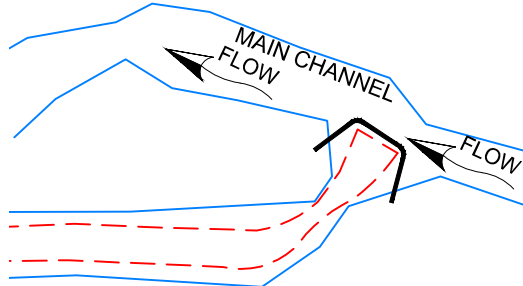
RECOMMENDED DEWATERING AND REWATERING STEPS
 CONSTRUCTION SHALL OCCUR IN THE FOLLOWING GENERAL STEPS, WHICH CORRESPOND TO THE STEPS SHOWN ON THIS PLAN SHEET. ALL WORK WITHIN THE ACTIVE CHANNEL SHALL OCCUR WITHIN THE ALLOWABLE FISH WINDOW (JULY 1 - OCTOBER 31).

1. INSTALL AND MAINTAIN TESC MEASURES. ESTABLISH WORK AREA ISOLATION AS SHOWN ON THIS SHEET.
2. DEWATERING AND INSTALLATION: INSTALL COFFERDAM AND DEWATER ISOLATED WORK AREA. EXCAVATE SIDE CHANNEL AND INSTALL INSTREAM HABITAT FEATURES AS SHOWN ON THE CONSTRUCTION PLAN SHEETS.
3. REWATERING: PERFORM STAGED REWATERING PROCESS WITH THE RECENTLY EXCAVATED CHANNEL. PREWASH EXCAVATED CHANNEL AND DETAIN AND RELEASE TURBID WATER TO THE FLOODPLAIN RATHER THAN FISH BEARING WATER. PREWASH CONSTRUCTED CHANNEL AND DETAIN AND RELEASE TURBID WATER TO THE FLOODPLAIN RATHER THAN FISH BEARING WATER. INSTALL SEINE AT UPSTREAM END OF CHANNEL TO PREVENT DOWNSTREAM FISH MOVEMENT UNTIL 2/3 OF TOTAL STREAMFLOW IS AVAILABLE IN THE CHANNEL. IN EARLY MORNING, INTRODUCE 1/3 OF FLOW INTO NEW CHANNEL OVER A 1-2 HOUR PERIOD. PERFORM TURBIDITY MONITORING PROTOCOL. INTRODUCE SECOND 1/3 OF THE FLOW OVER THE NEXT 1-2 HOURS. AFTER SECOND 1/3 IS INTRODUCED AND TURBIDITY IS WITHIN 10% OF THE BACKGROUND LEVEL, REMOVE SEINE NETS FROM THE NEW CHANNEL, AND ALLOW DOWNSTREAM FISH MOVEMENT.
4. SITE RESTORATION: STREAM BANKS AND DISTURBED AREA SHALL BE PERMANENTLY STABILIZED AS NECESSARY USING ONSITE NATIVE MATERIAL AND ALL PROJECT WASTE MATERIAL REMOVED.

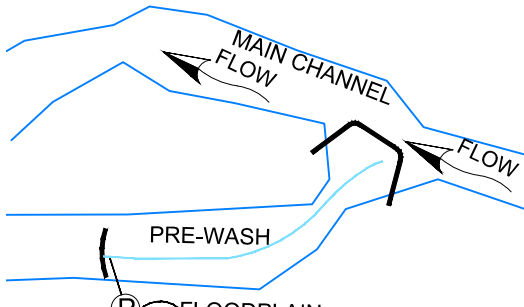
LEGEND:
 — TOP OF BANK
 — LOW FLOW LINE
 [Hatched Box] FISH BLOCK NET
 - - - EXCAVATION LIMITS
 [Thick Line] COFFER DAM
 (P) PUMP



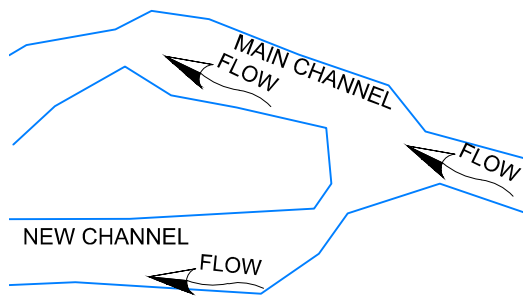
STEP 1



STEP 2

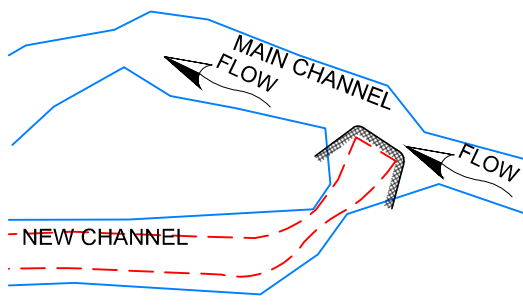


STEP 3

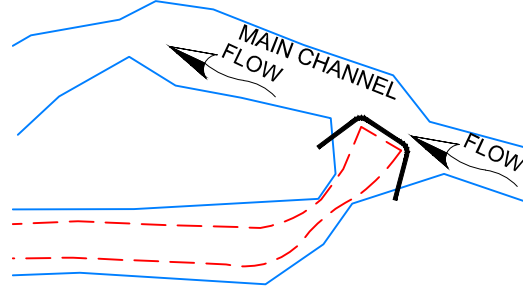


STEP 4

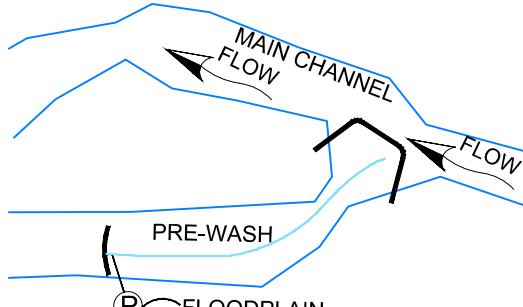
SIDE CHANNEL EXCAVATION WITH LOCAL ISOLATION (TYP.)
(NTS)



