

INVITATION TO BID

**FLOOD-CONSTRUCTION SERVICES FOR
SAINT VRAIN CREEK REACH 3
RESTORATION**

BID #6671-17



SUBMITTAL DUE DATE
AUGUST 1, 2017
10:00 A.M.

BOULDER COUNTY PURCHASING

2025 14TH STREET
BOULDER CO 80302

Purchasing@bouldercounty.org

INVITATION TO BID
FLOOD-CONSTRUCTION SERVICES
FOR SAINT VRAIN CREEK REACH 3 RESTORATION
BID #6671-17

BACKGROUND:

Boulder County Parks and Open Space is seeking a qualified and experienced contractor for construction services for Saint Vrain Reach 3 Creek restoration (Project) located between U.S. Highway 36 and Crane Hollow Road west of Longmont, CO. These services are required to restore approximately four (4) miles of stream which were damaged by the September 2013 flood event. Restoration services will include bank restoration, rebuilding, and stabilization as well as stream stabilization and channel establishment and replanting throughout. Boulder County seeks contractors interested in restoring the area to a resilient, functioning and ecologically rich stream corridor. Restoration will comply with the Contract Documents prepared and provided by Boulder County Parks and Open Space in this Invitation to Bid. The selected contractor will complete all construction aspects of the project before December 29, 2017.

CONTRACT LANGUAGE:

This project is supported by a grant from the United States Department of Agriculture, Natural Resource Conservation Service (NRCS) CFDA# 10.923, Emergency Watershed Protection (EWP) program as administered through the Colorado Water Conservation Board's Colorado Watershed Program with matching funds from Boulder County. This project is contingent upon Boulder County receiving an executed grant agreement from the Colorado Water Conservation Board (CWCB). A draft grant agreement is attached to this ITB and any associated contract will be subject to the terms and conditions of this Grant Agreement and the EWP program requirements.

The successful contractor will be required to enter into a Contract for Services. Additionally, the selected contractor shall execute the attached National Resources Conservation Services (NRCS) Emergency Watershed Protection Program Requirements for Procurement Contracts Addendum as part of any contract with the county, and comply with all NRCS requirements set forth in that addendum.

In the event the Contractor is unable to commence work as agreed to, the Boulder County Commissioners may rescind the bid award and proceed to award the Contract to another bidder based on BID #6671-17, re-bid the work, or proceed in any lawful manner the County deems necessary.

The selected contractor will comply with all state and local licensing requirements, including but not limited to, filing the State of Colorado Statement of Foreign Entity Authority paperwork, if contractor is not a Colorado company.

Contractor shall be authorized to do business in the State of Colorado and shall provide the County a current Certificate of Good Standing evidencing such authorization. Furthermore, Contractor shall be responsible for all applicable sales and employment taxes.

This project will require the selected Contractor to adhere to the NRCS Emergency Watershed Protection Grant Program Requirements for Procurement Contracts; therefore, all invoices submitted to Boulder County must contain sufficient information detailing expenses. Invoices shall be submitted on company letterhead and include, but not limited to, depending on activity completed, project name, date(s), description of work performed, quantity of materials purchased, if applicable, number of material units purchased, if applicable,

rate per hour, number of hours worked, mileage, mileage rate, administrative fees and complete site address of the project as awarded by the County. The contractor shall also be responsible for providing all submittals required in the Project Specifications in a timely manner to the County Project Engineer.

The selected Contractor will be required to be in good standing with the Federal Government, any agency that is not in compliance or in violation of Federal law will not be considered by Boulder County. Boulder County will not conduct business with any entities listed on the Federal Debarment Checklist.

Boulder County (County) is an Equal Opportunity Employer and no otherwise qualified individual shall be subject to discrimination on the basis of race, color, religion, creed, national origin, ancestry, sex, age, sexual orientation (incl. transgender status), physical or mental disability, marriage to a co-worker and retaliation for engaging in protected activity (opposing a discriminatory practice or participating in an employment discrimination proceeding) in any phase of employment for this position.

CONFLICT OF INTEREST:

Any party that has developed, designed or drafted specifications, requirements, statements of work and/or has participated in planning activities for this Project shall be excluded from consideration for the award of this Project.

SAM.GOV REGISTRATION:

Please provide a copy of your business' registration in sam.gov with your proposal.

DUNS NUMBER:

Please provide your business' DUNS number with your proposal.

W-9 REQUIREMENT:

Provide a copy of your business's W-9 with your proposal.

PRE-BID INFORMATION:

A Mandatory Pre-Bid meeting and project site visit is scheduled for **July 11, 2017 at 9:00 a.m., Mountain Time**. Interested parties are asked to meet at the Boulder County Parks and Open Space building, 5201 St. Vrain Road Longmont, CO. Please call 303-678-6200 for directions. A representative from your company must be in attendance at the meeting and project site visit.

Proposals from companies not represented at the Mandatory Pre-Bid/Project site meeting will not be accepted.

BID BOND:

A bid guarantee from each bidder equivalent to five percent (5%) of the bid price will be required. The bid guarantee shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.

PAYMENT BOND AND PERFORMANCE BOND:

Both a payment and a performance bond are required for this project and must equal 100% of the proposed cost. Please include the cost of this bonding into the total proposed cost. Payment and Performance Bond requirements are addressed in the attached Sample Contract. Bonds must be received and approved, by the

Sample Contract. Bonds must be received and approved, by the County, prior to work commencing. A Notice of Final Settlement will be required and retainage on all invoices.

ATTACHMENTS:

The following documents are part of this BID:

1. BID Document including the Contractor Qualification Statement
2. Attachment A: **Draft** CWCB and Boulder County Sub-Agreement (Grant Agreement)
3. Attachment B: NRCS/EWP Addendum
4. Attachment C: Sample Contract
5. Attachment D: QA Plan
6. Attachment E: O&M Plan
7. Attachment F: Construction Specifications
8. Attachment G: Construction Drawings – Dropbox Link
Copy and Paste
<https://www.dropbox.com/s/w1zvv93evihy581/Attachment%20G%20-%20Design%20Drawings.pdf?dl=0>
9. Attachment H: Landowner Agreement

BOULDER COUNTY INSURANCE REQUIREMENTS:

Insurance requirements are addressed in the attached Sample Contract and are listed below. All insurance requirements must be received and approved, by the County, prior to work commencing.

General Liability:	\$1,000,000, Each Occurrence \$2,000,000 General Aggregate
Automobile Liability:	\$1,000,000 Each Accident
Workers’ Compensation and Employer’s Liability:	Statutory Limits
Professional Liability:	\$1,000,000, Each Occurrence
Pollution Liability:	\$1,000,000, Each Occurrence
Crime Liability:	N/A
Farmer’s Liability:	N/A
Miscellaneous Other:	N/A
Umbrella or Excess Liability	\$3,000,000

Note that the above insurance amounts are the minimum required for this project. Proof of current insurance must be provided with your proposal in the form of a sample certificate or your proposal will be deemed non-responsive. If you require a waiver of insurance requirements (e.g. Workers Compensation and sole proprietorships) you may request one in your response with an explanation.

New certificates will be requested if the contract process takes more than 30 days after an award.

Additionally, the successful contractor will be required to comply with the insurance requirements as specified in the SubRecipient Grant Agreement between the NRCS EWP and Boulder County.

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Professional Liability:	\$1,000,000, Each Occurrence
Pollution Liability:	\$1,000,000, Each Occurrence
Crime Liability:	N/A
Farmer's Liability:	N/A
Miscellaneous Other:	N/A
Umbrella or Excess Liability	\$3,000,000

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WRITTEN INQUIRIES:

All inquiries regarding this BID shall be submitted via email to the Boulder County Purchasing Office at purchasing@bouldercounty.org on or before **10:00 a.m., Mountain Time, July 17, 2017**. A response from the County to all inquiries shall be posted and sent via email no later than **10:00 a.m., Mountain Time, July 20, 2017**.

SUBMITTAL INSTRUCTIONS:

Submittals are due at the Administrative Services Front Desk or the email box (preferred) listed below, for time and date recording on or before **10:00 a.m., Mountain Time, on August 1, 2017**.

Your response can be submitted in the following ways. Please note that email responses to this solicitation are preferred, but are limited to a maximum of 25MB capacity. NO ZIP FILES ALLOWED. Electronic Submittals must be received in the e-mail box listed below. Submittals sent to any other box will NOT be forwarded or accepted. This e-mail box is only accessed on the due date of your questions or proposals. Please use the Delivery Receipt option to verify receipt of your email. It is the sole responsibility of the proposer to ensure their documents are received before the deadline specified above. Boulder County does not accept responsibility under any circumstance for delayed or failed email or mailed submittals.

