IPNF – GNA – JOHNSON CREEK BRIDGE REPLACEMENT

WEIGHTED INVITATION TO BID (WITB) 22-234-041007

RESPONSES DUE BEFORE 3:00 PM Mountain Time (MT) on July 11, 2022
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Bids will be received by the Idaho Department of Lands (IDL) for the installation of a replacement bridge on Johnson Creek, Clark Fork, ID.

**PRE-BID SITE MEETING**

An on-site meeting is scheduled for June 8, 2022, at 10:00 AM PT. Potential bidders are strongly urged to visit the site where the services are to be performed to inform themselves of the site conditions and limitations. Please contact Sandra Ramirez sramirez@idl.idaho.gov 208-334-0221 to confirm attendance and receive location details. Failure to do so will in no way relieve the successful Contractor of the responsibility in furnishing sufficient materials, equipment and/or personnel to perform all duties described in the Scope of Work without additional cost to the State.

Note, the project location and Contracting Officer Representative are in Pacific Time (PT) zone, Contracts Officer/Purchasing is in Mountain Time (MT) zone.

**QUESTIONS**

Questions pertaining to this WITB must be submitted utilizing Attachment 5 via email to sramirez@idl.idaho.gov. Questions deadline is midnight on June 15, 2022. Responses to questions will be posted on the IDL website at www.idl.idaho.gov by June 20, 2022. Verbal questions will not be accepted. NOTE: Any issues a bidder has with the draft agreement included in this solicitation document must be addressed during the Q&A period of the solicitation. No negotiating on contract terms will occur after the firms are ranked and IDL is seeking to establish a contract award with the successful bidder.

**BID REQUIREMENTS**

All price bid submissions must be entered on the attached Bid Schedule - Attachment 4 and include responses to any Mandatory Requirements. Sealed Bids must be received, and time stamped by the Idaho Department of Lands at 300 North 6th Street, Ste. 103, Boise, ID 83702 before 3:00 PM MT on July 11, 2022. The Department of Lands is not responsible for lost, undelivered responses or failure of the United States Postal Service or any other courier service to deliver responses to the Idaho Department of Lands by the deadline specified. The date and time of receipt of a manual submission will be the Idaho Department of Lands clock at the front desk in Boise.

The Idaho Department of Lands assumes no responsibility for failure of any electronic submission process, including any computer or other equipment to deliver all or a portion of the Bid at the time, or to the location, required. The date and time of electronically received responses, to the Idaho Department of Lands email address listed below, will be used to determine if electronically submitted responses were received by the deadline specified. Late responses. Faxed responses will not be accepted. Multiple responses will not be accepted.

The date and time of the final timely received response from a Bidder will be accepted as its entire Bid. If you need to modify a particular section of your response, you must resubmit the
entire response prior to the deadline specified. Only one Bid response will be evaluated per Bidder.

**Manual or Mail Responses:**
Idaho Department of Lands
ATTN: Sandra Ramirez
300 North 6th Street Ste. 103
Boise, ID 83702

Manual responses must be sealed and marked in the lower left-hand corner as follows: Responses submitted via courier service, must be shipped in a separate sealed inner envelope identified as stated above and enclosed inside the courier’s shipping package.

Sealed Bid For: 22-234-041007 – Johnson Creek Bridge Replacement
Responses Due: 3:00 PM MT on July 11, 2022

**Electronic Responses:**
PurchasingITB@idl.idaho.gov

Subject line must include the following information:

Sealed Bid For: 22-234-041007 – Johnson Creek Bridge Replacement
Responses Due: 3:00 PM MT on July 11, 2022

**Note:** Electronic responses that exceed 20MB in size should be submitted manually.

**PUBLIC BID OPENING**

A public bid open is scheduled for July 11, 2022, at 3:15 PM (MT) at the Idaho Department of Lands 300 North 6th Street Ste. 103, Boise, ID 83702 in the Fiscal Department – 2nd Floor. Participants may attend via IDL’s phone conferencing solution in place of attending in person by calling 208-769-1525 and asking to be transferred to Meet Me Extension 5057.
<table>
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<th>Event</th>
<th>Date</th>
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<tbody>
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<td>Advertised / Released</td>
<td>May 24, 2022</td>
</tr>
<tr>
<td>Site Visit</td>
<td>June 8, 2022</td>
</tr>
<tr>
<td>Questions Deadline</td>
<td>June 15, 2022</td>
</tr>
<tr>
<td>Responses to Questions</td>
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IDAHO DEPARTMENT OF LANDS

STANDARD INFORMATION

ADDENDA

It will be the respondent’s responsibility to check for any addenda prior to submitting a bid. In the event it becomes necessary to revise any part of the solicitation documents, addenda will be made available. Information given to a respondent will be available to all other respondents if such information is necessary for purposes of submitting a or if failure to give such information would be prejudicial to uninformed respondents.

BURDEN OF PROOF

ANY VARIATIONS of brand names or deviations from the specifications MUST BE CLEARLY STATED. It shall be the responsibility and burden of the submitting vendor to furnish the State WITH ITS ORIGINAL SUBMISSION sufficient data to determine if the goods or services offered conform to the specifications.

ORAL INFORMATION

The State will not be responsible for any verbal or oral information regarding a bid.

DISQUALIFICATION AND AWARD INFORMATION

The state reserves the right to make reasonable inquiry to determine the responsibility of a contractor. Such requests may include but not be limited to financial statements, credit ratings, statements of experience and past performance, references, etc. Successful contractors must show to the satisfaction of the Idaho Department of Lands that they have sufficient equipment and work crews to complete the work contracted by the time specified. The unreasonable failure of a contractor to promptly supply information in connection with such a request is reason for disqualification. Except as otherwise provided by law, information furnished by the contractor pursuant to this provision may not be disclosed outside the Idaho Department of Lands without prior written consent of the Contractor. Disqualification of a high-ranking contractor may be pursued when their reputation, experience or references are such as to create a doubt about satisfactory job completion or if the bids are considerably below Department estimates and the other bids. The purchasing agent will contact the contractor and request that they disqualify themselves by withdrawing in writing. If the contractor refuses to withdraw, the purchasing agent may notify the contractor in writing or email that the Department will not offer the contractor a contract and proceed with an award to the next responsible contractor.

PARTNERSHIPS

Contractors responding as partners must furnish the Idaho Department of Lands the name of the partnership, names of the partners, and the partnership’s federal taxpayer ID number. All payments will be made to the partnership.
INTERNAL REVENUE SERVICES REPORTING REQUIREMENT

IRS rules and regulations require employers to submit a miscellaneous income form (IRS form 1099) for all contractual persons who receive $600 or more in a calendar year. Incorporated firms are exempt from this reporting requirement. The contractor’s taxpayer identification number (Social Security or employer number) must be listed on the signature page of the contract.

PUBLIC RECORDS

The Idaho Public Records Law, Idaho Code Sections 74-101 through 74-126, allows the open inspection and copying of public records. Public records include any writing containing information relating to the conduct or administration of the public’s business prepared, owned, used, or retained by a state or local agency regardless of the physical form or character. ALL, OR MOST (there are exceptions), OF THE INFORMATION CONTAINED IN YOUR RESPONSE TO THE STATE’S SOLICITATION WILL BE A PUBLIC RECORD SUBJECT TO DISCLOSURE UNDER THE PUBLIC RECORDS LAW.

WORKERS COMPENSATION INSURANCE

All persons working for the State under any contract of hire, expressed or implied, must be covered by worker’s compensation insurance. (Reference Title 72, Idaho Code). Contact the Idaho Industrial Commission with any Worker’s Compensation questions.

Any contractor who hires employees to accomplish the contracted work must provide a certificate of worker’s compensation insurance.

PREFERENCES

Section 67-2349, Idaho Code, requires application of a preference in determining which contractor submitted the lowest responsible bid. If the contractor who submitted the lowest bid is domiciled in a state which has a preference law that penalizes Idaho domiciled contractors, then the State must apply a preference. The penalty applied to out-of-state contractors competing against Idaho contractors is determined by the penalty applied by the contractor’s domiciliary state to its out-of-state contractors.

In determining domicile, the following “rule of thumb” will be used: Corporations – the state in which the corporation is chartered or incorporated; Sole proprietor or partnership – the state in which the permanent headquarters of the business is located.

A contractor domiciled outside the boundaries of the state of Idaho may be considered as an Idaho domiciled contractor provided that there exists for a period of one year preceding the date of the bid a significant Idaho economic presence as defined herein. A significant Idaho economic presence shall consist of the following: (a) That the contractor maintains in Idaho fully staffed offices, or fully staffed sales offices or divisions, or fully staffed sales outlets, or manufacturing facilities, or warehouses or other necessary related property; and (b) if a corporation, that it be...
registered and licensed to do business in the state of Idaho with the Office of the Secretary of State.

**REJECTION OF BIDS AND CANCELLATION OF BID SOLICITATION**

Prior to the issuance of a contract, the State shall have the right to accept or reject all or any part of a bid when: (i) it is in the best interests of the State of Idaho; (ii) the bid does not meet the minimum bid specifications; (iii) the bid is not the lowest responsible bid; (iv) a finding is made based upon available evidence that a respondent is not responsible or is otherwise incapable of meeting specifications or providing an assurance of ability to fulfill contract requirements; or (v) the item offered deviates to a major degree from the specifications, as determined by the State (minor deviations, as determined by the State, may be accepted as substantially meeting the bid requirements of the State of Idaho). Deviations will be considered major when such deviations appear to frustrate the competitive solicitation process or provide a respondent an unfair advantage. Prior to the issuance of a contract, the State shall have the right to reject all bids or to cancel a solicitation or invitation to bid. Cancellation may be for reasons that include but are not limited to: (i) inadequate or ambiguous specifications; (ii) specifications have been revised; (iii) property is no longer required; (iv) there is a change in requirements; (v) all bids are deemed unreasonable or sufficient funds are not available; (vi) bids were not independently arrived at or were submitted in bad faith; (vii) it is determined that all requirements of the solicitation process were not met; (viii) insufficient competition; or (ix) it is in the best interests of the state of Idaho.

**AWARD PROCEDURES**

For contracts with a total value of $100,000 or less, the State will email all respondents within five (5) business days following the solicitation closure of its intent to award a contract(s) and the party(ies) to whom the contract(s) will be awarded and will then email a contract award to the successful respondent(s).

For contracts with a total value of more than $100,000, the State will notify all respondents within five (5) business days following the solicitation closure, by mail and/or email, of its intent to award a contract and the party(ies) to whom the contract will be awarded. After elapse of the five (5) day appeal period, if no appeals are received, the State will award a contract to the successful respondent(s).

Respondents to whom a contract has been awarded will have fourteen (14) calendar days from the mailing date of the award notice to return to the State a signed copy of the contract along with the required certificates of insurance. If the State does not receive such documents within the specified time period, the State may declare, at its sole discretion, that all respondent’s rights to the contract are forfeited, and the State may proceed without further delay or notice to award the contract to the next low respondent.

IDL reserves the right to enter competitive negotiations with one or multiple bidders in accordance with IDL Procurement Policy #13.
EXHIBIT A

SCOPE OF WORK

PROJECT NAME: Johnson Creek Bridge Replacement
PROJECT NUMBER: 22-234-041007
SUPERVISORY AREA: Sandpoint Ranger District, Idaho Panhandle National Forests

PROJECT LOCATION
Johnson Creek Bridge Replacement, Clark Fork, Idaho - Forest Service Road #278. This Project is located on the Sandpoint Ranger District and can be accessed from Sandpoint, Idaho by taking HWY 200 east for approx. 26.3 miles and in Clark Fork, Idaho turn right onto Stephen street for approx. 0.3 miles to South River Road. Turn left and take South River Road approx. 0.7 miles, turn right onto Johnson Creek Road for approx. 2.7 miles. Arrive at Johnson Creek Bridge project.
Coordinates: NAD 83 N 48° 08' 17" W 116° 13' 38" T. 55 N., R. 2 E., Section 8, B.M.

PROJECT OVERVIEW
This project involves the installation of a 75’ span single lane road bridge structure over Johnson Creek and associated road work. The substructure will be a prestressed concrete bulb-tee on a cast-in-place concrete cap supported by deep footed H-Pile substructure (spill-thru design). The work includes but is not limited to:
- Construction staking, excavation & embankment, embankment borrow, structural excavation, leaving the existing wingwalls and abutments in place during excavation of overburden material to minimize stream disturbance, removal of wingwalls and abutments and placement of riprap, driving steel H piles to the required depth and ultimate pile capacity,
- Pouring of cast-in-place concrete abutment pile caps, supply and installation of prestressed concrete bulb-tee bridge superstructure, placement of commercial source crushed aggregate surfacing, structural steel bridge guardrail system, W-beam approach guardrail system, removal and disposal of existing timber treated bridge.
Overburden to be wasted in two separate locations on each side of the bridge within 10 miles. A temporary bridge will be installed if needed for construction. Provide minor equipment rental, soil erosion and pollution control, contractor construction quality control and associated minor work items.
The precise details of performing the work are not stipulated except as considered essential for the successful completion of the work. Contractor shall furnish all labor, material, equipment, tools, transportation, and supplies necessary to complete the work according to the contract.
FHWA FP-14 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, are included in this Project Description by reference only. Copies of the “FHWA FP-14 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS” are available for download at the following URL: https://flh.fhwa.dot.gov/resources/specs/fp-14/.

PUBLIC TRAFFIC
Accommodate traffic according to section 156 of attached Forest Service Supplemental Specifications. keep existing roads open to all traffic during road improvement work and maintain them in a condition that will adequately accommodate traffic. Delays may not exceed 30 minutes at any one time followed by an open period of no less than 10 minutes. Accommodate public traffic on roads adjacent to and within the project until the project is accepted according to Subsection 106.07(b). Submit traffic control plan at least 30 days prior
to intended use. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved.

Post construction signs and traffic control devices in conformance with MUTCD and Forest Service EM 7100-15. All required signs will be in place and approved prior to beginning work on project. If the Contractor agrees in writing to allow public traffic to use a new road being constructed prior to completion, it will be considered an existing road for traffic control purposes.

Road segments may be closed as shown in the table below. The maximum consecutive days of closure shall be followed by a minimum number of consecutive days open to traffic as shown. Maintain traffic control devices during closure period(s). Appropriate barricades and signs will be erected and maintained as shown in the traffic control plan or as otherwise designated. Prior to closing roads during the construction, give written notice to the Contracting Officer at least 10 days in advance.

**Temporary Road Closures**

<table>
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<tr>
<th>Road Number</th>
<th>From Terminus</th>
<th>To Terminus</th>
<th>Maximum Consecutive Days of Closure</th>
<th>Minimum Consecutive Days Open</th>
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<tr>
<td>278</td>
<td>MP 0.65 (Placed at Cattleguard)</td>
<td>MP 0.80</td>
<td>56</td>
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**RESTRICTIONS**

Specific instream work will be limited to October 15 – February 28. Examples of instream work that will need to be accomplished during this timing window will likely include the demolition of the existing wing-walls (pilings, retaining wall, and the fill behind the walls) and placement of the new steel pilings, slope fill, and rip-rap rock placement.

Excavation to design depth is not expected to occur until draw down of Lake Pend Oreille in November 2022.

Food on site must be kept in bear-proof food storage containers.

**SOIL EROSION CONTROL**

Thirty (30) days prior to the start of construction, submit a written plan according to attached Forest Service Supplemental Specification with all necessary permits that provides permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction. Do not begin work until the necessary controls for that particular phase of work have been implemented. Do not modify the type, size, or location of any control without approval. When erosion control measures are not functioning as intended, take corrective action to eliminate or minimize pollutants in storm water discharges from the project. Delete the first two paragraphs and replace with the following:

Submit a Dewatering Plan along with a Soil Erosion and Pollution Control Plan detailing permanent and temporary control measures to minimize erosion and sedimentation during and after construction in accordance with the plans. Do not modify the type, size, or location of any control or practice without approval. Submit the erosion control plan proposal at least seven (7) days before operations begin to the USFS COR for approval.
WATER CROSSINGS

Refer to Forest Service Special Specification Section 157 for requirements for Dewatering and Soil Erosion and Pollution Control Plan prior to instream work at any channel crossing where there is running water, dewater by rerouting water flow around the site before and during excavation and embankment operations.

MOBILIZATION

Work also includes cleaning of all equipment used at the project site. Clean all construction equipment prior to entry on the national forest lands. Remove all dirt, plant parts and material that may carry noxious weed seeds into the area.

SPECIFICATIONS

Please refer to the attached Forest Service Supplemental Specifications (FSSS) Document for information on construction requirements, bridge material specifications, and disposing of existing bridge and waste material.

PROJECT SUBMITTALS

Please refer to Section 153 (Contractor Quality Control) of the attached Forest Service Supplemental Specifications (FSSS) Document.

MATERIAL SOURCES

Contractor will furnish all materials from a commercial source.

SAFETY

Contractor shall comply with all applicable local, state, and federal safety regulations including:

- Federal Occupational Safety and Health Administration (OSHA) Standards.
- The contractor will be solely responsible for safety at the site.

CONTRACT ADMINISTRATION

Contractor is responsible for the quality and accuracy of their work consistent with their approved QA/QC plan. Idaho Panhandle NF’s staff members or IDL staff will assess the Contractor's performance, ensuring that work is completed in compliance with all of the applicable guidelines in the Project Description and Appendices.

Periodic inspections of work may be conducted by IDL or USFS COR. Progress meetings may be scheduled at the request of IDL via teleconference or in person to ascertain if the Contractor is on-schedule and whether or not the Contractor is complying with the Project Description.

As necessary, the Contractor must then revise the draft reports, incorporating any required changes, before delivering a final version of each report.

The Contracting Officer Representative (COR) for IDL for this contract will be Chase Bolyard, specific contact information will be provided upon contract award. The COR will administer the contract as required in all specifications.

Disputes between the COR and the Contractor will be resolved by the IDL Contracting Officer.
The COR has the following authority in addition to that delegated in other portions of the contract:

- Resolve disputes between the COR and the Contractor.
- Resolve disputes between the USFS COR and the Contractor.
- Decide questions of fact arising regarding quality and acceptability of equipment to be used, materials furnished, and all work performed.
- Process invoices for payment.

The Contracting Officer Representative (COR) for USFS for this contract will be Rick Driggs, specific contact information will be provided upon contract award.

The COR has the following authority in addition to that delegated in other portions of the contract:

- Decide questions of fact arising regarding quality and acceptability of work performed.
- Make recommendations to IDL for invoice payment.

The USFS Project Inspector for this Contract will be Hampton Coogle, specific contact information will be provided upon contract award.

The Project Inspector has the following authority in addition to that delegated in other portions of the contract:

- Inspect and document work performed regarding quality and acceptability.

PERIOD OF PERFORMANCE

Work must be complete by May 15th, 2023 and the contract shall expire on December 31, 2023.

ATTACHMENTS

- Plans titled Buckskin Saddle Bridges Johnson Creek Replacement dated 2/16/2022 by DJ&A (26 pages)
  - Photographs of existing bridge (6 pages)

- Specifications titled Forest Service Supplemental Specifications (FSSS) for Buckskin Saddle Bridges Johnson Creek Replacement dated 4/11/2022 by DJ&A (64 pages)

- USDA Form AD-1048 (2 pages)

- IPNF Food Storage Order (5 pages)

- IPNF Food Storage Certified Products List (26 pages)

- NOT ATTACHED

  - US Department of Transportation Federal Highway Administration Standard Specifications FP14 website (follow link below for specs):
    - Standard Specifications (FP-14) | FHWA (dot.gov)
      - https://highways.dot.gov/federal-lands/specs

Contact Information will be provided upon contract award.
MANDATORY REQUIREMENTS and EVALUATED CRITERIA

OVERVIEW

Bidders are instructed to read the following carefully. The sections below require a written response when submitting a bid in response to this solicitation. Failure to include responses as required may be cause for rejection of a bidder’s entire response. Please utilize the format below when preparing the bid response so that required responses can be easily identified by the IDL staff responsible for evaluating the bids received.

The categories included below are marked in one of two ways; with an (M) for Mandatory, requiring a “pass-fail” response from the bidder, and (ME) for Mandatory and Evaluated, requiring a response that will be evaluated (e.g., reviewed and scored) by IDL’s Evaluation Team and compared to competitive responses to in order to establish an apparent awardee.

COVER LETTER (M)

a. Bidder shall provide a cover letter with its response signed by a representative with the authority to commit the bidder to the work and bind the bidder to the prices provided in the Bid Schedule. The cover letter must include the following information:

i. General company contact information including but not limited to, the bidder’s (company’s) name, mailing address, telephone number, and email address.

ii. The bidder’s tax identification number. A bidder must be a legal entity with the right to contract within the state of Idaho.

Note: If the bidder has a DUNS number, please include this number in your cover letter. Failure to provide a DUNS number will not serve as grounds for dismissal of a bid.

iii. A statement indicating bidder’s acceptance of and willingness to comply with the requirements of this ITB and any attachments or addenda thereto. This includes compliance with the terms and conditions of the “SAMPLE” Agreement included below.

iv. A statement naming the specific firm or bidder’s personnel responsible for writing and submitting its bid.

v. A statement bidder is not currently suspended, debarred or otherwise excluded from federal or state procurement and non-procurement programs.

vi. A statement affirming the bid will be firm and binding for a period of no less than sixty (60) calendar days from the date of the public bid opening.

PAST PERFORMANCE (ME)

b. Bidder shall provide written evidence of engagement in three (3) completed projects similar to those required by this WITB for at least the last three (3) years leading up to the submission of its bid for this solicitation. This written evidence must include customer satisfaction through at least two (2) references for which you completed work similar in size and scope to the work required by this WITB.
References must include a primary point of contact for the client - name, title, email, phone number and a description of how the person identified was engaged in the administration of the agreement with the bidder.

Other information to include:
- Quality of Services
- Cost Control
- Business Relations
- Timeliness of Performance

**Technical Approach (ME)**

- Bidder shall provide outlined information on the approach to meet the needs of the project to include, but not limited to:
  - Plan of Operation
    - Demonstrate understanding of Scope of Work
    - Project time flow chart required showing planned construction
  - Resources dedicated to the project
  - Method of Construction
    - Skill in road reconstruction methods.
    - Bridge removal and minimal impacts to waterway/limit stream sedimentation Bridge construction.
  - Subcontractors or Suppliers (Concrete supplier PCI Certified Concrete / Pre-Cast plant, Steel pilings and driving, Aggregate and riprap supplier, Sampling and testing, Guard rail).

**Key Personnel (ME)**

- Bidder shall provide information for all personnel whom will be involved with the project to include:
  - Superintendent Qualifications
  - Site management experience working in structure construction
  - Skills, experience or other credentials within the firm to accomplish the scope of work
  - Project Contractor Quality Control (CQC) responsibilities and credentials
  - Resumes of personnel
METHOD OF EVALUATION AND AWARD

Evaluation Criteria

An Evaluation Team established by IDL will review and score each response. The criteria listed below will be used to evaluate and weigh scores for each responsive response in order to establish an apparent awardee (i.e., the high-point respondent). Scores will be normalized according to the following philosophy: the bidder receiving the highest score for any one criterion will receive all points for that criterion and the competitive responses to that criterion will receive a portion of the total points by weighing the score of the response in question to the initial (or raw) score given to the high point bidder for that criterion. The bidder receiving the highest point total after adding

1. Cover Letter - Pass/Fail

2. Past Performance - 100 Points
   a. Quality of Services
   b. Customer Satisfaction with reference contacts
   c. Cost Control
   d. Business Relations
   e. Timeliness of Performance

3. Technical Approach - 250 Points
   a. Plan of Operation
   b. Project Resources
   c. Method of Construction

4. Key Personnel - 150 Points
   a. Qualifications
   b. Management Experience
   c. Firm Credentials
   d. CQC Credentials

5. Cost - 500 Points

Maximum Total Points  1000
### GENERAL NOTES

**BRIEFCASE DESIGN:** This project is designed for HL-93 loading in accordance with AASHTO LRFD Bridge Design Specifications, 9th edition with current interims.

**SPECIFICATIONS:** Construct the project in compliance with Federal Highway Administration Standard Specifications for Construction of Road and Bridges on Federal Highway Projects (FP-14) and applicable Forest Service Supplemental Specifications (FS55).

### MATERIAL NOTES

**CONCRETE:** Use Class A(AE) for all cast-in-place and precast, non-prestressed concrete with $f_c' = 4500$ psi at 28 days and an entrained air content per Standard Specifications. Forming and casting shall comply with the requirements of FP-14 Section 552. Finish all precast elements with a Class 2 - Rubbed Finish.

Use Class "9" Prestressed concrete with strength requirements as determined by the prestressed beam fabricator, except as follows. The minimum 28-day compressive strength is 5500 psi ($f_c' = 5500$ psi) with a minimum compressive strength at transfer of prestress force of 3500 psi ($f_f' = 3500$ psi). In the top two inches of the prestressed beams, use concrete with an entrained air content of 5% ± 1%.

Make all concrete in accordance with an approved mix design. Chamfer all exposed edges of concrete $3/4"$ and fillet all acute angles $3"$ unless otherwise noted.

**REINFORCING STEEL:** Use non-prestressed reinforcing of the deformed type conforming to ASTM M31 (ASTM A615), Grade 60. Cut and bend steel to conform to AASHTO M315. Concrete cover shall be as shown; where not shown it shall conform to the following (conditions not specified per AASHTO):

- **Type:**
  - **Class In-Place Concrete:** 3 inch
  - **Precast Concrete:** 2 inch
  - **Precast Concrete:** See AASHTO M315

**PILE STRUCTURAL STEEL:** For piling furnish steel shapes conforming to the requirements of AASHTO M270, Grade 50 (ASTM A572, Grade 50). Provide certified copies of mill test reports for all structural steel and bolts.

**HARDWARE AND STRUCTURAL STEEL:** Use steel shapes, plates and bars meeting the requirements of ASTM A36. Galvanize all steel in accordance with AASHTO M31 (ASTM A615), Grade 60. Cut and bend steel to conform to AASHTO M315. Concrete cover shall be as shown; where not shown it shall conform to the following (conditions not specified per AASHTO):

- **Type:**
  - **Class In-Place Concrete:** 3 inch
  - **Precast Concrete:** 2 inch
  - **Precast Concrete:** See AASHTO M315

**PILE STRUCTURAL STEEL:** For piling furnish steel shapes conforming to the requirements of AASHTO M270, Grade 50 (ASTM A572, Grade 50). Provide certified copies of mill test reports for all structural steel and bolts.

**WELDING:** Weld in accordance with the Bridge Welding Code, AWS D1.5. A certified welder is required.

**INSTALLATION OF PRESTRESSED BEAMS:** Erect prestressed concrete beams with vertical tolerances of no more than 1/8" at Centerline Bearing and no more than 1/4" between deck surfaces at any point along the beam length. Use galvanized steel shims where necessary. Elastomeric bearing pads shall be in accordance with AASHTO M232. See Sheet 12 for additional information on bearing pads. Furnish shims the same size as the bearing pads and place the shims between the beams and the bearing pads. Galvanize the shims in accordance with AASHTO M232.

After erecting the beams and prior to grouting, measure the vertical difference between adjacent deck surfaces every 18’ along the bridge length and submit the measurements to the CO. **DO NOT** proceed with grouting the beam keyways or attempt to level the beams until the CO has reviewed and evaluated the measurements for tolerances and camber or erection inconsistencies. If the CO determines that a camber adjustment/leveling procedure is required, submit a camber adjustment/leveling plan designed and approved by the beam manufacturer. Any camber adjustment/leveling work authorized by the CO must be done under the direction of a manufacturer's representative. Notify the CO immediately of any damage to the beams during erection. Make no repairs until authorized by the CO.

### SUMMARY OF ESTIMATED QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>QUANTITY</th>
<th>COMMENTS</th>
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<tr>
<td>15101</td>
<td>MOBILIZATION</td>
<td>Lump Sum</td>
<td>All</td>
<td>INCLUDES TEMPORARY TRAFFIC CONTROL.</td>
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<td>15221</td>
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<td>Lump Sum</td>
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<td>LICENSED SURVEYOR REQUIRED</td>
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<tr>
<td>15713</td>
<td>SOIL EROSION &amp; POLLUTION CONTROL</td>
<td>Lump Sum</td>
<td>All</td>
<td>SEE GENERAL NOTES</td>
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<tr>
<td>20302</td>
<td>REMOVAL OF EXISTING BRIDGE, METHOD A</td>
<td>Each</td>
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<td>20401</td>
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<td>30208</td>
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<tr>
<td>55102</td>
<td>HP14x102 PILE, IN PLACE</td>
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<tr>
<td>55201</td>
<td>STRUCTURAL CONCRETE, CLASS A(AE), PILE CAP, END DIAPHRAGS &amp; WINDWALLS</td>
<td>Cubic Yard</td>
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<td>55301</td>
<td>PREFCAST, PRESTRESSED STRUCTURAL CONCRETE MEMBER, BULB-TEE BEAM</td>
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<td>55401</td>
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<td>Lbs</td>
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<td>61702B</td>
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<td>AQ</td>
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<tr>
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<td>AQ</td>
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<td>SEEDING, DRY METHOD WITH MULCH</td>
<td>Lump Sum</td>
<td>All</td>
<td>GOVERNMENT FURNISHED SEED</td>
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</table>

**SOIL EROSION CONTROL PLAN:** Submit a Soil Erosion and Sediment Control Plan to the Contracting Officer for approval at least thirty (30) days prior to beginning work. See Section 157 of the Supplemental Specifications for details. Dewatering has been deemed unsuitable at this site and will not be required.

**STREAM CROSSINGS & IN-STREAM WORK:** Approval of the CO is required for contractor to cross the live stream with equipment during construction. Submit maximum number of stream crossings and proposed location prior to beginning work. Comply with in-stream work window dates as directed by the CO and the approved project permits.

**REMOVAL AND DISPOSAL:** All materials designated for removal become the property of the Contractor and are to be disposed of by removing from the Forest in an environmentally safe manner in accordance with all Local, State and Federal requirements.

**TEMPORARY TRAFFIC CONTROL:** Submit a Temporary Traffic Control Plan to the Contracting Officer for approval at least 30 days prior to intended use.

**EXISTING UTILITIES:** Location of existing utilities is unknown. The contractor is responsible for locating all utilities prior to any excavation activities and coordinating with the appropriate utility companies to have utilities moved as needed to complete the project. Damage to any existing utilities will be repaired at the Contractor's expense.

**CO:** Contract Quantity (See Section 109.02(b) of the STANDARD SPECIFICATIONS)
The hydraulic placement of the bridge is based on historic Lake Pend Oreille water levels. The bridge low chord was set to "Moderate Flood Stage" (2), which has not occurred with the Albeni Falls Dam in service (construction completed in 1955). This will provide 2.5' of clearance between official "Flood Stage" (1) and the bridge.
SOIL EROSION CONTROL NOTES:
1. Protect against soil erosion and sedimentation during construction in accordance with FP-14 Section 157, the project permits, Forest Service Handbook (FSH) 2509.22, Region 1 BMPs for Erosion Control, and the Guidance for the Invasive Pest Management Program (Krosse 2017). Prepare and submit a soil erosion and sediment control plan to the CO for approval.
2. Contractor should anticipate water infiltrating the excavations.
3. Structure excavation, riprap, and backfill are to be completed in accordance with the Contract Specifications. Standing or running water in the work area does not relieve the contractor from meeting the specifications.
4. Dewatering has been deemed unfeasible at this site and will not be required.

STRUCTURE EXCAVATION NOTES:
1. Complete structure excavation in accordance with FP-14 Section 208.
2. Limits of excavation are shown for information purposes only. The contractor is solely responsible for excavation support and compliance with all applicable OSHA regulations.
3. Notify the CO immediately if bedrock or soft, unsuitable soils are encountered.
4. The estimated volume of structure excavation is based on the excavation limits shown in structure excavation section above.
5. Leave existing bridge abutment structure (i.e. timber piling, wingwalls, and deadmen) in place for as long as possible to protect against soil erosion and sedimentation.

STRUCTURE DEMOLITION NOTES:
1. Complete Structure Removal in accordance with FP-14 Section 203.
2. Submit a Demolition Plan for approval that includes, as a minimum, the following: drawings and a written outline illustrating and describing the methods, equipment to be used, and estimated quantities. The Demolition Plan must comply with all applicable OSHA requirements. The Excavation Plan is incidental to the work.

BACKFILL NOTES:
1. Structural Backfill limits shown here are the minimum requirements. Place Structural Backfill in accordance with FP-14 Section 208, and as shown on these Plans, with material meeting the requirements of Subsection 704.04. Compact Structural Backfill material in accordance with FP-14 Subsection 208.10. Any material outside the Structural Backfill limits shown is considered Road Embankment constructed in accordance with FP-14 Section 204 with material that must meet the requirements of FP-14 Subsection 704.06.
2. It is assumed that the existing roadway embankment material from Structure Excavation at this site will meet the requirements for Unclassified Borrow (704.06). Some mixing and sorting may be required. Approval from the CO must be obtained prior to use.

EXISTING BRIDGE
PILE NOTES

1. Drive piles to a minimum ultimate pile capacity of 150 kips as determined by the wave equation.

2. The contractor is required to retain a pile specialty consultant to monitor all phases of the pile installation and determine capacity using the wave equation. See FP-14 SS1.03 for qualification requirements and SS1.04 for required submittals.

3. Contractor to utilize pile shoes per FP-14 Subsection 715.08.
**USGS DESCRIPTION**

<table>
<thead>
<tr>
<th>Depth / Location</th>
<th>boring 1</th>
<th>boring 2</th>
<th>boring 3</th>
<th>boring 4</th>
<th>boring 5</th>
<th>boring 6</th>
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<tbody>
<tr>
<td>20 ft.</td>
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<tr>
<td>5 ft.</td>
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<td>10 ft.</td>
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<tr>
<td>15 ft.</td>
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</tbody>
</table>

**ADDITIONAL NOTES**

- Auto hammer used from 5 to 20 ft.
- Vegetable in sampler at 10 ft.
- No recovery at 15 ft.
- Borehole (11 ft to 12 ft) possible 1st phase layer.
- Borehole (11 ft to 12 ft) possible 2nd phase layer.
- Borehole (11 ft to 12 ft) possible 3rd phase layer.
- Borehole (11 ft to 12 ft) possible 4th phase layer.
- Borehole (11 ft to 12 ft) possible 5th phase layer.
- Borehole (11 ft to 12 ft) possible 6th phase layer.

**Client:** USGS

**Borehole Number:** 1

**Project:** JOHNSON CREEK BRIDGE REPLACEMENT

**Date:** Feb-22

**Archives No.:** 7140.011

**ID:** 24 of 237

---

**USGS DESCRIPTION**

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<th>Depth / Location</th>
<th>boring 1</th>
<th>boring 2</th>
<th>boring 3</th>
<th>boring 4</th>
<th>boring 5</th>
<th>boring 6</th>
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<td>20 ft.</td>
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<td>5 ft.</td>
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<td>10 ft.</td>
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<tr>
<td>15 ft.</td>
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</tbody>
</table>

**ADDITIONAL NOTES**

- Subsoil hammer used from 26 to 50 ft.

**Client:** USGS

**Borehole Number:** 1

**Project:** JOHNSON CREEK BRIDGE REPLACEMENT

**Date:** Feb-22

**Archives No.:** 7140.011

**ID:** 24 of 237
BIOLOGY LOGS

- Depth to Groundwater: 4.5'
- Logged By: J.H.W

- Depth to Groundwater: 6.5'
- Logged By: J.H.W

Client: DJ&A
Borehole Number: 2
Project: JOHNSON CREEK BRIDGE

- USGS Description: Elevation (ft)
- USGS Description: Depth (ft)
- USGS Description: Elevation (ft)
- USGS Description: Depth (ft)

Additional Notes:
- Borehole terminated at 4.5'
- Borehole terminated at 6.5'

J. ROSKE
P. JACKSON
A. GROESBECK

client: DJ&A
borehole number: 2
project: johnson creek bridge

- Elevation: 2000
- Depth: 45
- Elevation: 2005
- Depth: 50

- Elevation: 2010
- Depth: 55
- Elevation: 2015
- Depth: 60

Additional Notes:
- Borehole terminated at 45'
- Vegetation in sampler at 40'
- Borehole terminated at 50'
- Borehole terminated at 55'

- Forest Service
- United States Department of Agriculture

- Region: 1
- Northern Region

- Project Name: Johnson Creek Bridge Replacement
- Project No.: 7140.011
- Sheet: 6 of 6

- Regional Ranger District: Sandpoint

- Date: 2/16/22
- Time: 07:26
- User: P. Jackson
JOHNSON CREEK BRIDGE REPLACEMENT

ABUTMENT PLAN

ABUTMENT PLAN

ABUTMENT PLAN & ELEVATION

ABUTMENT ELEVATION

Scale: 1/4" = 1'-0"

Typical Pile Cap to Girder Connection
See DETAIL

Steel H-Pile, Ty.

Typical Pile Cap to Girder Connection
See DETAIL

Steel H-Pile, Ty.

(4) #8P1 - Top & Bottom

(4) #8P1 - Top & Bottom

3'-0"

3'-0"

Steel H-Pile, Ty.

Steel H-Pile, Ty.

Steel H-Pile, Ty.

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Steel H-Pile, Ty.
**A. DETAIL PILE CAP TO GIRDER CONNECTION**

Scale: 1/2" = 1'-0"

- **Pile Cap to Girder Connection**
- **Prestressed Concrete Girder**
- **Bearing Pad**
- **Cast-in-Place Pile Cap**
- **2-1/2" Ø nom. PVC sleeve, Leave Embedded in Pile Cap**
- **3/4" thick expansion joint filler under beam web in front of bearing pad.**
- **Apply Layer of Tar Paper Between Pile Cap & Backwall**
- **Grout and Set Dowel Prior to Pouring Backwall**

**B. DETAIL GUARD ANGLE DETAIL**

Scale: 1" = 1'-0"

- **Recess Angle 1/8" below Finished Grade**
- **1/2" Ø x 4" Headed concrete anchors @ 12" c.c. max. spacing**
- **Guard Angle**
- **Prestressed Girder Top Range**
- **L2-1/2x2 2-1/2x2 1/4**
- **Cast-in-Place Backwall**

---

**PILE CAP REINFORCING STEEL SCHEDULE**

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>QTY</th>
<th>LENGTH</th>
<th>WEIGHT</th>
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<tbody>
<tr>
<td>#8P1</td>
<td>8</td>
<td>Str</td>
<td>Longitudinal Top and Bottom Pile Cap</td>
<td>16</td>
<td>28'-2&quot;</td>
<td>1204.4</td>
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<tr>
<td>#6P2</td>
<td>6</td>
<td>Str</td>
<td>Bottom Longitudinal Bar Between H-Piles</td>
<td>8</td>
<td>9'-1&quot;</td>
<td>61.1</td>
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<tr>
<td>#6P3</td>
<td>6</td>
<td>Str</td>
<td>Bottom Longitudinal Bar at Pile Cap Ends</td>
<td>4</td>
<td>2'-11&quot;</td>
<td>17.5</td>
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<tr>
<td>#5P4</td>
<td>5</td>
<td>Str</td>
<td>Longitudinal Front and Back Face of Pile Caps</td>
<td>20</td>
<td>28'-2&quot;</td>
<td>588.1</td>
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<tr>
<td>#5P5</td>
<td>5</td>
<td>T1</td>
<td>Standard Hoops</td>
<td>96</td>
<td>11'-3&quot;*</td>
<td>1127.5</td>
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<tr>
<td>#5P6</td>
<td>5</td>
<td>S9</td>
<td>Hoops at H-Piles</td>
<td>32</td>
<td>10'-10&quot;*</td>
<td>361.9</td>
</tr>
</tbody>
</table>

Subtotal: 3350.6

*Lengths shown are total length. See Sheet 12 for rebar leg lengths.
PRESTRESSED BEAM NOTES

Pretensioning is the only acceptable method of prestressing for this project. Provide the final design for all prestressed reinforcement and non-prestressed reinforcement in the section shown on this sheet. Verify that the allowable stress and ultimate strength requirements are met at all stages of construction. Assume moderate corrosive conditions for tensile stress limits at Service Limit State after losses. The design documents must bear the seal of a Professional Engineer licensed in Idaho. Submit calculations and shop drawings in accordance with Section 553 of the Standard Specifications at least 30 days prior to casting any members. See GENERAL NOTES on Sheet 2 for additional design and material specifications.

Design in accordance with the AASHTO LRFD Bridge Design Specifications, 9th Edition. Design notes are as follows:

1. HL-93 Live Load with Impact. Also, ensure the LRFD load rating factor exceeds 1.0 for HL-93 loading.
2. Superimposed dead load is 35 PSF for a future wearing surface. Superimposed dead load may be assumed to be equally distributed to the beams.
3. Girders must be designed for buoyancy effects as the girders have the potential to be submerged in water to the maximum elevation (water level #3) shown on Sheet 6.
4. Assume moderate corrosive conditions for tensile stress limits at Service Limit State after losses.
5. Either approximate or refined methods for estimating prestress losses may be used.
6. Ensure the maximum tension stress in the pre-compressed tensile zone after losses for all service cases is 0.19√F'c. Maximum temporary tensile stress (at release) is 0.20 ksi.

FINISHING CONCRETE: Finish the bottoms of all beams and the exterior face of all exterior beams in accordance with the specifications except a concrete gray epoxy mortar using AASHTO M235 Class II Epoxy Resin Adhesive may be used instead of the specified sand-cement mortar to reduce curing time. Rub the epoxy mortar with cement prior to hardening. Finish the beam ends so that all holes or acceptable rock pockets are patched and the strands are cut off flush or burned back.

PAINTING OF WELD TIE CONNECTIONS AND GUARD ANGLES: Galvanize or paint guard angles or weld ties not covered by 1 inch or more of concrete. If painting, use one primer coat and two field coats of aluminum paint conforming to AASHTO M69, Type II.

Not to Scale

SUPERSTRUCTURE PLAN

EXTERIOR BEAM

INTERIOR BEAM

Scale: 1/2" = 1'-0"
BACKWALL REINFORCING

Scale: 3/8" = 1'-0"

FOOTNOTES

1/ Provide reinforcing in the anchorage zone for splitting resistance and confinement in accordance with AASHTO LRFD 5.10.10.1 and 5.10.10.2, respectively. Use min. confinement reinforcement of #3 bars @ 6".

2/ Blockout holes may be formed with post-tensioning duct left in place. Other materials used to form holes must be removed prior to shipping.

Provide Clearance to Beam, Typ.

