

Construction Specifications

Asotin Creek Project Area 3.2 Habitat Restoration Design Asotin County, Washington

for **Asotin County Conservation District**

January 14, 2025

523 East Second Avenue Spokane, Washington 99202 509.363.3125



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Section 210. Mobilization and Demobilization (Including Temporary Access and Removal and Resinstallation of Livestock Fencing)

PART 1. GENERAL

1.01 Scope

- A. Mobilization consists of operations and preparatory work necessary to become ready to perform the work or an item of work. Mobilization includes and is not limited to:
 - **a.** Mobilizing equipment, personnel, supplies, and incidentals to the identified project and staging sites.
 - b. Establishment of necessary facilities for the Contractor's operation.
 - **c.** Securing bonds, insurance and permits necessary to do the work as stated in the contract and/or agreement.
 - **d.** Establishment of access routes during construction, including temporary removal of livestock exclusion fencing.
- B. Demobilization includes the removal and transport off site of excess construction materials, equipment, personnel, and facilities that were necessary to do the work.
 - a. All livestock exclusions fences removed for site access are to be restored per Section 480.
- C. Nothing in this Section shall relieve the Contractor from full responsibility for compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule lump sum amount for the item, "Mobilization and Demobilization."
- B. Includes costs associated with all labor, materials, equipment, and permits required to perform scope.

PART 2. PRODUCTS

A. Standard, incidental materials, products and equipment required to perform scope.

PART 3. EXECUTION

- A. The Contractor shall dispose of Materials and debris, including, without limitation, forms, falsework, scaffolding, and rubbish resulting from clearing, grubbing, trimming, clean-up, removal, and other Work. These Materials and debris become the property of the Contractor.
- B. Where the Work has impacted existing facilities or devices, including livestock fencing and gates, the Contractor shall restore or replace those facilities to their pre-existing condition.



Section 280. Erosion Control

PART 1. GENERAL

1.01 Scope

- A. This work includes controlling soil erosion by wind, water, or other means, and preventing eroded sediments and other construction-generated pollutants from moving off the Project Site in order to comply with:
 - a. Applicable local, state, and federal laws, orders, regulations, and Water Quality Standards concerning control and abatement of water pollution, air pollution and fish and wildlife protection.
 - b. The Washington Administrative Code (WAC), National Pollution Discharge Elimination System Construction Stormwater General Permit (CSWGP) and all other permits applicable to the project.
- B. Designate and provide a representative as the Erosion and Sediment Control Manager to:
 - a. Manage and ensure proper implementation of an Erosion and Sediment Control (ESC) Plan.
 - **b.** Accompany the contracting officer during field review of the ESC Plan prior to construction activities.
 - c. Monitor rainfall on and in the vicinity of the Project Site.
 - d. Inspect ESC materials on active construction sites weekly for effective functioning.
 - e. Inspect ESC on inactive sites every week for effective functioning.
 - f. Ensure that ESC are regularly cleaned and maintained.
 - g. Mobilize crews to make immediate repairs to ESC if not effectively functioning.
 - h. Record actions taken to clean up significant amounts of sediment.
 - i. Report potential permit violations to the Contracting Officer in a timely manner. Report permit violations to Washington Department of Ecology (Ecology) as specified in the permit documents.
- C. Develop a ESC Plan narrative section and plan sheets that meets Ecology's Stormwater Pollution Prevention Plan (SWPPP) requirements in the CSWGP.

1.02 Payment

- A. Payment will be made at the Bid Schedule lump sum amount for the item, "Erosion Control."
- B. Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified. Payment includes:
 - a. Providing the Erosion and Sediment Control Manager.
 - b. Developing, revising, and documenting the TESC Plan.
 - c. Monitoring activities to maintain effective functioning.
 - d. Furnishing, stockpiling, protecting, restocking, and removing emergency materials.
 - e. Preparing project for a period of extended non-activity.
 - f. Inspecting, maintaining, and removing erosion control devices.



- g. Restoring, mulching, tacking, and seeding all disturbed ground, work, and storage areas not otherwise covered.
- h. Reporting as required in the permit documents, which might extend beyond project completion.
- C. Costs for damages and work stoppage resulting from failure to adequately implement proper environmental controls are the Contractor's responsibility.

1.03 Submittals

- A. The Contractor is responsible to prepare and submit a SWPPP to Ecology for coverage under the CSWGP.
- B. The Contractor shall submit a copy of the SWPPP and the Notice of Intent (NOI) to the Contracting Officer following submittal to Ecology.

1.04 Regulatory Requirements

- A. The Contracting Officer will apply for all necessary environmental permits excluding the CSWGP. The Contractor shall comply with all permit conditions. Contractor shall be responsible for notification of Contracting Officer prior to implementing any changes, modifications, or deviations from the specifications and designs provided to the Contractor and reviewed by permit agencies as the basis for their approval.
- B. Adaptive management shall be employed throughout the duration of the project for the implementation of erosion and water pollution control permit requirements for the current condition of the project site. The adaptive management includes the selection and utilization of best management practices (BMPs), scheduling of activities, prohibiting unacceptable practices, implementing maintenance procedures, and other managerial practices that when used singularly or in combination, prevent or reduce the release of pollutants to waters of the State. The adaptive management shall use the means and methods identified in this section and means and methods identified in the Washington State Department of Transportation's (WSDOT) Temporary Erosion and Sediment Control Manual or Ecology's Stormwater Management Manuals for construction stormwater.

