

Foghorn Reach Habitat Improvement Project Methow River Subbasin Okanogan County, Washington

Special Provisions to modify the Washington State Department of Transportation
Standard Specifications for Road, Bridge and Municipal Construction (WSDOT
Standard Specifications), 2024 Edition

Prepared by Rio Applied Science and Engineering (Rio ASE)
for Yakama Nation Fisheries
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The person signing the specifications package shall have been in responsible charge of the overall design including developing or assembling the specifications. In cases where the designs described by the specifications meet the criteria for preparation by a registered engineer or architect, this person shall be registered with the applicable professional designation after their signature, such as P.E. for professional engineer or R.A. for registered architect. By this signature, this person is certifying the written specifications convey the design intent as portrayed on the drawings included therein. For specifications package containing designs from multiple disciplines, it is the signing individual's responsibility to ensure (using procedures defined by his/her organization) that the technical information prepared by other professions and disciplines and depicted in the document is compatible with the overall design intent and that the documents used to depict that information (e.g., drawings) include signatures with appropriate professional registration designations.

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List of Special Provision Submittals

- Erosion Sediment Control (ESC) plan
- Spill Prevention Control and Countermeasure (SPCC)
- Cofferdam Plan
- Pumping Plan
- Log Acquisition Plan
- Log Schedule
- Access Plan

Other Submittals per WSDOT Standard Specifications

- Construction Schedule (including milestones, start date, finish dates, etc.)
- Progress Schedule (submitted weekly throughout the duration of construction)
- Subcontractor List
- Pay Requests
- Emergency Telephone Number List
- Emergency Action Plan in Case of Workplace Injury
- Insurance Certificates
- Bond
- Safety Plan
- Record Drawings

Submittal Notes:

- A. Time required to review submittals shall be (5) working days from the time the Contracting Officer receives a complete set of materials for a particular submittal.
- B. The Contracting Officer will indicate the approval or disapproval of each submittal and the reasons for disapproval. When each submittal has been approved, one copy will be returned to the Contractor.
- C. Obtain approvals on all submittals before beginning work on the items included in the submittal.

Bid Schedule

Item #	Activity	Units	Quantity
001	Mobilization/Demobilization	LS	1
002	Environmental Controls	LS	1
003	Clearing, Grubbing and Tree Salvage	LS	1
004	Temporary Construction Access	LS	1
005	Earthwork	LS	1
006	Cofferdams and Dewatering	LS	1
007	Habitat Structure - 1: Three log structure	EA	2
008	Habitat Structure - 2: Low Profile Bank Jam	EA	2
009	Habitat Structure - 3: Large Bank Jam	EA	2
010	Habitat Structure - 4: Single Log Structure	EA	10
011	Roughened Edge Bank Treatment	LS	1
012	Woody Material Acquisition and Delivery	LS	1
013	Crushed Surfacing Top Course (Driveway surfacing)	CY	210
014	Medium Excavator (300-series or similar)	HRS	10

Division 1 - General Requirements

1-02 Bid Procedures and Conditions

1-02.4 Examination of Plans, Specifications, and Site Work

Plans will be referred to as “Drawings” within these Special Provisions and these Special Provisions will be referred to as “Specifications” within the Drawings. Drawings and these Specifications will be made available by Yakama Nation Fisheries.

1-02.4(2) Subsurface Information

The Contracting Agency does not possess subsurface information for the project.

END OF SECTION

1-04 Scope of the Work

1-04.4 Changes

This section is supplemented with the following:

If Sponsor desires to order a change in the Work, it may request a written Change Order proposal from Contractor.

1. Due to the short and critical duration of this type of project, Contractor shall submit a Change Order proposal within 24 hours of the request from Sponsor, or within such other period as mutually agreed.
2. Contractor’s Change Order proposal shall be full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in Work.
3. Upon receipt of the Change Order proposal, or a request for equitable adjustment in the Contract Sum or Contract Time, Sponsor may accept or reject the proposal, request further documentation, or negotiate acceptable terms with the Contractor.
4. Pending agreement on the terms of the Change Order, Sponsor may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Sponsor’s approval. All Work done pursuant to any Sponsor-directed change in the Work shall be executed in accordance with the Contract Documents.
5. If Sponsor and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order. The Change Order shall reflect full payment and final settlement of all claims for time and for direct, indirect and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment.
6. A request for an equitable adjustment in the Contract Sum shall be based on written notice delivered to the Sponsor within 24 hours of the occurrence of the event giving

rise to the request. For purposes of this part, “occurrence” means when Contractor knew, or in its diligent prosecution of the Work should have knowledge of the event giving rise to the request. If the Contractor believes it is entitled to an adjustment in the Contract Sum, Contractor shall immediately notify the Sponsor and begin to keep and maintain complete, accurate and specific daily records. Contractor shall give the Sponsor access to any such records and, if requested, shall promptly furnish copies of such records to Sponsor.