BACKWALL REINFORCING STEEL SCHEDULE

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>QTY</th>
<th>LENGTH</th>
<th>WEIGHT</th>
</tr>
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<tbody>
<tr>
<td>#5A1</td>
<td>6</td>
<td>Str</td>
<td>Longitudinal Through Beam Web (Stream Face)</td>
<td>8</td>
<td>18'-7&quot;</td>
<td>167.6</td>
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<tr>
<td>#5A2</td>
<td>5</td>
<td>Str</td>
<td>Vertical Backwall</td>
<td>52</td>
<td>2'-6&quot;</td>
<td>144.8</td>
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<tr>
<td>#5A3</td>
<td>5</td>
<td>Str</td>
<td>Vertical Backwall</td>
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<td>1'-8&quot;</td>
<td>13.9</td>
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<td>#5A4</td>
<td>5</td>
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<td>Vertical Backwall</td>
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<td>2'-4&quot;</td>
<td>19.3</td>
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<tr>
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*Lengths shown are total length, See Detail this Sheet for rebar leg lengths.

#5 bars from flange bent into Backwall, typ. (7 Each Beam)

1/4" to Center of bent flange bar

Provide Clearance to Beam, Typ.

#5A1 continued thru holes in beam web, Typ.

1' clear
# Intermediate Diaphragm Detail

**Scale:** 3/8" = 1'-0"

**NOTE:** Galvaneal or paint steel diaphragm elements. Use one primer coat and two top coats of aluminum paint conforming to AASHTO M69, Type II.

## Diaphragm Connection

**Scale:** 1" = 1'-0"

**NOTE:** REINFORCING SHOWN IS IN ADDITION TO TYPICAL BEAM REINFORCING.

## Weld Tie Detail

Not to Scale

**NOTE:** Beam Fabricator may submit alternate weld detail for approval.

## Grout Key

Not to Scale

**NOTE:** Beam Fabricator may submit alternate grout key detail for approval.
BRIDGE RAIL NOTES

GALVANIZED: Galvanize all bolts, nuts, washers and pipe sleeves in accordance with AASHTO M 232 or ASTM F 2239. Galvanize metal guardrail in accordance with AASHTO Specification A 653 or AASHTO M 111. Galvanize the posts, structural tubing and plates in accordance with AASHTO M 111.

MATERIALS: Use posts and plates conforming to AASHTO M 270 Grade 56. Use metal guardrail conforming to AASHTO M 186, Class A, Type J, and lap in direction of traffic. Use 65 tube rails conforming to ASTM A 500, Grade B, or ASTM 501.

EJECTION: Set the rail parallel to the roadway grade. Adjust rail to proper height using vertical slots in rail post or rail post shims. Furnish shims as necessary to adjust rail to grade. Place shims between fiber reinforced pads. Place shims with slots toward roadway carriageline. Use fiber reinforced pads of vulcanized rubber-fiber pads made from new un-vulcanized rubber and synthetic fibers. Each component must make up 50% of the pads weight. The pad surface must have:

1. A standard rubber hardness of 80 ± 5 Shore A durometer;
2. An ultimate compressive breakdown strength of at least 7,000 psi (48.3 MPa); and
3. A minimum and maximum pad thickness of 1/16-inch (2 mm) and 5-inch (5 mm), respectively.

Size and position the pads so that not less than 1/2" of the pad protrudes on all sides of the base plates. Punch slots in the pads to match base plate.

REFLECTORS: Place a reflector on each end rail post and at approximately equal spacing (every third rail post but not to exceed 25 feet) between end rail posts. Mount reflectors with reflectorized face toward oncoming traffic. See Sheet 21 for reflector sizes. Mount reflector to W-beam post web with an approved adhesive. Include the cost of the reflector in the unit price bid for bridge rail.

INSIDE ELEVATION OF RAIL

 gości 3/8" = 1'-0"

NOTE: Attach panel lengths of tube members continuously to a minimum of three posts. Do not provide a splice in the first panel at the bridge end.

NOTE: Tube shop splices are not allowed.

SECTION

Scale: 1" = 1'-0"

DETAIL ADDITIONAL REINFORCING AT BRIDGE RAIL POSTS

NOTE: Add 1/2" = 1'-0"

SCALE: 17

SECTION

Scale: 1/2" = 1'-0"

DETAIL 17

ADDITONAL REINFORCING AT BRIDGE RAIL POSTS
**SECTION C - C**

**TUBE SPLICE DETAIL**

- Wax and grout smooth as reap!

**RAIL SPLICE**

- Washers to conform to the requirements of AASHTO M 180.

**POST CONNECTION**

- Provide 1/4"Ø holes for attaching to forms.

**SLEEVE FABRICATION OPTIONS**

- Cut/grip corners of Tube Cap to match Tube radius.

**RECTANGULAR PLATE WASHER**

- Scale = 3" = 1'-0".

**RAIL POST SHIM**

- Scale = 1/4" = 1'-0".

**DETAIL**

- Not to Scale.

**TUBE CAP**

- Not to Scale.

**ANCHOR BOLT ASSEMBLY**

- 1" ID standard pipe sleeve, typ.

**NOTE**: Fabricate sleeves using channels, angles, plates, or bent plates meeting the dimensions shown. Other sections of equal or greater strength with a minimum wall thickness of 1/4" are acceptable.

**NOTE**: Provide 5/8" oval shoulderbuttonhead bolts with hex nuts at all splice ends.

**NOTE**: See BRIDGE RAIL NOTES on Sheet 17.

**NOTE**: At Expansion Splices in W-beam, tighten bolts slowly.

**NOTE**: At Expansion Splice in Sleeve, eliminate thin wall or provide buttonhead bolt.

**NOTE**: 29/32"x1 1/9" Slots at Regular Splices.

**NOTE**: 29/32"x3/4" Slots at Expansion Splices.

**NOTE**: Traffic.
**PLAN**

- **1/2**: 37'-6" - Terminal Section, Type Tangent
- **12'-6"**: Bridge Transition Railing
- **12'-6"**: Bridge Rail Face Projection off CL of Road
- **12'-6"**: Bridge Transition Railing

**ELEVATION**

**TYPICAL TANGENT RAILING**

- Not to Scale
- 6" x 8" x 1'-2" Wood Block, See Sheet 21
- 1'-11" W-Beam Rail
- 1"-2" Post
- 5/8" x 2" Button Hole Splice Bolt
- All Unused Holes in W-Beam (Typ.)
- Reflection on Traffic

**TYPICAL WOOD POST OPTION**

- Not to Scale
- 6" x 8" x 1'-2" Wood Post, See Sheet 21
- Tapered 1/2" x 1/2" Guardrail Bolt w/ Flat Washer & Recess Nut
- 2% Slope

**TYPICAL STEEL POST OPTION**

- Not to Scale
- 6'-0" W-Beam Rail
- 1'-5" Post
- 5/8" x 8"-0" Steel Post, See Sheet 21
- Direction Of Traffic

**GUARDRAIL SPLICE DETAIL**

- Not to Scale
- Lap in Direction of Traffic
- 6'-3" (Typical Post Spacing)
- 5/8" x 2" Button Hole Splice Bolt
- All Unused Holes in W-Beam (Typ.)
- Reflection on Traffic

**CONSTRUCTION NOTES**

1. Install all bolts with heads on traffic side of installation.
2. Attach reflectors to posts every 1'-6" with the adhered reflective surface facing adjacent traffic. Fasten reflector to wood post using two 10d galvanized nails and two 3/16" dia. washers in predrilled holes.
3. No field cutting or welding is permitted on galvanized metal unless approved by the Contracting Officer.
4. Set all rail posts vertical and erect the rail parallel to grade. Set posts in 18" diameter holes, unless augured or driven. Thoroughly compact the bottom of excavated holes.
5. Splice rails only at post. Do not have more than one rail splice per post when double-layer W-beam guardrail elements are specified.

**FOOTNOTES**

1. Install a tangent blocked-out W-beam guardrail terminal that meets NCHRP-350 requirements per manufacturer's recommendations. Ensure that terminal meets Test Level 3 (TL3).
2. Follow manufacturer's installation instructions when terminal is placed on a curve. Ensure that the face of the rail does not encroach beyond the edge of the shoulder.
3. Details shown on Sheet 21 are for reference only and do not supersede manufacturer's requirements. See terminal manufacturer's drawings for governing details.
Install a flared blocked out W-Beam guardrail terminal that meets NCHRP-350 requirements per manufacturer's recommendations. Ensure that terminal meets test level 3 (TL3).

Follow manufacturer's installation instructions when terminal is placed on a curve. Ensure that the face of the rail does not encroach beyond the edge of the shoulder.

Details shown on Sheets 22 are for reference only and do not supersede manufacturer's requirements. See terminal manufacturer's drawings for governing details.

1. Install all bolts with heads on traffic side of installation.
2. Attach reflectors to posts every 12'-6" with the reflectorized surface facing adjacent traffic. Fasten reflector to wood post using two 10d galvanized nails and two 3/16" dia. washers in predrilled holes.
3. No field cutting or welding is permitted on galvanized metal unless approved by the Contracting Officer.
4. Set all rail posts vertical and erect the rail parallel to grade. Set posts in 18" diameter holes, unless augured or driven. Thoroughly compact the bottom of excavated holes.
5. Splice rails only at post. Do not have more than one rail splice per post when double-layer W-beam guardrail elements are specified.
**GUARDRAIL SPLICE DETAIL**

**SCALE:** 1/2" = 1'-0"

**TYPE**

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<td>0'-1 3/8&quot;</td>
<td>0'-1 1/8&quot;</td>
</tr>
<tr>
<td>Wood Post Bolt</td>
<td>1'-6&quot;</td>
<td>4&quot; min</td>
</tr>
<tr>
<td>Steel Post Bolt</td>
<td>0'-10&quot;</td>
<td>4&quot; min</td>
</tr>
</tbody>
</table>

**Wood Bolt Slot**

3/4" X 2 1/2" 7/8"Ø Slot

**Steel Bolt Slot**

3/4" X 2 1/2" 7/8"Ø Slot

**Guardrail Splice**

When double-layer W-Beam guardrail elements are specified, make approach guardrail post holes a minimum of 18" in diameter, unless augered or drilled. Thoroughly clean the bottom of excavated holes and compact backfill in 4-inch lifts. Fill all unused holes in W-Beam with standard buttonhead bolts and nuts. After erection is complete, back off of nuts. Repair all damaged galvanized surfaces with 2 coats of zinc dust-zinc oxide paint meeting federal specification TT-P-641 or military specification MIL-P-21035. Make all rail splices at posts. Shop bend curved rail sections.

**SPLICE & POST BOLT**

**SCALE:** 1" = 1'-0"

**TYPE**

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When double-layer W-Beam guardrail elements are specified, make approach guardrail post holes a minimum of 18" in diameter, unless augered or drilled. Thoroughly clean the bottom of excavated holes and compact backfill in 4-inch lifts. Fill all unused holes in W-Beam with standard buttonhead bolts and nuts. After erection is complete, back off of nuts. Repair all damaged galvanized surfaces with 2 coats of zinc dust-zinc oxide paint meeting federal specification TT-P-641 or military specification MIL-P-21035. Make all rail splices at posts. Shop bend curved rail sections.

**WOOD POST DETAIL**

**SCALE:** 3/4" = 1'-0"

**TYPE**

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<tbody>
<tr>
<td>Wood Post Bolt</td>
<td>1'-6&quot;</td>
<td>4&quot; min</td>
</tr>
</tbody>
</table>

**Steel Post Bolt**

0'-10" 4" min

**ROKUTED WOOD BLOCK DETAIL**

**SCALE:** 1" = 1'-0"

**WOOD BLOCK DETAIL**

**SCALE:** 1" = 1'-0"

**STEEL POST DETAIL**

**SCALE:** 3/4" = 1'-0"

**TYPE**

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<tbody>
<tr>
<td>Steel Post Bolt</td>
<td>0'-10&quot;</td>
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**Guardrail Splice**

When double-layer W-Beam guardrail elements are specified, make approach guardrail post holes a minimum of 18" in diameter, unless augered or drilled. Thoroughly clean the bottom of excavated holes and compact backfill in 4-inch lifts. Fill all unused holes in W-Beam with standard buttonhead bolts and nuts. After erection is complete, back off of nuts. Repair all damaged galvanized surfaces with 2 coats of zinc dust-zinc oxide paint meeting federal specification TT-P-641 or military specification MIL-P-21035. Make all rail splices at posts. Shop bend curved rail sections.

**SPLICE & POST BOLT**

**SCALE:** 1" = 1'-0"

**TYPE**

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**WOOD POST DETAIL**

**SCALE:** 3/4" = 1'-0"

**TYPE**

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<tr>
<td>Wood Post Bolt</td>
<td>1'-6&quot;</td>
<td>4&quot; min</td>
</tr>
</tbody>
</table>

**Steel Post Bolt**

0'-10" 4" min

**ROKUTED WOOD BLOCK DETAIL**

**SCALE:** 1" = 1'-0"

**WOOD BLOCK DETAIL**

**SCALE:** 1" = 1'-0"

**STEEL POST DETAIL**

**SCALE:** 3/4" = 1'-0"

**TYPE**

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<tr>
<td>Steel Post Bolt</td>
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**Guardrail Splice**

When double-layer W-Beam guardrail elements are specified, make approach guardrail post holes a minimum of 18" in diameter, unless augered or drilled. Thoroughly clean the bottom of excavated holes and compact backfill in 4-inch lifts. Fill all unused holes in W-Beam with standard buttonhead bolts and nuts. After erection is complete, back off of nuts. Repair all damaged galvanized surfaces with 2 coats of zinc dust-zinc oxide paint meeting federal specification TT-P-641 or military specification MIL-P-21035. Make all rail splices at posts. Shop bend curved rail sections.

**SPLICE & POST BOLT**

**SCALE:** 1" = 1'-0"

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**WOOD POST DETAIL**

**SCALE:** 3/4" = 1'-0"

**TYPE**

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**Steel Post Bolt**

0'-10" 4" min

**ROKUTED WOOD BLOCK DETAIL**

**SCALE:** 1" = 1'-0"

**WOOD BLOCK DETAIL**

**SCALE:** 1" = 1'-0"

**STEEL POST DETAIL**

**SCALE:** 3/4" = 1'-0"

**TYPE**

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</tbody>
</table>
NOTE: Details shown on this sheet are for reference only and do not supersede end terminal manufacturer's requirements.
TRAFFIC CONTROL PLAN

IDAH0 PANHANDLE NATIONAL FOREST
SANDPOINT RANGER DISTRICT

CONCEPTUAL TRAFFIC CONTROL DIAGRAM

1. Submit a traffic control plan for review per Section 156 of the Forest Service Supplemental Specifications (FSSS).
2. The conceptual plan shown represents the minimum requirements for closure. The Contractor is responsible to submit a traffic control plan and furnish and install any additional signs that may be required by their operations, and in accordance with the requirements of the Manual on Uniform Traffic Control Devices (MUTCD).
3. The Contractor is responsible to notify the CO in writing at least 14 days prior to any proposed road closure.
4. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved. Post construction signs and traffic control devices in conformance with MUTCD. All required signs will be in place and approved prior to beginning work on project.
5. The Contractor is responsible to maintain all traffic control signs. Immediately replace any missing or defaced signs. Remove all signs and barricades at the end of the closure period.
6. Sign distances and locations may be adjusted based on road conditions.
7. The Contractor is responsible for maintaining access to private residences.

TRAFFIC CONTROL NOTES:
1. Provide Variable Message Signs (VMS) 30 days in advance to the road closure. Signage to alert public of the Johnson Creek Bridge closure and the associated timeline of the closure. Provide VMS signs at the following locations:
   - Intersection of River Road (County RD 775) and Johnson Creek Road (County RD 749) [See Vicinity Map]
   - Bunco Parking Lot off of East Bunco Road (NFSR 332) [LAT/LONG: 47.908399, -116.578649]
2. The conceptual plan shown represents the minimum requirements for closure. The Contractor is responsible to submit a traffic control plan and furnish and install any additional signs that may be required by their operations, and in accordance with the requirements of the Manual on Uniform Traffic Control Devices (MUTCD).
3. Signage must be designed to be universally understood and effective for drivers.
4. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved.
5. The Contractor is responsible to notify the CO in writing at least 14 days prior to any proposed road closure.
6. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved.
7. The Contractor is responsible to maintain all traffic control signs. Immediately replace any missing or defaced signs. Remove all signs and barricades at the end of the closure period.
8. Sign distances and locations may be adjusted based on road conditions.
9. The Contractor is responsible for maintaining access to private residences.

VARIABLE MESSAGE SIGNS:

1. Provide Variable Message Signs (VMS) 30 days in advance to the road closure. Signage to alert public of the Johnson Creek Bridge closure and the associated timeline of the closure. Provide VMS signs at the following locations:
   - Intersection of River Road (County RD 775) and Johnson Creek Road (County RD 749) [See Vicinity Map]
   - Bunco Parking Lot off of East Bunco Road (NFSR 332) [LAT/LONG: 47.908399, -116.578649]

Detour Route, Typ.
Detour Arrows (Each Direction)
Detour Arrows (Each Direction)

Vicinity Map

1. Johnson Creek Bridge Closed 2.5 Miles Ahead. Detour NFSR 277 Twin Creek. (Include Detour Arrow)
2. Johnson Creek Bridge Closed 7.0 Miles Ahead. Detour NFSR 277 Twin Creek. No Turnaround Ahead. (Include Detour Arrow)

Road Closed (Each Direction)
Road Closed (Each Direction)
Road Closed (Each Direction)

Legend

"TRUCKS AHEAD" 36"x36"
"ROAD CLOSED AHEAD" 36"x36"
"CONSTRUCTION AHEAD" 36"x36"
ROAD CLOSURE BARRICADE, TYPE III WITH ROAD CLOSED SIGN 36"x18"

Signage shown on Vicinity Map

Signage Notes:
1. Sign distance and locations may be adjusted based on road conditions.
2. Signage must meet MUTCD Standards.
3. In addition to these signs above, place a "ROAD CLOSED AHEAD, XX MILES" where shown on the Vicinity Map on this sheet.

Road to be Closed

Type III Barricade for Closure

Right Stand
Left Stand

4' Min.
2' Max.
Typical Fill Slope: 1.5'

Finished Grade at Bridge:

Approach Guardrail, Typ.:

Existing Ground, Typ.

Typical Cross Slopes:
- 11.5'
- 11.5'

-2.0% 

Existing Ground, Typ.

Approach Guardrail, Typ.
ATTACHMENT 2

FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS

For

BUCKSKIN SADDLE BRIDGES
JOHNSON CREEK REPLACEMENT
F.S. ROAD 278 MP 0.77

U.S.D.A.  FOREST SERVICE
IDAHO PANHANDLE NATIONAL FOREST

Prepared by:

April 2022
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<tr>
<td>554 - Reinforcing Steel</td>
<td>56</td>
</tr>
<tr>
<td>625 - Turf Establishment</td>
<td>57</td>
</tr>
<tr>
<td>701 - Cement</td>
<td>59</td>
</tr>
<tr>
<td>703 - Aggregate</td>
<td>61</td>
</tr>
<tr>
<td>704 – Soil</td>
<td>62</td>
</tr>
<tr>
<td>725 - Miscellaneous Material</td>
<td>63</td>
</tr>
</tbody>
</table>
Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-14 for construction of National Forest System Roads.
Add the following paragraph to Subsection 101.01:

101.01 Meaning of Terms.
Delete all references to the FAR (Federal Acquisition Regulations) in the specifications when incorporating into 2400-6(T) Timber Sale or 2400-13(T) Stewardship contracts.

Add the following paragraph to Subsection 101.01:

101.01 Meaning of Terms.
Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

Add the following to Subsection 101.03:

101.03 Abbreviations.
(a) Acronyms.
AGAR — Agriculture Acquisition Regulations
AFPA — American Forest and Paper Association
FSAR — Forest Service Acquisition Regulations
MSHA — Mine Safety and Health Administration
NESC — National Electrical Safety Code
WCLIB — West Coast Lumber Inspection Bureau

(f) Miscellaneous unit abbreviations.
MP — milepost location
ppm — parts per million volume
STA — station location
Make the following changes to Subsection 101.04:

101.04 Definitions.

Delete these definitions and replace the following:

**Bid Schedule** — The Schedule of Items.

**Bridge** — A structure, including supports, erected over a depression or an obstruction such as water along a road, a trail, or a railway and having a deck for carrying traffic or other loads.

**Contractor** — The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the “Purchaser”.

**Culvert** — Any structure with a bottom, regardless of fill depth, depth of invert burial, or presence of horizontal driving surface, or any bottomless (natural channel) structure with footings that will not have wheel loads in direct contact with the top of the structure.

**Drawings** — (Public Works Contracts) Design sheets or fabrication, erection, or construction details submitted to the CO by the Contractor according to FAR Clause 52.236-21 Specifications and Drawings for Construction. Also refers to submissions and submittals.

**Notice to Proceed** — (Public Works Contracts) Written notice to the Contractor to begin the contract work.

**Right-of-Way** — A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

**Solicitation** — (Public Works Contracts) The complete assembly of documents (whether attached or incorporated by reference) furnished to prospective bidders.

Add the following definitions:

**Adjustment in Contract Price** — “Equitable adjustment,” as used in the Federal Acquisition Regulations, or “construction cost adjustment,” as used in the Timber Sale Contract, as applicable.

**Change** — “Change” means “change order” as used in the Federal Acquisition Regulations, or “design change” as used in the Timber Sale Contract.

**Forest Service** — The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

**Neat Line** — A line defining the proposed or specified limits of an excavation or structure.

**Pioneer Road** — Temporary construction access built along the route of the project.

**Purchaser** — The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

**Protected Streamcourse** — A drainage shown on the plans or timber sale area map that requires designated mitigation measures.
Road Order — An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

Shop Drawings — (Timber and Stewardship Contracts) Referred to as “Drawings” in FP-14, include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, lists or tables, performance and test data, and similar materials furnished by Purchaser to explain in detail specific portions of the work required by the contract.

Utilization Standards — The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:
Figure 101-1—Illustration of road structure terms.
Delete Section 102 in its entirety.

Delete Section 102.
Delete all of Section 103 except Subsection 103.01 Intent of Contract.

Delete Subsections 103.02, 103.03, 103.04, 103.05.
Delete Subsections 104.01, 104.02, and 104.04.

Add the following to Subsection 104.06:

104.06 Use of Roads by Contractor.

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.
Add the following to Subsection 105.02(a):

**105.02(a) Government-provided sources.**

Government-provided sources for this project are identified as follows:

1. **Government-provided mandatory sources.**

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Material source number or name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Waste Site</td>
<td>CO Designated location within 10 miles of the project site</td>
</tr>
</tbody>
</table>

Add the following to Subsection 105.02(c):

**105.02(c) Contractor-located sources.**

All material (e.g., soil, gravel, sand, borrow, aggregate, etc.) transported onto National Forest System land or incorporated into the work shall be weed-free. The Contracting Officer may request written documentation of methods used to determine the weed-free status of any and all materials furnished by the contractor. Contractor-provided expertise and methods to establish weed-free status must be appropriate for the weeds of concern in the local area.

A Forest Service weed specialist will inspect proposed sources to determine weed-free status. Provide the Contracting Officer written notification of proposed material sources 14 days prior to use. Written approval of the specific source will be provided to the contractor by the CO. If weed species are present in the proposed source, appropriate mitigation measures may allow conditional use of the source as required by the Contracting Officer.

Add the following to Subsection 105.02 (a):

**105.02 (a) Government-provided sources.**

Complete any pit or quarry development specified for a designated source, even when material is not obtained from the source.
Delete Subsection 106.01 and replace with the following:

106.01 Conformity with Contract Requirements.

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove, repair, or replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted. Removing, repairing, or replacing work; providing temporary traffic control; and any other related work to accomplish conformity will be at no cost to the Government.

(a) Disputing Government test results. If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:

1. Sampling method;
2. Number of samples;
3. Sample transport;
4. Test procedures;
5. Testing laboratories;
6. Reporting;
7. Estimated time and costs; and
8. Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory’s accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

1. Have the work accepted at a reduced price; or
2. Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

Delete Subsection 106.02 and replace with the following:

106.02 Visual Inspection.

Acceptance is based on visual inspection of the work for compliance with the specific contract requirements. Use prevailing industry standards in the absence of specific contract requirements or tolerances.

Delete Subsection 106.07.

106.07 Partial and Final Acceptance.
Add the following to Subsection 107.02:

**107.02 Protection and Restoration of Property and Landscape.**
Work within the wetted perimeter of streams will be allowed only as specified in the approved project permits.

*Delete Subsection 107.05.*

**107.05 Responsibility for Damage Claims.**
Delete Section 108 in its entirety.

Delete Section 108.
Delete Subsections 109.06, 109.07, 109.08, and 109.09:

Add the following sentence to Subsection 109.02(b):

109.02 Measurement Terms and Definitions.

  (b) Contract quantity.

  Contract quantities will be adjusted only when there are errors in the original design of 15% or more.
152.02 Qualifications.

Add the following:

Conduct all construction staking under the direction of a licensed professional engineer or land surveyor who is closely associated and familiar with construction staking.

Add the following to Subsection 152.04(c):

152.04 General.

(c) Material.

Use required stake dimensions and materials. Pre-paint the top 2 inches of all stakes and lath, or mark them with plastic flagging. Use designated colors for paint or flagging. Mark all stakes with a stake pencil that leaves a legible imprint, or with waterproof ink.

Do not use aerosol spray paints.

Use moisture-resistant paper for survey notes. Keep notes in books with covers that will protect the contents and retain the pages in numerical sequence.

Make the following changes to Subsection 152.05:

152.05 Survey and Staking Requirements.

Delete Subsection 152.05(d)(2) and replace with the following:

(d) Slope and reference stakes.

(2) Conventional survey methods. When required, locate slope stakes on designated portions of the road. Locate the slope stake catch points and use them to establish clearing limits and slope stake references.

Mark slope stakes with the station, the amount of cut or fill, the horizontal distance to centerline, and the slope ratios.

Place slope reference stakes at least 10 feet outside the clearing limit and mark with the offset distance to the slope stake. Place sight stakes when required.

Prior to clearing and grubbing operations, move the slope stake outside the clearing limit to the slope reference stake. After clearing and grubbing and before excavation, reset the slope stakes in their original position.

Use the designated method to establish the slope stake catchpoint.

Method I—Computed Method. Use the template information shown in the plans or other Government-provided data to calculate the actual location of the catchpoint. The slope stake “catchpoint distance” provided may be used as a trial location to initiate slope staking. Recatch slope stakes on any section that does not match the staking report within the tolerances established in Table 152-2.
Method II—Catchpoint Measurement Method. Determine the location of slope stake catchpoints by measuring the catchpoint distances shown in the plans or other Government-provided data.

Add the following to Subsection 152.05(e):

(e) Clearing and grubbing limits.

Mark the clearing limits with flagging or tags on trees to be left standing, or on lath. Make markings intervisible, and no more than 90 feet apart.

After establishing clearing limits, move the location line stake outside the clearing limits for station identification purposes, and mark it with horizontal distance to location line.
Replace Table 152-1 with the following:

Table 152-1 Construction Survey and Staking Tolerances

<table>
<thead>
<tr>
<th>Staking Phase</th>
<th>Horizontal</th>
<th>Vertical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control points set from existing Government control points- Tolerance Class A</td>
<td>±0.03 feet</td>
<td>±0.01 feet × √N</td>
</tr>
<tr>
<td></td>
<td>(±10 millimeters)</td>
<td>(±3 millimeters × √N)²</td>
</tr>
<tr>
<td>Mapping, topography, and cross-section Points- Tolerance Class A</td>
<td>±0.16 feet</td>
<td>±0.16 feet</td>
</tr>
<tr>
<td></td>
<td>(±50 millimeters)</td>
<td>(±50 millimeters)</td>
</tr>
<tr>
<td>Centerline points (³) including (PC), (PT), (POT),(POC), and references- Tolerance Class A</td>
<td>±0.06 feet</td>
<td>±0.06 feet</td>
</tr>
<tr>
<td></td>
<td>(±20 millimeters)</td>
<td>(±20 millimeters)</td>
</tr>
<tr>
<td>Slope-stake and slope-stake references- Tolerance Class A (⁴)</td>
<td>±0.16 feet</td>
<td>±0.16 feet</td>
</tr>
<tr>
<td></td>
<td>(±50 millimeters)</td>
<td>(±50 millimeters)</td>
</tr>
<tr>
<td>Culverts, ditches, and minor drainage structures stakes- Tolerance Class A</td>
<td>±0.16 feet</td>
<td>±0.06 feet</td>
</tr>
<tr>
<td></td>
<td>(±50 millimeters)</td>
<td>(±20 millimeters)</td>
</tr>
<tr>
<td>Retaining walls stakes</td>
<td>±0.06 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td></td>
<td>(±20 millimeters)</td>
<td>(±10 millimeters)</td>
</tr>
<tr>
<td>Curb and gutter stakes</td>
<td>±0.06 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td></td>
<td>(±20 millimeters)</td>
<td>(±10 millimeters)</td>
</tr>
<tr>
<td>Bridge substructures stakes</td>
<td>±0.03 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td></td>
<td>(±10 millimeters)</td>
<td>(±10 millimeters)</td>
</tr>
<tr>
<td>Bridge superstructures stakes</td>
<td>±0.03 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td></td>
<td>(±10 millimeters)</td>
<td>(±10 millimeters)</td>
</tr>
<tr>
<td>Clearing and grubbing limit stakes- Tolerance Class A</td>
<td>±1.00 feet</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>(±300 millimeters)</td>
<td></td>
</tr>
<tr>
<td>Roadway subgrade finish stakes- Tolerance Class A (⁶)</td>
<td>±0.16 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td></td>
<td>(±50 millimeters)</td>
<td>(±10 millimeters)</td>
</tr>
<tr>
<td>Roadway finish grade stakes (⁶)</td>
<td>±0.16 feet</td>
<td>±0.03 feet</td>
</tr>
<tr>
<td></td>
<td>(±50 millimeters)</td>
<td>(±10 millimeters)</td>
</tr>
<tr>
<td>Staking Phase</td>
<td>Horizontal</td>
<td>Vertical</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Control points set from existing Government control points –Tolerance Class B (7)</td>
<td>±0.16 feet (±20 millimeters)</td>
<td>±0.16 feet × (\frac{\sqrt{N}}{\sqrt{2}}) (±20 millimeters × (\frac{\sqrt{N}}{\sqrt{2}})) (2)</td>
</tr>
<tr>
<td>Mapping, topography, and cross-section points–Tolerance Class B (7)</td>
<td>±1.00 feet (±300 millimeters)</td>
<td>±0.50 feet (±150 millimeters)</td>
</tr>
<tr>
<td>Centerline points including (PC), (PT), (POT),(POC), and references–Tolerance Class B (7)</td>
<td>±0.16 feet (±20 millimeters)</td>
<td>±0.16 feet (±20 millimeters)</td>
</tr>
<tr>
<td>Slope-stake and slope-stake references–Tolerance Class B (7)</td>
<td>±0.50 feet (±50 millimeters)</td>
<td>±0.16 feet (±50 millimeters)</td>
</tr>
<tr>
<td>Culverts, ditches, and minor drainage structures stakes–Tolerance Class B (7)</td>
<td>±0.50 feet (±150 millimeters)</td>
<td>±0.16 feet (±20 millimeters)</td>
</tr>
<tr>
<td>Clearing and grubbing limit stakes–Tolerance Class B (7)</td>
<td>±2.00 feet (±600 millimeters)</td>
<td>—</td>
</tr>
<tr>
<td>Roadway subgrade finish stakes–Tolerance Class B (7)</td>
<td>±0.50 feet (±50 millimeters)</td>
<td>±0.16 feet (±10 millimeters)</td>
</tr>
<tr>
<td>Roadway finish grade stakes–Tolerance Class B (7)</td>
<td>±0.50 feet (±50 millimeters)</td>
<td>±0.16 feet (±10 millimeters)</td>
</tr>
</tbody>
</table>

(1) At statistical 95 percent confidence level. Tolerances are relative to existing Government control points.

(2) \(N\) is the number of instrument setups.

(3) Centerline points: PC - point of curve, PT - point of tangent, POT - point on tangent, POC - point on curve.

(4) Take the cross-sections normal to the centerline ±1 degree.

(5) Bridge control is established as a local network and the tolerances are relative to that network.

(6) Includes paved ditches.

(7) Tolerance Class B for Very Low Volume Roads with an aggregate or native finished surface.
Delete Subsection 153.02 and replace with the following:

153.02 Qualifications.
Submit the following for approval with the quality control plan:

(a) **Quality control manager (QCM).** Furnish a QCM who has at least 2 years’ experience in construction, inspector, quality control and material testing on construction projects of similar type and scope.

(b) **Testers.** Provide testers with at least one year experience in the type of sampling and testing required, and with one of the following for the type of sampling and testing performed:

   1. NICET Level II certification in highway material or equivalent state or industry certification;
   2. Certification by a regional certification program (such as Western Alliance for Quality Transportation Construction (WAQTC), Northeast Transportation Technician Certification Program (NETTCP), Southeast Task Force for Technician Training and Qualification (STFTTQ), or Multi Regional Training and Certification (M-TRAC)); or
   3. At least one year employment by an AASHTO accredited laboratory performing equivalent sampling and testing.

Add the following paragraph to the end of Subsection 153.03(b):

153.03 Quality Control Plan.

(b) **Quality Control Procedures.**
Submit written proposals for approval of alternate AASHTO or State approved test methods. Alternate methods may be allowed based on documented equivalence to the specified method.
Add the following to the end of Subsection 153.04(a)(2):

At a minimum the contractor shall provide project submittals as shown on the below Submittal Log. Submittal requirements are listed in the Standard Specifications, Supplemental Specifications, and Plans.

<table>
<thead>
<tr>
<th>Log No.</th>
<th>Incidental to Pay Item(s)</th>
<th>Description of Submittal</th>
<th>Type of Submittal</th>
<th>Requirement found in Specification No./Drawings</th>
<th>Additional Specification References</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>151</td>
<td>Weed Free Material Source Certification</td>
<td>Material Certification</td>
<td>FSSS 105.02(b)</td>
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<tr>
<td>2</td>
<td>151</td>
<td>Hazardous Spill Plan</td>
<td>Plan</td>
<td>FSSS 107.10</td>
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<tr>
<td>3</td>
<td>151</td>
<td>Contractor Quality Control Plan</td>
<td>Plan</td>
<td>153.02</td>
<td></td>
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<tr>
<td>4</td>
<td>151</td>
<td>Traffic Control Plan</td>
<td>Plan</td>
<td>FSSS 156.03</td>
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<tr>
<td>5</td>
<td>157</td>
<td>Dewatering and Soil Erosion and Pollution Control Plan</td>
<td>Plan</td>
<td>FSSS 157.03</td>
<td></td>
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<tr>
<td>6</td>
<td>208</td>
<td>Excavation Plan</td>
<td>Plan</td>
<td>FSSS 208.04</td>
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<tr>
<td>7</td>
<td>251</td>
<td>Riprap</td>
<td>Material Certification</td>
<td>251.07</td>
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<tr>
<td>8</td>
<td>552</td>
<td>Structural Concrete: Mix Design</td>
<td>Mix Design</td>
<td>552.03</td>
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</tr>
<tr>
<td>9</td>
<td>552</td>
<td>Structural Concrete: Testing</td>
<td>Test Results</td>
<td>552.19</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>553</td>
<td>Prestressed Concrete</td>
<td>Shop Drawing</td>
<td>104.03</td>
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<tr>
<td>11</td>
<td>553</td>
<td>Prestressed Concrete: PCI Certification</td>
<td>Fabrication Certification</td>
<td>FSSS 553.03</td>
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<tr>
<td>12</td>
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<td>Prestressed Concrete: Prestressing</td>
<td>Method Approval</td>
<td>553.03</td>
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<td>553</td>
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<td>Material Certification</td>
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<td>Reinforcing Steel and Wire Rope</td>
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<tr>
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<td>553</td>
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<td>FSSS 725.40</td>
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<td>553</td>
<td>Welder Certification</td>
<td>Copy of Certification</td>
<td>Sheet 2 of Plans</td>
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<td>19</td>
<td>553A</td>
<td>Precast Concrete Structures</td>
<td>Shop Drawing</td>
<td>FSSS 553A.03</td>
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<td>FSSS 553A.02</td>
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<tr>
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<td>556</td>
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<td>Shop Drawing</td>
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<td>Material Certification</td>
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<td>Description of Submittal</td>
<td>Type of Submittal</td>
<td>Requirement found in Specification No./Drawings</td>
<td>Additional Specification References</td>
</tr>
<tr>
<td>--------</td>
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<td>-----------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>25</td>
<td>625</td>
<td>Fertilizer, Seed Mix, &amp; Mulch</td>
<td>Material Certification</td>
<td>625.10</td>
<td>106, FSSS 625, 713</td>
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</tbody>
</table>

Delete Subsection 153.07 and replace with the following:

**153.07 Records and control charts.**

Maintain complete testing and inspection records by pay item number and make them accessible to the CO.
Delete Section 155 in its entirety.

Delete Section 155.
Delete Section 156 in its entirety and replace with the following:

Description

156.01 This work consists of controlling and protecting public traffic adjacent to and within the project.

Material

156.02 Conform to the MUTCD and the following Sections and Subsections:

- Permanent Traffic Control 633
- Traffic Signing and Marking Material 718
- Concrete Barriers and Precast Guardwalls 618
- Temporary plastic fence 710.11

Construction Requirements

156.03 General. Accommodate traffic according to MUTCD, approved traffic control plan and this section. Perform work in a manner that ensures safety and convenience of the public. Unless otherwise provided for in Table 156-1, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Delays may not exceed 30 minutes at any one time followed by an open period of no less than 10 minutes. Accommodate public traffic on roads adjacent to and within the project until the project is accepted according to Subsection 106.07(b).

Submit traffic control plan at least 30 days prior to intended use. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved.

Post construction signs and traffic control devices in conformance with MUTCD and Forest Service EM 7100-15. All required signs will be in place and approved prior to beginning work on project.

If the Contractor agrees in writing to allow public traffic to use a new road being constructed prior to completion, it will be considered an existing road for traffic control purposes.

156.04 Temporary Traffic Control. Install and maintain temporary traffic control devices adjacent to and within the project as required by the approved traffic control plan and the MUTCD. Install and maintain traffic control devices as follows:

(a) Furnish and install traffic control devices before the start of construction operations.

(b) All detours outside of clearing limits will be approved in writing by the Contracting Officer as part of the traffic control plan.

(c) Install only those traffic control devices needed for each stage or phase.

(d) Relocate temporary traffic control devices as necessary.

(e) Remove devices that no longer apply to the existing conditions.
(f) Immediately replace any device that is lost, stolen, destroyed, or inoperative.

(g) Keep temporary traffic control devices clean.

(h) Remove all temporary traffic control devices upon contract completion or when approved.

(i) When required, use flaggers certified by the American Traffic Safety Services Association, the National Safety Council, the International Municipal Signal Association, a state agency, or other acceptable organization. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting on flagger paddles. Do not use flags. Flaggers must wear high visibility safety apparel as required by MUTCD 6E.02.

156.05 Temporary Closures. Road segments may be closed as shown in Table 156-1. The maximum consecutive days of closure shall be followed by a minimum number of consecutive days open to traffic as shown. Maintain traffic control devices during closure period(s). Appropriate barricades and signs will be erected and maintained as shown in the traffic control plan or as otherwise designated.

Prior to closing roads during construction, give written notice to the Contracting Officer at least 10 days in advance.

<table>
<thead>
<tr>
<th>Road Number</th>
<th>From Terminus</th>
<th>To Terminus</th>
<th>Maximum Consecutive Days of Closure</th>
<th>Minimum Consecutive Days Open</th>
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</thead>
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<tr>
<td>278</td>
<td>MP 0.65 (Placed at Cattleguard)</td>
<td>MP 0.80</td>
<td>56</td>
<td>-</td>
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</tbody>
</table>

156.06 Acceptance. Public traffic work will be evaluated under Subsection 106.02.

Measurement and Payment

156.07 Do not measure Public Traffic for payment. Payment for contract work is provided indirectly. See Subsection 109.05.
Delete Subsection 157.04 and replace with the following:

157.04 General.

Thirty (30) days prior to the start of construction, submit a written plan according to subsection 104.03 with all necessary permits that provides permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction. Do not begin work until the necessary controls for that particular phase of work have been implemented. Do not modify the type, size, or location of any control without approval.

When erosion control measures are not functioning as intended, take corrective action to eliminate or minimize pollutants in storm water discharges from the project.

Delete the first two paragraphs and replace with the following:

Submit a Dewatering Plan along with a Soil Erosion and Pollution Control Plan detailing permanent and temporary control measures to minimize erosion and sedimentation during and after construction in accordance with the plans. Do not modify the type, size, or location of any control or practice without approval. Submit the erosion control plan proposal at least 7 days before operations begin to the CO for approval.

Reflect in the Dewatering Plan and Soil Erosion and Pollution Control Plan special concerns and measures necessary to protect resources and government improvements. Include:

(a) The construction activities and sequence of implementation relating to specific erosion control measures.

(b) The location and type of permanent controls to be implemented during construction.

(c) The location and type of temporary controls to be implemented during construction. The following pollution prevention measures are a requirement for endangered species protection:

   i. All equipment will be inspected for leaks prior to commencing work each day and any identified problems corrected before equipment is allowed to operate.

   ii. Fueling, maintenance and staging of equipment will occur in designated areas away from water bodies.

   iii. A spill containment kit will be available onsite at all times during construction, and proper notification procures will be in place in the event of a hazardous release.

   iv. Absorbent pads will be placed beneath fuel tanks during fueling and maintenance. Pads will also be placed under any pumps while operating.