1.05 Contractor Violations

- A. If noncompliance occurs, report noncompliance to the Contracting Officer and Ecology immediately (orally), with specific information submitted in writing to the Contracting Officer and Ecology within 2 calendar days or as otherwise specified in permit documents.
- B. Nonconformance with applicable local, state, and federal laws, orders, regulations, or Water Quality Standards may result in the Contracting Officer stopping all site activity until compliance is achieved and ensured.
- C. The Contractor shall not be entitled to any extension of time, claim for damage, or additional compensation by reason of such a noncompliance work stoppage.
- D. Corrective measures required to bring activities into compliance shall be at the Contractor's expense.
- E. The Contractor shall be solely responsible for any and all fines, penalties or additional permit fees resulting from noncompliance with any applicable local, state and federal laws, orders, regulations or Water Quality Standards.



- F. Contractor shall be responsible for damages resulting from dust or spills originating from contractor operations.
- G. The Contracting Officer may stop any construction activity in violation of local, state, and federal laws. Additional expenses resulting from such a work stoppage will be responsibility of Contractor.

PART 2. PRODUCTS

- A. Standard, incidental materials, products and equipment required to perform scope.
- B. ESC materials shall be compliant with the WSDOT's Temporary Erosion and Sediment Control Manual or Ecology's Stormwater Management Manuals for construction stormwater.

PART 3. EXECUTION

3.01 Installation

- A. Install ESC BMPs as shown and according to the ESC Plan before clearing, grading or other land-altering activities. Ensure effective functioning of BMPs such that sediment does not leave the Project boundaries, enter drainage systems or waterways.
- B. Modify BMPs so they are effective if necessary.

3.02 Work Restrictions

- A. Disturbance Limits Delineate all construction site clearing limits with high visibility markings and do not disturb areas outside of the clearing limits.
- B. Perimeter Controls Install all appropriate perimeter controls before beginning any ground-disturbing activities.
- C. Wet Season Work and Temporary Work Suspension Update the ESCP and schedule for work proposed during the wet season to ensure all appropriate controls, including ESC during work suspensions, are implemented and maintained.

3.03 Stabilization

- A. Stabilize all areas disturbed within 7 days of exposure with methods that do not solely rely on germination.
- B. Temporary stabilization every 14 days or more frequently as needed, a minimum of one day before expected rain events and at the end of each day during wet periods.
- C. Permanent stabilization as indicated on the project seeding and planting Drawings.



Section 290. Pollution Control

PART 1. GENERAL

1.01 Scope

- A. Perform construction operations in such a manner to comply, and ensure subcontractors comply, with:
 - a. Applicable local, state, and federal laws, orders, regulations, and Water Quality Standards concerning control and abatement of water pollution, air pollution and fish and wildlife protection.
 - b. Terms and conditions of applicable permits issued by permit issuing authority. If conflict occurs between local, state, and federal laws, regulations and requirements, the most stringent shall apply.
- B. Locate staging and disposal sites as identified on the Drawings, on improved or disturbed sites such as roadways.
- C. Minimize the use of water by maintaining equipment, immediately fixing water line and container leaks, ensuring water valves are turned off promptly, and using recycled water when feasible.
- D. Comply with all applicable federal, state and local laws as they pertain to the storage, handling, management, transportation, disposal, and documentation of waste, hazardous waste, and hazardous substances.
 - a. Clean fill becomes the property of the Contractor at the place of origin.
 - b. Waste materials become the property of the Contractor at the place of origin.
 - **c.** Woody matter shall be disposed of on site and used as slash material in the Large Woody Material structures according to the Drawings.

1.02 Payment

- A. Payment will be included in the Bid Schedule item, "Pollution Control" per Section 290.
- B. Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.
- C. Costs for damages and work stoppage resulting from failure to adequately implement proper environmental controls are the Contractor's responsibility.

1.03 Regulatory Requirements

- A. The Contracting Officer will apply for all necessary environmental permits excluding the CSWGP. The Contractor shall comply with all permit conditions and be responsible for notifying the Contracting Officer prior to implementing any changes, modifications, or deviations from the specifications and designs provided to the Contractor previously reviewed by permit agencies as the basis for their approval.
- B. This project shall be constructed in accordance with all HIP IV General Aquatic Conservation Measures. BMPs shall be incorporated into all installations, and work sites, as required, to minimize impacts to fish, wildlife, and habitat in the immediate area. Contractor shall comply with all specific mitigation measures that are required on this project listed in the project environmental permits.



1.04 Contractor Violations

- A. If noncompliance occurs, report noncompliance to the Contracting Officer and Ecology immediately (orally), with specific information submitted in writing to the Contracting Officer and Ecology within 2 calendar days or as otherwise specified in permit documents.
- B. Nonconformance with applicable local, state, and federal laws, orders, regulations, or Water Quality Standards may result in the Contracting Officer stopping all site activity until compliance is achieved and ensured.
- C. The Contractor shall not be entitled to any extension of time, claim for damage, or additional compensation by reason of such a noncompliance work stoppage.
- D. Corrective measures required to bring activities into compliance shall be at the Contractor's expense.
- E. The Contractor shall be solely responsible for any and all fines, penalties or additional permit fees resulting from noncompliance with any applicable local, state and federal laws, orders, regulations or Water Quality Standards.
- F. Contractor shall be responsible for damages resulting from dust or spills originating from contractor operations.
- G. The Contracting Officer may stop any construction activity in violation of local, state, and federal laws. Additional expenses resulting from such a work stoppage will be responsibility of Contractor.