7. Contractor shall not be entitled to any adjustment in the Contract Sum for any occurrence of events or costs that occurred more than 24 hours before Contractor’s written notice to the Sponsor. The written notice shall set forth, at a minimum, a description of:
8. The event giving rise to the request for an equitable adjustment in the Contract Sum;
 - a. The nature of the impacts to Contractor and Subcontractors, if any; and,
 - b. To the extent possible, the amount of the adjustment in Contract Sum requested.
9. Failure to properly give such written notice shall, to the extent Sponsor’s interests are prejudiced, constitute a waiver of Contractor’s right to an equitable adjustment.
10. When the request for compensation relates to a delay or other change in Contract Time, Contractor shall demonstrate the impact on the critical path of the schedule attributable to the change of Work or event(s) giving rise to the request for equitable adjustment. Contractor shall be responsible for showing clearly on the Progress Schedule that the change or event:
 - a. Had specific impact on the critical path and, except in case of concurrent delay, was the sole cause of such impact; and
 - b. Could not have been avoided by re-sequencing of the Work or other reasonable alternatives.

END OF SECTION

1-07 Legal Relations and Responsibilities to the Public

1-07.1 Laws To Be Observed

This section applies as written. Contractor shall review this section carefully and have a thorough understanding of all laws to be observed.

1-07.2 State Taxes

Delete 1-07.2(1) and 1-07.2(2) and replace with the following:

- A. This contract shall be exempt from Washington State Taxes as described in the Construction Agreement.

1-07.5 Fish and Wildlife and Ecology Regulations

1-07.5(1) General

This section is supplemented with the following:

- A. The Sponsor has an HPA and permits or approvals from the Corps, Ecology and County which the contractor must abide by.
- B. This specification describes requirements originating from the Washington Department of Fish and Wildlife (WDFW), U.S. Fish & Wildlife Service (USFWS) and U.S. Army Corps of Engineers (ACOE) whose collective responsibility in this case is to make sure aquatic resources and fish communities are adequately protected during construction projects.
- C. The Contractor is advised that many of the requirements for protection of fish life, water quality, etc., are shown on Drawings, described in Division 8. Some other agency requirements are reflected in Specifications and/or Drawings related to site clearing, excavation limits, re-vegetation, etc.

1-07.5(2) State Department of Fish and Wildlife

This section is supplemented with the following:

- A. Prepare a Spill Prevention Countermeasures and Control Plan. Oil absorbent pads and personnel trained in spill prevention and control will be on site during all heavy equipment operations.
- B. Inspect heavy equipment at least daily for any leaks of petroleum products. Repair as needed.
- C. Heavy equipment needs to be pressure washed to be visibly free of all soil before shipping to the project site.

1-07.6 Permits and Licenses

This section is supplemented with the following:

- A. The Sponsor shall be responsible for obtaining all environmental permits required for construction, excluding business licenses and permits required for the Contractor's business. The Contractor shall be given a copy of the HPA and any other applicable permits. The Contractor shall comply with all permit requirements and always keep a copy of the permits on site.

1-07.15 Temporary Water Pollution Prevention

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

Add the following:

- A. This project shall adhere to specific Bonneville Power Administration's Habitat Improvement Programmatic (HIP) Conservations Measures summarized in the Drawings and shall be strictly adhered to.
- B. All work associated with Section 1-07.15(1) Spill Prevention, Control, and Countermeasures Plan and Section and including any amendments to work items shall be named "Environmental Controls."

END OF SECTION

1-08 Prosecution and Progress

1-08.1 Subcontracting

This section does not apply. Refer to the requirements in the Construction Agreement.

1-08.2 Assignment

This section does not apply. Refer to the requirements in the Construction Agreement.

1-08.3 Progress Schedule

This section does not apply. Refer to the requirements in the Construction Agreement.

1-08.4 Prosecution of Work

This section does not apply. Refer to the requirements in the Construction Agreement.

1-08.5 Time for Completion

This section does not apply. Refer to the requirements in the Construction Agreement.

1-08.8 Extensions of Time

1-08.8(3) Wildfire

Add the following:

- A. Partial hoot owl, partial shutdowns, and general shutdowns may come into effect during the period of performance of the contract. For USFS Industrial Fire Precaution Levels, visit https://www.fs.usda.gov/detail/okawen/alerts-notice/?cid=fsbdev3_053600.

1-08.9 Liquidated Damages

This section does not apply. Refer to the requirements in the Construction Agreement.

1-08.10 Termination of Contract

This section does not apply. Refer to the requirements in the Construction Agreement.

END OF SECTION

1-09 Measurement and Payment

1-09.1 Measurement of Quantities

- A. Measurement for Bid Item 001 - Mobilization and Demobilization will be by lump sum;
- B. Measurement for Bid Item 002 - Environmental Controls will be by lump sum;
- C. Measurement for Bid Item 004 - Temporary Construction Access will be by lump sum;
- D. Measurement for Bid Item 006 - Cofferdams and Dewatering will be by lump sum;
- E. Measurement for Bid Item 013 – Crushed Surfacing Top Course will be by cubic yards;
- F. Measurement for Bid Item 014 - Medium Excavator (300-series or similar) will be by hours;

1-09.9 Payments

- A. Payment for Bid Item 001 - Mobilization and Demobilization will be by lump sum and includes any/all labor, materials, and equipment required for temporary traffic control discussed in Section 1-10 and all appurtenances of required work not already itemized in the Bid Schedule.