(d) For work in stream channels with running water a detailed dewatering plan is required. The following dewatering, fish salvage, and turbidity control measures are a requirement for endangered species protection:

   i. All instream work must be completed during the designated instream fisheries work window.

   ii. The Contracting Officer shall be notified at least 72 hours in advance of commencing dewatering and re-watering activities.
iii. The Contractor shall coordinate and participate in the fish salvage operations in cooperation with the Contracting Officer’s fisheries biologist(s). The Contracting Officer will provide fisheries biologists and capture equipment to lead the fish salvage effort. The Contractor shall provide pumps, equipment, labor and resources during the fish salvage operations to ensure fish passage and flow conditions per the Drawings and specifications.

iv. Work area isolation and fish capture activities will occur during periods of the coolest air and water temperatures possible, normally early in the morning, and during conditions appropriate to minimize mortality for the species present. Electrofishing during cooler water temperatures would reduce the stress levels of salmonids.

v. Flows will be completely diverted around the instream work site through a combination of pumping and/or pre-approved, alternative methods and returned to the channel below the project area. Pump screen openings shall not exceed 3/32 or 0.0938 inches (2.38 mm). If the diversion inlet is not screened, the diversion outlet will be placed in a location that facilitates safe reentry of fish into the stream channel.

vi. Flow diversion structures will be constructed with sand bags covered with plastic sheeting. Cofferdams, portable bladder dams, or other technologies constructed of non-erodible material may also be used to contain stream flow.

vii. Once channel rehabilitation is complete, the streambed will be washed and sediment-laden water within the isolation area should be pumped to the forest floor and not allowed to return to the stream. Once the isolated streambed is washed, water will be slowly released back into the channel to minimize sediment suspension, reaching full streamflow over a period of at least one hour.

(e) For work in stream channels without flowing water describe level of ground and vegetative disturbance and measures to reduce potential sediment delivery.
171 - Weed and Disease Prevention

Description

171.01 This work consists of washing and treating construction equipment to remove seeds, plants, and plant fragments from the equipment before the equipment is used on National Forest System lands.

Material

171.02 Conform to the following Subsection:

Water 725.01

Construction Requirements

171.03 General. Notify the CO in writing at least 15 days before moving any construction equipment onto National Forest System lands. Construction equipment does not include cars, pickup trucks, and other vehicles that regularly travel between the construction site and areas outside of National Forest System lands.

Perform all work at a location designated on the plans or other locations approved in writing. Provide the CO with an opportunity to monitor the washing and inspection.

Equipment. Use a high pressure washing system.

For work on National Forest System lands, use a washing system that traps all wash water and either stores it for removal from National Forest System lands or recycles the water for continued use. If the equipment recycles the water, provide adequate filters for seed removal. Dispose of the filter material and removed seeds in an approved manner. Do not mix soaps, detergents, or other chemicals with the wash water.

For work at a commercial washing facility, use an approved facility.

171.05 Washing. Wash the sides, tops, and undercarriages of all construction equipment. Remove all seeds, plants, plant fragments, dirt, and debris from the construction equipment.

171.06 Inspection. Inspect the washed construction equipment, including the undercarriage, to ensure that the washing removed the dirt, debris, and seeds from the construction equipment. Rewash the construction equipment as necessary or as directed.

171.07 Acceptance. Weed prevention will be evaluated under Subsection 106.02.

Measurement

171.08 Do not measure weed prevention for payment.

Payment

171.09 Include all costs associated with the Section 171-Weed Prevention in the unit price for Section 151-Mobilization.
Delete and replace Subsection 201.04(d) with the following:

201.04(d) Clearing.

(d) Trim tree branches that extend over the road surface and shoulders to attain a clear height of 15 feet. Trim tree limbs as near flush with the trunk as practicable.

Add the following paragraph to Subsection 201.04:

201.04 Clearing.

(e) Do not cut vegetation less than 3 feet in height and less than 3 inches in diameter that is within the clearing limits but beyond the roadway and not in a decking area and that does not interfere with sight distance along the road unless otherwise designated.

Dispose of merchantable timber designated for removal according to the provisions of the timber sale contract.

Measurement

201.08. Delete this subsection and substitute the following:

Do not measure clearing and grubbing for payment.
Add the following to Subsection 203.05:

203.05 Disposing of Material.

(e) Windrowing Construction Slash. Place construction slash outside the roadway in neat, compacted windrows approximately parallel to and along the toe line of embankment slopes. Do not permit the top of the windrows to extend above subgrade. Use construction equipment to matt down all material in a windrow to form a compact and uniform pile. Construct breaks of at least 15 feet at least every 200 feet in a windrow. Do not place windrows against trees.

(f) Scattering. Scatter construction slash in designated areas without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will not roll, and are not on top of one another. Limb and scatter other construction slash to reduce slash concentrations. When scattering for erosion control, place construction slash as flat as practicable on the completed slope.

(g) Chipping. Use an approved chipping machine to chip slash longer than 3 feet. Deposit chips on embankment slopes or outside the roadway to a loose depth less than 6 inches. Minor amounts of chips or ground woody material may be permitted within the roadway if they are thoroughly mixed with soil and do not form a layer.

(h) Debris Mat. Use tree limbs, tops, cull logs, split stumps, wood chunks, and other debris to form a mat upon which construction equipment is operated. Place stumps upside down and blend stumps into the mat.

(i) Decking. Remove brush from designated log deck areas. Limb and top logs.

Logs not meeting the Utilization Standards described in Subsection 201.04(c) shall be cut to lengths less than 30 feet and decked in designated log deck location.

Merchantable timber not associated with an existing timber sale shall be cut to length meeting the Utilization Standards described in Subsection 201.04(c).

Deck logs so that logs are piled parallel to one another; can be removed by standard log loading equipment; will not damage standing trees; will not interfere with drainage, and will not roll. Keep logs in log decks free of brush and soil.

(j) Removal to designated locations. Remove construction slash to designated locations.

(k) Piling. Pile construction slash in designated areas. Place and construct piles so that if the piles are burned, the burning will not damage remaining trees. Keep piles free of dirt from stumps.
Delete Section 204 in its entirety and replace with the following.

Section 204. — EXCAVATION AND EMBANKMENT

Description

204.01 This work consists of excavating material and constructing embankments. This work also includes furnishing, hauling, stockpiling, placing, disposing, sloping, shaping, compacting, and finishing earthen and rocky material.

204.02 Definitions.

(a) Excavation. Excavation consists of the following:

(1) Roadway excavation. Material excavated from within the right-of-way or easement areas, except subexcavation covered in Subsection 204.02(a)(2) and structure excavation covered in Sections 208 and 209. Roadway excavation includes all material encountered regardless of its nature or characteristics.

(2) Subexcavation. Material excavated from below subgrade elevation in cut sections or from below the original ground-line in embankment sections. Subexcavation excludes the work required by Subsection 204.05 or 204.06.

(3) Borrow excavation. Material used for embankment construction that is obtained from outside the roadway prism. Borrow excavation includes unclassified borrow, and topping.

(b) Embankment construction. Embankment construction consists of placing and compacting roadway or borrow excavation. This work includes:

(1) Preparing foundation for embankment;

(2) Constructing roadway embankments;

(3) Benching for side-hill embankments;

(4) Constructing dikes, ramps, mounds, and berms; and

(5) Backfilling subexcavated areas, holes, pits, and other depressions.

(c) Conserved topsoil. Excavated material conserved from the roadway excavation and embankment foundation areas that is suitable for growth of grass, cover crops, or native vegetation.

(d) Waste. Excess and unsuitable roadway excavation and subexcavation that cannot be used.

Material

204.03 Conform to the following Subsections:

Topping 704.05

Unclassified borrow 704.06

Water 725.01(c)
Construction Requirements

204.04 Preparation for Roadway Excavation and Embankment Construction. Clear the area of vegetation and obstructions according to Sections 201 and 203.

Road pioneering, slash disposal, and grubbing of stumps may proceed concurrently with excavation and embankment. Maintain drainage during pioneering operations.

204.05 Conserved Topsoil. When designated, conserve topsoil from roadway excavation and embankment foundation areas. Stockpile conserved topsoil in low windrows immediately beyond the rounding limits of cut and embankment slopes or in other approved locations. Separate conserved topsoil from other excavated material. When designated, place conserved topsoil on completed slopes according to Section 624.

204.06 Roadway Excavation. Excavate as follows:

(a) Rock cuts. Blast rock according to Section 205. Excavate rock cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Backfill to subgrade with topping or other suitable material. Compact the material according to Subsection 204.11.

(b) Earth cuts. Scarify earth cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Compact the scarified material according to Subsection 204.11.

(c) Pioneer Roads. Conduct excavation and placement operations so material to be treated under Section 201 will not be incorporated into the roadway unless specified in the slash treatment method. Maintain drainage during pioneering operations.

Remove snow and ice in advance of the work and deposit beyond the roadway limits in a manner that will not waste material or generate sediment. Do not incorporate snow and ice into embankments. Place snow or ice in a manner to prevent resource damage.

(d) Drainage Feature. Drainage feature includes construction of all ditches, minor channel changes, drainage dips, catch basins, surface water deflectors, and other minor drainage structures. Compact the material according to Subsection 204.11. Excavate on a uniform grade between control points.

Do not disturb material and vegetation outside the construction limits. Retrieve material deposited outside the construction limits. Dispose of unsuitable or excess excavation material according to Subsection 204.14. Replace shortage of suitable material caused by premature disposal of roadway excavation.

Shape to drain and compact the work area to a uniform cross-section at the end of each day's operations.

204.07 Subexcavation. Excavate material to the required limits. Dispose of unsuitable material according to Subsection 204.14. Take cross-sections according to Section 152. Backfill subexcavated area with suitable material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness and compact according to Subsection 204.11. Prevent unsuitable material from mixing with suitable backfill material.

204.08 Borrow Excavation. Use suitable roadway excavation in embankment construction. Do not use borrow excavation when it results in excess roadway excavation. Deduct excess borrow excavation from the total borrow excavation quantity.
Obtain borrow source approval according to Subsection 105.02. Develop and restore borrow sources according to Subsections 105.03 and 105.06. Do not excavate beyond the established limits. When applicable, shape the borrow source to permit accurate measurements when excavation is complete.

204.09 Preparing Foundation for Embankment Construction. Prepare foundation for embankment construction as follows:

(a) Embankment over natural ground. Remove topsoil and break up the ground surface to a minimum depth of 6 inches (150 millimeters) by plowing or scarifying. Compact the ground surface according to Subsection 204.11.

(b) Embankments over an existing asphalt, concrete, or gravel road surface. Scarify gravel roads to a minimum depth of 6 inches (150 millimeters). Scarify or pulverize asphalt and concrete roads to 6 inches (150 millimeters) below the pavement. Reduce particles to a maximum size of 6 inches (150 millimeters) and produce a uniform material. Compact the surface according to Subsection 204.11.

(c) Embankment across ground not capable of supporting equipment. Dump successive loads of embankment material in a uniformly distributed layer to construct the lower portion of the embankment. Limit the layer thickness to the minimum depth necessary to support the equipment.

(d) Embankment on an existing slope steeper than 1V:3H. Cut horizontal steps in the existing slope to a sufficient width to accommodate placement and compaction operations and equipment. Step the slope as the embankment is placed and compacted in layers. Begin each step at the intersection of the original ground and the vertical cut of the previous step.

204.10 Embankment Construction. Incorporate only suitable roadway excavation material into the embankment. When the supply of suitable roadway excavation is exhausted, furnish unclassified borrow to complete the embankment. Obtain written approval before beginning construction of embankments over 6 feet (2 meters) high at subgrade centerline. Construct embankments as follows:

(a) General. At the end of each day’s operations, shape to drain and compact the embankment surface to a uniform cross-section. Eliminate ruts and low spots that could hold water.

During all stages of construction, route and distribute hauling and leveling equipment over the width and length of each layer of material.

Compact embankment side slopes with a tamping foot roller, by walking with a dozer, or by over-building the fill and then removing excess material to the final slope line. For slopes 1V:1¾H or steeper, compact the slopes as embankment construction progresses.

(b) Embankment within the roadway prism. Place embankment material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness. Incorporate oversize boulders or rock fragments into the 12-inch (300-millimeter) layers by reducing them in size or placing them individually as required below. Compact each layer according to Subsection 204.11 before placing the next layer.

Material composed predominately of boulders or rock fragments too large for 12-inch (300-millimeter) layers may be placed in layers up to 24 inches (600 millimeters) thick. Incorporate oversize boulders or rock fragments into the 24-inch (600-millimeter) layer by reducing them in size or placing individual rock fragments and boulders greater than 24 inches (600 millimeters) in diameter as follows:

(1) Reduce rock to less than 48 inches (1200 millimeters) in the largest dimension;
(2) Distribute rock within the embankment to prevent nesting;

(3) Place layers of embankment material around each rock to a depth not greater than that permitted above. Fill voids between rocks; and

(4) Compact each layer according to Subsection 204.11(a) before placing the next layer.

(c) Embankment outside of roadway prism. When placing embankment outside the staked roadway prism, place material in horizontal layers not exceeding 24 inches (600 millimeters) in compacted thickness. Compact each layer according to Subsection 204.11.

204.11 Compaction. Compact the embankment using one of the following methods as specified.

(a) Placement Method 1. Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve. Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

(a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;

(b) Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or

(c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(a), by four passes; or

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(b) and (c), by eight passes.

(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of material passing a No. 4 (4.75-millimeter) sieve, and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width according to Subsection 204.11(a)(1).

(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C.
Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width to at least 95 percent of the maximum density. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures. When required, use AASHTO T 224 to correct for coarse particles.

(b) Placement Method 2. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

(1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.

(2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, specifically designed to compact the material on which it is used.

(3) Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi (550 Kilopascals).

(4) Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

(c) Placement Method 3. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

(d) Placement Method 4. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

(e) Placement Method 5. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by ½ width of bucket.

(f) Placement Method 6. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes.
204.12 Drainage Features. Slope, grade, and shape all drainage features. Remove projecting roots, stumps, rock, or similar matter. Maintain all drainage features in an open condition and without sticks, and other debris.

Form furrow ditches by plowing or using other acceptable methods to produce a continuous furrow. Place excavated material on the downhill side so the bottom of the ditch is approximately 18 inches (450 millimeters) below the crest of the loose material. Clean the ditch using a hand shovel or other suitable method. Shape to provide drainage without overflow.

204.13 Sloping, Shaping, and Finishing. Complete subgrade, slopes, drainage features, culverts, riprap, and other underground minor structures before placing aggregate courses. Slope, shape, and finish to the designated tolerance class as defined in Table 204-2 as follows:

(a) Sloping. Leave earth slopes with uniform roughened surfaces, except as described in Subsection 204.13(b), with no noticeable break as viewed from the road. Except in solid rock, round tops and bottoms of slopes including the slopes of drainage ditches. Round material overlaying solid rock to the extent practical. Scale rock slopes. Slope rounding is not required on tolerance class D through M roads.

If a slide or slipout occurs on a cut or embankment slope, remove or replace the material and repair or restore damage to the work. Bench or key the slope to stabilize the slide. Reshape the cut or embankment slope to an acceptable condition.

(b) Stepped slopes. Where required, construct steps on slopes of 1⅓V:1H to 1V:2H. Construct the steps approximately 18 inches (450 millimeters) high. Blend the steps into natural ground at the end of the cut. If the slope contains non-rippable rock outcrops, blend steps into the rock. Remove loose material found in transitional area. Except for removing large rocks that may fall, scaling stepped slopes is not required.

(c) Shaping. Shape the subgrade to a smooth surface and to the cross-section required. Shape slopes to gradually transition into slope adjustments without noticeable breaks. At the ends of cuts and at intersections of cuts and embankments, adjust slopes in the horizontal and vertical planes to blend into each other or into the natural ground.

(d) Finishing. Ensure that the subgrade is visibly moist during shaping and dressing; smooth and uniform, and shaped to conform to the typical sections. Remove material larger than 6 inches (150 millimeters) from the top 6 inches (150 millimeters) of the roadbed. Remove unsuitable material from the roadbed, and replace it with suitable material. Scarify to 6 inches (150 millimeters) below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material.

Maintain proper ditch drainage.

204.14 Disposal of Unsuitable or Excess Material. Dispose of unsuitable or excess material at designated sites or according to Subsection 203.05(a).

When there is a pay item for waste, shape and compact the waste material in its final location. Do not mix clearing or other material not subject to payment with the waste material.

204.15 Acceptance. See Table 204-1 for sampling, testing, and acceptance requirements.

Material for embankment and conserved topsoil will be evaluated under Subsections 106.02 and 106.04.

Excavation and embankment construction will be evaluated under Subsections 106.02 and 106.04.

Subexcavation will be evaluated under Subsections 106.02 and 106.04.
Measurement

204.16 Measure the Section 204 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

(a) Roadway excavation. Measure roadway excavation in its original position as follows:

(1) Include the following volumes in roadway excavation:

(a) Roadway prism excavation;
(b) Rock material excavated and removed from below subgrade in cut sections;
(c) Unsuitable material below subgrade and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;
(d) Ditches, except furrow ditches measured under a separate pay item;
(e) Conserved topsoil;
(f) Borrow material used in the work when a pay item for borrow is not listed in the bid schedule;
(g) Loose scattered rocks removed and placed as required within the roadway;
(h) Conserved material taken from pre-existing stockpiles and used in Section 204 work, except topsoil measured under 624; and
(i) Slide and slipout material not attributable to the Contractor’s method of operation.

(2) Do not include the following in roadway excavation:

(a) Overburden and other spoil material from borrow sources;
(b) Overbreakage from the backslope in rock excavation;
(c) Water or other liquid material;
(d) Material used for purposes other than required;
(e) Roadbed material scarified in place and not removed;
(f) Material excavated when stepping cut slopes;
(g) Material excavated when rounding cut slopes;
(h) Preparing foundations for embankment construction;
(i) Material excavated when benching for embankments;
(j) Slide or slipout material attributable to the Contractor’s method of operation;
(k) Conserved material taken from stockpiles constructed at the option of the Contractor;
(l) Material excavated outside the established slope limits; and
(m) Road pioneering for the convenience of the Contractor.
When both roadway excavation and embankment construction pay items are listed in the bid schedule, measure roadway excavation only for the following:

(a) Unsuitable material below subgrade in cuts and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;

(b) Slide and slipout material not attributable to the Contractor’s method of operations; and

(c) Drainage ditches, channel changes, and diversion ditches.

**Unclassified borrow, and topping.** When measuring by the cubic yard (cubic meter) measure in its original position. If borrow excavation is measured by the cubic yard (cubic meter) in-place, take initial cross-sections of the ground surface after stripping overburden. Upon completion of excavation and after the borrow source waste material is returned to the source, retake cross-sections before replacing the overburden. Do not measure borrow excavation until suitable roadway excavation is depleted.

**Embarkment construction.** Measure embankment construction in its final position. Do not make deductions from the embankment construction quantity for the volume of minor structures.

(1) Include the following volumes in embankment construction:

(a) Roadway embankments;

(b) Material used to backfill subexcavated areas, holes, pits, and other depressions;

(c) Material used to restore obliterated roadbeds to original contours; and

(d) Material used for dikes, ramps, mounds, and berms.

(2) Do not include the following in embankment construction:

(a) Preparing foundations for embankment construction;

(b) Adjustments for subsidence or settlement of the embankment or of the foundation on which the embankment is placed; and

(c) Material used to round fill slopes.

**Rounding cut slopes.** If a pay item for slope rounding is included in the bid schedule measure rounding cut slopes horizontally along the centerline of the roadway. If a pay item is not included for slope rounding is not included in the bid schedule payment will be considered indirect to roadway excavation.

**Waste.** Measure waste by the cubic yard (cubic meter) in its final position. Take initial cross-sections of the ground surface after stripping overburden. Upon completion of the waste placement, retake cross-sections before replacing overburden.

**Slope scaling.** Measure slope scaling by the cubic yard (cubic meter) in the hauling vehicle.

**Subexcavation.** Measure subexcavation by the cubic yard (cubic meter) in its original position.

**Drainage features.** Measurement includes all excavation, embankment, shaping, and grading necessary for a completed drainage feature.
Payment

204.17 The accepted quantities will be paid at the contract price per unit of measurement for the Section 204 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.
### Table 204-1
Sampling, Testing, and Acceptance Requirements

<table>
<thead>
<tr>
<th>Material or Product (Subsection)</th>
<th>Type of Acceptance (Subsection)</th>
<th>Characteristic</th>
<th>Category</th>
<th>Test Methods Specifications</th>
<th>Sampling Frequency</th>
<th>Point of Sampling</th>
<th>Split Sample</th>
<th>Reporting Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topping (704.05)</td>
<td>Measured and tested for conformance (106.04 &amp; 105)</td>
<td>Classification(1)</td>
<td>–</td>
<td>AASHTO M 145</td>
<td>1 per soil type and source of material</td>
<td>Processed material</td>
<td>Yes</td>
<td>Before using in work</td>
</tr>
<tr>
<td>Unclassified borrow (704.06)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topping (704.05) and (204.11(a))</td>
<td>Measured and tested for conformance (106.04)</td>
<td>Moisture-density</td>
<td>–</td>
<td>T 99, Method C(2)</td>
<td>1 per soil type, but not less than 1 per each 13,000 yd³ (10,000 m³)</td>
<td>Processed material</td>
<td>Yes</td>
<td>Before using in work</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Density</td>
<td>–</td>
<td>AASHTO T 310 or other approved procedures</td>
<td>1 per 3500 yd² (3000 m²), but not less than 3 per layer</td>
<td>In-place</td>
<td>No</td>
<td>Before placement of next layer</td>
</tr>
<tr>
<td>Unclassified borrow (704.06) and (204.11(a))</td>
<td></td>
<td>Moisture-density</td>
<td>–</td>
<td>T 99, Method C(2)</td>
<td>1 per soil type, but not less than 1 per each 13,000 yd³ (10,000 m³)</td>
<td>Processed material</td>
<td>Yes</td>
<td>Before using in work</td>
</tr>
<tr>
<td>Material or Product (Subsection)</td>
<td>Type of Acceptance (Subsection)</td>
<td>Characteristic</td>
<td>Category</td>
<td>Test Methods Specifications</td>
<td>Sampling Frequency</td>
<td>Point of Sampling</td>
<td>Split Sample</td>
<td>Reporting Time</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Density</td>
<td>–</td>
<td>AASHTO T 310 or other approved procedures</td>
<td>1 per 3500 yd² (3000 m²), but not less than 3 per layer</td>
<td>In-place</td>
<td>No</td>
<td>Before placement of next layer</td>
</tr>
<tr>
<td>Production (continued)</td>
<td></td>
<td>Classification</td>
<td>–</td>
<td>AASHTO M 145</td>
<td>1 per soil type</td>
<td>Source of material</td>
<td>Yes</td>
<td>Before using in work</td>
</tr>
<tr>
<td>Earth embankment (204.11(a))</td>
<td>Measured and tested for conformance (106.04)</td>
<td>Moisture-density</td>
<td>–</td>
<td>T 99, Method C²</td>
<td>1 per soil type, but not less than 1 per each 13,000 yd³ (10,000 m³)</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Density</td>
<td>–</td>
<td>AASHTO T 310 or other approved procedures</td>
<td>1 per 3500 yd² (3000 m²), but not less than 3 per layer</td>
<td>In-place</td>
<td>No</td>
<td>Before placement of next layer</td>
</tr>
<tr>
<td>Top of subgrade (204.11(a))</td>
<td>&quot;</td>
<td>Density</td>
<td>–</td>
<td>AASHTO T 310 or other approved procedures</td>
<td>1 per 2500 yd² (2000 m²), but not less than 3 per layer</td>
<td>In-place</td>
<td>No</td>
<td>Before placement of next layer</td>
</tr>
<tr>
<td>Finished Product</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material or Product (Subsection)</td>
<td>Type of Acceptance (Subsection)</td>
<td>Characteristic</td>
<td>Category</td>
<td>Test Methods Specifications</td>
<td>Sampling Frequency</td>
<td>Point of Sampling</td>
<td>Split Sample</td>
<td>Reporting Time</td>
</tr>
<tr>
<td>--------------------------------</td>
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<td>-----------------------------</td>
<td>--------------------</td>
<td>------------------</td>
<td>--------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Roadbed (204.13)</td>
<td>Measured and tested for conformance (106.04)</td>
<td>Final line &amp; grade</td>
<td>–</td>
<td>Field measured</td>
<td>Determined by the CO</td>
<td>Determined by the CO</td>
<td>No</td>
<td>Before placement of next layer</td>
</tr>
</tbody>
</table>

(1) Not required when using Government-provided source.
(2) Minimum 5 points per proctor.
### Table 204-2
Construction Tolerances

<table>
<thead>
<tr>
<th>Location Description</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadbed width (ft)</td>
<td>+0.5</td>
<td>+0.5</td>
<td>+1.0</td>
<td>+1.0</td>
<td>+1.0</td>
<td>+1.5</td>
<td>+1.0</td>
<td>+2.0</td>
<td>+2.0</td>
<td>+2.0</td>
<td>+2.0</td>
<td>+2.0</td>
<td>+2.0</td>
</tr>
<tr>
<td>Subgrade elevation (ft)</td>
<td>±0.1</td>
<td>±0.2</td>
<td>±0.5</td>
<td>±0.5</td>
<td>±1.0</td>
<td>±1.5</td>
<td>±2.0</td>
<td>±3.0</td>
<td>±2.0</td>
<td>±3.0</td>
<td>(c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centerline alignment (ft)</td>
<td>±0.2</td>
<td>±0.2</td>
<td>±0.5</td>
<td>±1.0</td>
<td>±1.5</td>
<td>±2.0</td>
<td>±3.0</td>
<td>±3.0</td>
<td>±5.0</td>
<td>(c)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slopes, excavation, and embankment (% slope)&lt;sup&gt;(b)&lt;/sup&gt;</td>
<td>±3</td>
<td>±5</td>
<td>±5</td>
<td>±5</td>
<td>±5</td>
<td>±10</td>
<td>±10</td>
<td>±20</td>
<td>±20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) Maximum allowable deviation from construction stakes and drawings.
(b) Maximum allowable deviation from staked slope measured from slope stakes or hinge points.
(c) Unless otherwise shown the centerline alignment and subgrade elevation, as built, have no horizontal curves with a radius of less than 80 feet, and no vertical curves with a curve length of less than 80 feet when the algebraic difference in the grade change is less than 10 percent, or a curve length of less than 100 feet when the algebraic difference of the grade change is greater than or equal to 10 percent. The centerline grade is not to exceed 20 percent in 100 feet of length.
Delete the 6th paragraph of Subsection 208.03 and replace with the following:

208.03 General.

Conserve suitable material for backfill from excavated material, some sorting may be required. Do not deposit excavated material in or near a waterway. Do not stockpile excavated material or allow equipment closer than 24 inches from the edge of the excavation. Use suitable material in embankment construction when approved. Field drain and dry excessively wet material that is otherwise suitable for backfill before placement. Dispose of unsuitable or excess material at designated sites shown on the drawings or as directed by the CO according to Subsection 204.14.

Add the following to Subsection 208.03:

208.03 General.

Submit an Excavation Plan for approval prior to beginning the work. As a minimum, the Excavation Plan must include: drawings and a written outline illustrating and describing the proposed excavation limits, methods, equipment to be used, location of stockpiles, and estimated quantities. The Excavation Plan must comply with all applicable OSHA requirements and list the soil type assumed.

Add the following to Subsection 208.07:

208.07 Dewatering.

Construct diversions according to Subsection 157.10 Diversions. Submit dewatering plans according to Subsection 104.03.
Delete paragraph (a) of Subsection 302.05 and substitute the following:

302.05 Compacting and Finishing Crushed Aggregate.

(a) Roadway aggregate. Compact using the methods below, specified in the Schedule of Items.

(1) Method 1. Compact the aggregate by operating compaction equipment over the total width until visible deformation ceases. A minimum of three complete roller passes shall be made at a moisture content suitable for compaction.

(2) Method 2. Operate equipment over the full width of spread aggregate.
552 - Structural Concrete

552.01 Description.

Delete the first paragraph of Subsection 552.01 and replace with the following:

This work consists of furnishing, placing, finishing, and curing concrete to be cast-in-place in bridges, culverts, and other structures; furnishing precast concrete elements by forming, placing reinforcing steel, placing and finishing concrete, curing, and transporting members; and materials testing and implementing quality control procedures. When specified, work also includes installation of furnished precast concrete elements, including performing all necessary grouting, welding or other connections; and repairs or finishing associated with transport and the removal of lifting devices.

552.02 Material.

Add the following references to Subsection 552.02:

- Dowel bars: 709.01(f)
- Falsework and forms: 562
- Hook bolts: 709.01(e)
- Mortar cement: 701.02(b)
- Reinforcing steel: 554
- Structural steel: 717.01
552.03 Construction Requirements.

Delete Table 552-1 and its footnotes and replace with the following table and footnotes:

Table 552-1

Composition of Concrete

<table>
<thead>
<tr>
<th>Class of Concrete</th>
<th>Minimum Compressive Strength @ 28-Days, ( f'_c ), psi (MPa)</th>
<th>Maximum Water/Cementitious Material Ratio</th>
<th>Coarse Aggregate Size Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4500 (31.0)</td>
<td>0.45</td>
<td>5, 56, 57</td>
</tr>
<tr>
<td>A(AE)</td>
<td>4500 (31.0)</td>
<td>0.45</td>
<td>5, 56, 57</td>
</tr>
<tr>
<td>C</td>
<td>4500 (31.0)</td>
<td>0.45</td>
<td>7, 78</td>
</tr>
<tr>
<td>C(AE)</td>
<td>4500 (31.0)</td>
<td>0.45</td>
<td>7, 78</td>
</tr>
<tr>
<td>D(AE)</td>
<td>5000 (34.5)</td>
<td>0.40</td>
<td>5, 56, 57</td>
</tr>
<tr>
<td>P (Precast, Prestressed)</td>
<td>See plans</td>
<td>–</td>
<td>6,7,67,68,78</td>
</tr>
<tr>
<td>P(AE)</td>
<td>See plans</td>
<td>–</td>
<td>6,7,67,68,78</td>
</tr>
<tr>
<td>S (Seal)</td>
<td>–</td>
<td>0.54</td>
<td>5, 56, 57</td>
</tr>
</tbody>
</table>

(1) Meet the processing requirements of AASHTO M 43, Table 1 – Standard Sizes of Processed Aggregate.

(2) The maximum water-soluble chloride ion (Cl-) content is 0.15 percent by mass of cement. Determine the water-soluble chloride ion content of concrete made with mix ingredients at an age between 28 and 48 days according to ASTM C1218. Submit test results with the concrete mix design for approval.

(3) The maximum water-soluble chloride ion (Cl-) content is 0.06 percent by mass of cement. Determine the water-soluble chloride ion content of concrete made with mix ingredients at an age between 28 and 48 days according to ASTM C1218. Submit test results with the concrete mix design for approval.

(4) Use Class P (AE) concrete in the entire depth of the top flange of all multi-beam bridge girders. In lieu of this, Class P (AE) concrete may be used for fabrication of the entire girder and throughout the entire depth of prestressed slabs. In all cases, furnish concrete meeting the 28 day specified minimum concrete strength requirements for the prestressed members as shown on the plans, unless otherwise specified.

(5) Use Class A (AE) or Class P (AE) concrete for precast elements to be used as substructure elements, such as footings or foundations. Use Class P (AE) concrete for fabrication of precast elements to be used in a precast (non-prestressed) superstructure element, including slabs, girders, and box culverts where traffic will be in contact with the horizontal top surface. In all cases, furnish concrete meeting the 28 day specified minimum concrete strength requirements for the precast or prestressed members as shown on the plans, unless otherwise specified.
Delete the second and third paragraph of Subsection 552.03 and replace with the following:

Submit written concrete mix designs on FHWA Form 1608, 552 Structural Concrete Mix Design Submittal, or other format that is professional in appearance and provides all of the required information in subsections (a) through (z) of this section, 552.03. Allow at least 30 calendar days for approval before production.

Add the following item to Subsection 552.03 under the list of items to be included in the mix design submittal:

(z) Evaluation of potential aggregate reactivity

552.08 Delivery.

Delete the last sentence of the first paragraph of Subsection 552.08(a) and replace with the following:

Do not exceed 130 total revolutions at mixing speed, including both initial mixing and remixing. Do not exceed 300 total revolutions, including both mixing and agitating speed.

Delete table 552-4 and its footnotes and replace with the following table and footnotes:

<table>
<thead>
<tr>
<th>Table 552-4</th>
<th>Concrete Remixing and Discharge Time Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement Type</td>
<td>Admixtures</td>
</tr>
<tr>
<td>Type I, IA, II, IIA, V, or approved blended hydraulic cement</td>
<td>None</td>
</tr>
<tr>
<td>Type I, IA, II, IIA, V, or approved blended hydraulic cement</td>
<td>ASTM C494, Type B, D, or G(2)</td>
</tr>
<tr>
<td>Type I, IA, II, IIA, V, or approved blended hydraulic cement</td>
<td>Hydration stabilizer</td>
</tr>
<tr>
<td>Type III</td>
<td>None</td>
</tr>
<tr>
<td>Type III</td>
<td>ASTM C494, Type B, D, or G(2)</td>
</tr>
</tbody>
</table>

(1) AASHTO M 85 or AASHTO M 240 as applicable.

(2) ASTM C494 defines Type B as a retarding admixture, Type D as a Water-reducing and retarding admixture, and Type G as a Water-reducing, high range, and retarding admixture.
552.18 Loads on New Concrete Structures.

Add the following paragraph to Subsection 552.18:

Do not allow public traffic on the bridge until approaches, curbs, and bridge rail are completed and in-place. Erect barricades at each end of bridge spans when road approaches allow vehicles to drive directly onto the structure.

Delete Subsections 552.20, 552.21, and 552.22 and replace with the following:

552.20 Precast Elements. Precast concrete elements and members considered structural in nature shall meet the following specifications of this section.

(a) Certification and/or Quality Assurance of Precast Manufacturing Plant. Furnish precast concrete members using a plant with one of the following certifications, appropriate to the type of member being fabricated:

   (1) Precast/Prestressed Concrete Institute (PCI)
      (a) Bridge 1, Precast Bridge Products (no prestressed reinforcing).
      (b) Commercial 1, Precast Concrete Products (no prestressed reinforcing).
   (2) National Precast Concrete Association (NPCA)
   (3) American Concrete Pipe Association (ACPA)

When available, submit a copy of the transmittal letter of the latest PCI, NPCA, or ACPA inspection and certification with the shop drawings.

In lieu of the above certification, the Contractor shall retain a professional engineer to provide quality assurance for the work by inspecting and certifying in writing the concrete members are constructed in accordance with the contract specifications and FSSS Section 552 and shall include information including but not limited to the following:

   (a) Shop drawings review.
   (b) Concrete member dimensions.
   (c) Concrete mix design.
   (d) Aggregate sources, moisture contents, test results.
   (e) Steel reinforcing placement.
   (f) Concrete curing and strength test results.
   (g) Concrete material certifications.
   (h) Placement mixing, delivery and sampling.
   (i) Properly calibrated production and test equipment
   (j) Proper records keeping including; personnel qualifications and training records, material sources, quality control testing results for the aggregate and concrete, pre-
pour and post-pour inspection reports, batching records, disposition of failing products, and shipping.

Material sources shall be on the State’s approved supplier list or approved in writing by the CO. Furnish the certification or supplemental information above to the CO prior to shipment of materials and installation at the job site.

Perform all sampling, testing, and inspection necessary to ensure quality control of the component materials and the concrete. Sample and test for quality control and acceptance testing in accordance with the AASHTO or ASTM test methods prescribed in Section 552.

Maintain adequate records of all inspections and tests. Keep records that indicate the nature and number of observations made, the number and type of deficiencies found, the quantities approved and rejected, and the nature of any corrective action taken.

(b) Precast Manufacturing Plant (i.e. Casting Yard). The precasting of concrete structural members may be done at a casting yard of an industry-certified plant or a casting yard of the Contractor’s choice with the appropriate certifications discussed above.

(c) Tolerances. Place and consolidate concrete so that shrinkage cracks are not produced in the member.

Verify that the prefabricated elements will fit-up and align properly before shipping from the precast facility. Assembling each superstructure and substructure composed of prefabricated elements in the yard prior to shipping the elements to the project site is a suitable way to perform such verification. If assembled in the yard, use blocking to simulate the support of the elements and the spacing between the elements. Verify all elements are constructed in compliance with all plan requirements. Dry fit all connections in the fabrication yard prior to installation of the elements at the bridge site.

Fabricate precast concrete foundation units straight and true size and shape with exposed edges and corners precise and true so each finished unit complies with the following dimension tolerances as well as position tolerances for cast in items:

1. Do not vary the length by more than ¾ inch.
2. Do not vary the height/width from that shown in the design by more than ¼ inch.
3. Do not allow defects in local smoothness that vary more than ¼ inch in 10 feet for any surface, except when special finishing or form liners are called out or accepted as part of the submittal.
4. Do not vary the position of inserts for structural connections from that shown in the shop drawings by more than ½ inch, except as submitted and approved.
5. Comply with Section 554 Reinforcing steel in the placement of mild reinforcement.

(d) Submittals. Submit four (4) sets of shop drawings to the CO for approval according to subsection 104.03, a minimum of 21 days before fabrication of the precast member(s). In lieu of
hard copy shop drawing submittals, electronic submittals are acceptable. Show all details necessary for fabrication, including the following:

1. Details and location of all lifting holes, inserts, hardware, devices, and any additional reinforcing required for lifting. Include supporting calculations and lifting procedures.
2. Description of the method of curing, handling, storing, and transporting the elements.
3. Concrete mix design for all precast elements.
4. Details and location of Government-furnished date plate if shown on the plans.

(e) Quality Assurance.
1. Permanently mark each element with date of fabrication, supplier identification and module identification. Stamp markings in fresh concrete.
2. Prevent cracking or damage of precast components during handling and storage.
3. Replace or repair defective or broken precast concrete deck and concrete deck overhang elements according to section 106. Requests to repair defective or broken elements are subject to the following:
   a. Obtain approval before performing concrete repairs.
   b. Concrete repair work must re-establish the module’s structural integrity, durability, and aesthetics to the satisfaction of the CO.
   c. Describe the cause of damage and the corrective action taken to eliminate future damage.
   d. Submit an updated CPM schedule showing the effects of repair work on project completion.
4. Elements will be rejected if they do not conform to the contract documents, and for the following reasons:
   a. Full-depth cracking of concrete and concrete breakage that is not repairable.
   b. Cracks that extend to the nearest reinforcement plane, or fine surface cracks that do not extend to the nearest reinforcement plane but are numerous or extensive.
   c. Camber that does not meet the requirements of the plans or fabrication drawings.
   d. Honeycombed texture.
   e. Dimensions exceeding the allowable tolerances.
   f. Damage during fabrication, transportation, erection, or construction.
5. Document all test results for structural concrete. Show in the quality control files at least the following information:
   a. Element identification.
   b. Date and time of fabrication concrete pour.
   c. Concrete cylinder test results.
   d. Concrete mix design and the batch print out.
   e. Form-stripping date.
(f) Location and number of blockouts and lifting inserts.

(g) Temperature, moisture, and duration of curing period.

(h) Approved repair procedures.

(f) **Handling, storing, and transporting.**

(1) *Damage/Cracking.* Prevent cracking or damage of prefabricated elements and modules during handling, storing, and transporting.

(2) *Precast Element Sizes.* Finalize the size of precast elements with consideration for shipping restrictions, equipment availability, and site constraints. Show the final element sizes on the assembly plan.

(3) *Lifting Devices.* The design and detailing of the lifting devices are the responsibility of the contractor. Use lifting devices in a manner that does not cause damage, cracking, or torsional forces. Place the lifting devices in locations that are not visible once the prefabricated element is placed, or within recessed pockets that can be patched after installation.

(4) *Safety.* The Contractor is responsible for the safety and stability of prefabricated elements during all stages of handling, transportation, and construction.

(5) *Handling and Storing.* Store the precast units in a horizontal and upright position, supported at their designated bearing points. Follow Chapter 5 of the PCI Design Handbook for handling and erection bracing requirements.

Lift the precast elements so that the angle between the top surface of the precast element and the lifting line is not less than 60 degrees when measured from the top surface of the precast elements to the lifting line. If two cranes are used, then the lifting lines shall be vertical. Lift the modules at the designated points. The Contractor is responsible for handling stresses in the modules. Choose the locations of the lifting points so that the anticipated flexural tensile stress induced in the top of the structural concrete for the assumed support locations is not greater than the allowable stress.

Select smooth and well compacted storage areas to prevent damage due to differential settlement. Support precast elements during storage to prevent cracking or creep induced deformation (sagging). Check precast elements at least once per month to ensure that creep-induced deformation does not occur.

Protect the elements from freezing temperatures for 5 days after casting or until precast concrete attains design compressive strength. Do not remove thermal protection for any length of time before the units attain the specified compressive strength when the surrounding air temperature is below 20 °F (-6 °C).
Before transporting precast concrete members, provide written certification that the members were fabricated and visually inspected in conformance with 552 and meet minimum quality requirements.

(6) **Additional Reinforcement.** Provide additional reinforcement, as needed, to meet the requirements of handling, transporting, and erecting precast members.

(7) **Requirements Prior to Shipping.** Do not ship precast concrete members until concrete cylinder tests, manufactured from the same concrete and cured under the same conditions as the members, indicate that the concrete in each member has attained the minimum required design strength and is at least 7 days old.

(g) **Installation.**

1. Install members without damage to structural capacity, shape, or finish. Replace or repair damaged members.
2. Install members level and plumb without exceeding the following allowable tolerances:
   (a) Plan Location from Design Datum: Plus or Minus ½ in. (±13mm).
   (b) Top Elevation from Nominal Top Elevation: Plus or Minus 3/8 in. (±6mm).
   (c) Maximum Plumb Variation over the Lesser of Height of Structure or 100 ft (30m): 1 in. (25 mm).
   (d) Plumb in Any 10 ft (3 m) of Element Height: ¼ in. (6mm).
   (e) Maximum Jog in Alignment of Matching Edges: ¼ in. (6mm).

**552.21 Acceptance.**

See Table 552-9 for sampling, testing, and acceptance requirements and the quality characteristic category.

Reinforcing steel, anchor devices, elastomeric bearings, and material for concrete and grout will be evaluated under Subsection 106.03. Furnish production certifications for hydraulic cement, reinforcing steel, and any other cementitious materials.

Cast in place concrete mixture’s slump, air content, density, and temperature will be evaluated under Subsections 106.02 and 106.04.

Concrete compressive strength will be evaluated under Subsection 106.05. The lower specification limit is the minimum required compressive strength at 28 days (f'c) specified in the contract. Remove and replace concrete represented by cylinders having a compressive strength less than 90 percent of the minimum 28-day strength (f'c).

Concrete for precast concrete members will be evaluated under Subsections 106.02, 106.03, and 106.04.

Construction of all precast concrete members and concrete structures (including batching, placing, finishing, and curing concrete) will be evaluated under Subsections 106.02 and 106.04.

Reinforcing steel will be evaluated under Section 554.

Falsework and forms will be evaluated under Section 562.
Measurement

552.22 Measure the Section 552 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

When measuring structural concrete by the cubic yard (cubic meter), measure in the structure.