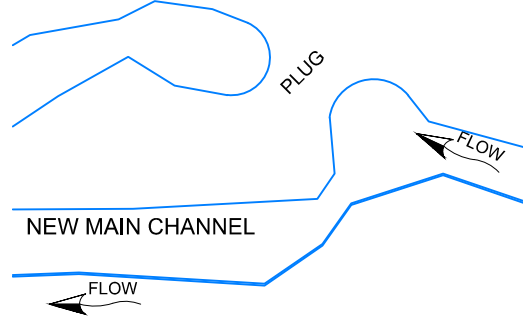
STEP 1



STEP 2



STEP 3



STEP 4

NEW CHANNEL EXCAVATION WITH LOCAL ISOLATION (TYP.)
(NTS)

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 PLOT DETAILS: MCKINNEY, CHAD
 JUN 21, 2019 3:30 PM

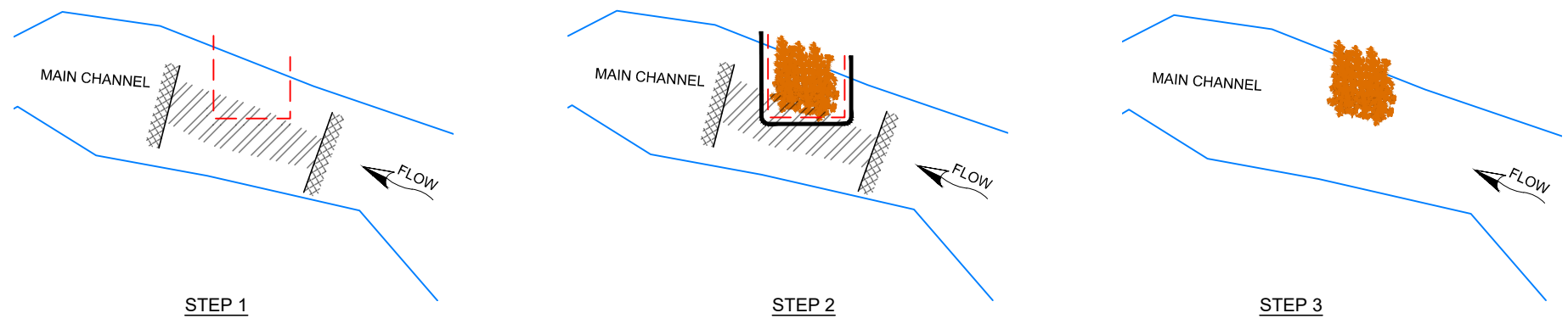


ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
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0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN
 100% DESIGN
 DEWATERING AND REWATERING DETAILS

DWG. NO.: **C-303**
 CREATED: 6/21/2019
 SHEET: 33 OF 38



LWD INSTALLATION WITH LOCAL ISOLATION (TYP.)
(NOT TO SCALE)

GENERAL FISH SALVAGE AND DEWATERING STEPS
CONSTRUCTION SHALL OCCUR IN THE FOLLOWING GENERAL STEPS, WHICH CORRESPOND TO THE STEPS SHOWN ON THIS PLAN SHEET.

- A) ISOLATION AND SALVAGE: ESTABLISH LIMITS OF EXCAVATION, STAGING AREAS AND ACCESS ROADS. INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES. INSTALL BLOCKNETS AND ESTABLISH WORK AREA ISOLATION AS SHOWN ON THIS SHEET. FISH SALVAGE METHODS SHALL BE IN ACCORDANCE WITH HIP III GUIDELINES.
- B) DEWATERING AND INSTALLATION: INSTALL COFFERDAM AND DEWATER ISOLATED WORK AREA. ALL ISOLATION WORK AND DEWATERING ACTIVITIES SHALL BE IN ACCORDANCE WITH HIP III GUIDELINES. EXCAVATE AND INSTALL LARGE WOODY DEBRIS (LWD) STRUCTURES AS SHOWN ON THE THE CONSTRUCTION PLAN SHEETS AND IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
- C) REWATERING: WHEN NECESSARY PERFORM STAGED REWATERING PROCESS WITH THE RECENTLY INSTALLED STRUCTURE. PREWASH CHANNEL AND DETAIN AND RELEASE TURBID WATER TO THE FLOODPLAIN RATHER THAN FISH BEARING WATER IN ACCORDANCE WITH STAGED REWATERING PLAN. PERFORM TURBIDITY MONITORING PROTOCOL.
- D) SITE RESTORATION: STREAMBANKS AND DISTURB AREA SHALL BE RESTORED AS NECESSARY USING ONSITE NATIVE MATERIAL AND ALL PROJECT WASTE MATERIAL REMOVED. ALL REWATERING ACTIVITIES, CONSTRUCTION, AND POST-CONSTRUCTION CONSERVATION MEASURES SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

GENERAL FISH SALVAGE NOTES:

1. PROPOSED PROJECT DESIGN, CONSTRUCTION ACTIVITIES, AND MATERIALS SUBJECT TO APPROVAL BY OWNER.
2. CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROL PLAN PER PROJECT PLAN AND SPECIFICATIONS.
3. CONTRACTOR TO PROVIDE DEWATERING PLAN PER PROJECT PLANS AND SPECIFICATIONS.
4. THE CONTRACTOR SHALL CONSTRUCT THE RESTORATION DESIGN ELEMENTS IN ACCORDANCE WITH THE PLANS STAMPED "ISSUED FOR CONSTRUCTION" AS PROVIDED TO THE CONTRACTOR BY THE OWNER PRIOR TO CONSTRUCTION.
5. ALL WORK WITHIN THE ACTIVE CHANNEL SHALL OCCUR WITHIN THE ALLOWABLE FISH WINDOW (JULY 1 - OCTOBER 31). ALL CONSTRUCTION ACTIVITIES SHALL MINIMIZE DISTURBANCE TO AND MAXIMIZE RE-USE OF EXISTING RIPARIAN VEGETATION.
6. ALL TEMPORARY ACCESS ROUTES SHALL BE LAID OUT TO MINIMIZE DISTURBANCE TO EXISTING VEGETATION AND FINAL LOCATION WILL BE VERIFIED BY OWNER.
7. ALL EROSION CONTROL MEASURES ARE TO INDICATE WHAT IS EXPECTED IN SIMILAR GEOMORPHIC CONDITIONS. CHANNEL CONDITIONS MAY DIFFER DURING CONSTRUCTION AND FIELD ADJUSTMENT SHALL BE COORDINATED WITH PROJECT OWNER.
8. OWNER SHALL BE RESPONSIBLE FOR FISH SALVAGE EFFORTS.
9. CONSTRUCTION WORK IN THE IMMEDIATE VICINITY OF FISH SALVAGE EFFORTS SHALL BE DELAYED (TYPICALLY 2 TO 24 HOURS) DURING SALVAGE. DELAYS MAY BE LONGER IN SOME CASES.

- LEGEND:**
- TOP OF BANK
 - LOW FLOW LINE
 - ▨ FISH BLOCK NET
 - - - EXCAVATION LIMITS
 - COFFER DAM

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PLOT DETAILS: MCKINNEY.CHAD
JUNE 21, 2019 3:30 PM

TETRA TECH
www.tetrattech.com
19803 North Creek Parkway
Bothell, Washington 98011
Phone: 425-482-7600 Fax: 425-482-7652



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PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")							
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP	
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0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT	

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN

DWG. NO.: **C-304**

DEWATERING AND REWATERING DETAILS

CREATED: 6/21/2019

SHEET: 34 OF 38

SPECIAL PROVISIONS

INTRODUCTION

THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION 2018 (WSDOT STANDARD SPECIFICATIONS) SHALL APPLY UNLESS OTHERWISE NOTED IN THE FOLLOWING SPECIAL PROVISIONS. THE "CONTRACTING AGENCY" OR "OWNER" SHALL REFER TO THE CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION. ADDITIONAL SPECIFICATIONS IN THE FOLLOWING CONTRACT SECTIONS ARE INCLUDED FOR ITEMS NOT COVERED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (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 - 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 WSDOT STANDARD SPECIFICATIONS (STANDARD SPECIFICATIONS).

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.

MEASUREMENT

"MOBILIZATION" WILL BE MEASURED BY LUMP SUM.

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.

ITEM 002 - CLEARING AND GRUBBING

THIS ITEM CONSISTS OF CLEARING AND GRUBBING FOR CONSTRUCTION AS SHOWN ON THE PLANS INCLUDING THOSE AREAS REQUIRED FOR TEMPORARY ACCESS ROUTES AND IN ACCORDANCE WITH SECTION 2-01 OF THE STANDARD SPECIFICATIONS, AND AS AMENDED BY THESE SPECIAL PROVISIONS.

- AREAS FOR CLEARING AND GRUBBING ARE SHOWN IN THE PLANS. ADJUSTMENTS TO ALIGNMENTS AND EXTENTS MAY BE ADJUSTED BY THE OWNER TO REDUCE DAMAGE TO THE ENVIRONMENT. THE FINAL AREAS WILL BE FLAGGED IN THE FIELD BY THE OWNER PRIOR TO CLEARING AND GRUBBING WORK. CLEARING AND GRUBBING SHALL NOT OCCUR OUTSIDE OF THE DESIGNATED LIMITS.
- INCLUDED IN THIS ITEM ARE THE REMOVAL AND SALVAGE OF APPROXIMATELY 30 TREES, VARYING IN SIZE FROM 10' TO 30' DIAMETER AT BREAST HEIGHT (DBH). SALVAGED TREES SHALL BE USED AS WOODY DEBRIS DURING CONSTRUCTION TO THE MAXIMUM EXTENT PRACTICAL. THE CONTRACTOR SHALL EXCAVATE THE ROOT WADS AND THEN PUSH OVER THE TREES IN ORDER TO SALVAGE LOGS WITH INTACT ATTACHED ROOTS. PLACEMENT OF TREES INCLUDED IN ITEM 15.
- ALL SHRUBS REMOVED DURING CLEARING AND GRUBBING SHALL BE LEFT ONSITE, PLACED OUTSIDE OF LIMITS OF DISTURBANCE TO BE USED AS SLASH DURING INSTALLATION OF LOGS. EXCESS SLASH MAY REMAIN ON SITE.
- VEGETATION PROTECTION AND RESTORATION PER SECTION 1-07.16(2) SHALL BE INCIDENTAL TO CLEARING AND GRUBBING.

MEASUREMENT

REMOVAL AND SALVAGE OF TREES AND SHRUBS SHALL BE CONSIDERED INCIDENTAL TO CLEARING AND GRUBBING BID ITEM. MEASUREMENT AND COMPENSATION FOR THE INSTALLATION OF THE SALVAGED TREES IS DESCRIBED UNDER BID ITEM 15 AND PAID UNDER THAT ITEM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

"CLEARING AND GRUBBING" WILL BE MEASURED BY LUMP SUM.

