Sweetwater Creek Floodplain Restoration
Reach 3
Final Design

Prepared for:
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Lapwai, ID 83540

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APPENDIX A – TECHNICAL SPECIFICATIONS

APPENDIX B – PROJECT DRAWINGS
# Acronyms and Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>ABA</td>
<td>Acid-Base Accounting</td>
</tr>
<tr>
<td>BF</td>
<td>Brush Fascine</td>
</tr>
<tr>
<td>BMPs</td>
<td>Best Management Practices</td>
</tr>
<tr>
<td>CGP</td>
<td>Construction General Permit</td>
</tr>
<tr>
<td>EC</td>
<td>electrical conductivity</td>
</tr>
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<td>ITD</td>
<td>Idaho Transportation Department</td>
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<td>Max</td>
<td>maximum</td>
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</tr>
<tr>
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<td>millimeter</td>
</tr>
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<td>Occupational Safety and Health Administration</td>
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<tr>
<td>PPE</td>
<td>personal protective equipment</td>
</tr>
<tr>
<td>USDA</td>
<td>U.S. Department of Agriculture</td>
</tr>
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<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
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SPECIAL PROVISIONS

This section of the Construction Documents describes the Project and details the Work required to implement the Sweetwater Creek Reach 3 Floodplain Restoration Project (Project) as shown on the Drawings. The Technical Specifications for each component of the Project are referenced below and are taken from the Idaho Standards for Public Works Construction (ISPWC), 2012 Edition. Refer to Appendix A of this document for a list of applicable Technical Specifications. Any special conditions applicable to this Project are also identified. Addenda issued after these documents have been published shall supplement and/or supersede these construction documents. For any discrepancies between the Special Provisions and the Technical Specifications, the Special Provisions will govern. For any discrepancies between the Special Provisions and the Drawings, the most stringent and detailed provisions shall govern.

Section 1.0  Project Description

The Project, referred to as the Sweetwater Creek Reach 3 Floodplain Restoration Project, is located on Webb Road on the Nez Perce Tribe Indian Reservation in Nez Perce County, upstream from Sweetwater, Idaho and north of U.S. Highway 95. Sweetwater Creek, a tributary to the Clearwater River, is the stream of interest for the Project. The purpose of the Project is to restore fish habitat, floodplain function, natural stream function, and native plant communities. Invasive weed control at the Project Site is an additional objective.

In general, the Project consists of the following activities: channel relocation using channel diversion structures and ditch plugs, filling sections of old channel, excavation of new channel segments, installation of off-channel habitat, installation of in-stream habitat structures and logs, construction of bank treatments, floodplain grading, and control of invasive weeds.

Section 2.0  Health and Safety Plan

Contractor and all on-site personnel, including all Subcontractors and their employees, under Contractor’s supervision shall comply with all US Department of Labor Occupational Safety and Health Administration (OSHA) Regulations.

Contractor shall prepare and submit to Owner a Site-specific Health and Safety Plan in accordance with these Special Provisions, Section 16.0 – Submittals. Contractor shall prepare the Health and Safety Plan in accordance with the following OSHA standard practices: Safety and Health Standards 29 CFR 1926 (General Industry and Construction Industry). At a minimum, the Health and Safety Plan shall address the following elements: staff organization, responsibilities, and authorities; Site description and identification of hazards; hazard analysis for each Project task and operation; required general and Site-specific training; personal protective equipment (PPE); medical surveillance; personal and environmental exposure monitoring; standard operating safety procedures, engineering controls, and work practices (including a prohibition of single person work crews); communications; illumination; Site control measures; personnel hygiene; emergency equipment and first aid; emergency response and contingency procedures; and logs, reports, and record keeping. The Health and Safety Plan shall include a discussion of training, safety procedures, training certificates, and other requirements necessary to educate all workers and Subcontractors used on the Project.
Contractor shall address all specific safety and operational issues in the Site-specific Health and Safety Plan. At a minimum, Contractor shall comply with the following general safety requirements at all times:

- Contractor’s employees and Subcontractor’s employees shall not operate mobile phones while driving.
- Contractor’s employees and Subcontractor’s employees shall obey all posted speed limits when driving on public roads.
- Contractor’s employees and Subcontractor’s employees shall wear safety belts at all times when driving a vehicle or operating equipment.
- First aid kits and fire extinguishers are required in all field vehicles and equipment.
- No drugs, alcohol, or firearms are allowed on site or in employees’ vehicles.

Section 3.0 Site Controls and Stormwater Management

Contractor shall inspect construction equipment daily for leaks, seeps, and general condition. Any leaks of fuel, oil, lubricants, hydraulic fluid, or other fluids will be repaired before equipment is used for further work. Every vehicle used on the construction Site will have absorbent materials capable of absorbing a minimum of 10 gallons of fuel, oil, or hydraulic fluid on board.

Site security and public safety shall be the responsibility of Contractor. Contractor shall limit public access to the Site during construction. At a minimum, this includes installation of temporary construction fence at the construction access points off of Webb Road.

Contractor shall document, provide, install, and maintain all necessary Best Management Practices (BMPs) that will be used during construction activities for erosion control and stormwater management purposes. All BMPs installed by Contractor shall meet the applicable requirements of the Drawings, Special Provisions, Technical Specifications, and permits. Depending on actual Site conditions encountered during construction, additional BMPs may be necessary to complete the Work. Contractor shall install any additional BMPs at Owner’s discretion and in accordance with the guidance documents listed below:

- U.S. Environmental Protection Agency (USEPA), Storm Water Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practices, October 1992.

Contractor shall obtain and comply with all provisions of the USEPA 2017 Construction General Permit (CGP). Refer to the following website for information on the 2017 CGP, including guidelines on how to apply for and obtain permit coverage: https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents

Section 4.0 Quality Control/Quality Assurance

Quality control in order to assure that construction complies with the requirements of the Project Drawings, Special Provisions, and Technical Specifications is the responsibility of Contractor.
Quality assurance is the responsibility of Owner. Owner will perform quality assurance in the form of construction oversight and additional testing, as necessary, to ensure that the Work performed by Contractor meets all applicable requirements.

Specific Contractor quality control testing, sampling, and analysis requirements, if applicable, are described for each Work Item in the Work Description paragraph of these Special Provisions and/or in the Technical Specifications. Contractor shall be responsible for overall management of the construction quality. All submittals shall be reviewed and approved by Owner in accordance with Section 16.0 of these Special Provisions.

Construction grade tolerances shall be as specified below, unless noted otherwise in the Plans. Final grade for the floodplain surfaces shall be plus or minus 0.5 feet to allow for decompaction and surface variability as stated below. Final elevations shall be plus or minus 0.2 feet for all in-stream and streambank structures. Locations of structures noted on the plans are approximate and can be field fitted to accommodate existing mature vegetation or as approved by Owner. It is Contractor’s responsibility to construct to the established tolerances. Work resulting in grades and alignments not within the specified tolerances will be rejected. Contractor shall remove the rejected or defective Work and complete the Work to the specified requirements or tolerances at Contractor’s expense.

Section 5.0 General Work Description

General:
Contractor assumes full and sole responsibility for the capability of selected construction techniques to complete the Work in accordance with the Contract Documents. Contractor also assumes full and sole responsibility for safety and environmental protection with the selected construction techniques. Review of submittals by Owner in no way relieves Contractor of these responsibilities.

Contractor shall respect all right-of-way boundaries and shall protect from damage all monuments, utility poles, overhead power lines, wells, culverts, bridges, and other features existing on or near the Site. Contractor shall protect property corners, section corners, and highway monuments. All such disturbed survey monuments shall be reset by a Professional Land Surveyor licensed in the State of Idaho at no additional cost to Owner.

Contractor shall maintain existing drainage patterns unless otherwise specified in the Drawings or these Special Provisions.

Existing improvements, surfaces, and vegetation that are to be protected or are to remain, which are subsequently disturbed or removed, shall be replaced to conditions as good as or better than those encountered at Contractor’s expense. Existing native vegetation shall be retained and protected to the extent possible.

Contractor shall contain and store all solid and liquid wastes generated by or used during construction activities in a neat and orderly manner at an approved storage area. Contractor shall dispose all liquid wastes off site in a legal manner. Liquid wastes may include, but are not limited to grease, used motor oil, and sanitary waste. Store and handle all wastes in accordance with applicable regulations. All spills shall be reported to Owner and cleaned up immediately.
Contractor shall remove all solid wastes from the construction area upon completion of the Work and dispose at a licensed landfill.

No littering will be allowed in the construction area (see Special Provisions, Section 11.0, Site Cleanup). Contractor shall provide and maintain suitable garbage receptacles at the staging area and other locations within the construction area as appropriate. The garbage receptacles shall be covered and physically secured to prevent loss of contents by weather, wildlife, or vandalism. Contractor shall empty the garbage receptacles as needed and ensure that the garbage is properly disposed of at a licensed landfill facility. Contractor shall inform employees and Subcontractors of the locations of the garbage receptacles, instruct them not to litter, and require that all garbage generated on site be properly disposed.

**Permits:**

Owner shall be responsible for stream construction-related permits and will provide copies of relevant information prior to the start of construction. Contractor shall obtain required general construction permits for the Work prior to starting construction. All costs necessary to obtain and comply with applicable permits are considered incidental to the Work. Copies of all permits shall be submitted to Owner prior to initiating construction activities.

**Facilities:**

Contractor shall provide necessary mobile office and sanitation facilities for Contractor’s operations. Contractor shall locate facilities at the Site and as approved by Owner.

**Utility Protection:**

Overhead power lines and telephone lines, and buried power lines, telephone lines, water lines, gas lines, and sewer and septic lines may be present within the construction area. Utilities identified on the Drawings are in approximate locations and may not identify all utilities present at the Site. Contractor shall locate all utilities within the work area prior to starting construction. Call Idaho’s Dig Line, Inc. at 800-342-1585 or 811 at least two (2) working days prior to starting construction. Contractor shall locate and protect all utilities and repair at Contractor’s expense any damage to utilities caused by Contractor.

Contractor shall provide copies of all written communications with the utility owner(s) to Owner. Contractor shall notify the appropriate utility owner(s) at least five (5) days in advance of excavating near any utility within the construction area. Contractor shall meet and coordinate with the appropriate utility representatives to determine exact locations, crossing requirements, and schedules. Contractor shall provide Owner at least 48 hours advance notice of meetings scheduled with utility owner(s).

Contractor shall notify Owner of all buried utilities encountered during the Work and shall not backfill the area until the type, size, and location of the utility is recorded and mapped.
Section 6.0  General Measurement and Payment

General:
The total price for each Bid Item of the Contract shall cover all work shown on the Drawings and required by the Special Provisions, Technical Specifications, and other Contract Documents. All costs in connection with the Work, including furnishing all materials, equipment, supplies, and appurtenances; providing all construction equipment, tools, and incidentals; and performing all necessary labor and supervision to fully complete the Work, shall be included in the unit and lump sum prices bid. No item that is required by the Contract Documents for the proper and successful completion of the Work will be paid for outside of or in addition to the prices submitted in the bid.

Measurement of all Unit Price Bid Items will be made by Owner unless noted otherwise.

Contractor shall backfill unauthorized excavation in accordance with the appropriate Technical Specifications at Contractor’s expense. Unauthorized excavation consists of removal of materials beyond the indicated removal areas, subgrade elevations, or dimensions without approval of Owner.

Estimated Quantities:
All estimated quantities provided on the Bid Form (Table 1) and Materials List (Table 2) are approximate and are to be used only as a basis for estimating the probable cost of Work and for the purpose of comparing the Bids submitted for the Work. The actual quantity of Work performed may differ from the estimated quantities. The measurement method for determining final payment for each Bid Item will be by the Actual, Design, or Lump Sum Quantities, as described below and as shown on the Bid Form. Contractor will make no claim for damages, cost of materials, anticipated profits, or otherwise on account of any difference between the amount of Work actually performed and the estimated amount herein, unless disputing a Design Quantity Bid Item (see below).

Design Quantities denote the final number of units to be paid for under the terms of the Contract. They are based upon the original design data available prior to the project’s advertisement. Original design data include the preliminary survey information, design assumptions, calculations, drawings, and the presentation in the Contract. Changes in the number of units DESIGNATED ON THE BID FORM may be authorized under any of the following conditions:

1. Changes in the Work authorized by Owner.
2. A determination by Owner that errors exist in the original design that cause a Bid Item quantity to change by 15 percent or more.
3. A written request by the Contractor submitted to Owner showing evidence of errors in the original design that cause the Bid Item quantity to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designed quantity is in error.

Actual Quantities are determined from measurements of completed work. Measurement will be made by Owner and/or Owner’s authorized representative.
Lump Sum Quantities denote one complete unit of work as required by or described in the Contract, including necessary materials, equipment, and labor to complete the job. Lump Sum Bid Items based upon estimated quantities are not subject to adjustment for actual quantities. The lump sum price reflects a reasonable compromise of the Owner and Contractor’s risk that the actual material quantity may be higher or lower than the estimate.

