APPENDIX B

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

SECTION 01000 — GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

A. The work includes improvements at the Pack River Delta as described below:

1. Construction of temporary access crossings, roads, staging area, and fills.
2. Placement of rock for island edge protection areas.
3. Coarse Grain soil fill for island construction.
4. Fine Grain soil fill for island construction.
5. Planting of willow poles provided by IDFG.

1.2 ACRONYMS

A. CFS = Cubic feet per second

B. DEQ = Department of Environmental Quality

C. IDAPA = Idaho Administrative Procedures Act

D. IDFG = Idaho Department of Fish & Game

E. ITD = Idaho Transportation Department

F. OHW = Ordinary High Water, as shown on the Contract Drawings

G. ACOE = United States Army Corp of Engineers

H. USFWS = United States Fish and Wildlife Service

1.3 SITE CONDITIONS

A. SITE INVESTIGATION AND REPRESENTATION

1. The Contractor acknowledges that the Contractor is satisfied as to the nature and location of the work, the general and local conditions, particularly those bearing upon availability of transportation, access to the site, disposal, handling and storage of materials, availability of labor, water, electric power, roads, and uncertainties of weather, river stages, or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during the prosecution of the work and all other matters which can in any way affect the work or the cost thereof under this Contract.

2. The Contractor further acknowledges that the Contractor is satisfied as to the character, quality, and quantity of surface and subsurface materials to be encountered from their inspection of the site and from reviewing any available records of exploratory work furnished by the Owner or included in these documents. Failure by the Contractor to acquaint themselves with the physical conditions of the site and all the available information will not relieve the Contractor from responsibility for properly estimating the difficulty or cost of successfully performing the

work.

3. The Contractor warrants that as a result of their examination and investigation of all the aforesaid data that the Contractor can perform the work in a good and workmanlike manner and to the satisfaction of the Owner. The Owner assumes no responsibility for any representations made by and of its officers or agents during or prior to the execution of this Contract, unless (1) such representations are expressly stated in the Contract, and (2) the Contract expressly provides that the responsibility therefore is assumed by the Owner.

B. INFORMATION ON SITE CONDITIONS

1. Any information obtained by the Owner's Representative regarding site conditions, site access, subsurface information, groundwater and surface water elevations, existing construction of site facilities as applicable, and similar data will be available for inspection at the office of the Owner's Representative upon request. Such information is offered as supplementary information only. Neither the Owner's Representative nor the Owner assumes any responsibility for the completeness or interpretation of such supplementary information.

C. SUBSURFACE INVESTIGATION

1. Owner has provided known geotechnical information during prequalification process. Contractor shall refer to that information.
2. Any additional information the Owner may have concerning subsurface conditions will be made available to the Contractors upon request.
3. The Contractor shall examine the site and may make arrangements with the Owner to conduct their own subsurface investigation.

D. UNDERGROUND UTILITIES

1. Known utilities and structures adjacent to or encountered in the work area are shown on the Contract Drawings. The locations shown are taken from existing records and the best information available from existing utility plans; however, it is expected that there may be some discrepancies and omissions in the locations and quantities of utilities and structures shown. Those shown are for the convenience of the Contractor only, and no responsibility is assumed by either the Owner or the Owner's Representative for their accuracy or completeness.

E. CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

1. Where the Contractor's operations could cause damage or inconvenience to railway, telephone, television, power, oil, gas, water, sewer, or irrigation systems, the operations shall be suspended until all arrangements necessary for the protection of these utilities and services have been made by the Contractor.

2. Notify all utility offices which are affected by the construction operation at least 48 hours in advance. Under no circumstances expose any utility without first obtaining permission from the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for all existing underground utilities.

3. The Contractor shall be solely and directly responsible to the operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage which may result from the construction operations under this Contract.

4. Neither the Owner nor its officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the work area.

5. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no case shall interruption of any water or utility service be allowed to exist outside working hours unless prior approval is granted.

6. In the event the Contractor encounters water service lines that interfere with trenching, they may, by obtaining prior approval of the property owner, Utility Manager, or Fire Department as applicable, and the Owner's Representative, cut the service, dig through, and restore the service with similar and equal materials at the Contractor's expense.

7. The Contractor shall replace, at their own expense, any and all other existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract Documents or ordered by the Owner's Representative.

F. EASEMENTS

1. Where portions of the work are located on public or private property, any required easements and permits will be obtained by the Owner. Easements will provide for the use of property for construction purposes to the extent indicated on the easements. If required, copies of any easements will be provided by Owner.

2. It is **not** anticipated that any easements will be needed for this project. However, should the procurement of any easement or permit be delayed, the Contractor shall schedule and perform the work around these areas until such a time as the easement or permit has been secured.

G. LAND MONUMENTS

1. The Contractor shall notify the Owner's Representative of any existing Federal, State, City, County, and private land monuments encountered. Private monuments that are within 5 feet of the trench centerline shall be preserved or replaced by a licensed surveyor at the Owner's expense. When Government monuments are encountered, the Contractor shall notify the Owner's Representative at least 2 weeks in advance of the proposed construction in order that the Owner's Representative will have ample opportunity to notify the proper authority and reference these monuments for later replacement.

1.4 TIME FOR COMPLETION OF PROJECT

A. Substantially complete project in accordance with the Contract Drawings and Specifications within the timeframe outlined herein. Final Completion of the project, in accordance with Contract Documents, shall occur within 30 calendar days from substantial completion date.

B. See Section 01320 for specific completion dates.

C. No time extensions or extra compensation will be granted for delays due to inclement weather conditions or due to a delayed start.

1.5 PROJECT START DATE

A. The Project Start Date shall be identified in the Notice to Proceed. No work is allowed within the project site limits or access area prior to NTP.

1.6 HOURS OF WORK

A. Except in the case of an emergency or unless otherwise approved by the Owner, the work hours shall be between 6 a.m. through 9 p.m. Monday through Sunday, excluding federal holidays.

B. If the Contractor desires to perform Work on holidays or outside the work hours stated above, the Contractor shall apply in writing to the Owner for permission to Work such days or times.

1.7 PRE-CONSTRUCTION CONFERENCE

A. Following notification of award to Contractor, the date for an on-site preconstruction conference will be set in accordance with Section 01312 – Project Meetings.

B. Furnish Owner and Owner's Representative with the following:

1. Complete list of sub-contractors, including business address, telephone numbers, items of Work, and registration numbers. List is to be updated during contract life.
2. Name of Contractor's superintendent who will be on job at all times.
3. A progress schedule in accordance with these Technical Specifications.
4. Construction Sequence Work Plan and other Work Plans as required by the Contract Specifications and Contract Drawings.

1.8 ENGINEERING REQUIREMENTS

A. The Contractor shall review and be familiar with the hydrology/geotechnical data provided during the prequalification process as well as publicly available USGS data, and site conditions to develop a work plan that will provide protection of the active work area from inundation of water for the range of flows and lake level elevations anticipated during Construction.

B. Flow diversion may be required to complete the Work. The Contractor is responsible for selection of the design river flow and water level conditions for the Flow Diversion design.

1.9 CONSTRUCTION SEQUENCING

A. The Contractor shall submit a detailed Construction Sequence Work Plan as outlined in the Contract Drawings to the Owner's Representative and shall receive approval 30 days prior to start of construction. The approved Construction Sequence Work Plan shall be updated weekly during construction and submitted to the Owner's Representative and Owner's Construction Manager for review.

1.10 PROGRESS CLEANING

A. Remove rubbish and debris from project site daily. Storage of materials is not allowed on site unless specified by the Owner's Representative.

B. Maintain work area in a neat and orderly condition at all times.

C. All cleanup operations are incidental to the Contract and no extra compensation will be made.

1.11 PUBLIC SAFETY AND CONVENIENCE

A. Access by Federal, State, and Local Government Officials

1. Authorized representatives of the Idaho Department of Health and Welfare, and other government officials shall at all times have safe access to the work wherever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and inspection.

B. Fire Prevention and Protection

1. The Contractor shall perform all work in a fire-safe manner. The Contractor shall supply and maintain on the site adequate fire- fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable Federal, local, and State fire- prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations, (NFPA No. 241) shall be followed.

1.12 UNANTICIPATED DISCOVERY OF CULTURAL OR ARCHEOLOGICAL RESOURCES

A. Archaeological resource sites are known to exist within Work Limits. Contractor shall adhere to all known avoidance areas as shown on plans. However, there always exist the potential for unanticipated discoveries during excavation work.

B. If resources of potential cultural or archeological resources are discovered the Contractor shall immediately contact the Owner or his representative and follow these steps outlined in Bonneville Power Administration Inadvertent Discovery of Cultural Resources Procedure:

1. **IMMEDIATELY DISCONTINUE ALL GROUND DISTURBING ACTIVITY WITHIN 100 FEET OF THE FIND. DO NOT TOUCH OR MOVE THE OBJECTS AND MAINTAIN THE CONFIDENTIALITY OF THE SITE. DO NOT TAKE PHOTOS**. Removing bone fragments, artifacts, and other items from any archaeological site, without proper authorization, is against the law. Violators could be charged in state or federal court resulting in a fine or imprisonment.
2. Immediately start trying to make contact with a BPA Archaeologist (listed in table below) beginning with the cell phone numbers, continue calling down the list until you speak with someone. BPA staff once contacted by the Lead Cultural Resource Monitor, will contact the appropriate tribal and state authorities to notify them of the find and help guide everyone through the IDP process as stipulated in the Programmatic Agreement. If it is after regular business hours, and/or you can't contact anyone on their office or work cell phones, then please contact Jenna Peterson on her personal cell phone (971.420.7598). BPA staff once contacted by the Lead Cultural Resource Monitor will contact the appropriate tribal and state authorities to notify them of the find and help guide everyone through the IDP process as stipulated in the Programmatic Agreement.

