ADDENDUM 1

Date: June 10, 2016  Addendum #: 1
Project: Museum of the Rockies Collections & Storage Facility
Project #: Slate Architecture #: 15056
 MSU PPA #: 13-0093
To: All Plan Holders of Record

This Addendum is issued to inform bidders of clarifications to the plans & specifications. The additions, clarifications, and corrections contained herein shall be made to the Project Manual, Drawings, and Schedules for the above referenced project, and shall be included in the scope of work and proposals to be submitted. References made below to the Project Manual and Drawings shall be used as a general guide only. Bidder shall determine the extent of work affected by Addendum items.

GENERAL NOTES:

1. Survey control points will be provided. All scopes of work are responsible for their own staking and layout.

QUESTIONS (Q) / CLARIFICATIONS (C):

Q1. Detail 5 on Sheet C3.0, “Concrete Retaining Wall” has “Structural fill compacted to 98% AASHTO T-99. However, there is not a thickness of for the structural fill lift. Can you please provide that?

   C1. See the General Structural Notes S0.01, Earthwork, note 9 and 10 for subgrade prep of footings and foundation walls. We are calling for 1'-0" of structural fill below the footings.

Q2. The dimensions for the material lift are shown on sheet S1.01 and detail F/S5.01, what dimensions should be used?

   C2. For bidding purposes, assume that the pit is 13'-9"W x 20'-6"L x 0'-10"D.

DRAWING MODIFICATIONS/CLARIFICATIONS:

1) Sheet G0.1 – COVER SHEET
   a. REVISE Electrical sheet index with the one provided in attached sketch ADD1.0
   b. ADD Alternate No. 2 as shown on attached sketch ADD1.0
2) Sheet A2.0 – ARCHITECTURAL SITE PLAN
   a. **MODIFY** Detail 3 Site Sign, as shown on attached sketch ADD1.1

3) Sheet A2.1 – OVERALL FLOOR PLAN
   a. **REPLACE** the sheet in its entirety with the one attached.

4) Sheet A2.2 – OVERALL FLOOR PLAN
   a. **REPLACE** the sheet in its entirety with the one attached.

5) Sheet A2.5 – REFLECTED CEILING PLAN
   a. **MODIFY** all references to “2X4 ACT” ceiling to READ “2X2 ACT”

6) Sheet A3.1 – EXTERIOR ELEVATIONS
   a. **REPLACE** the sheet in its entirety with the one attached.

7) Sheet A6.1 – DOOR & WINDOW SCHEDULE, ELEVATIONS & DETAILS
   a. **REPLACE** the sheet in its entirety with the one attached.

8) ELECTRICAL SHEETS E1.0, E1.1 – GENERAL NOTES
   a. Modify existing General Note A: “……………Provide new Remote at MOR main entrance. …” **ADD TEXT:** Replace existing flush mount Manual Pull (MP) Station with surface mounted box and new addressable MP. Nipple new Remote FAA on to surface mount MP box. New FAA shall be surface mount as well. Use existing conduit for MP for new Remote FAA wiring. (Delete requirement for new exterior FA Horn/Strobe due to building architecture). Provide new conduit and 4-wire FA wiring to new devices in new addition. Size conduit as required; ¾”c minimum. Run conduit down through floor and in ceiling space of office to loading dock area and then to new addition. Existing devices, conduit and wiring in existing museum to remain in place for now. Provide exterior Knox Box........”

   b. **ADD NOTE ‘D’**: Where a conflict exists between the drawings and the specifications, assume the more costly approach for bidding purposes. Bring all contradictions to the attention of the design professional.
      i. Copper bus is required for panels. Aluminum is not allowed.
      ii. Copper feeders / wire is required. See Feeder Schedule on plans. Aluminum is not allowed.
      iii. Conduit and wire is required for power circuits – NM non-metallic (Romex) is not allowed.

   c. **ADD NOTE ‘E’**: Demolition of light pole, fixture, conduit, and wire to be by the GC. EC shall be responsible to disconnect demo pole wiring from nearest upstream pole.
d. ADD NOTE ‘F’: Coordinate routing of main panel feeder from Main Switchboard to new main panel with GC and owner. Coordinate removal of dust collector equipment and owner lumber storage rack (to facilitate drilling / installation of conduit through existing concrete walls) with GC and owner. Contractor shall seal and fire-stop all concrete wall penetrations per specification section 260533.