E-Mail purchasing@bouldercounty.org; identified as **BID #6671-17** in the subject line.

-OR-

US Mail **One (1)** unbound copy of your submittal, printed double-sided, 11 point, on at least 50% post-consumer, recycled paper must be submitted in a sealed envelope, clearly marked as **BID # 6671-17**, to the Administrative Services Front Desk at 2025 14th Street, Boulder, CO 80302.

All BIDs must be received and time and date **recorded and verified** at the Administrative Services Front Desk by the above due date and time. Sole responsibility rests with the Offeror to see that their BID is received on time at the stated location(s). Any BID's received after due date and time will be returned to the bidder. No exceptions will be made.

The Board of County Commissioners reserve the right to reject any and all BIDs, to waive any informalities or irregularities therein, and to accept the proposal in whole, or portions of the proposal that, in the opinion of the Board, is in the best interest of the Board and of the County of Boulder, State of Colorado.

Americans with Disabilities Act (ADA):

If you need special services provided for under the Americans with Disabilities Act, contact the ADA Coordinator or the Human Resources office at (303) 441-3525 at least 48 hours before the scheduled event.

TERMS AND CONDITIONS

1. Bidders are expected to examine the drawing, specifications, schedule of delivery, and all instructions. Failure to do so will be at the bidder's risk.
2. Each bidder shall furnish the information required in the Invitation to Bid.
3. The Contract/Purchase Order will be awarded to that responsible bidder whose submittal, conforming to the Invitation to Bid, will be most advantageous to the County of Boulder, price and other factors considered.
4. The County of Boulder reserves the right to reject any or all bids and to waive informalities and minor irregularities in bids received, and to accept any portion of or all items proposed if deemed in the best interest of the County of Boulder to do so.
5. No submittal shall be withdrawn for a period of thirty (30) days subsequent to the opening of bids without the consent of the County Purchasing Agent or delegated representative.
6. A signed purchase order or contract furnished to the successful bidder results in a binding contract without further action by either party.
7. Late or unsigned bids will not be accepted or considered. It is the responsibility of bidders to insure that the bid arrives at the Administrative Services Front Desk or appropriate email box prior to the time indicated in the "Invitation to Bid."
8. The proposed price shall be exclusive of any Federal or State taxes from which the County of Boulder is exempt by law.
9. Any interpretation, correction or change of the bid documents will be made by Addendum. Interpretations, corrections and changes of the bid documents made in any other manner will not be binding, and bidder shall not rely upon such interpretations, corrections and changes. The County's Representative will not be responsible for oral clarification.
10. Confidential/Proprietary Information: Bids submitted in response to this "Invitation to Bid" and any resulting contract are subject to the provisions of the Colorado Public (Open) Records Act, 24-72-201 et.seq., C.R.S., as amended. Any restrictions on the use or inspection of material contained within the bid and any resulting contract shall be clearly stated in the bid itself. Confidential/proprietary information must be readily identified, marked and separated/packaged from the rest of the bid. Co-mingling of confidential/proprietary and other information is NOT acceptable. Neither a bid, in its entirety, nor bid price information will be considered confidential/proprietary. Any information that will be included in any resulting contract cannot be considered confidential.
11. Boulder County promotes the purchase/leasing of energy efficient, materials efficient and reduced toxic level products where availability, quality and budget constraints allow. Bidders are expected whenever possible to provide products that earn the ENERGY STAR and meet the ENERGY STAR specifications for energy efficiency with power management features enabled. Bidders are encouraged to offer products and equipment with post-consumer recycled-content materials. Products should be packaged and delivered with a minimum amount of recycled packaging that adequately protects the product, but is not excessive.
12. Pursuant to Colorado law (House Bill 1292), in any bidding process for public works in which a bid is received from a non-resident bidder who is from a state that provides a percentage bidding preference, a comparable percentage disadvantage shall be applied to the bid of that bidder. Bidders may obtain additional information from the Department of Personnel's website: <http://www.colorado.gov/dpa/>.

BID #6671-17
FLOOD-CONSTRUCTION SERVICES
FOR SAINT VRAIN CREEK REACH 3 RESTORATION

BACKGROUND:

Boulder County, through its Parks and Open Space Department (BCPOS), owns and manages properties within the subject project area. The project limits are roughly U.S. Highway 36 to the west and Crane Hollow to the east as well as Colorado State Highway 66 (Ute Highway) and Hygiene Road to the South. The construction area contains private properties as well as irrigation ditches and associated infrastructure.

During the 2013 flood event, Saint Vrain Creek breached its banks east of U.S. Highway 36 and a pattern of spatially varied flow allowed water to flow within the existing channel as well as across the floodplain south and east to a series of ponds created during gravel mining operations (Lakes 3, 4, West and A-Frame). The water in the main channel breached the creek bank again at Lake 2 after a debris plug again redirected flow. The creek again breached its banks at a private property north of Hygiene Road. At this location flooding destroyed two separate ponds and significantly damaged banks throughout the property.

Floodwaters in this segment of the Saint Vrain (identified in subsequent planning documents as Reach 3) destroyed and damaged a number of private homes, industrial facilities, and infrastructure. Spatially varied flow and debris plugs resulted in bank avulsion as well as the destruction of banks in six different ponds associated with previous gravel mining. As a result of avulsions and bank failures the Saint Vrain deposited an enormous amount of water and debris in residential neighborhoods of the City of Longmont.

The flood event resulted in some of these specific impacts:

1. The bank south and east of the Longmont South Water Treatment Plant was overtopped and failed creating a large split flow channel (Stations 190+50 – 195+50). Water from this split flow channel entered the CEMEX facility.
2. Water in the split flow channel flowed into and destroyed the banks of four ponds.
3. Debris in the main channel plugged the creek just east of the South Branch headgate (~ Sta. 131+00). This debris plug resulted in another bank failure causing water to enter another pond (Sta. 132+00 – 135+50) .
4. Flows in the main channel seriously damaged the Oligarchy Ditch headgate (Sta. 67+50).
5. Water in the main channel scoured out the bank east of 61st Street destroyed structures at the historic Ramey farmhouse and flooded the house itself (Sta. 55+50 – 58+00).
6. East of the Ramey farmhouse and north of Hygiene Road, floodwaters created severe damage on what is known as the Hepp property. Bank failures caused permanent damage and water flowed from this property east towards Hygiene and eventually to Longmont (Sta. 21+00 – 39+50).

The greatest threats to the watershed continue to be:

1. The stream bank failure locations.
2. The lack of a defined channel to handle adequate flow capacity.
3. Banks with poor protection

Immediately after the flood, the bank breaches were temporarily repaired with the support of the Federal Emergency Management Agency (FEMA). These temporary breach closures are not engineered structures, but do contain a clay core as well as riprap on the creek side face. Per FEMA regulations the material from these breach closures may be reused but the structures themselves may not remain as they currently exist.

Other entities have completed work in the watershed since the flood and still others are designing work to be done soon. Work has focused on increasing flood protection at the CEMEX plant and restoring or shoring up facilities at the Foothills Inlet, South Branch, Longmont Supply, Oligarchy, and North Branch Ditch diversions and headgates. To the south of the project area, FEMA is financing the reconstruction of four ponds by Boulder County. These ponds were breached by water flowing in the split flow channel. Reconstruction of these ponds will involve coordination with the advertised project. Any such coordination will be managed by Boulder County.

GOALS:

The intent of this project is to create a stable channel in the main-stem of Reach 3 of Saint Vrain Creek. This will involve in-stream stabilization work, bank stabilization, planting and seeding work, and the reconstruction of four (4) breached locations on the banks of the Saint Vrain. The project should result in a resilient reach of the Saint Vrain that can protect life and property along the creek while promoting the return of native plant and wildlife communities. The Contractor shall coordinate closely with the Boulder County Parks and Open Space through the Quality Assurance Plan (QA Plan).

SCOPE OF WORK:

This project consists of bank reconstruction and restoration, bank stabilization, creek bed stabilization and shaping, and planting and seeding in impacted areas along the work space. In-stream work will necessitate working with bioengineering features, rip rap, bank shaping, channel restoration, and planting.