All estimated quantities designated as cubic yard shall be considered “bank” cubic yard unless otherwise noted. An excavated “bank” cubic yard is the quantity of material removed as measured in its original position.
Table 1.  Bid Form

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Table 1. Bid Form

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TOTAL BID $
Table 2. Materials List

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Abbreviations: CDS = Channel Diversion Structure; DP = Ditch Plug; FA = Fill Area; DC = Design Channel; OCH = Off-channel Habitat; RA = Regrade Area; UVRA = Undesirable Vegetation Removal Area; HS = Habitat Structure; CSWS = Channel-spanning Wood Structure; SW = System of Wood, BF = Brush Fascine
Section 7.0  Incidentals

The Work Description, Measurement, and Payment section below does not necessarily name all the incidental items and tasks required by the Contract Documents to complete the Work. Incidentals are Work activities, labor, materials and/or tools, and equipment necessary to complete the Work for which there is no additional charge to Owner. The cost of all such incidentals shall be included in the various related Bid Item(s).

Two known incidentals to the Work are described as follows.

Harvest Alluvium:

Harvest of native alluvium from Sweetwater Creek involves excavation of river rock material from banks, exposed point bars, and bed from the existing channel. Refer to the Drawings (Sheet C2 and Sheet C3) for approximate alluvium harvest areas/locations. Exact locations for alluvium harvest will be determined in the field by Owner. Material shall be excavated in dewatered conditions only. Material may be sourced from wetted locations after dewatering and fish removal operations are complete in accordance with Bid Item 5 – Water Management. Bed material should be harvested in as few areas as possible. It is preferable to dig deeper in fewer spots than to harvest at the surface only across a larger area. Alluvium shall meet as closely as possible the Stream Channel Substrate gradation in Bid Item 9 – New Channel Construction and shall be approved by Owner.

Alluvium material harvested will be used for constructed channel substrate (Bid Item 9 – New Channel Construction) and will be incidental to Bid Item 9.

Meetings:

A pre-construction meeting with the Owner is mandatory. Owner will coordinate with Contractor the date and time of the pre-construction meeting. The pre-construction meeting is expected to be held during or after the Mobilization to the site. Contractor MUST complete this meeting before proceeding with the work. The meeting will cover submittals, equipment, Contractor’s work plan, pay application process, quantity tracking, staging, haul routes, and more.

Weekly construction meetings with the Owner are mandatory. Weekly construction meetings will occur throughout construction on each Tuesday at 9 AM. It is anticipated that these meetings will take no longer than one hour and only the Contractor’s superintendent is needed, but others are encouraged to attend. Contractor shall be prepared to update Owner on construction progress. These meetings may also cover design changes, pay application status, submittal review status, and any questions between Owner and Contractor that need clarification.
Section 8.0 Work Description

Contractor shall perform the Project Work described below.

8.1 Bid Item No. 1: Mobilization, Demobilization, Bonding, and Insurance

Applicable Technical Specifications:
Section 1001 – Construction Site Management
Section 1002 – Construction Site Housekeeping
Section 2010 – Mobilization

Applicable Drawings:
Sheet CS – Cover Sheet
Sheet G2 – HIPIII Measures
Sheet C1 – Existing Site Layout & Sheet Index

Work Description:
This Bid Item includes all the Work necessary for the movement of personnel, equipment, supplies, and incidentals to and from the Project Site. This Bid Item includes preparing, moving, and setting up structures and equipment for on-site facilities; establishing and decommissioning the staging area(s) and Contractor’s facilities; removing all construction garbage, equipment, leftover material, and incidentals from the Site; decontaminating equipment prior to demobilizing from the site; and all other work and operations that must be performed or costs incurred before beginning Work on the various items on the construction area. Mobilization and demobilization costs for subcontracted work shall be included in this Bid Item. Contractor’s cost for administration, bonding, insurance, and other documents shall be included in this Bid Item, and no separate payment will be made.

This Bid Item also includes the Work necessary to prepare, implement, maintain, and conduct the provisions discussed below in (1) Staging Areas, (2) Road Protection and Maintenance, (3) Weed Control, and (4) Site Controls. Contractor shall include the cost for all materials, labor, and equipment necessary to complete the work for this Bid Item, and no separate payment will be made.

(1) Staging Areas: Equipment and materials staging areas shall be established in locations approved by Owner. Contractor shall limit equipment and materials storage to the staging areas, unless specifically approved by Owner. Contractor will be responsible for security of the staging area, hazardous material containment and cleanup, weed control, and drainage and erosion control. Contractor shall designate a refueling area within the staging area that is an Owner-approved distance from Sweetwater Creek. Immediately following completion of the Project, the staging area shall be thoroughly cleaned of all trash and debris and restored to pre-project condition as approved by Owner. Staging areas are to be established and
decommissioned at location(s) identified in writing by Contractor to Owner prior to commencement of staging.

(2) **Road Protection and Maintenance:** Contractor shall take all necessary precautions to prevent damage to all roads including city, state, and county roads during construction due to heavy vehicle loading (including bridges and cattle guards). All such precautions shall be approved by Owner and, as appropriate, Idaho Transportation Department (ITD) and Nez Perce County. Contractor shall repair any damage resulting from construction activities.

(3) **Weed Control:** Contractor shall control the spread of invasive weeds onto and from the Site. Contractor shall:

- Establish a weed decontamination area at each entrance to the Site;
- Decontaminate construction equipment to prevent the spread of invasive weeds by cleaning with high-pressure water before moving equipment into or away from the Site;
- Decontaminate each piece of equipment used coming from established haul and access routes each time it enters the Site if it has been used at sites other than the construction area since it was last decontaminated;
- Clean all wheels, tracks, undercarriages, fenders, blades, buckets, and the exterior body of vehicles/equipment prior to entering the Site;
- Decontaminate equipment if used in area with invasive weeds (for example, if a dozer is used to strip cover from an area with invasive weeds it should be decontaminated before being used elsewhere on the Site);
- Owner will mark areas within and adjacent to the Site having large weed populations and Contractor shall restrict vehicle travel through these areas, including walking traffic and light duty vehicles;
- Provide a parking area for Contractor, employees, suppliers, Owner, and other persons in an area free from weed infestations; and
- Provide training for all employees on weed control methods and vehicle decontamination procedures.

(4) **Site Controls:** Contractor shall inspect all equipment and vehicles daily and repair any seeping or leaking grease and/or oil prior to entering the Project Site.

(5) **Traffic Control Plan:** Contractor is responsible for implementation of traffic control measures throughout the Site and other areas as necessary to safely complete the Work and facilitate required construction operations. Contractor shall be responsible for providing adequate safe guards, safety devices, temporary signs, protective equipment, flaggers, and any other needed actions to protect the life, health, and safety of the public and to protect property in connection with the performance of Work covered by the Contract. Contractor shall be responsible for providing traffic controls appropriate to the
type, size, and usage of equipment employed by the Contractor and maintain all public roads and travel ways in a safe and passable condition. Contractor shall be responsible for implementing and maintaining traffic control throughout the Project, but shall not leave traffic control in place to affect traffic flow when not required for construction. All signs and other traffic control devices shall be in accordance with Manual of Uniform Traffic Control Devices (MUTCD) requirements.

Contractor shall prepare and submit a Traffic Control Plan in accordance with Section 15.0, Submittals. The Traffic Control Plan shall include lighting, signage, and navigation issues as needed. The Traffic Control Plan shall be approved by Owner and County Highway District before any work on the Project commences.

Materials:
- Contractor shall provide all materials necessary to complete the Work as specified.

Execution:
Work includes, at a minimum:
- Mobilize to and demobilize from the Site with all necessary materials, equipment, and personnel to complete the Work.
- Provide insurance and bonding for the Contract.
- Mobilize and demobilize for subcontracted work.
- Protect and maintain public roads during construction.
- Attend pre-construction meeting and weekly construction meetings with Owner.
- Coordinate with other Work items, as necessary.
- Construct, maintain, and decommission staging area(s).
- Install, maintain, and decommission decontamination area(s).
- Establish and maintain appropriate refueling areas.
- Clean equipment prior to transport to and from the Site to prevent importation or exportation of invasive weeds.
- Inspect all equipment daily, repair any leaks, and remove as necessary grease, oil, or contaminated material.
- Properly dispose of liquid and solid wastes from the construction area.
- Provide, maintain, and remove Contractor structures and sanitation facilities.
- Provide, maintain, and remove trash receptacles.
- Dispose of all trash, garbage, and other waste materials generated by Contractor.
- Repair all property damage caused by Contractor.
- Prepare, submit, and implement a Traffic Control Plan.
- Provide and maintain traffic control measures throughout the Project as necessary to safely complete the Work.
- Remove traffic control measures if not needed during any work shutdown and upon completion of the Work.
- Provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.

Measurement:
No direct measurement for Bid Item 1 – Mobilization, Demobilization, Bonding, and Insurance, will be made.

**Payment:**

Payment for Bid Item 1 – Mobilization, Demobilization, Bonding, and Insurance, will be based on the lump sum price bid as shown on the Bid Form of the Contract Documents. Fifty percent (50%) payment for this Bid Item will be allowed once Contractor submits Bonds and Insurance Certificates, fully mobilizes to the Site, and obtains approval on all submittals required before starting construction. Full payment for this Bid Item will be allowed once Contractor completes the Work for the remainder of the Contract, completes final cleanup work, and fully demobilizes equipment and materials from the Site. **THE LUMP SUM BID PRICE FOR THIS BID ITEM MUST NOT EXCEED TEN PERCENT (10%) OF THE TOTAL BID PRICE.**

### 8.2 Bid Item No. 2: Stormwater BMPs

**Applicable Technical Specifications:**

Section 1001 – Construction Site Management  
Section 1002 – Construction Site Housekeeping  
Section 1003 – Sediment Collection  
Section 1007 – Slope Stabilization  

**Applicable Drawings:**

Sheet G2 – HIP III Measures  
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)  
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)

**Work Description:**

This Bid Item includes all the Work necessary for installation of all BMPs as identified by applicable permits, jurisdictions, and as requested by Owner. Contractor shall prepare and submit an Erosion and Sediment Control Plan to Owner prior to the start of construction in accordance with Section 16.0, Submittals. Contractor shall perform this Work in accordance with the Technical Specifications, Division 1000 – Construction Stormwater BMPs. Contractor shall inspect BMPs at least once every work day and within 24 hours of a storm event that results in runoff. BMPs shall be immediately maintained and repaired, as necessary, to remain in compliance with their intended function and capacity as specified in Contractor’s Erosion and Sediment Control Plan. Contractor shall remove all BMPs at the end of the Work, unless otherwise requested by Owner or specified herein. **Contractor shall maintain all BMPs that are installed for the duration of the Project. A stop work order may be issued if Contractor fails to install and maintain adequate sediment control BMPs.**

**Materials:**

- Contractor shall provide all materials necessary to complete the Work as specified.

**Execution:**
Work Includes, at a minimum:

- Prepare, submit, and implement an Erosion and Sediment Control Plan to Owner.
- Supply, install, and maintain BMPs as needed.
- Remove all BMPs (unless permanent structures) upon completion of the Project or when requested by Owner.
- Provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work.

Measurement:
There will be no direct measurement for Bid Item 2 – Stormwater BMPs.

Payment:
Payment for Bid Item 2 – Stormwater BMPs, will be made at the lump sum price as shown on the Bid Form of the Contract Documents. This lump sum price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

8.3 **Bid Item No. 3: Provide Water**

Applicable Technical Specifications:
Section 1001 – Construction Site Management
Section 1002 – Construction Site Housekeeping

Applicable Drawings:
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)

Work Description:
This Bid Item covers all Work necessary to obtain, provide, and apply water for dust control and moisture conditioning for compaction during filling operations. Following construction of new channels and placement of alluvium in accordance with Bid Item 9 – New Channel Construction, water shall be required to “wash in” fines in the new channel. The purpose is to allow fines to soak into interstitial spaces in alluvium to seal the streambed and to prevent excess turbidity when water is reintroduced naturally during the first runoff event following construction. This Bid Item also covers all Work necessary to provide water for new vegetation throughout the duration of the Project. New vegetation will be provided by Contractor under Bid Item 19 and installed by Owner. Contractor shall coordinate with Owner on deliveries, staging, and on revegetation activities through the course of the project. Contractor shall provide and have available at all times during construction one truck capable of spreading water uniformly across the surface to be watered and equipped with spray nozzles capable of water for fire suppression to the satisfaction of the Owner. If pumping from Sweetwater Creek, contractor shall secure water right permit from Idaho Department of Water Resources (if required) and provide a pump with a screened inlet for pumping water from the river. Pump water inlet must have a 3/32-inch mesh screen or other Government-approved device to prevent fish entrainment or impingement. Contractor shall ensure that water truck has capacity and water supply sufficient to complete the
Work specified herein (minimum 3,000 gallon tank). Contractor shall ensure that all water supply and watering equipment are prepared and readied for use prior to beginning any Work and remain available continuously throughout the project. Contractor shall indicate the source of water to be used to the Owner prior to start of construction. All necessary permits must be obtained if water is to be obtained from a non-commercial local source. Quantity of water and duration will be dependent on current weather conditions during construction. It is estimated that a minimum of 1 full tank of water will be used daily once revegetation efforts begin.

Materials:
- Contractor shall provide all materials necessary to complete the Work as specified.

Execution:
Work Includes, at a minimum:
- Contractor shall propose a water source location(s) prior to start of construction. Contractor must obtain necessary permits for water withdrawals from waterbodies;
- Contractor shall be responsible for dust control during the Work;
- Apply water for dust control on dust-generating surfaces as often as necessary to prevent visible dust and as requested by the Owner at the construction area on all gravel and/or dirt haul roads and routes and at locations identified by the Owner or specified elsewhere in these Special Provisions;
- Apply water at the locations and in the amounts needed to properly complete the Work;
- Apply water to subgrades, embankments, and backfill in quantities and a manner to ensure that the subgrade, embankment, and backfill are compacted in accordance with these Special Provisions; and
- Water plants during storage and upon installation by Owner. Contractor shall also maintain plant hydration throughout the construction project. Coordinate with Owner on revegetation during the work.