- B. Payment for Bid Item 002 - Environmental Controls will be by lump sum and includes all work associated with Section 1-07 Legal Relations and Responsibilities to the Public and Section 8-01 Erosion and Sediment Water Pollution Control (including preparing, implementing, and maintaining a Stormwater Pollution Prevention Plan (SWPPP) if required for the project and a Spill Prevention, Control, and Countermeasures Plan (required for the project).
- C. Payment for Bid Item 004 - Temporary Construction Access will be by lump sum and includes any/all labor, materials, and equipment required for all work described in Section 2-01 Clearing, Grubbing, and Roadside Cleanup and Section 8-104 Temporary Construction Access, Staging, and Stockpile Areas.
- D. Payment for Bid Item 006 - Cofferdams and Dewatering will be by lump sum and includes any/all labor, materials, and equipment required for all work described in Section 8-100 Water Management.
- E. Payment for Bid Item 013 – Crushed Surfacing Top Course will be by cubic yard and will include any/all labor, materials, and equipment required for work associated with placing Crushed Surfacing as described in the Drawings.
- F. Payment for Bid Item 014 – Medium Excavator (300-series or similar) will be by hours and will include any/all labor and equipment required for work associated with work directed by the Contractor Officer.

END OF SECTION

1-10 Temporary Traffic Control

1-10.5 Payment

Measurement and payment for temporary traffic control for this project will be incidental to the Bid Item 001 - Mobilization and Demobilization bid item regardless of the required procedures and devices used. Traffic control for the project shall conform to applicable traffic control standards.

END OF SECTION

1-11 Safety Precautions

This section is added:

- A. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the work.
- B. In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the work and other persons who may be affected by the work; prevent damage to materials, supplies and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with chapter 296-800 WAC and all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall

notify owners of adjacent property and utilities when prosecution of the work may affect them.

- C. The Contractor shall maintain an accurate record of exposure data on all incidents relating to the work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies or equipment. The Contractor shall immediately report any such incident to Sponsor and appropriate jurisdictions. The Sponsor shall, at all times, have a right of access to all records of exposure.
- D. All work shall be performed with due regard for the safety of the public. The Contractor shall perform the work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.
- E. In an emergency affecting the safety of life or the work or of adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened loss or injury, and Contractor shall so act if authorized or instructed.
- F. Nothing provided in this section shall be construed as imposing any duty upon the Sponsor with regard to, or as constituting any express or implied assumption of control or responsibility over, project site safety, or over any other safety conditions relation to employees or agents of the Contractor or any of its Subcontractors, or the public.

END OF SECTION

Division 2 - Earthwork

2-01 Clearing, Grubbing, and Roadside Cleanup

2-01.1 Description

Add the following:

This section describes clearing activities necessary for construction. Grubbing is not expected for this project. Clearing is expected for areas required for temporary access routes, temporary staging and stockpiling areas, and temporary contractor parking areas and in accordance with Section 2-01 of the WSDOT Standard Specifications, and as amended:

- A. This project shall adhere to specific Conservations Measures summarized in the Drawings (Drawings G3 to G5) and shall be strictly adhered to.
- B. Areas for clearing shall be the minimum necessary and within the limits of disturbance (grading limits) shown on the Drawings and including temporary construction access routes, staging areas, stockpile areas, storage areas, and contractor parking areas.
- C. Clearing shall not occur outside of the designated grading limits.
- D. Disturbance of river banks and riparian vegetation shall be minimized and shall only include those areas marked by the Sponsor, Contracting Officer, or Engineer
- E. Removal of large trees, if necessary, shall be reused at the project site as woody material at the direction of the Contracting Officer.
- F. Shrubs removed during clearing and grubbing shall be left on site and placed outside of the limits of disturbance to be used as slash during installation of wood structures.
- G. Removal and salvage of trees and shrubs shall be considered incidental to clearing and grubbing.
- H. Vegetation and trees flagged for protection shall be completed by the Sponsor or Contracting Officer prior to clearing and grubbing activities. Vegetation protection during construction shall be incidental to clearing and grubbing.

2-01.4 Measurement

Measurement and compensation for all work described in Section 2-01 Clearing, Grubbing, and Roadside Cleanup shall be by lump sum (LS) as part of Bid Item 003 - Clearing, Grubbing, and Tree Salvage.

2-01.5 Payment

Measurement and compensation for all work described in Section 2-01 Clearing, Grubbing, and Roadside Cleanup shall be by lump sum (LS) as part of Bid Item 003 - Clearing, Grubbing, and Tree Salvage.