Name	Title	Office Phone	Cell Phone	Email
Sarah McDaniel	BPA Archaeologist	503 230 3696	503 560 6207	sfmcdaniel@bpa.gov
Jenna Peterson	BPA Senor Archaeologist	503 230 3018	971 420 7598	jepeterson@bpa.gov
Sunshine Schmidt	BPA Supervisor/Program Manager	503 230 5015	503 250 1815	srclark@bpa.gov

3. Do not draw any attention to the area with obvious flagging or markers. Maintain confidentiality concerning the discovery of the cultural resource, and do not discuss with anyone other than the contact people listed above. Do not contact the media.
4. Fill out the Cultural Resources Discovery Report on page 3 of the Inadvertent Discovery Procedure.
5. Do not resume ground-disturbing work in this area until directed to do so by a BPA archaeologist.

BPA's cultural resources staff will work with the archaeological monitor, agencies, and Tribes to address the inadvertent discovery as quickly as possible. Following the guidelines above will assist BPA in that process and minimize any downtime that may result. Best Management Practices are specified by the funding authority (BPA). Copies of those can be provided by the Owner upon request.

1.13 AVOIDANCE AREAS

A. Known avoidance areas are shown in the plans. The contractor shall provide t-post and yellow rope to construct a temporary boundary fence or have GPS equipped devices on equipment that provides real-time locations of avoidance areas if operating near any of the areas. All personnel and equipment must stay outside the boundaries of marked areas during project construction. Contractor to remove fencing upon demobilization. Any costs shall be incidental to Section 01550.

1.14 AS-BUILT DRAWINGS

A. Contractor shall keep a clean set of full-sized design drawings at job site that are updated to identify all changes.

1.15 PROJECT CONDITIONS SITE SAFETY

A. The Contractor shall be solely responsible for job-site safety. Contractor shall adhere to requirements for safety established in state and federal regulations.

B. Federal, state, and local laws, rules, and regulations related to construction, safety and health standards are essential and must be followed by the Contractor. The Contractor will conduct their work in a safe and prudent manner at all times. The Contractor is prohibited from allowing or requiring workers to work in conditions that are unsanitary, hazardous, or dangerous to their health or safety.

C. Provide reasonable restroom facilities for personnel and adequate work time to use those facilities, including provision of portable facilities for moving operations.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01110— SUMMARY OF WORK

PART 1 GENERAL

1.1 REQUIREMENT

A. Construct and complete the work in accordance with the Contract provisions, the Contract Specifications, and the Contract Project Plans (hereafter referred to as Project Plans).

B. Perform Work in accordance with all applicable laws, codes, ordinances, and regulations.

C. This project is funded by the Bonneville Power Administration (BPA) through a Memorandum of Agreement signed between BPA and the State of Idaho to provide funding to mitigate for wildlife habitat loses caused by operation of Albeni Falls dam. The Idaho Department of Fish and Game will administer this project according to the terms and conditions of the award and State laws and guidelines. The project's construction wage rate requirement will fall under Davis-Bacon Act and considered Heavy Construction category. A listing of prevailing wages is included at the end of the specifications and can be found at the following website: https://www.wdol.gov/index.aspx.

D. The Contractor shall have an approved set of the Contract Documents on site at all times. The Contractor shall also have a copy of applicable permits and licenses on the site at all times.

E. Protection of natural resources: All work should be carried out in a manner consistent with the goal of achieving the proposed developments with the least possible disturbance to vegetation, wildlife, steep slopes, wetlands, streams, and their buffers. No disturbance, including access or storage of materials, is to occur within designated wetlands or below ordinary high water, with the exception of those areas as shown in the Project Plans, which are permitted disturbances.

1.2 LOCATION

A. Idaho Department of Fish and Game (IDFG) manages the land within the delta, but it is owned by the U.S. Army Corps of Engineers (ACOE). The project is located approximately 10 miles east of Sandpoint, Idaho on the lake side (south) of the BN train tracks in the northwest region. The main access to the construction project site will be developed off of Sunnyside Road. A temporary staging area and temporary access roads will be built off of Sunnyside Road onto the Pack River delta floor.

1.3 INTENT

A. The Pack River delta has multiple areas within the delta that have been identified for both protection and habitat restoration. This project will focus primarily south of the BN train track in the northwest corner of that region of the Pack River delta. The project's main goals are to restore and enhance wildlife habitat and protect the delta from further erosion. The Project includes bankline erosion stabilization and protection, wetland enhancements, filling and/or grading, and planting. Access road development and temporary staging areas construction are scheduled to begin after a contract is awarded and signed with Idaho Department of Fish and Game and water levels and permits allow. The main project work will begin as soon as water levels allow in the fall of 2025. Construction should be completed by April 2026 or sooner. See the Contract Documents for project completion

deadlines.

B. The above work is to be performed for the Idaho Department of Fish and Game, hereafter referred to as the “Contracting Officer”, “Owner”, or “Owner’s Representative”. The Ducks Unlimited team provided the engineering and hereafter will be referred to as “Designer” or “Engineer”. The Contracting Officer will enter into a contract to construct the above work and will administer the contract and funds for the project.

C. Erosion control BMP’s will be necessary in the project area. A BMP plan will be required by Idaho Department of Environmental Quality and may be required for this project for areas above OHWM by the Contractor.

D. Should work stoppage occur due to inclement weather conditions, Contractor shall provide temporary project stabilization as needed to minimize off-site storm water runoff impacts, on-site erosion, and dust.

E. Organic layer/topsoil shall be salvaged and re-used in all construction areas as indicated in the project plans.

1.4 CONTRACT TIME AND WEATHER-RELATED DELAYS

A. Unless otherwise indicated in the Contract, the following shall apply:

1. The Work of this Contract shall commence immediately upon the receipt of Notice to Proceed and shall be substantially complete within the Contract time defined in the General Conditions of the Contract Documents. Completion of Final Punch List shall be achieved within the time period required in the Certificate of Substantial Completion.

2. Contract time may be changed by Change Order only. The Contractor shall manage the project workload, schedule, and float in anticipation of potential weather delays. The Contractor is required to meet the project milestones regardless of weather and no time extensions will be considered.

3. The construction schedule shall be developed per section 01320.

1.5 REGULATORY REQUIREMENTS

The following regulatory permits will be part of the contract documents. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of federal, state, and local governmental agencies and jurisdictions having authority over the Project.

IDFG is in the process of securing the following permits and will provide them upon receipt.

1. USACE Section 404- Nationwide Permit (NWP) No. 27: Aquatic Habitat Restoration, Establishment, and Enhancement
2. Idaho Department of Lands encroachment permit
3. Idaho Department of Environmental Quality Section 401 Water Quality Certification (see Appendix for example copy)
4. Bonner County Floodplain Development Permit

IDEQ General Construction Permit (CGP) for Stormwater **will not be required.**

PART 2 PRODUCTS

See project plans and technical specifications.

PART 3 EXECUTION

See project plans and technical specifications.

END OF SECTION

SECTION 01300—SUBMITTALS

PART 1 GENERAL

1.1 PAYMENT

A. No separate payment shall be made. Include in the prices offered in the schedule for other items of Work, except as specified.

1.2 DEFINITIONS

A. Days: Calendar days.

B. Required Submittal Number (RSN): RSN identifies items to be submitted together as a complete submittal.

1.3 REVIEW OF SUBMITTALS

A. Time required to review submittals shall be 10 days.

B. Time required for review of each submittal or resubmittal begins when the Contracting Officer receives complete sets of materials required for a particular RSN and extends through return mailing postmark date.

1.4 TRANSMITTAL

A. Send submittals required to Pete Rust, Project Manager at Idaho Department of Fish and Game, 2885 W. Kathleen Ave., Coeur d'Alene, Idaho 83815, or preferred via email at: pete.rust@idfg.idaho.gov. Clearly label each submittal with the title and RSN number.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 GENERAL

A. Maintain one approved set of submittals at the worksite and provide access to these submittals for the Project Manager and interested Government agencies.

Table 01300 – List of Submittals

RSN	Submittal title	Type*	Submittals required	Submittal Due	No. of sets to be sent to Contracting
01320-1	SCHEDULE	A	60-day Schedule	Preconstruction Meeting	1
04000-1	BMP Pan	A	BMP plan for project site	Not less than 10 days prior to mobilization	1
01505-1	Spill Containment Control Plan	A	Spill Containment Control Plan	Not less than 10 days prior to mobilization	1

01550-1	Access Route Plan	A	Access Routes Plan	Not less than 10 days prior to mobilization	1
01781-1	Record Project Plans	A	Contractor's Record Project Plans	Not more than 21 days after substantial completion	3
02375-1	Rock Material	A	Source of materials showing that specification have been	Not less than 21 days prior to staging riprap	1

* Type "A" indicates submittals for review and approval.

END OF SECTION

SECTION 01312 – PROJECT MEETINGS

PART 1 GENERAL

1.1 PAYMENT

A. No separate payment shall be made. Include in the prices offered in the schedule for other items of Work, except as specified.

1.2 PRE-CONSTRUCTION MEETING

A. Notification - Following the award, the Contractor shall schedule a pre-construction meeting with the Owner and Owner's Representative.

B. Location - The preconstruction meeting will be held at the project site or at a location approved by the Owner and Owner's Representative.

C. Pre-Construction meeting shall be completed at least 30-days prior to starting work if possible.

D. Topics to be discussed at the pre-construction meeting may include:

1. Organization structure, including delegation of authority
2. Correspondence and contract procedures
3. Payment procedures
4. Permit restrictions
5. Discussion of the Technical Specifications including:
    a. Layout of work
    b. Permits and key permit conditions affecting the work
    c. Quality Control Plan
    d. Traffic Control Plan
6. Staging, parking, and fueling locations and procedures
7. Other items of mutual interest to the contracting parties
8. The Contractor's Project Manager and other key personnel shall attend this meeting

1.3 PROGRESS MEETINGS

A. The Owner's Representative will schedule and administer weekly or bi-weekly progress meetings, depending on the level of activity, throughout progress of the work.