Measurement:
There will be no direct measurement for Bid Item 3 – Provide Water.

Payment:
Payment for Bid Item 3 – Provide Water, will by the lump sum price bid as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

8.4 Bid Item No. 4: Temporary Access Routes

Applicable Technical Specifications:
Section 1001 – Construction Site Management
Section 1002 – Construction Site Housekeeping

Applicable Drawings:
n/a
Work Description:
In the project area, the location and layout of temporary access routes to the project features shall be selected by the Contractor and approved by Owner. For these temporary access routes minimal to no construction by the Contractor is expected. Minor filling of holes may be required. Decompaction of access routes will be necessary after construction. Decompaction promotes water infiltration, improves air movement through the soil, and helps establishment of vegetation.

Contractor shall minimize tracking across the farm field by utilizing no more than two access points off Webb Road. Travel along the project Site should be restricted to the western-most edge of the farm field.

Established native vegetation in the floodplain and existing channel shall be retained and protected. Contractor shall not cause unnecessary harm or destruction to existing vegetation. Minimize haul routes to the existing channel as needed. Coordinate with Owner on vegetation to be protected and on revegetation.

Once the design channel is fully constructed and flowing water is introduced into the design channel, Contractor shall provide one temporary river crossing structure as approved by the owner.

Materials:
Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.

Execution:
Work includes, at a minimum:

- Contractor shall select the location and layout of meadow area temporary access routes to the project features, to be approved by the Owner.

- Contractor shall minimize the total length of temporary access routes in an effort to prevent unnecessary disturbance of existing farm field and riparian areas. Temporary access routes shall be utilized only as required for adequate movement around the Site to complete the specified Work.

- Protect and retain existing native vegetation.

- Contractor shall provide, install, and remove a temporary river crossing structure as necessary to complete the Work. Crossing shall be a bridge of the span, length, width, height, and size to facilitate the Work as described herein and with a design load rating that exceeds the loadings needed to accommodate the equipment necessary to perform the Work as described herein. Prior to beginning construction, Contractor shall prepare and submit to Owner a plan for installation and removal of temporary river crossings in accordance with Section 16 – Submittals. Locations for temporary river crossings shall be proposed by Contractor and approved by Owner prior to installation. Crossing within the water shall not be accepted as a temporary crossing method. Upon removal of temporary crossing, Contractor shall completely restore impacted area to the design condition.
Upon completion of the project, Contractor shall decompact the full length and width of temporary access routes within the riparian area. Decompaction shall consist of loosening all of the soil in the utilized construction access road and temporary access route footprint to a minimum depth of 6 inches.

No decompaction Work shall be done during wet weather or when the ground is frozen or otherwise unsuitable as determined by the Owner.

Access route segments within the riparian area shall be decompacted and covered with slash in accordance with Bid Item 6b – Provide and Place Slash.

**Measurement:**
No measurement for Bid Item 4 – Temporary Access Routes will be made.

**Payment:**
Payment for Bid Item 4 – Temporary Access Routes will be made at the lump sum price as shown on the Bid Form. This lump sum price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

### 8.5 Bid Item No. 5: Water Management

**Applicable Technical Specifications:**
Section 205 – Dewatering

**Applicable Drawings:**
Sheet G2 – HIPIII Measures
Sheet C9 – Dewatering Plan & Suggested Work Sequence

**Work Description:**
This Bid Item describes the Work required to provide and install channel dewatering systems, provide water control, and provide work area isolation and dewatering for construction. Water management is needed to dewater portions of the existing Sweetwater Creek channel to build Fill Areas (Bid Item 11), In-Stream Habitat Structures (Bid Item 12), Channel Diversion Structures (Bid Item 14), and install Ditch Plugs (Bid Item 15).

Work conducted under this Bid Item shall conform to all applicable local, state, and federal permits regarding in-stream Work. To the extent possible, the Contractor shall complete as much of the Work in non-flowing water separated from streamflow. This includes Work for Bid Item No. 9, New Channel Construction, Bid Item No. 12, In-Stream Habitat Structures, Bid Item No. 13, Brush Fascine, Bid Item No. 14, Channel Diversion Structure, and Bid Item No. 15, Ditch Plugs.

Individual channel dewatering and diversions shall be implemented for the in-stream habitat structures that are located within the existing Sweetwater Creek stream channel. Each specific work area shall be segregated and pumped free of water. Sediment shall be controlled as specified in Bid Item No. 2, Stormwater BMPs. Sediment release and turbidity requirements shall follow all applicable permits and jurisdictions.
Coordination of this Work with the Owner will be necessary as the Owner conducts fish salvage operations in the dewatered river section. Fish salvage may cause delay of in-stream work by up to nine (9) calendar days. Owner will install fish isolation features as appropriate upstream and downstream of dewatering area before dewatering begins.

Only one river segment shall be dewatered at any one time.

Contractor shall submit to Owner its Water Management Plan in accordance with the Submittals section of these Special Provisions. Water management shall be executed in accordance with the Water Management Plan, the Drawings (Sheet C9), and as described below. Flows in Sweetwater Creek during the constructed period may vary. Historical records indicate they may be between 7 cfs and 20 cfs.

Materials:

- Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.
- Contractor shall provide a coffer dam, water control device(s), and pumps as needed for water reduction and water adjustment during fish salvage operations.
- Contractor shall provide water control devices (sandbags, ecology blocks, bulk bags, etc.) that allow for water isolation around project features at the Site.
- Contractor shall provide pump(s) capable of completing the Work described herein. Pump water inlet must have a 3/32-inch mesh screen or other Owner-approved device to prevent fish entrainment or impingement.

Execution:

Work includes, at a minimum:

- Contractor shall refer to the Drawings (Sheet C9) for approximate locations of channel dewatering structures.
- Contractor shall implement a water control device(s) and reduce or increase flow in the existing channel as approved by Owner.
- Enhance and upgrade the existing channel as required to keep all flowing water out of work zones.
- Contractor shall provide water reduction by approximately 1/3 to 2/3 of the initial flow on the first day of dewatering. In coordination with the Owner, water level shall be reduced to nearly dry (isolated pools) on the second or third day. Contractor shall have the capability to adjust the water control device to provide more or less water into the dewatered reach as requested by Owner. Upon completion of fish salvage operations, and upon approval by Owner, Owner can begin work in the dewatered reach.
- Contractor shall coordinate and work closely with Owner to provide dewatering and rewetting as requested as they conduct fish salvage in the dewatered reach and to control water and sediment flowing in the constructed channel.
- Contractor shall receive from Owner approval of constructed project features in the design channel alignment prior to diverting water into the design channel alignment.
• Water shall be diverted into the design channel alignment as requested by Owner. Do not divert water into the new channel until the following work is completed: Bid Item No. 9, New Channel Construction, Bid Item No. 12, In-Stream Habitat Structures, Bid Item No. 13, Brush Fascine, Bid Item No. 14, Channel Diversion Structures, and Bid Item No 15, Ditch Plug.

• Contractor shall provide isolation dewatering of the existing Sweetwater Creek channel if work is to be conducted in flowing water and as needed to build In-Stream Habitat Structures (Bid Item 12).

• Contractor shall coordinate isolation dewatering in the Sweetwater Creek existing channel with the Owner as they conduct fish salvage.

• Contractor shall use a pump or other Owner-approved water reduction measure to draw down water from the isolation areas at a rate and to a level that is accepted by the Owner.

• Contractor shall coordinate this Bid Item with Bid Item 12 – In-Stream Habitat Structures, Bid Item 14 – Channel Diversion Structures, and Bid Item 15 – Ditch Plugs.

• Conform to all applicable permits and regulations set forth for this project as provided by the Owner.

Measurement:
No measurement for Bid Item 5 – Water Management will be made.

Payment:
Payment for Bid Item 5 – Water Management will be by the lump sum price bid as shown on the Bid Form of the Contract Documents.

8.6 Bid Item No. 6: Provide Logs and Slash

Applicable Technical Specifications:
Section 201 – Clearing and Grubbing and Removal of Obstructions

Applicable Drawings:
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Sheet C8 – Floodplain Roughness Plan

Work Description:
This bid item is separated into Bid Item 6a – Provide Logs and Bid Item 6b – Provide and Place Slash.

This Bid Item includes all Work necessary to procure trees and slash and to stockpile those materials which are suitable as floodplain roughness on several Bid Items and for use in habitat structures in accordance with Bid Item No. 12 – In-Stream Habitat Structures. Some material may be extracted from the site during other construction activities; however, established native vegetation in the floodplain must be protected to the extent possible. All trees and slash required for the project that are not available on site shall be procured and transported to the site.
8.6.1 Bid Item No. 6a: Provide Logs

The definition of a tree shall be any standing tree which measures at least 6 inches in diameter and is at least 10 feet tall. Some material may be extracted from the site during other construction activities; however, established native vegetation in the floodplain must be protected to the extent possible. Trees that are to be removed will be marked in the field by Owner prior to construction. Contractor shall remove those trees that have been marked by Owner from existing ground keeping the rootwad and entire trunk of the tree intact. Branches shall be left intact to the extent practical.

All logs required for the project that are not available on site shall be procured and transported to the site including logs with and without root wads.

Materials:
- Contractor shall supply the materials necessary to procure and stockpile from on-site or off-site sources logs with and without rootwads.

Execution:
Work includes, at a minimum:
- Procure and transport to the site logs as needed for Bid Item 12 – In-Stream Habitat Structures and Bid Item 17 – System of Wood Placement.
- Extract only those trees marked by Owner for removal from existing ground, keeping rootwads and the entire trunk of the tree intact.
- Stockpile extracted trees whose dimensions are 6 inches or greater in diameter on site to be used for Bid Item 12 – In-Stream Habitat Structures and Bid Item 17 – System of Wood Placement.

Measurement:
Measurement for Bid Item 6a – Provide Logs, will be by the actual number of logs provided, as measured by Owner.

Payment:
Payment for Bid Item 6a – Provide Logs, will be based on the unit price bid per log provided, as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

8.6.2 Bid Item No. 6b: Provide and Place Slash

Suitable slash is defined as any woody material smaller than 6 inches in diameter or shorter than 10 feet. Slash also contains contain live or dead vegetation and other miscellaneous vegetative material (e.g., wood, stumps, brush, roots, branches, and bushes). Slash does not include stripping topsoil or removal of herbaceous vegetative material (e.g. grasses, weeds, and non-woody plants), and removal of dead standing trees is expressly prohibited. Owner shall determine (if any) what above-ground vegetative materials are not needed or are unsuitable (i.e., excess materials or objectionable materials) for the project.
Slash shall be stockpiled at the Site as needed to be used to provide floodplain roughness in Bid Item 4 – Temporary Access Routes, Bid Item 8 – Regrade Areas, Bid Item 9 – New Channel Construction, Bid Item 10 – Off-Channel Habitat, Bid Item 11 – Fill Areas, Bid Item 12 – In-Stream Habitat Structures, Bid Item 13 – Brush Fascine, Bid Item 14 – Channel Diversion Structures, and Bid Item 15 – Ditch Plugs.

To the extent that slash required for the project is not available on site, Contractor shall procure these materials and transport them to the site.

**Materials:**
- Contractor shall supply the materials necessary to supply and stockpile slash.

**Execution:**
Work includes, at a minimum:
- Procure and transport to the site slash as needed to provide floodplain roughness in Bid Items 4, 8, 9, 10, 11, 12, 13, 14, and 15.
- Extract slash from on site and stockpile for use for Bid Items 4, 8, 9, 10, 11, 12, 13, 14, and 15 to provide floodplain roughness.
- Place slash in a continuous layer across all disturbed areas of the site after construction is complete. At least 70 percent of disturbed ground shall be covered with slash.

**Measurement:**
Measurement for Bid Item 6b – Provide and Place Slash, shall be by the lump sum, as listed on the Bid Form.

**Payment:**
Payment for Bid Item 6b – Provide and Place Slash, will be based on the lump sum bid, as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

**8.7 Bid Item No. 7: Undesirable Vegetation Removal and Disposal**

**Applicable Technical Specifications:**
Section 201 – Clearing and Grubbing and Removal of Obstructions
Section 202 – Excavation and Embankment

**Applicable Drawings:**
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)

**Work Description:**
This Bid Item includes all Work necessary to remove and stockpile undesirable vegetation, including invasive weeds from specific portions of the Site. Contractor shall remove undesirable vegetation in areas indicated on the Drawings (Sheet C2 and Sheet C3) as Undesirable.
Vegetation Removal Area. Material shall be stockpiled on-site at an Owner-approved location. The total estimated square feet of undesirable vegetation removal is indicated on the Bid Form.

Contractor shall implement stormwater BMPs in accordance with Bid Item 2 – Stormwater BMPs as necessary to ensure that no sediment as a result of the Work is discharged into Sweetwater Creek.

Undesirable vegetation removal areas will be staked in the field by Owner prior and during to construction. Excavation of undesirable vegetation will occur in the marked removal areas as described below.

Established native vegetation in the floodplain must be protected. Contractor shall not cause unnecessary harm or destruction to existing vegetation. Minimize haul routes as needed. Coordinate with Owner on vegetation to be protected.