Do not measure reinforcing steel, concrete, anchorages, plates, nuts, and other material contained within or attached to the unit for precast concrete structural members.

Payment

552.23 The accepted quantities will be paid at the contract price per unit of measurement for the Section 552 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05
553 - Prestressed Concrete
Construction Requirements

553.03 Method Approval.

Add the following:

Precast prestressed concrete members must be manufactured by a plant with one of the following certifications:

- Precast / Prestressed Concrete Institute (PCI)
  - Bridge 4, Prestressed Deflected-Strand Bridge Beams (superstructure).
- National Precast Concrete Association (NPCA)
  - Precast and Prestressed

Submit a copy of the transmittal letter of the latest PCI/NPCA inspection with the shop drawings.

Perform all sampling, testing, and inspection necessary to ensure quality control of the component materials and the concrete. Sample and test for quality control and acceptance testing in accordance with the AASHTO or ASTM test methods prescribed in Section 552.

Maintain adequate records of all inspections and tests. Keep records that indicate the nature and number of observations made, the number and type of deficiencies found, the quantities approved and rejected, and the nature of any corrective action taken.
554 - Reinforcing Steel

Construction Requirements

554.03 Order Lists.

Delete the first paragraph and replace with the following:

Do not submit order lists or bending diagrams for approval.
625 - Turf Establishment

Delete Section 625 in its entirety and replace with the following:

Description

625.01 This work consists of soil preparation, watering, fertilizing, seeding, and mulching. Seeding and mulching methods are designated as dry or hydraulic.

Material

625.02 Conform to the following Subsections:

- Agricultural limestone
- Fertilizer
- Mulch
- Seed
- Tackifiers
- Water

Construction Requirements

625.03 General. Apply turf establishment to prepared ground or any disturbed area between July 1 and October 31. Apply turf establishment to the areas shown on the plans or worklists within 7 days after completion of ground disturbing activities.

Seeded areas damaged by construction activities shall be reseeded within 10 days of the damage. Do not seed during windy weather or when the ground is excessively wet, frozen, or snow covered.

Assure that all seed and mulch used in the work conforms to the weed free requirements of Section 713.

625.04 Preparing Seedbed. Ensure that the surface soil is in a roughened condition favorable for germination and growth.

625.05 Watering. Maintain moisture as follows:

Not Applicable

625.06 Fertilizing. Apply fertilizer by the following methods:

Not Applicable

625.07 Seeding. Apply Government-furnished seed at the rate directed by the CO by the following methods:

(a) Dry Method. Apply the seed with approved power driven seeders, drills, or other mechanical equipment. Hand-operated seeding methods are satisfactory on areas inaccessible to mechanical equipment; or
(b) **Hydraulic Method.** Use hydraulic-type equipment capable of providing a uniform application using water as the carrying agent. Add a tracer material consisting of either wood or grass cellulose fiber mulch to the water. Apply the tracer material at a rate of 400 pounds per acre (450 kilograms per hectare) to provide visible evidence of uniform application. Add the seed to the water slurry no more than 30 minutes before application. Seed by hand areas inaccessible to seeding equipment.

**625.08 Mulching.** Apply Mulch within 5 hours after seeding by the following methods.

(a) **Dry Method.** Apply mulch with a hand spreader or a spreader utilizing forced air at a rate of 2,000 pounds per acre so that 60% of the seeded area is covered by a thin layer of straw. Coverage shall be measured by visual means.

(b) **Hydraulic Method.** Apply mulch in a separate application from the seed using hydraulic-type equipment according to Subsection 625.07(b).

Apply wood fiber or grass straw cellulose fiber mulch at a rate recommended by manufacturer for pounds per acre.

Apply bonded fiber matrix hydraulic mulch at a minimum rate recommended by manufacturer for pounds per acre.

Apply so no hole in the matrix is greater than 0.04 inches. Apply so that no gaps exist between the matrix and the soil.

Apply mulch uniformly over the entire disturbed area. Mulch by hand areas inaccessible to mulching equipment.

**625.09 Protecting and Caring for Seeded Areas.** Protect and care for seeded areas including watering according to 625.05. Repair or apply supplemental applications of seed, mulch, fertilizer, and water according to 625.05 as many times as needed until turf is established or final acceptance.

**625.10 Acceptance.** Material for turf establishment will be evaluated under Subsections 106.02 and 106.03.

Placing of turf establishment will be evaluated under Subsections 106.02 and 106.04.

**Measurement**

**625.11** Measure the Section 625 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

When measuring turf establishment and supplemental applications by the acre (hectare), measure on the ground surface.

When measuring water by volume or mass, measure in the hauling vehicle or by metering.

**Payment**

**625.12** The accepted quantities will be paid at the contract price per unit of measurement for the Section 625 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.
Add the following to Subsection 701.02:

701.02 Masonry and Mortar Cement.

Keep mortar in the original manufacturer’s labeled containers until used. Protect as specified for Portland cement in 701.01. Do not use mortar after the expiration date shown on the container or 1 year from date of purchase, whichever date occurs first.

Store, mix, place and cure in accordance with the manufacturer’s instructions; submit a copy in advance of use to the CO.

Furnish mortar that is a chemical action concrete of the magnesium ammonium phosphate family and requires no curing under ambient temperatures of 36° - 100° F. Require recommendation by its manufacturer specifically for use in prestressed concrete bridge member keyways that are to be part of the finished wearing and running surface of the bridge, subjected to normal roadway contaminants and conditions promoting wear of normal bridge deck concrete.

Typical properties of the mortar, when tested neat without aggregate, are as follows, except when noted:

- Compressive strength (ASTM C 109 modified) of 6000 psi at 24 hours at 72° F or above, and when used below 50° F, 5000 psi.
- Modulus of elasticity (ASTM C 469) at 7 and 28 days of 4177 ksi and 4554 ksi.
- Freeze-thaw durability (ASTM C 666, Procedure A Modified) of a relative dynamic modulus greater than 80 percent after 300 cycles.
- Scaling resistance to deicing chemicals (ASTM C 672) after 5 and 25 cycles at a rating of 0, shall show no surface scaling; after 50 cycles at a rating of 1.5 shall show only slight surface scaling.
- Sulfate resistance (ASTM C 1012) length change after 52 weeks shall be no greater than 0.9 percent.
- Coefficient of thermal expansion (CRD-C 39-81) when run with 1 inch x 1 inch x 11 inch bars and neat mixes without aggregate, shall be within 10 percent of 7150 psi/degree Fahrenheit.
- Flexural strength (ASTM C 78 Modified) of 3 inch x 4 inch x 16 inch prisms shall be 3.8550 psi at 24 hours for the mortar only, and 670 psi with 3/8 inch pea gravel.

Submit independent tests for the mortar recommended for use from 50° - 100° F, when used to fill test specimens conforming to the Government’s bridge box beam test keyway, showing the following results:

Lateral (horizontal) shear between adjacent members: Range of 14 k/ft of keyway

Vertical shear between adjacent members: 16 k/ft of keyway

Direct tension between adjacent members: 6 k/ft of keyway.
Submit independent tests for the mortar recommended for use from 36° - 50° F, when used to fill test specimens conforming to the Government's bridge box beam test keyway, showing the following results:

- Lateral (horizontal) shear between adjacent members: Range of 2.4 k/ft of keyway
- Vertical shear between adjacent members: 6 k/ft of keyway
- Direct tension between adjacent members: 4 k/ft of keyway.

Two products that meet these requirements are BASF/Master Builders Technologies Regular Set-45 [for use below 50° F] and Set-45 Hot Weather Formula [for use from 50° - 100° F].

Use Set-45 Hot Weather Formula in air temperatures from 50° - 100° F. Use Regular Set-45 only in air temperatures below 50° F. When used in temperatures below 36° F, use approved weather precautions designed to prevent the mortar from freezing. Except when used in bridge deck keyways and blockouts, Regular Set-45 may be extended by the addition of 20 pounds of washed and clean 3/8 inch minus pea gravel per 50 pound bag when placed in thicknesses over 1.5 inches, or when approved by the CO.

Unless using one of the two products described above, submit products proposed for use to the CO for approval, and accompany them with the manufacturer’s submittals substantiating all requirements in this section, including (1) graphs or charts showing the time, temperature, humidity, and curing requirements to achieve mortar strengths equal to the adjacent concrete; and (2) complete recommendations for storage, mixing, application and curing procedures.
703 - Aggregate

703.03 Granular Backfill.

Add the following:

(c) **Coarse Granular Backfill.** Furnish backfill material that consists of clean, hard durable particles or fragments of crushed stone, crushed slag or crushed gravel meeting the gradation shown below.

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 inch</td>
<td>100</td>
</tr>
<tr>
<td>¾ inch</td>
<td>75 to 100</td>
</tr>
<tr>
<td>No. 4</td>
<td>0 to 60</td>
</tr>
<tr>
<td>No. 40</td>
<td>0 to 50</td>
</tr>
<tr>
<td>No. 200</td>
<td>0 to 5</td>
</tr>
</tbody>
</table>
704 - Soil

704.06 Unclassified Borrow. Delete 704.06(a) and replace with the following.

(a) Maximum particle size 12 in (300 mm)
Delete paragraph (a) of Subsection 725.04 and replace with the following:

725.04 Pozzolans.

(a) **Fly ash.** Conform to AASHTO M 295, Class C or Class F, except the loss on ignition must not exceed 3.0%.

1.5 max

*Add the following to Subsection 725.13 (b):*

725.13 Grout.

(b) **Nonshrink grout.**

When non-shrink grout is called for in bridge deck and prestressed multi-beam girder keyways, furnish non-shrink grout from an approved Qualified Products List for the state the bridge is located in. If specifically listed, use non-shrink grout appropriate for use in keyways.
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Appendix C: Laboratory Testing Results
Appendix D: Photo Log
Appendix E: Liquefaction Analysis Results
Appendix F: Benching and Slope Fill Requirements
Appendix G: Lateral Pile Analysis
1.0 EXECUTIVE SUMMARY

The following geotechnical engineering report has been prepared for Johnson Creek Bridge at Idaho Panhandle National Forest near Clark Fork, Idaho. The following geotechnical characteristics have been identified for careful consideration by the design, construction, and ownership teams:

- The driven piles rely primarily on skin friction. Dynamic load testing with signal matching analysis are recommended to confirm the nominal driving resistance. Alternatively, a wave equation analysis may be performed to determine a driving criterion.
- The site geology was variable with depth and horizontal extent. This is consistent with a layered alluvium with layer thicknesses estimated to vary between 1- and 6-feet thick. The layers consisted of silt, clay, sand and gravel. Predominately, the profile consisted of sand with varying degrees of silt and clay.

Liberty Geotech should be involved in the design development to help ensure interpretation of the following report recommendations.

2.0 PROPOSED CONSTRUCTION

The proposed project scope includes replacing a 24-foot existing bridge located southwest of Clark Fork, Idaho. A new bridge will replace the existing bridge. The span will be increased to 75 feet. Each abutment will be supported with a cast-in-place concrete pile cap founded on five, driven HP14x102 piles.

The bridge deck will be comprise of three pre-stressed concrete bulb-tee beams with mounted bridge rail. The total deck width is 16 foot 6 ½ inches. Each abutment slope is protected with three feet of Class 4 rip-rap on a 1.5H:1.0V (horizontal to vertical) slope.

The recommendations included in this report are based on the following plans and reports:

- Description of Work Bridge Replacement, dated March 30, 2021 and the authored was not noted,
- Johnson Creek Bridge 278-0.71 Replacement, 50% plan set by DJ&A Engineers, Planners, Surveyor and dated October 21, and
- Road Bridge Inspection Report provided by Great West Engineering, dated July 8, 2019.

3.0 GEOTECHNICAL EXPLORATION

Two exploratory borings were performed to a depth of 50-feet below the ground surface. The drilling was performed with a G2400 trailer-mounted drill rig and equipped with a rope and cathead hammer. Standard penetration test (SPT) soil sampling was performed at 2.5-foot intervals to ten feet below the ground surface. After ten feet, the sample interval was increased
to every five feet. The sampler diameter was a standard split spoon sampler. The exploratory boring logs are attached in Appendix B: *Subsurface Exploration Results*.

The contractor or client is recommended to notify Liberty Geotech if the soil conditions differ from those described in the following sections. Throughout this report, borings are abbreviated BH and are hyphenated with a numbering system that corresponds to Appendix A: *Exploration Site Plan* and Appendix B: *Subsurface Exploration Results*. The boring locations depicted in Appendix A were located using the accuracy of a cell phone location system. The locations were not surveyed, and the accuracy is expected to be within 10-feet of the depicted location. Also, the elevation of each boring was estimated using Google Earth™ mapping service with the GWS84 EGM96 geoid. The topographic data provided on *Bridge General Layout*, Sheet 6 of 18, indicates that the boring elevation used in this report is two feet higher than the elevation on the 50% design plan set.

3.1 Geology, Topography, and Current Site Condition

The *Geologic Map of the Clark Fork* (Burmester, 2004) was reviewed to determine the geologic deposit at the site. The geologic map indicated that the geologic unit was an alluvium and deltaic deposits of Clark Fork River. The geologic unit is described as soft clayey silt. In addition, the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS, 2019) was reviewed. The soil survey shows that the soil unit is the Bonner silt loam comprising slightly decomposed plant material from the ground surface to a depth of 1 inch, ashy silt loam from 1 inch to 6 inches, gravelly silt loam from 6 inches to 22 inches, gravelly loam from 22 inches to 30 inches and a very gravelly loamy sand from 30 inches to 60 inches. The soil survey describes the soil as volcanic ash and loess over outwash derived from granite and/or schist and/or gneiss.

A one-lane bridge over Johnson Creek is at the site. The timber bridge is 24-feet long and 13-feet wide and has gravel road on both approaches. The bridge is relatively level based on field observations. Pine trees and grasses are within the immediate vicinity.

3.2 Summary of Soil Encountered During Exploration

The soil encountered during the exploration is generally consistent with the geologic research. Generally, both borings encountered roadway fill overlying saturated alluvium. The depth of roadway fill is estimated to be six feet below the roadway surface. The alluvium consists of clayey sand and gravel and poorly-graded sand.

3.3 Estimated Groundwater and Bedrock Elevations

Groundwater was observed in both boreholes at a depth of 5-feet and 6-feet below the ground surface. The static groundwater appeared to be in equilibrium with Johnson Creek. United
States Geological Survey (USGS) creek monitoring records show that the creek has the highest discharge rate during the months of May and June.

4.0 LABORATORY TESTING RESULTS

Soil samples were obtained in the exploration locations at varying depths to characterize the existing fill and native alluvium. The laboratory testing was performed referencing the following American Society for Testing and Material Standard Methods (ASTM):

- ASTM D1140 *Amount of Material in Soils Finer than the No. 200 Sieve*,
- ASTM D1557 *Laboratory Compaction Characteristics of Soil Using Modified Effort*,
- ASTM D2216 *Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass*,
- ASTM D4318 *Liquid Limit, Plastic Limit, and Plasticity Index of Soils*, and
- ASTM D6913 *Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis*.

The results of the laboratory testing results are presented in Appendix C: *Laboratory Testing Results*.

4.1 Summary of Laboratory Testing Results

The following table summarizes the laboratory tests that were performed on the soil samples obtained from the site.

<table>
<thead>
<tr>
<th><strong>Table 4.1.A - Summary of Laboratory Testing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soil Unit</strong></td>
</tr>
<tr>
<td>Native Alluvium</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
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<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Roadway Fill</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 Construction Considerations for Pile Driving Operation

The following means and methods should be submitted to the engineer for review:

- Pile size and splice method, if necessary
- Pile driving hammer manufacturer, model and energy rating.
- Embankment fill placed for access.
- Pile handling sequence.
- Method of manufacturing (spiral or seam welded).

The piles should be dynamically loaded with a pile driving hammer large enough to mobilize the pile. The pile load test should be performed after pile setup, which is recommended to be at least one week.

5.1.1 Pile Driving Working Surface

The contractor should communicate the work sequence to install the piles for review. The effects of placing significant amounts of fill before or after driving piles could cause consolidation. Consolidation can cause down-drag on the piles.

Also, the contractor should carefully sequence the work to maximize the amount of set up time for the piles. The contractor may elect to drive the pile through the existing fill. However, the load testing (if required) should not be performed until the existing embankment fill has been removed.

5.1.2 Pile Driving Stresses and Hammer Selection

No drivability analysis has been performed. Drivability depends on the hammer that is selected by the contractor. The following layers are a summary of the anticipated soil resistance based on the SPT blow counts.

<table>
<thead>
<tr>
<th>Soil Layer</th>
<th>Average SPT Blow Count</th>
<th>Avg. Ending Depth (ft. bgs)</th>
<th>Estimated Driving Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layer 1 - Embankment Fill</td>
<td>20</td>
<td>5</td>
<td>High</td>
</tr>
<tr>
<td>Layer 2 - Alluvium</td>
<td>16</td>
<td>50 (boring termination)</td>
<td>Medium</td>
</tr>
</tbody>
</table>
Liberty Geotech can provide a driveability analysis at the contractor’s expense. Soil resistance depends on the pile type and hammer selected.

### 5.1.3 Construction Considerations for Natural Events

Rising creek elevations, stream velocity (scour potential), flash floods, or other naturally occurring events have not been assessed for this project. Additional design or review may be necessary. The following recommendations should be considered by the contractors and owners during construction:

1. A cofferdam may be necessary depending on the sequence of work, elevation of the abutment and pile driving operations.
2. No sediment control or runoff considerations have been analyzed for this report.
3. The energy effects of pile driving on fish have not been analyzed.
4. Stockpiles of soil products should be protected during wet weather. Soil products that have been compacted should be protected.

This report does not provide recommendations for erosion, runoff, trackout from trucks removing site stripping, or environmental considerations associated with operations.

### 5.2 Subgrade Preparation for the Abutment Structure

Conceptual or final plans have not been developed for the pile cap, abutment wall, or abutment grade beam. Clear and grub all vegetation, strip all topsoil and remove embankment fill to prepare the subgrades under the reinforced concrete abutment structure. The existing embankment fill appeared to be suitable for reuse as *Structural Fill* based on the subsurface exploration but likely requires screening of all material larger than 4-inches in diameter. The final abutment structure elevations should be provided to determine the suitability of the subgrade soil. Place a woven geotextile fabric on the native subgrade soil. Mirafi 500X or the approved equivalent is recommended.

The abutment slopes should be benched to prepare the subgrade prior to placing *Structural Fill* or other soil products. The benches should be created in accordance with Appendix F: *Benching and Slope Fill Construction*.

Liberty Geotech should be contacted once the subgrade areas have been exposed to review the subgrade conditions. Liberty Geotech is also available to provide material testing and observation during construction.

### 5.3 Earthwork Soil Products, Compaction, and Testing Frequency

Different soil products should be used for different applications. The following table presents recommendations for anticipated earthwork construction:
### Table 5.3.A - Soil product selection.

<table>
<thead>
<tr>
<th>Soil Product</th>
<th>Project Use</th>
<th>Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Fill</td>
<td>• Fill areas under abutment or foundation.</td>
<td>Soil classified as:</td>
</tr>
<tr>
<td></td>
<td>• Fill for the embankment</td>
<td>● GP-GM or GW-GM</td>
</tr>
<tr>
<td></td>
<td>• Backfill of abutment or foundations.</td>
<td>● GM</td>
</tr>
<tr>
<td></td>
<td>• Fill outside 3 feet of the back face of the abutment.</td>
<td>● SP-SM or SW-SM</td>
</tr>
<tr>
<td></td>
<td>• Soil restraining an abutment from sliding.</td>
<td>● SM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil should be free of organics, deleterious material, and all material larger than 3-inches in diameter.</td>
</tr>
<tr>
<td>Abutment Fill</td>
<td>• Fill within 3 feet of the back face of the abutment.</td>
<td>Free-draining soil classified as:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● GP or GW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● SP or SW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil should be free of organics, deleterious material, and all material larger than 2-inches in diameter.</td>
</tr>
<tr>
<td>Crushed Surfacing</td>
<td>• Fill immediately below the abutment approach slab (if required), sidewalks and exterior hardscapes.</td>
<td>Crushed rock should meet the percent passing the following sieve size:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 1-⅛&quot;: 99-100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 1&quot;: 80-100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● ⅝&quot;: 50-80%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● No. 4: 25-45%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● No. 40: 3-18%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● No. 200: 7.5% maximum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Sand equivalent: 40 minimum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Also, the material should be free of wood, roots, bark, and deleterious material. For roadway base the following requirements should also be met:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Fracture face: 75%, minimum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Los Angeles Wear, 500 rev:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35%, maximum.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Degradation factor: 15 minimum</td>
</tr>
<tr>
<td>Landscaping Fill</td>
<td>• Non-structural fill areas.</td>
<td>Soil meeting the following requirements:</td>
</tr>
<tr>
<td></td>
<td>• Vegetated areas.</td>
<td>● Silt or Clay: 35% to 70%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Sand: 20% to 60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Organic material: 2% to 20%</td>
</tr>
</tbody>
</table>
The following table provides compaction recommendations specific to ASTM D1557 *Laboratory Compaction Characteristics of Soil Using Modified Effort*. All fill products should be compacted in lifts of soil not exceeding 12 inches measured prior to compaction.

<table>
<thead>
<tr>
<th>Project Use</th>
<th>Recommended Compaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Fill areas under foundation or abutment.</td>
<td>95 percent of the maximum dry density of Modified Proctor.</td>
</tr>
<tr>
<td>● Fill to achieve subgrade under approach slab or driveway.</td>
<td></td>
</tr>
<tr>
<td>● Fill in front of the abutment or foundation.</td>
<td></td>
</tr>
<tr>
<td>● Exterior wall backfill.</td>
<td>92 percent of the maximum dry density of Modified Proctor.</td>
</tr>
<tr>
<td>● Utility trench backfills.</td>
<td></td>
</tr>
<tr>
<td>● Non-structural fill areas.</td>
<td>80 to 85 percent of the maximum dry density of Modified Proctor.</td>
</tr>
<tr>
<td>● Vegetated areas.</td>
<td></td>
</tr>
</tbody>
</table>

If over 30 percent of native or imported Structural Fill material is retained on the ¾” sieve, ASTM D1557 *Laboratory Compaction Characteristics of Soil Using Modified Effort* is not recommended to be used. In this case, a soil specific method specification can be developed. A nuclear density gauge can be used during earthwork operations to establish a moisture and compaction method that provides an acceptable maximum dry density. Method specification earthwork operations are recommended to have full-time soil testing to ensure adequate compaction.

The soil products are recommended to have passing compaction testing results at the following frequency to ensure the soil is uniformly meeting compaction requirements. Failing test results should be retested after additional compactive effort and, if necessary, water is added. At least 90% of the compaction testing results must achieve the required maximum dry density.

<table>
<thead>
<tr>
<th>Project Use</th>
<th>Testing Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Below concrete approach slabs for fill less than a vertical foot.</td>
<td>1,000 square feet and a minimum of 2 tests.</td>
</tr>
<tr>
<td>● Below, behind or in front of the abutment or foundation</td>
<td>3 tests per lift. Lift height should not be greater than 1 foot.</td>
</tr>
<tr>
<td>● Structural fill placements larger than one foot in</td>
<td>Every 50 cubic yards and a</td>
</tr>
</tbody>
</table>
The jurisdictional requirements should be conformed to if there is a conflict with the requirements of Table 5.3.C. Excavations deeper than four feet must have adequate trenching protection or sloped back in accordance with state and federal requirements in order to be compaction tested.

### 5.4 Driven Pile Foundation Design

#### 5.4.1 Design Approach

Pile design has been performed referencing *Design and Construction of Driven Pile Foundations*, published in September 2016 (Hannigan, 2016). The design method uses load and resistance factors design (LRFD). The fully factor force effects, $Q$, must be less than the factored resistance, as expressed in the generalized LRFD equation:

$$Q \leq \phi R_n$$

The total factored load is calculated as follows:

$$Q = \sum \eta_i \gamma_i Q_i$$

*Where* $Q_i$ *is the force effect, $\eta_i$ is the load modifier, and $\gamma_i$ is the load factor.*

There are four limit states including 13 load combinations. The limit states are Strength I, Strength IV, Extreme Event I, II, and Service I include geotechnical components and will be addressed within this report. There are 28 load effects. This report provides recommendations for the geotechnical force effects, including:

- Downdrag, DD
- Vertical Earth Pressure, EV
- Earth Surcharge, ES
- Force Effects Because of Settlement, SE
- Earthquake Loads, EQ

The material for driven piles can be steel, concrete or wood. Steel piles have been selected based on the longevity of the design, driving conditions, local practice, and anticipated loading.
conditions. Additional analysis can be performed for a different cross section up request. The pile section of HP14x102 has been analyzed in this report.

- 
- 
- 

5.4.2 Axial Pile Capacity

The axial pile capacity is composed of the skin friction and the tip resistance of the driven pile. The nominal resistance has been calculated using a combination of the Nordlund Method. The pile capacity is based on B-2 which has an average SPT blow count (N-values) that are lower than B-1. The N-values are corrected for hammer efficiency of 80 percent and were not corrected for overburden or atmospheric effects.

Many factors can affect the nominal resistance of the piles. These include:
● Pile plugging effects.
● Pile setup (pore water pressure dissipation or soil aging.)
● Variable soil conditions.
● Variability in empirical theories estimating pile capacity.

A pile on each abutment is recommended to be pile load tested to confirm the skin and end bearing nominal driving resistance of the pile. A dynamic load test with signal matching is recommended in accordance with bridge design manual section 10.7.3.8.3. Alternatively, the client may elect to perform a wave equation analysis to establish an end of driving (EOD) or beginning of redrive (BOR) driving criteria. This

A resistance factor for the field verification method, $\varphi_{dyn}$, is equal to 0.65 if two percent or more of the piles are dynamically load tested. Axial group effects are avoided if the pile spacing exceeds three times the diameter (width) of the pile.

5.4.3 Lateral Pile Capacity

The HP14x102 pile section was selected for the lateral analysis. The following graphs present the shear force necessary to develop a plastic moment in the pile section. Figure 1 illustrates the shear load required for a deflection of 1 inch in the strong pile axis direction (parallel to the direction of travel). The induced bending moment is much less plastic moment capacity for the cross section, 6,084 kip-in.

Figure 1: HP14x102 Lateral Soil-Pile Loading Interaction for the Strong Axis
The abutment geometry is assumed to be sloped at a 2.0H:1.0V (horizontal to vertical) angle immediately away from the driven pile. This geometry is assumed in both the weak and strong axis directions.

The lateral load analysis is based on a pile spacing of at least 45 inches between piles. Additional assumptions and analysis details from the computer software used, LPile 2019.11.09 by Ensoft, Inc. are provided in the Appendix G: Lateral Pile Load Analysis.

5.4.4 Pile Settlement and Group Settlement

The pile load settlement was evaluated in accordance with bridge design manual section 10.7.2.3. The piles will be driven into a medium dense to dense granular layer. A detailed analysis of the settlement is not required. Also, the group effects of settlement were not considered because of the pile spacing and the clayey sand that was encountered.

5.4.5 Corrosion Design

The structural design of steel piles should incorporate a loss because of corrosion of 0.003 inches per year for piles embedded in native soils. For a 50 year design life, the piles should be designed for a cross section loss of 0.15 inches.

A corrosion rate of 0.002 inches per year may be used for piles immersed in fresh water. Special corrosion design should be performed for piles that are exposed to the waterline where the corrosion rate may be as high as 0.013 inches per year (Morley, 1979).
5.5 Abutment or Foundation Design

The following design parameters are provided based on the project understanding described in Section 2.0. Liberty Geotech should be notified to revise or confirm the following recommendations if the building location, locations of the site improvements, or structural loads change.

- Allowable bearing capacity for foundations: 3,500 psf with 8 inches of compacted Crushed Surfacing. The Crushed Surfacing should extend 16 inches from all edges of the foundation.
- Footing embedment for abutment or foundations: 2 feet.
- Estimated total settlement for foundations on Structural Fill: Less than 1 inch.
- A sliding coefficient of friction between the shallow foundations and native soil of 0.35 may be used.

Differential settlement can occur when two different foundations exert different bearing pressures on the soil. The magnitude of the differential settlement depends on the foundation pressure difference. Or, differential settlement can occur due to differences in the soil resistance to the foundation pressure. Differential settlement is anticipated to be less than ½ inch.

5.6 Seismicity and Liquefaction

The site is designated a Site Class E. The following table presents seismicity coefficients referencing the 2015 National Earthquake Hazard Reduction Program (NEHRP) code. The acceleration parameters listed are based on derivation from AASHTO Seismic Coefficient Spectra as shown in Figure 2-9 of LRFD Seismic Analysis and Design of Bridges.

<table>
<thead>
<tr>
<th>Spectral Response Acceleration</th>
<th>0.2 Second MCE</th>
<th>0.2 Second MCE</th>
<th>1.0 Second MCE</th>
<th>1.0 Second MCE</th>
<th>Design Peak Ground Acceleration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectral Response</td>
<td>Sₙ</td>
<td>Sₜ</td>
<td>Sₜₜ</td>
<td>Sₜₜ</td>
<td>PGₘ</td>
</tr>
<tr>
<td>Acceleration</td>
<td>0.350</td>
<td>0.116</td>
<td>0.495</td>
<td>0.314</td>
<td>0.331</td>
</tr>
</tbody>
</table>

Latitude: 48.13700
Longitude: -116.22534
Simplified, performance-based liquefaction assessment and deterministic liquefaction analysis methods were performed, referencing methods developed by Idriss and Boulanger (2012). The factor of safety against liquefaction was greater than 1.0 for a return period of 475 years (probability of exceedance of 10 percent in 50 years). The settlement induced liquefaction was estimated to be zero. The analysis is provided in Appendix E: Liquefaction Analysis Results.

5.6.1 Downdrag Considerations

The risk of downdrag forces from liquefaction is low. The risk of downdrag forces from embankment fill should be considered if an embankment is proposed to be constructed after the piles are driven or if the piles are driven through an embankment that is still consolidating. Downdrag, DD, should be zero unless one of these two situations is proposed.

5.7 Lateral Earth Pressure Design

The following table provides equivalent fluid pressures recommended to be used by the structural engineer to design abutment walls. Walls with a back slope or slope in front of the wall (toe slope) should have the global stability analyzed.

<table>
<thead>
<tr>
<th>Equivalent Fluid Pressure Designation</th>
<th>Unit Weight (PCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Equivalent Fluid Pressure</td>
<td>35</td>
</tr>
<tr>
<td>At-rest Equivalent Fluid Pressure</td>
<td>55</td>
</tr>
<tr>
<td>Passive Equivalent Fluid Pressure</td>
<td>450</td>
</tr>
</tbody>
</table>

Walls that are fully restrained should be designed for at-rest equivalent fluid pressure. Flexible walls or concrete walls that may crack may be designed for the active equivalent fluid pressure. Soil that is preventing an abutment or foundation wall from sliding may be analyzed with the passive equivalent fluid pressure. Soil behind abutment and foundations should consist of free-draining Retaining Wall Fill.

6.0 DESIGN REVIEW AND CONSTRUCTION OBSERVATIONS

6.1 Geotechnical Consultant versus Geotechnical Inspector

Liberty Geotech has no liability for settlement associated with Structural Fill placement and compaction, pile driving, or other earthwork operations if the recommended observations within this report are not completed. Liberty Geotech’s liability is limited to the authorized proposal dated June 20, 2021.
6.2 Revisions and Transfer of Geotechnical Recommendations

Liberty Geotech should be notified to update recommendations if the proposed development changes or subsurface soil or groundwater conditions vary from those described in this report. This report cannot be relied upon by property owners adjacent to this property without confirmation of their specific site soil conditions. Also, the report recommendations cannot be transferred to other business entities or subsequent property owners without written authorization. No warranty or certification of construction is provided with this report. It is recommended that Liberty Geotech is retained to provide design review of the proposed construction and be the Geotechnical Consultant during construction in order to continue to be the Geotechnical Engineer of Record.

7.0 REFERENCES


APPENDIX A

Exploration Site Plan
APPENDIX B

Subsurface Exploration Logs
<table>
<thead>
<tr>
<th>MAJOR DIVISIONS</th>
<th>GRAPHIC SYMBOL</th>
<th>USCS GROUP SYMBOL</th>
<th>SOIL DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURSE GRAINED SOIL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAVEL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLEAN GRAVEL</td>
<td>GW</td>
<td>WELL-GRADED GRAVEL</td>
<td></td>
</tr>
<tr>
<td>GRAVEL WITH FINES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silty Gravel</td>
<td>GM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silty Gravel With Sand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GC</td>
<td>CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLEAN SAND</td>
<td>SW</td>
<td>WELL-GRADED SAND</td>
<td></td>
</tr>
<tr>
<td>SAND WITH FINES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silty Sand</td>
<td>SM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>CLAYEY SAND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FINE GRAINED SOIL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SILT AND CLAY LIQUID LIMIT LESS THAN 50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inelastic Silt</td>
<td>ML</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lean Clay</td>
<td>CL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic Silt</td>
<td>OL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SILT AND CLAY LIQUID LIMIT GREATER THAN 50%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Elastic Silt</td>
<td>MH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fat Clay</td>
<td>CH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic Clay</td>
<td>OH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peat</td>
<td>PT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ABBREVIATIONS
BGS - BELOW EXISTING GROUND SURFACE
N.E. - NOT ENCOUNTERED
<table>
<thead>
<tr>
<th>ELEVATION (FT)</th>
<th>DEPTH (FT)</th>
<th>SAMPLE INTERVAL</th>
<th>BLOW COUNTS (NVALUE)</th>
<th>% PASSING %O200</th>
<th>MOISTURE CONTENT (%)</th>
<th>LL, PL, PI</th>
<th>VOID RATIO (%)</th>
<th>ADDITIONAL NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROADWAY FILL - Poorly-Graded Gravel with Silt and Sand (GP-GM) Loose to Dense, Gray, Moist</td>
<td>2070</td>
<td>5</td>
<td>SS 6-12-21 (33)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Auto hammer used from 0 to 20'.</td>
</tr>
<tr>
<td>ALLUVIUM - Clayey Sand and Gravel (SC) Soft to Medium Stiff, Gray, Saturated</td>
<td>2065</td>
<td>10</td>
<td>SS 2-2-1 (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vegetable in sampler at 10'.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td>SS 1-3-3 (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Stiff drilling 11.5' to 13.5' possible gravel layer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
<td>SS 0-0-1 (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No recovery 15'.</td>
</tr>
<tr>
<td>ALLUVIUM - Clayey Sand (SC) Medium Dense to Dense, Gray, Saturated</td>
<td>2055</td>
<td>20</td>
<td>SS 1-13-14 (27)</td>
<td>11</td>
<td>17.3</td>
<td></td>
<td></td>
<td>Bentonite slurry added at 20'.</td>
</tr>
<tr>
<td>USCS DESCRIPTION</td>
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<td>SAMPLE INTERVAL</td>
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<td>MOISTURE CONTENT (%)</td>
<td>LL, PL, PI</td>
<td>VOID RATIO (%)</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------</td>
<td>------------</td>
<td>-----------------</td>
<td>----------------------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>-----------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td>2050</td>
<td>25</td>
<td>SS 10-14-14 (28)</td>
<td>6</td>
<td>10.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2045</td>
<td>30</td>
<td>SS 7-14-16 (30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2040</td>
<td>35</td>
<td>SS 7-21-21 (42)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2035</td>
<td>40</td>
<td>SS 16-6-6 (12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Client: DJ&A
Project: JOHNSON CREEK BRIDGE
Equipment: G-2400
Depth to Groundwater: 5'
Date Excavated: 7/21/21
Logged By: JH/JW

Project Number: 21201
Sheet: 2 of 6
<table>
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<th>USCS DESCRIPTION</th>
<th>ELEVATION (FT)</th>
<th>DEPTH (FT)</th>
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<th>SAMPLE INTERVAL</th>
<th>BLOW COUNTS (VALUE)</th>
<th>% PASSING NO. 200 SIEVE</th>
<th>MOISTURE CONTENT (%)</th>
<th>VOID RATIO (%)</th>
<th>ADDITIONAL NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2030</td>
<td>45</td>
<td>SS</td>
<td>6-8-8</td>
<td>(16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2025</td>
<td>50</td>
<td>SS</td>
<td>5-5-5</td>
<td>(10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Borehole terminated at 50-feet to auger refusal.

Borehole termination Depth 50'.

Client: DJ&A
Project: JOHNSON CREEK BRIDGE
Equipment: G-2400
Depth to Groundwater: 5'
Logged By: JH/JW

Date Excavated: 7/21/21
Project Number: 21201

Sheet: 3 of 6

JOHNSON CREEK BRIDGE REPLACEMENT
<table>
<thead>
<tr>
<th>ELEVATION (FT)</th>
<th>DEPTH (FT)</th>
<th>LITHOLOGY</th>
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<th>BLOW COUNTS (NVALUE)</th>
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<th>MOISTURE CONTENT (%)</th>
<th>LL, PL, PI</th>
<th>VOID RATIO (%)</th>
<th>ADDITIONAL NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROADWAY FILL - Poorly-Graded Gravel with Silt and Sand (GP-GM) Medium Dense, Gray, Moist</td>
<td>2070</td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>0.6</td>
<td></td>
<td></td>
<td>Auto hammer used from 0 to 20'. 1' layer of sand, clay, and gravel.</td>
</tr>
<tr>
<td></td>
<td>2065</td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>17.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALLUVIUM - Clayey Sand and Gravel (SC) Soft to Medium Stiff, Gray, Saturated</td>
<td>2055</td>
<td></td>
<td></td>
<td></td>
<td>66</td>
<td>42</td>
<td></td>
<td></td>
<td>Rounded gravel in cuttings at 15'.</td>
</tr>
<tr>
<td></td>
<td>2060</td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>14.3</td>
<td></td>
<td></td>
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<tr>
<td>ALLUVIUM - Clayey Sand (SC) Medium Dense to Dense, Gray, Saturated</td>
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<td></td>
<td></td>
<td></td>
<td>66</td>
<td>42</td>
<td></td>
<td></td>
<td>Smooth drilling 15' to 20'. No recovery 20'.</td>
</tr>
<tr>
<td></td>
<td>2060</td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>14.3</td>
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**Client:** DJ&A  
**Borehole Number:** 2  
**Project:** JOHNSON CREEK BRIDGE  
**Project Number:** 21201  
**Equipment:** G-2400  
**Date Excavated:** 7/21/21  
**Logged By:** JH/JW
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<th>ELEVATION (FT)</th>
<th>DEPTH (FT)</th>
<th>LITHOLOGY</th>
<th>SAMPLE INTERVAL</th>
<th>BLOW COUNTS (VALUE)</th>
<th>% PASSING</th>
<th>% PASSING</th>
<th>% PASSING</th>
<th>MOISTURE CONTENT (%)</th>
<th>LL, PL, PI</th>
<th>VOID RATIO (%)</th>
<th>ADDITIONAL NOTES</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Safety hammer used from 25 to 50'.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SS 12-13-10 (23)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Smooth drilling 26' to 35'.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SS 4-6-3 (9)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SS 5-5-3 (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>SS 2-3-4 (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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Client: DJ&A

Project: JOHNSON CREEK BRIDGE

Equipment: G-2400

Borehole Number: 2

Depth to Groundwater: 6.5'

Logged By: JH/JW

Project Number: 21201

Date Excavated: 7/21/21

Sheet: 5 of 6
<table>
<thead>
<tr>
<th>ELEVATION (FT)</th>
<th>DEPTH (FT)</th>
<th>SAMPLE INTERVAL</th>
<th>BLOW COUNTS (NVALUE)</th>
<th>% PASSING NO. 200 SIEVE</th>
<th>MOISTURE CONTENT (%)</th>
<th>Void Ratio (%)</th>
<th>ADDITIONAL NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>2030</td>
<td>45</td>
<td>SS 5-5-5</td>
<td>(15)</td>
<td></td>
<td></td>
<td></td>
<td>Vegetation in sampler at 45'.</td>
</tr>
<tr>
<td>2025</td>
<td>50</td>
<td>SS 5-6-6</td>
<td>(12)</td>
<td></td>
<td></td>
<td></td>
<td>Borehole termination Depth 50'.</td>
</tr>
</tbody>
</table>

Borehole terminated at 50-feet to auger refusal.
APPENDIX C
Laboratory Testing Results
ASTM D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

Project: Johnson Creek Bridge  
Test No.: 1  
Testing Date: 7/14/2021

Job No: 21201  
Sample Location: B-2 @ 2.5'  
Lab Technician: Alex Raney

Method Used: Method A  
Max Particle Size: 1"  
Total Sample Mass: 503 grams  
Minimum Sample Size: 3,000 grams  
Drying Method: Oven Dry

Summary:

<table>
<thead>
<tr>
<th>Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;</td>
<td>100%</td>
</tr>
<tr>
<td>2&quot;</td>
<td>100%</td>
</tr>
<tr>
<td>1.5&quot;</td>
<td>100%</td>
</tr>
<tr>
<td>1&quot;</td>
<td>100%</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>85%</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>69%</td>
</tr>
<tr>
<td>#4</td>
<td>52%</td>
</tr>
<tr>
<td>#10</td>
<td>36%</td>
</tr>
<tr>
<td>#20</td>
<td>26%</td>
</tr>
<tr>
<td>#40</td>
<td>21%</td>
</tr>
<tr>
<td>#60</td>
<td>18%</td>
</tr>
<tr>
<td>#100</td>
<td>16%</td>
</tr>
<tr>
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<td>14%</td>
</tr>
<tr>
<td>#200</td>
<td>13%</td>
</tr>
<tr>
<td>Pan</td>
<td>1%</td>
</tr>
</tbody>
</table>

Notes: The sample is undersized per ASTM 6913, Table 2. 
Excluded Material: None.

Additional Results
Soil Classification: Silty Gravel with Sand
Percent Moisture: 0.6%
%Gravel: 48%  
%Sand: 39%  
%Fines: 13%
ASTM D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

Project: Johnson Creek Bridge  Test No.: 3  Testing Date: 7/14/2021
Job No: 21201  Sample Location: B-2 @ 15.0' - 16.5'  Lab Technician: Alex Raney

Method Used: Method A  Max Particle Size: 3/4"
Total Sample Mass: 395 grams  Minimum Sample Size: 1,300 grams  Drying Method: Oven Dry

Summary:

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<tr>
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</thead>
<tbody>
<tr>
<td>3&quot;</td>
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<td>100%</td>
</tr>
<tr>
<td>1&quot;</td>
<td>100%</td>
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<tr>
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<tr>
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<td>17%</td>
</tr>
<tr>
<td>#200</td>
<td>14%</td>
</tr>
<tr>
<td>Pan</td>
<td>0%</td>
</tr>
</tbody>
</table>

Gradation Chart - Percent Passing

Notes:
The sample is undersized per ASTM 6913, Table 2.
Excluded Material: None.