PAYMENT

PAYMENT WILL BE MADE IN ACCORDANCE WITH SECTION 1-09.9 FOR THE FOLLOWING BID ITEMS: "CLEARING AND GRUBBING" PER LUMP SUM.

ITEM 003 - SPCC AND TESC PLANS AND IMPLEMENTATION

THIS WORK SHALL PROVIDE FOR THE PREPARATION AND IMPLEMENTATION OF A SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN IN ACCORDANCE WITH SECTION 1-07.15 OF THE STANDARD SPECIFICATIONS AND PREPARATION, IMPLEMENTATION, AND REMOVAL OF A TEMPORARY EROSION SEDIMENT CONTROL (TESC) PLAN IN ACCORDANCE WITH SECTION 8-01 OF THE STANDARD SPECIFICATIONS, AND AS AMENDED BY THESE SPECIAL PROVISIONS.

- THE CONTRACTOR SHALL SUBMIT A SPCC AND TESC PLAN 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 THEIR 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 FOR THE PERSON RESPONSIBLE FOR EROSION PREVENTION AND SEDIMENT CONTROL MEASURES.

ITEM 004 - COFFERDAMS

THIS ITEM SHALL CONSIST OF PROVIDING AND INSTALLING, MAINTAINING, AND REMOVING MEASURES TO BYPASS THE SURFACE WATERS OF BEAVER CREEK AROUND IN-CHANNEL WORK AREAS, AND TO PREVENT TURBIDITY FROM ENTERING THE CREEK. WORK PERFORMED BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF SECTION 2-09.3(3)D OF THE STANDARD SPECIFICATIONS. QUANTITIES FOR COFFERDAMS SHOWN ON G-002 AND BID SHEET.

COFFERDAMS SHOWN ON THE PLANS IS ONE ACCEPTABLE METHOD. THE CONTRACTOR MAY USE THIS METHOD OR PROPOSE A DIFFERENT METHOD THAT PROVIDES EQUAL OR BETTER ISOLATION OF THE WORK AREA FROM THE BEAVER CREEK FLOW. IF A DIFFERENT METHOD IS PROPOSED, THE CONTRACTOR SHALL SUBMIT DRAWINGS DETAILING THE PROPOSED METHOD(S) FOR PROVIDING TEMPORARY ISOLATION OF SURFACE WATER DURING CONSTRUCTION ACTIVITIES. REVIEW AND APPROVAL OF THE COFFERDAM METHOD SHALL NOT RELIEVE THE CONTRACTOR FROM FULL RESPONSIBILITY FOR THE ADEQUACY OF COFFERDAM WORK IF THE PROPOSED METHOD IS NOT SUCCESSFUL AT SUFFICIENTLY ISOLATING THE WORK AREA FROM THE FLOW. COFFERDAMS SHALL BE SUITABLY OFFSET FROM THE WORK AREA SO AS TO NOT INTERFERE WITH LOG PLACEMENT OR LIMIT POOL EXCAVATION.

COFFERDAM WORK INCLUDES COORDINATING WITH THE OWNER FOR FISH SALVAGE ACTIVITIES.

MATERIALS

THE CONTRACTOR SHALL PROVIDE ALL REQUIRED MATERIALS FOR THE PROJECT, SUCH AS BLOCK NETS, SILT FENCING, FLOATING BOOMS, BULK BAGS, AND/OR OTHER SUITABLE MEANS. IF A BULK BAG COFFERDAM IS THE CHOSEN METHOD TO BE USED, SEE PLAN DETAILS FOR TEMPORARY COFFERDAM. BULK BAG SHALL BE FILLED WITH WASHED PEA GRAVEL OR STREAM GRAVEL.

CONSTRUCTION REQUIREMENTS

CONTRACTOR SHALL CONSTRUCT AND MAINTAIN COFFERDAMS AS NECESSARY AND AS SHOWN ON THE DRAWINGS TO DIVERT AND DE-WATER FISH ISOLATION AREAS FOR ALL WORK ACTIVITIES WITHIN THE WETTED CHANNEL. WATER REMOVED FROM WITHIN THE ISOLATED WORK AREA SHALL BE ROUTED TO AN AREA APPROVED BY THE OWNER'S REPRESENTATIVE TO ALLOW REMOVAL OF FINE SEDIMENT AND OTHER CONTAMINANTS. THE EXISTING FLOW DOWNSTREAM FROM THE PROJECT AREA SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. THE DIVERSION AND DEWATERING SHALL REMAIN IN PLACE UNTIL IN-STREAM RESTORATION WORK IS COMPLETE AND OWNER'S REPRESENTATIVE OR ENGINEER APPROVES REMOVAL OF THE COFFERDAM SYSTEM.

THE CONTRACTOR SHALL PROVIDED MINIMUM 2 DAYS ADVANCE NOTICE TO THE OWNER BEFORE EACH COFFERDAM INSTALLATION. THE CONTRACTOR SHALL UNDERSTAND THAT COFFERDAM INSTALLATION REQUIRES COORDINATION WITH THE OWNER AND ONLY AFTER THE OWNER HAS COMPLETED FISH RESCUE CAN THE COFFERDAMS BE COMPLETED.

MEASUREMENT

MEASUREMENT WILL BE BASED ON THE ITEM FROM THE BID LIST INSTALLED AND THE WORK FOR THAT PORTION COMPLETED. "COFFERDAMS" WILL BE MEASURED BY LINEAR FEET OF COFFERDAM INSTALLED.