Contractor shall excavate and remove undesirable plant rootmass to the minimum depth of 6 inches below existing ground or the bottom of the plant rootmass. Excavated material is to be stored on site in a location approved by Owner. Excavated material shall be treated with extreme caution to avoid spreading the material across the Project Site or to other locations. Excavated material containing undesirable plants in any form shall not be suitable for reuse anywhere at the Site.

Known undesirable plants and invasive weeds located at the Project Site include, but are not limited to: Himalayan blackberry (*Rubus armeniacus*), Reed Canarygrass (*Phalaris arundinacea*), Common Tansy (*Tanacetum vulgare*), Poison Hemlock (*Conium maculatum*), Dalmatian Toadflax (*Linaria dalmatica*), Houndstongue (*Cynoglossum officinale*), Oxeye Daisy (*Leucanthemum vulgare*), Tansy Ragwort (*Senecio jacobaea*), Canada Thistle (*Cirsium arvense*), and Spotted Knapweed (*Centaurea stoebe*), and Teasel (*Dipsacus fullonum*).

Contractor shall take special care to prevent the spread of these plants and seeds across the Site in any way.

Contractor shall spread slash across those areas marked as undesirable vegetation removal areas on the Drawings in accordance with Bid Item 6b – Provide and Place Slash.

Undesirable vegetation will also be removed and disposed offsite as described in this Bid Item during construction of Regrade Areas (Bid Item 8), New Channel Construction (Bid Item 9), Off-Channel Habitat (Bid Item 10), and areas to be disturbed around Channel Diversion Structures (Bid Item 14), Ditch Plugs (Bid Item 15), and Brush Fascines (Bid Item 13). Removal of undesirable vegetation will be considered incidental to each of these Bid Items.

**Materials:**

- Contractor shall supply the materials necessary to excavate and remove plant rootmass, and to dispose of the material at a licensed landfill or other location approved by Owner.

**Execution:**

Work includes, at a minimum:

- In areas indicated on the Drawings (Sheet C2 and Sheet C3) as Undesirable Vegetation Removal area, excavate and completely remove plant rootmass to a depth of 6 inches below existing ground.
- Store material on site in a location deemed appropriate by Owner.
• Ensure that no seeds, pieces of the plant, rootmass, or material containing any undesirable vegetation are spread around the Project Site during construction.
• Protect existing native vegetation.

Measurement:
Measurement for Bid Item 7 – Undesirable Vegetation Removal and Disposal, will be by the actual number of square feet (to the nearest 100 square feet) of undesirable vegetation removal and disposal completed, as measured by Owner.

Payment:
Payment for Bid Item 7 – Undesirable Vegetation Removal and Disposal, will be based on the unit price bid per square foot as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

8.8 Bid Item No. 8: Regrade Areas

Applicable Technical Specifications:
Section 202 – Excavation and Embankment

Applicable Drawings:
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)

Work Description:
This Bid Item includes all of the Work necessary for floodplain finished grading as shown on the Drawings (Sheet C2 and Sheet C3).

Established mature vegetation in the floodplain must be protected. Contractor shall not cause unnecessary harm or destruction to existing vegetation. Minimize haul routes as needed. Coordinate with Owner on vegetation to be protected.

Within the Regrade Area grading limits, Contractor shall remove and dispose undesirable vegetation to a depth of 6 inches as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal. Undesirable vegetation removal shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid.

Contractor shall excavate floodplain material to the finished grades shown on the Drawings (Sheet C2 and Sheet C3). Contractor shall not excavate material outside of the Work Limits for the Project designated on the Drawings. Contractor shall implement stormwater BMPs in accordance with Bid Item 2 – Stormwater BMPs as necessary to ensure that no sediment as a result of the Work is discharged into Sweetwater Creek.

This Bid Item covers areas referred to on the Drawings (Sheet C2 and Sheet C3) as Regrade Area. Refer to the regrade areas and limits on the Drawings for the extents of the Work covered under this Bid Item. Contractor shall remove and dispose undesirable vegetation to a depth of 6 inches. Contractor shall further excavate floodplain material within the grading limits to the finished grades shown on Sheet C2 and Sheet C3 of the Drawings. Contractor shall use
excavated clean material to fill in the existing Sweetwater Creek stream channel in those locations shown on the Drawings (Sheet C2 and Sheet C3) as specified under Bid Item 11 – Fill Areas. Contractor shall perform all excavation in accordance with Technical Specification Section 202 – Excavation and Embankment. Contractor shall not excavate outside of the Work Limits shown on Sheet C1 of the Drawings unless requested to do so by Owner. All tie-ins with existing ground shall be gradual and smooth. Contractor shall leave the final regraded surface rough and spread slash across the disturbed area in accordance with Bid Item 6b – Provide and Place Slash.

**Materials:**
- Contractor shall supply the materials necessary to grade the floodplain material as described above.

**Execution:**
Work includes, at a minimum:
- Provide all labor, tools, equipment, materials, and incidentals necessary to complete the Work as specified.
- Excavate undesirable vegetation within the Regrade Area excavation limits shown on Sheet C2 and Sheet C3 of the Drawings as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal.
- Further excavate Regrade Areas to the grades shown on the Drawings (Sheet C2 and Sheet C3).
- Use weed free floodplain material for Fill Areas in those locations shown on the Drawings (Sheet C2 and Sheet C3) in accordance with Bid Item 11 – Fill Areas.
- Do not excavate outside of the Work Limits shown on Sheet C1 of the Drawings.
- Ensure that all tie-ins with existing ground are gradual and smooth.
- Upon completion of regrade area, Contractor shall leave the area surface rough with up to 6 inches of variation in the surface elevation. Contractor shall spread slash in accordance with Bid Item 6b – Provide and Place Slash over the fill area and all adjacent areas that may have been disturbed during construction. Slash shall extend a minimum of 10 feet in all directions past the disturbed area.

**Measurement:**
Measurement for Bid Item 8 – Regrade Areas, will be by the actual number of square feet, to the nearest 100 square feet) of floodplain grading, as determined by Owner.

**Payment:**
Payment for Bid Item 8 – Regrade Areas, will be based on the unit price bid per square foot as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

8.9 **Bid Item No. 9: New Channel Construction**

**Applicable Technical Specifications:**
Section 202 – Excavation and Embankment
Applicable Drawings:
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Sheet C7 – Design Channel Bedform Sequencing & Alignment Layout
Sheet D5 – Details – Longitudinal Profiles & Design Channel
Sheet D6 – Details – Design Channel Typical Cross-Sections

Work Description:
This Work covers new channel construction including excavation, haul, and all other tasks associated with completing the Work as specified. Refer to Sheet C2 and Sheet C3 of the Drawings for the new channel alignment and design profile. New channel construction involves removal of undesirable vegetation, excavation of existing ground as staked, and placement of slash. Excavation generates material that may be used elsewhere on the Project Site, if deemed suitable by the Owner. Haul of material generated from new channel construction shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid. Material will be re-used on site in Fill Areas (Bid Item 11).

Within the New Channel Construction grading limits, Contractor shall remove and dispose of approximately 43,000 square feet of undesirable vegetation to a depth of 6 inches as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal. Undesirable vegetation removal shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid.

Contractor shall construct the new channel based on the design alignment and design profile (shown on Sheet C2 and Sheet C3 of the Drawings). Owner shall provide initial staking of the channel alignment along with stationing to assist with channel construction. Contractor shall refer to typical cross-sections (shown on Sheet D6 of the Drawings) and typical longitudinal profiles (shown on Sheet D5 of the Drawings) for dimensions and transitions within the new channel. Sheet C7 of the Drawings indicates the stationing along the new channel alignment where typical cross-sections (riffles, pools, and runs) occur. Typical cross-sections shown on the Drawings are approximate and field adjustments by the Contractor may be made if approved by the Owner. Contractor shall line the low-flow portion of the new channel with stream channel substrate harvested from the existing channel as described in Section 7.0 – Incidentals. Contractor shall install in-stream habitat structures within the new channel in accordance with Bid Item 12 – In-Stream Habitat Structures and in the locations shown on Sheet C2 and Sheet C3 of the Drawings. Contractor shall install Brush Fascines along the new channel’s banks in the locations shown on Sheet C2 and Sheet C3 of the Drawings and in accordance with Bid Item 13 – Brush Fascine

Materials:
- Contractor shall provide all labor, equipment, tools, materials and incidentals necessary to complete the Work as specified.
- Stream channel substrate harvested from existing channel.

Execution:
Work includes, at a minimum:
- Excavate the new channel in the locations and to the dimensions shown on the Drawings;
  - Refer to the Drawings (Sheet C2 and Sheet C3) for the new channel alignment and design profile.
  - Refer to Sheet D6 of the Drawings for typical cross-section dimensions of the new channel. Sheet C7 of the Drawings indicates the stations where each of these typical cross-sections occur. The typical cross-sections shown provide a general guideline of the size and geometry of the new channel to be constructed.
  - Refer to Sheet D5 of the Drawings for typical longitudinal profiles and transitions between typical cross-sections.
- Contractor shall overexcavate the new channel bottom by 4 inches to 6 inches in those areas directed by the Government and as shown on the Drawings (Sheet D5, Detail 2) to allow for stream channel substrate placement.
- Install stream channel substrate along the bottom of the new channel at the direction of the Government and as shown on the Drawings (Sheet D5, Detail 2). If water is present in the new channel when stream channel substrate is installed, Contractor shall pour the material into the channel to a 4-inch to 6-inch thickness without arranging or “stirring” substrate in live water. It is critical that finished upstream and downstream ends of constructed channel align exactly flush with native ground. Harvest and placement of stream channel substrate shall be incidental to this bid item and no additional payment shall be made.
- Compact stream channel substrate with an excavator bucket or using a similar compaction method. Compaction shall yield a surface with binding, interlocking rock.
- Thoroughly wash stream channel substrate with water to seal in the fines among voids and ensure water remains on top of the placed and compacted material.
- Add additional fines if needed or as directed by the Owner.
- Contractor shall wash fines in newly constructed channel using the following steps:
  Slowly introduce water such that it wets the channel without exiting the channel before soaking into the ground. If necessary, as series of small temporary coffer dams can be constructed from soil or coir logs to prevent water from exiting the system. Allow the water to soak into the ground or, if water remains after one hour, pump turbid water onto the floodplain. Repeat this process along the length of all channel segments as necessary until the new channel has been completely wetted.
- Install in-stream habitat structures in the new channel in the locations shown on Sheet C2 and Sheet C3 of the Drawings and as specified in Bid Item 12 – In-Stream Habitat Structures.
- Install streambank treatments along the new channel banks in the locations shown on Sheet C2 and Sheet C3 of the Drawings and in accordance with Bid Item 13 – Brush Fascine.
- Install system of wood in accordance with Bid Item 17 – System of Wood Placement.
- Contractor shall haul suitable excavated material to be used elsewhere on Site. Reuse excavated material, if suitable and not contaminated with undesirable vegetation, to construct Fill Areas in accordance with Bid Item 11 – Fill Areas. Do not haul usable rock offsite.
Measurement:
Measurement for Bid Item 9 – New Channel Construction, will be by the actual number of linear feet of new channel constructed, as measured by Owner.

Payment:
Payment for Bid Item 9 – New Channel Construction, will be based on the unit price bid per linear foot as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.

8.10 Bid Item No. 10: Off-Channel Habitat

Applicable Technical Specifications:
Section 202 – Excavation and Embankment

Applicable Drawings:
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Sheets C4 to C6 – Off-Channel Habitat Areas
Sheet D7 – Off-Channel Habitat and Brush Fascine

Work Description:
This Bid Item includes construction of off-channel habitat as shown on the Drawings (Sheets C2, C3, C4, C5, and C6). Off-channel habitat areas are intended to accept flow from overland during a typical annual flood event and backwater during moderate flows. These areas offer water storage and habitat for aquatic organisms.

Off-channel habitat involves removal of undesirable vegetation, excavation to the grades shown on the Drawings, installation of logs with rootwads into the floodplain, and placement of slash around the disturbed perimeter of the Off-Channel Habitat. Off-channel habitat areas will be staked by Owner prior to excavation. Construction of this Bid Item involves excavation of existing ground within the historical floodplain and generates, as a result, material that may be used elsewhere on the Site. Haul of excess soils generated from off-channel habitat shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid. Material will be re-used on site in Fill Areas (Bid Item 11). Owner or Owner’s representative must be present during off-channel habitat construction.

Materials:
- Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.
- Logs with rootwads (quantity per off-channel habitat area indicated on Drawings).
  - 20-foot minimum length.
  - 6-inch minimum diameter.
SWEETWATER CREEK FLOODPLAIN RESTORATION SPECIAL PROVISIONS

- 1.5-foot minimum rootwad diameter.
- Slash as defined under Bid Item 6b – Provide and Place Slash.

**Execution:**

Work includes, at a minimum:

- Within the Off-Channel Habitat grading limits, Contractor shall remove and dispose of undesirable vegetation to a depth of 6 inches as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal. Undesirable vegetation removal shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid.
- Off-channel habitat area construction shall follow longitudinal profiles and cross-sections on Sheets C4, C5, C6, and D7 of the Drawings.
- Contractor shall work with Owner’s representative to vary the off-channel habitat depth to achieve a non-planar surface with elevation diversity.
- Reuse excavated material, if suitable and not contaminated with undesirable vegetation to construct Fill Areas in accordance with Bid Item 11 – Fill Areas. Logs with rootwads shall be installed with 2-foot minimum cover over buried section, with rootwad in direct contact with the Off-Channel Habitat bottom. Do not haul usable material offsite.
- Upon completion of off-channel habitat area, Contractor shall spread slash in accordance with Bid Item 6b – Provide and Place Slash across any disturbed areas extending a minimum of 10 feet in all directions past the disturbed area or as directed by Owner.