END OF SECTION

2-03 Roadway Excavation and Embankment

2-03.1 Description

Add the following:

This section describes the following work per the Drawings:

- A. Channel and Pool Excavation
- B. Excess material from project excavations
- C. Backfill for Wood Structures
- D. Constructed Riffles

2-03.2 Materials

Add the following:

- A. Native Alluvium
 - 1. Undisturbed ground excavated from within the limits of project excavations (channel excavations, excavations required for wood structure installation, etc.).
 - 2. Native Alluvium material shall meet WSDOT standard specifications for Streambed Sediment (9-03.11(1)) or Streambed Cobbles (9-03.11(4)) generated from onsite excavations.
- B. Backfill for Wood Structures
 - 1. Shall be Native Alluvium unless otherwise specified in the Drawings. Native Alluvium material shall meet WSDOT standard specifications for Streambed Sediment (9-03.11(1)) or Streambed Cobbles (9-03.11(4)) generated from onsite excavations.
- C. Constructed Riffle
 - 1. Shall be Native Alluvium unless otherwise specified in the Drawings. Native Alluvium material shall meet WSDOT standard specifications for Streambed Cobbles (9-03.11(4)) generated from onsite excavations.
 - 2. Imported riffle material shall be furnished by the Contractor from an offsite borrow source identified by the Contractor and approved by the Contracting Officer. The material shall be sub-angular and approved by the Contracting Officer prior to transporting it to the project site.
 - 3. Consists of a well-graded mixture of sand, gravel, cobble, and boulders meeting the gradation specified in the Drawings.
 - 4. Percent passing in the gradation size class is based on the nominal diameter of rock. Nominal diameter shall be measured as the intermediate axis where the small and large axis shall not be more than 3 times less than or greater than the nominal diameter. Size class is unique to these Drawings and is not based on the Unified Soil Classification.

2-03.3 Construction Requirements

Add the following:

- A. Excavation

1. Perform channel excavations to the lines and grades shown in the Drawings, or by field clarification by the Contracting Officer.
 2. Channel excavation includes excavation for channels and pools (including pools for wood structures if not already included as part of excavation of channels).
 3. Finish grades shall be within ± 0.5 feet horizontal and ± 0.10 feet vertical of the locations and elevations shown on the Drawings unless otherwise approved by the Contracting Officer or Engineer.
 4. Finish grades shall be flush with adjacent surfaces unless otherwise indicated.
 5. Finish grades shall be inspected and approved by the Contracting Officer or Engineer prior to rewatering of a current work segment or removing cofferdams. The Contracting Officer or Engineer will flag areas that should be adjusted and reviewed with the Contractor. The Contractor is responsible for making all adjustments prior to rewatering or removing cofferdams.
- B. Excess material from project excavations
1. Native Alluvium material generated through all project excavations and not used to create Constructed Riffle Material or used in areas of general fill shall be spoiled onsite at locations determined by the Contracting Officer.
- C. Backfill for Wood Structures
1. Shall be in accordance with the requirements specified in the Drawings.
- D. Constructed Riffles
1. Shall be in accordance with the requirements specified in the Drawings.

2-03.4 Measurement

Measurement and compensation for all work described in Section 2-03 Roadway Excavation and Embankment shall be by lump sum (LS) under Bid Item 005 - Earthwork. Includes full compensation for all materials, labor, equipment, temporary stockpiling, and all appurtenances not itemized in the Bid Schedule necessary or required to perform the work.

2-03.5 Payment

Measurement and compensation for all work described in Section 2-03 Roadway Excavation and Embankment shall be by lump sum (LS) under Bid Item 005 - Earthwork. Includes full compensation for all materials, labor, equipment, temporary stockpiling, and all appurtenances not itemized in the Bid Schedule necessary or required to perform the work.

END OF SECTION

Division 8 – Miscellaneous Construction

8-01 Erosion and Sediment Water Pollution Control

8-01.1 Description

Add the following:

This work shall provide for preparation and implementation of an Erosion Control and Water Pollution Control plan including removal of associated items in accordance with Section 8-01 of the Standard Specifications, and as amended by these special provisions:

- A. If required for the project (based on disturbance area), the Contractor shall be responsible for preparing, implementing, and maintaining a Stormwater Pollution Prevention Plan (SWPPP).
- B. This project shall adhere to specific Conservation Measures summarized in the Drawings (Drawings G3 to G5).
- C. This item includes silt/sediment fence installed around the perimeter of all staging areas.
- D. This item includes installation of a construction entrance at locations identified in the Drawings.
- E. This item includes proper environmental controls with emphasis on dust control at the project site. Performing dust abatement shall be a critical component of project implementation. The Contractor shall properly monitor and mitigate dust with all construction activities beginning with mobilization. Drafting from the river will be allowed with the use of a NOAA approved pump intake screen, any drafting from the river shall be coordinated in advance with the Contracting Officer.

8-01.4 Measurement

- A. All work associated with 8-01 Erosion and Sediment Water Pollution Control shall be measured and paid by lump sum (LS) under Bid Item 002 – Environmental Controls. Includes full compensation for all materials, labor, equipment, temporary stockpiling, and all appurtenances not itemized in the Bid Schedule necessary or required to perform the work.