e. ADD NOTE ‘G’: All devices in Collections Storage area(s) shall be surface mounted on poured concrete walls. See specification section 260533 for acceptable surface mount raceway and boxes. Devices mounted on exterior concrete walls can be sleeved with boxes cast in place or drilled later at contractor’s discretion. Coordinate with GC prior to pour.

f. ADD NOTE ‘H’: Provide separate line item price for all security, access control, CCTV, and voice data low-voltage wiring. Where exposed to physical damage or in new gyp walls, this wiring shall be in conduit. Where located in accessible ceiling space, no conduit is required (plenum rated cable attached to structure). Voice data wiring shall run from device location in new addition to head-end computer rack in existing upper loading dock E101 (column A/4). Security wiring shall run from new devices to security system head-end; assume 100’ into existing building (wire only – no conduit) beyond computer rack location (column A/4). Security devices and termination by MSU IT.

9) SHEET E0.1 ELECTRICAL 1-LINE AND DETAILS:
   a. Modify Detail 4, FIRE ALARM RISER, to reflect new conduit and wire from new FACP to new devices in new addition.
   b. Delete reference to Fire Suppression Control Panel, instead provide all required interconnect wiring to Fire Suppression Control Valves / Pre-Action System devices as required for a fully functional system.

SPECIFICATION MODIFICATIONS/CLARIFICATIONS:

1) BID FORM
   a. REPLACE the Bid Form (pages 8 – 12) in its entirety with the one attached.

2) Bid package 1.2A Sitework, Excavation, and Utilities: The CM will provide the SWPPP permit and all administration and inspections relating to this. This subcontractor is responsible for providing all sedimentation and erosion control provisions in accordance with MT DEQ Best Management Practices, including materials, installation, maintenance (if required) and removal at final stabilization. Reference BMP layout in the included sheets.

3) Bid Package 1.2B Selective Building Demolition: Provide concrete pour back for sanitary sewer tie in shown on sheet P1.0U. Sawcutting, concrete removal, and piping is to be done by Bid Package 1.22A contractor. For the above grade connections shown on P1.0, provide drywall patch and paint touch-up. Penetration to be cut by Bid Package 1.22A contractor.
4) Bid Package 1.2B Selective Building Demolition: Delete the following item under “Removal & Reuse Preparation”: “The specific area for demolition to occur is found along gridline BB, from the west corner of the existing building to the easternmost part of the Schedule E.1 building, reference Sheet A1.1” and replace with “The specific area for demolition is found on sheet A1.1”

5) Bid Package 1.3A Site Concrete: Add the following to bid item notes:
   a. Site retaining wall footings are by this subcontractor

6) Bid Package 1.22A Plumbing Systems, Mechanical Piping, & HVAC: Add the following items to “Bid Item Notes”
   a. Provide trenching, excavating and backfill as required to complete your work and in conformance with the earthwork specifications
   b. Provide all required access doors for own work
   c. Provide Sawcutting, Concrete, Wall and Piping Demolition and Disposal as required to make connections to the existing systems. Provide patching in all cases except those required in Bid Package 1.2B, clarified above.

7) Bid Package 1.26A Electrical: Add the following items to “Bid Item Notes”
   a. Provide Sawcutting, Concrete, Wall and Piping Demolition and Disposal as required to make connections to the existing systems. Provide patching in all cases except those required in Bid Package 1.2B, clarified above.

8) SECTION 01 2300 - ALTERNATES
   a. ADD NOTE B to 1.03 SCHEDULE OF ALTERNATES
      i. B. Alternate No. 2 – Low Voltage Wiring
         1. Provide separate line item price for all security, access control, CCTV, and voice data low-voltage wiring. Where exposed to physical damage or in new gyp walls, this wiring shall be in conduit. Where located in accessible ceiling space, no conduit is required (plenum rated cable attached to structure). Voice data wiring shall run from device location in new addition to head-end computer rack in existing upper loading dock E101 (column A/4). Security wiring shall run from new devices to security system head-end; assume 100’ into existing building (wire only – no conduit) beyond computer rack location (column A/4). Security devices and termination by MSU IT.