**Measurement:**

Measurement for Bid Item 10 – Off-Channel Habitat will be by the actual number of square feet (to the nearest 500 square feet) of off-channel habitat constructed, as listed on the Bid Form.

**Payment:**

Payment for Bid Item 10 – Off-Channel Habitat will be based on the unit price bid per square foot as shown in the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.

**8.11 Bid Item No. 11: Fill Areas**

**Applicable Technical Specifications:**

Section 202 – Excavation and Embankment
Section 203 – Soil Materials
Section 204 – Structural Excavation and Compacting Backfill
Section 205 – Dewatering

**Applicable Drawings:**

Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Sheet D2 – Fill Area

Work Description:
This Work consists of excavating, backfilling, compacting, and all other tasks associated with fill area construction. Fill areas are located in the existing channel in the locations shown on the Drawings (Sheets C2 and C3). The purpose of fill areas is to fill the existing channel, minimize avulsion paths on the floodplain, and increase floodplain area where off channel habitat may form.

Materials:
- Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.
- Rock/soil fill shall have rocks up to a maximum size of 6 inches, with a fines content that is suitable for compaction as described below. Contractor shall use suitable on-site fill material that was generated from Bid Item 8 – Regrade Areas, Bid Item 9 – New Channel Construction, and Bid Item 10 – Off-Channel Habitat.
- Additional rock/soil fill shall come from Bid Item 20 – Provide Rock/Soil Fill as needed to complete the Work.
- Slash as defined in Bid Item 6b – Provide and Place Slash.

Execution:
Work includes, at a minimum:
- Contractor shall refer to the Drawings (Sheets C2 and C3) for fill area locations.
- Contractor shall construct fill areas in accordance with the details and typical dimensions shown on the Drawings (Sheet D2) and at the direction of Owner.
- Work shall occur during dry or low-water conditions. If the area to be filled is not completely dry, water management shall conform to all permit and environmental requirements and be approved by Owner. Standing water within the fill area footprint must be removed before any fill material is placed. If standing water is present, Owner must be notified and clear the area before work commences.
- Contractor shall backfill the structure with rock/soil fill and compact in 9-inch maximum lifts adjusted to a moisture content that is suitable for compaction, and each lift shall be compacted with vibratory compaction equipment with three complete passes minimum or until visual displacement ceases. Compacted fill shall be placed up to 6 inches below final grade.
- Contractor is responsible for ensuring that compaction requirements are met as specified herein. Testing and results will only be required at Owner’s request.
- The top 6 inches of fill shall be placed but not compacted. Place loose floodplain material over the compacted rock/soil fill until the average final top elevation is approximately 3 to 4 inches above the elevation of the surrounding floodplain.
- Upon completion of fill area, Contractor shall leave the fill area surface rough with up to 6 inches of variation in the fill area surface elevation. Contractor shall spread slash as
defined in Bid Item 6b – Provide and Place Slash over the fill area and all adjacent areas that may have been disturbed during construction. Slash shall extend a minimum of 10 feet in all directions past the disturbed area.

**Measurement:**
Measurement for Bid Item 11 – Fill Areas will be by the design number of bank cubic yards (to the nearest 100 cubic yards) of Fill Area constructed, as determined by Owner.

**Payment:**
Payment for Bid Item 11 – Fill Areas will be based on the unit price bid per design cubic yard as shown on the Bid Form.

**8.12 Bid Item No. 12: In-Stream Habitat Structures**

**Applicable Technical Specifications:**
Section 202 – Excavation and Embankment
Section 203 – Soil Materials
Section 204 – Structural Excavation and Compacting Backfill
Section 205 – Dewatering

**Applicable Drawings:**
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Sheet D1 – Details – Habitat Structures

This Bid Item is separated into Bid Item 12a – Type 1 Habitat Structure and Bid Item 12b – Key Structure.

**Work Description:**
This Bid Item includes all Work necessary for the construction of two different In-Stream Habitat Structure types. Contractor shall install all In-Stream Habitat Structures in the locations and manner shown on the Drawings. Construction of In-Stream Habitat Structures includes the installation of logs in the channel bed and streambank. For those habitat structures located in the Sweetwater Creek existing stream channel, the work area shall be isolated with netting and water management structures and all fish shall be relocated from the Work area by Owner before construction on the habitat structure begins. Netting and water management shall remain in place during construction of these features and shall be removed only as approved by Owner. Dewatering as needed and fish relocation shall be conducted under Bid Item 5 – Water Management and shall be incidental to this Bid Item.

The two types of In-Stream Habitat Structures are: Type 1 Habitat Structure and Key Structure. Logs with rootwads procured (or salvaged from onsite) under Bid Item 6a – Provide Logs that meet the size requirements specified may be used for in-stream habitat structures. Contractor shall procure additional logs that meet the specifications on the Drawings and herein as needed for in-stream habitat structures.
Owner’s representative must be present when habitat features are constructed.

8.12.1 **Bid Item No. 12a: Type 1 Habitat Structures**

This Work consists of providing materials for and constructing Type 1 Habitat Structures. Construction of a Type 1 Habitat Structure includes excavation, moving and placing logs, backfill and compaction, and all other tasks associated with Type 1 Habitat Structure installation.

In the area to be disturbed during construction of Type 1 Habitat Structures, Contractor shall remove and dispose of approximately 100 square feet per structure of undesirable vegetation to a depth of 6 inches as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal. Undesirable vegetation removal shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid.

Contractor shall excavate the streambank to place the buried log with rootwad as shown on the Drawings. Minimize trench dimensions to the smallest dimensions practical to allow for secure placement of the anchor log. Position anchor log in excavated trench with the rootwad facing upstream at the angle specified on the Drawings (Sheet D1). Ensure that the anchor log is buried the minimum percentage of its total length and to the minimum bury depth specified on the Drawings (Sheet D1). Place the racked logs such that they are secured in place by the anchor log, streambanks, and available pieces of large rock. Weave and stack at least four logs against the rootwad, beneath the anchor log, and pinned against banks. Type 1 Habitat Structures shall be constructed densely, with racked logs carefully interlocked with the anchor log, each other, and the adjacent bank. Contractor shall backfill around the buried logs with native alluvial material. Native alluvial backfill shall be placed in 6-inch loose lifts and moisture conditioned. Contractor shall operate compaction equipment over the full width of each 6-inch lift with a minimum of three complete passes or until visual displacement ceases. Backfill shall be placed to match the floodplain at the tie-ins and so the log with rootwad is buried to the specified minimum length as shown on the Drawings.

**Owner must be present during Type 1 Habitat Structure installation.**

**Materials:**

- One log with intact rootwad and minimum 4 logs without rootwads of the dimensions indicated on the Drawings (see Sheet D1).
- Native alluvial material shall be floodplain material excavated to build the structure. Additional material may come from those above Bid Items that generate suitable backfill.
- Slash in accordance with Bid Item 6b – Provide and Place Slash.
- Large rocks from alluvium to assist with interlocking the structure.

**Execution:**

Work includes, at a minimum:

- Provide logs of the type and dimensions noted in the Materials above and specified on the Drawings.
- Excavate an area in the new channel streambank large enough to place one anchor log with rootwad.
- Place the racked logs such that they are secured in place by the anchor log, streambanks, and available pieces of large rock. Weave and stack at least four logs against the rootwad.
of and beneath the anchor log. Place one log with rootwad with rootwad facing upstream at the angle and elevation specified on the Drawings.

- Place log such that the log’s length is buried to the minimum dimensions shown on the Drawings, and the end of the rootwad is extending waterward into the channel.
- Ensure that racked logs are carefully interlocked with the anchor log, each other, and the adjacent bank.
- Backfill around log with rootwad with native alluvial material.
- Place native alluvial backfill in 6-inch loose lifts, moisture condition, and operate compaction equipment over the full width of each 6-inch layer with a minimum of three complete passes or until visual displacement ceases.
- Tie in native alluvial backfill with the floodplain such that the minimum bury depth shown on the Drawings is achieved.
- Place slash over finished topsoil surface.

**Measurement:**

Measurement for Bid Item 12a – Type 1 Habitat Structures, will be by the actual number of structures installed, as measured by Owner.

**Payment:**

Payment for Bid Item 12a – Type 1 Habitat Structures, will be based on unit price bid per structure as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

**8.12.2 Bid Item No. 12b: Key Structures**

**Work Description:**

This Bid Item involves the Work required to install key structures in the existing and design channel. A key structure spans the channel and contains logs and logs with rootwads wedged together and pinned by existing trees on the bank or excavator pile-driven logs. The structure acts as a flow dissipater that decreases energy in the stream channel, promotes floodplain access, and provides habitat for fish and other aquatic organisms.

In the area to be disturbed during construction of key structures, Contractor shall remove and dispose of approximately 100 square feet per structure of undesirable vegetation to a depth of 6 inches as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal. Undesirable vegetation removal shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid.

**Owner must be present during Key Structure installation.**

**Materials:**

- Contractor shall procure logs that meet the quantity and sizing requirements listed herein.
- Logs shall meet the criteria listed below:
  - Minimum 4 logs per structure, 18-inch to 24-inch diameter.
Length, to be approved by Owner, shall be approximately 40-100 feet and will vary per log.

Approximately 50% of the logs used in each structure shall have intact rootwads.

- Pile driven logs (if needed) shall meet the criteria listed below:
  - Broken pieces of logs.
  - 6-inch minimum diameter.
  - Free of branches.
- Slash in accordance with Bid Item 6b – Provide and Place Slash.
- Boulders shall be no smaller than 24 inches in diameter.

**Execution:**

- Refer to the Drawings (Sheets C2 and C3) for key structure locations. Locations shown on Drawings may vary and definite locations will be determined by the Owner.
- Refer to the Drawings (Sheet D1) for typical key structure design.
- Install logs in the stream channel at the direction of the Owner.
- Pin logs against existing trees on the streambanks where possible.
- Wedge logs together inside the stream channel. Use a large log with rootwad to anchor other logs.
- Drive pieces of log into the streambank (as needed) a minimum of 50% of log length in those locations requested by the Owner, to aid in the pinning and wedging of in-stream logs.
- Place boulders on downstream sides of logs as directed by Owner.
- Place slash on bank areas disturbed by construction in accordance with Bid Item 6b – Provide and Place Slash.

**Measurement:**

Measurement for Bid Item 12b – Key Structures will be by the actual number of structures installed, as measured by Owner.

**Payment:**

Payment for Bid Item 12b – Key Structures will be based on the unit price bid for each structure installed as shown on the Bid Form.
8.13 **Bid Item No. 13: Brush Fascine**

**Applicable Technical Specifications:**
Section 202 – Excavation and Embankment
Section 203 – Soil Materials

**Applicable Drawings:**
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Sheet D7 – Off-Channel Habitat & Brush Fascine

**Work Description:**
This Work covers Brush Fascine (BF) streambank treatments including excavation, backfill, and all other tasks associated with completing the Work as specified. BF streambank treatments are used along the design channel alignment to stabilize design channel streambanks and provide roughness. They promote rapid development of vegetation within the streambanks, and provide habitat and cover for aquatic organisms.

BF locations are shown on the Drawings (Sheet C2 and Sheet C3). Coordination of BFs with Bid Item 9 – New Channel Construction will be necessary. Owner will stake bank elevations and locations of BF treatments. Owner may modify these elevations and locations to fit circumstances encountered in the field.

In the area to be disturbed during construction of Brush Fascines, Contractor shall remove and dispose of approximately 12 square feet (per linear foot of fascine) of undesirable vegetation to a depth of 6 inches as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal. Undesirable vegetation removal shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid.

**Materials:**
- Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.

- Slash shall meet the following criteria:
  - 3 to 6 inches in diameter.
  - 8 to 12 feet in length.
  - Limbs intact.

- Contractor shall obtain logs in accordance with Bid Item 6a – Provide Logs. Logs for BF shall meet the following criteria:
  - 6 to 12 inches in diameter.
  - 8 to 12 feet in length.
  - Limbs intact.
  - Rootwads are optional.
• Floodplain soil material excavated during construction of Brush Fascine.

**Execution:**

Work includes, at a minimum:

• Contractor shall construct brush fascine streambank treatments in the locations shown on Sheet C2 and C3 of the Drawings.
• Contractor shall excavate streambank to subgrade elevations as shown on the Drawings (Sheet D7, Details 3 and 4).
• Small logs shall be placed in streambank at skewed angles to the streambank (angles and density shown on Drawings). Logs shall be placed below the top of bank elevation and shall overlap as much as possible. If logs are cut with saw, no cut ends shall be showing.
• Slash shall be placed within the voids and gaps of small logs to the density shown on the Drawings. Slash may extend above the top of bank, but only by a maximum of 1 foot.
• Contractor shall backfill streambank with excavated floodplain material mixed with alluvium material.
• Contractor shall thoroughly wash the streambank fill to seal voids in the backfill.
• Contractor shall ensure that BF streambank treatments tie in smoothly with upstream and downstream streambank.
• The top of bank shall be graded to match the surrounding floodplain.

**Measurement:**

Measurement for Bid Item 11 – Brush Fascine will be by the actual number of linear feet (to the nearest linear foot) of BF constructed, as measured by Owner.