8-01.5 Payment

- A. All work associated with 8-01 Erosion and Sediment Water Pollution Control shall be measured and paid by lump sum (LS) under Bid Item 002 – Environmental Controls. Includes full compensation for all materials, labor, equipment, temporary stockpiling, and all appurtenances not itemized in the Bid Schedule necessary or required to perform the work.

END OF SECTION

8-100 Water Management

This section is added.

8-100.1 Description

The work consists of furnishing, installing, monitoring, maintaining, and removing cofferdams as needed to effectively construct proposed features, and coordinating with the Contracting Officer for fish salvage activities. The work also consists of furnishing, monitoring, operating, maintaining, removing pumps, and control of discharge water. Fish salvage is not the responsibility of the Contractor. Fish salvage will be coordinated and led by the Contracting Officer and completed by project partners if deemed necessary.

8-100.2 Submittals

The Contractor is responsible for developing and submitting a Cofferdam Plan for review and approval by the Engineer to include sufficient detail of means and methods satisfyingly meeting the Drawings, Specifications, permit requirements, and Conservation Measures. See Drawings for examples of acceptable cofferdam methods and associated notes.

The Contractor is responsible for developing and submitting a Pumping Plan for review and approval by the Engineer to include sufficient detail of means and methods satisfyingly meeting the Drawings, Specifications, permit requirements, and Conservation Measures. The Pumping Plan shall include the expected equipment (number of pumps, pump types, pump sizes, length of discharge hose, etc.). Electric pumps with generators and quiet packs are preferred. The Pumping Plan shall also include locations for discharge water and types of environmental protection measures. If infiltration becomes an ineffective means to control turbidity, additional and alternative methods shall still comply with all associated Permit Provisions (such as pumping to stilling basins) and shall be at the Contractor's expense.

8-100.3 Materials

The Contractor shall provide all required materials for the project.

8-100.4 Construction Requirements

- A. The Sponsor is responsible for measuring turbidity however the Contractor shall adhere to the special procedures regarding in-stream work, turbidity, and dewatering as defined within Bonneville Power Administration's Habitat Improvements Programmatic Conservation Measures and Department of Ecology's restrictions whichever is more stringent. Additionally, this project shall adhere to specific Conservations Measures summarized in the Drawings (Drawings G3 to G5).
- B. The Contractor shall notify the Contracting Officer at least 1 day before each cofferdam installation date so that fish salvage activities can be scheduled.
- C. Fill material for sandbags or "super sacks", if used, shall be clean, washed, and rounded material meeting WSDOT standard specifications for Drain Rock, Streambed Aggregates, Streambed Sediments, or Streambed Cobbles. Material used to fill bulk bags may be disposed of onsite if the permits allow. The Contractor shall coordinate with the Contracting Officer regarding disposal. Otherwise, the material shall be removed from the project site and properly disposed of at the end of construction. Disposal of the

material within newly excavated channels including inlets and outlets shall not be permitted.

- B. Dewatering within excavated channels shall be performed such that the Contractor can sufficiently construct all features and the Contracting Officer can easily inspect and measure the finished elevation of the channel bed.
- C. If the Contractor attempts to construct a portion of the project without fully dewatering the site and is unable to construct the item as shown on the Drawings to the satisfaction of the Contracting Officer, the Contractor shall receive no additional compensation for removing and replacing unacceptable work including dewatering associated with removing and replacing work.
- D. Dewatering pump discharge from within work areas shall be released onto floodplain areas at locations identified in the Drawings or at locations approved by the Contracting Officer (per an approved Pumping Plan) away from wetlands and construction activities. Discharge shall be completely infiltrated prior to reaching wetlands or surface waters unless approved by the Contracting Officer. All return flows must meet permit requirements for turbidity.
- E. All pump intakes shall be screened for fish protection as required by NOAA.
- F. All earthwork and wood structure construction within the ordinary high-water limits shall conform to the water quality standards established by regulatory agency permits for this project.

8-100.5 Measurement

- A. All work associated with 8-100 Water Management shall be measured and paid as lump sum (LS) under Bid Item 006 – Cofferdams and Dewatering. Includes full compensation for all materials, labor, equipment, temporary stockpiling, and all appurtenances not itemized in the Bid Schedule necessary or required to perform the work.

8-100.6 Payment

- A. All work associated with 8-100 Water Management shall be measured and paid as lump sum (LS) under Bid Item 006 – Cofferdams and Dewatering. Includes full compensation for all materials, labor, equipment, temporary stockpiling, and all appurtenances not itemized in the Bid Schedule necessary or required to perform the work.

END OF SECTION

8-102 Wood Structures

This section is added.