9) SECTION 22 0000 – PLUMBING GENERAL REQUIREMENTS
   a. Add part 1.14B Provide indexed and bookmarked PDFs of the O&M to the architect and engineer for review prior to finalizing manuals. Once reviewed and finalized provide an electronic copy of the PDFs and 3 printed bound copies to the owner.
b. Add Part 1.15D See sections 017000 “Execution and Closeout Requirements” and 017800 “Close out submittals for additional information

c. Add Part 1.17C See Sections 017900 “Demonstration and Training”, 019113 “General Commissioning Requirements” and 019114 “Commissioning Authority Responsibilities” for additional requirements and information.

d. Add Part 1.19 LEED and Sustainability: This project was designed to achieve LEED certification. It shall be the responsibility of the mechanical contractor to comply with the provisions of the following specification section to ensure that all products and installations meet the requirements of LEED:
   i. 013610 Sustainable Design Requirements – LEED for New Construction and Major Renovations
   ii. 016000 Product Requirements
   iii. 016116 Volatile Organic Compound Content Restrictions

10) SECTION 23 000 – MECHANICAL GENERAL REQUIREMENTS
   a. Add part 1.14B Provide indexed and bookmarked PDFs of the O&M to the architect and engineer for review prior to finalizing manuals. Once reviewed and finalized provide an electronic copy of the PDFs and 3 printed bound copies to the owner.
   b. Add Part 1.15D See sections 017000 “Execution and Closeout Requirements” and 017800 “Close out submittals for additional information.
   c. Add Part 1.17D See Sections 017900 “Demonstration and Training”, 019113 “General Commissioning Requirements” and 019114 “Commissioning Authority Responsibilities” for additional requirements and information.
   d. Add Part 1.19 LEED and Sustainability: This project was designed to achieve LEED certification. It shall be the responsibility of the mechanical contractor to comply with the provisions of the following specification section to ensure that all products and installations meet the requirements of LEED.
      i. 013610 Sustainable Design Requirements – LEED for New Construction and Major Renovations
      ii. 016000 Product Requirements
      iii. 016116 Volatile Organic Compound Content Restrictions

11) SECTION 23 0520 – BTU METERS
   a. Add Part 2.04G: The BTU computer shall include parallel Modbus and BACnet outputs.

12) SECTION 23 0523 – GENERAL DUTY VALVES FOR HVAC PIPING
   a. Delete Part 2.3 Iron Single Flange Butterfly Valves
   b. Add Part 2.6 Butter Fly Valves
      i. Manufacturer
         1. Nibco
         2. Milwaukee
3. Red-White Valve Corp.
4. Watts
c. Description
   i. Lug Style
   ii. Ductile Iron Body
   iii. Aluminum Disc
   iv. EPDM Seals
   v. Stainless Steel Stem
   vi. Class 125/150

13) SECTION 23 0593 – TESTING ADJUSTING AND BALANCING FOR HVAC
   a. Add Part 3.21 Procedures for VRF System
      i. Measure Adjust and Record the following for each Heat Pump Unit:
         1. Water flow rate
         2. Water Pressure Drop
         3. Entering water temperature
         4. Leaving water temperature
         5. Voltage
         6. Full Load Amps
      ii. Measure and Record the Following for Each VRF Fan coil Unit:
         1. Voltage
         2. Full Load Amps
         3. Total Supply Airflow
         4. Outside airflow (if applicable)
   b. Revise Part 3.7B to include: Measure and Record differential pressure across each automatic flow control valve.

14) SECTION 23 2116 – HYDRONIC PIPING
   a. Delete Part 2.6E Dielectric Nipples
   b. Add Part 2.6F PEX Dielectric Separator: A 6”-12” long section of PEX piping shall be installed between dis-similar piping materials. The PEX separator shall be the same pipe size the two pipe it connects. Provide pipe supports and isolation valves immediately adjacent and on both sides of all PEX dielectric separators.
      i. Pipe Material: PEX plastic according to ASTM F 876.
      ii. Oxygen Barrier: Limit oxygen diffusion through the tube to maximum 0.10 mg per cu. m/day at 104 deg F according to DIN 4726.
      iii. Fittings: Brass or Plastic.
      iv. Connections: Copper Crimp Ring ASTM F1807, Expansion Fittings ASTM F1960 or Stainless Steel Band Clamps F2098. Verify connection type is compatible with fittings used.
      v. Pressure/Temperature Rating: Minimum 100 psig and 180 deg F.
c. Delete Part 2.7B Air Controls Devices

d. Add Part 2.7 C Manual Air Vents:

e. Provide ¼” ball valve with 24” of soft copper to allow purging of air from all hydronic devices. Install manual air vents on the return connection of all hydronic devices or where shown on the drawings.