Major work will include:

1. Securing applicable permits prior to construction startup.
2. Mobilization, survey data, site erosion control, demobilization, and creek restoration at several project reaches per construction drawings and specifications.
3. Site preparation including survey, utility location, sediment and erosion control Best Management Practices (BMP), materials testing and submittal.
4. Salvage and stockpile topsoil.
5. Clearing and grubbing within limits of disturbance, especially woody material having a Diameter at Breast Height (DBH) less than 6 inches at 4.5 feet above ground surface.
6. Removal of abandoned utilities appurtenances and flood generated trash and debris along the project corridor.
7. Removal of flagged trees i.e. trees over 6 inches (DBH) for re-use within project limits. Salvage trees greater than 12 inches (DBH) with root wad intact per the drawings and specifications for potential reuse.
8. Removal or delivery of any trees necessary to complete bank stabilization.
9. Dewatering temporary excavations in channel and off channel.
10. Removal of temporary breach repairs and stockpiling of materials.
11. Retrieval and reuse of clay available at county-owned project site for reuse in bank reconstruction, as described.
12. Reconstruction of banks as described and designed using native, stockpiled, and imported materials as necessary.
13. Selective native streambed salvage, stockpiling and replacement of existing native river bottom material (sand, gravel, cobbles).
14. Channel and floodplain earthwork in conformity with the lines and grades shown in the construction drawings.
15. Construction of instream water control structures.

16. Placement of instream rocks for channel roughness and complexity.
17. Construction of bank stabilization structures as defined in construction drawings and specifications.
18. Prepare final grades, incorporate soil amendments, install erosion control measures, native seeding and mulching for riparian and upland restoration.
19. Planting of native trees, shrubs, perennial (tubelings), willow cuttings as shown on the construction drawings and described in the specifications.
20. Caging specified plantings against beaver and small mammal herbivory as shown on the construction drawings and described in the specifications.
21. One year plant establishment, including necessary corrective measures such as replanting if needed and/or temporary watering as determined by the contractor for plant survival.
22. Restoration of all disturbed areas within project limits and project closeout.
23. This project may require a significant amount of “field fitting” by the. This is particularly true of the stream restoration efforts.

ADDITIONAL INFORMATION:

A. Pre-Construction Meeting

Prior to commencement of work, the selected Contractor, any subcontractors and the persons responsible for coordination of the work shall meet with representatives from Boulder County. The meeting will be held at the Boulder County Parks and Open Space Administrative Building, 5201 St. Vrain Road, Longmont, Colorado 80503. Please call 303-678-6200 for directions. The detailed preconstruction conference agenda will be provided to the selected contractor for review prior to the meeting and the contractor is responsible for providing base line schedule to the County’s representative at the meeting. Also weekly periodic progress meeting will conducted at project facility to discuss schedule, progress, coordination, submittals, and job related problems.

B. BCPOS Responsibilities

BCPOS will provide digital Drawings and Specifications files as needed by the Contractor in order to fulfill the terms of the Contract.

1. Permits

There will be a significant amount of contracting related to this project. BCPOS and the contractor will share responsibility for obtaining permits and licenses. Please see Specifications (Section 107.02) for details.

2. Staging Areas and Access Routes

Preliminary staging areas are identified on the Drawings. The contractor shall be responsible for the location and obtaining approval for all final staging areas and access routes. BCPOS shall specify requirements for protection of sensitive species.

3. Non-County Landowner Permission

Boulder County will obtain permission from all landowners required to complete the PROJECT as specified in this document; access and/or work on private land. Boulder County will not authorize commencement of work until all permissions are secured. Contractor will be responsible for following all conditions of the permissions.

C. Contractor Responsibilities

The Contractor agrees to work in a timely and efficient manner, and in accordance with the Drawings and Specifications to accomplish the tasks specified in this Project.

1. Time Limit

Permitting will commence within ten (10) calendar days of the date of the execution of the Contract and written Notice to Proceed provided by BCPOS's representative, and Contractor-required permit applications will be submitted to applicable approval agencies within twenty (20) calendar days of the execution of the Contract. Project mobilization will commence within ten (10) calendar days of approval of all Contractor-required permits or by no later than October 1, 2017. The Project is to be completed on or before December 29, 2017.

It is the intent of the County to proceed with the full project as described herein. The construction contractor will be selected on this basis.

Should, for any reason (including funding, timeline issues that would impair the project's ability to be completed by December 29, 2017, and cost considerations) the project scope shall be reduced. The County reserves the right to reconfigure the project into sub-projects for implementation. One or more such sub-projects will be selected for construction. Before beginning work, the selected construction contractor, in cooperation with the County, will further refine the sub-projects consistent with the Bid Schedule. The County will then select the specific sub-projects for construction.

Project construction may be impacted by wildlife closures. With the anticipated construction start date of mid-September these closures should not impact construction timelines. However, if closures do impact the schedule, the County will coordinate and negotiate a written solution with the selected construction contractor.

In addition, the project timeline, which is compressed due to the federal funding timeline restrictions, may impact the ability of the contractor to complete items B,C, E, and I of Section 17 of the Bid Schedule. These items include planting containerized or wetland plants that are unlikely to survive winter if planted in the proposed construction window. The contractor shall prepare a bid as directed in the Bid Schedule, assuming that the contract time will be extended to accomplish revegetation only, during the spring of 2018. If the time extension is not granted, dependent upon federal funding decisions, the county reserves the right to delete the relevant items from the project. The contractor will be selected based on the lowest responsible and responsive bidder with a bid for the whole project including all planting.

2. Equipment

All equipment and vehicles utilized by the Contractor shall meet all the requirements of federal, state and local regulations without limitation including all U. S. Department of Transportation (USDOT), Colorado Department of Transportation (CDOT) safety regulations, and Boulder County's Storm Drainage Criteria Manual.

3. Site Management

All equipment must be maintained and in good working order. Continuous, excessive oil and hydraulic fluid leakage will not be tolerated and will be cause to have the machinery removed from the project site and including removal of any contaminated soil by the Contractor.

All operators shall have the skills to operate the machinery in a responsible, safe, and efficient manner while being conscientious of the natural resource values. Trash and debris generated by the Contractor shall be contained and removed on a weekly basis. The Contractor is responsible for providing on-site portable toilet facilities for their staff.

4. Permits

There will be a significant amount of permitting related to this project. BCPOS and the contractor will share responsibility for obtaining permits and licenses. Please see Specifications (Section 107.02) for details.

5. Overnight Camping

Boulder County prohibits any overnight camping; Operational staff is not authorized to be present at Project site from sunset to sunrise, the open space property will remain closed during these hours to the contractor and its subcontractors and/or designated representatives and/or agents.

6. Hours of Operation

Contractor work hours shall be Monday to Friday, 7:00 a.m. to 5:00 p.m. Work on Saturdays and Sundays, nights, and federal holidays shall not be allowed unless approved, in writing, by the County. Hours of hauling shall be limited to 8:30 a.m. to 4:00 p.m. Monday through Friday.

7. Surveying

A surveyor, licensed to practice in the State of Colorado shall be part of the selected contractor's team. Site benchmarks will be needed to facilitate construction staking and surveying for as-built conditions. A post-construction survey shall be conducted to survey the final stations, elevations, and dimensions of constructed in-channel features and bench grading.

Post construction surveying and as-built requirements are in Appendix A3 of the EWP Project Engineering Guidance for the 2013 Colorado Flood Recovery Phase 2 on the Colorado EWP website: <https://coloradoewp.com/document/emergency-watershed-protection-ewp-program-2013-colorado-flood-recovery-phase-2-project>

In addition to the requirements above, Contractor shall comply with all operational requirements as outlined in the Draft CWCB and Boulder County Sub-Agreement (Grant Agreement), project Specifications and the project QA Plan.

8. Submittal Format

For submittals such as survey data, as-built drawings, etc. that require Computer Aided Design (CAD); the contractor shall submit both paper and electronic copies with the following formatting considerations:

For all data:

1. All spatial or georeferenced data (GIS, CAD, LiDAR, Imagery) will be provided in the following coordinate system:
 - a. Name: NAD 1983 HARN State Plane Colorado North FIPS 0501 Feet
WKID: 2876 Authority: EPSG
Unit: Foot US
Projection: Lambert Conformal Conic
Horizontal Datum: North American Datum 1983 HARN
Vertical Datum: North American Vertical Datum 1988
Spheroid: GRS 1980
 - b. Where possible, include control points, corner section points and/or benchmarks.