PART 2. PRODUCTS

A. Standard, incidental materials, products and equipment required to perform scope.

PART 3. EXECUTION

3.01 Pollution Controls

- A. Control pollutants by use of sediment and erosion controls, wastewater and stormwater management controls, construction site management practices, and other controls including State and local control requirements as included in the NPDES Permit. The NPDES Permit shall include a detailed description of the following:
 - a. Construction Site Management.
 - b. Construction equipment.
 - c. Sediment and erosion controls measures and practices.
- B. Follow the most stringent of noise restrictions whether in permits, State or local regulations.

3.02 Preservation and Restoration

- A. Preserve and restore native soil materials for site rehabilitation.
- B. If materials are moved, damaged or destroyed, replace them with a functional equivalent during site rehabilitation.
- C. Restore temporary construction access to original contours as approved by the Contracting Officer.



3.03 Protection of Wildlife and Wildlife Habitat

- A. Comply with the laws of the Washington Department of Fish and Wildlife, NOAA Fisheries, and the U.S. Fish and Wildlife Service. Conduct operations to avoid any hazards to the safety and propagation of fish and wildlife.
- B. Comply with and require that all the Contractor's employees, agents, and Subcontractors on the Project Site comply with the following:
 - a. Clean Water Act Section 404
 - b. WAC 220-660-110 to WAC 220-660-130
 - c. WAC 220-660-190
 - d. WAC 220-660-210 to WAC 220-660-220
- C. Contractor shall immediately cease operation if a sick, injured, or dead specimen of a threatened or endangered species is found in association with project activities. Care shall be taken in handling and storage of dead specimens to preserve biological material in the best possible condition for later analysis of cause of death. The handling of threatened or endangered species shall be done in accordance with applicable environmental permits.

3.04 Waste, Hazardous Waste, and Hazardous Substances

- A. Comply with all applicable federal, State, and local Laws as they pertain to the storage, handling, management, transportation, disposal, and documentation of waste, hazardous waste, and hazardous substances.
- B. Store fuel according to the current edition of the International Fire Code and all applicable federal, State, and local Laws. If total fuel and petroleum storage, in containers 55 gallons or larger, exceeds 1,320 gallons, comply with the applicable spill prevention control and countermeasures (SPCC) requirements of 40 CFR 112. If applicable, submit the professional engineer-stamped SPCC plan, 10 days before the preconstruction conference. Comply with the plan and keep a copy on site and readily available. The SPCC plan may be combined with the Pollution Control Plan.
- C. Dispose of waste at an energy recovery facility with an Ecology Permit, at a permitted landfill, or at other waste disposal facilities as required depending on the type of waste.
- D. If, during construction, unanticipated hazardous substances are discovered that threaten the health and safety of workers, the public, or the environment, do the following:
 - a. Immediately remove all affected employees and secure the area to prevent access.
 - b. Notify the Contracting Officer, Ecology, and/or other applicable regulatory agencies immediately and provide written notification within 24 hours, setting forth a description of the hazardous substances encountered.

3.05 Protection of Cultural Resources

- A. Comply with all Laws governing preservation of cultural resources. Cultural resources may include, but are not limited to, dwellings, bridges, trails, fossils, and artifacts.
- B. If cultural resources are encountered on the project area or in material sources, do the following:



- a. Immediately discontinue operations or move to another area of the project site or material source.
- b. Protect the cultural resource from disturbance or damage.
- c. Notify the Contracting Officer.
- C. If cultural resources are encountered on the Project area or in material sources, the Contracting Officer will do the following:
 - a. Arrange immediate investigations.
 - **b.** Arrange for disposition of the cultural resources.
 - c. Notify the Contractor when to begin or resume construction operations in the affected area.

3.06 Protection of Sensitive Cultural Sites

- A. Comply with and require that all the Contractor's employees, agents, and Subcontractors on the Project Site comply with all Laws applicable to the preservation and protection of sensitive cultural sites. The existence of any sensitive cultural sites affecting the project, and the mandatory preservation and protection measures applicable to the sites, are determined according to the Laws including, but not limited to, the following:
 - a. National Historic Preservation Act (NHPA) of 1966, Section 106, codified in 36 CFR Part 800 (Protection of Historic Properties).
 - b. WAC 365-196-450 (Historic Preservation).
 - c. Washington State Governor's Executive Order (GEO) 21-02 (Archaeological and Cultural Resources).
- B. Ensure protection for sensitive cultural sites according to the following:
 - a. Except as authorized by the Contracting Officer for the purpose of installing or maintaining approved sensitive cultural site protective measures, keep all persons, equipment, and materials off known sensitive cultural sites.
 - **b.** Install all sensitive cultural site protection required prior to staging equipment or starting Work near the sites.
 - c. Instruct all Contractor and Subcontractor personnel to regard the locations of these sites and their contents as confidential.
- C. The Contracting Officer has the authority to bar from the project any person entering a protected site other than for the purpose of installing or maintaining protective measures.



Section 320. Clearing and Grubbing

PART 1. GENERAL

1.01 Scope

- A. Clearing, grubbing, stockpile and disposal of trees, snags, logs, stumps, brush, shrubs, and rubbish from designated areas as instructed by Contracting Officer.
- B. Legally dispose of unsuitable, undesirable cleared material.
- C. Avoid injuring vegetation or other natural materials outside grading limits shown on the Drawings and as directed by Contracting Officer. Confine operations that may injure vegetation or other natural materials to the work area, or to areas that have already been cleared.
- D. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item, "Clearing and Grubbing."
- B. No field measurement or related unit cost of cleared acreage will be conducted or awarded during or after construction.
- C. Includes costs associated with all labor, materials, equipment, and permits required to perform scope.
- D. No separate or additional payment will be made for work zone fencing.