**Payment:**

Payment for Bid Item 11 – Brush Fascine will be based on the unit price bid per linear foot as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work.

8.14 **Bid Item No. 14: Channel Diversion Structures**

**Applicable Technical Specifications:**

Section 201 – Clearing and Grubbing and Removal of Obstructions
Section 202 – Excavation and Embankment
Section 204 – Structural Excavation and Compacting Backfill
Section 205 – Dewatering
Section 206 – Permanent Erosion Control
Section 1007 – Slope Stabilization

**Applicable Drawings:**
Work Description:

This Work consists of excavating, backfilling, compacting, and all other tasks associated with construction of two channel diversion structures. Contractor shall install the channel diversion structures in the existing Sweetwater Creek channel in the locations shown on the Drawings (Sheet C2).

Established native vegetation in the floodplain and existing channel must be protected. Contractor shall not cause unnecessary harm or destruction to existing vegetation. Minimize haul routes to the existing channel as needed. Coordinate with Owner on vegetation to be protected.

In the area to be disturbed during construction of Channel Diversion Structures, Contractor shall remove and dispose of approximately 50 square feet per structure of undesirable vegetation to a depth of 6 inches as described in Bid Item 7 – Undesirable Vegetation Removal and Disposal. Undesirable vegetation removal shall be incidental to this Bid Item and shall be accounted for by the Contractor as appropriate in their bid.

Contractor shall excavate a minimum of 12 inches below the existing channel bottom in the channel diversion structure footprint prior to placing fill material. Work shall occur during dry conditions, and water management shall conform to all permit and environmental requirements and be approved by the Owner. Standing water within the channel diversion structure footprint shall be removed before any fill material is placed. Dewatering shall occur in accordance with Bid Item 5 – Water Management. Contractor shall backfill the structure with rock/soil fill and compact in 6-inch maximum lifts. Contractor shall operate vibratory compaction equipment over the full width of each 6-inch layer with a minimum of three complete passes or until visual displacement ceases. The channel diversion structure side slopes shall not exceed a 3:1 (horizontal:vertical) slope. Contractor shall install a key trench and riprap rock armoring along the channel diversion structure’s upstream toe. Riprap rock armoring shall extend 2 feet minimum up the side slope and the key trench shall be to the dimensions indicated on the Drawings (Sheet D3). In locations where a channel diversion structure abuts a fill area, Contractor shall install fill area on channel diversion structure’s downstream side in accordance with Bid Item 11 – Fill Areas. Contractor shall place topsoil over the channel diversion structure as shown on the Drawings (Sheet D3) and in accordance with Bid Item 16 – Provide and Place Topsoil. Topsoil shall be loosely placed to facilitate plant growth, and shall not be driven over with heavy equipment. The finished top elevation of the channel diversion structure shall not be greater than 1 foot above the surrounding floodplain. Contractor shall install live stakes on channel diversion structure above the riprap rock armoring, as shown on the Drawings.

Materials:

- Rock/soil fill shall be structural, compactable material. Rock/soil fill shall have rocks up to a maximum size of 6 inches, with a fines content that is suitable for compaction as described below.
- Rock toe armoring

<table>
<thead>
<tr>
<th>Size (inches)</th>
<th>Percent Passing</th>
</tr>
</thead>
</table>

---
SWEETWATER CREEK FLOODPLAIN RESTORATION SPECIAL PROVISIONS

<table>
<thead>
<tr>
<th>16</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>80-90</td>
</tr>
<tr>
<td>10</td>
<td>40-50</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
</tr>
</tbody>
</table>

- Topsoil as specified in Bid Item 16 – Provide and Place Topsoil.
- Slash in accordance with Bid Item 6b – Provide and Place Slash.
- Live stakes
  - 6-foot to 8-foot long dormant willow cuttings, minimum diameter of 0.5”.
  - Soak cuttings for a minimum of 24 hours in cool, aerated water prior to placement.
  - Space along structure as shown on the Drawings with the cut ends extending at least 6 inches below the riprap. The uncut ends shall extend beyond the edge of the riprap such that approximately one-half of the total cutting length is exposed.
  - Cut ends shall extend into moist or wet soil.

**Execution:**

Work includes, at a minimum:

- Dewater the Work area in accordance with Bid Item 5 – Water Management.
- Construct the channel diversion structure in accordance with the details and typical dimensions shown on the Drawings (Sheet D3).
  - Refer to the Drawings (Sheet C2) for the channel diversion structure locations;
- Excavate existing ground within the channel diversion structure footprint to a minimum depth of 12 inches.
- Place and compact rock/soil fill in 6-inch maximum lifts until the final top elevation is at approximately the same elevation as the adjacent existing channel top of bank, with start and end slopes no steeper than 3:1 (horizontal:vertical) slope. Adjust rock/soil fill to a moisture content that is suitable for compaction. Operate compaction equipment over the full width of each 6-inch layer with a minimum of three complete passes or until visual displacement ceases.
- Contractor is responsible for ensuring that compaction requirements are met as specified herein.
- Install key trench and rock toe armoring. Refer to the Drawings (Sheet D3) for key trench dimensions. Extend rock armoring to the top of existing bank on the channel diversion structure side slope (upstream side).
- Fill the downstream side of Channel Diversion Structure 2 with floodplain material as specified in Bid Item 11 – Fill Areas.
- Place topsoil over the rock/soil fill in accordance with Bid Item 16 – Provide and Place Topsoil. Add topsoil to the rock armoring to facilitate growth of vegetation. Taper topsoil down to adjacent existing ground at a slope no steeper than 3:1 (horizontal:vertical) in all directions. Avoid compaction of topsoil to the extent possible to allow for optimal vegetation and growth. Do not drive heavy equipment over topsoil surface.
- Install live stakes as shown on the Drawings. Soak cuttings for a minimum of 24 hours in cool, aerated water prior to placement.
- Place slash in the four corners of channel diversion structure, as shown on the Drawings and requested by Owner.
- Install slash on bank areas disturbed by heavy equipment during construction.

**Measurement:**
Measurement for Bid Item 14 – Channel Diversion Structure, will be by the design number of cubic yards installed, as indicated on the Bid Form.

**Payment:**
Payment for Bid Item 14 – Channel Diversion Structure, will be based on the unit price bid per cubic yard as shown on the Bid Form. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the Work as specified.

**8.15 Bid Item No. 15: Ditch Plugs**

**Applicable Technical Specifications:**
Section 201 – Clearing and Grubbing and Removal of Obstructions
Section 202 – Excavation and Embankment
Section 204 – Structural Excavation and Compacting Backfill
Section 205 – Dewatering
Section 206 – Permanent Erosion Control
Section 1007 – Slope Stabilization

**Applicable Drawings:**
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Sheet D4 – Details – Ditch Plug

**Work Description:**
This Work consists of excavating, backfilling, compacting, and all other tasks associated with construction of ditch plugs. Per the Drawings (Sheet C2 and Sheet C3), Contractor shall construct a total of four ditch plugs. Contractor shall install the ditch plugs in the existing Sweetwater Creek channel in the locations shown on the Drawings. Contractor shall excavate a minimum of 12 inches below the existing channel bottom in the ditch plug footprint prior to placing fill material. Work shall occur during dry conditions, and water management shall conform to all permit and environmental requirements and be approved by the Owner. Standing water within the ditch plug footprint shall be removed before any fill material is placed. Dewatering shall occur in accordance with Bid Item 5 – Water Management. Contractor shall backfill the structure with rock/soil fill and compact in 6-inch maximum lifts. Contractor shall operate compaction equipment over the full width of each 6-inch layer with a minimum of three
complete passes or until visual displacement ceases. The ditch plug side slopes shall not exceed a 3:1 (horizontal:vertical) slope. Contractor shall install rock toe armoring along each ditch plug’s toe as shown on the Drawings. Contractor shall fill the upstream sides of Ditch Plug 2 and Ditch Plug 4 with floodplain material as specified in Bid Item 11 – Fill Areas. Contractor shall place topsoil over the ditch plug as shown on the Drawings (Sheet D4) and in accordance with Bid Item 16 – Provide and Place Topsoil. Topsoil shall be loosely placed to facilitate plant growth, and shall not be driven over with heavy equipment. The finished top elevation of each ditch plug shall be approximately the same as the surrounding finish grade floodplain, with the ditch plug top graded to have positive drainage towards the edges of the ditch plug. Contractor shall install live stakes on the ditch plugs above the rock toe armoring, as shown on the Drawings.

Materials:

- Rock/soil fill shall be structural, compactable material. Rock/soil fill shall have rocks up to a maximum size of 6 inches, with a fines content that is suitable for compaction as described below.
- Rock toe armoring

<table>
<thead>
<tr>
<th>Size (inches)</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>100</td>
</tr>
<tr>
<td>14</td>
<td>80-90</td>
</tr>
<tr>
<td>10</td>
<td>40-50</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
</tr>
</tbody>
</table>

- Topsoil as specified in Bid Item 16 – Provide and Place Topsoil.
- Slash in accordance with Bid Item 6b – Provide and Place Slash.
- Live stakes.
  - 6-foot to 8-foot long dormant willow cuttings, minimum diameter of 0.5”.
  - Soak cuttings for a minimum of 24 hours in cool, aerated water prior to placement.
  - Space along structure as shown on the Drawings with the cut ends extending at least 6 inches below the riprap. The uncut ends shall extend beyond the edge of the riprap such that approximately one-half of the total cutting length is exposed.

Execution:

Work includes, at a minimum:

- Dewater the Work area in accordance with Bid Item 5 – Water Management.
- Refer to the Drawings (Sheet C2 and Sheet C3) for each ditch plug location.
- Construct ditch plugs in accordance with the details and typical dimensions shown on the Drawings (Sheet D4) and at the direction of the Owner.
- Excavate existing ground within the ditch plug footprint to a minimum depth of 12 inches.
- Place and compact rock/soil fill in 6-inch maximum lifts until the final top elevation is at approximately the same elevation as the adjacent existing channel top of bank, with start
and end slopes no steeper than 3:1 (horizontal:vertical) slope. Adjust rock/soil fill to a moisture content that is suitable for compaction. Operate compaction equipment over the full width of each 6-inch layer with a minimum of three complete passes or until visual displacement ceases.

- Contractor is responsible for ensuring that compaction requirements are met as specified herein.
- Place topsoil over the rock/soil fill and rock toe. Avoid compaction of topsoil to the extent possible to allow for optimal vegetation and growth.
- Install rock toe armoring along ditch plug toes as shown on the Drawings.
- Install live stakes as shown on the Drawings.
- Place slash in the four corners of channel diversion structure, as shown on the Drawings and requested by Owner.
- Install microtopography and floodplain roughness on bank areas disturbed by heavy equipment during construction.

Measurement:
Measurement for Bid Item 15 – Ditch Plugs, will be by the design cubic yards, as listed on the Bid Form.

Payment:
Payment for Bid Item 15 – Ditch Plugs, will be based on the design cubic yards of material as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.

8.16 Bid Item No. 16: Provide and Place Topsoil

Applicable Technical Specifications:
Section 202 – Excavation and Embankment
Section 203 – Soil Materials

Applicable Drawings:
Sheet D3 – Details – Channel Diversion Structure
Sheet D4 – Details – Ditch Plug

Work Description:
This Bid Item includes all Work necessary to provide and install topsoil as necessary to complete the Project. Under this Bid Item, Contractor shall procure the required loose quantity of topsoil, and install to the grades and in the locations shown on the Drawings. Contractor shall submit to Owner all product data and information from suppliers regarding furnished topsoil utilized for the Work.

Topsoil to be used as cover soil shall be fertile, friable material of an organic composition and characterized as loam, sandy loam, sandy clay loam, clay loam, silty clay loam, or silt loam in accordance with the U.S. Department of Agriculture (USDA) Soil Conservation Service textural classification. Topsoil material shall be reasonably free of trash, rocks, hard lumps of soil,
stumps, and slash. Contractor’s proposed topsoil source shall not contain any invasive weeds. If invasive weeds are found at the topsoil source site, the topsoil will be rejected and not used on the Project. Clay textured soils with more than 10% clay shall be unsuitable. Topsoil shall meet the following requirements as shown in Table 3.

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Particle Size (mm)</th>
<th>Max % of Soil (#10 Mesh) Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay</td>
<td>Less than 0.0023</td>
<td>10</td>
</tr>
<tr>
<td>Silt</td>
<td>0.002 to 0.05</td>
<td>70</td>
</tr>
<tr>
<td>Sand</td>
<td>0.05 to 2.0</td>
<td>70</td>
</tr>
<tr>
<td>Gravel</td>
<td>2.0 to 8.0</td>
<td>*Max % of total sample</td>
</tr>
<tr>
<td>Large Gravel</td>
<td>Larger than 8.0</td>
<td>0</td>
</tr>
</tbody>
</table>

*A maximum of 20% of the total soil sample is allowable; however, any quantity greater than 5% will not be included in the basis for payment.

The soil pH shall be between 5.5 and 8.0, except that the maximum limit may be extended to 8.5 if the exchangeable sodium percentage (ESP) is less than 10%. The soil ESP shall not be greater than 15%. Soil saturation percent shall be between 25% and 85%. The soil shall have an electrical conductivity (EC) less than 4 millimhos per centimeter (mmhos/cm). The organic content of the topsoil shall be within a range of values of 1% to 20%. The Acid-Base Accounting (ABA) shall indicate that no acid-forming materials are present.