For the CAD data:

1. A hard copy of the AutoCAD drawing(s) plotted on "11x17" sheets, ***stamped and signed by the design professional.***
2. A hard copy print out which shows layer names along with a description of the layer names used in all drawings.
3. Electronic AutoCAD Files:
4. Electronic drawing file in AutoCAD 2010 format or more recent AutoCAD (packaged with associated files such as fonts, images, ctb, etc.), contour lines shall have accurate z elevations. Contours shall have separate layers for the minor contours and five foot contours (e.g. Contours-Minor and Contours-Major). The contour text labels must be on unique layers with similar names (e.g. Contours-Minor-txt and Contours-Major-txt)
5. The text and symbols shall be at a scale of 1"=40'. The file shall be in model space (not paper space) with 1' contours.
6. No forced colors or linetypes. Drawing entities must be created so that their color and linetype can be changed in the layer dialogue box. All objects (points, polylines, polygons, hatches, text, dimensions, blocks, nested blocks, etc.) shall be drawn with attributes set to "COLOR BY LAYER," "LINEWEIGHT BY LAYER" and "LINETYPE BY LAYER."
7. All blocks created on layer zero with no forced colors or linetypes.
8. Create polylines with "line type gen" set "on".
9. All lines consisting of multiple intersections must be continuous polylines except for lots, section lines, right-of-way lines or other data created by curves, bearings, etc.
10. Text must be on unique layers. No mixing of text and entities except for utilities where labels and line work is to be on the same layer.
11. Layers may contain only one type of information, i.e. gas lines, layer may only have polylines showing location of gas lines, with no text or other information on the layer. Layer naming must clearly describe the following: entity name, new or existing, above or underground. Use consistent naming conventions through the drawing layers. Create numerically prefix layers in the following way:
12. All hatch layers should be named to end with the word "hatch" and be prefixed with the identical name as the layer representing the edge of the hatch. Use a separate name and layer for each type of hatch.
13. Create closed polygons for all sidewalks, curbing, driveways, and other surveyed entities.
14. Draw all utility lines both above ground and underground, with continuous polylines with no elevations (z coordinate zero).
15. Provide all AutoCAD Plot styles.
16. Survey point data files must have survey point descriptions in an understandable alpha description in both the provided survey data file and when viewed within AutoCAD. Provide a list of commonly used acronyms, i.e. EOP=Edge of Pavement, "tel ped" or TR=telecommunications pedestal, etc. Provide a list of all of the layers utilized with a description.

For the GIS data:

1. All GIS data will be delivered in an ESRI geodatabase, ArcGIS 10.3 compatible. Shapefiles may be accepted with pre-approval.
2. All GIS data will have complete metadata, following [Boulder County GIS Metadata Standards](#).
3. All GIS deliverables will include an accuracy report in the metadata.

4. The contractor shall employ appropriate QA/QC standards to ensure data quality. A summary of the methods used to correct inconsistencies and any remaining errors by case should be included in the metadata under the “Logical Consistency Report” and “Completeness Report” sections.
5. All records must be fully attributed. Attribute table requirements:
 - a. Field names must populate the first row. Field names are unique. Field names do not contain spaces or special characters, except for underscores. Field names must start with a letter. No spaces are included before or after text or numbers within a cell. Field names must be 10 characters or less.

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FLOOD-CONSTRUCTION SERVICES
FOR SAINT VRAIN CREEK REACH 3 RESTORATION

SELECTION CRITERIA:

In order to be eligible for consideration, a Contractor must submit all information as requested herein. Omission of any of the required information may be grounds to reject the Contractor's bid from further consideration. The selection criteria will include, but is not limited to:

- A. Technical ability, capacity, experience and skill of the contractor, and key team members assigned to the project.
- B. Ability of the contractor to meet the requirements of the Data Format; Inability to meet the requirements as stated may be grounds to reject the bid from consideration.
- C. Past experience of the company having successfully completed projects of similar size and complexity, including stream restoration projects.
- D. Quality and/or performance of work provided on previous projects.
- E. References and recommendations from former customers and/or design engineers and clients.
- F. Subcontractors' past performance and references.
- G. Financial ability, sufficiency of resources, and bonding capacity to undertake and successfully complete the project.
- H. Organization and completeness of the statement of qualifications.
- I. Other relevant information provided by the contractor.
- J. Firm selection will be based on the bid that provides Boulder County with the best cost and quality project.
- K. Ability to commence the work within ten (10) calendar days of approval of all Contractor-required permits and to complete construction before December 29, 2017 from the date of mobilization.
- L. Construction schedule must be submitted showing conformance with the completion date of December 29, 2017.

**BID #6671-17
FLOOD-CONSTRUCTION SERVICES
FOR SAINT VRAIN CREEK REACH 3 RESTORATION**

BID TAB:

Item No.	Div.	Item	Qty	Unit	Rate	Amount
1	625	Surveying	1	LS		\$ -
2	626	Mobilization and Demobilization	1	LS		\$ -
3	208	Erosion and Sediment Control	1	LS		\$ -
4	306	Ramey Staging Area & Access Road	1	LS		\$ -
5	202	Removal of Waste and Inorganic Debris	15	LD		\$ -
6	201	Removal of Organic Debris	15	LD		\$ -
7	250	Protection of Migratory Birds	1	LS		\$ -
8	Ancillary Services					
a	104	Traffic Control	1	LS		\$ -
b	n/a	QC Materials Testing	1	LS		\$ -
9	Breach 1 Repair					
a	201	Clear, Strip and Grub	1	LS		\$ -
b	200	Access Road Improvements	1	LS		\$ -
c	211	Care and Diversion of Stream Water	1	LS		\$ -
d	211	Dewatering	1	LS		\$ -
e	203	Excavation	2800	CY		\$ -
f	203	Borrow and Fill	13500	CY		\$ -
g	712	Non-woven Geotextile	1500	SY		\$ -

h	506	Remove and Stockpile Riprap	250	CY		\$	-
i	506	Type M Riprap Delivered	1550	TN		\$	-
j	506	Riprap Placement	1	LS		\$	-
k	206	Clay Core	2000	CY		\$	-
10	Breach 2 Repair						
a	201	Clear, Strip and Grub	1	LS		\$	-
b	200	Access Road Improvements	1	LS		\$	-
c	211	Care and Diversion of Stream Water	1	LS		\$	-
d	211	Dewatering	1	LS		\$	-
e	203	Excavation	2000	CY		\$	-
f	203	Borrow and Fill	10000	CY		\$	-
g	712	Non-woven Geotextile	1400	SY		\$	-
h	506	Remove and Stockpile Riprap	100	CY		\$	-
i	506	Type H Riprap Delivered	3900	TN		\$	-
j	506	Riprap Placement	1	LS		\$	-
k	206	Clay Core	1700	CY		\$	-
11	Breach 6 Repair						
a	201	Clear, Strip and Grub	1	LS		\$	-
b	200	Access Road Improvements	1	LS		\$	-
c	211	Care and Diversion of Stream Water	1	LS		\$	-
d	211	Dewatering	1	LS		\$	-
e	203	Excavation	1500	CY		\$	-
f	203	Borrow and Fill	2200	CY		\$	-
g	712	Non-woven Geotextile	600	SY		\$	-

h	506	Type H Riprap Delivered	750	TN		\$	-
i	506	Riprap Placement	1	LS		\$	-
j	206	Clay Core	1000	CY		\$	-
12	Breach 7 Repair						
a	201	Clear, Strip and Grub	1	LS		\$	-
b	200	Access Road Improvements	1	LS		\$	-
c	211	Care and Diversion of Stream Water	1	LS		\$	-
d	211	Dewatering	1	LS		\$	-
e	203	Excavation	2000	CY		\$	-
f	203	Borrow and Fill	50000	CY		\$	-
g	506	Remove and Stockpiled Riprap	600	CY		\$	-
h	206	Clay Core	4000	CY		\$	-
13	Breaches 8, 9, and Hygiene Road Approach						
a	201	Clear, Strip and Grub	1	LS		\$	-
b	200	Access Road Improvements	1	LS		\$	-
c	211	Care and Diversion of Stream Water	1	LS		\$	-
d	211	Dewatering	1	LS		\$	-
e	712	Non-woven Geotextile	3000	SY		\$	-
f	506	Remove and Stockpile Riprap	500	CY		\$	-
g	506	Type H Riprap Delivered	7000	TN		\$	-
h	506	Riprap Placement	1	LS		\$	-
14	Stream Channel Restoration						
a	201	Clear, Strip and Grub	1	LS		\$	-
b	203	Restore, Grade & Shape Channel	1	LS		\$	-

c	200	Stream Access Restoration	14	EA		\$	-
d	203	Material Sorting	1	LS		\$	-
e	519	Riffle/Pool Sequences	26	EA		\$	-
f	203	Instream Fill Placement	6000	CY		\$	-
g	203	Boulders Delivered	35	EA		\$	-
h	203	Boulder Clusters	26	EA		\$	-
i	216	Erosion Control Fabric	15000	SY		\$	-
15	Bifurcation Structure						
a	201	Clear, Strip and Grub	1	LS		\$	-
b	200	Access Road Improvements	1	LS		\$	-
c	211	Care and Diversion of Stream Water	1	LS		\$	-
d	211	Dewatering	1	LS		\$	-
e	203	Excavation	2500	CY		\$	-
f	203	Borrow and Fill	2000	CY		\$	-
g	601	Bifurcation Structure	1	LS		\$	-
h	712	Non-woven Geotextile	800	SY		\$	-
i	506	Type M Riprap Delivered	1300	TN		\$	-
j	506	Riprap Placed	1	LS		\$	-
16	Bank Stabilization						
a	506	Type VL Riprap Delivered	1800	TN		\$	-
a	519	Type A Bank Stabilization	1400	LF		\$	-
b	519	Type B Bank Stabilization	500	LF		\$	-
d	519	Type C Bank Stabilization	1500	LF		\$	-
e	519	Type D Bank Stabilization	1500	LF		\$	-