B. Progress meetings may take place in-person or via teleconference, at the Owner's Representative discretion.

C. The Contractor is responsible for providing a location with teleconference capabilities and telecommunications connectivity (land line or cellular connection) for weekly construction meetings.

D. Attendance is required for the Contractor's job superintendent, major subcontractors, Owner's Construction Manager, Owner, and Owner's Representative as appropriate to the agenda topics for each meeting.

E. Standard Agenda

1. Safety
2. Review minutes of previous meeting.
3. Review of work progress.
4. Field observations, problems, and decisions.

5. Identification of problems that impede planned progress.
6. Maintenance of progress schedule.
7. Corrective measures to regain projected schedules.
8. Planned progress during succeeding work period.
9. Coordination of projected progress.
10. Maintenance of quality and work standards.
11. Effect of proposed changes on progress schedule and coordination.
12. Demonstration that the project record drawings are up to date.
13. Other business relating to the work.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01320 - CONSTRUCTION SCHEDULE

PART 1 – GENERAL

1.1 PAYMENT

A. No separate payment shall be made. Include in the prices offered in the schedule for other items of Work, except as specified.

1.2 GENERAL

A. The construction schedule is limited by reservoir and river fluctuations which vary depending on the weather and downstream dam operations. The Contractor shall be fully aware of potential daily and seasonal water fluctuations and schedule the work accordingly. The following draft schedule milestones and limitations are based on historic data and anticipated dam and reservoir operations:

1. Removal of access roads, crossings, and conversion of staging area by March 15, 2026.

2. Final demobilization by March 31, 2026

Contractor shall monitor the weather and available stream flow information to identify the potential for fluctuations in Pack River flows and adjust the work as required to accommodate these fluctuations.

Contractor shall coordinate with the USACE during construction to identify any changes to reservoir operations and shall adjust the work accordingly to successfully complete the project prior to inundation by the reservoir.

B. The Contractor shall schedule the work in accordance with this Section and based on weather, river flow, and reservoir operating constraints.

C. Development of the schedule, the cost loading of the schedule monthly payment requisitions and project status reporting requirements of the Contract Documents shall employ computerized Critical Path Method (CPM) scheduling.

1.3 DEFINITIONS

A. **CPM Scheduling**: The term shall be interpreted to be generally as outlined in the Association of General Contractors (AGC) publication, "The Use of CPM in Construction." except that either "i-j" arrow diagrams or precedence diagramming format may be utilized. In the case of conflicts between this Section and the AGC document, this Section or the terms in the Contract shall govern. The Contract will determine which document takes precedence.

B. **Float**: Unless otherwise indicated herein, float and total float are synonymous. Total float is the period of time measured by the number of Days each non-critical path activity may be delayed before it and its succeeding activities become part of the critical path. If a non-critical path activity is delayed beyond its float period, then that activity becomes part of the critical path and controls the end date of the work. Thus, delay of a non- critical path activity

beyond its float period will cause delay to the project itself.

C. **Day**: Unless otherwise indicated herein, each reference to “Day” or “Days” shall refer to a calendar day or calendar days.

1.4 INITIAL SCHEDULE SUBMITTALS

A. Initial and progress schedules can be emailed to all interested parties.

B. The Contractor shall submit an initial schedule at the preconstruction meeting which shall serve as the Contractor's plan of operation for the initial 60 Day period of the Period of Performance or for a different period of time as approved by the Owner and identify the manner in which the Contractor intends to complete the Work within the Period of Performance.

1. **60 Day Plan of Operation:** During the initial 60 Days of the Period of Performance, the Contractor shall conduct operations in accordance with a 60 Day bar chart type schedule. The chart will be prepared to show accomplishment of the Contractor's early activities (mobilization, permit acquisition, submittals necessary for early material and equipment procurement, submittals necessary for long lead equipment procurement, CPM submittals, initial sitework and other submittals and activities required in the first 60 Days).

2. **Complete Total Project Overview Bar Chart:** The overview bar chart shall indicate the major components of the work and the sequence relations between major components and subdivisions of major components. The overview bar chart shall indicate the relationships and time frames in which the various components of the work will be made substantially complete and placed into service in order to meet the required milestones. Sufficient detail shall be included to subdivide major components into activities with a maximum duration of 10-days.

1.5 CPM SCHEDULE SUBMITTALS

A. **Original CPM Schedule Submittal**: At Preconstruction meeting, the Contractor shall submit for review by the Owner the CPM schedule and the computerized schedule report tabulations. This submittal shall have already been reviewed and approved by the Contractor's Representative, superintendent, and estimator prior to submission.

1. **Float Ownership:** Neither the Owner nor the Contractor owns the float time. The project owns the float time. Liability for delay to the project completion date rests with the party causing the delay. For example, if Party A is responsible for consuming a portion of the float time and Party B later consumes the remainder of the float time plus additional time beyond the float time, Party B is responsible for the time that is a delay past the completion date. Party A would not be responsible for any delay since it did not consume all the float time, additional float time remained after its delay, and the completion date was unaffected by its tardiness.

B. **Original CPM Schedule Review Meeting**: The Contractor shall, within 30 Days from the Contract execution date, meet with the Owner to review the original CPM schedule submittal. The Contractor shall have the project manager, superintendent, and the scheduler in attendance. The review may include:

1. Clarifications of the design intent.

2. Directions to include activities and information missing from the submittal.

3. Requests to the Contractor to clarify and revise the schedule.

C. Acceptance

1. Acceptance of the Contractor's schedule by the Owner will be based solely upon compliance with the requirements. By way of the Contractor assigning activity durations and proposing the sequence of the work, the Contractor agrees to utilize sufficient and necessary management and other resources to perform work in accordance with the schedule. Upon submittal of a schedule update, the updated schedule shall be considered the "current" project schedule.

2. Submission of the Contractor's progress schedule to the Owner shall not relieve the Contractor of total responsibility for scheduling, sequencing, inspecting, testing, obtaining project approvals and pursuing the work to comply with the requirements of the Scope of Work, including adverse effects such as delays resulting from ill- timed work.

D. Monthly Updates and Periodic CPM Schedule Submittals

1. Following acceptance of the Contractor's original CPM schedule, the Contractor shall monitor the progress of the work and adjust the schedule each month to reflect actual progress and any changes in planned future activities. Each schedule update submittal shall be complete including information requested in the original schedule submittal and be in the schedule report format indicated below. Each update shall continue to show work activities including those already completed. Completed activities shall accurately depict "as built" information by indicating when the Work was actually started and completed.

2. Neither the submission nor the updating of the Contractor's original schedule submittal nor the submission, updating, change, or revision of any other report, curve, schedule, or narrative submitted by the Contractor, nor the Owner’s review or acceptance of any such report, curve, schedule, or narrative shall have the effect of amending or modifying in any way the Period of Performance or milestone dates or of modifying or limiting in any way the Contractor's obligations under the Scope of Work. Only a signed, fully executed change order can modify contractual obligations.

E. **Schedule Revisions**: The Contractor shall highlight or otherwise identify changes to the schedule logic or activity durations made from the previous schedule. The Contractor shall modify any portions of the CPM schedule which become infeasible because activities are behind schedule or for any other valid reason.

1.6 CPM STANDARDS

A. **Construction Schedules**: Construction schedules shall include a graphic network diagram and computerized schedule reports as required below for status reporting.

B. **Duration Estimates**: The duration estimate for each activity shall be computed in Days and shall represent the single best estimate considering the scope of the work and resources planned for the activity. Except for certain non-labor activities such as curing of concrete or delivery of materials, activity duration shall not exceed 10 Days nor be less than one Day, unless otherwise accepted by the Owner.

1.7 SCHEDULE REPORT FORMAT

A. **Schedule Reports**: Schedule reports shall be prepared based on the CPM schedule, shall be submitted electronically by email, CD, or thumb drive, depending on file size, and shall include the following minimum data for each activity:

1. Activity numbers and responsibility codes.
2. Work Order No.
3. CIP No.
4. Estimated activity duration.
5. Activity description.
6. Activity percent completion.
7. Early start date (calendar dated).
8. Early finish date (calendar dated).
9. Late start date (calendar dated).
10. Late finish date (calendar dated).
11. Status (whether critical).
12. Total float for each activity.
13. Free float for each activity.
14. Cost value for each activity.

B. **Project Information**: Each Schedule Report shall be prefaced with the following summary data:

1. Project name.
2. Contractor name.
3. Type of tabulation.
4. Project duration.
5. Period of Performance (as revised by change orders).
6. The commencement date stated in the Contract execution date.
7. The data date and plot date of the CPM Schedule.
8. If an update, cite the new schedule completion date.

1.8 PROJECT STATUS REPORTING

A. The Contractor shall prepare and submit monthly an overview bar chart schedule of the major project components. The overview bar chart schedule shall be a summary of the current CPM schedule (original and as updated and adjusted throughout the entire construction period). For example, the major project components shall be represented as time bars which shall be subdivided into various types of Work including but not limited to demolition, temporary access, excavation and earthwork, shoreline armoring, etc.

B. It is the Contractor's responsibility to coordinate and plan the construction activities to integrate each schedule constraint into performance of the work.

C. The listing of schedule constraints does not mean that every constraint, test or inspection, special inspection, county or city inspection or special condition has been identified. This list does not substitute for the Contractor's coordination, scheduling and planning for completion of the work within the terms of the Contract.

D. The Contractor may include any other information pertinent to the status of the Work. The Contractor shall include additional status information requested by the Owner.