PAYMENT

PAYMENT WILL BE MADE IN ACCORDANCE WITH SECTION 1-09.9 FOR THE FOLLOWING BID ITEMS; "COFFERDAMS" PER LINEAR FOOT.

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 PLOT DETAILS: MCKINNEY, CHAD
 JUNE 21, 2019 3:33 PM



ISSUED FOR CONSTRUCTION

REV.		DATE	REVISION DESCRIPTION				DRW	ENG	CHK	APP
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0		5/31/19	ISSUED FOR CONSTRUCTION				CB	CB	CM	JT

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")		YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN		DWG. NO.: C-501
SPECIAL PROVISIONS			CREATED: 6/21/2019	
			SHEET: 35 OF 38	

SPECIAL PROVISIONS

ITEM 005 - WATER MANAGEMENT/PUMPING

THIS ITEM SHALL CONSIST OF PREPARATION WORK AND OPERATIONS PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 8-01.3(1)C OF THE STANDARD SPECIFICATIONS.

WORK IN THIS SECTION CONSISTS OF THE INSTALLATION AND REMOVAL OF A WATER MANAGEMENT SYSTEM TO DEWATER AND CONTROL TURBIDITY WITHIN CONSTRUCTION AREAS ISOLATED FROM BEAVER CREEK BY COFFERDAMS FOR THE CONSTRUCTION OF IN-CHANNEL LOG JAMS AND LWD STRUCTURES.

MATERIALS

IF ANY BYPASS PUMPING IS APPROVED BY ENGINEER OR OWNER'S REPRESENTATIVE, THE CONTRACTOR SHALL ALSO PROVIDE PUMPS WITH ADEQUATE PUMP CAPACITY, HOSES, AND PERSONNEL AS BACKUP TO THE TEMPORARY STREAM FLOW BYPASS SYSTEM IN THE EVENT THE SYSTEM BECOMES NON-OPERATIONAL, AS MAY BE REQUIRED DURING CONSTRUCTION WHEN FLOW RATES IN THE EXISTING CHANNEL EXCEED THE DESIGN CAPACITY OF THE GRAVITY BYPASS, OR TO MAINTAIN A DRY WORK AREA WHEN INSTALLING LOG JAMS AND LWD STRUCTURES. PUMPS AND HOSES MAY ALSO BE USED TO PUMP SEEPAGE FLOW THROUGH THE COFFERDAM INTO THE BYPASS PIPELINE TO KEEP WATER OUT OF THE WORK AREA. TURBID WATER SHALL BE DISCHARGED TO AN APPROVED AREA WITH SUFFICIENT CAPACITY TO ALLOW FOR SLOW INFILTRATION AND REMAIN DISCONNECTED FROM ACTIVE FLOW CHANNEL. THE CONTRACTOR SHALL MONITOR PUMPING OPERATION AT ALL TIMES.

ANY PUMPING OPERATION SHALL USE A FISH SCREEN THAT IS IN ACCORDANCE WITH THE NATIONAL MARINE FISHERIES SERVICE STANDARDS. PUMP INTAKE SCREENS SHALL BE SIZED TO PREVENT FISH FROM BEING ENTRAINED INTO THE PUMP INTAKE OR FROM BEING IMPINGED ON THE INTAKE SCREEN. THE SCREEN FACE SHOULD BE ORIENTED PARALLEL TO FLOW FOR BEST SCREENING PERFORMANCE. THE SCREEN SHALL BE DESIGNED AND USED SUCH THAT IT CAN BE SUBMERGED WITH AT LEAST ONE-SCREEN-HEIGHT-CLEARANCE ABOVE AND BELOW THE SCREEN.

CONSTRUCTION REQUIREMENTS

THE CONTRACTOR SHALL PROVIDE AND OPERATE TRASH PUMPS THAT ARE APPROPRIATELY SIZED TO LOWER THE WATER SURFACE WITHIN THE ISOLATED AREA AND DISCHARGE TO AN INFILTRATION AREA. DURING SIDE CHANNEL CONSTRUCTION, CONSTRUCTION WATER SHALL BE PUMPED AWAY FROM WORK AREAS AND INFILTRATED INTO THE GROUND WITHOUT ENTERING THE WATERWAY OR WETLAND AREAS.

IF INFILTRATION BECOMES INEFFECTIVE TO CONTROL TURBIDITY, ADDITIONAL AND/OR ALTERNATIVE METHODS, SUCH AS PUMPING INTO STILLING BASINS OR FILTRATION GEOTEXTILE FABRIC SHALL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

MEASUREMENT

MEASUREMENT SHALL BE BASED ON THE ITEM FROM THE BID LIST INSTALLED AND THE WORK FOR THAT PORTION COMPLETED.

"WATER MANAGEMENT/PUMPING" WILL BE MEASURED BY LUMP SUM.

PAYMENT

PAYMENT FOR "WATER MANAGEMENT/PUMPING" SHALL BE BY THE LUMP SUM CONTRACT PRICE FOR 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. IF ADDITIONAL ENVIRONMENTAL PROTECTION MEASURES ARE REQUIRED TO CONTROL TURBIDITY, THEY SHALL BE CONSIDERED INCIDENTAL TO PUMPING AND NOT ADDITIONAL COMPENSATION WILL BE MADE.