17	Vegetation					
a	214	Willow Cuttings	21940	EA		\$ -
b	214	Deciduous Trees & Shrubs 14" Tall 1-GAL	2760	EA		\$ -
c	214	Deciduous Trees & Shrubs 40 CI	9616	EA		\$ -
d	215	Willow Transplant (Clump)	250	EA		\$ -
e	214	Herbaceous Plants (10 CI)	16655	EA		\$ -
f	213	Lower Riparian Seeding	17.1	AC		\$ -
g	212	Upper Riparian Seeding	41.7	AC		\$ -
h	213	Wood Straw	41.7	AC		\$ -
i	213	Beaver and Vole Protection	1	LS		\$ -
18	Topsoil					
a	207	Imported Topsoil	10900	CY		\$ -
b	212	Class 1 Compost	22.6	AC		\$ -
c	212	Granular Endo Mychorrizal Inoculum (20#/AC) (Zone 3)	22.6	AC		\$ -
d	212	Granular Humate	22.6	AC		\$ -
e	212	Biosol 7-2-1 Organic Fertilizer	22.6	AC		\$ -
f	212	Biochar	0.1	AC		\$ -
g	212	Application and Tillage	22.6	AC		\$ -
TOTAL BID						\$ -

Company Name

Name of person and title submitting BID (PLEASE PRINT)

Signature of Bidder

**BID #6671-17
 FLOOD-CONSTRUCTION SERVICES
 FOR SAINT VRAIN CREEK REACH 3 RESTORATION**

SIGNATURE PAGE:

SIGN AND RETURN THIS SUBMITTAL PAGE WITH YOUR BID.

Contact Information	Response
Company Name including DBA	
List type of organization (Corporation, Partnership, etc)	
Name and Title of Person authorized to contract with Boulder County	
Name and Title of Person submitting Bid	
Email address for Person submitting Bid	
Company Address	
Company Telephone Number	
Company Website	
Company Fax Number	

By signing below I certify that:

I am authorized to bid on my company's behalf.

I am not currently an employee of Boulder County.

None of my employees or agents is currently an employee of Boulder County.

I am not related to any Boulder County employee or Elected Official.

I am not a Public Employees' Retirement Association (PERA) retiree.

**Signature of Person Authorized to Bid on
 Company's Behalf**

Date

Note: If you cannot certify the above statements, please explain in a statement of explanation.

ATTACHMENT A

Routing # CMS #

STATE OF COLORADO Colorado Water Conservation Board SubRecipient Grant Agreement County of Boulder

1. PARTIES

This Subrecipient Grant Agreement (hereinafter called “Grant”) is entered into by and between County of Boulder, whose address is P.O. Box 471, Boulder, Colorado, 80301-0471 (hereinafter called “Grantee”), unique entity identifier (DUNS Number) 075755199 and the STATE OF COLORADO, acting by and through the Colorado Water Conservation Board, whose address is 1313 Sherman Street, #720, Denver CO 80203, (hereinafter called the “State” or “CWCB”).

2. EFFECTIVE DATE AND NOTICE OF NONLIABILITY.

This Grant shall not be effective or enforceable until it is approved and signed by the Colorado State Controller or designee (hereinafter called the “Effective Date”). The State shall not be liable to pay or reimburse Grantee for any performance hereunder, including, but not limited to costs or expenses incurred, or be bound by any provision hereof prior to the Effective Date.

3. RECITALS

A. Authority, Appropriation, and Approval

Authority to enter into this Grant exists in §37-60-101 through -121 C.R.S. and funds have been budgeted, appropriated and otherwise made available pursuant to Governor's Emergency fund, Executive Order #D2014-012, and funds made available by the U.S. Department Of Agriculture, Natural Resources Conservation Service (NRCS), CFDA # 10.923, Federal Award Identification Number (FAIN) 68-8B05-17-TBD, and a sufficient unencumbered balance thereof remains available for payment. Required approvals, clearance and coordination have been accomplished from and with appropriate agencies.

B. Consideration

The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Grant.

C. Purpose

The purpose of this grant agreement is to fund and implement approved projects under the NRCS Emergency Watershed Protection Program. Those projects support long-term expenditures of funded entities in response to and recovery from the September 2013 floods in Colorado.

D. References

All references in this Grant to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

E. Selection

This grant is exempt from the Procurement Code under CRS §24-101-105 (1)(a)(II).

4. DEFINITIONS

The following terms as used herein shall be construed and interpreted as follows:

A. Budget

“Budget” means the budget for the Work described in **Exhibit B**.

B. Cost Sharing Funds

“Cost Sharing Funds” means the portion of project costs not paid by Federal funds. Cost Sharing Funds are the same as Matching Funds.

C. Evaluation

“Evaluation” means the process of examining Grantee’s Work and rating it based on criteria established in §6 and Exhibit A.

D. Exhibits and other Attachments

The following are attached hereto and incorporated by reference herein:

Exhibit A – Statement of Work,

Exhibit A-1 – Operation and Maintenance Plan,

Exhibit A-2 – Quality Assurance Plan,

Exhibit A-3 – Statement of Work, Administrative Requirements

Exhibit B – Project Budget,

Exhibit C – Grant Assurances

Exhibit C-1 – Applicable Federal Laws and State Grant Guidance

Exhibit C-2 – Emergency Watershed Protection Technical Assistance

Exhibit C-3 – General Terms and Conditions Grants and Cooperative Agreements (USDA/NRCS)

Exhibit C-4 – Supplemental Provisions for Federal Awards

Exhibit C-5 – Assurances Relating to Real Property Acquisition

Exhibit C-6 – NRCS Supplement to OSHA Parts 1910 and 1926-Construction Industry Standards and Interpretations

Exhibit C-7 – Colorado Supplemental Provisions (3/30/2013)

Exhibit D – Option Letter.

E. Goods

“Goods” means tangible material acquired, produced, or delivered by Grantee either separately or in conjunction with the Services Grantee renders hereunder.

F. Grant

“Grant” means this Grant, its terms and conditions, attached exhibits, documents incorporated by reference under the terms of this Grant, and any future modifying agreements, exhibits, attachments or references incorporated herein pursuant to Colorado State law, Fiscal Rules, and State Controller Policies.

G. Grant Funds

“Grant Funds” means available funds payable by the State to Grantee pursuant to this Grant.

H. Matching Funds

“Matching Funds” means the portion of project costs not paid by Federal funds. Matching Funds are the same as Cost Sharing Funds.

I. Party or Parties

“Party” means the State or Grantee and “Parties” means both the State and Grantee.

J. Program

“Program” means the NRCS Emergency Watershed Protection Program grant program that provides the funding for this Grant.

K. Recipient

“Recipient” means a Colorado State agency that receives an Award. In this agreement, the Recipient is the Colorado Water Conservation Board.

L. Review

“Review” means examining Grantee’s Work to ensure that it is adequate, accurate, correct and in accordance with the criteria established in §6 and Exhibit A and C.

M. Services

“Services” means the required services to be performed by Grantee pursuant to this Grant.

N. Subcontractor

“Subcontractor” means third-parties, if any, who are not subgrantees, engaged by Contractor to provide goods, services or construction.

O. Subgrantee

“Subgrantee” means third-parties, if any, engaged by Grantee to aid in performance of a federal program. A subgrantee may also be a subrecipient.

P. Subrecipient

“Subrecipient” means a non-federal entity that receives a Subaward from a Recipient to carry out part of a federal program, but does not include an individual that is a beneficiary of such program.

Q. Work

“Work” means the tasks and activities Grantee is required to perform to fulfill its obligations under this Grant and **Exhibit A and C**, including the performance of the Services and delivery of the Goods.