1.9 INCLEMENT WEATHER PROVISIONS OF THE SCHEDULE

A. The construction schedule is limited by weather, reservoir and river fluctuations which vary depending on the weather, upstream flows, and downstream dam operations. Therefore, additional time may not be available for inclement weather delays. The Contractor shall actively manage the schedule based on weather and reservoir operating information gathered during the project and provide additional resources if necessary to complete the work in accordance with the construction schedule.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

END OF SECTION

SECTION 01505 – MOBILIZATION AND DEMOBILIZATION

PART 1 GENERAL

1.1 PAYMENT

A. Payment: Lump-sum price offered in the schedule. 50% of contract unit price shall be paid at the first billing. The remaining 50% of the contract unit price shall be paid at project completion.

1.2 MOBILIZATION

A. Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the site; for the establishment of all facilities necessary for work on the project; and for all other work and operations which must be performed, or costs incurred prior to beginning work, on the various items on the project site. Mobilization includes obtaining any permits not provided by the Contracting Agency and obtaining project-specific bonds.

B. Mobilization shall also include the construction of temporary fencing, and the necessary preparatory work required to allow for the safe and stable movement of all vehicles that are required to construct the improvements outlined in the Contract Documents.

C. Equipment

1. All equipment shall be washed prior to mobilization to the site to minimize the introduction of foreign materials and fluids to the project site. All equipment shall be free of oil, hydraulic fluid, and diesel fuel leaks. To prevent invasion of noxious weeds or the spread of whirling disease spores, all equipment shall be power washed or cleaned to remove mud and soil prior to mobilization into the project area. It will be the contractor's responsibility to ensure that adequate measures have been taken.

2. Equipment shall be in a well-maintained condition to minimize the likelihood of a fluid leak. If a fluid leak does occur, the Engineer shall be notified immediately, and all work ceased until the leak has been rectified. At all times during the construction phase, fluid spill containment equipment shall be present on-site and ready for deployment should an accidental spill occur. The Engineer reserves the right to refuse equipment that does not meet criteria.

3. All construction equipment shall be staged in a location and manner to minimize air, soil and water pollution. Storage of fuel and lubricants - all fuel and lubricants shall be stored in containers and areas that are in conformance with the Idaho State Department of Environmental Quality, biological opinion terms and conditions, and local regulations.

4. Servicing and refueling equipment - all fuel and lubricants used in the servicing of construction equipment shall be done in a manner that avoids spills and over filling and shall be on designated high ground or if possible 150-ft from waterbodies. The Idaho State Department of Environmental Quality shall be notified immediately of any spill and the operator shall contain the spillage.

5. Contractor must prepare and submit a Spill Containment Control Plan

    A. Spill Containment Control Plan shall be developed and submitted by the Contractor to the Contracting Officer.
    B. The Spill Containment Control Plan shall include the following:
        1. Measures to reduce/recycle hazardous and non-hazardous wastes

2. Spill notification procedures
3. Specific cleanup and disposal instructions for different products
4. Quick response and cleanup measures
5. Methods of disposal of spilled materials
6. Employee training on spill containment

6. If a spill of chemical pollutants such as fuel or hydraulic fluid should occur, immediately attempt to contain the spilled material. The following procedures shall be followed:

   A. for spillage on land, construct earthen berms or use other suitable barricade material of sufficient size to contain the spill and keep it from spreading.

   B. for spillage on water, attempt to isolate and contain the spilled material. Commercial booms or other suitable materials shall be kept on site during construction to contain fuel and oil spills on water.

7. Sanitary facilities - sanitary facilities such as chemical toilets shall be located at least 150 feet from water bodies to prevent contamination of surface or subsurface water.

1.3 DEMOBILIZATION AND SITE RECLAMATION

A. Demobilization shall consist of work and operations necessary to disband all mobilized items and clean up the site. The removal of all temporary ramps, access ways, roads, signs, temporary fencing, construction debris including rock chips, wood debris, construction stakes, and other construction-related refuse, and temporary facilities or works and the restoration of surfaces to an equal or better than existing condition shall also be included as part of demobilization.

B. Site reclamation is included under demobilization. Site reclamation includes reclamation of areas disturbed during construction, other than access and staging areas, to pre-project conditions or better.

C. Stockpiled materials (i.e., trees, vegetation, sand, topsoil, and other excavated material) from restoration project areas shall be used to rehabilitate areas disturbed by equipment to pre-work conditions. Short-term stabilization measures will be implemented until permanent erosion control measures (plant restoration) are effective.

PART 2 PRODUCTS

A. Materials and product specifications are included on Project Plans and in related specifications.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01550—EQUIPMENT ACCESS AND PARKING

PART 1 GENERAL

1.1 PAYMENT

A. Site Access and Parking, including temporary and permanent access roads and on-site parking and staging areas, shall be paid for on a Lump Sum (LS) basis under the corresponding bid item in the bid table.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01300 - Submittals.

1. Access Route Plan

2. Traffic Control Plan:

1.3 REGULATORY REQUIREMENTS

A. Meet jurisdictional conditions for use of existing roadways and haul routes; including seasonal or other limitations or restrictions, payment of excess size and weight fees, and posting of bonds conditioned upon repair of damage.

B. Comply with applicable local regulations for haul routes over public highways, roads, or bridges.

C. The primary site access will be off Sunnyside Road which is managed by Bonner County. Equipment will enter the Pack River delta, which is owned by ACOE, off Sunnyside Road. The Contractor may need a **Traffic Control Plan** when initially staging material as part of the permit.

1.4 SITE CONDITIONS

A. Access to the site is limited and the Contractor is advised to become familiar with equipment access.

1. Use established roadways, parking areas, and haul routes where feasible.

2. The general location of the primary access haul routes have been identified in the Plans, but additional construction specific access roads will likely be required in the vicinity of specific construction activities. **Due to historic cultural sites on the Pack River Delta, all specific access routes shall be located and flagged by the Contractor and approved by the Owner prior to use through the Access Route Plan submittal.**

3. Temporary roadways, parking areas, or haul routes may be constructed by the Contractor only when and as authorized by the Owner.

1.5 STAGING AREAS

A. A staging area will need to be built on the delta floor from the Sunnyside Road access point. Currently there is no power to the staging area. Access to the staging area off Sunnyside Road will likely be open to the public.

B. The cost of establishing or modifying any required access roads and staging area(s) shall be included in the Contractor's prices offered in the schedule under Equipment Access and Parking.

PART 2 PRODUCTS

2.1 MATERIALS

A. Materials to maintain and repair existing roadways, parking areas, and haul routes: In accordance with requirements of jurisdictional authority.

B. Materials to construct, maintain, and repair temporary roadways, staging areas, and haul routes: As approved by the Owner.

PART 3 EXECUTION

3.1 EXAMINATION

A. Investigate the condition of available public or private roads for clearances, restrictions, load limits, bond requirements, and other limitations that affect or may affect access and transportation operations to and from the jobsite.

3.2 ESTABLISHED ROADWAYS AND PARKING AREAS

A. Established roadways and parking areas are available for the Contractor's use subject to existing restrictions and approval of the Contracting Officer.

B. Designated areas of existing parking facilities may be used by construction personnel.

C. Proposed off-site staging areas shall pre-approved by Owner prior to use.

3.3 TEMPORARY ROADWAYS, STREAM CROSSINGS, AND PARKING AREAS

A. Roadways:

1. Construct temporary all-weather surfaced roadways for access from public thoroughfares to serve construction area, of a width and load-bearing capacity to provide unimpeded traffic for construction purposes.

2. Minimize soil disturbance and compaction.

3. Construct temporary fills and culverts at stream crossings or cross-drainage channels to allow for unimpeded surface drainage.

B. Parking areas:

1. Arrange for temporary parking areas to accommodate use of construction personnel.

2. Provide additional offsite parking when site space is not adequate.

3. Locate parking areas as approved by the IDFG.

3.4 HAUL ROUTES

A. Perform work on rights-of-way established by the Contracting Officer as necessary to construct and maintain any roads, bridges, or drainage structures required for establishment and use of haul routes for construction operations.

B. Use existing available public highways, roads, or bridges as haul routes subject to applicable local regulations.

C. Minimize interference with or congestion of local traffic.

D. Provide barricades, flaggers, and other necessary precautions for safety of the public where haul routes cross public highways or roads.

3.5 MAINTENANCE

A. Maintain roadways, parking areas, and haul routes in a sound, reasonably serviceable condition.

B. Maintain roads and parking areas until completion and acceptance of all work under this contract.

C. Maintain surfacing of gravel-surfaced roads and parking areas in a serviceable condition until completion and acceptance of all work under this contract.

3.6 REPAIR

A. Promptly repair ruts, broken pavement, potholes, low areas with standing water, and other deficiencies to maintain road surfacing and drainage in original or specified condition.

3.7 REMOVAL

A. Any improvements made to the existing access road, including widenings, passing areas, roadway surfacing, etc. may be left in place after construction with approval of the Contracting Officer. The road shall be left in a condition the same as or better than at the start of construction.

B. Temporary access roads located adjacent to the channel bank protection shall be incorporated into the final bank protection as shown in the Plans.

C. Unless otherwise approved by the Owner, all temporary roadways, parking and staging areas, and haul routes not indicated above shall be reclaimed prior to completion. Reclamation includes removal of any rock or artificial surfacing, tilling or loosening of compacted soil, and revegetation in accordance with the Contract Documents. Abandon and restore temporary roads in wet or flooded areas by the end of the in-water work period.

END OF SECTION

SECTION 01640 – OWNER FURNISHED MATERIALS

PART 1 GENERAL

1.1 PAYMENT

A. No separate payment shall be made. Include in the prices offered in the schedule for other items of Work, except as specified.

1.2 Owner-furnished items and materials will be provided for incorporation into the work. The contractor shall coordinate delivery time, handling, and storage for each material with the Owner.

PART 2 PRODUCTS

2.1 The Owner will provide riparian dormant planting materials. Riparian materials will be delivered to the staging areas. The Owner will provide willow poles. The Contractor shall place riparian materials into bank protection and other work as shown on plans.

PART 3 EXECUTION

3.1 DELIVERY OF MATERIAL

A. The Owner shall deliver product data, samples, tests, and certificates to the Contractor if available. The Contractor shall handle products once on-site, including storage and transportation to points of installation. The Engineer will not accept material deliveries for the Owner or Contractor.