DIVISION 2 - EARTHWORK

ITEM 006 - 008: SIDE CHANNEL, BACKWATER ALCOVE, AND PIPER CREEK REALIGNMENT

THIS ITEM CONSISTS OF BOULDER SALVAGE, EXCAVATING, LOADING, HAULING, PLACING, AND EMBANKMENT COMPACTING FOR THE PROPOSED SIDE CHANNEL, BACKWATER ALCOVES, AND PIPER CREEK REALIGNMENT, OR OTHERWISE DISPOSING OF THE MATERIAL IN ACCORDANCE WITH SECTION 2-03 OF THE STANDARD SPECIFICATIONS, AND AS AMENDED BY THESE SPECIAL PROVISIONS. STRUCTURE QUANTITIES FOR EACH ITEM ARE LISTED ON THE BID SHEET.

1. PORTIONS OF THE WORK WILL INCLUDE EXCAVATION BELOW GRADE. THE CONTRACTOR SHALL BE ADVISED THAT GROUNDWATER WILL BE ENCOUNTERED THROUGHOUT EXCAVATION AREAS.
2. THIS ITEM INCLUDES SALVAGING BOULDERS FROM THE SIDE CHANNEL EXCAVATION AND FLOODPLAIN AREA DOWNSTREAM OF EXISTING BRIDGE.

3. THESE ITEMS INCLUDE HAULING OF EXCAVATED MATERIAL TO LWD STRUCTURES OR THE SPOILS REPOSITORY FOR DISPOSAL. THE CONTRACT PRICE SHALL INCLUDE "HAUL".
4. THIS ITEM INCLUDES PLACEMENT AND COMPACTION OF EXCESS SPOILS BACKFILL AT THE SPOILS REPOSITORY LOCATION AS DESCRIBED IN THE 2018 WSDOT STANDARD SPECIFICATIONS, OR MOST CURRENT, FOR EARTH EMBANKMENTS 2-03.3(14)B AND 2-03.3(14)C METHOD A.
5. THIS ITEM INCLUDES GRADING TO SHAPE THE SIDE CHANNEL, ALCOVES, AND PIPER CREEK, INCLUDING CREATING POOLS WITHIN THE CHANNELS AS SHOWN IN THE DRAWINGS. POOLS SHALL BE OVEREXCAVATED TO PROVIDE ROOM TO INSTALL LOGS AND BOULDERS AS SHOWN IN THE DRAWINGS.
6. NO WORK SHALL OCCUR OUTSIDE OF THE LIMITS OF DISTURBANCE SHOWN IN THE DRAWINGS UNLESS AUTHORIZED BY THE OWNER.

MATERIALS

THE CONTRACTOR SHALL PROVIDE ALL REQUIRED MATERIALS FOR THE PROJECT. HABITAT BOULDERS AND CHANNEL COBBLE SHALL BE SALVAGED FROM ONSITE MATERIALS. THE EXCAVATED SIDE CHANNEL BED MATERIAL SHALL CONSIST OF NATIVE ALLUVIUM SIMILAR TO BEAVER CREEK. IF FINER MATERIAL IS ENCOUNTERED AND NOT SUITABLE FOR THE CHANNEL BED MATERIAL CONTRACTOR SHALL SALVAGE FROM ONSITE STREAMBED COBBLES MATCHING 10" COBBLE GRADATION SHOWN IN SECTION 9-03.11(2) OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION REQUIREMENTS

1. EXCESS SPOILS BACKFILL SHALL FOLLOW THE 2018 WSDOT STANDARD SPECIFICATIONS, OR MOST CURRENT, FOR EARTH EMBANKMENTS 2-03.3(14)B AND 2-03.3(14)C METHOD A. AT A MINIMUM EMBANKMENT MATERIAL SHALL MEET REQUIREMENTS FOR COMMON BORROW UNDER 9-03.14(3).
2. PLACE STREAMBED COBBLES IN ONE OR MORE LAYERS WITH A LAYER DEPTH LESS THAN 1½ TIMES THE MAXIMUM DIMENSION OF THE STREAMBED COBBLE, BUT NO GREATER THAN 1 FOOT. PLACEMENT SHALL BE BY METHODS THAT DO NOT CAUSE SEGREGATION OR DAMAGE TO THE PREPARED SURFACE. PLACE OR REARRANGE INDIVIDUAL COBBLES TO OBTAIN A UNIFORMLY DENSE, COMPACT, LOW PERMEABILITY MASS. FILL VOIDS BY MACHINE OR HAND TAMPING BEFORE PLACING THE NEXT LIFT. COMPACT BED MATERIALS BY MECHANICAL MEANS SUCH AS PLATE COMPACTORS, LOADERS, ETC.
3. FILL ALL VOIDS LEFT DURING PLACEMENT OF STREAMBED COBBLES AS SHOWN ON THE DRAWINGS. USE WATER PRESSURE, METAL TAMPING RODS, AND SIMILAR HAND-OPERATED EQUIPMENT TO FORCE MATERIAL INTO ALL SURFACES AND SUBSURFACE VOIDS BETWEEN THE STRUCTURE AND ROCKS, AND BETWEEN INDIVIDUAL ROCKS.
4. ONCE ALL THE STREAMBED COBBLE MATERIALS HAVE BEEN PLACED AND BEFORE THE STREAM BED IS OPEN TO STREAM FLOWS, THE CONTRACTOR SHALL WASH IN FINES FROM SELECTED ON SITE MATERIALS APPROVED BY THE OWNER'S REPRESENTATIVE TO SEAL THE GRAVELS TO KEEP THE INTRODUCED WATER ON THE SURFACE AND AVOID HAVING THE CREEK GO UNDERGROUND THROUGH THE NEW STREAM BED. FINES SHALL BE WASHED IN UNTIL PONDING OCCURS ON THE SURFACE OF EACH LIFT PRIOR TO PLACING NEXT LIFT.
5. WATER THAT FLOWS OFF THE STREAM BED DURING THE WASH-IN PROCESS SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH THE APPROVED TEMPORARY EROSION AND SEDIMENT CONTROL PLAN.
6. ONCE FINES HAVE BEEN WASHED IN, THE SURFACE SHALL BE FLUSHED SO FLOWS COMING OFF THE NEW STREAM BED DO NOT INCREASE THE TURBIDITY OVER EXISTING LEVELS IN THE UPSTREAM CREEK, AS APPROVED BY THE OWNER'S REPRESENTATIVE.
7. IF FINE MATERIAL IS ENCOUNTERED DURING SIDE CHANNEL EXCAVATION, FINE MATERIAL SHALL BE EXCAVATED AND REPLACED WILL STREAMBED COBBLES.