PART 2. PRODUCTS

A. Standard, incidental materials, products and equipment required to perform scope.

PART 3. EXECUTION

3.01 Clearing

- A. Remove trees, shrubs, brush, stumps, roots, rootwads, downed timber, branches, grass, weeds, vegetation, rubbish, riprap, rocks, and other objectionable material.
- B. Woody matter shall be disposed of on site and used as slash material in the Large Woody Material structures according to the Drawings.
- C. Trees with roots shall be knocked over with rootwads attached using an excavator or other suitable means and be removed, replanted, or disposed of as directed by the Contracting Officer.

3.02 Grubbing

- A. Grubbing is defined as removal of stumps, roots, vegetative matter, and other unsuitable materials.
- B. Grub around surfaces to be under proposed fill; areas to be excavated; and areas to be regraded.
- C. Perform grubbing in advance of topsoil stripping, excavation, and grading operations.



Section 330. Channel Excavation Inc. Haul and Dispose Onsite

PART 1. GENERAL

1.01 Scope

- A. Excavate proposed side channels and floodplain terrace to the lines, grades, and cross sections shown on Drawings and as directed by Contracting Officer.
- B. Sort and screen stream channel excavation material for potential reuse as select borrow (Section 240) or streambed boulders (Section 1080). Asotin County Conservation District (ACCD) makes no guarantee or representation by implication or otherwise, that any material available on the Project site is suitable for incorporation into any portion of the Project. No material will be considered unsuitable on the sole basis that special or additional processing or handling is required to make it suitable for incorporation into the project.
- C. Placement of suitable material excavated from side channels and floodplain terrace in permanent disposal area as shown on the Drawings.
- D. Haul and disposal of unsuitable material excavated per Section 290.
- E. The term "earthwork" will be used as a general term to designate the work included within the scope of this section.
- F. Restore areas of streambanks beyond channel limits disturbed during construction to pre-existing grades using bioengineering methods as approved by the Contracting Officer.
- G. Provide operator and equipment necessary for contingency grading adjustments as requested by the Contracting Officer.
- H. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item, "Channel Excavation Inc. Haul and Dispose Onsite."
- B. No separate or additional payment will be made for:
 - a. Excavation.
 - b. Sorting and screening of materials.
 - c. On-site disposal or haul.
 - d. Bio-engineering bank restoration.
- C. No field measurement of excavated and stockpiled material quantities will be conducted during construction.
- D. Includes costs associated with all labor, materials, equipment, and permits required to perform scope.



PART 2. PRODUCTS

- A. Standard, incidental materials, products and equipment required to perform scope.
- B. All equipment operating below the ordinary high water mark shall use biodegradable fluids and be cleaned of invasive species in conformance with the project permits and HIP IV General Conservation Measures.

PART 3. EXECUTION

3.01 General Execution

- A. Perform all operations involved in excavating, hauling, and placing of earthwork materials so no damage or detriment to the completed or partially completed work results. At all times provide sufficient drainage of completed or partially completed earthwork to prevent damage or loss due to rainfall, surface water or any other cause.
- B. In all cases, take proper precautions to ensure that embankment construction and filling do not move, endanger, or cause undue strain or stress to any structure or adjacent ground.
- C. Remove and dispose of miscellaneous matter encountered in the work as a part of the earthwork, unless otherwise specified.
 - **a.** Remove miscellaneous matter remaining exposed in slopes or at subgrade after excavation work to at least 2 feet back of the finished slope.
- D. Immediately before completing the earthwork:
 - a. Blend the tops of cutbanks with the adjacent terrain.
 - b. Remove all litter, debris, and obstructions.

3.02 Place Excavated Materials in Permanent Disposal Area

- A. Place material in dewatered or otherwise dry conditions in 12-inch loose lifts.
- B. Compaction of placed material shall be accomplished with machine tracking.
- C. On-site soils may become unworkable because of excess moisture content. To reduce moisture content, some disking and drying of the on-site soils may be required.

3.03 Contingency Grading

- A. Prior to demobilization from the site and prior to removal of any temporary crossings, the Contracting Officer may elect to have the Contractor perform some fine grading adjustments including and not limited to side channel grading, LWM structures, bioengineered bank treatments, and low-flow paths.
- B. The Contractor shall notify the Contracting Officer at least 48 hours prior to removing any temporary crossings or demobilizing from the site.
- C. The Contracting Officer will provide the scope of the Contingency Grading in writing to the Contractor for review prior to commencement of the work.
 - a. The assumed level of effort for the contingency grading is not to exceed ten (10) hours of operating a single excavator or dozer.



Section 340. Select Borrow Inc. Haul

PART 1. GENERAL

1.01 Scope

- A. Import material required beyond the excavated and screened material identified in Section 330 "Channel Excavation Inc. Haul and Dispose Onsite."
- B. Stockpile material on-site.
- C. Placement and compaction of material to create bridge ramps as shown on the Drawings.
- D. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item, "Select Borrow Inc. Haul."
- B. No field measurement of material placement quantities will be conducted during construction.
- C. Includes costs associated with all labor, materials, equipment, and permits required to perform scope.

PART 2. PRODUCTS

- A. Standard, incidental materials, products and equipment required to perform scope.
- B. Fill materials shall contain no frozen soil, sod, brush, roots, or other perishable material.
- C. Select borrow shall meet the following requirements for grading when placed in hauling vehicles for delivery to the project or during manufacture and placement into temporary stockpile. Alternate gradations may be used if proposed by the Contractor and accepted by the Engineer. The exact point of acceptance will be determined by the Engineer.