Additional Results
Soil Classification: Silty Sand with Gravel
Percent Moisture: 14.3%

%Gravel: 41%  %Sand: 45%  %Fines: 14%
ASTM D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

Project: Johnson Creek Bridge
Test No.: 4
Job No: 21201
Sample Location: B-2 @ 7.5'
Testing Date: 7/14/2021
Lab Technician: Alex Raney

Method Used: Method A
Total Sample Mass: 345 grams
Drying Method: Oven Dry
Max Particle Size: 1"
Minimum Sample Size: 3,000 grams

Summary:

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<tr>
<th>Size</th>
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</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>#200</td>
<td>9%</td>
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<tr>
<td>Pan</td>
<td>0%</td>
</tr>
</tbody>
</table>

Notes:
The sample is undersized per ASTM 6913, Table 2.
Excluded Material: None.

Additional Results
Soil Classification: Well-Graded Gravel with Silt and Sand
Percent Moisture: 8.9%

<table>
<thead>
<tr>
<th>%Gravel</th>
<th>%Sand</th>
<th>%Fines</th>
</tr>
</thead>
<tbody>
<tr>
<td>56%</td>
<td>35%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Coefficient of Uniformity, Cu: 83.3
Coefficient of Curvature, Cc: 2.1
ASTM D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

Project: Johnson Creek Bridge  Test No.: 5  Testing Date: 7/28/2021
Job No: 21201  Sample Location: B-2 @ 10-11.5  Lab Technician: Alex Raney

Method Used: Method A  Max Particle Size: No. 10
Total Sample Mass: 326 grams  Minimum Sample Size: 50 grams
Drying Method: Oven Dry

Summary:

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<td>100%</td>
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<tr>
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<td>3/8&quot;</td>
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<tr>
<td>#200</td>
<td>66%</td>
</tr>
<tr>
<td>Pan</td>
<td>1%</td>
</tr>
</tbody>
</table>

Gradation Chart - Percent Passing

Notes:
Excluded Material: None.

Additional Results
Soil Classification: Sandy Silt
Percent Moisture: 42.0%
%Gravel: 2%  %Sand: 32%  %Fines: 66%
ASTM D6913 Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

Project: Johnson Creek Bridge
Job No: 21201
Sample Location: B-1 @ 20-21.5
Testing Date: 7/28/2021
Test No.: 6
Lab Technician: Alex Raney

Method Used: Method A
Max Particle Size: 3/8"
Total Sample Mass: 393 grams
Drying Method: Oven Dry
Minimum Sample Size: 165 grams

Summary:

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<th>Size (mm)</th>
<th>% Passing</th>
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</thead>
<tbody>
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<td>100%</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>100%</td>
</tr>
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<tr>
<td>#4</td>
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</tr>
<tr>
<td>#10</td>
<td>72%</td>
</tr>
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<td>60%</td>
</tr>
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<td>#40</td>
<td>48%</td>
</tr>
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<td>13%</td>
</tr>
<tr>
<td>#200</td>
<td>11%</td>
</tr>
<tr>
<td>Pan</td>
<td>0%</td>
</tr>
</tbody>
</table>

Gradation Chart - Percent Passing

Notes:
Excluded Material: None.

Additional Results
Soil Classification: Well-Graded Sand with Silt
Percent Moisture: 17.3%

<table>
<thead>
<tr>
<th>Material</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>%Gravel</td>
<td>11%</td>
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<tr>
<td>%Sand</td>
<td>79%</td>
</tr>
<tr>
<td>%Fines</td>
<td>11%</td>
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</tbody>
</table>

Coefficient of Uniformity, Cu: 10.6
Coefficient of Curvature, Cc: 1.3
Data Table

<table>
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<tr>
<th>Test No.</th>
<th>Location</th>
<th>Liquid Limit</th>
<th>Plastic Limit</th>
<th>Plastic Index</th>
<th>Soil Description and Color</th>
<th>% Rel. on No. 40</th>
<th>As Rec. Moisture %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B2 at 11.5 Ft</td>
<td>39</td>
<td>27</td>
<td>12</td>
<td>Grey-Brown Sandy Silt</td>
<td>13</td>
<td>42.0</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The plastic limit was determined by hand rolled method. The liquid limit was determined with a manual liquid limit device with a plastic grooving tool. The dry preparation method was used, unless otherwise noted.
Appendix E: Photo Log

PHOTO 1: BH-1 at 25'.

PHOTO 2: BH-1 at 30'.

PHOTO 3: Drilling on-progress.

PHOTO 4: BH-1 at 35'.
Appendix D: Photo Log

PHOTO 5: BH-1 at 40'.

PHOTO 6: BH-1 at 45'.

PHOTO 7: BH-2 at 5'.

PHOTO 8: BH-2 at 8'.
Appendix D: Photo Log

PHOTO 9: BH-2 at 10'.

PHOTO 10: BH-2 at 20'.

PHOTO 11: BH-2 at 25'.

PHOTO 12: BH-2 at 30'.
PHOTO 13: BH-2 at 35'.

PHOTO 14: BH-2 at 40'.

PHOTO 15: Vegetation on BH-2 at 45'.

PHOTO 16: BH-2 at 45'.
Summary of Inputs for Liquefaction Initiation:

- Hammer Efficiency = 80%
- Borehole Diameter = 8 in
- Rod Stickup Length = 3.25 ft

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>SPT N</th>
<th>γ (lb/ft^3)</th>
<th>Fines (%)</th>
<th>Thickness (ft)</th>
<th>K_{DR}</th>
<th>Soil Type</th>
<th>Susceptible?</th>
</tr>
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<tbody>
<tr>
<td>2.50</td>
<td>29</td>
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<td>13.0</td>
<td>2.50</td>
<td>0.9</td>
<td>GM</td>
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<tr>
<td>5.00</td>
<td>11</td>
<td>105.0</td>
<td>17.8</td>
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<td>SC</td>
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</tr>
<tr>
<td>7.50</td>
<td>18</td>
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<td>10.0</td>
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<td>1</td>
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<tr>
<td>10.00</td>
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<td>30.0</td>
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<td>SM</td>
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<td>15.00</td>
<td>9</td>
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<td>1</td>
<td>SM</td>
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<td>25.00</td>
<td>23</td>
<td>105.0</td>
<td>14.0</td>
<td>5.00</td>
<td>1</td>
<td>SW</td>
<td></td>
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<tr>
<td>30.00</td>
<td>9</td>
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<td>1</td>
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<td>35.00</td>
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<td>110.0</td>
<td>17.0</td>
<td>5.00</td>
<td>1</td>
<td>SW</td>
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</tr>
<tr>
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<td>7</td>
<td>110.0</td>
<td>17.0</td>
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<td>1</td>
<td>SW</td>
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<tr>
<td>45.00</td>
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<td>1</td>
<td>SW</td>
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<td>12</td>
<td>118.6</td>
<td>17.0</td>
<td>5.00</td>
<td>1</td>
<td>SW</td>
<td></td>
</tr>
</tbody>
</table>

Site Liquefaction Parameters:

- PGA = 0.0802
- $F_{PGA} = 2.500$
- $M_w = 5.10$
- $V_{s,12} = 587.0$ m/s
- Site Class = E

Mapped Reference Values:

- $CSR(\%)^{ref} = 7.72$
- $N_{req}^{ref} = 5.12$
- $\varepsilon_v,Cetin (\%)^{ref} = 0.00$
- $\varepsilon_v,IshiharaYoshimine (\%)^{ref} = 0.00$
- $T_R = 475$ yrs

Site Location:

- Hope, ID
- Latitude: 48.137
- Longitude: -116.225

Probability of Exceedance = 10% in 50 yrs
Liquefaction Initiation and Settlement Simplified Performance-based Results:

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>$(N_1)_{60,cs}$</th>
<th>$N_{req\ site}$</th>
<th>$CSR_{site}$</th>
<th>$FS_L$</th>
<th>$\sum S$ [in]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.50</td>
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<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>0.01</td>
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<tr>
<td>5.00</td>
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</tr>
</tbody>
</table>

Idriss and Boulanger (2008, 2012); Ishihara & Yoshimine (1992)
### Liquefaction Initiation and Settlement Deterministic Results:

**Table 1: Depth (ft) vs. CSR, FS_L, and Cumulative Settlement [in]**

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>$(N_1)_{60,cs}$</th>
<th>N Site (I&amp;B)</th>
<th>N Req (I&amp;B)</th>
<th>CSR Site (I&amp;B)</th>
<th>FS_L</th>
<th>S (I&amp;Y)</th>
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<td>2.50</td>
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<td>#N/A</td>
<td>#N/A</td>
<td>0.33</td>
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<td>189.5</td>
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<tr>
<td>10.00</td>
<td>63.86</td>
<td>26.12</td>
<td>0.2649</td>
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<td>0.33</td>
<td>#N/A</td>
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<tr>
<td>15.00</td>
<td>27.52</td>
<td>8.32</td>
<td>0.0885</td>
<td>3.9</td>
<td>0.33</td>
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<tr>
<td>20.00</td>
<td>59.24</td>
<td>31.50</td>
<td>0.4955</td>
<td>92727510</td>
<td>0.33</td>
<td>#N/A</td>
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<tr>
<td>25.00</td>
<td>54.53</td>
<td>6.33</td>
<td>0.0780</td>
<td>3146984.1</td>
<td>0.33</td>
<td>#N/A</td>
</tr>
<tr>
<td>30.00</td>
<td>22.73</td>
<td>12.74</td>
<td>0.1145</td>
<td>2.0</td>
<td>0.33</td>
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<tr>
<td>35.00</td>
<td>18.91</td>
<td>14.47</td>
<td>0.1259</td>
<td>1.5</td>
<td>0.33</td>
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<td>40.00</td>
<td>15.83</td>
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<td>0.1325</td>
<td>1.2</td>
<td>0.21</td>
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<tr>
<td>45.00</td>
<td>27.26</td>
<td>8.89</td>
<td>0.0916</td>
<td>3.7</td>
<td>0.00</td>
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<tr>
<td>50.00</td>
<td>20.98</td>
<td>11.26</td>
<td>0.1054</td>
<td>2.0</td>
<td>0.00</td>
<td>#N/A</td>
</tr>
</tbody>
</table>

*Note: The governing value is the lower value between the simplified performance-based and deterministic results*
APPENDIX F

BENCHING AND SLOPE FILL REQUIREMENTS
BENCHING AND CONSTRUCTION REQUIREMENTS
FOR SLOPE CONSTRUCTION

GENERAL NOTES
1. THE SLOPE BENCHING SHOULD BE CONSTRUCTED ON SUBGRADE SURFACE THAT HAVE BEEN PREPARED IN ACCORDANCE
   WITH THE SUBGRADE PREPARATION SECTION OF THE GEOTECHNICAL REPORT. THE SUBGRADE SHOULD BE APPROVED BY THE
   GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE FIRST LIFT.
2. ALL SLOPING SURFACES SHOULD BE BENCHED WITH A MAXIMUM VERTICAL CUT OF 3 FEET.
3. ALL LOOSE LIFT HEIGHTS SHOULD BE LIMITED TO 12 INCHES PRIOR TO COMPACTION
4. REFER TO THE GEOTECH REPORT FOR ADDITIONAL DESIGN RECOMMENDATIONS AND CONSTRUCTION RECOMMENDATIONS.
APPENDIX G
Lateral Pile Load Analysis
This copy of LPile is being used by:

Liberty Geotech
Spokane Valley

Serial Number of Security Device: 156025296

This copy of LPile is licensed for exclusive use by:

Liberty Geotech, Liberty Lake, W

Use of this program by any entity other than Liberty Geotech, Liberty Lake, W is a violation of the software license agreement.

Files Used for Analysis

Path to file locations:
\Shared drives\Jobs\2021\21201 Johnson Creek Bridge\3.0 Analysis\

Name of input data file:
Lpile.lp11d

Name of output report file:
Lpile.lp11o

Name of plot output file:
Lpile.lp11p

Name of runtime message file:
Lpile.lp11r

Date and Time of Analysis
Project Name:

Job Number:

Client:

Engineer:

Description:

Computational Options:
- Conventional Analysis

Engineering Units Used for Data Input and Computations:
- US Customary System Units (pounds, feet, inches)

Analysis Control Options:
- Maximum number of iterations allowed = 500
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 100.0000 in
- Number of pile increments = 100

Loading Type and Number of Cycles of Loading:
- Static loading specified

- Use of p-y modification factors for p-y curves not selected
- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Compute push-over analysis of pile for specified deflections
- Buckling analysis of pile not selected

Output Options:
- Output files use decimal points to denote decimal symbols.
- Values of pile-head deflection, bending moment, shear force, and
  soil reaction are printed for full length of pile.
- Printing Increment (nodal spacing of output points) = 1
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined = 1
Total length of pile = 50.000 ft
Depth of ground surface below top of pile = 0.0000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

<table>
<thead>
<tr>
<th>Point No.</th>
<th>Depth Below Pile Head (feet)</th>
<th>Pile Diameter (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.000</td>
<td>14.800</td>
</tr>
<tr>
<td>2</td>
<td>50.000</td>
<td>14.800</td>
</tr>
</tbody>
</table>

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a AISC weak axis steel pile
Length of section = 50.000000 ft
AISC Section Type = HP
AISC Section Name = HP14X102
Pile width = 14.000000 in
Shear capacity of section = 0.0000 lbs

Control Data for Pushover Analysis

Pile-head fixity condition = free and fixed head
Number of pushover points to generate = 10
Pushover point distribution method = arithmetic
Minimum pushover pile-head deflection = 0.0001000 in
Maximum pushover pile-head deflection = 1.000000 in

Ground Slope and Pile Batter Angles

Ground Slope Angle = 33.700 degrees = 0.588 radians
Pile Batter Angle = 0.000 degrees = 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 2 layers
Layer 1 is sand, p-y criteria by Reese et al., 1974

Distance from top of pile to top of layer = 0.0000 ft
Distance from top of pile to bottom of layer = 6.000000 ft
Effective unit weight at top of layer = 118.000000 pcf
Effective unit weight at bottom of layer = 118.000000 pcf
Friction angle at top of layer             = 38.000000 deg.
Friction angle at bottom of layer          = 38.000000 deg.
Subgrade k at top of layer                 = 0.0000 pci
Subgrade k at bottom of layer              = 0.0000 pci

NOTE: Default values for subgrade k will be computed for this layer.

Layer 2 is sand, p-y criteria by Reese et al., 1974

  Distance from top of pile to top of layer   = 6.000000 ft
  Distance from top of pile to bottom of layer = 50.000000 ft
  Effective unit weight at top of layer       = 120.000000 pcf
  Effective unit weight at bottom of layer    = 120.000000 pcf
  Friction angle at top of layer              = 34.000000 deg.
  Friction angle at bottom of layer           = 34.000000 deg.
  Subgrade k at top of layer                  = 0.0000 pci
  Subgrade k at bottom of layer               = 0.0000 pci

NOTE: Default values for subgrade k will be computed for this layer.

(Depth of the lowest soil layer extends 0.000 ft below the pile tip)

----------------------------------------------
Summary of Input Soil Properties
----------------------------------------------

<table>
<thead>
<tr>
<th>Layer Num.</th>
<th>Soil Type</th>
<th>Layer Depth</th>
<th>Effective Unit Wt.</th>
<th>Angle of Friction</th>
<th>kpy (p-y Curve Type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sand</td>
<td>0.00</td>
<td>118.0000</td>
<td>38.0000</td>
<td>default (Reese, et al.)</td>
</tr>
<tr>
<td>2</td>
<td>Sand</td>
<td>6.0000</td>
<td>118.0000</td>
<td>38.0000</td>
<td>default (Reese, et al.)</td>
</tr>
</tbody>
</table>

----------------------------------------------
Static Loading Type
----------------------------------------------

Static loading criteria were used when computing p-y curves for all analyses.

----------------------------------------------
Pile-head Loading and Pile-head Fixity Conditions
----------------------------------------------
Number of loads specified = 1

<table>
<thead>
<tr>
<th>Load No.</th>
<th>Load Type</th>
<th>Condition 1</th>
<th>Condition 2</th>
<th>Axial Thrust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compute Top y vs. Pile Length</td>
<td>1</td>
<td></td>
<td></td>
<td>Force, lbs</td>
</tr>
<tr>
<td>Run Analysis</td>
<td></td>
<td></td>
<td></td>
<td>30000.</td>
</tr>
</tbody>
</table>

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head

Values of top y vs. pile lengths can be computed only for load types with specified shear loading (Load Types 1, 2, and 3). Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Steel AISC Weak Axis:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Section</td>
<td>50.000000 ft</td>
</tr>
<tr>
<td>Flange Width</td>
<td>14.800000 in</td>
</tr>
<tr>
<td>Section Depth</td>
<td>14.000000 in</td>
</tr>
<tr>
<td>Flange Thickness</td>
<td>0.705000 in</td>
</tr>
<tr>
<td>Web Thickness</td>
<td>0.705000 in</td>
</tr>
<tr>
<td>Yield Stress of Pipe</td>
<td>36.000000 ksi</td>
</tr>
<tr>
<td>Elastic Modulus</td>
<td>29000. ksi</td>
</tr>
<tr>
<td>Cross-sectional Area</td>
<td>30.100000 sq. in.</td>
</tr>
<tr>
<td>Moment of Inertia</td>
<td>380.000000 in^4</td>
</tr>
<tr>
<td>Elastic Bending Stiffness</td>
<td>11020000. kip-in^2</td>
</tr>
<tr>
<td>Plastic Modulus, Z</td>
<td>78.800000in^3</td>
</tr>
<tr>
<td>Plastic Moment Capacity = Fy Z</td>
<td>2837. in-kip</td>
</tr>
</tbody>
</table>

Axial Structural Capacities:
Nom. Axial Structural Capacity = Fy As = 1083.600 kips
Nominal Axial Tensile Capacity = -1083.600 kips

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 1

<table>
<thead>
<tr>
<th>Number</th>
<th>Axial Thrust Force kips</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30.000</td>
</tr>
</tbody>
</table>

Definition of Run Messages:
Y = part of pipe section has yielded.

Axial Thrust Force = 30.000 kips

<table>
<thead>
<tr>
<th>Bending Curvature rad/in.</th>
<th>Bending Moment in-kip</th>
<th>Bending Stiffness kip-in²</th>
<th>Depth to N Axis in</th>
<th>Max Total Stress ksi</th>
<th>Run Msg</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00000371</td>
<td>40.9808041</td>
<td>1105686.</td>
<td>16.7837463</td>
<td>1.7960409</td>
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<tr>
<td>0.00000741</td>
<td>81.9616082</td>
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<td>2.5834733</td>
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<tr>
<td>Time</td>
<td>Distance</td>
<td>Temperature</td>
<td>Wind Speed</td>
<td>Weather</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------</td>
<td>-------------</td>
<td>------------</td>
<td>-----------</td>
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<tr>
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<td>7.6536148</td>
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<td>1105686.</td>
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<td>1105686.</td>
<td>7.6187293</td>
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<td></td>
</tr>
</tbody>
</table>

**JOHNSON CREEK BRIDGE REPLACEMENT**
Summary of Results for Nominal Moment Capacity for Section 1

<table>
<thead>
<tr>
<th>Load No.</th>
<th>Axial Thrust (kips)</th>
<th>Moment Capacity (in-kips)</th>
<th>Nominal Load (kips)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30.0000000000</td>
<td>2751.</td>
<td>30.000000000</td>
</tr>
</tbody>
</table>

Note that the values in the above table are not factored by a strength reduction factor for LRFD.

The value of the strength reduction factor depends on the provisions of the LRFD code being followed.

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to the LRFD structural design standard being followed.
Layer | Below Pile Head ft | Below Grnd Surf ft | Same Layer Type As Above Layer | Layer is Rock or Layer is Below Rock Layer | F0 Integral lbs | F1 Integral lbs
--- | --- | --- | --- | --- | --- | ---
1 | 0.00 | 0.00 | N.A. | No | 0.00 | 45019.
2 | 6.0000 | 6.8342 | Yes | No | 45019. | N.A.

Notes: The F0 integral of Layer n+1 equals the sum of the F0 and F1 integrals for Layer n. Layering correction equivalent depths are computed only for soil types with both shallow-depth and deep-depth expressions for peak lateral load transfer. These soil types are soft and stiff clays, non-liquefied sands, and cemented c-phi soil.

---

**Computed Values of Pile Loading and Deflection for Lateral Loading for Load Case Number 1**

Pile-head conditions are Displacement and Moment (Loading Type 4)
Displacement of pile head = 1.000000 inches
Moment at pile head = 1.0 in-lbs
Axial load at pile head = 30000.0 lbs

<table>
<thead>
<tr>
<th>Depth</th>
<th>Deflect. Res.</th>
<th>Soil Spr</th>
<th>Bending Distrib.</th>
<th>Shear</th>
<th>Slope</th>
<th>Total Stress</th>
<th>Bending Stiffness</th>
<th>Soil p</th>
</tr>
</thead>
<tbody>
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* This analysis computed pile response using nonlinear moment-curvature relationships. Values of total stress due to combined axial and bending stresses are computed only for elastic sections only and do not equal the actual stresses in concrete and steel. Stresses in concrete and steel may be interpolated from the output for nonlinear bending properties relative to the magnitude of bending moment developed in the pile.

Output Summary for Load Case No. 1:

Pile-head deflection = 1.00000000 inches
Computed slope at pile head = -0.01102818 radians
Maximum bending moment = 1035222. inch-lbs
Maximum shear force = 18012. lbs
Depth of maximum bending moment = 7.50000000 feet below pile head
Depth of maximum shear force = 0.000000 feet below pile head
Number of iterations = 9
Number of zero deflection points = 5

--------------------------------------------------------------------------------
Summary of Pile-head Responses for Conventional Analyses
--------------------------------------------------------------------------------

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

<table>
<thead>
<tr>
<th>Load</th>
<th>Load 1</th>
<th>Load 2</th>
<th>Axial</th>
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<th>Pile-head Rotation</th>
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<td>1</td>
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<td>M, in-lb</td>
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Maximum pile-head deflection = 1.0000000000 inches
Maximum pile-head rotation = -0.0110281813 radians = -0.631868 deg.

--------------------------------------------------------------------------------
Results of Push-over Analysis
--------------------------------------------------------------------------------

Computation Methods Used for Push-over Analyses:
- Computations use both pinned-head and fixed-head conditions
- Computations use an arithmetic distribution of pile-head deflections

Number of push-over steps = 10
Minimum pushover deflection = 0.0001000 in
Maximum pushover deflection = 1.000000 in
Axial thrust force for pushover analysis = 30000. lbs
## Pushover Analysis

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<tr>
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<th>Condition</th>
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<th>Shear in Pile</th>
<th>Max Moment in Pile</th>
<th>Max Moment in Pile</th>
<th>Depth to in Pile</th>
<th>Depth to Pile</th>
<th>Depth to Max Moment in Pile</th>
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The analysis ended normally.
**ATTACHMENT 4**

**BID SCHEDULE**

**CONTRACT NO. 22-234-041007**

**JOHNSON CREEK BRIDGE INSTALLATION**

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**TOTAL**

$ -

Equipment rates are fully operated. Transport miles will be from the location designated in the project description or actual miles whichever is less. Transport rates are paid one way. Other hour and mile rates are for on project only and do not include miles and hours to get to the site.

* Cat 312, Komatsu 120, Kolbelco, **Cat 320, Any other 200n series machine, Kolbelco Blade Runner, *** Cat 330, any other 300 series machine or equivalent.

Excavator must have a bucket with operating thumb.

Any additional work required under this contract but not scheduled will be performed at the rates shown herein. An approved and signed request for service will be required prior to the starting of additional work.

In the case of math errors, the **PRICE PER UNIT** will be correctly extended and the corrected **TOTAL EXTENDED AMOUNT** will be the basis for award.

**NOTE:** The quantities of work to be done under this contract as set forth in Schedule A have been estimated and may not be accurate in any or all particulars. They are only for the purpose of comparing on a uniform basis the quotes offered for the work under this contract. The Contractor understands and agrees that these are estimates only and that the State shall not be responsible for any claim of profits, loss of profit or for damages because no work is ordered under certain items or because of a difference between the estimated quantities of work to be done and the actual quantities ordered by the State.

---

**Company Name**

**Contractor's Name**

**Mailing Address**

**Contractors Signature**

**Title**

**Contractor's Email**

**Contractor's Phone**

**Taxpayer ID #**

**Public Works License #**

**Signed by**

Please Print Name
ATTACHMENT 5

IDL WITB 22-234-041007
JOHNSON CREEK BRIDGE REPLACEMENT
BIDDER QUESTION INSTRUCTIONS

PLEASE DO NOT IDENTIFY YOUR NAME OR YOUR COMPANY’S NAME OR PRODUCT NAMES OF INTELLECTUAL PROPERTY IN YOUR QUESTIONS.

ADD ROWS BY HITTING THE TAB KEY WHILE WITHIN THE TABLE AND WITHIN THE FINAL ROW.

The following instructions must be followed when submitting questions using the question format on the following page.

1. **DO NOT CHANGE THE FORMAT OR FONT.** Do not bold your questions or change the color of the font.

2. Enter the solicitation section number that the question is for in the “Solicitation Section” field (column 2). If the question is a general question not related to a specific section, enter “General” in column 2. If the question is in regards to an IDL Contract Term or Condition, state the clause number in column 2. If the question is in regard to an attachment, enter the attachment identifier in column 2, and the attachment page number in column 3.

3. **Do not enter text in the “Response” field (column 5).** This is for the IDL’s responses only.

4. Once completed, this form is to be e-mailed per the instructions in the solicitation. The e-mail subject line is to state the solicitation number followed by “Questions.”
<table>
<thead>
<tr>
<th>Solicitation Section</th>
<th>Page #</th>
<th>Question</th>
<th>Response <em>For IDL use only</em></th>
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Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552(a), as amended). This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, and 2 C.F.R. §§ 180.300, 180.355, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880. Copies of the regulations may be obtained by contacting the Department of Agriculture agency offering the proposed covered transaction.

According to the Paperwork Reduction Act of 1995 an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0505-0027. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The provisions of appropriate criminal and civil fraud privacy, and other statutes may be applicable to the information provided.

(Read Instructions On Page Two Before Completing Certification)

A. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;

B. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

<table>
<thead>
<tr>
<th>ORGANIZATION NAME</th>
<th>PR/AWARD NUMBER OR PROJECT NAME</th>
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<tr>
<td>NAME(S) AND TITLE(S) OF AUTHORIZED REPRESENTATIVE(S)</td>
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<tr>
<td>SIGNATURE(S)</td>
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The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Assistant Secretary for Civil Rights, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, S.W., Stop 9410, Washington, DC 20250-9410, or call toll-free at (866) 632-9992 (English) or (800) 877-8339 (TDD) or (866) 377-8642 (English Federal-relay) or (800) 845-6136 (Spanish Federal-relay). USDA is an equal opportunity provider and employer.
Instructions for Certification

(1) By signing and submitting this form, the prospective lower tier participant is providing the certification set out on page 1 in accordance with these instructions.

(2) The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

(3) The prospective lower tier participant shall provide immediate written notice to the person(s) to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(4) The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 C.F.R. Parts 180 and 417. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

(5) The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

(6) The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

(7) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.

(8) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(9) Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
ATTACHMENT 7

IDAHO PANHANDLE NATIONAL FORESTS

Sandpoint, Bonners Ferry, and Priest Lake Ranger Districts

Order No. F-11-002

Occupancy and Use Restrictions

Pursuant to 36 CFR 261.50(a), the following acts are prohibited in the area displayed on the attached map that covers National Forest lands on the Kaniksu National Forest north of the Clark Fork River, Lake Pend Oreille, and the Pend Oreille River. This order applies to all National Forest system lands and facilities located and/or permitted on lands described above.

1. It is prohibited to possess or store any food\(^1\) (human food or animal food, including pet food) or refuse EXCEPTION as specified in this order from April 1 to December 1, annually (36 CFR 261.58(cc)).

2. It is prohibited to possess, store, or transport any bird, fish, or other animal, or parts thereof EXCEPTION as specified in the order from April 1 to December 1, annually (36 CFR 261.58(s)).

UNDER THIS ORDER IT IS REQUIRED THAT:

In Areas Mapped as Front Country:

1. Human, pet, and livestock food (except baled or cubed hay without additives), garbage, and all other attractants (cookware/utensils, personal hygiene products) shall be stored within buildings (buildings that are secure from wildlife entry), hard-sided vehicles, or within approved bear-resistant storage containers (coolers are NOT bear-resistant), or other acceptably stored methods at all times (night and day) unless being prepared for eating, being consumed (eaten/drank), being transported, or being prepared for acceptable storage. See Attachment ‘A’ for definitions.

2. Attractants (e.g. food leftovers, bacon grease, animal entrails) shall not be buried, discarded, or burned in an open campfire in areas defined as Front Country on the attached map. They shall be disposed of in bear-resistant garbage containers, stored in bear-resistant storage containers or other methods of acceptably storing bear attractants as described in Attachment A until such time as they can be packed out of the closure area or disposed of in bear-resistant garbage containers.

In Areas Mapped as Back Country:

1. Attractants (e.g. food, food leftovers, bacon grease) shall not be buried, discarded, or burned in an open campfire in areas defined as Back Country on the attached map. This material along with all solid waste (non-biodegradable) will be packed out of the area. See Attachment ‘A’ for definitions.

2. Animal and fish entrails may be left in place in areas defined as Back Country on the attached map but must meet the requirements of #4 under In Areas Mapped as either Front or Back Country for distance from camping and sleeping areas and National Forest system trails.

\(^1\) All italicized words in this order are defined in Attachment A.
3. Dispose of human waste and gray water in a pit or hole well away from campsites. Cover with sod or topsoil.

4. *Food* shall be *acceptably stored* when not being consumed or prepared for consumption.

**In Areas Mapped as either Front or Back Country:**

1. Bird feeders (liquid, suet or seed) are not allowed in the area shown on the map.
2. No person shall provide *food* of any kind to any wildlife species.
3. *Camping* or *sleeping areas* shall be established at least ½ mile from a known *animal carcass* that is on the ground or where an animal has been field dressed, skinned, or gutted, or at least 100 yards from an *acceptably stored animal carcass*.
4. Any harvested *animal carcass* shall be *acceptably stored* when located 100 yards to ½ mile of a *camping* or *sleeping area* or within 200 yards of a National Forest system trail (unless the carcass is being, transported, being prepared for eating, or being prepared for acceptable storage).
5. The responsible party shall report the death and location of livestock to a Forest Service official within 24 hours of discovery. In remote areas, where it is not possible to meet the 24 hour timeframe, the report should be made within 48 hours.

Pursuant to 36 CFR 261.50(e), the following persons are exempt from this Order:

1. Persons with a permit specifically authorizing the otherwise prohibited act or omission.
2. Any Federal, State or Local Law Enforcement Officer or member of an organized rescue or fire fighting force in the performance of an official duty.

These prohibitions are in addition to the general prohibitions in 36 CFR Part 261, Subpart A and become effective immediately and will remain in effect until rescinded or revoked.

Executed in Coeur d'Alene, Idaho, this 29th day of September, 2011.

MAGGIE PITTMAN
Acting Forest Supervisor
Idaho Panhandle National Forests

Violation of these prohibitions is punishable by a fine of not more than $5,000 for an individual or $10,000 for an organization, imprisonment for not more than 6 months, or both. (16 U.S.C. 551 and 18 U.S.C. 3559 and 3571).
Acceptably stored:

- Stored in a closed vehicle (hard-sided camper, vehicle trunk, or cab or trailer cab) where the storage compartment is constructed of solid, non-pliable material that, when secured, will have no openings, hinges, lids, or coverings that would allow a bear to gain entry without breaking, bending, tearing, biting, or pulling with its claws (any windows in the vehicle must be closed); or
- Stored within a hard-sided residence, building, or storage container subject to the terms and conditions of a special-use authorization or operating plan; or
- Food and animal carcasses shall be suspended at least 10 feet clear of the ground at all points and 4 feet horizontally from any supporting tree or pole (required to be 100 yards from camping or sleeping area); or
- Stored in commercial bear-resistant container or electric fence certified through the Interagency Grizzly Bear Committee Certified Bear-Resistant Equipment and Electric Fences for Public Lands (http://www.igbconline.org/html/container.html); or
- Animal carcasses are not considered acceptably stored when within 100 yards of a camping or sleeping area or within 200 yards of a National Forest System Trail.
- Animal carcasses more that ½ mile from a camping area and more than 200 yards from a National Forest System Trail may be left on the ground.

Animal carcass: The dead body or parts thereof, of any harvested mammal, bird, or fish, including the head or skull plate with antlers or horns and hide or cape of big game animals or any dead livestock that may be found in the area encompassed by this order. Packaged or prepared animal carcass products transported into the restricted area for consumption, game birds, small mammals, or fish harvested for consumption in the restricted area are considered food.

Attractant: Food (as defined below), animal carcasses (as defined above), garbage, recycling, coolers (even when empty), cookware/utensils, grills, bait (such as used in legal fishing and trapping) and other human, livestock, or pet items that emit an odor such as personal hygiene products (e.g. soap, toothpaste, lotion, bug spray). Bird feeders (liquid, suet or seed) are defined as an attractant. This definition does NOT include water, baled hay, or hay cubes without additives.

Bear-resistant storage or garbage container: A securable container constructed of a solid material capable of withstanding 200 foot-pounds of energy applied by direct impact. The container, when secured and under stress, will not have any openings greater than ¼ inch that would allow a bear to gain entry by biting or pulling with its claws. A bear-resistant container developed commercially must be approved by the USDA, Forest Service, Missoula Technology and Development Center (MTDC). For commercial operations, the MTDC has an impact testing machine available to evaluate containers for strength. A list of bear resistant container distributors that have been certified by the IGBC is available in their Certified Bear Resistant Products Report located at:

Camping/sleeping area: National Forest System Lands temporarily used for the purpose of overnight occupancy without a permanently fixed structure or lands temporarily occupied by unattended camping equipment.
**Food:** Any substance, which includes human food or drink (canned, solid, or liquid – even in sealed containers), livestock feed (except baled hay or cubed hay without additives) and pet food.

**Front Country:** This area includes the following developed recreation sites: Stagger Inn, the west side of Priest Lake and Upper Priest Lake (Priest Lake Ranger District); Copper Creek CG; Robinson Lake CG and Boat Dock; Sinclair Lake Fishing Dock; Brush Lake CG and Boat Dock; Snyder Guard Station; Meadow Creek CG; Smith Lake CG and Boat Dock; Perkins Lake; and Stampede Lake (all on the Bonners Ferry Ranger District); and all acreage that makes up the Sam Owen area on the Sandpoint Ranger District.
Introduction

IGBC-Certified Bear-Resistant Products provide a way to meet requirements to secure food, garbage, and other attractants on public and private lands. These requirements apply to most National Forests, National Parks, and federal land managed by the Bureau of Land Management within grizzly bear range. They may also apply on some state lands. In addition, some municipalities, private land owners, and homeowners associations require use of IGBC-Certified Products.

The IGBC maintains two lists of Certified Products. List A includes products that the IGBC has confirmed are available for purchase. Links provided with these products connect to the manufacturer’s homepage or other websites where the product can be purchased. List B includes products that have been certified, but may no longer be available for purchase.

Products on both lists have met IGBC standards as grizzly bear-resistant but it is not a guarantee that a grizzly bear cannot gain entry into these products. Nor does the IGBC guarantee that small amounts of the contents of the containers won’t be able to leak or spill out.

These lists of commercial products and suppliers is for information only and does not imply any endorsement of one product or source over another. Products are generally arranged in alphabetical order.

This official list of certified products will be updated as needed. Please note that some products may be marketed or sold under different brand names.

Methods for Complying with Food Storage Regulations on Public Lands

In order to keep food and other attractants unavailable to bears, many public lands within grizzly bear habitat have regulations pertaining to proper storage. Use of IGBC-Certified Bear-Resistant Products is one method of complying with these food storage regulations. Other methods of food storage order compliance may be available; for instance electric fencing is authorized in some areas and under certain conditions. Food storage requirements vary by location. So regardless of your public land location or destination, we recommend contacting local land management offices for more details on the use of electric fences or other products and methods that may be used to comply with applicable food storage regulations.

More information about using IGBC-Certified Products to meet food storage regulations on public lands in the Lower 48 States is available here.
LIST A – IGBC-Certified Bear-Resistant Products Confirmed As Available for Purchase

- BACK PACKING & SMALL STORAGE CONTAINERS
- PANNIERS and BOXES
- COOLERS
- GARBAGE CONTAINERS, FOOD STORAGE LOCKERS & RECYCLING UNITS
- ELECTRIC FENCES

LIST B - IGBC Certified Bear-Resistant Products Not Confirmed as Available for Purchase

- LIST B - BACK PACKING & SMALL STORAGE CONTAINERS
- PANNIERS and BOXES
- COOLERS
- GARBAGE CONTAINERS, FOOD STORAGE LOCKERS & RECYCLING UNITS
LIST A - IGBC-CERTIFIED BEAR-RESISTANT PRODUCTS
CONFIRMED AS AVAILABLE FOR PURCHASE

BACK PACKING & SMALL STORAGE CONTAINERS

BearVault
BV450 - IGBC Certification No. 5339
BV500 - IGBC Certification No. 5340
866-301-3442  http://www.bearvault.com

Grub Can
GL500 Backpacking canister - IGBC Certification No. 5277
www.grubcan.com

Missoula Technical Development Center
Modifications to 50 Caliber Ammo Box
Modifications to Military Medical Box, See Publ. # 9623-2325 MTDC.

UDAP Industries Inc.
“No Fed Bear” Canister- IGBC Certification No. 5345
866 BEAR 911  www.pepperpower.com

Ursack (Bear Saga, LLC)
Food Storage Bag – Model: Ursack Major (Previously the S29 AllWhite) – IGBC Certification No. 3738
Food Storage Bag – Model: AllMitey – IGBC Certification No. 5135 (approved 4-24-17)
440-570-1503  www.ursack.com

PANNIERS and BOXES

Bear Aware/Tee-N-Jay Mfg.
28” Large Dry Box - Model #281816DRY - IGBC Certification No. 5332
818-504-3515

Bear Country Containers - Jerry Kawasaki
Model Camp Cupboard- IGBC Certification No. 4892C (Approved 3/26/15)
406-763-4364  http://www.bearcountrycontainers.com

Industrial Design & Equipment, Inc.   DBA   Indeco Inc.
Aluminum Storage Pannier  Model 3.03 – IGBC Certification No. 3767
360-393-9750  http://www.indeco-usa.com
Mad Cow Metal Works
Aluminum dry boxes ranging in size from 12”x8”x7” to 40”x16”x16”, IGBC Cert. No. 3353
Aluminum horse pannier 24”x13”x18” – IGBC Certification No. 3355
406-581-9115  http://madcowmetalworks.com

Outfitters Supply, Inc.
Trail Max Pack Panniers Item# WPA500 – IGBC Cert. No. 5279 (Approved 04/30/10)
406-892-4234  http://www.outfitterssupply.com

Recretec Manufacturing, Inc.
Aluminum Dry Boxes ranging in size from 8”x10”x16” to 18”x18”x44”: IGBC Cert. No. 3850
541-757-7567  http://www.recretec.com

Tee-N-Jay Mfg. (see Bear Aware)

Zarges Inc.
Aluminum Case, Model Zarges K470 # 40810 - IGBC Certification No. 5001
Aluminum Case, Model Zarges K470 # 40568 - IGBC Certification No. 5398
Aluminum Case, Model Zarges K470 # 40678 - IGBC Certification No. 5021
704-357-6285  http://www.ZargesUSA.com

COOLERS

** COOLERS REQUIRE USE OF BOLTS AND NUTS OR
APPROPRIATELY-SIZED PADLOCKS TO BE BEAR-RESISTANT **

BIG FRIG
COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT
Badlands 45 QT Cooler, Model BFBB45 - IGBC Certification No. 5401 (Approved 5/12/21)
605-540-0911  http://www.bigfrig.com

Canyon Coolers
COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT
Outfitter 35 Cooler - IGBC Certification No. 5022 (Approved 5/17/16)
Outfitter 55 Cooler - IGBC Certification No. 5119 (Approved 11/2/16)
Outfitter 75 Cooler - IGBC Certification No. 5120 (Approved 11/2/16)
Prospector 103 Cooler - IGBC Certification No. 5094 (Approved 3/31/16)
Outfitter 125 Cooler – IGBC Certification No. 3769
PRO65 Cooler – IGBC Certification No. 5304 (Approved 7/20/20)
928-774-3486  http://www.canyoncoolers.com
Discover Home Products

**Coolers require use of bolts or padlocks to be bear-resistant**

Camp-Zero Cooler, Model CZ-10L - IGBC Certification No. 5170 (Approved 10-16-17)
Camp-Zero Cooler, Model CZ16L - IGBC Certification No. 5262 (Approved 8-30-19)
Camp-Zero Cooler, Model CZ-20L - IGBC Certification No. 5143 (Approved 5-1-17)
Camp-Zero Cooler, Model CZ-40L - IGBC Certification No. 5163 (Approved 8-24-17)
Camp-Zero Cooler, Model CZ-80L - IGBC Certification No. 5144 (Approved 5-1-17)
Camp-Zero Cooler, Model CZ-60L - IGBC Certification No. 5146 (Approved 5-8-17)
Camp-Zero Cooler, Model CZ-110L - IGBC Certification No. 5145 (Approved 5-1-17)

(636) 600-1895  www.camp-zero.com

Elkhart Products

**Coolers require use of bolts or padlocks to be bear-resistant**

Kong Cooler, Model 25 QT - IGBC Certification No. 5147 (Approved 5-12-17)
Kong Cooler, Model 50 QT - IGBC Certification No. 5148 (Approved 5-12-17)
Kong Cooler, Model 70 QT - IGBC Certification No. 5149 (Approved 5-12-17)
Kong Cooler, Model 110 QT - IGBC Certification No. 5225 (Approved 5-4-18)

(360) 223-0439  www.epi-roto.com

Iowa Rotocast Plastics

**Coolers require use of bolts or padlocks to be bear-resistant**

Bud Light 40QT Cooler, Model 3001069 – IGBC Certification No. 5404 (Approved 5/13/21)

(800) 553-0050  www.irpinc.com

Lifetime Products

**Coolers require use of bolts or padlocks to be bear-resistant**

Lifetime 48QT Cooler, Model 91047 – IGBC Certification No. 5399 (Approved 5/12/21)

(801) 776-1532  www.lifetime.com

Permafrost Coolers LLC

**Coolers require use of bolts or padlocks to be bear-resistant**

Permafrost 20-qt cooler – IGBC Certification No. 5264 (Approved 9/20/19)
Permafrost 45-qt cooler – IGBC Certification No. 5259 (Approved 7/22/19)
Permafrost 75-qt cooler – IGBC Certification No. 5260 (Approved 7/22/19)

(406) 209-5156  www.permafrostcoolers.com

RovR Products

**Coolers require use of bolts or padlocks to be bear-resistant**

RollR 80, 80 QT Cooler - IGBC Certification No. 5238 (Approved 6/1/17)
RollR 60, 60 QT Cooler - IGBC Certification No. 5255 (Approved 5/24/19)

303-589-4409  www.RovRProducts.com

Smak Plastics Inc.