R. Work Product

“Work Product” means the tangible or intangible results of Grantee’s Work, including, but not limited to, software, research, reports, studies, data, photographs, negatives or other finished or unfinished documents, drawings, models, surveys, maps, materials, or work product of any type, including drafts.

5. TERM

A. Initial Term-Work Commencement

This agreement shall commence on the effective date, as detailed under the project schedule in **Exhibit A**. The agreement shall terminate **TBD** unless sooner terminated or extended by a formal amendment to this grant as outlined in **section 5.C**.

B. Two Month Extension

The State, at its sole discretion upon written notice to Grantee as provided in **§16**, may unilaterally extend the term of this Grant for a period not to exceed two months if the Parties are negotiating a replacement Grant at or near the end of any initial term or any extension thereof. The provisions of this Grant in effect when such notice is given, including, but not limited to prices, rates, and delivery requirements, shall remain in effect during the two month extension. The two-month extension shall immediately terminate when and if a replacement Grant is approved and signed by the Colorado State Controller.

C. State’s Option to Extend

The State may require continued performance for an additional period, at the same rates and same terms specified in the Grant. If the State exercises this option, it shall provide written notice to Grantee at least 30 days prior to the end of the current Grant term in form substantially equivalent to **Exhibit D**. If funded and exercised, the provisions of the Option Letter shall become part of and be incorporated into this Grant. The total duration of this Grant, including the exercise of any options under this clause, shall not exceed five years.

6. STATEMENT OF WORK

A. Completion

Grantee shall complete the Work and its other obligations as described herein and in **Exhibit A and A** on or before **TBD**. The State shall not be liable to compensate Grantee for any Work performed prior to the Effective Date or after the termination of this Grant.

B. Goods and Services

Grantee shall procure Goods and Services necessary to complete the Work. Such procurement shall be accomplished using the Grant Funds and shall not increase the maximum amount payable hereunder by the State.

C. Employees

All persons employed by Grantee, Subcontractors or Subgrantees shall be considered Grantee’s, Subcontractor’s or Subgrantees’ employee(s) for all purposes hereunder and shall not be employees of the State for any purpose as a result of this Grant.

7. PAYMENTS TO GRANTEE

The State shall, in accordance with the provisions of this §7, pay Grantee in the following amounts and using the methods set forth below:

A. Maximum Amount

The maximum amount payable under this Grant to Grantee by the State is \$5,588,050.13, as determined by the State from available funds. Grantee agrees to provide any additional funds required for the successful completion of the Work. Payments to Grantee are limited to the unpaid obligated balance of the Grant as set forth in **Exhibit A and B**. Final costs will be agreed upon during the pre-design conference. These costs consist of costs from contracts awarded to contractors, and eligible Grantee in-kind

construction costs for materials, labor, and equipment. The Sponsor shall provide NRCS documentation to support all eligible construction costs. The maximum amount payable by the State to Grantee during each State fiscal year of this Grant shall be:

\$5,588,050.13 in FY2017
\$ 5,588,050.13 minus the amount spent in FY 2017 in FY2018

B. Payment

i. Interim and Final Payments

All payments allowed under this Grant and in **Exhibit B** shall comply with State Fiscal Rules and be made in accordance with the provisions of this Grant or such Exhibit based on cost reimbursement as specified in **§7.A.**, above. Grantee shall initiate any payment requests by submitting invoices to the State in the form and manner set forth and approved by the State.

ii. Interest

The State shall fully pay each invoice within 45 days of receipt thereof if the amount invoiced represents performance by Grantee previously accepted by the State. Uncontested amounts not paid by the State within 45 days may, if Grantee so requests, bear interest on the unpaid balance beginning on the 46th day at a rate not to exceed one percent per month until paid in full; provided, however, that interest shall not accrue on unpaid amounts that are subject to a good faith dispute. Grantee shall invoice the State separately for accrued interest on delinquent amounts. The billing shall reference the delinquent payment, the number of day’s interest to be paid and the interest rate.

iii. Available Funds-Contingency-Termination

The State is prohibited by law from making fiscal commitments beyond the term of the State’s current fiscal year. Therefore, Grantee’s compensation is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions, set forth below. If federal funds are used with this Grant in whole or in part, the State’s performance hereunder is contingent upon the continuing availability of such funds. Payments pursuant to this Grant shall be made only from available funds encumbered for this Grant and the State’s liability for such payments shall be limited to the amount remaining of such encumbered funds. If State or federal funds are not appropriated, or otherwise become unavailable to fund this Grant, the State may immediately terminate this Grant in whole or in part without further liability in accordance with the provisions herein.

iv. Erroneous Payments

At the State’s sole discretion, payments made to Grantee in error for any reason, including, but not limited to overpayments or improper payments, and unexpended or excess funds received by Grantee, may be recovered from Grantee by deduction from subsequent payments under this Grant or other Grants, grants or agreements between the State and Grantee or by other appropriate methods and collected as a debt due to the State. Such funds shall not be paid to any person or entity other than the State.

C. Use of Funds

Grant Funds shall be used only for eligible costs identified herein and/or in the Budget.

D. Matching Funds

Grantee shall provide Matching Funds as provided in **Exhibit B**, “Local Matching Funds”. Grantee shall have raised the full amount of Local Matching Funds prior to the Effective Date and shall report to the State regarding the status of such funds upon request. The Grantee’s obligation to pay all or any part of any matching funds, whether direct or contingent only extends to funds duly and lawfully appropriated for the purposes of this Agreement by the authorized representatives of the Subrecipient and paid into the Grantee’s treasury or bank account. The Grantee represents to the State that the amount designated “Grantee’s Matching Funds” in **Exhibit B** has been legally appropriated for the purposes of this Agreement by its authorized representatives and paid into its treasury or bank account. The Grantee does not by this Agreement irrevocably pledge present cash reserves for payments in future fiscal years, and this Agreement is not intended to create a multiple-fiscal year debt of the Grantee. The Grantee shall not pay or be liable for any claimed

interest, late charges, fees, taxes or penalties of any nature, except as required by the Local Agency's laws or policies.

E. Reimbursement of Grantees' Costs

The State shall reimburse the Grantee's allowable costs, not exceeding the maximum total amount described in **Exhibit B** and **§7**. The State shall reimburse the Grantee for the federal share or the "NRCS Funds" and the State Matching Funds" as shown on Exhibit B, of properly documented allowable costs related to the Work after review and approval thereof, subject to the provisions of this Agreement and **Exhibit A, B and C**. However, any costs incurred by the Grantee prior to the Effective Date shall not be reimbursed absent specific allowance of pre-award costs and indication that the federal award funding is retroactive. Allowable costs shall be:

i. Reasonable and Necessary.

Reasonable and necessary to accomplish the Work and for the Goods and Services provided.

ii. Net Cost.

Actual net cost to the Grantee (i.e. the price paid minus any items of value received by the Subrecipient that reduce the cost actually incurred).

F. Close Out.

The Grantee shall close out this Grant within 90 days after the end date. Grant close out entails submission to the State by the Grantee of all documentation required by this Grant, and Grantee's final reimbursement request. The State shall withhold 5% of the allowable costs until all final project documentation has been submitted and accepted by State as substantially complete. If the project has not been closed by Natural Resources Conservation Service (NRCS) within 1 year and 90 days after the end date due to Grantee's failure to submit required documentation that the State has requested from the Subrecipient, then the Grantee may be prohibited from applying for new federal awards through the State until such documentation has been submitted and accepted.

G. Erroneous Payments.

The closeout of a federal award does not affect the right of NRCS or CWCB to disallow costs and recover funds on the basis of a later audit or other review. Any cost disallowance recovery is to be made within the record retention period.

8. REPORTING - NOTIFICATION

Reports, Evaluations, and Reviews required under this **§8** shall be in accordance with the procedures of and in such form as prescribed by the State and in accordance with **§19**, if applicable.

A. Performance, Progress, Personnel, and Funds

Grantee shall submit all financial, performance, and other reports to the State upon expiration or sooner termination of this Grant, containing an Evaluation and Review of Grantee's performance and the final status of Grantee's obligations hereunder. In addition, Grantee shall comply with all reporting requirements, if any, set forth in **Exhibits A and C**.

B. Litigation Reporting

Within 10 days after being served with any pleading in a legal action filed with a court or administrative agency, related to this Grant or which may affect Grantee's ability to perform its obligations hereunder, Grantee shall notify the State of such action and deliver copies of such pleadings to the State's principal representative as identified herein. If the State's principal representative is not then serving, such notice and copies shall be delivered to the Executive Director of the Department of Natural Resources.