MEASUREMENT

"SIDE CHANNEL, BACKWATER ALCOVE, AND PIPER CREEK REALIGNMENT" WILL BE MEASURED BY LUMP SUM. MEASUREMENT SHALL BE BASED ON THE ITEM FROM THE BID LIST INSTALLED AND THE WORK FOR THAT PORTION COMPLETED. NO ADDITIONAL COMPENSATION WILL BE MADE FOR EXCAVATED MATERIAL THAT IS STOCKPILED, RE-EXCAVATED, AND MOVED AGAIN.

PAYMENT

PAYMENT FOR "SIDE CHANNEL, BACKWATER ALCOVE, AND PIPER CREEK REALIGNMENT" SHALL BE BY THE LUMP SUM CONTRACT PRICE FOR 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.

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ISSUED FOR CONSTRUCTION

PLOTTED AS ANSI B (11" X 17"), PLAN SHEET FULL SIZE ANSI D (22" X 34")						
REV.	DATE	REVISION DESCRIPTION	DRW	ENG	CHK	APP
1	6/21/19	ISSUED FOR CONSTRUCTION	CM	CM	JA	JT
0	5/31/19	ISSUED FOR CONSTRUCTION	CB	CB	CM	JT

YAKAMA NATION FISHERIES - BEAVER CREEK REACH 5 DESIGN 100% DESIGN		DWG. NO.: C-502
SPECIAL PROVISIONS		CREATED: 6/21/2019
		SHEET: 36 OF 38

SPECIAL PROVISIONS

ITEM 018-019: ROAD REPAIR (BLADING/GRADING AND CRUSHED SURFACE TOP COURSE)

THIS WORK CONSISTS OF CONSTRUCTING ONE OR MORE COURSES OF CRUSHED SURFACING TOP COURSE UPON A PREPARED SUBGRADE IN ACCORDANCE WITH SECTION 2-06 AND 4-04 OF THE STANDARD SPECIFICATIONS AND THE FOLLOWING SUPPLEMENTS.

THE WORK AREA IS BEAVER CREEK ROAD IN LOCATIONS AS DIRECTED BY THE OWNER.

MATERIALS

MATERIALS SHALL MEET THE REQUIREMENTS OF CRUSHED SURFACING 9-03.9(3).

CONSTRUCTION REQUIREMENTS

RESURFACING SHALL CONSIST OF APPLICATION OF A CRUSHED SURFACING TOP COURSE TO A COMPACTED DEPTH OF 3 INCHES. THE CONTRACTOR SHALL APPLY WATER AND COMPACT TOP COURSE MATERIALS TO ENSURE QUALITY ROAD SURFACE CONSTRUCTION. THIS ITEM SHALL INCLUDE "BLADING" AND "WATER SUPPLY AND WATERING".

BLADING- THIS WORK CONSISTS OF SURFACE BLADING THE TRAVELED WAY TO A CONDITION TO FACILITATE TRAFFIC AND PROVIDE PROPER DRAINAGE. BLADING INCLUDES SHAPING THE CROWN OR SLOPE OF THE TRAVELED WAY, AND DRAINAGE DIPS, IN ACCORDANCE WITH THIS SPECIFICATION. WATERING SHALL BE INCIDENTAL TO THIS ITEM.

1. BLADE AND SHAPE THE EXISTING TRAVELED WAY TO PRODUCE A SURFACE WHICH IS UNIFORM, CONSISTENT TO GRADE, AND CROWNED OR CROSS SLOPED AS INDICATED BY THE CHARACTER OF THE EXISTING SURFACE PRIOR TO DISTURBANCE, UNLESS OTHERWISE SPECIFIED. THOROUGHLY LOOSEN SURFACING MATERIAL TO NO LESS THAN 2 INCHES DEPTH OR THE DEPTH OF POTHOLE OR CORRUGATIONS.
2. APPLY WATER DURING BLADING WHEN SUFFICIENT MOISTURE IS NOT PRESENT TO PREVENT SURFACE MATERIAL SEGREGATION. WATER SUPPLY, HAULING, AND APPLICATION SHALL BE IN ACCORDANCE WITH "WATER SUPPLY AND WATERING" (SEE BELOW).
3. SHAPE EXISTING NATIVE ROCK OR AGGREGATE SURFACED DRAINAGE DIPS TO DIVERT SURFACE RUNOFF TO EXISTING OUTLET DEVICES, DITCHES, AND DISCHARGE LOCATIONS.
4. ESTABLISH A BLADING PATTERN WHICH PROVIDES A UNIFORM DRIVING SURFACE, RETAINS THE SURFACING ON THE ROADBED, AND PROVIDES A THOROUGH MIXING OF MATERIAL WITHIN THE COMPLETED SURFACE WIDTH. UPON FINAL BLADING, NO DISTURBED ROCK SHALL PROTRUDE MORE THAN 2 INCHES ABOVE THE ADJACENT SURFACE UNLESS OTHERWISE SPECIFIED.
5. DO NOT REMOVE ESTABLISHED GRASSES AND OTHER VEGETATION FROM THE EXCESS WIDTH EXCEPT AS INCIDENTAL TO PROVIDING DRAINAGE OR UNLESS OTHERWISE DIRECTED.
6. SIGNAGE - PLACE SUITABLE TEMPORARY TRAFFIC CONTROL WARNING SIGNS AT EACH END OF THE WORK AREA. SUCH SIGNING SHALL CONFORM TO THE FEDERAL HIGHWAY ADMINISTRATIONS'S PUBLICATION *MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES*, OR MUTDC.