**Coolers require use of bolts or padlocks to be bear-resistant**

Fish Box 165 Cooler - IGBC Certification No. 5252 (Approved 5/3/19)

360-882-0410  www.smakplastics.com
Taiga Coolers, LLC

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT
Taiga 55 QT Cooler, Model 01-055-000-W - IGBC Certification No. 5403 (Approved 5/12/21)
214-762-3648 www.taigacoolers.com

GARBAGE CONTAINERS, FOOD STORAGE LOCKERS & RECYCLING UNITS

Back Alley Metals – Back Alley Bear Can
33-gallon Metal Recycle Box – IGBC Certification No. 3354
Metal Bag Enclosure “D’Bear” – IGBC Certification No. 5331 (Approved 7/10/2009)
406-425-0244 or 406-425-1533 www.backalleymetals.com

Bear Block, LLC
Bear Block garbage cart, Model RS 5000 – IGBC Certification No. 5069 (Approved 5/27/16)
Bear Block garbage cart, Model RS5000.4.48XTOTER – IGBC Certification No. 5402 (Approved 5/12/21)
970-397-1880 https://bearblock.com/

BearSaver
Dumpster: 3-yrd, front-load - IGBC Certification No. 5369
Food Storage Locker: FS15 - IGBC Certification No. 5371
Food Storage Locker: FS16 - IGBC Certification No. 5372
Food Storage Locker: FS20 - IGBC Certification No. 5373
Food Storage Locker: FS24 - IGBC Certification No. 5374
Food Storage Locker: FS30 - IGBC Certification No. 5375
Trash/Recycling Unit: HB-1 - IGBC Certification No. 5376
Trash/Recycling Unit: HB-1 Mini - IGBC Certification No. 5377
Trash/Recycling Unit: HB-2 - IGBC Certification No. 5378
Trash/Recycling Unit: HB-2 Mini - IGBC Certification No. 5379
Trash Enclosure – Single: BE1-P - IGBC Certification No. 5380
Recycling Enclosure – Single, Model BE1-Y - IGBC Certification No. 5381
Trash Enclosure – Double, BE2-P - IGBC Certification No. 5382
Recycling Enclosure – Double, BE2-Y - IGBC Certification No. 5383
Trash/Recycling Combo Unit - Double: BE2-PX - IGBC Certification No. 5384
Trash Cans and Recycle Bins: “CE Series” - IGBC Certification No. 5385
Trash Cans and Recycle Bins: “HA Series” - IGBC Certification No. 5386
Residential Trash Cart Enclosure: RCE195F - IGBC Certification No. 5387
Residential Trash Cart Enclosure – 35 Gallon: RCE135F - IGBC Certification No. 5388
Trash/Recycling Unit: “RCE Series” - IGBC Certification No. 5393
Mini-Depot Triple Recycling Unit: MDYP-LL - IGBC Certification No. 5366
Mini-Depot Trash/Recycling Combo Unit: MDYP-LL-X - IGBC Certification No. 5367
800-851-3887 http://www.bearsaver.com

CanShed, LLC
CanShed 3 Slider garbage can enclosure – IGBC Certification No. 3754
720-339-4828 www.canshed.us.com
Egan Machine
Bear Proof Box, Model # BPB20 - IGBC Cert. No. 5115 (Approved 11/1/16)
208-522-9678

Northland Products, Inc.
Kodiak Can, 65-gal, rotating knob latch, Model # KP65-HDRK - IGBC Cert. # 5142 (App. 4-30-17)
Kodiak Can, 95-gal, Model # KP-95 HD- IGBC Cert. No. 5048 (Approved 5-27-16)
Kodiak Can, 95-gal, heavy weight; rotating knob latch, Model # KP-95X HD - IGBC Cert. No. 5071 (App. 7-5-16)
Kodiak Can, 95-gal, standard weight with rotating knob latch release, Model # KP95-HDRK - IGBC Cert. No. 5136 (App. 7-5-16)
Kodiak Can, 95-gal, standard weight with rotating knob latch release, Model # KP95-HDRK - IGBC Cert. No. 5229 (App. 5-10-18)
Kodiak Can, 65 gal., lever latch, 40 lbs total weight, Model # KP65-HDLL – IGBC Cert. No. 5396 (App. 4-27-17)
Kodiak Can, 95 gal., lever latch, 34 lb can, 8 lb lid), Model # KP95-HDLL – IGBC Cert. No. 5397 (App. 4-11-18)

Rehrig Pacific Co.
35EG Bear Cart, Semi-Automated Cart with Latch Bite Guard – IGBC Cert. No. 5400 (Approved 5/12/21)
65EG Bear Cart, Medium with Bar and Bite Guard – IGBC Cert. No. 5249 (Approved 5/1/19)
95EG Bear Cart – IGBC Certification No. 5151 [Due to reported field failures, this product was recently re-tested by the IGBC and several product performance issues were observed. Potential consumers should take this into consideration before making purchasing decisions. The manufacturer has given an opportunity to correct these deficiencies and then have a re-designed product tested when product testing resumes in April 2021. This IGBC list of certified bear-resistant products will be updated at that time.] (Nov. 25)
(800) 241-9693  www.rehrigpacific.com

RJ Thomas Co., Inc.
Food Storage Locker, Model # BPFL-D-30 – IGBC Certification No. 5258 (Approved 6/12/19)
Food Storage Locker, Model # BPFL-25 (new latching system since product with cert # 3372 tested so assigned new cert #) – IGBC Certification No. 5123 (App. 12/6/16)
Food Storage Locker, Model # BPFL-15/#1 – IGBC Certification No. 5104 (App. 10/26/16)
Food Storage Locker, Model # BPFL-T-18 – IGBC Certification No. 5263 (App. 9/3/19)
Trash/Recycling Receptacle, Model # BPRT1-36/#1 – IGBC Cert. No. 5106 (App. 10/26/16)
Trash/Recycling Receptacle, Model # BPRT2-72 – IGBC Cert. No. 5124 (App. 12/6/16)
Trash/Recycling Receptacle, Model # BPRT3-108/#1 – IGBC Cert. No. 5107 (App. 10/26/16)
800-762-5002  http://www.pilotrock.com

Wasteline Containers Ltd.
6 yd. Sloper, Model FLS-6S – IGBC Certification No. 5095 (Approved 10/24/16)
604-852-5656  www.wastelinecontainers.com
ELECTRIC FENCES

The IGBC recommends several electric fence designs that have been field tested by the US Forest Service’s Missoula Technology and Development Center. These designs were proven to be effective in deterring grizzlies and therefore may be an option for securing bear attractants in areas frequented by grizzly bears. As additional designs are tested and proven to be effective, they will be added here.

The first design is a permanent fencing design that can be used to secure livestock, fruit trees, compost piles, chicken coops and other attractants. The second design describes components of portable electric fences that can be used when recreating in bear country and needing to secure harvested game meat, coolers, campsites. DO NOT use portable electric fences to secure food or garbage in an occupied camp site – attractants should be secured using the usual rules for camping safely in bear country. Visit www.igbconline.org/bear-safety/ for information about recreating safely in grizzly country.

Several commercially-available products meet the specifications described in these approved fencing designs.

Permanent Fence Designs

The 7-strand electric fence is listed as an acceptable food storage method in the food storage order for the NCDE. This fence is not listed as an approved food storage device in the GYE. However, it can be used under special approval by the Forest Supervisor in most forests in the GYE. This fence has applicability in situations such as base outfitter camps with a permitted location on the National Forest or beehives on private land where the fence is typically in place for several days or weeks.

Missoula Technical Development Center  Ph.: (406) 329-3900
Northern Continental Divide Electric Fence System Pub# 9923-2321 MTDC
http://www.fs.fed.us/t-d/ (username: t-d: password: t-d)

Portable Electric Fence Designs

The IGBC endorses the portable electric fence standards as described in the USFS’s Missoula Technology and Development Center Technical Note #0723-2305-MTDC entitled, “Specifications for portable electric fence systems as a potential alternative for food storage” as an effective method of “bear-resistant storage” in grizzly bear ecosystems. The IGBC believes this is an adequate and appropriate, temporary method of food storage.

The IGBC recommends use of the portable electric fence as described in the Technical note) for storing food on USFS lands in the Northern Continental Divide Ecosystem (NCDE) and the Greater Yellowstone Ecosystem (GYE) with food storage orders. The IGBC encourages line officers to utilize this new method, as they deem appropriate, and to utilize it under written authorization of line officers to ensure proper use.

This IGBC approval of portable electric fence as specified, does not alter or replace the 7-strand electric fence (MTDC Publication #9923-2321) that has been used in the NCDE since 1999.
IGBC-CERTIFIED ELECTRIC FENCING PRODUCTS

Products listed below meet IGBC requirements for portable electric fences based on the requirements described in the MTDC Publication “Portable Mesh Electric Fence System Pub# 0723-2305 MTDC”. This is not imply that the products listed below are acceptable for meeting food storage orders. Please check with the appropriate land management authority for the area you will be visiting for guidance regarding acceptable methods of meeting the food storage orders in that area.

**UDAP Industries, Inc. - Bear Shock Fence**

*Portable Bear Net Electric Fence built according to specifications in Pub# 0723-2305 MTDC*

406-494-9292 or 866 BEAR 911  
http://www.PepperPower.com

**Counter Assault – Pentagon Electric Bear Fence**

*Portable Mesh Electric Fence built according to specifications in Pub# 0723-2305 MTDC*

406-257-4740 or 800-695-3394  
http://www.counterassault.com

**Patriot - Bear & Nuisance Animal Fence Kit**  
(Approved 5/10/16)

*Portable Mesh Electric Fence built according to specifications in Pub# 0723-2305 MTDC*

800-874-8494  
www.tru-test.com

*Note: this kit does not contain an energizer to power the electric fence. In order to meet IGBC specifications, an energizer meeting the specifications set forth in Pub# 0723-2305 MTDC must be used with the kit. The kit recommends using either the Stafix/Speedrite AN90 or the Patriot PB12 model energizer and both of these meet IGBC specifications.*
LIST B - IGBC-CERTIFIED BEAR-RESISTANT PRODUCTS
NOT CONFIRMED AS AVAILABLE FOR PURCHASE

The products listed below have been certified by the IGBC as bear-resistant; all products meet IGBC bear-resistant design and structural standards however, the IGBC was unable to confirm that the products are available for purchase.

Products that are highlighted in yellow have been discontinued as per the manufacturer.

This list of commercial products and suppliers is for information only and does not imply any endorsement of one product or source over another. Products are generally arranged in alphabetical order.

BACK PACKING & SMALL STORAGE CONTAINERS

The Bare Boxer, Golf City Products
Contender, Model 101
Champ, Model 202- IGBC Certification No. 5333

BearVault
BV250 Solo- IGBC Certification No. 5305
BV300- IGBC Certification No. 5306
BV350 Solo- IGBC Certification No. 5310
BV400- IGBC Certification No. 5323
866-301-3442

Craftsman Tech Composites
Wise Backpack (~3600 in³ capacity) - IGBC Certification No. 3349

Counter Assault
Bear Keg- IGBC Certification No. 5341

Frontiersman by Security Equipment Corporation
Frontiersman Insider Bear Safe – Model FBS-100-A- IGBC Certification No. 5175 (Approved 11/16/17)
Frontiersman Insider Bear Safe – Model FBS-100-B- IGBC Certification No. 5176 (Approved 11/16/17)
**Garcia Machine**
Backpackers’ Cache - Model 812 - IGBC Certification No. 5298

**JP Enterprises**
35 Gallon Plastic Screw-Top Over Pak Container - IGBC Certification No. 5309 (Approved 3/9/11)

**Lighter1 Bear Canisters**
Big Daddy Model (2.29 lbs) - IGBC Certification No. 3350
Lil’ Sami Model (1.34 lbs) - IGBC Certification No. 3351

**Loctote Industrial Bag Company**
Flak Sack – Model 21228 - IGBC Certification No. 5160 (approved 7-25-17)
Flak Sack Coalition– Model 21242 - IGBC Certification No. 5164 (approved 8-24-17)

**Riley Stove Company**
Grain Storage Container- IGBC Certification No. 5342
Food Storage Container- IGBC Certification No. 5343
Insulated Cooler- IGBC Certification No. 5344

**Vernon Matthews**
Greif Bros. Steel Drums Part #’s: OH10-1R and OH8-1R (10 and 8 gal drums)

**Wes Mauz**
Aluminum Canister
303-908-7383

**World Safety Products**
Overpack Plastic Drums – 95, 65 and 30 gallon (Models 1690, 1661 and 1600 with modified metal reinforced lid)

**PANNIERS and BOXES**

**Bear Country Containers - Jerry Kawasaki**
Model SFO- IGBC Certification No. 4892A (approved 3/26/15)
Model HFO- IGBC Certification No. 4892B (approved 3/26/15)
Model HTL- IGBC Certification No. 4892D (approved 3/26/15)

**Buckstitch Canvas Saddle and Tack**
Aluminum Kitchen Pannier
Aluminum Storage Pannier

**Colorado River and Trails Expeditions Inc.**
Rafting Dry Box

**Columbia Construction, Inc.**
Aluminum Panniers
Decarteret Pack Equipment  
Aluminum Panniers

DW Metal Works  
Aluminum Pannier, Model APDW092020 – IGBC Certification Number 5395 (approved 11/20/20)

Evans Feed and Livestock Supply  
Plastic Pannier/Bear Box

ECS Composites  
Octagonal Plastic Dry Box – IGBC Certification Number 5295 (approved 3/23/05)

Greenlee  
Mobile Storage Chest, Model 2448

Howling Wind Welding  
Aluminum Storage Pannier  
Steve Kirko,

Kanz Outdoors LLC  
Field Pantry P120 – IGBC Certification Number 3537

Kirkham Motorsports  
Camp Loll Bear Box, Model #A – IGBC Certification Number 5068 (approved 5/27/16)

Koffler Boats, Inc.  
Small Pack Box – IGBC Certification Number 3719 (approved 1/14/15)  
Medium Pack Box – IGBC Certification Number 3720 (approved 1/14/15)  
Large Pack Box – IGBC Certification Number 3721 (approved 1/14/15)  
Small Pack Kitchen – IGBC Certification Number 3722 (approved 1/14/15)  
Large Pack Kitchen – IGBC Certification Number 3723 (approved 1/14/15)

LMI Welding, Inc.  
Various aluminum panniers

Metalworks of Montana  
Aluminum Pannier/Storage Box – IGBC Certification Number 2810

Ben Notti/Marshall Ridenour  
Aluminum Panniers  
1029 Terrace View Drive  
Alberton, MT 59820
High Country Plastics bought mold in 2008 — Changed on List from Outfitters Pack Station to
High Country Plastics in August 2020
Plastic Pannier, Item 1809-1 – IGBC Cert. # 3536

Pride – Metal
Food Storage Container – Model #91550 – IGBC Cert. No. 5161 (Approved 8/11/17)
Animal-Resistant Trash Receptacle – Model #98477A - IGBC Cert. No. 5162 (Approved 8/11/17)

Robertson Enterprises
Mountaineer Grain Pannier, Model 312 – IGBC Cert. No. 5177
Mountaineer Mule Pannier, Model 304 – IGBC Cert. No. 5178
Mountaineer Camp Kitchen, Model 310 – IGBC Cert. No. 5179
Mountaineer Kitchen Pannier, Model 309 – IGBC Cert. No. 5180
Mountaineer Storage/Cooler Pannier, Model 311 – IGBC Cert. No. 5181
Wyoming Outdoor Industries Storage Pannier, Model 335 – IGBC Cert. No. 5189
Wyoming Outdoor Industries Kitchen Pannier, Model 330 – IGBC Cert. No. 5190
RE Camp Kitchen Pannier – IGBC Cert. No. 5394 (Approved 11-12-20)

Salem Tent and Awning
Model HBR

Bob Skorz
Plastic Kitchen Pannier

Teton Welding
Aluminum Panniers

Ron Terrill
Aluminum Kitchen Pannier

Wind River Products
Backpack Container - IGBC Certification No. 5351
Regular Pannier - IGBC Certification No. 5352
Decker Style Pannier - IGBC Certification No. 5353

Ziegel Engineering
Ziegel Aluminum Box WD5 (Bear Box 1)
Ziegel Aluminum Box WD6 (Bear Box 2)
** COOLERS REQUIRE USE OF BOLTS AND NUTS OR APPROPRIATELY-SIZED PADLOCKS TO BE BEAR-RESISTANT **

** Academy Sports & Outdoors **

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Magellan Icebox 25 Model #FSMGCP0001/FSMGCP0008 - IGBC Cert. No. 5065 (Approval date 5/17/16)
Magellan Icebox 50 Model #FSMGCP0000 - IGBC Certification No. 5004
Magellan Icebox 70 Model #FSMGCP0002/FSMGCP0010 - IGBC Cert. No. 5070 (Approved 5/27/16)

** AIRIA LLC **

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

AIRIA 50 QT Cooler – IGBC Certification No. 5085 (Approved 7/28/2016)
AIRIA 75 QT Cooler – IGBC Certification No. 5092 (Approved 9/29/2016)

** Blackbird Products **

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Titan Series Cooler, Model MT65 – IGBC Certification No. 5009
Titan Series Cooler, Model MT75 – IGBC Certification No. 5026
Titan Series Cooler, Model MT110 – IGBC Certification No. 5027
Titan Series Cooler, Model MT125 – IGBC Certification No. 5010
Ranger 65 Cooler, Model MR65 – IGBC Certification No. 5174 (Approved 11/16/17)

** Black Rock Coolers (V-Wave River Supply) **

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Expedition Cooler Model 45C - IGBC Certification No. 5011
Expedition Cooler Model 55L - IGBC Certification No. 5012
Expedition Cooler Model 70L - IGBC Certification No. 5013
Expedition Cooler Model 90L - IGBC Certification No. 5014
Expedition Cooler Model 110L - IGBC Certification No. 5015
Expedition Cooler Model 150L - IGBC Certification No. 5016

** Cabela’s Polar Cap Cooler/Submitted by Premier O.E.M. **

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Cabela’s Polar Cap cooler, Model #25 Quart - IGBC Certification No. 5020
Cabela’s Polar Cap cooler, Model #40 Quart - IGBC Cert. No. 5046 (Approved 8/31/15)
Cabela’s Polar Cap cooler, Model #60 Quart - IGBC Certification No. 5023
Cabela’s Polar Cap cooler, Model #80 Quart - IGBC Cert. No. 5047 (Approved 8/31/15)
Cabela’s Polar Cap cooler, Model #100 Quart - IGBC Cert. No. 5045 (Approved 8/31/15)
California Innovations (see also Ozark Trail Coolers)

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Ozark Trail 16QT Cooler – IGBC Certification No. 5242 (Approved 8/20/18)
Ozark Trail 60QT Rolling Cooler – IGBC Certification No. 5213 (Approved 1/24/18)
Ozark Trail 45QT Rolling Cooler – IGBC Certification No. 5272 (Approved 12/03/19)
Ozark Trail 110QT Rolling Cooler – IGBC Certification No. 5224 (Approved 3/2/18)
Ozark Trail High Performance 26QT Cooler - IGBC Cert. No. 5150 (App. 5/25/17) see also Olympia Tools
Ozark Trail High Performance 73QT Cooler - IGBC Cert. No. 5159 (App. 7/10/17) see also Olympia Tools
Titan DeepFreeze™ Cooler model # 70L – IGBC Certification No. 5007
Titan DeepFreeze™ Cooler model # 50L – IGBC Certification No. 5018
Titan DeepFreeze™ Cooler model # 25L – IGBC Certification No. 5008
Member’s Mark Roto Molded Rolling model# 50Qt – IGBC Cert. No. 5121 (Approved 11/8/16)
Columbia 25QT Cooler – IGBC Certification No. 5241 (Approved 7/24/18)
Columbia PFG 50QT Cooler – IGBC Certification No. 5253 (Approved 5/3/19)
Titan Cooler, Model 20 QT– IGBC Certification No. 5243 (Approved 9/11/18)
Titan Cooler, Model 55 QT– IGBC Certification No. 5244 (Approved 10/25/18)

Cascade Mountain Tech

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

45QT Super Cooler A, Model RC-45-WH - IGBC Certification No. 5231 (Approved 5/29/18)
45QT Super Cooler B, Model RC-45-WH - IGBC Certification No. 5230 (Approved 5/29/18)
80QT Cooler, Model CMT80QR - IGBC Certification No. 5173 (Approved 11/16/17)

Chard International

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

PermaChill Cooler model # RC-50W – IGBC Certification No. 3749
PermaChill Cooler model # RC-70W – IGBC Certification No. 3750
PermaChill Cooler model # RC-120W – IGBC Certification No. 3751

Cixi Dafeng Plastic Metal Industry Co., Ltd.

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Cooler Box Model GMD20L - IGBC Certification No. 5271 (Approved 11/13/19)
Cooler Box Model GMD55L - IGBC Certification No. 5261 (Approved 7/23/19)
Cooler Box Model GMD75L - IGBC Certification No. 5269 (Approved 10/28/19)

Cold Bastard Outdoors

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Hard Cooler, Model Rugged+45 – IGBC Cert No. 5389 (App. 8/21/20)

Coleman Company

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Esky 55 Cooler, model #3000002623 – IGBC Cert No. 3752 (App. 8/21/14)
Esky 85 Cooler, model #3000002624 – IGBC Cert No. 3753 (App. 8/22/14)
Cordova Coolers

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Cordova Small, Model 28QT - IGBC Certification No. 5232 (Approved 5/29/18)
Cordova Medium, Model 45QT- IGBC Certification No. 5233 (Approved 5/29/18)
Cordova Large, Model 86QT- IGBC Certification No. 5234 (Approved 5/29/18)
Cordova X-Small, Model CCXS- IGBC Certification No. 5273 (Approved 12/03/19)
Cordova X-Large, Model 126QT- IGBC Certification No. 5235 (Approved 5/29/18)

Dick’s Sporting Goods

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Field & Stream Arctic Vault 35 Cooler, Model CEH01712 – IGBC Certification No. 5002
Field & Stream Arctic Vault 45 Cooler, Model CEH01713 – IGBC Certification No. 5019
Field & Stream Arctic Vault 65 Cooler, Model CEH01714 – IGBC Certification No. 5003

Duluth Trading Company

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Alaskan Hardgear Cooler, Model 35 QT – IGBC Certification No. 5227 (Approved 5-10-18)
Alaskan Hardgear Cooler, Model 45 QT (AHG 45QT) – IGBC Cert. No. 5240 (Approved 6-21-18)
Alaskan Hardgear Cooler, Model 65 QT – IGBC Certification No. 5228 (Approved 5-10-18)

Engel USA

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Deepblue High Performance Cooler, model # ENG25- IGBC Certification No. 5077
Deepblue High Performance Cooler, model # ENG35- IGBC Certification No. 5078
Deepblue High Performance Cooler, model # ENG50- IGBC Certification No. 5079
Deepblue High Performance Cooler, model # ENG65
Deepblue High Performance Cooler, model # ENG80- IGBC Certification No. 5080
Deepblue High Performance Cooler, model # ENG123- IGBC Certification No. 5081
Deepblue High Performance Cooler, model # ENG165- IGBC Certification No. 5082
Deepblue High Performance Cooler, model # ENG240- IGBC Certification No. 5083
Deepblue High Performance Cooler, model # ENG320- IGBC Certification No. 5084

Extreme Cold, LLC.

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Extreme Cold 25 cooler model #25L/ESCECWW025L01 - IGBC Certification No. 3759
Extreme Cold 35 cooler model #35L/ESCECWW035L01 - IGBC Certification No. 3760
Extreme Cold 50 cooler model #50L/ESCECWW050L01 - IGBC Certification No. 3761
Extreme Cold 75 cooler model #75L/ESCECWW075L01 - IGBC Certification No. 3762
Extreme Cold100 cooler model #100L/ESCECWW100L01 - IGBC Certification No. 3763
Extreme Cold 150 cooler model #150L/ESCECWW150L01 - IGBC Certification No. 3764

Forcome (Shanghai) Co., Ltd.

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

20QT Cooler model# 2A-CM185W - IGBC Certification No. 5247 (Approved 12/04/18)
30L Cooler model# 2A-CM001 - IGBC Certification No. 5152 (Approved 6/27/17)
50QT Cooler model# 2A-CM002 - IGBC Certification No. 5153 (Approved 6/27/17)
85QT Wheeled Cooler model# 2A-CM005 - IGBC Certification No. 5166 (Approved 9/12/17)
65L Cooler model# 2A-CM003 - IGBC Certification No. 5157 (Approved 7/6/17)
65QT Cooler model# 2A-CM189 - IGBC Certification No. 5256 (Approved 5/24/19)
110QT Cooler model# 2A-CM006 - IGBC Certification No. 5167 (Approved 10/2/17)
110QT Cooler model# 2A-CM191W - IGBC Certification No. 5361 (Approved 5/8/20)
85L Cooler model# 2A-CM004 - IGBC Certification No. 5158 (Approved 7/6/17)
50L Cooler model# 2A-CM152 - IGBC Certification No. 5074
100L Cooler model# 2A-CM153 - IGBC Certification No. 5075
125QT Cooler model# 2A-CM007 - IGBC Certification No. 5168 (Approved 10/2/17)

Gander Outdoors & Camping World

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT
Perma Chill Cooler, Model 20 QT – IGBC Certification No. 5270 (Approved 10-28-19)
Perma Chill Cooler, Model 50 QT – IGBC Certification No. 5265 (Approved 10-8-19)
Perma Chill Cooler, Model 80 QT – IGBC Certification No. 5257 (Approved 7-15-19)

Grizzly Coolers, LLC

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT
Grizzly Cooler, Model G15, Part No. IRP-9100 – IGBC Certification No. 5006
Grizzly Cooler, Model G60, Part No. IRP-9110 – IGBC Certification No. 5025
Grizzly Cooler, Model Grizzly 100, IRP-9140 – IGBC Cert. No. 5066 (Approval date 5/17/16)
Grizzly Cooler, Model Grizzly165 – IGBC Cert. No. 5165 (Approval date 8/28/17)
Cooler, Model “Outback” (49” Long x 23” Deep x 21” Tall): IGBC Certification No. 5303
Grizzly 400 model # IRP-8040: IGBC Certification No. 3402
Grizzly 150 model # IRP-8060: IGBC Certification No. 3401
Grizzly 75 model # IRP-9070: IGBC Certification No. 3370
Grizzly 60 model # IRP-8070: IGBC Certification No. 3359
Grizzly 40 model # IRP-9080: IGBC Certification No. 3369
Grizzly 20 model # IRP-9090: IGBC Certification No. 3725
Grizzly 16 model # IRP-9050: IGBC Certification No. 3362

Igloo Products Corp.

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT
Yukon Cold Locker 50 – Models #49150, #49153, #49166, #49343 - IGBC Cert. No. 3301
Yukon Cold Locker 50 wheeled - IGBC Certification No. 3382
Marine Elite Offshore 20 – Model #43866 - IGBC Certification No. 3770
Marine Elite Offshore 40 – Model #49329 - IGBC Certification No. 3772
Marine Elite Offshore 50 - IGBC Certification No. 3385
Marine Elite Offshore 50 wheeled - IGBC Certification No. 3388
Marine Elite Offshore 55 - Model #49328 – IGBC Certification No. 3396
Marine Elite Offshore 70 – Model #49330 - IGBC Certification No. 3774
Yukon Marine 20 - IGBC Certification No. 3399
Yukon Marine 55 - IGBC Certification No. 3384
Sportsman 20- Models #43760, #32003, #32019, #32020, #32045, #43934 # 43943 - IGBC No. 3400
Sportsman 40- Model #45891, #45892, #49425 - IGBC Certification No. 3771
Sportsman 55- Model #49133, #49323, #49426 - IGBC Certification No. 3371
Sportsman 70- Model #49234, #49427, #49584 - IGBC Certification No. 3773
Yukon Cold Locker 70 - IGBC Certification No. 3381
Marine Elite Offshore 70 - IGBC Certification No. 3386
Yukon Cold Locker 90 wheeled – Model #45657 - IGBC Certification No. 3383
Marine Elite Offshore 90 wheeled - IGBC Certification No. 3389
Yukon Cold Locker 120 - IGBC Certification No. 3377
Marine Elite Offshore 120 - IGBC Certification No. 3387
Iowa Rotocast Plastics, Inc. (AKA Grizzly Coolers)

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Cooler, Model “Outback”: IGBC Certification No. 5303
Grizzly 400 model # IRP-8040: IGBC Certification No. 3402
Grizzly 150 model # IRP-8060: IGBC Certification No. 3401
Grizzly 75 model # IRP-9070: IGBC Certification No. 3370
Grizzly 60 model # IRP-8070: IGBC Certification No. 3359
Grizzly 40 model # IRP-9080: IGBC Certification No. 3369
Grizzly 20 model # IRP-9090: IGBC Certification No. 3725
Grizzly 16 model # IRP-9050: IGBC Certification No. 3362

ICEHOLE Coolers

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Cooler, model 60 QT – IGBC Certification No. 3358 (Approved 11/15/12)

Jackson Kayak/Orion Coolers

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Orion 25-Quart Cooler: IGBC Certification No. 5005
Orion 35-Quart Cooler: IGBC Certification No. 5063 (Approved 5/18/16)
Orion 45-Quart Cooler: IGBC Certification No. 5024
Orion 55-Quart Cooler: IGBC Certification No. 5064 (Approved 5/18/16)
Orion 65-Quart Cooler: IGBC Certification No. 3700
Orion 85-Quart Cooler: IGBC Certification No. 5033

KONG Coolers

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Cruiser Cooler – IGBC Certification No. 5392 (Approved 10/15/20)

Lerpin International LLC

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Lerpin 25 Cooler, Model LC-25Q-WHT: IGBC Certification No. 5250 (Approved 5/2/19)
Lerpin 50 Cooler, Model LC-50Q-WHT: IGBC Certification No. 5251 (Approved 5/2/19)

Lifetime Products

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Lifetime 28 QT Cooler, Models 90911, 91020, 91023, 91024: IGBC Cert. No. 5248 (Approved 12/05/18)
Lifetime 55 QT Cooler, Models 90820, 90895,90949, 91021, 90914: IGBC Cert. No. 5169
Lifetime 55 QT Wheeled Cooler, Model 91072: IGBC Cert. No. 5391 (Approved 10/15/20)
Lifetime 65 QT Cooler, Models 90983, 90997, 91005, 290983: IGBC Cert. No. 5267 (Approved 10/22/19)
Lifetime 77 QT Cooler, Model 90903: IGBC Cert. No. 5245 (Approved 11/26/18)
Lifetime 115 QT Cooler, Models 91000, 91108: IGBC Cert. No. 5288 (Approved 7/10/20)

LIT Coolers LLC

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

LIT Cooler Firefly, Model # TS 300: IGBC Certification No. 5067 (Approved date 5/27/16)
LIT Cooler, Model # TS 400: IGBC Certification No. 5073 (Approved date 7/14/16)
LIT Cooler, Model # TS 600: IGBC Certification No. 5072 (Approved date 7/14/16)
Mammoth/Blackbird

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Discovery 50 model # MD50T: IGBC Certification No. 3739
Discovery 60 model # MD60T: IGBC Certification No. 3741
Discovery 65 model # MD65T: IGBC Certification No. 3742
Discovery 75 model # MD75T: IGBC Certification No. 3743
Discovery 95 model # MD95T: IGBC Certification No. 3744
Discovery 115 model # MD115T: IGBC Certification No. 3745
Discovery 160 model # MD160T: IGBC Certification No. 3740

Olympia Tools International Inc.

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

High Performance 26 QT Cooler: IGBC Certification No. 5150 (Approved 5/25/17)
High Performance 55 QT Cooler, Model # 84-263-0121: IGBC Cert. No. 5254 (Approved 5/3/19)
High Performance 73QT Cooler - IGBC Cert. No. 5159 (Approved 7/10/17)

ORCA Coolers - Outdoor Recreation Company of America

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

ORCA 20 QT Cooler, Model ORC020: IGBC Certification No. 5087 (approved 8/24/16)
ORCA 26 QT Cooler, Model ORCW026: IGBC Certification No. 5089 (approved 9/12/16)
ORCA 40 QT Cooler, Model ORCW040: IGBC Certification No. 5090 (approved 9/12/16)
ORCA 58 QT Cooler, Model ORCW058: IGBC Certification No. 5091 (approved 9/12/16)
ORCA 75 QT Cooler, Model ORCT075 (prev. listed as “Plains Cooler”): IGBC Cert. No. 3360
ORCA 140 QT Cooler, Model ORCP140: IGBC Certification No. 5076 (approved 7/8/16)

OtterBox

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Venture Cooler, Model 25 QT: IGBC Certification No. 5154 (approved 6/27/17)
Venture Cooler, Model 45 QT: IGBC Certification No. 5141 (approved 4/27/17)
Venture Cooler, Model 65 QT: IGBC Certification No. 5155 (approved 6/27/17)

Ozark Trail (See California Innovations. IGBC Cert. Nos. for Titan DeepFreeze coolers are the same for same size coolers in the Ozark Trail line)

Pelican Products, Inc.

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

ProGear Elite 20-qt Cooler, model# 20QT/32-20QT-MC-WHT: IGBC Certification No. 3756
ProGear Elite 35-qt Cooler, model# 35QT/32-35QT-MC-WHT: IGBC Certification No. 3366
ProGear Elite 45-qt Cooler, model# 45QT/32-45QT-MC-WHT: IGBC Certification No. 3373
ProGear Elite 45-qt Wheeled Cooler, - IGBC Cert. No. 5030 (approved 5-27-16)
ProGear Elite 65-qt Cooler, model# 65QT/32-65QT-MC-WHT: IGBC Certification No. 3374
Pelican Elite 70-qt Cooler, - IGBC Cert. No. 5086 (approved 7/28/16)
ProGear Elite 80-qt Wheeled Cooler, - IGBC Cert. No. 5031 (approved 5-27-16)
ProGear Elite 95-qt Cooler, model# 95QT/32-95QT-MC-WHT: IGBC Certification No. 3375
ProGear Elite 150-qt Cooler, model# 150QT/32-150QT-MC-WHT: IGBC Cert. No. 3376
ProGear Elite 250-qt Cooler, model# 250QT/32-250QT-MC-WHT: IGBC Cert. No. 3365
Polaris Northstar/Submitted by Premier O.E.M.

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

Polaris Northstar 30 QT Cooler - IGBC Certification No. 5028 (approved 8-14-15)
Polaris Northstar 60 QT Cooler - IGBC Certification No. 5029 (approved 8-14-15)
Polaris Northstar 105 QT Cooler - IGBC Certification No. 5226 (approved 5-4-18)

Premier OEM

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

Premier OEM 60-qt cooler, Model # CAB4416 – IGBC Certification No. 3380

Rhino Rotational Molding

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

Rhino True 22 Cooler - IGBC Certification No. 5156 (Approved 7/6/17)
Rhino True 42 Cooler – IGBC Certification No. 3757
Rhino 62QT Cooler - IGBC Certification No. 5171 (Approved 10/30/17)

Siberian Coolers

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

ALPHA Coolers 22 Qt. Cooler: IGBC Certification No. 5140 (approved 4/27/17)
ALPHA Coolers 45 Qt. Cooler: IGBC Certification No. 5139 (approved 4/27/17)
ALPHA Coolers 65 Qt. Cooler: IGBC Certification No. 5137 (approved 4/25/17)
ALPHA Coolers 85 Qt. Cooler: IGBC Certification No. 5138 (approved 4/25/17)

Southern Sales & Marketing Group

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

20QT Cooler, Model # CLF-517646: IGBC Certification No. 5214 (approved 1/25/18)
50QT Cooler, Model # CLF-517684: IGBC Certification No. 5172 (approved 10/30/17)
75QT Cooler, Model # CLF-517769: IGBC Certification No. 5209 (approved 12/19/17)
110QT Cooler, Model # CLF-517806: IGBC Certification No. 5210 (approved 12/19/17)

Sportsman’s Guide

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

Guide Gear 20 QT Cooler - IGBC Certification No. 5266 (Approved 10/8/19)

SSMG, Inc.