8-102.1 Description

The work consists of procuring and delivering woody material and boulders to the site, storing material, hauling and handling, and construction of wood structures (including excavation, adjacent pool excavation, placement of wood and boulders, and backfilling of structures) as detailed in the Drawings. **The Sponsor has obtained all Type 1,2, and 3 logs required for the project however the Contractor will be required to transport them to the project site.**

- A. Woody material shall be procured at a source identified by the Contractor.
- B. Woody material shall be delivered to the Project Site meeting all applicable highway traffic laws for maximum weight and length requirements for the most restrictive segment of public road along the proposed haul route.
- C. The Contractor is responsible for obtaining all necessary highway hauling permits. Woody material shall be inspected at the time of delivery and shall not be offloaded until accepted by the Contracting Officer. All Type 1, 2, and 3 logs shall be marked with a ring of paint near the dbh measurement. Each log type shall have a distinct paint color for ease of identification and measurement of quantity. Racking and slash material shall be stockpiled in separate piles.
- D. The Contractor shall provide the Contracting Officer a materials manifest that itemizes the size and species of all material delivered on a per truckload basis. Each manifest of accepted woody material shall become the record to determine the balance of acceptable material delivered and the basis for measurement and payment.
- E. Wood material shall be offloaded at designated staging areas and stacked in neat piles, separating material types as directed by the Contracting Officer. Offloading and stacking of material shall be done with care to avoid damage to branch structure, rootwad structure, and log integrity. Any woody material determined to be damaged during offloading and handling in the stacking process will be rejected and removed from the Project Site at the Contractor's expense.
- F. Woody material determined to be damaged during offloading and handling to individual wood structure sites will be rejected and removed from the Project Site at the Contractor's expense. The Contracting Officer may test for disease, decay or insect infestation through the use of visual or manual inspection. Disposal of rejected woody material is the responsibility of the Contractor but must be done in a legal fashion and at the Contractor's expense. No dumping or abandoning is allowed. Under special circumstances and with approval by the Contracting Officer, rejected woody material may be left onsite.
- G. Woody material determined to be damaged during installation will be rejected and removed from the Project Site at the Contractor's expense. Rootwads shall have intact root balls measuring a minimum diameter as shown on the Drawings (Sheet G6) and shall be inspected during and immediately after construction of each structure.

8-102.2 Submittals

8-102.2(1) Log Delivery Schedule

Submit a detailed list of individual logs delivered as specified in the Drawings and these specifications. The list shall include species type, log diameter (at breast height), log diameter (at tip), rootwad diameter (as measured to root tips capable of supporting the log), and log lengths (log length includes rootwad, as applicable). The Contractor shall provide notice to Contracting Officer at least 2 weeks prior to delivering logs to the project site and shall begin construction no more than 1 week following delivery of materials to the project site.

8-102.3 Materials

The Contractor shall provide all required materials for the project.

- A. **The Sponsor has obtained all Type 1, 2, and 3 logs required for the project however the Contractor will be required to transport them to the project site.**
- B. Tree material shall be free of disease, insect infestation and rot. Fungal staining is acceptable unless the fungal growth is evidenced as rot.
- C. Tree material shall be unseasoned (green) material. Tree material that has been previously burned may be allowed under certain circumstances and must be approved for use prior to delivery by the Contracting Officer.
- D. Tree material shall generally be sound in nature and free from excessive checks and shakes. Excessive checking shall mean continuous longitudinal checks exceeding 20 percent of the log length with a depth exceeding 20 percent of the diameter of the log. Excessive shakes shall mean continuous circumferential cracking that exceeds 50% of the circumference of the log.
- E. Preferred genus and species are:
 1. Douglas Fir
 2. Ponderosa Pine
 3. Larch
 4. Western Red Cedar
- F. Logs may be with or without bark and may have branches/stubs remaining (preferred). Diameter of each log shall be as indicated in the section below and shall be the specified minimum diameter at breast height (dbh) not including the bark. For logs without rootwads the diameter of the log will be determined by measuring one foot in from the largest of the cut ends. Length of each log shall be as indicated in the section below.
- G. Rootwads (when required) shall be free of loose accumulations of dirt and rocks that may contribute to the turbidity of the river when immersed. Rootwads shall have intact root balls measuring a minimum of 4 times the log DBH.
- H. Racking material shall meet the same material specifications as tree materials including genus and species identified above.
- I. Live Stakes shall be installed within wood habitat structures as specified in the Drawings. Requirements for Live Stakes are discussed in Section 8-105.

Type 1 Logs

- A. Refer to the Drawings (Sheet G6) for the number of Type 1 Logs required for this contract.

- B. Type 1 Logs shall have a dbh of 18 to 24 inches, and a length of 35 to 40 feet.
- C. Type 1 logs shall have an intact rootwad with a minimum diameter of 5 feet.

Type 2 Logs

- A. Refer to the Drawings (Sheet G6) for the number of Type 2 Logs required for this contract.
- B. Type 2 Logs shall have a dbh of 18 to 24 inches, and a length of 30 to 35 feet.
- C. Type 2 logs shall have an intact rootwad with a minimum diameter of 4.5 feet.

Type 3 Logs

- A. Refer to the Drawings (Sheet G6) for the number of Type 3 Logs required for this contract.
- B. Type 3 Logs shall have a dbh of 18 to 24 inches, and a length of 25 to 30 feet.
- C. Type 3 logs shall not have an intact rootwad.