SIEVE SIZE	PERCENT PASSING	
6"	99-100	
3"	75-100	
No. 40	50 max.	
No. 200	10.0 max.	
Sand Equivalent	30 min.	

Notes:

All percentages are by weight.

PART 3. EXECUTION

- A. Import and store materials in stockpile areas previously approved by the Contracting Officer.
- B. Fill shall be placed in approximately horizontal layers. The thickness of each layer before compaction shall not exceed the maximum thickness specified. Materials placed by dumping in piles shall be spread uniformly to not more than the specified thickness before being compacted.



- C. Place material in layers no more than 1-foot thick. The Contractor shall compact each layer by routing loaded haul equipment over its entire width. If the Engineer approves, the Contractor may use end dumping to begin placing a side hill fill too narrow for hauling equipment. When the fill is wide enough, the remaining layers shall be compacted by the loaded hauling equipment. Any embankment inaccessible to large compacting equipment shall be compacted with small mechanical or vibratory compactors.
- D. The Contractor shall adjust moisture content during compaction to produce a firm, stable and unyielding embankment. The embankment shall be free from pumping and rutting due to excessive moisture and is the Contractor's responsibility to manage and adjust as necessary. The Contracting Agency will consider all costs for drying embankment material to be incidental to other Work, including excessive moisture due to inclement weather.



Section 350. Class A Rock for Erosion and Scour Protection

PART 1. GENERAL

1.01 Scope

- A. ACCD is responsible for providing Class A Rock for Erosion and Scour Protection required beyond the excavated and screened material identified in Section 330.
- B. Contractor is responsible for hauling material from onsite stockpiles to location of installation as shown in the Drawings.
- C. Installation of Class A Rock for Erosion and Scour Protection as shown on the Drawings.
- D. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item, "Class A Rock for Erosion and Scour Protection."
- B. No field measurement of material placement quantities will be conducted during construction.
- C. Includes costs associated with all labor, equipment, and permits required to perform scope.

PART 2. PRODUCTS

- A. Standard, incidental materials, products and equipment required to perform scope.
- B. Rock for Erosion and Scour Protection shall be hard, sound, and durable material, free from seams, cracks, and other defects that tend to destroy its resistance to weather, and it shall consist of broken and/or processed rock. The use of recycled materials and concrete rubble is not permitted for this application.
- C. The Suitable Shape of these rocks shall be "Angular" (having sharply defined edges) to "Subangular" (having a shape in between Rounded and Angular) for a higher degree of interlocking to provide stability to the protected area. The use of round, thin, flat, or long and needle-like shapes is not allowed. Suitable Shape can be determined by the ratio of the Length/Thickness, where the Length is the longest axis, Width is the second longest axis, and Thickness is the shortest. The Suitable Shape shall be the maximum of 3.0 using the following calculation: = ≤ 3.0 Suitable Shape.
- D. Class A Rock for Erosion and Scour Protection shall meet the following requirements for grading when placed in hauling vehicles for delivery to the project or during manufacture and placement into temporary stockpile. Alternate gradations may be used if proposed by the Contractor and accepted by the Engineer. The exact point of acceptance will be determined by the Engineer.



APPROXIMATE SIZE (IN.)1	PERCENT PASSING (SMALLER)	
18	100	
16	80-95	
12	50-80	
8	15-50	
4	15 max.	

Notes:

¹ Approximate Size can be determined by taking the average dimension of the three axes of the rock, Length, Width, and Thickness, by use of the following calculation:

$$\frac{Length + Width + Thickness}{3} = Approximate Size$$

Length is the longest axis, width is the second longest axis, and thickness is the shortest axis.

Rock for Erosion and Scour Protection shall be visually accepted by the Engineer. The Engineer shall determine the Suitable Shape, Approximate Size, and Grading of the load before it is placed. If so ordered by the Engineer, the loads shall be dumped on a flat surface for sorting and measuring the individual rocks contained in the load.

A granular filter blanket shall be placed on the prepared slope to the full thickness specified in the Drawings using methods which will not cause segregation of particle sizes within the bedding. The surface of the finished layer shall be even and free from mounds or windrows. Additional layers of filter material, when required, shall be placed using methods that will not cause mixing of the materials in the different layers.

PART 3. EXECUTION

- A. Haul material from an onsite location to where it will be installed.
- B. Place Class A Rock for Erosion and Scour Protection on 6-inch layer of granular filter according to the Drawings.



Section 470. 8' X 75' Bridge (Including Footings and railings)

PART 1. GENERAL

1.01 Scope

- A. District SE Area Engineer, registered as a professional engineer in the state of Washington, will be on site to field fit the bridge and bridge components for installation. ACCD staff engineer will oversee bridge and bridge components installation and welding and connection details.
- B. This work includes installing bridge superstructures and all related components. Related components include bridge approaches, bridge placement, railing attachment, installing abutments, installing bridge footings, excavation, backfill, and anchoring bridge superstructures to footings as required.
- C. ACCD engineer will submit shop drawings, design calculations, and load rating for superstructure of the bridge.
- D. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item, "8' X 75' Bridge (Incl. Footings)."
- B. Includes costs associated with all labor and equipment required to perform scope.

PART 2. PRODUCTS

- A. Standard, incidental materials, products and equipment required to perform scope.
- B. ACCD will provide the livestock bridge and all bridge components.