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

20 Quart Cooler, Model #CKR-512153-WHI – IGBC Cert. No. 5093 (Approved 9/29/16)
45 Quart Cooler, Model #CKR-512160-WHI – IGBC Cert. No. 5118 (Approved 11/01/16)
75 Quart Cooler, Model #CKR-512177-WHI – IGBC Cert. No. 5088 (Approved 8/24/16)

Techni Ice

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

Techni Ice 37qt Signature Series - IGBC Certification No. 5041 (approved 6/22/16)
Techni Ice 132qt Signature Series - IGBC Certification No. 3755

Techtronic Industries Power Equipment

**COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT**

Arctic Cove 20 QT Cooler, Model #ACRMCM20 - IGBC Certification No. 5050
Truck gear by Line-X

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Expedition 20 QT Cooler - IGBC Certification No. 5246 (approved 12/4/18)

Way Coolers

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

MX70 (Tested as Blackrock Model 70 and Mammoth Model MD75) - IGBC Cert No. 5125
MX90 (Tested as Blackrock Model 90 and Mammoth Model MD95) - IGBC Cert No. 5126
MX110 (Tested as Blackrock Model 110 and Mammoth Model MD115) - IGBC Cert No. 5127
MX150 (Tested as Blackrock Model 150 and Mammoth Model MD160) - IGBC Cert No. 5128
MX60 (Tested as Mammoth Cooler Model MD50) - IGBC Cert No. 5129
MX50 (Tested as Mammoth Cooler Model MD60) - IGBC Cert No. 5130
MP60 (Tested as Blackbird Cooler MT65) - IGBC Cert No. 5131
MP75 (Tested as Blackbird Cooler MT75) - IGBC Cert No. 5132
MP90 (Tested as Blackbird Cooler MT110) - IGBC Cert No. 5133
MP120 (Tested as Blackbird Cooler MT125) - IGBC Cert No. 5134

West Marine

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

West Marine Cooler 120 QT - IGBC Certification No. 5268 (Approved 10/22/19)

Wyld Gear

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

Hard Cooler 25 QT - IGBC Certification No. 5237 (Approved 6/18/18)

YETI Coolers

COOLERS REQUIRE USE OF BOLTS OR PADLOCKS TO BE BEAR-RESISTANT

45 QT Cooler - IGBC Certification No. 5329
Roadie Cooler 20 - IGBC Certification No. 3716
Tundra Cooler 35 - IGBC Certification No. 3717
Tundra Cooler 45 - IGBC Certification No. 3701
Tundra Cooler 50 - IGBC Certification No. 3390
Tundra Cooler 60 – IGBC Certification No. 5211
Tundra Cooler 65 - IGBC Certification No. 3702
Tundra Cooler 75 - IGBC Certification No. 3391
Tundra Cooler 85 - IGBC Certification No. 4882
Tundra Cooler 105 - IGBC Certification No. 3392
Tundra Cooler 110 - IGBC Certification No. 3393
Tundra Cooler 120 - IGBC Certification No. 3704
Tundra Cooler 125 - IGBC Certification No. 3394
Tundra Cooler 155 - IGBC Certification No. 4883
Tundra Cooler 160 - IGBC Certification No. 3395
Tundra Cooler 210 - IGBC Certification No. 5017
Tundra Cooler 250 - IGBC Certification No. 3703
Tundra Cooler 350 - IGBC Certification No. 5032
Tundra Cooler 420 – IGBC Certification No. 3718
GARBAGE CONTAINERS, FOOD STORAGE
LOCKERS & RECYCLING UNITS

Alarik Industries LLC
Bear Tote model 001, 96-gallon plastic residential garbage container, measuring 43” high, 43” long, 28” wide, 33” deep, requiring 2 padlocks - IGBC Certification No. 3357

Athens Services
Athens Bear Barrel Model 95 gallon garbage cart - IGBC Certification No. 5043

Anaconda Job Corps
Metal Frame for Regular Residential Garbage Cart - IGBC Certification No. 5281
Steel Enclosure - IGBC Certification No. 5330

BearGuard Co. Ltd.
Enclosure low profile, reversible single door – IGBC Certification No. 5334 (Approved 10/30/2008)

Bear Necessities
70 Gallon Garbage Enclosure - IGBC Certification No. 5283 (Approved 8/28/05)

Bear Guardian
B-100 Bitterroot Series trash can receptacle for 32-gallon trash can (revised latch May 2020) IGBC Cert. No. 3746
B-200 Bitterroot Series trash can receptacle for (2) 32-gallon trash cans (revised latch May 2020) IGBC Cert. No. 3747
S-100 Selway Series 11 cu ft Food Storage Locker IGBC Certification No. 3748
S-115 Selway Series 15 cu ft Food Storage Locker IGBC Certification No. 5274 (Approved 5/26/10)
S-124 Selway Series 24 cu ft Food Storage Locker S124 (Updated latch 5/2020) IGBC Cert. No. 5212 (App. 1/24/18)
S-130 Selway Series 30 cu ft Food Storage Locker (updated latch 5/2020) IGBC Cert. No. 5061
S-215 Selway Series 30 cu ft Double Compartment Food Storage Locker IGBC Certification No. 5360 (Approved 5/5/20)
T-400 Teton Series 4 yd dumpster IGBC Certification No. 5218 (Approved 2/18/18)
T-400 CH Teton Series 4 yd dumpster with chute IGBC Certification No. 5359 (Approved 5/5/20)
T-600 Teton Series 6 yd dumpster (double access doors) (updated latch 5/2020) IGBC Cert. No. 5220 (App. 2/21/18)
T-600 CH Teton Series 6 yd dumpster (with chute) IGBC Cert. No. 5358 (Approved 5/5/20)
T-800 Teton Series 8 yd dumpster IGBC Certification No. 5219 (Approved 2/18/18)

BearSaver
Residential Poly Cart: PCE65-G – IGBC Certification No. 3765
Residential Poly Cart: PC65-G – IGBC Certification No. 5060 – Approved 2/26/16
Residential Poly Cart: PC95-G – IGBC Certification No. 5062 – Approved 12/16/16
Residential Poly Cart: PC32-G – IGBC Certification No. 5051
Residential PolyCart – IGBC Certification No. 5284 – Approved 8/30/05

Beaver Creek Resort
Steel Enclosure – 35 Gallon - IGBC Certification No. 5335 (Approved 2/15/09)

BurrTec Waste Industries, Inc
95 gallon polycart with reinforced front and sides near the lid - IGBC Certification No. 3352
Capital Industries
2-yd³ Rear-Load Dumpster
3 yd³ Dumpster – IGBC Certification No. 5276

Carneys Waste
65 Gal IPL Polycart – IGBC Certification No. 5337 (Approved 11/13/08)

Carson Valley Welding
“No Bear Can” Steel Garbage Can Enclosure - IGBC Certification No. 5289

Cascade Engineering
The Bear Cart, 96-gallon poly cart, model # 96A- IGBC Certification No. 3705
95-gallon poly cart- IGBC Certification No. 5290 (Approved 12/03/05)
Poly cart, model #1- IGBC Certification No. 5291 (Approved 10/29/11)
Poly cart, model #3- IGBC Certification No. 5292 (Approved 10/29/11)

Colorado Correctional Industries
1.5yd Rear Load Dumpster, Model: WM1.5CDREL-BPL IGBC Cert. No.: 5193
2yd Rear Load Dumpster, Model: WM2CDREL-BPL IGBC Cert. No.: 5194
2yd Front Load Dumpster, Model: WM2CDFEL-BPL IGBC Cert. No.: 5195
3yd Rear Load Dumpster, Model: WM3CDREL-BPL IGBC Cert. No.: 5196
3yd Front Load Dumpster, Model: WM3CDFEL-BPL IGBC Cert. No.: 5197
4yd Front Load Dumpster, Model: WM4CDFEL-BPL IGBC Cert. No.: 5198
6yd Front Load Dumpster, Model WM6CDFEL-BPL IGBC Cert. No.: 5199
8yd Front Load Dumpster, Model: WM8CDFEL-BPL IGBC Cert. No.: 5200
95 Gal. Roll-Away Cart, Model: MPBP95C IGBC Cert. No.: 5201
32 Gal. Double Residential, Model: MPBPFD32C IGBC Cert. No.: 5202
32 Gal. Single Residential, Model: MPBPFS32C IGBC Cert. No.: 5203
35 Gal. Double Residential, Model: MPBPFD35C IGBC Cert. No.: 5204
35 Gal. Single Residential, Model: MPBPFS35C IGBC Cert. No.: 5205
95 Gal. Double Residential, Model: MPBPFD2C IGBC Cert. No.: 5206
95 Gal. Single Residential, Model: MPBPFSC IGBC Cert. No.: 5207
Quick Release Locking System, Model: MPBPQRS IGBC Cert. No.: 5208
70 Gallon Tip-Out, Model MPBPFS70G IGBC Cert. No.: 5293
Single Campsite Food Storage Locker IGBC Cert. No.: 5299 (Approved 5/10/05)

Critter Guard
65 Gallon IPL Polycart - IGBC Cert. No. 5348 (Approved 11/14/08)

Dawg Inc.
95 Gal Polycart - IGBC Cert. No. 5349 (Approved 3/18/07)

Egan Machine
Bear Proof Box, Model # BPB24 - IGBC Cert. No. 5116 (Approved 11/1/16)
Bear Proof Box, Model # BPB30 - IGBC Cert. No. 5117 (Approved 11/1/16)
Enterprise Sales, Inc.
2.0-yd³ Rear-Load Dumpster - IGBC Cert. No. 3471 (Approved 2/2/12)
3.5-yd³ Rear-Load Dumpster - IGBC Cert. No. 3490 (Approved 2/2/12)
3.5 yd³ Rear-Load Dumpster - IGBC Cert. No. 5296 (Approved 8/04/11)

Growler Can
95 Gal rollout WITH metal plates on sides and front - IGBC Certification No. 5297 (Approved 7/14/10)

Haul-All Equipment Systems, ltd.
Freedom 32 - IGBC Certification No. 3332
Discovery - IGBC Certification No. 3333
Dumpster, 6-yd³ Front Load, Model # CFL6 – IGBC Cert. No. 3363
Hid-A-Bag I Mini, Model # HBIM-P – IGBC Cert. No. 5109 (Approved 10/31/16)
Hid-A-Bag II Mini, Model # HBIIIM-P – IGBC Cert. No. 5108 (Approved 10/31/16)
Hid-A-Bag I, Model# HBIS-P – IGBC Cert. No. 5110 (Approved 10/31/16)
Hid-A-Bag II, Model # HBIIIS-PG – IGBC Cert. No. 5113 (Approved 11/14/16)
Front Load Dumpster, Model #BT-1705 – IGBC Cert. No. 5180 (Approved 11/14/16)
Hid-A-Way - 6 YD dumpster, Model # HL6T - IGBC Cert. No. 5122 (Approved 11/14/16)

Jamestown Advanced Products Corp
24 ft³ Food Storage Locker – IGBC Certification No. 3766
24 ft³ Food Storage Locker, Model 16803-001 – IGBC Certification No. 5215 (App. 2/16/18)
30 ft³ Food Storage Locker, Model 16804-001 – IGBC Certification No. 5216 (App. 2/16/18)
30 ft³ Stackable Food Locker, Model 16808-001 – IGBC Certification No. 5217 (App. 2/16/18)
15 ft³ Food Locker, Model 16802-001 – IGBC Certification No. 5221 (App. 2/23/18)
24 ft³ Stackable Food Locker, Model 16807-001 – IGBC Certification No. 5222 (App. 2/23/18)
26 ft³ Food Locker with Sloped Lid, Model 16842-001 – IGBC Cert. No. 5223 (App. 2/23/18)
2-yd³ Front-Load Dumpster – IGBC Cert. No. 5307 (App. 9/25/08)

JP Enterprises
Steel Garbage Can Enclosure (Double – 30 gal.) - IGBC Certification No. 5308 (Approved 8/7/08)

Northland Products, Inc.
Kodiak Can, 95-gal, (14 lb lid/42 lb body; paddle latch) - IGBC Cert. No. 5311 (Approved 3-3-11)
Kodiak Can, 95-gal, (10 lb lid/36 lb body; paddle latch) - IGBC Cert. No. 5312 (Approved 3-26-11)
Kodiak Can, 95-gal, (10 lb lid/36 lb body; paddle latch) - IGBC Cert. No. 5313 (Approved 9-20-16)
Kodiak Can, 96-gal, Model # KP-96- IGBC Cert. No. 3356

Pride Metal
24 Cu Ft Food Storage Container, Model S124— IGBC Cert. No. 5161 (Approved 6/27/17)
Animal-Resistant Trash Receptacle, Model 98922A – IGBC Certification No. 5162 (Approved 6/27/17)

Republic Services - Montana
Capital Industries Dumpster – IGBC Cert. No. 5336 (Approved 6/2/04)
RJ Thomas Co., Inc.
Trash Receptacle (1 module), Model BPR1-36 IGBC Certification No. 5314 (Approved 6/12/19)
Trash Receptacle (2 module), Model BPR2-72 IGBC Certification No. 5315 (Approved 10/18/12)
Food Storage Locker, Model # BPFL-25/#1 – IGBC Certification No. 3372

Rollins Machinery
65 Gallon Polycart – IGBC Cert. No. 5316 (Approved 11/13/08)

Robertson Enterprises
Food storage locker, 12 cu ft, Model 612-RE – IGBC Cert. No. 5184 (Approved 6/9/12)
Food storage locker, 12 cu ft, Model 612C-RE – IGBC Cert. No. 5185 (Approved 11/27/12)
Retrofit for 12 cu ft locker, Model 612RETRO-RE – IGBC Cert. No. 5188 (Approved 11/27/12)
Food storage locker, 15 cu ft, Model 615C-RE – IGBC Cert. No. 5186 (Approved 11/27/17)
Food storage locker, 24 cu ft, Model 624C-RE – IGBC Cert. No. 5187 (Approved 11/27/17)
Food storage locker, 30 cu ft, Model 630C-RE – IGBC Cert. No. 5044 (Approved 11/21/17)
Bear-resistant dumpster cover, Model 651 RE – IGBC Cert. No. 5182 (Approved 6/9/12)
Collapsible Aluminum Food Storage Locker, Model 610-RE – IGBC Cert. No. 5183 (App. 6/9/12)

San Dimas Technology and Development Center - 2-yd³ Bear-Resistant Dumpster
909-599-1267  http://www.fs.fed.us/t-d/  username: t-d  password: t-d
See Recreation Management Tech Tip # 0323 1302 SDTDC.

Shoshone National Forest - Steel Bear Box, welded or bolted with or without stand.

Solid Waste Systems Equipment
95 Gal Polycart, New IPL Mold (no chain/wing/stake assembly) – IGBC Cert. No. 5317 (App. 3/5/05)
Grease Trap – IGBC Certification No. 5318 (Approved 4/27/04)
95 Gal Polycart – IGBC Certification No. 5319 (Approved 6/3/04)
64 Gal Polycart w/angle iron – IGBC Certification No. 5320 (Approved 6/3/04)
95 Gal Polycart (Rehrig-Pacific cart) – IGBC Certification No. 5321 (Approved 11/13/08)
95 Gal Polycart (IPL cart) – IGBC Certification No. 5322 (Approved 1/20/09)

Toter LLC
Polycart 32 gallon, Model 79B32 - IGBC Certification Number 5236 (Approved 6/18/18)
Polycart 64 gallon - IGBC Certification Number 3368
Polycart 96 gallon - IGBC Certification Number 3367
Polycart 64 gallon, automated, Model 79A64 - IGBC Certification Number 5362 (Approved 5/18/20)
Polycart 96 gallon, automated, Model 79A96 - IGBC Certification Number 5363 (Approved 5/18/20)

Ultratec Equipment Sales
4-yd³ Refuse Container - IGBC Certification Number 5324 (Approved 11/14/06)
Refuse Cabinet (holds two, 32-gal polycarts) - IGBC Certification Number 5325 (Approved 11/14/06)
Wasteline Containers Ltd.

Hid-A-Cart, Model HAC-64-96 – IGBC Certification No. 5096 (Approved 10/24/16)
Flat Top -3 yd, Model FLFT-3M – IGBC Certification No. 5097 (Approved 10/24/16)
4 yd. Sloper, Model FLS-4S – IGBC Certification No. 5098 (Approved 10/24/16)
3 yd. Sloper, Model FLS-3S – IGBC Certification No. 5099 (Approved 10/24/16)
Flat Top -4 yd, Model FLFT-4-3M – IGBC Certification No. 5100 (Approved 10/24/16)
Hid-A-Cart, Model HAC-32 – IGBC Certification No. 5101 (Approved 10/24/16)
Hid-A-Cart, Model HAC-24 – IGBC Certification No. 5102 (Approved 10/24/16)
Food Storage Locker, Model FSL-29 - IGBC Certification No. 5103 (Approved 10/24/16)

Waste Solutions

95 Gallon Polycart – IGBC Certification No. 5326 (Approved 11/9/04)
95 Gallon Polycart (OTTO cart) – IGBC Certification No. 5327 (Approved 12/29/04)

Western Disposal Service

WDS Auto Gen II, Model #C1, 32 gal garbage cart - IGBC Cert. No. 5034
WDS Auto Gen II, Model #C2, 32 gal garbage cart with upside down tip lock - IGBC Cert. No. 5035
WDS 2nd Gen 64, Model #3, 64 gal garbage cart with tip-over lock - IGBC Cert. No. 5042
WDS 2nd Gen 96, Model #5, 96 gal garbage cart with tip-over lock - IGBC Cert. No. 5049
WDS 32 gallon manual garbage cart - IGBC Cert. No. 5053
WDS 32 gallon automated garbage cart - IGBC Cert. No. 5054
WDS 32 gallon automated garbage cart - IGBC Cert. No. 5055
WDS 64 gallon manual garbage cart - IGBC Cert. No. 5056
WDS 64 gallon automated garbage cart - IGBC Cert. No. 5057
WDS 96 gallon manual garbage cart - IGBC Cert. No. 5058
WDS 96 gallon automated garbage cart - IGBC Cert. No. 5059

YPSS, Inc.

All metal Recycle/Trash Bin – IGBC Certification No. 3361
STATE OF IDAHO
DEPARTMENT OF LANDS

JOHNSON CREEK BRIDGE REPLACEMENT CONTRACT
22-234-041007
(CONTRACTOR)
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STATE OF IDAHO
DEPARTMENT OF LANDS
CONTRACT 22-234-041007

THIS FIXED PRICE CONSTRUCTION AGREEMENT is by and between the STATE OF IDAHO, acting through the DEPARTMENT OF LANDS on behalf of the Idaho State Board of Land Commissioners, hereafter referred to as the “IDL”, and ___________________, hereafter referred to as the “CONTRACTOR.”

a. Agreement: This duly executed written agreement between IDL and the Contractor resulting from a solicitation, which shall include these Terms and Conditions, the Statement of Work, the Cost Proposal, and all attachments thereto.

b. Contracting Officer: the IDL employee with the authority to enter into, administer, modify, and/or terminate this contract, and make related determinations and findings. The Contracting Officer is responsible for handling the contractual relationship with the contractor.

c. Contracting Officer Representative: The designated Department of Lands representative, also referred to as “COR” or “Representative”, who will provide daily technical oversight to the contractor and ensure the contractor performs according to the Scope of Work. The COR cannot modify the stated terms of the contract unilaterally or direct the contractor to perform work not specified in the contract. Only the Contracting Officer and the Contractor can do so bilaterally.

d. Contractor: The individual or business who has been awarded this Agreement to furnish goods or services for a certain price.

e. IDL: The Idaho Department of Lands.

f. Property: Goods, services, parts, supplies and equipment, both tangible and intangible, including, but not exclusively, designs, plans, programs, systems, techniques and any rights and interest in such property.

g. Procurement Manager: The Contracting Officer for the Idaho Department of Lands.

h. Scope of Work: Detailed outline of the location, project description, timeline, and deliverables.

i. Services: Includes services performed, workmanship, and materials furnished or utilized in the performance of services, including any deliverables.

j. State: The State of Idaho including each agency unless the context implies other states of the United States.

k. State of Idaho Board of Land Commissioners or Land Board: The State Board of Land Commissioners (Land Board) is comprised of Idaho’s Governor, Secretary of State, Attorney General, Superintendent of Public Instruction, and State Controller. The Land Board serve as the trustees for more than 2.4 million acres of state endowment trust lands in Idaho, with the IDL acting as the administrative arm of the Board, carrying out the executive directives necessary to meet the mandated Constitutional charge codified in Article IX Section 8 of the Idaho Constitution. The Land Board also oversees the work of the IDL in its regulatory and assistance duties, and in managing Idaho’s public trust lands.

In consideration of the mutual promises, covenants, and agreements stated herein, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, IDL and the Contractor agree:

ARTICLE 1
CONTRACT DOCUMENTS

1.1 The Contract Documents consist of this Contract, the scope of work, identified in Exhibit A and any Addenda thereto issued prior to execution of this Contract, written amendments signed by both IDL and the Contractor, Change Orders signed by both IDL and the Contractor, Construction Change Directives for minor changes in the Work (the "Contract Documents"). Documents not included or expressly contemplated in this Article 1 do not, and shall not, form any part of the Contract Documents.
1.2 The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.

ARTICLE 2
REPRESENTATIONS AND WARRANTIES OF THE CONTRACTOR

In order to induce IDL to execute this Contract and recognizing that IDL is relying thereon, the Contractor, by executing this Contract, makes the following express representations to IDL:

2.1 The Contractor is fully qualified to act as the Contractor for the Project and has, and shall maintain, any and all licenses, permits or other authorizations necessary to act as the Contractor for, and to construct, the Project.

2.2 The Contractor has become familiar with the Project site and the local conditions under which the Project is to be constructed and operated particularly in correlation to the requirements of the Contract.

2.3 The Contractor has received, reviewed, compared, studied and carefully examined all of the documents which make up the Contract Documents, including the Drawings and Specifications, and any Addenda, and has found them in all respects to be complete, accurate, adequate, consistent, coordinated and sufficient for construction. Such review, comparison, study and examination shall be a warranty that the contractor believes that the documents are complete and the Project is buildable as described except as reported.

2.4 The Contractor warrants that the Contract Time is a reasonable period for performing the Work.

2.5 The Contractor warrants to IDL that all labor furnished on this Project shall be competent to perform the tasks undertaken; materials and equipment furnished under the Contract will be new and of high quality unless otherwise required or permitted by the Contract Documents; that the Work will be complete, of high quality and free from defects not inherent in the quality required or permitted; and that the Work will strictly conform to the requirements of the Contract Documents. Any Work not strictly conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse by IDL or its representatives, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by IDL, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty shall survive the completion of the Contract and final payment to the Contractor.

ARTICLE 3
INTENT AND INTERPRETATION

With respect to the intent and interpretation of this Contract, IDL and the Contractor agree as follows:

3.1 This Contract constitutes the entire and exclusive agreement between the parties with reference to the Project, and supersedes any and all prior discussions, communications, representations, understandings, negotiations or agreements. This Contract also supersedes any bid documents.

3.2 The intent of the Contract is to include all items necessary for the proper execution and completion of the Project and anything that may be required, implied or inferred by the documents which make up this Contract, or any one or more of them, shall be provided by the Contractor for the Fixed Price Contract Amount. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all.

3.3 Nothing contained in this Contract shall create, nor be interpreted to create, private or any other relationship whatsoever between IDL and any person or entity except the Contractor is entitled to performance and enforcement of obligations under the Contract intended or necessary to facilitate its duties. Any reference to IDL or the Contractor shall be deemed to include authorized representatives.

3.4 When a word, term or phrase is used in this Contract, it shall be interpreted or construed first as defined herein; second, if not defined, according to its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning in the construction industry, according to its common and customary usage.

3.5 The words "include," "includes," or "including," as used in this Contract, shall be deemed to be followed by the phrase "without limitation."

3.6 The specification herein of any act, failure, refusal, omission, event, occurrence or condition as constituting a material breach of this Contract shall not imply that any other, non-specified act, failure, refusal, omission, event, occurrence or condition shall be deemed not to constitute a material breach of this Contract.
3.7 The Contractor shall have a continuing duty to read, examine, review, compare and contrast each of the documents which make up this Contract, shop drawings and other submittals, and shall give timely written notice to IDL of any conflict, ambiguity, error or omission which the Contractor may find with respect to these documents before proceeding with the affected Work.

3.8 The express or implied approval by IDL of any shop drawings or other submittals shall not relieve the Contractor of the continuing duties imposed hereby, nor shall any such approval be evidence of the Contractor’s compliance with this Contract. IDL makes no representation or warranty of any nature whatsoever to the Contractor concerning such documents. The Contractor again hereby acknowledges and represents that it has received, reviewed and carefully examined such documents; has found them to be complete, accurate, adequate, consistent, coordinated and sufficient for construction; and that the Contractor has not, does not and will not rely upon any representations or warranties by IDL concerning such documents, as no such representations or warranties have been or are hereby made.

3.9 In the event of any conflict among any of the documents which make up this Contract, and the interpretation shall be binding on both IDL and Contractor; provided, however, that this does not change IDL’s right to make decisions regarding Claims in accordance with Article 12 and Article 13. If no interpretation is provided, the most stringent requirement in the Contract Documents will apply.

ARTICLE 4
IDL OWNERSHIP OF DOCUMENTS

4.1 Unless otherwise agreed, the party that prepared the drawings, specifications and other documents is the author of such with all copyright, common law, statutory and other reserved rights. The Contractor may retain one (1) record set of the Drawings and Specifications and other documents but shall not own or claim any copyright in them.

4.2 The Drawings and Specifications and other documents, and any copies, are to be used solely for this Project, and not on any other project, or additions to this Project outside this Contract, without written consent of IDL; provided, however, that copies may be made of applicable portions as necessary for completion of the Work. Such copies shall include any copyright notice on the Drawings and Specifications and other documents.

4.3 Submission to or use by a regulatory body related to this Project is an acceptable use.

ARTICLE 5
CONTRACTOR’S PERFORMANCE

The Contractor shall perform all of the Work required, implied or reasonably inferable from this Contract, including the following:

5.1 Construction of the Project.

5.2 The furnishing of any required surety bonds and insurance.

5.3 The provision or furnishing, and prompt payment therefore, of labor, supervision, services, materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, fuel, heat, light, cooling or other utilities required for construction and all necessary permits, including any required elevator permits, required for the construction of the Project. Construction projects for the State of Idaho require a building permit issued by the Division of Building Safety.

5.4 The creation and submission of a detailed and comprehensive set of marked up blue or black-lined record drawings. Said record drawings shall be submitted and approved by IDL as a condition precedent to final payment to the Contractor.

ARTICLE 6
TIME FOR CONTRACTOR’S PERFORMANCE

6.1 The Contractor shall commence the performance of this Contract and shall diligently continue its performance to and until final completion of the Project. The Contractor shall accomplish Substantial Completion of the Project on or before the time indicated in Exhibit A. The period of time, including any adjustments made under this Contract, for the Contractor to reach Substantial Completion is the “Contract Time.”

6.2 The Contractor may be assessed by and be responsible to IDL for the amount indicated in Exhibit A per day for each and every calendar day of unexcused delay in achieving Substantial Completion beyond the date set forth for Substantial Completion. Any sums owed hereunder by the Contractor shall be payable not as a penalty but as liquidated
 damages, representing an estimate of delay damages likely to be sustained by IDL estimated at the time of this Contract. When IDL reasonably believes that Substantial Completion will be inexcusably delayed, IDL shall be entitled, but not required, to withhold from any amounts otherwise due the Contractor an amount then believed by IDL to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving Substantial Completion, or any part thereof, for which IDL has withheld payment, IDL shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages. IDL’s right to liquidated damages is not, and shall not be deemed to be, an exclusive remedy for delay and IDL shall retain all remedies at law or in equity for delay or other breach.

6.3 The term "Substantial Completion," as used herein, shall mean that point at which, as certified by IDL, the entire Project is at a level of completion in strict compliance with the Contract Documents, such that IDL or its designee can enjoy beneficial use or occupancy and can use or operate it in all respects for its intended purpose. If, in the reasonable determination of IDL, receipt of operation and maintenance manuals or completion of training is necessary for such beneficial use or occupancy, then there shall be no Substantial Completion until such manuals are provided or such training is completed. Partial use or occupancy of the Project shall not result in the Project being deemed substantially complete, or accepted as substantially complete, and such partial use or occupancy shall not be evidence of Substantial Completion. The Project shall not be deemed accepted until it is finally complete.

ARTICLE 7
FIXED PRICE AND CONTRACT PAYMENTS

7.1 IDL shall pay, and the Contractor shall accept, as full and complete payment for the Contractor's timely performance of its obligations hereunder, the Fixed Price Contract Amount indicated in Exhibit A according to Idaho Code 67-2302. The Fixed Price Contract Amount shall not be modified except as provided in this Contract.

7.2 Prior to submitting its first pay application, the Contractor shall prepare and present to IDL its Schedule of Values apportioning the Fixed Price Contract Amount among the different elements of the Project for purposes of periodic and final payment. The Contractor's Schedule of Values shall be presented in whatever format, with such detail, and backed up with whatever supporting information IDL reasonably requests. The Contractor shall not imbalance it's Schedule of Values nor artificially inflate any element thereof. The violation of this provision by the Contractor shall constitute a material breach of this Contract. The Contractor's Schedule of Values will be utilized for the Contractor's requests for payment but shall only be so utilized after it has been approved in writing.

7.3 IDL shall pay the Fixed Price Contract Amount to the Contractor in accordance with the procedures set forth in this Article. The Contractor shall submit a Contractor's Request for Payment, on or before the day of each month indicated in Exhibit A or otherwise agreed to, after commencement of performance, but no more frequently than once monthly. Said payment request shall be on IDL's standard form, or an alternate form approved by IDL, and shall include whatever supporting information as may be IDL. Therein, the Contractor may request payment for one hundred percent (100%) of the Work satisfactorily completed to the date of the Contractor's Request for Payment, less five percent (5%) retainage, based on the Fixed Price Contract Amount allocated on the Schedule of Values. The Contractor's Request for Payment may include only: properly provided labor, materials or equipment properly incorporated into the Project, and time and materials or equipment necessary for the Project or that will be incorporated into the Project and are properly stored at the Project site (or elsewhere if off-site storage is approved in writing by IDL). The Contractor's Request for Payment must exclude the total amount of previous payments received from IDL. Any payment on account of stored materials or equipment will be subject to the Contractor providing written proof that IDL has title to such materials or equipment and that they are fully insured against loss or damage. Each such Contractor’s Request for Payment shall be signed by the Contractor and its submission shall constitute the Contractor's affirmative representation that the quantity of Work has reached the level for which payment is requested; that the Work has been properly installed or performed in strict compliance with the Contract; that all Work for which IDL has previously paid is free and clear of any lien, claim or other encumbrance of any person whatsoever; and that the Contractor knows of no reason why payment should not be made as requested. As a condition precedent to payment, the Contractor shall, if required by IDL, furnish to IDL properly executed waivers or releases, in a form acceptable to IDL, from all subcontractors, materialmen, suppliers or others having any claims or alleged claims, wherein said subcontractors, materialmen, suppliers or others shall acknowledge receipt of all sums due pursuant to all prior Contractor's Requests for Payment, and waive and relinquish any rights or other claims relating to the Project or Project site. The submission by the Contractor of the Contractor's Request for Payment also constitutes the Contractor's affirmative representation that, upon payment of the Contractor's Request for Payment submitted, title to all Work included in such payment shall be vested in IDL.

Thereafter, IDL shall review the Contractor's Request for Payment and may also review the Work at the Project site or elsewhere to determine whether the quantity and quality of the Work are as represented in the Contractor's Request for Payment and as required by this Contract. IDL shall approve in writing the amount which is properly owing to the Contractor and such approval is required before IDL shall have any payment obligation. IDL may withhold such approval, in whole or
in part, as necessary to protect IDL if it reasonably believes that the quantity or quality of the Work is not as represented in the Contractor's Request for Payment or is not in strict conformance to the Contract Documents.

7.4 IDL shall make payment to the Contractor according to Idaho Code 67-2302 following receipt by IDL Contractor's Request for Payment. The amount of each such payment shall be the amount approved for payment by the less such amounts, if any, otherwise owing by the Contractor to IDL or which IDL shall have the right to withhold as authorized by this Contract. The approval of the Contractor's Request for Payment shall not preclude IDL from the exercise of any of its rights it may have in this Contract, at law or in equity, as set forth in Paragraph 7.8 hereinafter.

7.5 Off-site storage will not be approved at locations more than thirty (30) miles from the Project site or outside the State of Idaho and any payment for any off-site storage is subject to the following:

1. The Contractor must provide at least thirty (30) days’ advance written notice of its request to store off-site. Such notice must include a description of the type, quantities, locations and values of materials involved for the next billing cycle. All invoices must indicate the type, quantities and value of materials or equipment for which payment is requested;

2. All materials stored off-site must be segregated and clearly marked with the IDL Project number and as being the “Property of the State of Idaho;”

3. IDL’s Field Representative must have unrestricted access to the stored materials during all business hours and may physically inventory all invoiced materials and equipment and may physically inspect the storage conditions;

4. The Contractor must provide written Consent of Surety to off-site storage of materials and equipment and to payment for such materials and equipment prior to incorporation in the Work. Consent must be from the Surety. Consent of local broker or agent is not acceptable;

5. The Contractor must maintain and must provide, upon request, a current log of stored materials and equipment, which reflects when materials and equipment are used or added; and

6. The Contractor must obtain and maintain all risk property insurance at replacement cost, with the State of Idaho listed as loss payee on all materials and equipment stored off-site and in transit.

7.6 When payment is received from IDL, the Contractor shall immediately pay all subcontractors, materialmen, laborer and suppliers the amounts they are due for the Work covered by such payment. The Contractor shall not withhold from a subcontractor or supplier more than the percentage withheld from a payment certificate for the subcontractor’s or supplier’s portion of the Work. In the event IDL becomes informed that the Contractor has not paid a subcontractor, materialmen, laborer or supplier as provided herein, IDL shall have the right, but not the duty, to issue future checks and payment to the Contractor of amounts otherwise due hereunder naming the Contractor and any such subcontractor, materialmen, laborer or supplier as joint payees. Such joint check procedure, if employed by IDL, shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to commit IDL to repeat the procedure in the future.

7.7 Payment to the Contractor, utilization of the Project for any purpose by IDL, or any other act or omission by IDL shall not be interpreted or construed as an acceptance of any Work of the Contractor not strictly in compliance with this Contract.

7.8 IDL shall have and be entitled to the right to refuse to make any payment, including by reducing payment under any Contractor's Request for Payment, and, if necessary, may demand the return of a portion or all of an amount previously paid to the Contractor for reasons that include the following:

1. The quality of the Contractor's work, in whole or part, is not in strict accordance with the requirements of this Contract or identified defective work, including punch list work, is not remedied as required by the Contract Documents;

2. The quantity of the Contractor's work, in whole or in part, is not as represented in the Contractor's Request for Payment or otherwise;

3. The Contractor's rate of progress is such that, in IDL's opinion, Substantial Completion or final completion, or both, may be inexcusably delayed or that IDL will incur additional costs or expense related to repeated Substantial Completion or final completion inspections through no fault of IDL;

4. IDL reasonably believes that the Contractor has failed to use Contract funds, previously paid the Contractor
by IDL, to pay Contractor's project-related obligations, including subcontractors, laborers and material and equipment suppliers;

.5 There are claims made or it seems reasonably likely that claims will be made, against IDL;

.6 The Contractor has caused a loss or damage to IDL or another contractor;

.7 IDL reasonably believes that the Project cannot be completed for the unpaid balance of the Fixed Price Contract Amount or IDL reasonably believes that the Project cannot be completed within the Contract Time and that the unpaid balance of the Fixed Price Contract Amount would be inadequate to cover the cost of actual or liquidated damages for the anticipated delay;

.8 The Contractor fails or refuses to perform any of its obligations to IDL; or

.9 The Contractor fails to pay taxes as required by Title 63, Chapter 15, Idaho Code.

In the event that IDL makes written demand upon the Contractor for amounts previously paid by IDL as contemplated in Paragraph 7.8, the Contractor shall promptly comply with such demand.

7.9 If IDL, without cause, fails to pay the Contractor any amounts due and payable sixty (60) days after those amounts are due pursuant to Paragraph 7.4, the Contractor shall have the right to cease the Work until receipt of proper payment. Contractor must first provide written notice to IDL of the Contractor's intent to cease the Work ten (10) days prior to stopping the Work under this Paragraph.

7.10 When Contractor considers Substantial Completion has been achieved, the Contractor shall notify IDL and in writing and shall furnish a listing of those matters yet to be finished. IDL will thereupon conduct an inspection to confirm that the Work is, in fact, substantially complete. Upon its confirmation that the Contractor's work is substantially complete, the Contractor will so notify IDL will therein set forth the date of Substantial Completion. IDL and the Contractor must accept the date of Substantial Completion in writing. Guarantees and warranties required by this Contract shall commence on the date of Substantial Completion. At the Contractor's Request for Payment following Substantial Completion, IDL shall pay the Contractor an amount sufficient to increase total payments to the Contractor to ninety-five percent (95%) of the Fixed Price Contract Amount, less any liquidated damages, less the reasonable costs as determined by IDL for completing all incomplete work, correcting and bringing into conformance all defective and nonconforming work, and handling any outstanding or potential claims. If the IDL determines that the Contractor has made or is making satisfactory progress on any uncompleted portions of the Work, IDL may, at its discretion, release a portion of the retainage to the Contractor prior to the actual final completion of the conditions set forth in Paragraph 7.13. It is the intent of the parties that the Project will be accepted only in total (at Substantial Completion and final completion) and not in phases unless provided for in Exhibit A. Any acceptance other than in total shall require written agreement of IDL and Contractor.

7.11 When Contractor considers the Project is at final completion, it shall notify IDL. Thereupon, the IDL will perform a final inspection of the Project. If the IDL confirms that the Project is complete in full accordance with the Contract Documents and that the Contractor has performed all of its obligations to IDL, IDL will furnish a final approval for payment to IDL certifying to IDL that the Project is complete and the Contractor is entitled to the remainder of the unpaid Fixed Price Contract Amount, less any amount withheld pursuant to this Contract.

7.12 If the Contractor fails to achieve final completion within a reasonable number of days as established by IDL from the date of Substantial Completion, the Contractor may be assessed and be responsible to IDL for fifty percent (50%) of the daily amount of liquidated damages as established pursuant to Paragraph 6.2 and Exhibit A, per day for each and every calendar day of unexcused delay in achieving final completion beyond the date established for final completion of the Work. Any sums due and payable hereunder by the Contractor shall be payable not as a penalty but as liquidated damages representing an estimate of delay damages likely to be sustained by IDL, estimated at or before the time of executing this Contract. When IDL reasonably believes that final completion will be inexcusably delayed, IDL may withhold from any amounts otherwise due the Contractor an amount then believed by IDL to be adequate to recover liquidated damages applicable to such delays. If and when the Contractor overcomes the delay in achieving final completion, or any part thereof, for which IDL has withheld payment, IDL shall promptly release to the Contractor those funds withheld, but no longer applicable, as liquidated damages. IDL's right to liquidated damages is not, and shall not be deemed to be, an exclusive remedy for delay and IDL shall retain all remedies at law or in equity for delay or other breach.

7.13 As a condition precedent to final payment, the Contractor must furnish IDL, in the form and manner required by IDL the following:

.1 An affidavit that all of the Contractor's obligations to subcontractors, laborers, equipment or material suppliers or other third parties in connection with the Project have been paid or otherwise satisfied;
A release by the Contractor of all Claims it has or might have against IDL or IDL's property (Exhibit E);

Contractor’s Affidavit of Debts and Claims (AIA Document G706);

Consent of Surety to final payment (AIA Document G707);

Confirmation of all required training, product warranties, operating manuals, instruction manuals and other record documents, drawings and things customarily required of the Contractor; and


7.14 IDL shall, subject to its rights set forth in this Contract, make final payment of all sums due the Contractor within sixty (60) days of the IDL’s execution of a final approval for payment and receipt of documentation required by Paragraph 7.13, whichever is received later.

ARTICLE 8
INFORMATION AND MATERIAL SUPPLIED BY IDL

8.1 The Administrator of Support Services of IDL or his designee shall be the sole representative of IDL.

8.2 IDL will assign a Project Manager and a Field Representative to represent IDL, identified in Exhibit B. IDL’s Field Representative’s duties, responsibilities and limitations of authority are in accordance with IDL’s policies and procedures.

8.3 IDL shall furnish to the Contractor, prior to the execution of this Contract, any and all written and tangible material in its possession concerning conditions below ground at the site of the Project. Such written and tangible material is furnished to the Contractor only in order to make complete disclosure of such material as being in the possession of IDL and for no other purpose. By furnishing such material, IDL does not represent, warrant or guarantee its accuracy, either in whole in part, implicitly or explicitly.

8.4 IDL will secure and pay for all required easements, the plan check fee required by the Division of Building Safety, conditional use permits and any other permits and fees specifically indicated in the Contract Documents to be secured and paid for by IDL.

8.5 IDL will provide the Contractor one (1) copy of this complete Contract and the number of sets of Drawings and Project Manuals (including Specifications) as indicated in Exhibit A. The Contractor may purchase additional copies, at its expense.

ARTICLE 9
STOP WORK ORDER

9.1 In the event the Contractor fails or refuses to perform the Work as required or fails or refuses to correct nonconforming Work, IDL may instruct the Contractor to stop Work in whole or in part. Upon receipt of such instruction, the Contractor shall immediately stop as instructed by IDL and shall not proceed further until the cause for IDL’s instructions has been corrected, no longer exists or IDL instructs that the Work may resume. In the event IDL issues such instructions to stop, and in the further event that the Contractor fails and refuses within seven (7) days of receipt of same to provide adequate assurance to IDL that the cause of such instructions will be eliminated or corrected, then IDL shall have the right, but not the obligation, to carry out the Work with its own forces or with the forces of another contractor, and the Contractor shall be fully responsible and liable for the costs of performing such Work by IDL. Without limiting what else might constitute nonconforming Work, the existence of a gross safety violation or other situation or condition that creates, or could imminently create, a threat of serious harm to persons or property, shall constitute nonconforming Work and any order to stop the Work issued for such reason shall not be considered an interference with the Contractor’s performance of the Work or its means and methods. The rights set forth herein are in addition to, and without prejudice to, any other rights or remedies IDL may have against the Contractor.

9.2 Any order to stop the Work issued pursuant to Paragraph 9.1 shall not be used to justify any Claim by the Contractor for additional time or money.
ARTICLE 10
DUTIES, OBLIGATIONS AND RESPONSIBILITIES OF THE CONTRACTOR

In addition to any and all other duties, obligations and responsibilities of the Contractor set forth in this Contract, the Contractor shall have and perform the following duties, obligations and responsibilities to IDL:

10.1 The Contractor's continuing duties set forth in Paragraph 3.7 are by reference hereby incorporated in this Paragraph 10.1. The Contractor shall not perform Work without adequate plans and specifications or, as appropriate, approved shop drawings or other submittals. If the Contractor performs Work knowing or believing it involves an error, inconsistency or omission in the Contract without first providing written notice to IDL, the Contractor shall be responsible for such Work and shall pay the cost of correcting same.

10.2 The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing Work. Errors, inconsistencies or omissions discovered shall be reported to IDL and IDL's Field Representative immediately. Such examination, review and comparison shall be a warranty that the Contract Documents are complete and the Project is buildable as described except as reported. Reported errors, inconsistencies or omissions will constitute a request for an interpretation by IDL and may constitute a claim pursuant to Article 12 hereof where appropriate.

10.3 The Contractor shall ensure that all Work shall strictly conform to the requirements of this Contract.

10.4 The Work shall be strictly supervised, the Contractor bearing full responsibility for any and all acts or omissions of those engaged in the Work on behalf of the Contractor.

10.5 All labor furnished on this Project shall be competent to perform the tasks undertaken; materials and equipment furnished under the Contract will be new and of high quality unless otherwise required or permitted by the Contract Documents; the Work will be complete, of high quality and free from defects not inherent in the quality required or permitted; and the Work will strictly conform to the requirements of the Contract Documents. Any Work not strictly conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective.

10.6 Except as provided in Paragraph 8.4, the Contractor shall secure or provide and pay for all licenses, permits required by the Idaho Division of Building Safety, governmental approvals and inspections, connections for outside services for the use of municipal or private property for storage of materials, parking, utility services, temporary obstructions, enclosures or opening and patching of streets, and for all other facilities and services necessary for proper execution and completion of the Project.

10.7 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities bearing on performance of the Work.

10.8 The Contractor shall employ and maintain at the Project site only competent supervisory personnel. Key supervisory personnel assigned by the Contractor to this Project are as listed in Exhibit B.

10.9 The Contractor shall employ a competent superintendent and necessary assistants, as needed, to oversee execution of the Work. The superintendent shall be in attendance at the Project site during the progress of the Work. The superintendent and any project manager, if the Contractor utilizes a project manager, shall be reviewed and must be approved by IDL, and neither shall be changed except with the consent of IDL, unless the superintendent and/or project manager cease to be employed by the Contractor. Under this circumstance, any new superintendent or new project manager must be satisfactory to IDL. Such approval shall not be unreasonably withheld. The superintendent and any project manager shall represent the Contractor and all communications given to the superintendent or project manager are deemed given to the Contractor.

10.10 So long as the individuals named above remain actively employed or retained by the Contractor, they shall perform the functions indicated next to their names unless IDL agrees to the contrary in writing. In the event one or more individuals not listed in Paragraph 10.9 subsequently assumes one or more of those functions listed in Paragraph 10.9, the Contractor shall be bound by the provisions of this paragraph as though such individuals had been listed in Paragraph 10.9.

10.11 The Contractor shall provide to IDL a milestone schedule for completing the Work within the Contract Time. Such schedule shall be in a form specified in Division 1 of the Specifications and be acceptable to IDL. The schedule must be submitted to and accepted by the IDL prior to the first request for payment unless required earlier by Division 1 of the Specifications. The Contractor's milestone schedule must be updated as required by IDL to reflect conditions encountered and shall apply to the total Project. The Contractor's revisions to the schedule shall not constitute a waiver of the requirement to complete the Project in the time allowed by the Contract, unless additional time for performance has been allowed.
pursuant to a Change Order. Any changes in milestone begin or end dates must be furnished to IDL. Strict compliance with
the requirements of this Paragraph shall be a condition precedent to the payment to the Contractor and failure by the
Contractor to strictly comply with said requirements shall constitute a material breach of this Contract.

10.12 Once a month, or at intervals as required by IDL, the Contractor shall advise IDL and of the status of the Work (in
duplicate) on the current milestone schedule. If any project milestone dates are not met on schedule, the Contractor shall
immediately advise IDL in writing of the proposed action to bring the Work on schedule. The Contractor shall also submit a
detailed short term schedule, as required by Division 1 of the Specifications, each month. This short term schedule shall
include a description of current and anticipated problem areas, delaying factors and their impact, and explanation of
corrective action taken or proposed. If the Work is behind schedule, the Contractor shall indicate what measures it will take
to put the Work back on schedule.

10.13 If the Work is not progressing through no fault of IDL, as shown on the milestone schedule, and IDL does not believe
the Contractor's proposed action to bring the Work on schedule is adequate, then the Contractor shall be deemed in default
under this Contract and the progress of the Work shall be deemed unsatisfactory. In such event, IDL, at its discretion, may
require the Contractor to work such additional time over regular hours, including Saturdays, Sundays and holidays, without
additional cost to IDL to bring the Work on schedule.

10.14 The Contractor shall keep an updated copy of the Drawings and Project Manual (including Specifications) and
Addenda at the site. Additionally, the Contractor shall keep a current submittal schedule and a copy of approved shop
drawings and other submittals. All of these items shall be available to IDL at all regular business hours. Upon final completion
of the Work, all of these items must be updated by the Contractor and provided to the IDL and shall become the property of
IDL.