C. Noncompliance

Grantee's failure to provide reports and notify the State in a timely manner in accordance with this **§8** may result in the delay of payment of funds and/or termination as provided under this Grant.

D. Subcontracts and Subgrants

Copies of any and all subcontracts or subgrants entered into by Grantee to perform its obligations hereunder shall be submitted to the State or its principal representative upon request by the State. Any and all subcontracts or subgrants entered into by Grantee related to its performance hereunder shall comply with all applicable federal and state laws and shall provide that such subgrants be governed by the laws of the State of Colorado.

E. Violations Reporting

Grantee must disclose, in a timely manner, in writing to the State and to the NRCS, all violations of federal or state criminal law involving fraud, bribery, or gratuity violations potentially affecting the Grant. Penalties for noncompliance may include suspension or debarment (2 CFR Part 180 and 31 U.S.C. 3321).

9. GRANTEE RECORDS

Grantee shall make, keep, maintain and allow inspection and monitoring of the following records:

A. Maintenance

Grantee shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services (including, but not limited to the operation of programs) or Goods hereunder. Grantee shall maintain such records (the "Record Retention Period") until the last to occur of the following: (i) a period of three years after the date this Grant is completed or terminated or a longer period as required in the exhibits, or (ii) final payment is made hereunder, whichever is later, or (iii) for such further period as may be necessary to resolve any pending matters, or (iv) if an audit is occurring, or Grantee has received notice that an audit is pending, then until such audit has been completed and its findings have been resolved. If any litigation, claim, or audit related to the Grant starts before expiration of the Record Retention Period, the Record Retention Period shall extend until all litigation, claims, or audit findings have been resolved and final action taken by the State or NRCS. NRCS, a cognizant agency for audit, oversight or indirect costs, and the State may notify Grantee in writing that the Record Retention Period shall be extended. For records for real property and equipment, the Record Retention Period shall extend three years following final disposition of such property.

B. Inspection

Grantee shall permit the State, the federal government and any other duly authorized agent of a governmental agency to audit, inspect, examine, excerpt, copy and/or transcribe Grantee's records related to this Grant during the Record Retention Period for a period of three years following termination of this Grant or final payment hereunder, whichever is later, to assure compliance with the terms hereof or to evaluate Grantee's performance hereunder. The State reserves the right to inspect the Work at all reasonable times and places during the term of this Grant, including any extension. If the Work fails to conform to the requirements of this Grant, the State may require Grantee promptly to bring the Work into conformity with Grant requirements, at Grantee's sole expense. If the Work cannot be brought into conformance by re-performance or other corrective measures, the State may require Grantee to take necessary action to ensure that future performance conforms to Grant requirements and exercise the remedies available under this Grant, at law or inequity in lieu of or in conjunction with such corrective measures.

C. Monitoring

Grantee shall permit the State, the federal government, and other governmental agencies having jurisdiction, in their sole discretion, to monitor all activities conducted by Grantee pursuant to the terms of this Grant using any reasonable procedure, including, but not limited to: internal evaluation procedures, examination of program data, special analyses, on-site checking, formal audit examinations, or any other procedures. All monitoring controlled by the State shall be performed in a manner that shall not unduly interfere with Grantee's performance hereunder.

D. Final Audit Report

If an audit is performed on Grantee's records for any fiscal year covering a portion of the term of this Grant, Grantee shall submit a copy of the final audit report to the State or its principal representative at the address specified herein.

10. CONFIDENTIAL INFORMATION-STATE RECORDS

Grantee shall comply with the provisions of this §10 if it becomes privy to confidential information in connection with its performance hereunder. Confidential information, includes, but is not necessarily limited to, state records, personnel records, and information concerning individuals.

A. Confidentiality

Grantee shall keep all State records and information confidential at all times and to comply with all laws and regulations concerning confidentiality of information. Any request or demand by a third party for State

records and information in the possession of Grantee shall be immediately forwarded to the State's principal representative.

B. Notification

Grantee shall notify its agent, employees, Subcontractors, Subgrantees, and assigns who may come into contact with State records and confidential information that each is subject to the confidentiality requirements set forth herein, and shall provide each with a written explanation of such requirements before they are permitted to access such records and information.

C. Use, Security, and Retention

Confidential information of any kind shall not be distributed or sold to any third party or used by Grantee or its agents in any way except as authorized by this Grant or approved in writing by the State. Grantee shall provide and maintain a secure environment that ensures confidentiality of all State records and other confidential information wherever located. Confidential information shall not be retained in any files or otherwise by Grantee or its agents, except as permitted in this Grant or approved in writing by the State.

D. Disclosure-Liability

Disclosure of State records or other confidential information by Grantee for any reason may be cause for legal action by third parties against Grantee, the State or their respective agents.

11. CONFLICTS OF INTEREST

Grantee shall not engage in any business or personal activities or practices or maintain any relationships which conflict in any way with the full performance of Grantee's obligations hereunder. Such a conflict of interest would arise when a Grantee's employee, officer or agent, or any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or receives a tangible personal benefit from Grantee's receipt of the federal award and/or entry into this Grant Agreement. Officers, employees and agents of the Grantee may neither solicit nor accept gratuities, favors, or anything of monetary value from Subcontractors or Subrecipients or parties to subcontracts or subgrants. Grantee acknowledges that with respect to this Grant, even the appearance of a conflict of interest is harmful to the State's interests. Absent the State's prior written approval, Grantee shall refrain from any practices, activities or relationships that reasonably appear to be in conflict with the full performance of Grantee's obligations to the State hereunder. If a conflict or appearance exists, or if Grantee is uncertain whether a conflict or the appearance of a conflict of interest exists, Grantee shall submit to the State a disclosure statement setting forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the apparent conflict constitutes a breach of this Grant.

12. REPRESENTATIONS AND WARRANTIES

Grantee makes the following specific representations and warranties, each of which was relied on by the State in entering into this Grant.

A. Standard and Manner of Performance

Grantee shall perform its obligations hereunder in accordance with normal standards of care, skill and diligence in the industry, trades or profession and in the sequence and manner set forth in this Grant.

B. Legal Authority – Grantee and Grantee's Signatory

Grantee warrants that it possesses the legal authority to enter into this Grant and that it has taken all actions required by its procedures, by-laws, and/or applicable laws to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Grant, or any part thereof, and to bind Grantee to its terms. If requested by the State, Grantee shall provide the State with proof of Grantee's authority to enter into this Grant within 15 days of receiving such request.

C. Licenses, Permits, Etc.

Grantee represents and warrants that prior to performing any work required in **Exhibit A**, and that at all times during the term hereof it shall have, at its sole expense, all licenses, certifications, approvals, insurance, permits, and other authorization required by law to perform its obligations hereunder. Grantee warrants that it shall maintain all necessary licenses, certifications, approvals, insurance, permits, and other authorizations required to properly perform this Grant, without reimbursement by the State or other

adjustment in Grant Funds. Additionally, all employees and agents of Grantee performing Services under this Grant shall hold all required licenses or certifications, if any, to perform their responsibilities. Grantee, if a foreign corporation or other foreign entity transacting business in the State of Colorado, further warrants that it currently has obtained and shall maintain any applicable certificate of authority to transact business in the State of Colorado and has designated a registered agent in Colorado to accept service of process. Any revocation, withdrawal or non-renewal of licenses, certifications, approvals, insurance, permits or any such similar requirements necessary for Grantee to properly perform the terms of this Grant shall be deemed to be a material breach by Grantee and constitute grounds for termination of this Grant.

13. INSURANCE

Grantee and its Subgrantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Subgrantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Subgrantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in §13(B) with respect to Subgrantees that are not "public entities".

B. Grantee and Subgrantees

Grantee shall require each Grant with Subcontractors or Subgrantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Subgrantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows: (a) \$1,000,000 each occurrence; (b) \$1,000,000 general aggregate; (c) \$1,000,000 products and completed operations aggregate; and (d) \$50,000 any one fire. If any aggregate limit is reduced below \$1,000,000 because of claims made or paid, Subgrantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Subgrantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and Grantee shall forward such notice to the State in accordance with §16 (Notices and Representatives) within seven days of Grantee’s receipt of such notice.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Subgrantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. Certificates showing insurance coverage of Subcontractors shall be provided by Grantee to the State within seven business days of execution of a contract between Grantee and Subcontractor or Subgrantee. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Subgrantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any subgrant, Grantee and each Subgrantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this §13.