f. Add Part 2.8 D Automatic Air Vents:

g. Provide Hoffman Model 78 or prior approved equal where automatic air vents at all high points in hydronic system or where shown on the drawings. Pipe outlet to floor drain or floor sink.

15) SECTION 23 7200 – AIR TO AIR ENERGY RECOVERY EQUIPMENT

a. Part 1.2 Heading Should Read “Action Submittals”

16) SECTION 23 8123 – PRECISION HVAC UNITS

a. Part 2.03N Smoke Detection Add: Smoke detectors shall be addressable type and integrated into the building fire alarm system.

b. Part 3.02 Connections Add: Coordinate the integration of smoke detectors into the building fire alarm system with the electrical and fire alarm contractors.

17) SECTION 28 3111 – DIGITAL ADDRESSABLE FIRE ALARM SYSTEM

a. The new FACP shall be compatible with all existing detection and annunciation appliances throughout the existing museum. All additional communications modules or replacement devices shall be included in bid for a complete and functional system.

b. All programming and owner training shall be provided per MSU standards.

18) SECTION 32 9219 – SEEDING

a. REPLACE the section in its entirety with the one attached.

PRIOR APPROVALS

Review for prior approval is for general conformance with the plans and specifications. This review does not take the place of shop drawing review. All requirements of the Plans and Specifications must be met. This review does not relieve the Contractor of the responsibility for furnishing equipment and materials that meet the requirements of the Contract Documents.

Architectural Prior Approvals

<table>
<thead>
<tr>
<th>SECTION</th>
<th>ITEM</th>
<th>MANUFACTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>07 2500</td>
<td>Air Barrier Materials (Water Vapor Permeable and Water Resistive)</td>
<td>COSELLA-DÖRKEN PRODUCTS INC. – Product: DELTA®-VENT SA Self-Adhered Vapor Permeable Air Barrier Membrane</td>
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</table>
ATTACHMENTS:

1) SKETCH ADD1.0 - Attached

2) SKETCH ADD1.1 – Attached

3) SHEET A2.1 – Overall Floor Plans – Attached

4) SHEET A2.2 – Overall Floor Plans – Attached

5) SHEET 3.1 – Exterior Elevations – Attached

6) SHEET 6.1 – Door & Window Schedule, Elevations & Details – Attached

7) BID FORM (Pages 8-12) – Attached

8) Erosion Control Plan (2 Pages) – SWPPP BMP Plan – Attached

9) SECTION 32 9219 – SEEDING (3 Pages) – Attached

10) PRE-BID SIGN-IN SHEET – Attached

END OF ADDENDUM 1
ALTERNATES

ALTERNATE NO. 1 - CASEWORK:
1. BASE BID ITEM: SECTION 06 4000 ARCHITECTURAL WOOD CASEWORK AND DRAWING NUMBER 10 ON SHEET A7.1 INCLUDING ONE SINK BASE, TWO DRAWER BASES AND A COUNTERTOP AS HATCH PATTERN INDICATES ON THE DRAWINGS.
2. ALTERNATE ITEM: SECTION 06 4000 ARCHITECTURAL WOOD CASEWORK AND DRAWING NUMBER 10 ON SHEET A7.1 INCLUDING ALL CASEWORK THAT ARE NOT INDICATED WITH A HATCH PATTERN IN THE DRAWINGS.