Contractor shall install topsoil to the dimensions and in the locations indicated on the Drawings and specified in the Special Provisions for each applicable Bid Item. Contractor shall lightly compact the topsoil to prevent erosion but still allow for seeding and planting. Special care shall be taken by Contractor not to drive or track heavy equipment across the topsoil once it has been installed. Topsoil that is heavily compacted, and/or driven or tracked on with equipment, shall be rejected and Contractor shall re-install topsoil at Contractor’s expense.

Materials:

- Contractor shall provide all of the necessary materials to complete the Work described above.
- Topsoil shall be as described above.

Execution:

Work includes, at a minimum:

- Furnish topsoil that is of the quantity, type, and gradation, and that meets the description above.
- Ensure that the topsoil is free of any invasive weeds.
- Haul topsoil to the Project Site.
- Install topsoil to the grades indicated on the Drawings.
• Install topsoil in the locations shown on the Drawings and specified in all applicable Special Provisions.
• Lightly compact topsoil to prevent erosion and sediment migration during a rain event but still maintain a loose material conducive for seed and plant growth.
• Topsoil shall not be heavily compacted, or tracked or driven over with equipment once it has been placed.

**Measurement:**
Measurement for Bid Item 16 – Provide and Place Topsoil, will be by the design number of loose cubic yards of topsoil provided and installed.

**Payment:**
Payment for Bid Item 16 – Provide and Place Topsoil, will be based on the unit price bid per cubic yard as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.

### 8.17 Bid Item No. 17: System of Wood Placement

**Description:**
This Bid Item covers loose wood placement in and around the constructed and existing Sweetwater Creek stream channel (see Sheet D2, Detail 2 of the Drawings).

**Materials:**
- Contractor shall procure and deliver logs and boulders
- Boulders shall be approximately 24 inches in diameter
- Logs shall be procured under Bid Item 6 and meet the criteria listed below:
  - 6-inch minimum diameter.
  - Length, to be approved by Owner, shall be approximately 20 to 30 feet and will vary per log.
  - A minimum of 50% of the logs used shall have intact rootwads.

**Execution:**
Work includes, at a minimum:
- At the direction of the Owner, Contractor shall place logs along the entire length of the project reach at the density shown on the Drawings.
- An approximate configuration of these logs is shown on the Drawings (Sheet D2), but logs shall be placed randomly in an irregular pattern.
- Place boulders on downstream side of logs as shown on the Drawings (Sheet D2).

**Measurement:**
Measurement for Bid Item 17 – System of Wood Placement will be by the actual number of linear feet of channel, as measured by the Government.
Payment:
Payment for Bid Item 17 – System of Wood Placement will be based on the unit price bid per linear foot of channel as shown on the Bid Form.

8.18 Bid Item No. 18: Debris Removal

Applicable Technical Specifications:
Section 201 – Clearing and Grubbing and Removal of Obstructions

Applicable Drawings:
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)

Work Description:
This Work consists of removing debris from the Site and disposal at an off Site location, as requested by the Owner.

Materials:
Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.

Execution:
Work includes, at a minimum:

- Contractor shall remove existing fencing in locations indicated on the Drawings, Sheet C2 and Sheet C3.
- Contractor shall load and remove debris from locations throughout the project Site. Expected debris may include cars, farm implements, building materials, fencing, wire, cable, and similar metal, wood, and plastic items.
- Contractor shall haul debris to a licensed solid waste processing or recycling facility for disposal.
- Contractor shall be responsible for disposal fees associated with the debris disposal.
- Contractor shall obtain weight tickets from the landfill showing the date of delivery, the truck number or other identifier, the project name, and the net weight of debris. The name, location, and phone number of the disposal site shall be clearly visible on the ticket. Contractor shall supply a copy of all weight tickets to the Owner.

Measurement:
Measurement for Bid Item 18 – Debris Removal will be by the actual number of tons rounded up to the next ¼ ton of debris delivered to the disposal site, as determined by the Owner.

Payment:
Payment for Bid Item 18 – Debris Removal will be based on the unit price bid per ton as shown on the Bid Form.
8.19 **Bid Item No. 19: Provide Plants and Seed**

**Applicable Technical Specifications:**

n/a

**Applicable Drawings:**

Sheet G2 – HIP III Measures
Sheet C10 – Revegetation Plan

**Work Description:**

This Bid Item is separated into Bid Item 19a – Provide 1-Gallon Native Plants, 19b – Provide 10-Cubic-Inch Native Plants, and 19c – Provide Native Seed.

Contractor shall procure and deliver to Site native plants and seed to be installed by Owner. Contractor shall coordinate with Owner on delivery, staging of plants, watering, and on revegetation throughout the project work.

8.19.1 **Bid Item No. 19a: Provide 1-Gallon Native Plants**

**Materials:**

Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.

- 1-gallon containerized plants as described below.
- Water in accordance with Bid Item 3 – Provide Water.

**Execution:**

Work includes, at a minimum:

- Contractor shall procure and deliver to Site native plants in 1-gallon containers in the amounts and species indicated in Table 4. Some of these will be “Tall” 1-Gallon containers as indicated in Table 4.
- Contractor shall coordinate with Owner to deliver plants at the time required by Owner.
- Contractor shall store plants in a shady location and keep them moist until plants are installed or Contractor demobilizes from the site, whichever occurs first. Contractor will not be paid for any plants that do not thrive until planting due to inadequate storage conditions or watering.
- Contractor shall provide water under Bid Item 3 – Provide Water.

**Measurement:**

- Measurement for Bid Item 19a – Provide 1-Gallon Native Plants, will be by the actual number of plants delivered, as measured by Owner.

**Payment:**

- Payment for Bid Item 19a – Planting (1-gallon), will be based on the unit price bid per delivered plant as shown on the Bid Form of the Contract Documents. This price shall
constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.
Table 4. 1-Gallon Containerized Native Plants by Zone

<table>
<thead>
<tr>
<th>Plant Zone</th>
<th>Total # of Plants (Minimum Plant Size)</th>
<th>Common Name</th>
<th>Species Name</th>
<th>Required Percentage</th>
<th>Plant Spacing (ft)</th>
<th>Number of Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riparian Zone 1</td>
<td>5700 Plants 1-Gal</td>
<td>Thinleaf Alder</td>
<td>Alnus incana</td>
<td>20% 50%</td>
<td>8</td>
<td>1140 2850</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sandbar Willow</td>
<td>Salix exigua</td>
<td>5% 25%</td>
<td>8</td>
<td>285 1425</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Golden Currant</td>
<td>Ribes aureum</td>
<td>0% 15%</td>
<td>8</td>
<td>0 855</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black Cottonwood</td>
<td>Populus trichocarpa</td>
<td>15% 40%</td>
<td>8</td>
<td>855 2280</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Red-osier Dogwood</td>
<td>Cornus serecia</td>
<td>15% 40%</td>
<td>8</td>
<td>855 2280</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quaking Aspen</td>
<td>Populus tremuloides</td>
<td>10% 20%</td>
<td>8</td>
<td>570 1140</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Douglas Hawthorn</td>
<td>Crataegus douglasii</td>
<td>5% 30%</td>
<td>8</td>
<td>285 1710</td>
</tr>
<tr>
<td></td>
<td></td>
<td>McKenzie Willow</td>
<td>Salix rigida</td>
<td>5% 25%</td>
<td>8</td>
<td>285 1425</td>
</tr>
<tr>
<td>Zone 2</td>
<td>1700 Plants 1-Gal</td>
<td>Black Cottonwood</td>
<td>Populus trichocarpa</td>
<td>15% 40%</td>
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<td>255 680</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nootka Rose</td>
<td>Rosa nutkana</td>
<td>0% 10%</td>
<td>6</td>
<td>0 170</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Woods Rose</td>
<td>Rosa woodsii</td>
<td>0% 10%</td>
<td>6</td>
<td>0 170</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chokecherry</td>
<td>Prunus virginiana</td>
<td>5% 15%</td>
<td>6</td>
<td>85 255</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Serviceberry</td>
<td>Amelanchier alnifolia</td>
<td>5% 15%</td>
<td>6</td>
<td>85 255</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Red-osier Dogwood</td>
<td>Cornus serecia</td>
<td>15% 30%</td>
<td>6</td>
<td>255 510</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Douglas Hawthorn</td>
<td>Crataegus douglasii</td>
<td>15% 40%</td>
<td>6</td>
<td>255 680</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rocky Mountain Maple</td>
<td>Acer glabrum</td>
<td>5% 20%</td>
<td>6</td>
<td>85 340</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grand Fir</td>
<td>Abies grandis</td>
<td>2% 5%</td>
<td>8</td>
<td>34 85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lodgepole Pine</td>
<td>Pinus contorta</td>
<td>2% 5%</td>
<td>8</td>
<td>34 85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engelmann Spruce</td>
<td>Picea engelmannii</td>
<td>2% 5%</td>
<td>8</td>
<td>34 85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Common Snowberry</td>
<td>Symphoricarpus albus</td>
<td>10% 30%</td>
<td>6</td>
<td>170 510</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blue Elderberry</td>
<td>Sambucus cerulea</td>
<td>5% 15%</td>
<td>6</td>
<td>85 255</td>
</tr>
<tr>
<td>Riparian Zone 1</td>
<td>320 Plants Tall 1-Gal</td>
<td>Red-osier Dogwood</td>
<td>Cornus serecia</td>
<td>20% 40%</td>
<td>1</td>
<td>64 128</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Douglas Hawthorn</td>
<td>Crataegus douglasii</td>
<td>20% 40%</td>
<td>1</td>
<td>64 128</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black Cottonwood</td>
<td>Populus trichocarpa</td>
<td>20% 40%</td>
<td>1</td>
<td>64 128</td>
</tr>
</tbody>
</table>
8.19.2 Bid Item No. 19b: Provide 10-Cubic-Inch Native Plants

Materials:
Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.

- 10-cubic-inch containerized plants as described below.
- Water in accordance with Bid Item 3 – Provide Water.

Execution:
Work includes, at a minimum:

- Contractor shall procure and deliver to Site native plants in 10-cubic-inch containers in the amounts and species indicated in Table 5.
- Contractor shall coordinate with Owner to deliver plants at the time required by Owner.
- Contractor shall store plants in a shady location and keep them moist until plants are installed or Contractor demobilizes from the site, whichever occurs first. Contractor will not be paid for any plants that do not thrive until planting due to inadequate storage conditions or watering.
- Contractor shall provide water under Bid Item 3 – Provide Water.

Table 5. 10 in³ Containerized Native Plants by Zone

<table>
<thead>
<tr>
<th>Plant Zone</th>
<th>Total # of Plants (Minimum Plant Size)</th>
<th>Common Name</th>
<th>Species Name</th>
<th>Required Percentage</th>
<th>Plant Spacing (ft)</th>
<th>Number of Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riparian Zone 1</td>
<td>4700 Plants (10 in³)</td>
<td>Big-leaf Sedge</td>
<td>Carex amplifolia</td>
<td>5%</td>
<td>15%</td>
<td>235 - 705</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lens Sedge</td>
<td>Carex lenticularis</td>
<td>5%</td>
<td>15%</td>
<td>235 - 705</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nebraska Sedge</td>
<td>Carex nebrascensis</td>
<td>10%</td>
<td>25%</td>
<td>470 - 1175</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small-fruited Bulrush</td>
<td>Scirpus microcarpus</td>
<td>10%</td>
<td>15%</td>
<td>470 - 705</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Beaked Sedge</td>
<td>Carex utriculata</td>
<td>0%</td>
<td>10%</td>
<td>0 - 470</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Common Rush</td>
<td>Juncus effusus</td>
<td>10%</td>
<td>20%</td>
<td>470 - 940</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Drummond's Willow</td>
<td>Salix drummondii</td>
<td>5%</td>
<td>15%</td>
<td>235 - 705</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coyote Willow</td>
<td>Salix exigua</td>
<td>5%</td>
<td>15%</td>
<td>235 - 705</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hardstem Bulrush</td>
<td>Schoenoplectus acutus</td>
<td>0%</td>
<td>10%</td>
<td>0 - 470</td>
</tr>
</tbody>
</table>

Measurement:
- Measurement for Bid Item 19b – Provide 10-Cubic-Inch Native Plants, will be by the actual number of plants delivered, as measured by Owner.
Payment:

- Payment for Bid Item 19b – Provide 10-Cubic-Inch Native Plants, will be based on the unit price bid per delivered plant as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.

8.19.3 **Bid Item No. 19c: Provide Native Seed**

Materials:
Contractor shall provide all labor, equipment, tools, materials, and incidentals necessary to complete the Work as specified.

- Native seed as described below.

Execution:
Work includes, at a minimum:

- Contractor shall procure and deliver to Site native seed in the amounts and species indicated in Table 6.
- Contractor shall coordinate with Owner to deliver seed at the time required by Owner.
- Contractor shall store seed in a secure location protected from rodents, birds, etc.
- Contractor shall provide water under Bid Item 3 – Provide Water.

Measurement:

- Measurement for Bid Item 19c – Provide Native Seed, will be by the actual number of pounds of seed delivered, as measured by Owner.