3.2 PROTECTION OF MATERIALS

A. Materials supplied by the Owner shall be protected as contractor furnished materials upon delivery to the project site.

B. Contractor may need to place willow poles in excavation area and cover with plastic and soil for temporary storage until use when material arrive onsite.

3.3 CONSTRUCTION DELAY

A. If Owner furnished items cause delay in the critical path schedule, the Contractor shall notify the Contracting Agency in writing. Only changes to the critical path shall be considered as evidence for changes in contract time.

END OF SECTION

SECTION 01721 - SURVEYING

PART 1 GENERAL

1.1 PAYMENT

A. Separate payment will not be made. Include in the prices offered in the schedule where survey is required to construct/install elements and Work items to the grades and elevations indicated on the plans and as described in the Specifications.

B. Include in the prices offered in the schedule where survey is required for determining measurement and payment for Work items.

C. Primary survey control is included on the plans. The Contracting Officer will provide the necessary design survey control for construction of the Work items.

1.2 GENERAL

A. The project plans reflect data available at the time of design and may not include all utilities, surface features, structures, and other Project site specific information. Work under this contract occurs in a natural riverine environment; as such, the final location and elevation of Work items may differ from that shown on the project plans and is subject to the discretion of the Engineer and/or Contracting Officer.

B. The Contractor is responsible for surveying necessary to complete the Work. Primary survey control is included on the project plans. Design survey control will be provided to the Contractor by the Contracting Officer prior to construction for the individual Work items.

1.3 CONSTRUCTION STAKING

A. The Contractor shall provide survey staking for construction. The Engineer will provide survey control and grading surfaces if available for equipment with GPS machine control capability. When the Contractor requires horizontal and vertical control, he/she shall notify the Engineer (telephone 509-990-4965) of this requirement a minimum of three working days in advance of this need.

PART 2 PRODUCTS

2.1 SURVEYING MATERIALS AND EQUIPMENT

A. Provide materials and equipment required for surveying work, including but not limited to instruments, stakes, spikes, steel pins, templates, platforms, and tools. Except as required to be incorporated in work or left in place, surveying materials and equipment will remain property of the Contractor.

B. For determination of quantities, the use of survey equipment (Global Positioning System (GPS) receivers and total stations) and data collectors is the currently preferred method for obtaining measurements for linear, area and volume calculations. The type of equipment used (total station, GPS, etc.) must be appropriate for the pay item and the applicable tolerance. The use of Unmanned Aerial Vehicles (UAVs) must be approved by the Engineer and IDFG at a minimum and other regulatory agency may prohibit their use.

PART 3 EXECUTION

3.1 SURVEYING FOR MEASUEMENT AND PAY ITEMS

A. Survey Equipment

1. Total Stations, GPS, rods, tripods, tribrachs, targets and other equipment used shall be inspected prior to use to ensure equipment is in proper working condition.
2. Maximum allowable error for Control/Check Point checks:
    a. Horizontally +/- 0.04 feet
    b. Vertically +/- 0.08 feet
3. Satellite availability on site may vary, when using GPS ensure 3D point quality is no more than +/- 0.08 feet when collecting data.

B. Existing Surface Verification

The Contractor shall verify the existing design surfaces that will be used as a basis for measurement and payment items such as earthfill. The Contractor shall check for changed conditions, such as, excessive erosion, channel migration, aggradation, or degradation and notify the Engineer. A pre-construction survey will be performed by the Contractor to verify the existing surface to be used for calculation of quantities by surveyed method. This survey must be taken before the clearing, grubbing, or fill operation to adequately address existing surface conditions shown in the plans. The Engineer shall be notified in writing if there is a substantial change in surface from what is shown on the plans. The survey notes along with any revisions to the existing surface resulting from the Contractor's survey will be provided to the Engineer.

To generate each surface the Contractor shall collect data points that represent surface elevations on the ground at reasonable proximity to accurately represent the surface. It is also important to define breaklines along boundaries in the terrain where sharp or abrupt changes in surfaces occur. Survey points shall be collected at all corners, deflections, and changes in terrain break points. Curves will be collected as a series of points with sufficient spacing along the curve to accurately represent the curve.

Field measurements (raw field data) shall be recorded and submitted in an acceptable format, as backup records for all Digital Terrain Models (DTM's). Most electronic data collectors are capable of recording survey data. To assist in verifying the field notes and as an aid in checking the reduced data, the survey party shall prepare a sketch or layout of each setup and the area covered by observations.

Generating the DTM Surfaces:

Surface-modeling techniques, such as using triangles to represent small continuous surface areas are known as the Triangulated Irregular Network (TIN). TIN has become the standard for terrain modeling for meeting engineering requirements. Each vertex of a triangle in the TIN is formed by a field measured data point and is located by its (XYZ) coordinate. The TIN model is constructed by connecting these survey data points to their nearest neighboring points (in XY), forming a network (surface) of irregular triangles. It is important that the survey crew understand the TIN methodology and the assumptions made by the software when they are taking thesurvey data points for a DTM using the TIN method.

The DTM surfaces shall be field checked using randomly generated cross-sections or profiles extracted from the model. These cross-sections and profiles are then compared to actual ground shots taken to determine if the model matches the real-world terrain surface. This quality control check shall be performed before TIN data is used in quantities calculations. The Contractor shall provide the information to the Engineer for review and approval.

C. Final Pay Quantities

The Contractor shall use either AutoCAD, Trimble Business Center, or other approved surface earthwork volume calculations for measurement of quantities that are paid by the surveyed method. Other approved software can be used if approved by Engineer. Contractor shall provide all electronic files to Engineer.

1. Approved software must have the capability to compare surfaces, calculate volumes, and produce reports that detail earthwork quantities within the proper limits.

2. Where any software has been used to calculate the earthwork volumes, the required compatible electronic files (e.g. Land XML) must be submitted with the ***Final Estimates Documentation*** so calculated quantities can be verified.

3. To determine the volume, each location must have an existing surface, finished grade surface and as-built graded surfaces for each type of material being surveyed for payment.

4. No adjustment will be made for the Contractor's failure to construct to plan dimensions, unless approved by the Engineer.

3.2 STAKEOUT AND MEASUREMENT TO BE PERFORMED BY CONTRACTOR

A. The Engineer may assist the Contractor in the initial layout of the restoration design. After the initial layout, the Contractor shall be responsible for staking reference points/markers to complete the work from the initial control points and grading surfaces provided by the Engineer and shall be responsible for all measurements required for the execution of the work. The Contractor shall protect all stakes and shall pay for the time and materials required to replace stakes that have been disturbed or obliterated.

B. The Contractor shall furnish at the Contractor's own expense, such stakes, equipment, tools, materials, and all labor as required in stakeout of any parts of the work from the control points and grading surfaces provided by the Owner or the Engineer.

C. The Engineer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

D. Final elevations shall be placed under the direction of the Engineer and/or the Contracting Officer at locations as shown on the project plans or as modified by the Engineer and/or the Contracting Officer.

3.3 ACCURACY

A. The work shall be completed within the following degree of accuracy:

1. Horizontal alignment: Within 2.0 foot at Work item locations, or as directed by the Contracting Officer.

2. Existing structure and/or original ground: Within 0.1 foot, horizontally and vertically.

3. Vertical elevation and profile: Within 0.2 feet for Work item elevations or as directed by Engineer or Contracting Officer.

3.4 FIELD RECORDS

B. Record original field notes, computations, and other surveying data in field books.

END OF SECTION

SECTION 01725—PROTECTION OF EXISTING INSTALLATIONS

PART 1 GENERAL

1.1 PAYMENT

A. Separate payment shall not be made. Include in prices offered in the schedule for other items of work, except as specified.

B. Costs for repair of installations damaged by the Contractor's operations are the Contractor's expense.

1.2 PROJECT CONDITIONS

A. Project plans included in these specifications show items of existing materials and equipment but may not show all equipment and materials existing at the jobsite.

B. Determine the location of buried conduit, pipe, cable, underground utilities, and other buried items before prior to performing any excavation. Contact DigLine at 800-342-1585.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 REPAIR

A. Repair, at Contractor's expense, damage to existing installations due to Contractor's operations or Contractor's failure to provide proper protection. At the Owner’s option, damage may be repaired by the Contracting Officer, and the Contractor will be back charged repair costs.

B. All areas disturbed by construction shall be returned to the original ground topography before construction ends, unless otherwise shown on the project plans.

3.2 PROTECTION

A. Provide protection for personnel and existing facilities from harm due to the Contractor's operations. Protection shall be subject to approval of the Contracting Officer.

B. Arrange protective installations to permit operation of existing equipment and facilities while work is in progress.

3.3 REMOVAL OF PROTECTIVE INSTALLATIONS

A. Remove protective installations after purpose has been served. Materials furnished by the Contractor to provide protection remain property of the Contractor.

END OF SECTION

SECTION 01781 - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 PAYMENT

A. Separate payment shall not be made. Include in prices offered in the schedule for other items of work.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01300 - Submittals.

1. Record Drawing:

a. Certified marked sets.

b. Provide record drawing for each drawing listed on the Cover Sheet, except informational and standard drawings.

1.3 RECORD DRAWINGS

A. Maintain two (2) sets of full-size prints of contract plans marked to show accurate and complete records of as-built conditions. Keep plans at the jobsite and mark as work progresses.

1. Mark and dimension to show variations between actual construction and that indicated or specified in contract documents.

a. Include buried or concealed construction and utilities.

b. Include existing items, topographic features, and utility lines revealed during construction which differ from those shown on contract plans.

2. Mark to define construction actually provided where choice of materials or methods is permitted in specifications, or where variations in scope or character of methods is permitted in specifications, or where variations in scope or character of work from that of the original contract are authorized.