ALTERNATE NO. 2 - LOW VOLTAGE WIRING:
PROVIDE SEPARATE LINE ITEM PRICE FOR ALL SECURITY, ACCESS CONTROL, CCTV, AND VOICE DATA LOW-VOLTAGE WIRING. WHERE EXPOSED TO PHYSICAL DAMAGE OR IN NEW GYP WALLS, THIS WIRING SHALL BE IN CONDUIT. WHERE LOCATED IN ACCESSIBLE CEILING SPACE, NO CONDUIT IS REQUIRED (PLENUM RATED CABLE ATTACHED TO STRUCTURE). VOICE DATA WIRING SHALL RUN FROM DEVICE LOCATION IN NEW ADDITION TO HEAD-END COMPUTER RACK IN EXISTING UPPER LOADING DOCK E101 (COLUMN A/4). SECURITY WIRING SHALL RUN FROM NEW DEVICES TO SECURITY SYSTEM HEAD-END; ASSUME 100' INTO EXISTING BUILDING (WIRE ONLY – NO CONDUIT) BEYOND COMPUTER RACK LOCATION (COLUMN A/4). SECURITY DEVICES AND TERMINATION BY MSU IT.
TREATED POST OR FENCE MOUNT. CONTRACTOR OPTION

*M FINAL SIGN LAYOUT/DESIGN TO BE APPROVED BY ARCHITECT

COORDINATE LOCATION WITH OWNER

MONTANA STATE UNIVERSITY AND MUSEUM OF THE ROCKIES CURATORIAL CENTER FOR THE HUMANITIES

TREATED POST OR FENCE MOUNT. CONTRACTOR OPTION

JOB SITE SIGN 3/A2.0

1/2" = 1'-0"

MOR CURATORIAL CENTER FOR THE HUMANITIES
ADDENDUM NO. 1 - SHEET A2.0
The intent of the drawings is to provide information for where floor is transitioning to a different material. Install 11' - 5" 14' - 11" plan.

Contractor and subcontractors shall provide all labor, 27' - 2 1/4" 27' - 2 1/4" 27' - 2 1/4" plan.

Plan 013 016 026

All new walls are to extend to deck, unless otherwise noted.

Dimensions are from face of existing wall finish, or face of sill (3) layers ea. side 5/8" American.
3. Bid Form

BID FORM

*Museum of the Rockies Collections & Storage Facility
Bozeman, MT*

BID PACKAGE: ____________________________________________________________

Submitted By:________________________________________________________________________

To: Jackson Contractor Group c/o
Montana State University
Campus Planning, Design, and Construction
Plew Building
Bozeman, MT 59717

On Behalf of:
*Museum of the Rockies Collections & Storage Facility
Bozeman, MT*

We, the undersigned Company, having carefully read the Documents for the proposed contract, including the General Conditions, Supplemental Conditions, Specifications, and Drawings and Addendums and having carefully ascertained the conditions under which the Work is to be performed, hereby propose and offer to enter into a Contract to perform the Work as described in accordance with the Documents, complete and ready for use by the time specified, for the price of:

**Base Bid (Including 1% GRT):**

*Museum of the Rockies Collections & Storage Facility*  
Complete as per Bid Package named above $____________________________

*Alternate #1 – Casework*  
Complete as per Bid Package named above $____________________________

*Alternate #2 – Low Voltage Wiring*  
Complete as per Bid Package named above $____________________________

**Bond (if required)**  
Cost to Supply 100% Performance and Payment Bond $____________________________

The bidder may attach a proposal detailing any specific inclusions or exclusions intended with the submitted pricing.
PERIOD OF ACCEPTANCE:
The proposer agrees that this bid shall remain open for acceptance and the price shall remain unchanged and notwithstanding any error in the Bid at the amount stated for a period of sixty (60) days from the date of closing of this Proposal.

CONTRACT:
The Bidder agrees that this Bid is subject to a formal subcontract being prepared and executed with the Construction Manager.

The Bidder agrees to execute the Contract within 14 days of notification of the acceptance of his bid and to provide Certificates of Insurance including Worker’s Compensation Insurance.

The Bidder shall furnish 100% performance and Payment Bonds, if required by the Construction Manager. Cost of said bonds is listed as a bid item to the base bid above.