PART 3. EXECUTION

- A. Perform clearing, excavation, backfill and embankment work per sections 320, 330, 340 and 350. Construct approaches that allow a smooth transition onto the bridge. Ensure the deck surface and superstructure components are clean and free of debris until final acceptance of the project.
- B. Furnish all tools, devices, special equipment, and material needed for installation in well-marked watertight containers suitable for long-term, outdoor storage.



Section 480. Livestock Exclusion Fencing

PART 1. GENERAL

1.02 Scope

- A. ACCD is responsible for providing materials and installing new proposed livestock exclusion fence.
- B. Any existing livestock fencing removed for temporary access will be reinstalled by contractor when construction is completed.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item, "Temporary Livestock Fence Removal and Reinstall
- B. Includes costs associated with all labor, materials, equipment, and permits required to perform scope.

PART 2. PRODUCTS

- A. Standard, incidental materials, products and equipment required to perform scope.
- B. Cattle fencing shall be in accordance with United States Natural Resources Conservation Service Conservation Practice Standard 382, Fence.

PART 3. EXECUTION

- A. Installation shall be in accordance with United States Natural Resources Conservation Service Conservation Practice Standard 382, Permanent Exterior and Interior Fences.
- B. Any existing livestock fencing removed for temporary access will be reinstalled by the contractor when construction is completed.



Section 1080. Install Streambed Boulders

PART 1. GENERAL

1.01 Scope

- A. ACCD is responsible for providing all streambed boulders onsite.
- B. Contractor is responsible for hauling material from onsite stockpiles to location of installation as shown in the Drawings.
- C. Install Streambed Boulders in channel as shown on the Drawings.
- D. Restore areas of streambanks beyond channel limits disturbed during construction to pre-existing grades using bioengineering methods as approved by the Contracting Officer.
- E. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item, "Install Streambed Boulders."
- B. No field measurement of material placement quantities will be conducted during construction.
- C. No separate or additional payment will be made for:
 - a. Excavation.
 - b. Sorting and screening of materials.
 - c. On-site disposal or haul.
 - d. Bio-engineering bank restoration.
- D. Includes costs associated with all labor, equipment, and permits required to perform scope.

PART 2. PRODUCTS

- A. Standard, incidental materials, products and equipment required to perform scope.
- B. Streambed boulders may be sourced on site, upon approval by the Contracting Officer and Engineer.
- C. Streambed boulders shall be hard, sound and durable material, free from seams, cracks, and other defects tending to destroy its resistance to weather. Streambed Boulders shall be rounded to sub-angular in shape and the thickness axis shall be greater than 60 percent of the length axis. Streambed boulders sizes are approximately as follows, see Drawings for sizes specified:
- D. Streambed boulders shall be 24 inch to 48 inch In diameter. Approximate Size can be determined by taking the average dimension of the three axes of the rock, Length, Width, and Thickness, by use of the following calculation:

$$\frac{Length + Width + Thickness}{3} = Approximate Size$$

Length is the longest axis, width is the second longest axis, and thickness is the shortest axis.



- E. The grading of the boulders shall be determined by the Engineer by visual inspection of the load before it is dumped into place, or, if so ordered by the Engineer, by dumping individual loads on a flat surface and sorting and measuring the individual rocks contained in the load.
- F. Aggregates from quarries, ledge rock, and talus slopes are not acceptable for these applications.

PART 3. EXECUTION

- A. Import and store streambed boulders in stockpile areas previously approved by the Contracting Officer.
- B. Place streambed boulders in channel according to the Drawings.



Section 1090. Install Large Woody Material

PART 1. GENERAL

1.01 Scope

- A. Installation of large woody material (LWM) structures in the stream, as well as in the banks of the stream and side channels, as indicated on the Drawings and as directed by the Contracting Officer, including:
 - a. 1090 Install Flow Deflection Jam
 - b. 1090 Install Sweeper Logs
 - c. 1090 Install Bank Rootwads
 - d. 1090 Install Main Channel Single Rootwads
 - e. 1090 Install Side Channel Logs
- A. Includes excavation and stockpiling.
- B. Excavation shall be performed in accordance with Section 280 "Erosion and Sediment Control" and Section 290 "Pollution Control."
- C. ACCD is responsible for procurement of all wood materials, racking materials, pile material, and slash materials.
- D. Contractor is responsible for hauling material from onsite stockpiles to location of installation as shown in the Drawings.
- E. Includes placement of racking materials and slash materials.
- F. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the items, "1090" Install: _____."
- B. No field measurement of material placement quantities will be conducted during construction.
- C. Includes costs associated with all labor, equipment, and permits required to perform scope.
- D. Includes costs associated with excavation, backfill and bank restoration.

PART 2. PRODUCTS

2.01 Incidentals

A. Standard, incidental materials, products and equipment required to perform scope.

2.02 Whole Trees

A. Whole trees shall be imported for use in log structures. Whole trees include branches, limbs, treetops, and rootwads. Whole tree dimensions, including diameter at breast height, length and rootwad



diameter are included in Table 1090-1, below. Any trees that naturally exceed the required minimum length may be shortened so long as they meet the minimum length for each size class. Leaving trees longer than the minimum length is also acceptable.