Racking Wood Material

- A. Refer to the Drawings (Sheet G6) for the number of Racking pieces required for this contract.
- B. Racking pieces shall have a dbh of 6 to 14 inches, and a length of 15 to 25 feet.
- C. Racking pieces shall have an intact rootwad measuring a minimum of 2.5 feet in diameter.
- D. Racking material consists of small diameter logs, tree tops or branches with branches intact.
- E. Racking shall come from fir, pine or spruce trees. A minimum of 50% of the racking shall come from Douglas fir, grand fir, or spruce trees.

Slash Material

- A. Refer to Drawings (Sheet G6) for volume of Slash material required for this contract.
- B. Slash material shall be from the harvested trees and logs delivered to the project site or shall consist of dense vegetative debris including, but not limited to small trees, broken tops, limbs, branches, brush, saplings or poles.
- C. Slash shall be any native conifer or hardwood species. Length of individual pieces of slash may vary between 5-15 feet. Diameter of main slash pieces may vary from 1 to 4-inches diameter, with typical piece thickness between 2 and 4-inches diameter.
- D. Slash shall be free of soil and rocks to the greatest extent practicable.

Backfill Material for all Wood Habitat Structures

- A. Shall be native alluvium material meeting the WSDOT standard specifications for Streambed Aggregates, Streambed Sediment, or Streambed Cobbles generated from onsite excavations.

8-102.4 Construction Requirements

- A. See the Drawings for specific construction requirements regarding construction of wood structures.
- B. Each individual Log larger than ten feet in length and 12" inches in diameter shall be tagged with a unique numerical identifier that will withstand typical river conditions for at least three years. Tags shall be round aluminum tags measuring 1-1/4" diameter x 0.050" thick with a 3/16" diameter hole and will be provided by the Sponsor. Tags shall be fastened to each individual logs meeting the above criteria using a 2.5" nail or otherwise approved fastener. Tags shall be placed at inconspicuous locations that are not visible such as the underside of logs or covered or buried portions of logs.
- C. All logs shall be placed as shown on the Drawings or as directed by the Contracting Officer. Each type of structure has detailed methods of construction and layout of specific logs in specific sequence. The Contractor shall pay careful attention to the type, size and orientation of all logs as shown on the Drawings.
- D. The Contractor shall excavate scour pools in the channel bed near habitat structures as shown in the Drawings or as directed by the Contracting Officer.
- E. Where called for in the Drawings the Contractor shall place boulders as designated in the Drawings or as directed by the Contracting Officer or Engineer.
- F. Place structure backfill material at the locations shown on the Drawings and to the elevations shown on the Drawings unless otherwise directed by the Contracting Officer. Structure backfill shall be carefully placed over logs as indicated on the Drawings. Material shall be placed in lifts with a maximum 12-inch lift height, and with each lift compacted to at least 85% relative compaction prior to placing subsequent lift. No testing of compacted density will be performed, acceptance will be by the Contracting Officer observing fill placement and compaction effort.
- G. Pile Logs shall be vibrated in and pile testing for pull-out strength shall be conducted in accordance with the requirements/specifications in Detail 12 on Drawing D7.
- H. Contractor shall immediately notify the Contracting Officer if any pile cannot be installed to the specified depth. The Contracting Officer shall immediately notify Engineer and the Engineer shall provide direction to Contracting Officer within 2 working days of being notified. No payment shall be made for standby time.
- I. Vibratory pile driver shall meet or exceed the capabilities of these commercially available side grip drivers: HMC Movax Sonic Side Grip SP 80, Grizzly MultiGrip MG-90, Movax SG-75, RaMeC SGV 80, or equal with Contracting Officer approval. Installation by hammer pile driver, or vibratory plate compactor shall not be allowed.
- J. The top of installed piles shall be saw cut to proper elevation as determined by the Contracting Officer and roughened so that the saw cut is not visible. Contractor shall take precautions to prevent damage of the pile during the roughening process. If the pile is damaged, Contractor shall replace the pile at no cost to the Contracting Agency.

8-102.5 Inspections

Contracting Officer shall perform inspections upon delivery and again upon installation.

8-102.6 Measurement

Use the following unit price option as designated on the Bid Schedule for acquiring woody materials. Includes all labor, materials, and equipment for loading, unloading, and hauling woody materials and boulders from approved source locations to staging areas within the project area as directed by the Contracting Officer:

- A. All work associated with acquiring any/all woody materials required for the project shall be measured and paid as part of Bid Item 012 - Wood Material Acquisition and Delivery by lump sum. Quantities of Type 1, Type 2, Type 3, Racking, and Slash material required for the project shown on Drawing G6. Shall include all appurtenances not already itemized in the Bid Schedule and include all work required for obtaining necessary permits, shipping, loading, transporting, unloading, etc.