ADDENDA:
Addendum No. 1: _______________________________
Addendum No. 2: _______________________________
Addendum No. 3: _______________________________

ADDITIONAL INFORMATION MAY BE REQUESTED AFTER BID PROPOSALS ARE OPENED

1. References of Similar Projects – Minimum of 3
   Owner, Contractor and Architect
2. Staffing and Organizational Chart for this Project
3. Letter from Surety supporting ability to bond
4. Current Insurance Limits
5. Current Work Load
6. Potential Interview

SUBMITTED BY:
Company: ____________________________________________
Name of Bidder: ____________________________________________
Signature of Bidder: ____________________________________________
Dated: ______________________________________________________
Registration No.: ____________________________________________
Phone No: ____________________________________________________
Fax No: ______________________________________________________
Email: ______________________________________________________
CONDITIONS OF BID:

By submitting this bid, the bidder agrees to the following. Please initial the line in front of each statement.

______ 1. The bidder has visited the site of the Project, has fully examined, and considered the existing conditions affecting the work. JCG/Owner will not accept Change Order Requests as a result of the Subcontractor's failure to have made a pre-bid examination of the existing conditions.

______ 2. The bidder has reviewed the JCG insurance requirements and can meet or exceed all of the requirements. If subcontractor cannot meet the requirements they must indicate so on the following checklist.

______ 3. The bidder has reviewed the attached Project Schedule and agrees to meet the durations as shown, unless bidder has noted otherwise.

______ 4. The bidder has reviewed the Specific Scope of Work and agrees to meet all terms and conditions as required.

______ 5. The bidder has reviewed the Sample JCG Contract and agrees to meet all terms and conditions, without alteration.

______ 6. The bidder fully understands the site lay down, storage, parking and work area limitations of this project. All accommodations must be considered when proposing as space will not be available on site for these items.

______ 7. The bidder understands that all offloading and hoisting of materials, manpower and equipment is the sole responsibility of the subcontractor.

______ 8. The bidder understands the LEED requirements of the project and how those requirements will affect their specific scope of work and responsibilities.

Jackson Contractor Group reserves the right to reject any or all proposals. Any award will be made to the bidder whose proposal and qualifications indicate that the award will be in the best interest of the Project Team.

Jackson Contractor Group reserves the right to waive informalities in bids submitted and to hold and consider as many bids as they so desire for a period of sixty (60) days after the bids are opened.

All responsive proposals may be selected to receive an interview with the Project Team to discuss the firm's experience, current workload, ability to perform, and value-engineering items included with the bid. No award will be made until the Project Team has concluded such investigations as deemed necessary and appropriate to establish the responsibility, qualifications, and financial capability of the bidder to do the work in accordance with the contract, to the satisfaction of the CM/GC and within the time prescribed. Investigation of a bidder may continue after bids have been submitted. The final award and selection will be made after interviews & investigations are complete, and a complete evaluation of the price, value engineering and ability to perform.
INSURANCE REQUIREMENTS:

The Subcontractor agrees to follow all current applicable Occupational Safety & Health Administration (OSHA) Standards. In the event that the Subcontractor is cited for OSHA standard violations, any and all penalties levied against the contractor due to the actions of the Subcontractor, will be deducted by the Contractor from the Subcontracts contract amount.

The Subcontractor shall procure and maintain in force with companies acceptable to the Construction Manager, insurance with limits of liability of not less than the following:

1. Workers Compensation          Statutory
2. Employers Liability          $1,000,000.00 (Per Occurrence)
3. Commercial General Liability Including Completed Operations, Contractual & Aggregate Limit
   Per Project
   - Bodily Injury & Property Damage  $1,000,000.00 (Per Occurrence)
   - Personal Injury                $1,000,000.00 (Per Occurrence)
   - General Aggregate              $2,000,000.00 (Per Occurrence)
   - Products & Completed Operations Aggregate  $2,000,000.00 (Per Occurrence)
4. Commercial Auto Liability       $1,000,000.00 (Each Accident)
   - Bodily Injury & Property Damage - Combined Single Limit Including Non-Owned & Hired Auto
5. The Construction Manager and Owner shall be named as additional insured on each of these policies except for Workers Compensation and Employers Liability. The Subcontractor shall be primary to any and all other insurance with respect to any and all claims and demands made against Contractor or Owner.

The Subcontractor must keep and maintain complete operational coverage that meets or exceeds the minimum coverage stated above for the entire construction period and for at least 1 year post substantial competition or for a minimum of three years from date of subcontract.