TABLE 01090-1. WHOLE TREE DIMENSIONS

WHOLE TREE SIZE	MINIMUM LENGTH (FEET)	DIAMETER AT BREAST HEIGHT (DBH) (INCHES)	ROOTWAD DIAMETER (FEET)
Large	30	16 to 21	4.0 to 6.0
Medium	30	12 to 16	3.0 to 5.0
Small	20	8 to 12	2.5 to 4.0

- A. All trees shall be alive when harvested with the following exception. Signs of light scorching are acceptable on large trees if confined only to the outer bark. Dead, dried out, or brittle trees are not acceptable.
- B. When harvested, whole trees shall be excavated to retain the entire rootwad. Harvested trees shall be pushed over after loosening the soils around the tree roots to maximize root wad size and minimize handling damage to the tree roots and bole. Soil lodged around the roots shall be displaced to the extent practical without destroying the integrity of the roots. Contractor shall not cut limbs flush to the bole, except where needed to allow for legal and safe transport.
- C. All treetops, limbs, and other woody material created from the harvest and loading of the trees are also to be delivered to the project. These materials may be used for slash/racking as may be called for in the large wood structure Drawings or specifications. Racking and slash material must be fresh (green) and flexible, not dry and brittle.
- D. During transport to the site and staging, whole trees shall be handled with care to minimize breakage. All limbs and branches broken during harvest and transport shall be also delivered to the project and can be delivered separate from the trees. This material may be used for racking or slash, dependent on size. Racking and slash material must be fresh (green) and flexible, not dry and brittle. Trees shall be handled with care to keep logs, branches and root mass intact and to minimize breakage and damage to the tree bole.
- E. Acceptable trees may have defects such as crooks, multiple forks, bends, etc., if the tree is alive (green) when harvested and as long as minimum stem and top diameters and lengths are still met. These defects shall not affect the structural integrity of the tree, and trees that end up broken during transportation or handling as a result of these defects may be rejected by Owner's Representative or Engineer. The maximum percentage of trees with these types of irregularities shall be no more than 30 percent in any size class.
- F. Acceptable conifer species include Ponderosa Pine (*Pinus ponderosa*) and Douglas Fir (*Pseudotsuga menziesii*). Additional conifer species shall be reviewed and may be accepted by the Contracting Officer.
- G. Whole trees shall be processed into Log Types A, B, C, D, E, large racking log, and small racking log. The log type sizes, and number of the trees/wood for the proposed structures shall be in accordance with those set forth in the Drawings.
- H. All harvested trees and logs are subject to inspection by Contracting Officer or Engineer. Upon delivery, Contracting Officer reserves the right to reject any trees or logs failing to meet the specifications and requirements herein.



- I. Slash materials may be sourced on site or imported.
- J. Acceptable vertical piles shall be coniferous species (Douglas fir and ponderosa pine) and shall meet the diameter and length identified on the Drawings.

2.03 Rope Connections

- A. Rope shall be a 1.25-inch biodegradable manila rope.
- B. Staples shall be non-galvanized steel.

PART 3. EXECUTION

- A. Imported whole trees shall be marked in a manner that specifies length. Markings shall be visible around the whole tree at any one point, and can be accomplished using tree marking paint, chalk, or similar.
- B. Process whole trees into the following components:
 - a. Rootwads: Log Types A, B, and C are the rootwad end of the whole log. Log types vary by diameter at breast height and length. See log schedule in Drawings for quantities and diameters.
 - b. Tree tops: Log Types D, and E are the tops of trees. See log schedule in Drawings for quantities and diameters.
 - Racking Logs: See log schedule in Drawings for quantities and diameters.
- A. LWM Structures shall be installed as indicated above, on the Drawings and/or as guided by the Contracting Officer or their designated representative. LWM Structure installation requires on-site guidance by the Contracting Officer or their designated representative.
- B. Members shall be installed in trenches, rather than in wholesale bank excavation, to the extent possible, to promote greater resistance to flow.
- C. Piles shall be installed to the depth indicated on the Drawings in conformance with the HIP IV General Conservation Measures. Perform a pull test shall on one pile (min.) per structure using a force gauge. Pull test to indicate a minimum of 6,000 pounds of resistance. Submit record of pull tests to Contracting Officer.
- D. Racking members can be installed in and amongst the larger trees/logs.
- E. Structures shall be backfilled and compacted as each layer is installed, where there are multiple layers. The backfill will consist of the material excavated from the receiving hole and shall be compacted with construction equipment. Excess excavated material shall be removed from structure location and either placed on Project site at locations indicated on the Drawings and approved by the Contracting Officer. Structures shall be constructed, backfilled, and graded to appear natural.



Section 1100. Seeding and Mulching

PART 1. GENERAL

1.01 Scope

A. Seeding

- a. Include furnishing all labor, equipment, and materials to establish ground cover as noted on the Drawings and in the seed mix list. Any substantive variance to this specification, due to unforeseen conditions encountered on the site, weather conditions, plant availability, other construction activities, etc. must be approved by the Contracting Officer.
- b. Excludes irrigation.
- c. Areas disturbed by construction shall be seeded.
- **d.** Contractor may use either straw mulch or hydroseed mulch. The Contracting Officer shall approve type of mulch and application method prior to use.
- B. Nothing in this Section shall relieve the Contractor from full responsibility for the adequacy of protective works and compliance with permit requirements. Work shall not commence until Contracting Officer has approved.