B. Use standard drafting practice to represent changes and include supplementary notes, legends, and details necessary to clearly portray as-built construction.

C. Mark record drawings in the following colors:

1. Red - Additions to original drawings.

2. Green - Deletions to original drawings.

3. Blue - Notations necessary for explanation of as-built markings.

D. Allow the Owner and Engineer to review the drawings at all times.

E. Upon completion of work, sign marked prints as certified correct.

F. Final record drawings will be certified by Engineer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 02200 - SITE PREPARATION AND ACCESS

PART 1 GENERAL

1.1 PAYMENT

A. Site preparation and access shall be paid on a Lump Sum (LS) basis, which shall include all items under Section 02200.

1.2 SUMMARY

A. In its initial move onto the Site, the CONTRACTOR shall protect existing fences, pavement, bridges, railings, other features not designated for removal or modification.

B. See Section 01550 – Equipment Access and Parking for additional site access requirements.

1.3 SITE INSPECTION

A. Prior to moving onto the Site, the CONTRACTOR shall inspect the Site conditions and review maps of the Site and facilities delineating the OWNER's property and right-of-way lines.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PRIMARY SITE ACCESS

A. The CONTRACTOR shall develop any necessary access to the Site within any limitations as shown on the access plans, including improvements to Sunnyside Road (if required).

B. **Utility Interference:** Where existing utilities interfere with the WORK, notify the utility owner and the ENGINEER before proceeding in accordance with the General Conditions.

C. Sunnyside Road and the entire project area will be opened to the public during the construction period. The Contractor shall provide protection devices including barricades, fencing, warning signs, lights, and other devices necessary to ensure security and safety within the project site during all aspects of the work especially excavations left unfilled. The contractor shall provide site protection in accordance with the Occupational Safety & Health Regulations for Construction (OSHA) 29 CFR 1926, Subpart G, Signs, Signals, and Barricades (1926.200 to 1926.203).

3.2 TEMPORARY ROADS

A. Temporary access roads and secondary channel crossings will be needed to access the site during the fall/winter/spring work window. It will be at the Contractor's discretion as to how much material/equipment will need to be transported on roads. The design and material used for temporary roads will be the Contractor's responsibility (i.e., mats, rock, geotextile, etc). ***The Contractor shall submit anticipated temporary road construction design, methods and alignment to Engineer.*** **There are cultural concerns throughout the Pack River Delta so all travel routes must be approved before construction or use.** Any temporary roads constructed for use by the Contractor shall be removed and left in a condition satisfactory to the Engineer upon completion of the project unless otherwise approved by Engineer. Temporary road material required to be removed may be incorporated in the following elements with approval of Engineer and that it meets gradation requirements for each work element. Priority of use is as follows:

1. Island Edge Protection or foundation material for islands.

2. Bank protection between Sunnyside Road and the lakebed.

3. Stockpile near Islands and/or along Sunnyside Road access point. Location and final grading must be approved by Owner and Engineer.

4. Disposal within Borrow Areas.

B. Temporary Access Roads to be Constructed at Contractor's Discretion

1. Design Considerations

- Design temporary roads to handle anticipated loads and number of trips.
- Design temporary channel crossings for the anticipated loads and varying channel depths/widths. Design shall be as perpendicular to the channel as practical.
- Design all temporary channel crossings to minimize channel bank disturbance.
- The design of temporary roads shall also include temporary culverts where anticipated flows may occur. Culverts shall be sized for the range of anticipated flows to be determined by the Contractor.
- Locate temporary roads to minimize erosion impacts. Design temporary roads to access sensitive areas at specific locations.
- Ensure that sections of temporary roadways are wide enough for two vehicles to pass where necessary for either safety concerns (i.e. blind corners) or for production requirements. Provide adequate turning radius at all entrances.

2. Construction Considerations

- Adequately slope temporary roads for good drainage.
- Make field adjustments, as necessary, to ensure proper performance.
- Where appropriate, use geotextiles prior to placement of aggregate. Place aggregate at sufficient depth to support heavy equipment and protect existing pipe culverts from crushing. Roadway functionality and pipe protection shall be the Contractor's responsibility.
- Provide BMP's for areas where runoff from the road could enter flowing river channels.

3. Maintenance and Inspection Considerations

- Conduct inspections as required by the permits or contract specifications.
- At the end of construction, re-contour to original slope and return to natural conditions using permanent erosion and sediment control BMPs. Remove or stabilize trapped sediment and permanently stabilize disturbed areas.

3.3 CLEARING, GRUBBING, AND STRIPPING

A. Construction areas shall be cleared of bushes, grass and weeds to at least a depth of 6-inches and cleared of structures, concrete debris, trees, logs, upturned stumps, loose boulders, and any other objectionable material of any kind which would interfere with the performance or completion of the WORK, create a hazard to safety, or impair the subsequent usefulness of the WORK, or obstruct its operation. Trees and other natural vegetation outside the actual lines of construction shall be protected from damage during construction.

B. Within the limits of clearing, the areas below the natural ground surface shall be grubbed to a depth necessary to remove stumps, roots, buried logs, and other objectionable material. Objectionable material from the clearing and grubbing process shall be removed from the Site

and wasted in approved safe locations. Logs shall be stockpiled to be placed on emergent zones at the end of the project. Intact tree root wads should be avoided if possible.

C. Unless otherwise indicated, native trees larger than 3-inches in diameter at the base shall not be removed without IDFG and the ENGINEER's approval. The removal of any trees, shrubs, fences, or other improvements outside of rights-of-way, if necessary for the CONTRACTOR's choice of means and methods, shall be arranged with the owner of the property, and shall be removed and replaced, as part of the WORK. Any trees removed shall be reused within the project as directed by IDFG or ENGINEER.

3.4 CONTROL OF SURFACE/SUBSURFACE WATER

A. The Contractor is responsible for control of surface water, subsurface water and drainage during the construction period and should demonstrate that the necessary equipment will be available during the construction period. All temporary fills, crossings, or culverts necessary to promote drainage will be installed prior to the beginning of construction and removed at the Contractor's expense prior to acceptance of the project. Any damages arising upstream or downstream as a result of the construction or failure of these temporary works will be the Contractor’s responsibility.

3.5 PROTECTION/DELINEATION OF EXISTING VEGETATION

A. Trees, shrubs, sod, and other vegetation designated to remain undisturbed shall be protected from damage throughout the construction period. The Contractor shall be responsible for the repair or replacement of vegetation damaged by the Contractor’s operations.

B. The limits of the areas to be cleared and grubbed will be marked by flags, stakes, tree markings or other suitable method. Trees and other vegetation to be removed will be approved by IDFG and will be designated by a different color flag, ribbon or stake or other method.

END OF SECTION

SECTION 02232 – CLEARING, GRUBBING, STRIPPING

PART 1 GENERAL

1.1 PAYMENT

A. No separate payment shall be made. Include in the lump-sum price offered in the schedule for Site Preparation & Access- Section 02200.

1.2 PROJECT CONDITIONS

A. Preserve and protect vegetation designated for preservation within the clearing limits and vegetation outside the clearing limits, as indicated on the project plans or as indicated by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 CLEARING

A. Locate and clearly mark survey control and landscape to be preserved.

B. Clear adjacent to cut or fill sections to a minimum distance of 2 feet outside of slope lines.

C. Remove trees, shrubs, brush, stumps, exposed roots, down timber, branches, grass, weeds, vegetation, rubbish and other objectionable material as determined by the Contracting Officer.

3.2 GRUBBING

A. Grub ground surfaces to be under embankment and surfaces of excavation to be used for embankment.

B. Remove stumps, roots, and vegetative matter.

C. Perform grubbing in advance of grading and excavation operations.

3.3 STRIPPING

A. Stripping shall consist of the complete removal of all earth materials contaminated by organics as shown on the plans. The need for stripping shall be minimized for this project. Any reed canary grass stripped shall be buried by a minimum of 3-ft of clean fill. The Contractor shall strip all such materials regardless of the depth of material encountered to the satisfaction of the Engineer.

3.4 DISPOSAL OF CLEARED MATERIAL

A. Dispose of vegetative material and non-vegetative material as directed by the Owner.

END OF SECTION

SECTION 02300 - EARTHWORK

PART 1 GENERAL

1.1 PAYMENT

A. Fill for island foundation and island topping materials shall be measured and paid by the cubic yard (CY) based on surveyed in-place quantities.

1.2 SUMMARY

A. The Contractor shall perform earthwork as indicated and required for construction of the WORK, complete and in place, in accordance with the Contract Documents.

B. Limited geologic, soil or groundwater information is available at the site. Some available information, including exploratory test pits and soil classifications, are included with the Contract Documents or previously supplied prequalification documents. The Contractor shall be aware that the extent of the available soils is unknown. The Contractor shall be prepared to adjust the proposed borrow areas, including depths, widths, and volumes, based on the actual field conditions during construction. Surface and groundwater water is expected to be encountered in portions of the proposed work along the river, side channel, and locations within the delta.

C. The Contractor shall furnish all labor, materials, equipment, and incidentals necessary to perform all excavation, soil and rock placement, backfill, grading, hauling, and compaction required to complete the work shown on the Project Plans, and specified herein. The work shall include, but not necessarily be limited to excavation, backfilling and grading for structures; excavation, backfill and grading for island, streambanks and channels; placement of rock materials for structures; disposal of surplus and unsuitable materials; and all incidental related work.

D. This section includes requirements for the placement of onsite soil materials for islands, emergent zone fill, soil capping of rock, and soils used to incorporate with plantings.

1.3 CONTRACTOR SUBMITTALS

A. The Contractor shall submit locations of materials to be used if different than as shown on plans for approval.

1.4 INSPECTION

A. The Contractor shall stop work and call for inspection at the following points of construction:

1. Upon discovery on any archeological artifacts.

2. Upon discovery of major changes in soil composition during borrow and excavation operations.

PART 2 PRODUCTS

2.1 FILL AND BACKFILL MATERIAL REQUIREMENTS

A. General

1. Fill materials shall be selected or shall be processed using onsite soils free from grass, roots, brush, other vegetation and organic matter.