All insurance policies shall contain a provision that coverage afforded under the policies will not be cancelled, not renewed, or materially altered until at least thirty (30) days prior written notice has been given to the Contractor. Certificates of Insurance showing coverage to be in force shall be on file with the Contractor prior to the commencement of the Subcontractors Services.
Indemnification:

To the fullest extent permitted by law, it is expressly agreed and understood that the Subcontractor shall indemnify, defend, and hold harmless contractor, (including its owners, affiliates and subsidiaries), its officers, directors, agents, shareholders, successors and employees from and against any and all claims liabilities, actions cause of actions complaints, laws, expenses (including prejudgment interest) , and demands whatsoever in law and in equity including without limitations those of bodily injury, personal injury, sickness, disease, death, or property damage, (including but not limited to the work itself), arising out of, or alleged to arise out of or as a result of, or alleged as a result of, or to arise out of, the performance of the Subcontractor's work under this Subcontract Agreement, Subcontractor, at Subcontractors sole expense, shall promptly dispose of all such claims, defend all lawsuits against contractor, on the account hero, pay all judgments rendered against Contractor on the account thereof including, but not limited to, attorney fees, expert witness fees and court costs. It is expressly agreed and understood by Subcontractor that Subcontractor shall indemnify Contractor and hold Contractor harmless from the above referenced claims regardless of whether such claim is caused or alleged to be caused in part by joint or concurrent negligent act (either active or passive) or omission by a party indemnified hereunder provided however, the Subcontract shall not be obligated to indemnity for those claims which arise from the sole negligence or willful misconduct of the Contractor or the Contractors agents, servants or independent Contractors who are directly responsible to the Contractors excluding Subcontractor herein.

END OF BID FORM
Inlet Protection - as new structures are initiated

Soil stockpiles as required, 100% surrounded by silt fence

EROSION CONTROL PLAN
SECTION 32 9219
SEEDING

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Placing topsoil.
B. Seeding, mulching and fertilizer.
C. Maintenance.

1.02 RELATED REQUIREMENTS
A. Section 31 2200 - Grading: Topsoil material.
B. Section 31 2200 - Grading: Preparation of subsoil and placement of topsoil in preparation for the work of this section.
C. Section 31 2323 - Fill: Topsoil material.

1.03 PRICE AND PAYMENT PROCEDURES
A. Grassed Areas:
   1. Basis of Measurement: By the square yard.
   2. Basis of Payment: Includes preparation of subsoil, placing topsoil, seeding, watering and maintenance to specified time limit.

1.04 SUBMITTALS
A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
B. Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.
C. Maintenance Contract.

1.05 REGULATORY REQUIREMENTS
A. Comply with regulatory agencies for fertilizer and herbicide composition.
B. Provide certificate of compliance from authority having jurisdiction indicating approval of seed mixture.
C. All weed control chemicals must be registered with the Environmental Protection Agency and the State of Montana.
D. The Contractor shall have at least two (2) years of weed control spraying experience. Proof of experience will be required. The Contractor must have a valid Montana Commercial Herbicide Applicator's License.

1.06 DELIVERY, STORAGE, AND HANDLING
A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable. Deliver seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.
B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2 PRODUCTS

2.01 SEED MIXTURE
A. Non-Irrigated Seed Mixture:
   1. ‘Kitty Hawk’ turf type tall fescue.

2.02 SOIL MATERIALS
A. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of subsoil, clay or impurities, plants, weeds and roots; pH value of minimum 5.4 and maximum 7.0.
2.03 ACCESSORIES
   A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.
   B. Water: Clean, fresh and free of substances or matter that could inhibit vigorous growth of grass.
   C. Erosion Fabric: Jute matting, open weave.
   D. Stakes: Softwood lumber, chisel pointed.
   E. String: Inorganic fiber.

2.04 TESTS
   A. Provide analysis of topsoil fill under provisions of Section 01 4000.
   B. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value.
   C. Submit minimum 10 oz sample of topsoil proposed. Forward sample to approved testing laboratory in sealed containers to prevent contamination.
   D. Testing is not required if recent tests are available for imported topsoil. Submit these test results to the testing laboratory for approval. Indicate, by test results, information necessary to determine suitability.