1.02 Definitions

- A. Certified Seed A grass or legume seed named variety that has been reviewed and accepted into the Washington State Department of Agriculture (WSDA) Seed program.
- B. Establishment Period A period when planting Work has been performed and initially accepted, and there is a Contract requirement to care for the planted areas in some way until the period ends.
- C. Native Plant (existing) A variety of plant species occurring in its natural habitat without direct or indirect human actions.
- D. Noxious Weed All weeds designated by the Washington State Noxious Weed Control Board as injurious to public health, agriculture, recreation, wildlife, or all public or private property. The WSDA will be the authority in determination of noxious weed species.
- E. Pure Live Seed (PLS) The amount of living seed in the total quantity of seed when non-viable seed or non-seed material is excluded.
- F. Riparian Related to the bank, shore, or water-influenced areas of a watercourse or water body.
- G. Sensitive Areas Defined areas such as wetlands, natural water and riparian resources, special environmental zones, or where certain activities are restricted such as the use of chemicals.
- H. Specified Weeds All noxious weeds as defined above, and all plant species identified in the Special Provisions or on the Drawings as a species to be removed.
- I. Waters of the State See WAC 173-226-030 for "Waters of the State" definition.
- J. Weed A plant that is undesirable where it is growing.
- K. Weed Free For these Specifications, "Weed Free" is defined as the following maximum amount of living weeds per square yard:



- a. Zero "Type A" Noxious Weeds or weeds on the WSDA Quarantine List.
- b. One "Type B" Noxious Weed.
- c. One of each "Type C" Noxious Weed.
- L. The Washington State Noxious Weed List includes three classes of Noxious Weeds: Type "A," "B," and "C" Noxious Weeds.
- M. Weed Management Area (WMA) A defined project area with specified weeds to remove, including areas where weeds begin growing because of Project-associated ground disturbance. A WMA may be the entire Project Site or any portion, including material source and disposal sites as shown.

1.03 Payment

- A. Payment will be made at the Bid Schedule total bid amount for the item "Seeding and Mulching."
- B. No field measurement of seeding acreage quantities will be conducted during construction.
- C. Includes costs associated with all labor, materials, equipment, and permits required to perform scope.

1.04 Submittals

- A. Submit certification before application of pesticide Work begins, that when chemical weed control is used, that each applicator possesses a Washington Commercial Applicator License for pesticide application held in the individual's name. Submit a certification each time a new applicator begins application Work on the Project.
- B. Submit seed, mulch, and pesticide product information prior to arrival of materials on site.

PART 2. PRODUCTS

2.01 Seed

A. Seeding Rate—As specified in the design drawings.

2.02 Straw Mulch Material

- A. Straw mulch for non-hydroseeding applications from bentgrass, bluegrass, fescue, or ryegrass singly or in combination. Cereal grain straw from barley, oat or wheat may be allowed upon approval of the Contracting Officer. Provide straw that is not moldy, caked, decayed or of otherwise low quality. Submit certification from the Supplier that the straw is free of noxious weed seeds or plant parts. Acceptable documentation is any one of the following:
 - a. The straw source is a WSDA "Certified Seed" field.
 - b. The straw is certified by a recognized program accepted by WSDA as being weed free.
 - c. Seed lab test results of seed harvested from the straw meet minimum WSDA Certified Seed quality for weed seed content.

2.03 Water and Hydroseeding

A. Water shall be the responsibility of Contractor, unless otherwise noted. Water shall not contain elements toxic to plant life.



- B. Use of a broadcast spreader for spreading seed capable of uniformly distributing the material at the Manufacturer's specified rate for that product.
- C. Hydromulch products to be approved by the Contracting Officer prior to application.

2.04 Pesticides

- A. Submit proposed pesticides and receive approval before using.
- B. Submit a copy of the manufacturer's federal registered label and, if requested, a Material Safety Data Sheet.
- C. The Contracting Officer reserves the right to restrict chemicals from being used on sensitive areas.

PART 3. EXECUTION

3.01 Date of Seeding

- A. Areas disturbed by construction will be seeded at the end of the project prior to the onset of cold weather. Contracting Officer shall approve seeding dates.
- B. Seeding dates shall be selected to maximize growth. Seeding shall only be completed from August 15 until December 1, preferably between October and November, or as directed by the Contracting Officer.

3.02 Seedbed Preparation and Treatment

- A. Areas to be treated shall be dressed to a smooth, firm surface. On sites where equipment can operate on slopes safely, the seedbed shall be adequately loosened (4 to 6 inches deep) and smoothed. Where equipment cannot operate safely, the seedbed shall be prepared by hand methods by scarifying to provide a roughened soil surface so that broadcast seed will remain in place.
- B. If seeding is to be accomplished immediately following construction operations, seedbed preparation may not be required, as approved by the Contracting Officer, except on a compacted, polished, or freshly cut soil surface.
- C. Seedbed preparation shall be discontinued when soil moisture conditions are not suitable for the preparation of a satisfactory seedbed as determined by the Contracting Officer.

3.03 Seeding, Mulching and Stabilizing

- A. All seeding operations shall be performed in such a manner that the seed is applied in the specified quantities uniformly in the designated areas. Unless otherwise specified, seeding shall be accomplished within two days after final grading is completed and approved.
- B. Long-fibered mulch (wood and/or straw) with an appropriate tackifier to form a bonded fiber matrix applied at a rate of 3,000 pounds/acre is preferred.
- C. Seeding shall not commence until Contracting Officer has accepted the condition of the prepared areas.
- D. Seeding operations shall not be permitted when wind velocities exceed 15 miles per hour.
- E. Seed shall be sown only when the soil is moist and in proper condition to induce growth. No seeding shall be done when the ground is unduly wet, or otherwise not in a tillable condition.



3.04 Acceptance

- A. Contractor retains all ownership and responsibility for seeding until written acceptance by Contracting Officer. Contracting Officer will accept the seeding when:
 - a. The application or installation is complete.
 - b. Documentation is complete.
 - c. Verification of the adequacy of all repairs, including associated vegetation, is complete.
 - d. The required written seed certification documents have been received by Contracting Officer.