Use the following unit price option as designated on the Bid Schedule. Includes all labor, materials and equipment for loading and unloaded, hauling materials from project staging areas to installation sites and installation of log structures including placement of logs, tagging logs, bolted connections, boulders, excavation, and backfill:

- A. Bid Item 007 - Habitat Structure - 1: Measurement shall be by per each structure (EA)
- B. Bid Item 008 - Habitat Structure - 2: Measurement shall be by per each structure (EA)
- C. Bid Item 009 - Habitat Structure - 3: Measurement shall be by per each structure (EA)
- D. Bid Item 010 - Habitat Structure - 4: Measurement shall be by per each structure (EA)
- E. Bid Item 011 - Roughened Edge Bank Treatment: Measurement shall be by lump sum (LS)

8-102.7 Payment

Payment for acquisition of woody material shall be as follows:

- A. Bid Item 012 - Wood Material Acquisition and Delivery: Payment shall be by lump sum (LS). Quantities of Type 1, Type 2, Type 3, Racking, and Slash material required for the project shown on Drawing G6. Shall include all appurtenances not already itemized in the Bid Schedule and include all work required for obtaining necessary permits, shipping, loading, transporting, unloading, etc.

Payment for log structure installation shall be as follows:

- A. Bid Item 007 - Habitat Structure - 1: Measurement shall be by per each structure (EA)
- B. Bid Item 008 - Habitat Structure - 2: Measurement shall be by per each structure (EA)
- C. Bid Item 009 - Habitat Structure - 3: Measurement shall be by per each structure (EA)
- D. Bid Item 010 - Habitat Structure - 4: Measurement shall be by per each structure (EA)
- E. Bid Item 011 - Roughened Edge Bank Treatment: Measurement shall be by lump sum (LS)

END OF SECTION

8-104 Temporary Construction Access, Staging, and Stockpile Areas

This section is added.

8-104.1 Description

- A. The work consists of furnishing, monitoring, and maintaining temporary construction access routes, stabilized access routes, staging areas, stockpile areas, temporary construction entrance, temporary stream crossing, and other contractor use areas.

8-104.2 Submittals

- A. The Contractor is responsible for developing and submitting an Access Plan for review and approval by the Engineer to include sufficient detail of means and methods satisfyingly meeting the Drawings and Specifications for the installation of Temporary Stabilized Construction Access Routes. The plan shall include expected locations, equipment, and materials.

8-104.3 Construction Requirements

8-104.3(1) Temporary Construction Access Route

- A. All Temporary Construction Access Routes are depicted in the Drawings. Contractor may not deviate from these locations without prior approval from the Contracting Officer.
- B. Contractor shall establish a 12' wide access routes with sufficient load-bearing capacity to provide unimpeded traffic for construction purposes.
- C. Wetlands, saturated soils, and mature vegetation shall be avoided. If necessary, temporary access routes shall be modified at the direction of the Contracting Officer to avoid these areas. If conflicts cannot be avoided, then installation of Temporary Stabilized Construction Access Routes may be required at the direction of the Contracting Officer.
- D. Maintain all Temporary Construction Access Routes in a sound and serviceable condition until project completion and acceptance of work.
- E. Some Temporary Construction Access Routes shall be de-compacted and some shall be reclaimed by placing surfacing material. Refer to the Access and Staging requirements in the Drawings.

8-104.3(2) Temporary Stabilized Construction Access Route

- A. Temporary Stabilized Access Routes shall be installed where temporary routes used for construction traverse wetlands, saturated soils, or sensitive areas. At these locations, wetland sod/vegetation/organic layer shall be stripped and stockpiled adjacent to the access route. Contractor shall then install a minimum of 12" of wood chips (aka. hog fuel) or mulch. Otherwise, gravel underlain with non-woven geotextile road fabric may be used.
- B. All materials shall be removed and properly disposed of at project completion, decompacted in accordance Section 8-105, and wetland sod/vegetation replaced/returned to pre-existing conditions.
- C. Maintain all Temporary Stabilized Access Routes in a sound and serviceable condition until project completion and acceptance of work.

8-104.3(3) Temporary Staging and Material Stockpile Area

- A. The Contractor shall park all equipment, vehicles, materials, fuel, portable sanitation facilities, etc. on the sod in the designated Temporary Construction Staging and Material Stockpile Area designated in the Drawings. Do not strip the surface in accordance with the Conservation Measures in the Drawings (Drawings G3 to G5).
- B. All equipment and vehicles shall be stored in the Temporary Construction Staging Area each night.

8-104.3(4) Temporary Construction Entrance

- A. Contractor shall install Temporary Construction Entrances at location designated in the Drawings and in accordance with the detail on Drawing D7.

8-104.4 Measurement and Payment

Use the following unit price option as designated on the Bid Schedule. Includes all labor, materials and equipment for loading, hauling and unloading of materials to the project site and installation, including excavation and backfill, and removal and disposal of materials:

- A. All work described in 8-104 Temporary Construction Access, Staging, and Stockpile Areas shall be measured and paid for by lump sum (LS) as part of Bid Item 004 -Temporary Construction Access.

END OF SECTION