B. Suitable Materials

1. Suitable materials may be obtained from on-site excavations, may be processed from on-site materials, or may be imported.

2. Fill Material (**Type FG -Fine Grained Fill from on-site materials)**: Fine grained fill includes silts and clays obtained from on-site materials. This material is primarily used for island topping material, soils for use with plantings, and soils for capping rock surfaces. Borrow areas shall be graded and side slopes shall be 3 horizontal:1 vertical or flatter.

3. Fill Material (**Type CG - Coarse Grained Fill from on-site materials)**: Coarse grained fill includes sands, silty sands, and similar soils obtained from on-site materials. Type CG material shall be capable of being placed within the islands to define the island shape, including side slopes, and shall be reasonably free draining. This material is primarily used for island foundation and core construction. Borrow areas shall be graded and side slopes shall be 3 horizontal:1 vertical or flatter.

C. **Unsuitable Materials:** Materials which include significant organic material, or which cannot be hauled and placed for the intended purpose.

PART 3 EXECUTION

3.1 Island and Embankments and Fills

A. Contractor shall place the Type CG material (sands) encountered from borrow areas towards the bottom of fills and then place Type FG material (silts/clay) towards surface as shown on plans unless otherwise directed.

B. For material that is saturated, the Contractor may need to allow the material to drain prior to grading or placing additional lifts. With the ENGINEER'S approval, the initial layer may be increased in thickness in wet areas to provide a working pad capable of supporting the hauling equipment. The fill at all times must be maintained in a reasonably level condition and hauling equipment shall be directed over the full width of each layer to facilitate uniform compaction.

C. All fill construction must be as continuous as possible, and the fill maintained such that drainage is assured at all times. Placement of fill material shall be such that allows any surface drainage to be contained with each project area and not allowed enter the river or lake. Fill construction shall be constructed to within 0.2 ft of elevations shown on the plans. Should fill settlement occur during the construction of the emergent zones, prior to the work being substantially completed, or prior to acceptance of the work, additional material shall be placed and trimmed to achieve final grade by the Contractor at his/her own expense.

D. No compaction requirements are specified, however as stated in section 3.1B above, hauling equipment shall be directed over the full width of each layer of fill to facilitate uniform compaction.

E. When island or embankment or fill is to be constructed against hillsides or fill slopes steeper than 4:1, the slopes of the hillsides or fills shall be horizontally benched in order to key the embankment or fill to the underlying ground.

END OF SECTION

SECTION 02375 – ROCK MATERIAL

PART 1 GENERAL

1.1 PAYMENT

A. Offsite sources – Offsite materials, including rock for slope, base course, gravels, and bank protection, base rock, and gravel surfacing shall be measured and paid based on actual quantity per each ton (TON) placed. Rock materials shall be measured by the ton based on truck tickets. Payment shall include but not be limited to all costs associated with procuring the material, blasting if necessary, screening, temporary truck scales, trucking from the pit, offloading at stockpile areas, on-site transport, and placement at the final location. Contractors shall provide weight tickets for each load.

1.2 SUMMARY

A. The CONTRACTOR shall provide rock materials, including associated preparation and earthwork, complete and in place, in accordance with the Contract Documents.

1.3 CONTRACTOR SUBMITTAL

A. Furnish submittals in accordance with the Contract Documents.

B. Testing certificates from a qualified testing agency shall be submitted prior to acceptance of the rock source to verify the conformity to the requirements of the Contract Documents.

PART 2 PRODUCTS

2.1 STONES FOR RIPRAP

A. The acceptability of the stones will be determined by the ENGINEER prior to placement. Contractor shall submit source for each type of rock to ENGINEER for approval prior to the start of the project. **Class 3 will not be allowed from the Clark Fork Rock pit due to the shale-like, platy nature of the rock**. Any difference of opinion regarding the gradation between the ENGINEER and the CONTRACTOR shall be resolved by dumping and checking the gradation of two random truckloads of stones. Arranging for and the costs of mechanical equipment, a sorting site, and labor needed in checking gradation shall be the CONTRACTOR's responsibility.

B. Riprap shall conform to the size types as follows:

1. CLASS 1 RIPRAP (FHWA Class 1) - Class 1 riprap will be used primarily for Island slope protection

Range of Intermediate Dimensions (inches)	Percentage Passing	Range of Rock Mass (lbs)
9-15	100	59-270
7-11	85	28-110
5-8	50	10-42
3-6	15	2-18

(1) Gradation includes spalls and rock fragments to provide a stable, dense mass.

(2) The intermediate dimension is the longest straight-line distance across the rock that is perpendicular to the rock's longest axis on the rock face with the largest projection plane.

(3) Rock mass is based on a specific gravity of 2.65 and 85 percent of the cubic volume as calculated using the intermediate dimension

2. CLASS 3 RIPRAP (FHWA CLASS 3) – No Class 3 will be used at project.

Range of Intermediate Dimensions (inches)	Percentage Passing	Range of Rock Mass (lbs)
21-27	100	750-1600
15-19	85	270-560
11-14	50	110—220
8-10	15	42-81

(1) Gradation includes spalls and rock fragments to provide a stable, dense mass.

(2) The intermediate dimension is the longest straight-line distance across the rock that is perpendicular to the rock's longest axis on the rock face with the largest projection plane.

(3) Rock mass is based on a specific gravity of 2.65 and 85 percent of the cubic volume as calculated using the intermediate dimension

PART 3 EXECUTION

3.1 SURFACE PREPARATION

A. Surfaces to receive riprap shall be smooth and firm, free of brush, trees, stumps, and other objectionable material, and shall be brought to the line and grade indicated.

B. If a boulder is encountered during excavation of areas where large riprap is to be placed, the CONTRACTOR shall excavate around the boulder. If the boulder is larger than the largest allowable stone size for that area, the CONTRACTOR shall break up the boulder to an acceptable size or remove it entirely.

C. If shown on plans, prior to placement of the geotextile, the surface shall be prepared to a smooth condition free of debris, depressions, or obstructions which may damage the geotextile if used. The geotextile shall be overlapped a minimum of 2-feet at longitudinal and transverse

joints. Upstream sheets shall overlap downstream sheets. For slope placement, each strip shall overlap the next downhill strip. The geotextile shall be anchored using key trenches or aprons at the crest and toe of the slope. Pins may be used in securing the geotextile during installation. In no instance shall the geotextile be left exposed to sunlight longer than 7-Days. Overexposed geotextile shall be removed and replaced.

3.2 PLACEMENT OF RIPRAP

A. Loose riprap shall be placed in such a manner that all relatively large stones shall be essentially in contact with each other, and all voids filled with the finer material to provide a well graded compact mass. The stones shall be placed on the slope in a manner that will ensure the riprap attains its specified thickness in one operation. When placing, care shall be used to avoid disturbing the underlying material. Rock shall be placed by means of truck, hydraulic excavator or other approved equipment.

B. For bank/slope protection, rock shall begin at bottom of area to be covered and continue up slope. Subsequent loads of material shall be placed against previously placed material in such a manner as to ensure a relatively homogenous mass. The finished riprap shall be free from objectionable pockets of small stones and clusters of larger stones. Placing riprap in layers will not be permitted. Placing riprap by dumping into chutes, or by similar methods likely to cause segregation of the various sizes, shall not be permitted. Placing riprap by dumping it at the top of the slope and pushing it down the slopes shall not be permitted.

C. Where riprap is placed over a geotextile fabric, the riprap shall be placed so as to avoid damage to the geotextile. Stones shall not be dropped from a height greater than 3-feet, nor shall large stones be allowed to roll downslope.

END OF SECTION

SECTION 02910 - DORMANT PLANTINGS

PART 1 GENERAL

1.1 PAYMENT

A. Dormant Pole plantings shall be measured and paid based on a per each basis (EA).

1.2 DESCRIPTION

A. The Contractor is only responsible for placement of dormant plantings and not the supply of said material. IDFG will provide the dormant stock plantings (pole plantings)

B. This construction specification governs the installation of dormant stock planting for embedment into slope and bank protection and other locations as shown on the plans. Live willow pole are standard bio-engineering techniques which involves planting of dormant plant cuttings which are of a species known to produce rooting from cuttings. Work under this specification includes installation of live poles in areas as applicable to each site plan. IDFG will provide harvesting and delivery to a designated staging location near the staging area. Installation shall be to the lines and grades as shown on the drawing and to the requirements of this construction specification.

1.3 SITE PREPARATION

A. The sites shall be shaped to the lines and grades shown in the Project Plans. Excess material shall be disposed of by spreading in the areas shown on the Project Plans or removed from the site prior to the installation of the dormant cuttings. The Contractor shall clean loose or overhanging vegetation and soil along existing channel banks prior to placement of riparian vegetation.

B. Once cleaned contractor shall place willows as shown on plans and place additional soil a minimum of 2-ft up riparian vegetation (water side) prior to placing rock riprap.

1.4 TIMING

A. Harvesting by IDFG or others and planting by CONTRACTOR may happen after the plants are dormant.

PART 2 MATERIALS

2.1 PLANT MATERIALS (TO BE SUPPLIED BY IDFG)

A. Types of Species

1. The dormant stock shall be native woody plant materials or woody plants that are adapted to the site. IDFG will determine the type of dormant plantings.

B. Live Pole Cuttings

1. Live Stake cuttings shall be approximately one-half inch to one and one quarter inches (.5" to 1.25") in diameter. Cuttings will not exceed two inches (2") in diameter. Cuttings will be approximately six to eight feet (6'-8') in length and reasonably straight.

PART 3 EXECUTION

3.1 PLANT INSTALLATION

A. Harvesting

1. IDFG will provide all dormant plant materials of the species indicated in Section 2.1 Types of Species above. Live materials shall be generally obtained from a source that is located within fifty (50) miles of the project site and all cuttings will be installed on the same day during which they have been harvested.