PART 3 EXECUTION
3.01 EXAMINATION
   A. Verify that prepared soil base is ready to receive the work of this Section.

3.02 PREPARATION
   A. Place topsoil in accordance with Section 31 2200.
   B. Install edging at periphery of seeded areas in straight lines to consistent depth.

3.03 FERTILIZING
   A. Apply fertilizer in accordance with manufacturer's instructions.
   B. Apply after smooth raking of topsoil and prior to roller compaction.
   C. Do not apply fertilizer at same time or with same machine as will be used to apply seed.
   D. Mix thoroughly into upper 2 inches of topsoil.
   E. Lightly water to aid the dissipation of fertilizer.

3.04 SEEDING
   A. Apply all seed at a rate of 3 lbs per 1000 sq ft evenly in two intersecting directions. Rake in lightly.
   B. Do not seed areas in excess of that which can be mulched on same day.
   C. Do not sow immediately following rain, when ground is too dry, or during windy periods.
   D. Immediately following seeding, apply mulch to a thickness of 1/8 inches. Maintain clear of shrubs and trees.
   E. Apply water with a fine spray immediately after each area has been mulched. Saturate to 4 inches of soil.
   F. Following germination, immediately re-seed areas without germinated seeds that are larger than 4 by 4 inches.

3.05 PROTECTION
   A. Fencing: Provide four (4’) foot tall orange plastic snow fencing and metal tee fence post spaced at a maximum of eight (8’) feet apart around all walks at seeded and sodded areas. Maintain until lawn is accepted.
B. Cover seeded slopes where grade is 4 inches per foot or greater with erosion fabric. Roll fabric onto slopes without stretching or pulling.

C. Lay fabric smoothly on surface, bury top end of each section in 6 inch deep excavated topsoil trench. Provide 12 inch overlap of adjacent rolls. Backfill trench and rake smooth, level with adjacent soil.

D. Secure outside edges and overlaps at 36 inch intervals with stakes.

E. Lightly dress slopes with topsoil to ensure close contact between fabric and soil.

F. At sides of ditches, lay fabric laps in direction of water flow. Lap ends and edges minimum 6 inches.

3.06 MAINTENANCE

A. Maintain original grades of all lawn areas after commencement of planting and during maintenance period until final acceptance of the job, but in no case less than forty-five (45) days.

B. See Section 01 7000 - Execution Requirements, for additional requirements relating to maintenance service.

C. Provide a separate maintenance contract for specified maintenance service.

D. Maintain seeded areas immediately after placement until grass is well established and exhibits a vigorous growing condition. Until final acceptance, and until as approved stand of grass is achieved, maintain plantings by watering, cultivating, mowing, weeding, spraying, cleaning and replacing as necessary to keep lawns in a vigorous, healthy condition.

E. Mow grass at regular intervals to maintain at a maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at any one mowing. Maintain through a minimum of three mowings to provide an even stand over the entire seeded area, until final inspection and acceptance.

F. Neatly trim edges and hand clip where necessary.

G. Immediately remove clippings after mowing and trimming.

H. Water to prevent grass and soil from drying out, form puddles of water, or be washed by over-application.

I. Roll surface to remove minor depressions or irregularities.

J. Control growth of weeds. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides. Apply herbicide in late spring or early summer. Apply only when mean high temperatures are between 60° and 85° F with wind velocities less than five (5) miles per hour. Prior to application, Contractor shall notify Owner, in writing, of the proposed schedule for applying herbicides. The application area must be signed with Owner-approved signs informing the public of the application and duration of restricted use. Written notice shall include the following items:
   1. Date of proposed application
   2. Specific area of proposed application
   3. Proposed herbicide for application
   4. Proposed concentration and application rate.

K. Establish a dense lawn of permanent grasses, free from lumps and depressions. Any part failing to show uniform cover and grades free from lumps and depressions shall be redone, and such replacement shall continue until a dense lawn is established. Scattered bare spots will not be allowed. Immediately reseed areas that show bare spots. Adequate germination shall equate to 11 to 15 seedlings per square foot over 95 percent of area seeded for native grass areas.

L. Protect seeded areas with warning signs during maintenance period.

END OF SECTION
### Museum of the Rockies: Pre-Bid Walk-Through Sign-In

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