WATER SUPPLY AND WATERING- THIS WORK CONSISTS OF PROVIDING FACILITIES TO FURNISH AN ADEQUATE WATER SUPPLY, HAULING AND APPLYING WATER. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ALL RIGHTS TO USE THE WATER SOURCE. EQUIPMENT SHALL MEET ENVIRONMENTAL PERMIT OR MUNICIPALITY REQUIREMENTS FOR CONTROLLING DISPERSAL RATES, BACKFLOW, NMFS FISH SCREENING PROTOCOL, OR OTHER PERTINENT REQUIREMENTS TO CONDUCT THE WORK SAFELY AND EFFICIENTLY.

MEASUREMENT

'BLADING' WILL BE MEASURED AS LINEAR FEET OF ROAD TREATED.

'CRUSHED SURFACE TOP COURSE' WILL BE MEASURED AS TON OF MATERIAL SUPPLIED AND PLACED.

PAYMENT

PAYMENT FOR "BLADING" SHALL BE BY THE LINEAR FOOT AND 'CRUSHED SURFACE TOP COURSE' SHALL BE BY THE TON CONTRACT PRICE FOR 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.

ITEM 020 - 023: CAMPSITE CONSTRUCTION (BLADING ACCESS ROAD & PARKING STALLS, CRUSHED SURFACE TOP COURSE, GRADE TENT PAD LOCATIONS, AND PROCURE AND INSTALL FIRE RINGS)

WORK UNDER THIS SECTION CONSISTS OF BLADING CAMPSITE ACCESS ROAD & PARKING STALLS, PLACING CRUSHED SURFACE TOP COURSE, GRADING TENT PADS, AND INSTALLING FIRE RINGS AS SHOWN IN THE DRAWINGS AND THESE SPECIAL PROVISIONS.

MATERIALS

1. CRUSHED SURFACE TOP COURSE SHALL MEET REQUIREMENTS OF CRUSHED SURFACING 9-03.9(3).
2. SEED FOR TENT PAD LOCATIONS SHALL MEET REQUIREMENTS OF 9-14.1(3) OR AS DIRECTED BY THE OWNER.

3. FIRE RINGS SHALL BE A RJ THOMAS MANUFACTURING CO. FS-30 CAMPFIRE RING WITH 23 ³/₈" SIDES, PIN ANCHORS, S5 BOLT-ON SHELF, AND WITHOUT A HEAT SHIELD.

CONSTRUCTION REQUIREMENTS

1. "BLADING ACCESS ROAD & PARKING STALLS" AND "CRUSHED SURFACE TOP COURSE" SHALL MEET CONSTRUCTION REQUIREMENTS DESCRIBED IN SPECIAL PROVISION "ROAD REPAIR".
2. "GRADE TENT PAD LOCATIONS" SHALL CONSIST OF FLATTENING AND GRADING OF TENT PAD LOCATIONS TO REMOVE ABNORMALITIES AND PROTRUDING STONES LARGER THAN 1 INCH. NATIVE BUNCH GRASS SEED SHALL BE HAND CAST TO REVEGETATE TENT PAD LOCATIONS, OR AS DIRECTED BY THE OWNER.
3. "INSTALLING FIRE RINGS" SHALL FOLLOW MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES, OR AS DIRECTED BY THE OWNER AT THE LOCATIONS SHOWN ON THE DRAWINGS.

MEASUREMENT

"BLADING ACCESS ROAD & PARKING STALLS" WILL BE MEASURED BY LUMP SUM.

"CRUSHED SURFACE TOP COURSE" WILL BE MEASURED AS TON OF MATERIAL SUPPLIED AND PLACED.

"GRADE TENT PAD LOCATIONS" WILL BE MEASURED BY LUMP SUM PER EACH INDIVIDUAL TENT PAD CONSTRUCTED.

"PROCURE AND INSTALL FIRE RINGS" WILL BE MEASURED BY LUMP SUM PER EACH INDIVIDUAL FIRE RING PURCHASED AND INSTALLED.

MEASUREMENT SHALL BE BASED ON THE ITEM FROM THE BID LIST INSTALLED AND THE WORK FOR THAT PORTION COMPLETED. NO ADDITIONAL COMPENSATION WILL BE MADE FOR MATERIAL THAT IS STOCKPILED AND MOVED AGAIN.

PAYMENT

PAYMENT FOR "BLADING ACCESS ROAD & PARKING STALLS" SHALL BE BY THE LUMP SUM CONTRACT PRICE, "CRUSHED SURFACE TOP COURSE" SHALL BE BY THE TON CONTRACT PRICE, "GRADE TENT PAD LOCATIONS" SHALL BE BY THE LUMP SUM PER EACH TENT PAD LOCATION CONTRACT PRICE, AND "PROCURE AND INSTALL FIRE RINGS" SHALL BE BY THE LUMP SUM PER EACH FIRE RING INSTALLED CONTRACT PRICE 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.

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 PLOT DETAILS: MCKINNEY, CHAD
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SPECIAL PROVISIONS

DWG. NO.:	C-504
CREATED:	6/21/2019
SHEET:	38 OF 38