B. Live Material Preparation

1. Plant material shall be harvested such that maximum survival is obtained. All cuts shall be smooth, and the cut surface shall be kept small. Cuttings for stakes and live post should be cut at an angle across the bottom and cut flat on top. If live posts are to be stored, they should be treated with paint. The painted top is to be removed at time of installation. Harvesting may be done using hand tools (pruning shears) or power tools (chainsaws, power trimmer w/blades). Plant material with excessive damage or oblique cuts, or with excessive damage to the bark, will not be acceptable. All live materials shall be properly stored to ensure viability. Plant material must be moved from the harvest site and planted within eight (8) hours of cutting. IDFG shall protect plant materials from drying and overheating at the time of harvest, during transport and during the construction process. Live plant material shall receive continuous shade as well as protection from the wind. Shade fabric, heeling, mulches, plastic and watering are all techniques that may be used. Misting and watering shall not be done with water that exceeds 15^{o} C. Live materials shall be planted the same day as harvested or stored for a period of no longer than two (2) days. Shrubs and young trees used in preparation of live pegs shall be cut directly above the ground. Buds on the Live Posts shall be orientated in an upward position. The basal (bottom) ends shall be tapered to a point to facilitate insertion into the soil.

C. Live Poles

1. Live Poles and containerized plants shall be installed in accordance with the plans, details and following specifications or as directed in field. Approximately 2-3 live poles shall be planted per foot for bank and slope protection. The Live Poles shall be placed so that 1/2 of their length is buried and the Poles shall be excavated into the surrounding soil to ensure continuous soil to cutting contact, with no excessive voids in the surrounding soil materials. Live Poles/Posts shall be installed at the spacing and density as shown in the project plans or as directed by the Project Engineer. Total Live Poles density will be 2-4 stakes per square yard. Live Poles may split during installation. Live poles which are split shall be removed and replaced, or if the split is less than 1/6 of the cutting length, the top may be re-trimmed after installation to remove the damaged portion. Soil may be added (choked) to some of the pole planting if no fine material is present as substrate.

D. Backfilling

1. All Live Poles shall be planted such that the pole has full contact between the soil and cutting. In the event that an auger is used to predrill holes for Live Posts, or a bar is used to initiate a pilot hole for Live Poles, the holes will be filled with loose soil after the Poles/Post is installed. The Contractor shall use water, poured in each hole, to ensure that the cutting is in firm contact with the backfill.

E. Clean-up & Site Inspection

1. Upon completion of the project, and prior to the issue of the final payment, the Contractor shall remove all debris and trash from the site and dispose of such materials off site.

2. Upon completion of the planting, the Contractor and IDFG and/or DU will inspect all plantings. The Contractors shall correct all deficiencies within ten (10) calendar days of the inspection.

END OF SECTION

SECTION 04000—ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.1 PAYMENT

A. Lump-sum price offered in the schedule for all items included within Section 04000 unless noted for separate payment. All BMP's installed shall be considered incidental to Environmental Controls Bid Item if not listed as separate bid item and no separate measurement and payment shall be made.

2 Straw Mulch shall be paid per TON basis under the corresponding bid item in the bid table. A tackifier is considered incidental to the cost of straw mulch and separate payment and measurement will not be made.

1.2 CONTRACTOR SUBMITTAL

A. BMP plan. The contractor must submit a Best Management Practices (BMPs) plan that includes the design, implementation, and maintenance of BMPs to fully protect and maintain the beneficial uses and ambient water quality of waters of the state and to prevent exceedances of water quality standards. IDEQ provides a catalog of storm water best management practices, available at: https://www2.deq.idaho.gov/admin/LEIA/api/document/download/14968. This catalog presents a variety of BMPs that can be used to control erosion and sediment during and after construction.

1.3 SITE MAINTENANCE

A. The Contractor shall keep the work site, staging areas, and Contractor's facilities clean and free from rubbish and debris. The Contractor staging area is noted on the Project Plans. Materials and equipment shall be removed from the site when they are no longer necessary. Equipment removed as part of demolition shall not be stored on site. Upon completion of the work and before final acceptance, the work site shall be cleared of equipment, unused materials, and rubbish to present a clean and neat appearance.

1.4 CLEAN-UP

A. Waste material of any kind will not be permitted to remain on the site of the work or on adjacent roads. Immediately upon such materials becoming unfit for use in the work, they shall be collected, carried off the site, and properly disposed of by the Contractor.

B. The Contractor shall provide temporary restroom and cleanup facilities for Contractor's employees and keep these areas clear of all refuse, rubbish, and debris that may accumulate from any source and shall keep them in a neat condition to the satisfaction of the Contracting Agency.

C. In the event that waste material, refuse, debris, and/or rubbish are not so removed from the work by the Contractor, the Owner reserves the right to have the waste material, refuse, debris, and/or rubbish removed, and the expense of the removal and disposal charged to the Contractor.

1.5 AIR POLLUTION CONTROL

A. The Contractor shall not discharge smoke, dust, and other contaminants into the atmosphere that violate the air pollution regulations for the area. The Contractor shall maintain construction vehicles and equipment in good repair. Exhaust emissions that are determined to be excessive

by the Engineer shall be repaired or replaced. If determined to be necessary by the Project Engineer, Contractor shall provide a water truck to manage project area dust.

1.6 NOISE CONTROL

A. The Contractor shall comply with all local controls and noise level rules, regulations, and ordinances which apply to any work performed pursuant to the Contract. If the requirements of this Section are more restrictive than those of the local regulations, the requirements of this Section shall govern.

B. Each internal combustion engine, used for any purpose related to this Contract, shall be enclosed and be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler and enclosure.

1.7 EROSION CONTROL

A. Contractor must prepare and submit a BMP plan for the project.

B. A pollution and erosion control plan for construction activities shall be prepared and carried out by the contractor to prevent pollution related to construction operations. The plan will include:

1. Practices to prevent erosion and sedimentation associated with access roads, stream crossings, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations and staging areas.

2. A spill containment and control plan with notification procedures, specific clean up and disposal instructions for different products, quick response containment and clean up measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.

3. Practices to prevent construction debris from dropping into any stream or water body, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.

C. Erosion control measures shall be in place prior to commencing construction. During construction, all erosion controls shall be inspected by the contractor daily to ensure they are working adequately.

1. If inspection shows that the erosion controls are ineffective, work crews will be mobilized immediately to make repairs, install replacements, or install additional controls as necessary.

2. Sediment must be removed from erosion controls once it has reached 1/3 of the exposed height of the control.

D. Contractor shall provide measures to prevent movement of soil into waterways or wetlands, e.g. filter bags, sediment traps or catch basins, vegetative strips, berms, jersey barriers, fiber blankets, bonded fiber matrices, geotextiles, mulches or compost, wattles and sediment fences.

E. Contractor shall provide measures to prevent stockpile erosion during rain events or when the stockpile site is not moved or reshaped for more than 48 hours, by surrounding piles with compost berms, covering piles with impervious materials or other equally effective methods.

F. Contractor shall provide measures to prevent construction vehicles from tracking sediment offsite or onto roadways where it is subject to washing into storm drains, waterways, or wetlands, including gravel access pads, wheel wash stations, or other equally effective methods.

G. Contractor shall install removable pads or mats to prevent soil compaction in all temporary construction access points and staging areas in riparian or wetland areas.

H. Contractor shall prepare and have on-site a spill containment and control plan with notification procedures, equipment, specific cleanup and disposal instructions for all products used on site.

I. Contractor shall have an emergency supply of sediment control materials on hand (silt fence, straw bales, etc.), an oil adsorbing floating boom, and absorbent pads.

J. Stationary power equipment, such as generators, within 150 feet of the water shall be diapered to prevent leaks.

K. All power equipment within 150 feet of the water shall be inspected daily for fluid leaks and repaired. The contractor must keep daily inspection reports in a diary.

PART 2 PRODUCTS

2.1 BMP's. All material for BMP's shall be as shown on plans or meet the recommendations based on IDEQ Idaho Catalog of Stormwater Best Management Practices, April 2020.

2.2 Straw Mulch shall be certified weed free and derived from wheat, rice of barley. Contractor shall use approved tackifier to anchor mulch on slopes. Netting is not allowed. Wood fibers or chips may be substituted with approval from IDFG and Engineer.

PART 3 EXECUTION

3.1 BMP's

All BMP's shall be installed according to the manufacturers recommendations or installed according to IDEQ Idaho Catalog of Stormwater Best Management Practices, April 2020.

3.2 STRAW MULCH

- Apply straw at a rate of 4,000 lb/acre, either by machine or by hand distribution and provide 100% ground cover. A lighter application is used for flat surfaces and a heavier application is used for slopes.

- Use tackifier to anchor straw mulch to the soil on slopes. Crimping, punch roller-type rollers, or track walking may also be used to incorporate straw mulch into the soil on slopes. Track walking can be used where other methods are impractical. A tackifier acts to glue the straw fibers together and to the soil surface. The tackifier should be selected based on longevity and ability to hold the fibers in place. A tackifier is typically applied at a rate of 125 lb/acre. In windy conditions, the rates are typically 180 lb/acre. On slopes with soils that are stable enough and of sufficient gradient to safely support construction equipment without contributing to compaction and instability problems, straw can be "punched" into the ground using a knife blade roller or a straight bladed coulter, known commercially as a "crimper."

- Straw mulch with tackifier should not be applied during or immediately before rainfall.
- When using a tackifier to anchor the straw mulch, roughen embankment or fill areas by rolling with a crimping or punching-type roller or by track walking before placing the straw mulch. Track walking should only be used where rolling is impractical.
- Evenly distribute straw mulch on the soil surface. Anchoring straw mulch to the soil surface by "punching" it into the soil mechanically (incorporating) can be used in lieu of a tackifier.

.

END OF SECTION