Payment:

- Payment for Bid Item 19c – Provide Native Seed, will be based on the unit price bid per pound of seed as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.
### Table 6. Native Seed Mix

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Species Name</th>
<th>Required Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Min</td>
</tr>
<tr>
<td>Western Yarrow</td>
<td><em>Achillea millefolium</em></td>
<td>5%</td>
</tr>
<tr>
<td>Red Baneberry</td>
<td><em>Actaea rubra</em></td>
<td>0%</td>
</tr>
<tr>
<td>Spike Bentgrass</td>
<td><em>Agrostis exerata</em></td>
<td>10%</td>
</tr>
<tr>
<td>Nettleleaf Horsemint</td>
<td><em>Agastache urticifolia</em></td>
<td>0%</td>
</tr>
<tr>
<td>Rocky Mountain Columbine</td>
<td><em>Aquilegia caerulea</em></td>
<td>0%</td>
</tr>
<tr>
<td>Red Columbine</td>
<td><em>Aquilegia formosa</em></td>
<td>0%</td>
</tr>
<tr>
<td>Sloughgrass</td>
<td><em>Beckmannia syzigachne</em></td>
<td>10%</td>
</tr>
<tr>
<td>California Brome</td>
<td><em>Bromus carinatus</em></td>
<td>0%</td>
</tr>
<tr>
<td>Mountain Brome</td>
<td><em>Bromus marginatus</em></td>
<td>0%</td>
</tr>
<tr>
<td>Camas</td>
<td><em>Camassia quamash</em></td>
<td>0%</td>
</tr>
<tr>
<td>Bluejoint Reedgrass</td>
<td><em>Calamagrostis canadensis</em></td>
<td>5%</td>
</tr>
<tr>
<td>California Oatgrass</td>
<td><em>Danthonia californica</em></td>
<td>5%</td>
</tr>
<tr>
<td>Tufted Hairgrass</td>
<td><em>Deschampsia caespitosa</em></td>
<td>5%</td>
</tr>
<tr>
<td>Slender Hairgrass</td>
<td><em>Deschampsia elongata</em></td>
<td>0%</td>
</tr>
<tr>
<td>Blue Wildrye</td>
<td><em>Elymus glaucus</em></td>
<td>10%</td>
</tr>
<tr>
<td>Fowl Mannagrass</td>
<td><em>Glyceria striata</em></td>
<td>0%</td>
</tr>
<tr>
<td>Blanketflower</td>
<td><em>Gaillardia aristata</em></td>
<td>0%</td>
</tr>
<tr>
<td>Northern Bedstraw</td>
<td><em>Galium boreale</em></td>
<td>0%</td>
</tr>
<tr>
<td>Prairie Gentian</td>
<td><em>Gentiana affinis</em></td>
<td>0%</td>
</tr>
<tr>
<td>Sticky Purple Geranium</td>
<td><em>Geranium viscosissimum</em></td>
<td>0%</td>
</tr>
<tr>
<td>Cow Parsnip</td>
<td><em>Heracleum lanatum</em></td>
<td>0%</td>
</tr>
<tr>
<td>Roundleaf Alumroot</td>
<td><em>Heuchera cylindrica</em></td>
<td>0%</td>
</tr>
<tr>
<td>Meadow Barley</td>
<td><em>Hordeum brachyantherum</em></td>
<td>0%</td>
</tr>
<tr>
<td>Lewis Flax</td>
<td><em>Linum lewisii</em></td>
<td>0%</td>
</tr>
<tr>
<td>Big Leaf Lupine</td>
<td><em>Lupinus polyphyllus</em></td>
<td>0%</td>
</tr>
<tr>
<td>Globe Penstemon</td>
<td><em>Penstemon globosus</em></td>
<td>0%</td>
</tr>
<tr>
<td>Slender Cinquefoil</td>
<td><em>Potentilla gracilis</em></td>
<td>0%</td>
</tr>
<tr>
<td>Bluebunch Wheatgrass</td>
<td><em>Pseudoroegneria spicata</em></td>
<td>10%</td>
</tr>
<tr>
<td>Butterweed</td>
<td><em>Senecio integerrimus</em></td>
<td>0%</td>
</tr>
<tr>
<td>Oregon Checkermallow</td>
<td><em>Sidalcea oregana</em></td>
<td>0%</td>
</tr>
<tr>
<td>Canada Goldenrod</td>
<td><em>Solidago canadensis</em></td>
<td>0%</td>
</tr>
<tr>
<td>Missouri Goldenrod</td>
<td><em>Solidago missouriensis</em></td>
<td>0%</td>
</tr>
<tr>
<td>Western Aster</td>
<td><em>Symphyotrichum spathulatum</em></td>
<td>0%</td>
</tr>
<tr>
<td>Montana Goldenpea</td>
<td><em>Thermopsis montana</em></td>
<td>0%</td>
</tr>
</tbody>
</table>

8.19.4  **Bid Item No. 19d: Clump Planting**

There will be occasions when smaller trees and shrubs must be removed for construction. At the request of Owner, Contractor will dig these plants, which shall be not greater than 6-feet in
height at the time of transplant, and replant them immediately in a completed construction section of the project. Transplanting location will be no more than 100 feet from original plant location. At request of Owner, Contractor shall trim branches prior to transplant. Contractor shall prepare a hole at the planting site prior to removing the plant from its original location. Contractor will dig plant in a single scoop with excavator or other approved method ensuring that the majority of root material is contained in the scoop. If possible, plant will be immediately replanted in its new location by placement with excavator. Contractor shall place loose soil in the hole and water in to ensure all roots are in contact with soil.

**Materials:**
- Contractor shall provide all labor, equipment, tools, materials and incidentals necessary to complete the Work as specified.

**Execution:**
Work includes, at a minimum:
- At the request of Owner, dig and replant Owner-requested plants in a completed construction section of the project.
- If possible, do not transport plants more than 100 feet from original plant location;
- Trim branches prior to transplant at the request of Owner.
- Prepare a hole at the planting site prior to removing the plant from its original location. Dig plant in a single scoop with excavator or other approved method ensuring that the majority of root material is contained in the scoop. If possible, replant in its new location by placement with excavator.
- Place loose soil in the hole and water in to ensure all roots are in contact with soil.

**Measurement:**
Measurement for Bid Item No. 19d, Clump Planting, will be by the actual number of plants transplanted as measured by Owner.

**Payment:**
Payment for Bid Item No. 19d, Clump Planting, will be based on the unit price bid per plant as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.

8.20 **Bid Item No. 20: Provide Rock/Soil Fill**

**Applicable Technical Specifications:**
Section 203 – Soil Materials
Section 204 – Structural Excavation and Compacting Backfill

**Applicable Drawings:**
Sheet C2 – Plan, Profile, & Cross-Sections (Sta 24+00 to 9+50)
Sheet C3 – Plan, Profile, & Cross-Sections (Sta 9+50 to 0+00)
Work Description:
This Bid Item is for additional rock/soil fill required to complete the Work that is not generated as a result of project excavation. Rock/soil fill may be used in Channel Diversion Structures, Ditch Plugs, and/or Fill Areas, and as requested by Owner.

Materials:
- Rock/soil fill shall be structural, compactable material.
- Rock/soil fill shall have rocks up to a maximum size of 6 inches.
- Rock/soil fill shall have a fines content that is suitable for compaction as described under Channel Diversion Structure, Ditch Plugs, and/or Fill Areas.

Execution:
- Procure rock/soil fill that meets material requirements above and is approved by Owner under Submittals.
- Deliver rock/soil fill to the site. Placement will occur under other respective bid items.
- Haul rock/soil fill to placement locations.

Measurement:
Measurement for Bid Item 20 – Provide Rock/Soil Fill, will be by the ton, as listed on the Bid Form. Tonnage shall be tracked by haul weight and provided to Owner for review.

Payment:
Payment for Bid Item 20 – Provide Rock/Soil Fill, will be based on the loose cubic yards of material as shown on the Bid Form of the Contract Documents. This price shall constitute full compensation for all labor, equipment, tools, supplies, materials, and incidentals necessary to accomplish the work.

Section 9.0 Construction Staking
Owner will provide all initial construction staking of work limits, habitat structure locations, off-channel habitat areas, regrade areas, alluvium harvest areas, ditch plugs, channel diversion structures, and new channel alignment and layout. Contractor shall preserve all primary and other control coordinate stakes. Surveyor costs for resetting control stakes carelessly or willfully destroyed or disturbed by Contractor will be charged to Contractor, and such costs will be deducted from the payment for the Work. Control points located within areas that must be disturbed can be removed without replacement at Owner’s discretion. Permanent survey monuments and benchmarks shall not be disturbed. Contractor shall employ a surveyor licensed in Idaho to replace any survey monuments or benchmarks that are accidently or willfully disturbed. See Sheet C1.

Section 10.0 Use of Premises
Contractor shall confine equipment, storage materials, and construction operations to the areas approved by Owner (staging, excavation, haulage, etc.) or as set forth in this Design. Contractor shall store only equipment and materials used for the Work on the Project at the Site. Contractor
shall not unreasonably encumber the construction area or public rights-of-way with materials and construction equipment. Contractor shall obtain written approval from Owner to work outside the designated project limits shown on the Drawings. Contractor shall comply with all reasonable instructions of Owner and the ordinances and codes of government agencies regarding signs, traffic, fire restrictions, burning, explosives, danger signals, and barricades.

**Section 11.0 Site Cleanup**

Periodically, or as requested by Owner during the course of the Work, Contractor shall remove and dispose of all surplus construction materials, debris, and garbage and keep the Project and public rights-of-way reasonably clean. No littering is allowed on the Site. Upon completion of the Work, Contractor shall remove all temporary construction facilities, debris, garbage, and unused materials provided for or generated by the Project, leaving the Site in a neat and clean condition. Contractor’s costs for all cleanup work are incidental to the Work, and no separate payment will be made. Contractor shall dispose of all construction-related debris and wastes generated by Contractor offsite in a licensed waste management facility.

**Section 12.0 Restoration of Disturbed Areas by Contractor**

Contractor shall restore all areas disturbed by Contractor’s operations such as, but not limited to, access locations and staging areas, to the original contours as set forth in the Contract Documents. Contractor’s costs for restoring disturbed areas is incidental to the Work, and no separate payment will be made unless specifically provided for elsewhere in the Contract Documents.

**Section 13.0 Use of Explosives**

The use of explosives is prohibited under this Contract.

**Section 14.0 Weed Control**

Prior to mobilizing equipment to the construction area, Contractor shall clean all equipment and vehicles with a high-pressure washer to ensure no weeds are imported to the work areas. Equipment components requiring cleaning include wheels, tracks, undercarriages, fenders, blades, and buckets. Owner shall inspect all equipment prior to use at the Project Site. Weeds are present at the construction site. **Contractor shall thoroughly clean all equipment prior to leaving the site.**

**Section 15.0 Undiscovered and Undocumented Historic Properties**

Contractor shall adhere to the following procedures for all undiscovered and undocumented historic properties encountered during construction.
During construction activities, previously undiscovered and undocumented historic properties may be encountered. In such an event, Contractor shall notify Owner, and stop construction activities in the immediate area of the find to the extent that stoppage will not create an undue risk of harm to human health or the environment. Owner will then contact the Community Historic Preservation Officer, a qualified historian, or an archaeologist to examine the find, verify its significance, and conduct preliminary recordation as necessary. Any changes to the Work (other than construction sequencing) will be made in writing by Change Order.

Section 16.0 Submittals

Contractor shall submit all shop drawings, laboratory sample results, product samples, plans, and other submittals required by the Contract to Owner in accordance with the Contract Documents. Contractor shall provide material specifications, product cut sheets, and manufacturers’ installation instructions to Owner for all products and materials installed as a portion of the Work. The list below is provided as an aid to Contractor; this list is not considered to be exhaustive and additional submittals may be required by these Special Provisions or requested by Owner.

<table>
<thead>
<tr>
<th>Submittal</th>
<th>Submittal Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and Safety Plan</td>
<td>Contractor is responsible for developing and enforcing a Site-specific Health and Safety Plan as described in Section 2.0 of these Special Provisions.</td>
</tr>
<tr>
<td>General Construction Permit</td>
<td>Contractor must submit the approved Construction General Permit as described in Section 3.0 of these Special Provisions. A SWPPP shall be prepared as part of the Construction General Permit. SWPPP shall include Erosion and Pollution Control and a List of Proposed Equipment.</td>
</tr>
<tr>
<td>Highway Permits (if required)</td>
<td>Contractor shall submit all required permits from ITD/County Highway or acknowledge that no permits are required prior to the start of any Work.</td>
</tr>
<tr>
<td>Utility Locates</td>
<td>Contractor shall provide copies to Owner of all written communications with the utility owner(s) as described in Section 3.0 of these Special Provisions.</td>
</tr>
<tr>
<td>Material Submittals</td>
<td>Contractor must provide submittals at the time of the Preconstruction Conference for all materials imported to the construction area that are not provided by Owner. This includes, but is not limited to: structural rock/soil fill, topsoil, riprap, logs, boulders, live stakes, native plants, and native seed.</td>
</tr>
</tbody>
</table>
**Traffic Control Plan**  
Contractor must submit a Traffic Control Plan for the Project as described in Bid Item 1 – Mobilization, Demobilization, Bonding, and Insurance.

**Erosion and Sediment Control Plan**  
Contractor must submit a Stormwater Plan for the Project as described in Bid Item 2 – Stormwater BMPs.

**Temporary River Crossing Plan**  
Contractor must submit a plan for temporary river crossings as described in Bid Item 4 – Temporary Access.

**Water Management Plan**  
Contractor shall submit a Water Management Plan as described in Bid Item 5 – Water Management.

All submittals shall be provided to Owner on or within five (5) days of the Preconstruction Conference unless otherwise noted in these Contract Documents.