10.15 The Contractor shall carefully review and inspect for compliance with the Contract Documents, the shop drawings
and other submittals (including product data and samples) required by the Contract Documents and shall submit to the IDL
only submittals approved in accordance with this section. Such review and submittal shall be done promptly and in a
sequence that will not delay its Work under this Contract or the activities of IDL or of separate contractors. Shop drawings
and other submittals from the Contractor do not constitute a part of the Contract. The Contractor shall not do any work
requiring shop drawings or other submittals unless IDL has verified compliance in writing. All Work requiring verified shop
drawings or other submittals shall be done in strict compliance with such approved documents. However, verification of
compliance by IDL shall not be evidence that Work installed pursuant thereto conforms with the requirements of this
Contract. IDL shall have no duty to review submittals that are not Contractor approved, partial submittals or incomplete
submittals. The Contractor shall maintain a submittal log which shall include, at a minimum, the date of each submittal, the
date of any re-submittal, the date of any approval or rejection and the reason for any rejection.

10.16 The Contractor shall maintain the Project site in a reasonably clean condition during performance of the Work. Upon
final completion, the Contractor shall thoroughly clean the Project site of all debris, trash and excess materials or equipment.

10.17 At all times relevant to this Contract, IDL shall have a right to enter the Project site and the Contractor shall allow
IDL to review or inspect the work without formality or other procedure.

10.18 The presence or duties IDL's personnel or representatives at the construction site, does not make any of them
responsible for those duties that belong to the Contractor or other entities and does not relieve the Contractor or any other
entities of their obligations, duties and responsibilities, including any obligation or requirement to have or to implement any
health or safety plans or precautions. Except as provided in Paragraph 10.9, IDL's personnel have no authority to exercise
any control over any Contractor or other entities or their employees in connection with their work or any health or safety
precautions and have no duty for inspecting, noting, observing, correcting or reporting on health or safety deficiencies of
the Contractor or other entities or any other persons at the site except their own personnel. The presence of IDL's personnel
at a construction site is for the purpose of providing to IDL a greater degree of confidence that the completed Work will
conform to the Contract Documents and that the integrity of the design concept as reflected in the Contract Documents has
been implemented and preserved by the Contractor. For this Contract only, construction sites include places of manufacture
for materials incorporated into the construction Work and Contractor includes manufacturers of materials incorporated into
the construction Work.

10.19 Unless otherwise provided in the Construction Documents, on all projects where the Fixed Price Contract Amount
is over $1,000,000, the Contractor shall schedule and perform the Work in accordance with a Critical Path Method ("CPM")
to indicate the rate of progress and practical order of the Project. The purpose of this scheduling requirement is to assure
adequate planning, coordination and execution of the Work. The schedule shall indicate the dates for starting and
completing major work activities, project events, major equipment, material and equipment submittals and delivery of major
items. Project activities having critical time restraints on action, required by IDL, shall be shown as scheduled milestones.
The Contractor's schedule shall demonstrate the order, interdependence and sequence of activities. Critical paths shall be
highlighted or distinguished. The schedule shall include all the dates specified in the Contract for Substantial Completion

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and final completion of the Work.

The time limit set forth in the Contract for Substantial Completion and final completion must govern; the schedule must be adjusted to meet these dates. Schedule float shall belong to the Project. The Contractor shall submit to IDL a CPM schedule within three (3) weeks after award of the Contract and maintain such schedule on a current basis in accordance with the Contract Documents.

ARTICLE 11
INDEMNITY

11.1 Contractor shall indemnify, defend, and save harmless IDL, its officers, agents, employees, and volunteers from and against any and all liability, claims, damages, losses, expenses, actions, settlements, attorneys’ fees, and suits whatsoever caused by, arising out of, or in connection with Contractor’s acts or omissions under this Agreement or Contractor’s failure to comply with any state or federal statute, law, regulation, or rule.

11.2 Upon receipt of IDL’s tender of indemnity and defense, Contractor shall immediately take all reasonable actions necessary, including, but not limited to, providing a legal defense for IDL, to begin fulfilling its obligation to indemnify, defend, and save harmless IDL. Contractor’s indemnification and defense liabilities described herein shall apply regardless of any allegations that a claim or suit is attributable in whole or in part to any act or omission of IDL under this Agreement. However, if it is determined by a final judgment that IDL’s negligent act or omission is the sole proximate cause of a suit or claim, IDL shall not be entitled to indemnification from Contractor with respect to such suit or claim, and IDL, in its discretion, may reimburse Contractor for reasonable defense costs attributable to the defense provided by any Special Deputy Attorney General appointed pursuant to section 11.3.

11.3 Any legal defense provided by Contractor to IDL under this section must be free of any conflicts of interest, even if retention of separate legal counsel for IDL is necessary. Any attorney appointed to represent IDL must first qualify as and be appointed by the Attorney General of the State of Idaho as a Special Deputy Attorney General pursuant to Idaho Code Sections 67-1401(13) and 67-1409(1).

ARTICLE 12
CLAIMS

12.1 For purposes of this Contract, a “Claim” means a demand by the Contractor to IDL, or by IDL to the Contractor, for a change in the Fixed Price Contract Amount, an extension of the Contract Time, an adjustment to or interpretation of the Contract terms, or other relief with respect to the terms of the Contract, which demand the Contractor or IDL asserts is required or allowed under the Contract Documents and which the Contractor and IDL have previously discussed and failed to agree upon.

12.2 For the Claim to be considered, it must meet the following requirements:

.1 The Claim must be in writing;

.2 The Claim by the Contractor must be signed by an authorized representative of the Contractor, and the Claim by IDL must be signed by an authorized representative of IDL;

.3 The Claim by the Contractor must be provided to IDL. The Claim by IDL must be provided to the Contractor;

.4 The Claim must be made no later than ten (10) days after the event or first appearance of the circumstance giving rise to the Claim;

.5 The Claim must describe in detail all known facts and circumstances that the Contractor or IDL asserts support the Claim;

.6 The Claim must refer to the provision(s) of the Contract Documents that the Contractor or IDL asserts support the Claim;

.7 The Contractor or IDL must provide all documentation or other information to substantiate the Claim; and

.8 The Contractor or IDL must continue its performance under this Contract pending the resolution of any Claim; provided, however, that the Contractor shall not perform any additional or changed work not otherwise authorized in accordance with the Contract Documents.

12.3 The failure by the Contractor to meet any of the requirements of Paragraph 12.2 shall constitute a complete waiver by the Contractor of any rights arising from or related to the Claim. Similarly, the failure by IDL to meet any of the
requirements of Paragraph 12.2 shall constitute a complete waiver by IDL of any rights arising from or related to the Claim.

12.4 If the Claim is made based on concealed or unknown site conditions, the following shall apply in addition to all other provisions applicable to the Claim:

.1 The condition must have been previously concealed and unknown or of a type not ordinarily encountered in the general geographic location of the Project and must not have been reasonably susceptible to discovery; and

.2 The Contractor shall notify IDL of the condition and shall not disturb the condition until IDL have observed it or have waived in writing the right to observe it.

12.5 If the Claim by the Contractor is for an increase in the Fixed Price Contract Amount, the following shall apply in addition to all other provisions applicable to the Claim:

.1 Any increase in the Fixed Price Contract Amount shall be strictly limited to the direct costs incurred by the Contractor and shall not include any other costs, indirect or other, including any costs for or related to lost productivity, profit, home office overhead and any other overhead, legal fees, claim preparation, any matter previously resolved by a change order, equipment costs, costs related to the services of a project manager unless the project manager was required full time by IDL or the Contract Documents, any costs associated with the failure to complete the Work early or in advance of the date required by the Contract Documents, it being specifically agreed to by the parties that there is no intention to have the Eichleay or other similar formula applicable to this Contract nor shall this Contract be deemed to be subject to any such formula; and

.2 IDL shall have no liability for, and the Fixed Price Contract Amount shall not be increased related to, any claims of third parties, including subcontractors, unless and until the liability of the Contractor for such has been established in a court of competent jurisdiction and any such liability of IDL shall be limited in the same manner as described in subparagraph 12.5.1.

12.6 If the Claim by IDL is for a change in the Fixed Price Contract Amount, all other applicable provisions to the Claim apply.

12.7 If the Claim by the Contractor is for an extension of the Contract Time, the following shall apply in addition to all other provisions applicable to the Claim:

.1 The Contractor has been delayed in its performance by an act or omission of IDL and through no fault of the Contractor;

.2 The Contractor has been delayed in its performance by unusually severe weather that could not reasonably have been anticipated or by another event not within its reasonable control;

.3 At the time it occurs or during its occurrence, the delay will preclude completion of the Project in the time required by the Contract Documents; and

.4 Any extension of the Contract Time shall be the Contractor’s sole and exclusive remedy for any delay except a delay caused by the active interference of IDL with the Contractor’s performance which active interference continues after written notice to IDL. IDL’s exercise of any of its rights or remedies under this Contract, including ordering changes in the Work, directing suspension, rescheduling or correction of the Work, do not constitute active interference.

12.8 If a Claim is made based on an error, inconsistency or omission in the Contract that was reasonably susceptible to discovery by the Contractor and was not reported in accordance with Paragraph 2.3, that Claim shall be denied.

ARTICLE 13
RESOLUTION OF CLAIMS

13.1 All Claims made in accordance with Article 12 shall be reviewed and evaluated by the IDL. If the Claim is not made in strict accordance with Article 12, it shall be rejected as waived. Any failure by IDL to reject the Claim for failure to meet the requirements of Article 12 is not binding on IDL and IDL may reject the Claim for such failure.

13.2 No later than seven (7) days from receipt of the Claim by IDL, it shall:

.1 Make a written request to the Contractor or IDL for more data to support the Claim;

.2 Attempt to facilitate resolution of the Claim through informal negotiations; or
If the Claim is by the Contractor, make a written recommendation to IDL, with a copy to the Contractor, that IDL reject or approve all or part of the Claim and state the reasons for the recommendation. If the Claim is by IDL, make a written recommendation to the Contractor, with a copy to IDL, that the Contractor reject or approve all or part of the Claim and state the reasons for the recommendation.

If the IDL requests more data from the Contractor under subparagraph 13.2.1, the Contractor or IDL shall respond no later than seven (7) days from receipt of such request, and provide additional data, provide a date certain by which additional data will be provided, or state that it will not provide additional data. Upon receipt of data, if any, in accordance with this section, IDL will complete the evaluation of the Claim. Failure to respond at all or failure to provide data by the date specified in the response to the request shall result in the Claim being evaluated based on the information in the IDL’s possession.

In evaluating the Claim, IDL may consult with the Contractor, or other persons with knowledge or expertise that may assist the IDL in its evaluation.

No later than fourteen (14) days after IDL’s recommendation regarding the Contractor’s Claim, IDL shall, in writing, notify the Contractor of its decision regarding the Claim. No later than fourteen (14) days after receipt by the Contractor of the recommendation regarding IDL’s Claim, the Contractor shall, in writing, notify IDL and of its decision regarding the Claim.

IDL’s decision regarding the Contractor’s Claim is binding on IDL and the Contractor but is subject to mediation in accordance with this Contract, and the Contractor’s decision regarding IDL’s Claim is binding on IDL and the Contractor but is subject to mediation in accordance with this Contract.

ARTICLE 14
SUBCONTRACTORS

A document shall be completed and submitted upon execution of this Contract and those subcontractors named therein shall match those subcontractors named in the Contractor’s bid unless otherwise agreed to in writing by IDL. Also upon execution of this Contract by the Contractor, the Contractor shall identify to IDL, in writing, those parties intended as subcontractors on the Project not otherwise named. IDL shall, in writing, state any objections IDL may have to one or more of such subcontractors. The Contractor shall not enter into a subcontract with an intended subcontractor with reference to whom IDL objects. All subcontracts shall afford the Contractor rights against the subcontractor which correspond to those rights afforded to IDL against the Contractor herein, including those rights of Contract Termination as set forth in this Contract. All subcontractors shall, throughout the duration of this Contract, be properly licensed as Idaho Public Works Contractors.

The Contractor conditionally assigns each of its subcontracts related to the Project to IDL. All subcontracts between the Contractor and the subcontractors shall obligate the subcontractor to such conditional assignment. Upon a Termination by IDL for cause under Paragraph 19.1, IDL may accept such conditional assignment by written notification to the applicable subcontractor and to the Contractor. Such acceptance is subject to the rights of the Surety, if any, relating to the Contract.

ARTICLE 15
CHANGES IN THE WORK

General

Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article and elsewhere in the Contract Documents; and

Changes in the Work shall be performed under applicable provisions of the Contract Documents and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

Change Orders

A “Change Order” is a written instrument prepared by the Contractor and signed by IDL, and Contractor, stating their agreement upon: a change in the work, any adjustment in the Fixed Price Contract Amount and any adjustment in the Contract Time;

Methods used in determining adjustments to the Fixed Price Contract Amount may include those listed in subparagraph 15.3.4;
The amount allowed for overhead and profit on any Change Order is limited to the amounts indicated in subparagraph 15.3.11;

Any Change Order prepared, including those arising by reason of the parties’ mutual agreement or by mediation, shall constitute a final and full settlement of all matters relating to or affected by the change in the Work, including all direct, indirect and consequential costs associated with such change and any and all adjustments to the Fixed Price Contract Amount and Contract Time. In the event a Change Order increases the Fixed Price Contract Amount, the Contractor shall include the Work covered by such Change Order in the Contractor’s Request for Payment as if such Work were originally part of the Project and Contract Documents; and

By the execution of a Change Order, the Contractor agrees and acknowledges that it has had sufficient time and opportunity to examine the change in Work which is the subject of the Change Order and that it has undertaken all reasonable efforts to discover and disclose any concealed or unknown conditions which may to any extent affect the Contractor’s ability to perform in accordance with the Change Order. Aside from those matters specifically set forth in the Change Order, IDL shall not be obligated to make any adjustments to either the Fixed Price Contract Amount or Contract Time by reason of any conditions affecting the change in Work addressed by the Change Order, which could have reasonably been discovered or disclosed by the Contractor’s examination.

15.3 Construction Change Directive (CCD)

A “Construction Change Directive” is a written order prepared by IDL and signed by IDL and the Contractor directing a change in the Work prior to agreement on adjustment, if any, in the Fixed Price Contract Amount or Contract Time or both. IDL may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract, consisting of additions, deletions or other revisions, the Fixed Price Contract Amount and Contract Time being adjusted accordingly;

A Construction Change Directive, within limitations, may also be used to incorporate minor changes in the Work agreed to by IDL’s Field Representative and the Contractor’s superintendent or project manager. The limits of these representatives’ authority with regard to Construction Change Directives shall be documented in writing by the IDL and Contractor;

A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order;

If the Construction Change Directive provides for an adjustment to the Fixed Price Contract Amount, the adjustment shall be based on one (1) of the following methods:

- Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- Unit prices stated in the Contract Documents or subsequently agreed upon;
- Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- As provided in subparagraph 15.3.7;

Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the IDL in writing within forty-eight (48) hours of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Fixed Price Contract Amount or Contract Time;

A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Fixed Price Contract Amount and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be incorporated into a future Change Order;

If the Contractor does not respond promptly or disagrees with the method for adjustments in the Fixed Price Contract Amount or Contract Time, the method and the adjustment shall be determined by IDL on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Fixed Price Contract Amount, an allowance for overhead and profit in accordance with subparagraph 15.3.11. In such case of an increase in Fixed Price Contract Amount, and also under subparagraph 1653.4, the Contractor shall keep and present, in such form as the IDL may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this subsection shall be limited to the following:
Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom and workers' compensation insurance;

Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

Costs of permit fees and sales, use or similar taxes related to the Work; and

Additional costs of supervision and field office personnel directly attributable to the change;

The amount of credit to be allowed by the Contractor to IDL for a deletion or change which results in a net decrease in the Fixed Price Contract Amount shall be for the actual net cost of the decrease, confirmed by the IDL. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change;

Pending final determination of the total cost of a Construction Change Directive to IDL, amounts not in dispute for such changes in the Work shall be included in the Contractor’s Request for Payment accompanied by a Change Order indicating the parties’ agreement with part or all of such costs;

When IDL and Contractor agree with the determination concerning the adjustments in the Fixed Price Contract Amount and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order; and

For purposes of subparagraphs 15.2.3 and 15.3.7, the allowance for combined overhead, profit, bonds and insurance shall be limited as follows, unless otherwise provided in the Contract Documents:

For total changes of $10,000 or less in direct cost, the amount of overhead, profit, bonds and insurance for the Contractor and all subcontractors of any tier combined shall not exceed twenty percent (20%) of direct costs;

For total changes exceeding $10,000 in direct cost, the amount allowed for overhead, profit, bonds and insurance for the Contractor and all subcontractors of any tier combined shall not exceed fifteen percent (15%) of direct costs; or

The Contractor will determine the apportionment between the Contractor and its subcontractors of allowable amounts of overhead, profit, bonds and insurance.

IDL will have authority to order minor changes in the Work not involving adjustment in the Fixed Price Contract Amount or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on IDL and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 16
DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK

If the Contractor covers, conceals or obscures its Work in violation of this Contract or in violation of a directive or request from IDL such Work shall be uncovered and displayed for IDL's or inspection upon request and shall be reworked at no cost in time or money to IDL.

If any of the Work is covered, concealed or obscured in a manner not addressed by Paragraph 16.1, it shall, if directed by IDL, be uncovered and displayed for IDL's inspection. If the uncovered Work conforms strictly with this Contract, the costs incurred by the Contractor to uncover and subsequently replace such Work shall be borne by IDL. Otherwise, such costs shall be borne by the Contractor.

The Contractor shall, at no cost in time or money to IDL, promptly correct Work (fabricated, installed or completed) rejected by IDL as defective or that fails to conform to this Contract whether discovered before or after Substantial Completion. Additionally, the Contractor shall reimburse IDL for all testing, inspections and other expenses incurred as a result thereof.

In addition to any other warranty obligations in this Contract, the Contractor shall be specifically obligated to correct, upon written direction from IDL, any and all defective or nonconforming Work for a period of twelve (12) months following
16.5 IDL may, but shall in no event be required to, choose to accept defective or nonconforming Work. In such event, the Fixed Price Contract Amount shall be reduced by the lesser of: (i) the reasonable costs of removing and correcting the defective or nonconforming Work; or (ii) the difference between the fair market value of the Project as constructed and the fair market value of the Project had it not been constructed in such a manner as to include defective or nonconforming Work. If the remaining portion of the unpaid Fixed Price Contract Amount, if any, is insufficient to compensate IDL for the acceptance of defective or nonconforming Work, the Contractor shall, upon written demand from IDL, pay IDL such remaining compensation for accepting defective or nonconforming work.

ARTICLE 17
TERMINATION BY THE CONTRACTOR

17.1 The Contractor may terminate the Contract if the Work is stopped for a period of ninety (90) consecutive days through no act or fault of the Contractor or a subcontractor, sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

.1 Issuance of an order by a court or by another public authority having jurisdiction and authority which requires all Work to be stopped; or

.2 An act of government, such as a declaration of national emergency, which requires all Work to be stopped.

17.2 In such event, the Contractor shall be entitled to recover from IDL as though IDL had terminated the Contractor's performance under this Contract pursuant to Paragraph 19.3.

ARTICLE 18
IDL'S RIGHT TO SUSPEND CONTRACTOR'S PERFORMANCE

18.1 IDL may, at any time and without cause, order the Contractor, in writing, to suspend, delay or interrupt the Work in whole or in part for such period of time as IDL may determine. If IDL directs any such suspension, the Contractor must immediately comply with same.

18.2 In the event IDL directs a suspension of performance under this Article, and such suspension is through no fault of the Contractor, the Fixed Price Contract Amount and Contract Time shall be adjusted for increases in the cost and time caused by such suspension, delay or interruption to cover the Contractor's reasonable costs, actually incurred and paid, of:

.1 Demobilization and remobilization, including such costs paid to subcontractors;

.2 Preserving and protecting Work in place;

.3 Storage of materials or equipment purchased for the Project, including insurance thereon; and

.4 Performing in a later, or during a longer, time frame than that provided by this Contract.

18.3 The adjustment of the Fixed Price Contract Amount shall include an amount for a reasonable profit. The adjustment of the Fixed Price Contract Amount shall not include any amount not otherwise allowed under this Contract, including any limitations applicable to Claims. The Contractor shall provide supporting documentation related to any increase upon request of IDL. No adjustment shall be made to the extent:

.1 That performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

.2 That an equitable adjustment is made or denied under another provision of the Contract.
ARTICLE 19
TERMINATION BY IDL

IDL may terminate this Contract in accordance with the following terms and conditions:

19.1 If the Contractor does not perform the Work, or any part thereof, in accordance with the Contract Documents, or in a timely manner; does not supply adequate labor, supervisory personnel, or proper equipment or materials; fails to pay subcontractors; fails to timely discharge its obligations for labor, equipment, and materials; proceeds to disobey applicable law; or otherwise breaches this Contract, then IDL, in addition to any other rights it may have against the Contractor, may terminate the Contract and assume control of the Project site and of all materials and equipment at the site and may complete the Work. In such case, the Contractor shall not be paid further until the Work is complete. Upon such Termination, IDL may, subject to any superior rights of the Surety, take possession of the site and of all materials, equipment, tools and construction equipment and machinery thereon owned by the Contractor; accept assignment of those subcontracts conditionally assigned under Paragraph 14.2; and finish the Work by whatever reasonable method IDL may deem expedient.

19.2 When IDL terminates the Contract for cause as provided in Paragraph 19.1, the Contractor shall not be entitled to receive further payment until the Work is finished and shall only be entitled to payment for Work satisfactorily performed by the Contractor in accordance with the Contract Documents. If the costs of finishing the Work and expenses made necessary thereby, exceed the unpaid balance, the Contractor shall pay the difference to IDL. This obligation for payment shall survive termination of the Contract. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. In the event the employment of the Contractor is terminated by IDL for cause pursuant to Paragraph 19.1 and it is subsequently determined by a court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination under Paragraph 19.3 and the provisions of Paragraph 19.3 shall apply.

19.3 IDL may, at any time and for any reason, terminate this Contract. IDL shall give no less than seven (7) days' written notice of such Termination to the Contractor specifying when termination becomes effective. The Contractor shall incur no further obligations in connection with the Work and the Contractor shall stop Work when such Termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. IDL may direct the Contractor to assign the Contractor's right, title and interest under termination orders or subcontracts to IDL or its designee. The Contractor shall transfer title and deliver to IDL such completed or partially completed Work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has. When terminated pursuant to this section, the following shall apply:

1. The Contractor shall submit a Termination Claim to IDL specifying the amounts claimed due because of the Termination, together with costs, pricing or other supporting data required by IDL. Failure by the Contractor to file a Termination Claim within ninety (90) days from the effective date of termination shall be deemed a complete waiver by the Contractor of any right to any payment;

2. Before or after receipt of the Termination Claim, IDL and the Contractor may agree to the compensation, if any, due to the Contractor hereunder; and

3. If the Contractor has filed the Termination Claim but the Contractor and IDL do not agree on an amount due to the Contractor, IDL shall pay the Contractor the following amounts:

1. Unpaid Contract prices for labor, materials, equipment and other services provided or perfected prior to termination and acceptable to or accepted by IDL;

2. Reasonable costs incurred in preparing to perform the terminated portion of the Work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for direct job-site overhead and profit related to such preparation (such profit shall not include anticipated profit or consequential damages); provided, however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated loss, if any; and

3. Reasonable costs of settling and paying claims arising out of the Termination of subcontracts or orders pursuant to this Paragraph 19.3.

19.4 Costs described in subparagraphs 19.3.3.2 or 19.3.3.3 above shall not include amounts paid in accordance with other provisions hereof. In no event shall the total sum to be paid the Contractor under subparagraph 19.3.3 exceed the total Fixed Price Contract Amount, as properly adjusted, reduced by the amount of payments previously or otherwise made and by any other deductions permitted under this Contract and shall in no event include duplication of payment.

19.5 IDL is a government entity and it is understood and agreed that IDL's payments herein provided for shall be paid from Idaho State Legislative appropriations. The Legislature is under no legal obligation to make appropriations to fulfill this
Contract. This Contract shall in no way or manner be construed so as to bind or obligate IDL beyond the term of any particular appropriation of funds by IDL’s Legislature as may exist from time to time. IDL reserves the right to terminate this Contract in whole or in part (or any order placed under it) if, in its sole judgment, the Legislature of the State of Idaho fails, neglects, or refuses to appropriate sufficient funds as may be required for IDL to continue such payments, or requires any return or “give-back” of funds required for IDL to continue payments, or if the Executive Branch mandates any cuts or holdbacks in spending, or if funds are not budgeted or otherwise available, or if IDL discontinues or makes a material alteration of the program under which funds were provided. IDL shall not be required to transfer funds between accounts in the event that funds are reduced or unavailable. All affected future rights and liabilities of the parties shall thereupon cease within ten (10) calendar days after notice to the Contractor. Further, in the event of non-appropriation, IDL shall not be liable for any penalty, expense, or liability, or for general, special, incidental, consequential or other damages resulting therefrom.

ARTICLE 20
INSURANCE REQUIREMENTS

20.1 Contractor shall obtain and maintain insurance at its own expense as required herein for the duration of this Agreement, and comply with all limits, terms and conditions stipulated. Policies shall provide, or be endorse to provide, all required coverage. Contractor shall provide certificates of insurance or certified endorsements as applicable for the insurance required. Contractor shall not commence work under this Agreement until satisfactory evidence of all required insurance is provided to the State.

20.2 All insurance, except for Workers Compensation, and Professional Liability/Errors and Omissions shall be endorsed to name the State of Idaho, the State Board of Land Commissioners, and the Idaho Department of Lands as Additional Insured.

20.3 All insurance shall be with insurers rated A-, VII, or better in the latest Bests Rating Guide, and be in good standing and authorized to transact business in Idaho. The coverage provided by such policies shall be primary. Policies may contain deductibles, but such deductibles shall not be deducted from any damages due the State.

20.4 By requiring insurance herein, the State does not represent that coverage and limits will necessarily be adequate to protect Contractor, and such coverage and limits shall not be deemed as a limitation on Contractor's liability under the indemnities granted to the State.

20.5 Contractor shall maintain insurance in amounts not less than the following;

.1 Commercial General and Umbrella Liability Insurance

Contractor shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a combined single limit of not less than $1,000,000 each occurrence, $2,000,000 aggregate. The CGL shall be written on standard ISO occurrence form (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury, advertising injury, and liability assumed under an insured contract including the tort liability of another assumed in a business contract.

.3 Automobile Insurance

The Contractor shall maintain automobile liability insurance which shall provide a minimum $1,000,000 combined single limit per occurrence and shall include coverage for owned, non-owned, and hired automobiles.

.4 Worker’s Compensation Insurance

The Contractor shall maintain worker’s compensation insurance in amounts as required by statute in all states in which the Contractor performs work, and employer’s liability insurance with a limit of $100,000 Bodily Injury by Accident each Accident; $100,000 Bodily Injury by Disease – each employee; and $500,000 Bodily Injury by Disease – Policy Limit.

20.6 The Contractor shall require all subcontractors utilized in performance of this Agreement to provide certificates of insurance to the State evidencing insurance coverage with the required additional insured endorsements as set forth in the preceding paragraphs.
ARTICLE 21
PROJECT RECORDS

21.1 All documents relating in any manner whatsoever to the Project, or any designated portion thereof, which are in the possession of the Contractor or any subcontractor of the Contractor, shall be made available to IDL for inspection and copying upon written request. Furthermore, said documents shall be made available, upon request by IDL, to any state, federal or other regulatory authority and any such authority may review, inspect and copy such records. Said records include all drawings, plans, specifications, submittals, correspondence, minutes, memoranda, tape recordings, videos or other writings or things which document the Project, its design and its construction. Said records expressly include those documents reflecting the cost of construction to the Contractor. The Contractor shall maintain and protect these documents for no less than four (4) years after final completion or termination of the Contract or for any longer period of time as may be required by law or good construction practice.

ARTICLE 22
MISCELLANEOUS PROVISIONS

22.1 The law is hereby agreed to be the law of the State of Idaho. The parties further agree that venue for any proceeding related to this Contract shall be in Boise, Ada County, Idaho.

22.2 Pursuant to Section 54-1904A, Idaho Code, within thirty (30) days after award of this Contract, the Contractor shall file with the Idaho State Tax Commission, with a copy to IDL, a signed statement showing the date of Contract award, the names and addresses of the home offices of contracting parties, including all subcontractors, the state of incorporation, the Project Number and a general description of the type and location of the Work, the amount of the prime contracts and all subcontracts and all other relevant information which may be required on forms which may be prescribed by the Idaho State Tax Commission.

22.3 The Contractor, in consideration of securing the business of erecting or constructing public works in the State of Idaho, recognizing that the business in which it is engaged is of a transitory character, and that in the pursuit thereof, its property used therein may be without the state when taxes, excises or license fees to which it is liable become payable, agrees:

.1 To pay promptly when due all taxes (other than on real property), excises and license fees due to the State of Idaho, its sub-divisions, and municipal and quasi-municipal corporations therein, accrued or accruing during the term of this Contract, whether or not the same shall be payable at the end of such term;

.2 That if the said taxes, excises and license fees are not payable at the end of said term, but liability for the payment thereof exists even though the same constitute liens upon its property, to secure the same to the satisfaction of the respective officers charged with the collection thereof; and

.3 That, in the event of its default in the payment or securing of such taxes, excises and license fees, to consent that the department, officer, board or taxing unit entering into this Contract may withhold from any payment due it hereunder the estimated amount of such accrued and accruing taxes, excises and license fees for the benefit of all taxing units to which said Contractor is liable.

22.4 Before entering into a Contract, the Contractor shall be authorized to do business in the State of Idaho and shall submit a properly executed Contractor's Affidavit Concerning Taxes (Exhibit C).

22.5 Pursuant to Section 44-1002, Idaho Code, it is provided that each Contractor "must employ ninety-five percent (95%) bona fide Idaho residents as employees on any job under any such contract except where under such contracts fifty (50) or less persons are employed the contractor may employ ten percent (10%) nonresidents, provided, however, in all cases employers must give preference to the employment of bona fide residents in the performance of said work, and no contract shall be let to any person, firm, association, or corporation refusing to execute an agreement with the above mentioned provisions in it; provided, that, in contracts involving the expenditure of federal aid funds this act shall not be enforced in such a manner as to conflict with or be contrary to the federal statutes prescribing a labor preference to honorably discharged soldiers, sailors, and marines, prohibiting as unlawful any other preference or discrimination among citizens of the United States." (Ref. Section 44-1001, Idaho Code)

22.6 The Contractor shall maintain, in compliance with Title 72, Chapter 17, Idaho Code, a drug-free workplace program throughout the duration of this Contract and shall only subcontract work to subcontractors who have programs that comply with Title 72, Chapter 17, Idaho Code.

22.7 As between IDL and Contractor as to acts or failures to act, any applicable statute of limitations shall commence to run and any legal cause of action shall be deemed to have accrued in any and all events in accordance with Idaho law.

22.8 The Contractor and its subcontractors and sub-subcontractors shall comply with all applicable Idaho statutes with specific reference to Idaho Public Works Contractors’ licensing laws in the State of Idaho, Title 54, Chapter 19, Idaho Code,
22.9  The Contractor is and shall remain in compliance with Executive Order 2009-10 which requires that the Contractor does not knowingly hire or engage any illegal aliens or persons not authorized to work in the United States and that it takes steps to verify that it does not hire or engage any illegal aliens or persons not authorized to work in the United States. Any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and shall be cause for the imposition of monetary penalties not to exceed five percent (5%) of the Fixed Price Contract Amount per violation and/or Termination of this Contract. The Contractor also acknowledges that, if it is a natural person, it is subject to Title 67, Chapter 79, Idaho Code regarding verification of lawful presence in the United States.

ARTICLE 23
PERFORMANCE AND PAYMENT BONDS

23.1 The Contractor shall furnish separate performance and payment bonds to IDL. Each bond shall set forth a penal sum in an amount not less than the Fixed Price Contract Amount and shall include a power of attorney attached to each bond. The signature of both the Contractor (principal) and the Surety are required. If the Surety is incorporated, both bonds must have the corporate seal. Each bond furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. In the event the Fixed Price Contract Amount is adjusted by Change Order executed by the Contractor, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amount. The performance and payment bonds furnished by the Contractor shall be AIA Document A312, or a standard surety form certified approved to be the same as the AIA Document A312, and shall be executed by a Surety, or Sureties, reasonably acceptable to IDL and authorized to do business in the State of Idaho.

23.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

23.3 It is the Contractor's obligation to notify the Surety in the event of changes in the Contract Documents, which in the absence of notification might serve to discharge the Surety's obligations, duties or liability under bonds or the Contract.

ARTICLE 24
EQUAL OPPORTUNITY

The Contractor shall maintain policies of employment as follows:

24.1 The Contractor and the Contractor's subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, color, sex, age or national origin. Such action shall include the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

24.2 The Contractor and the Contractor's subcontractors shall, in all solicitation or advertisements for employees placed by them or on their behalf; state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, age or national origin.

ARTICLE 25
SUCCESSORS AND ASSIGNS

25.1 Each party binds itself, its successors, assigns, executors, administrators or other representatives to the other party hereto and to successors, assigns, executors, administrators or other representatives of such other party in connection with all terms and conditions of this Contract. The Contractor shall not assign this Contract or any part of it or right or obligation pursuant to it without prior written consent of IDL. If Contractor attempts to make assignment without consent of IDL, Contractor shall remain legally responsible for all obligations under this Contract.

ARTICLE 26
SEVERABILITY

26.1 In the event any provision or section of this Contract conflicts with applicable law or is otherwise held to be unenforceable, the remaining provisions shall nevertheless be enforceable and shall be carried into effect.
with that Article and, as a condition precedent to litigation, are subject to dispute resolution attempts and mediation in accordance with this Article. All other issues and disputes arising from this contract are also subject to dispute resolution attempts & mediation in accordance with this Article, as a condition precedent to litigation.

26.2 The parties agree that resolution of any dispute or disagreement without formal legal proceedings is to their mutual benefit and to the benefit of the Project.

26.3 The parties agree to make every reasonable attempt to resolve any issues or disputes informally. The parties further agree that prior to the institution by either of legal or equitable proceedings of any kind, and as a condition precedent thereto, any dispute between the Contractor and IDL related to the Contract, including a dispute over IDL’s decision regarding a Claim, shall be subject to mediation as follows:

.1 If the issue to be mediated involves only a dispute regarding the Contract Time, no request to mediate shall be made unless liquidated damages have been assessed by IDL. If the issue to be mediated involves a Claim or other financial dispute, no request to mediate shall be made unless the amount is $50,000 or more or until there are cumulative Claims or disputes amounting to $50,000 or more; provided, however, that a mediation request can be made as to any Claim or financial matter at any time after Substantial Completion;

.2 The party seeking mediation shall notify the other party in writing of its mediation request. In such written request, the requesting party must clearly describe the issues it believes are subject to mediation;

.3 Within fifteen (15) days of receipt of the mediation request, the non-requesting party shall respond in writing to the request;

.4 Unless IDL and the Contractor agree to other rules for mediation, mediation shall be in accordance with the Construction Industry Rules of Arbitration and Mediation Procedures in effect at the time of the mediation;

.5 The parties shall share the mediator’s fee and any filing fees equally; provided, however, that if a party makes a written request to the mediator without satisfying the requirements of this section and by doing so incurs any costs or fees, that party shall be solely responsible for the costs or fees;

.6 Unless otherwise mutually agreed to by the parties, the mediation shall be in Boise, Ada County, Idaho;

.7 The parties shall cooperate in arranging the other details of mediation, such as selection of the mediator, mediation dates and times;

.8 The parties agree that all parties necessary to resolve the matter shall be parties to the same mediation proceeding; provided, however, that no subcontractor or sub-subcontractor shall attend the mediation absent advance notice and consent from IDL;

.9 Agreements reached in mediation shall be enforceable as settlement agreements in any court having proper jurisdiction; and

.10 Unless otherwise agreed in writing, the Contractor shall continue the Work and maintain the approved schedules during any mediation proceedings. If the Contractor continues to perform, IDL shall continue to make payments in accordance with the Contract Documents.

26.4 If mediation fails to resolve the dispute, either party may file an action in the courts of Idaho in accordance with the venue provision contained in this Contract.

ARTICLE 28
WAIVER OF CONSEQUENTIAL DAMAGES

27.1 The Contractor and IDL waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

.1 Damages incurred by IDL for rental expenses, for losses of use, income, profit, financing, business and reputation and for loss of management or employee productivity or of the services of such persons.

.2 Damages incurred by the Contractor for principal office expenses, including the compensation of personnel stationed there; for losses of income, financing, business and reputation; loss of management or employee productivity or of the services of such persons; and for loss of profit except profit arising directly from the Work.

27.2 This mutual waiver is applicable, without limitation, to all consequential damages due to either party’s termination in accordance with Articles 17 and 19. Nothing contained in this paragraph shall be deemed to preclude an award of the assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.
ARTICLE 29
USE OF THE IDAHO DEPARTMENT OF LANDS NAME

28.1 Contractor agrees that it will not, prior to, in the course of, or after performance under this contract, use IDL's name in any advertising or promotional media as a customer or client of Contractor without the prior written consent of IDL.

ARTICLE 30
PUBLIC RECORDS

29.1 Pursuant to Idaho Code Section 74-101 through 74-126, information or documents received from the Contractor may be open to public inspection and copying unless exempt from disclosure. The Contractor shall clearly designate individual documents as "exempt" on each page of such documents and shall indicate the basis for such exemption. IDL will not accept the marking of an entire document as exempt. In addition, IDL will not accept a legend or statement on one (1) page that all, or substantially all, of the document is exempt from disclosure. The Contractor shall indemnify and defend IDL against all liability, claims, damages, losses, expenses, actions, attorney fees and suits whatsoever for honoring such a designation or for the Contractor's failure to designate individual documents as exempt. The Contractor's failure to designate as exempt any document or portion of a document that is released by IDL shall constitute a complete waiver of any and all claims for damages caused by any such release. If IDL receives a request for materials claimed exempt by the Contractor, the Contractor shall provide the legal defense for such claim.

ARTICLE 31
CONFIDENTIAL INFORMATION

30.1 Pursuant to this Agreement, Contractor may collect, or IDL may disclose to Contractor, financial, personnel or other information that IDL regards as proprietary, confidential or exempt from disclosure ("Confidential Information"). Confidential Information shall belong solely to IDL. Contractor shall use such Confidential Information only in the performance of its services under this Agreement and shall not disclose any Confidential Information to any third party, except with IDL's prior written consent or under a valid order of a court or governmental agency of competent jurisdiction, and then only upon timely notice to IDL. IDL may require that Contractor's officers, employees, agents or subcontractors separately agree in writing to the obligations contained in this section or sign a separate confidentiality agreement. Confidential Information shall be returned to IDL upon termination of this Agreement. The confidentiality obligation contained in this section shall survive termination of this Agreement. Confidential Information shall not include data or information that:

a. Is or was in the possession of Contractor before being furnished by IDL, provided that such information or other data is not known by Contractor to be subject to another confidentiality agreement with or other obligation of confidentiality to IDL;

b. Becomes generally available to the public other than as a result of disclosure by Contractor; or

c. Becomes available to Contractor on a non-confidential basis from a source other than IDL, provided that such source is not known by Contractor to be subject to a confidentiality agreement with or other obligation of confidentiality to IDL.

SIGNATURES

Contract will be signed at a later date using DocuSign electronic signatures.
Page intentionally left blank for Project Description, Scope of Work, Drawings and Maps included earlier in the solicitation, however will be included as "Exhibit A" in the impending contract.
EXHIBIT B

ADDRESSES and AUTHORIZED REPRESENTATIVES: The names, addresses and authorized representatives of the Owner, the Contractor and the Design Professional are:

OWNER: State of Idaho
Department of Lands
300 N 6th Street Ste 103
Boise, ID 83702

IDL COR: Name: Chase Bolyard
Telephone: 208-666-8656
E-mail: cbolyard@idl.idaho.gov

USFS COR: Name: Rick Driggs
Telephone: 208-610-7327
E-mail: rick.driggs@usda.gov

CONTRACTOR:
Public Works Contractors License No. ________________________________

Officer: ________________________________ (Name and Title)
          (Telephone)
          (E-mail)

Contractor's Project Manager: ________________________________ (Name)
          (Telephone and FAX)
          (E-mail)
May sign for Contractor: Yes [ ] No [ ]
Change Orders: up to: $_____.00
Construction Change Authorizations: up to: $______.00
Contractor's Request for Payment

Contractor's Superintendent: ________________________________ (Name)
          (Telephone and FAX)
          (E-mail)
May sign for Contractor: Yes [ ] No [ ]
Construction Change Authorizations: up to $______.00

DRAFT
EXHIBIT C

CONTRACTOR’S AFFIDAVIT CONCERNING TAXES

STATE OF IDAHO

COUNTY OF _____________________

Pursuant to the Title 63, Chapter 15, Idaho Code I, the undersigned, being duly sworn, depose and certify that all taxes, excises, and license fees due to the State or its taxing units, for which I or my property is liable then due or delinquent, has been paid, or arrangements have been made, before entering into a Contract for construction of any public works in the State of Idaho.

By: __________________________________
(Signature)

Subscribed and sworn to before me this ________________ day of ___________________, 2022.

Commission expires: ____________________________________

NOTARY PUBLIC, residing at ________________________________

________________________________________________________________________

________________________________________________________________________
REQUEST FOR TAX RELEASE

Date: ________________

RE: Contract Number: 041007
Project Name: Johnson Creek Bridge Replacement
Project Location: Clark Fork, Idaho

Contractor Requesting Release – Name: ________________________________
Address: __________________________________________________________
_______________________________________________________________
Contact Name: _______________________
Telephone Number: _______________
Federal Employer Identification No.: __

Project Information:
Project is Complete: ________________________________________________
Project is Substantially Complete: _____________________________________
Project Start Date: _________________________________________________
Project Complete Date: _____________________________________________
Final Contract Amount (including change orders): ________________________

Did any public works or other governmental agency supply materials, which were installed by this Contractor or his subcontractors?
    Yes _____________________________________________________________
    No _____________________________________________________________

If yes, list these materials and their dollar values: __________________________

To request a Tax Release, please send this form to:

Idaho State Tax Commission
Attn: Contract Desk; Sales Tax Audit
PO Box 36
Boise, ID 83722
EXHIBIT E

RELEASE OF CLAIMS

(TO BE COMPLETED FOR FINAL PAYMENT)

I, ____________________________, do hereby release the State of Idaho from any and all claims of any character whatsoever arising under and by virtue of contract number ______________, Dated ____ as amended, except as herein stated.

Dated _____________          Contractor ______________________