14. BREACH

A. Defined

In addition to any breaches specified in other sections of this Grant, the failure of either Party to perform any of its material obligations hereunder, in whole or in part or in a timely or satisfactory manner, constitutes a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Grantee, or the appointment of a receiver or similar officer for Grantee or any of its property, which is not vacated or fully stayed within 20 days after the institution or occurrence thereof, shall also constitute a breach.

B. Notice and Cure Period

In the event of a breach, notice of such shall be given in writing by the aggrieved Party to the other Party in the manner provided in §16. If such breach is not cured within 30 days of receipt of written notice, or if a cure cannot be completed within 30 days, or if cure of the breach has not begun within 30 days and pursued with due diligence, the State may exercise any of the remedies set forth in §15. Notwithstanding anything to the contrary herein, the State, in its sole discretion, need not provide advance notice or a cure period and may immediately terminate this Grant in whole or in part if reasonably necessary to preserve public safety or to prevent immediate public crisis.

15. REMEDIES

If Grantee is in breach under any provision of this Grant, the State shall have all of the remedies listed in this §15 in addition to all other remedies set forth in other sections of this Grant following the notice and cure period set forth in §14(B). The State may exercise any or all of the remedies available to it, in its sole discretion, concurrently or consecutively.

A. Termination for Cause and/or Breach

If Grantee fails to perform any of its obligations hereunder with such diligence as is required to ensure its completion in accordance with the provisions of this Grant and in a timely manner, the State may notify Grantee of such non-performance in accordance with the provisions herein. If Grantee thereafter fails to promptly cure such non-performance within the cure period, the State, at its option, may terminate this entire Grant or such part of this Grant as to which there has been delay or a failure to properly perform. Exercise by the State of this right shall not be deemed a breach of its obligations hereunder. Grantee shall continue performance of this Grant to the extent not terminated, if any.

i. Obligations and Rights

To the extent specified in any termination notice, Grantee shall not incur further obligations or render further performance hereunder past the effective date of such notice, and shall terminate outstanding

orders, subcontracts and/or subgrants with third parties. However, Grantee shall complete and deliver to the State all Work, Services and Goods not cancelled by the termination notice and may incur obligations as are necessary to do so within this Grant's terms. At the sole discretion of the State, Grantee shall assign to the State all of Grantee's right, title, and interest under such terminated orders, Subgrants, or subcontracts. Upon termination, Grantee shall take timely, reasonable and necessary action to protect and preserve property in the possession of Grantee in which the State has an interest. All materials owned by the State in the possession of Grantee shall be immediately returned to the State. All Work Product, at the option of the State, shall be delivered by Grantee to the State and shall become the State's property.

ii. Payments

The State shall reimburse Grantee only for accepted performance up to the date of termination. If, after termination by the State, it is determined that Grantee was not in breach or that Grantee's action or inaction was excusable, such termination shall be treated as a termination in the public interest and the rights and obligations of the Parties shall be the same as if this Grant had been terminated in the public interest, as described herein.

iii. Damages and Withholding

Notwithstanding any other remedial action by the State, Grantee also shall remain liable to the State for any damages sustained by the State by virtue of any breach under this Grant by Grantee and the State may withhold any payment to Grantee for the purpose of mitigating the State's damages, until such time as the exact amount of damages due to the State from Grantee is determined. The State may withhold any amount that may be due to Grantee as the State deems necessary to protect the State, including loss as a result of outstanding liens or claims of former lien holders, or to reimburse the State for the excess costs incurred in procuring similar goods or services. Grantee shall be liable for excess costs incurred by the State in procuring from third parties replacement Work, Services or substitute Goods as cover.

B. Early Termination in the Public Interest

The State is entering into this Grant for the purpose of carrying out the public policy of the State of Colorado, as determined by its Governor, General Assembly, and/or Courts. If this Grant ceases to further the public policy of the State, the State, in its sole discretion, may terminate this Grant in whole or in part. Exercise by the State of this right shall not constitute a breach of the State's obligations hereunder. This subsection shall not apply to a termination of this Grant by the State for cause or breach by Grantee, which shall be governed by §15(A) or as otherwise specifically provided for herein.

i. Method and Content

The State shall notify Grantee of such termination in accordance with §16. The notice shall specify the effective date of the termination and whether it affects all or a portion of this Grant.

ii. Obligations and Rights

Upon receipt of a termination notice, Grantee shall be subject to and comply with the same obligations and rights set forth in §15(A)(i).

iii. Payments

If this Grant is terminated by the State pursuant to this §15(B), Grantee shall be paid an amount which bears the same ratio to the total reimbursement under this Grant as the Services satisfactorily performed bear to the total Services covered by this Grant, less payments previously made.

Additionally, if this Grant is less than 60% completed, the State may reimburse Grantee for a portion of actual out-of-pocket expenses (not otherwise reimbursed under this Grant) incurred by Grantee which are directly attributable to the uncompleted portion of Grantee's obligations hereunder; provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Grantee hereunder.

C. Remedies Not Involving Termination

The State, in its sole discretion, may exercise one or more of the following remedies in addition to other remedies available to it:

i. Suspend Performance

Suspend Grantee's performance with respect to all or any portion of this Grant pending necessary corrective action as specified by the State without entitling Grantee to an adjustment in price/cost or

performance schedule. Grantee shall promptly cease performance and incurring costs in accordance with the State's directive and the State shall not be liable for costs incurred by Grantee after the suspension of performance under this provision.

ii. Withhold Payment

Withhold payment to Grantee until corrections in Grantee's performance are satisfactorily made and completed.

iii. Deny Payment

Deny payment for those obligations not performed, that due to Grantee's actions or inactions, cannot be performed or, if performed, would be of no value to the State; provided, that any denial of payment shall be reasonably related to the value to the State of the obligations not performed.

iv. Removal

Demand removal of any of Grantee's employees, agents, Subcontractors, or Subgrantees whom the State deems incompetent, careless, insubordinate, unsuitable, or otherwise unacceptable, or whose continued relation to this Grant is deemed to be contrary to the public interest or not in the State's best interest.

v. Intellectual Property

If Grantee infringes on a patent, copyright, trademark, trade secret or other intellectual property right while performing its obligations under this Grant, Grantee shall, at the State's option (a) obtain for the State or Grantee the right to use such products and services; (b) replace any Goods, Services, or other product involved with non-infringing products or modify them so that they become non-infringing; or, (c) if neither of the foregoing alternatives are reasonably available, remove any infringing Goods, Services, or products and refund the price paid therefore to the State.

16. NOTICES and REPRESENTATIVES

Each individual identified below is the principal representative of the designating Party. All notices required to be given hereunder shall be hand delivered with receipt required or sent by certified or registered mail to such Party's principal representative at the address set forth below. In addition to, but not in lieu of a hard-copy notice, notice also may be sent by e-mail to the e-mail addresses, if any, set forth below. Either Party may from time to time designate by written notice substitute addresses or persons to whom such notices shall be sent. Unless otherwise provided herein, all notices shall be effective upon receipt.

A. State:

Kevin Houck
Colorado Water Conservation Board
Room 718
1313 Sherman Street
Denver, CO 80203
Email: kevin.houck@state.co.us

B. Grantee:

Michelle Krezek
Deputy to the Board of County Commissioners
P.O. Box 471
Boulder, CO 80306-0471
Email: mkrezek@bouldercounty.org

17. RIGHTS IN DATA, DOCUMENTS, AND COMPUTER SOFTWARE

Any software, research, reports, studies, data, photographs, negatives or other documents, drawings, models, materials, or Work Product of any type, including drafts, prepared by Grantee in the performance of its obligations under this Grant shall be the exclusive property of the State. Copies of all such materials and Work Product shall be delivered to the State by Grantee upon completion or termination hereof. The State

shall have a non-exclusive license in such Work Product to copy, publish, display, transfer, and prepare derivative works, to the extent that such Work Product is not considered the proprietary and confidential commercial information of Grantee or a Subgrantee working with Grantee. Materials containing proprietary and confidential commercial information shall be marked as such and such information within those materials shall be clearly identified prior to being provided to the State.

18. GOVERNMENTAL IMMUNITY

Notwithstanding any other provision to the contrary, nothing herein shall constitute a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended. Liability for claims for injuries to persons or property arising from the negligence of the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of the Governmental Immunity Act and the risk management statutes, CRS §24-30-1501, et seq., as amended.

19. STATEWIDE GRANT MANAGEMENT SYSTEM

If the maximum amount payable to Grantee under this Grant is \$100,000 or greater, either on the Effective Date or at anytime thereafter, this §19 applies.

Grantee agrees to be governed, and to abide, by the provisions of CRS §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102 concerning the monitoring of vendor performance on state Grants and inclusion of Grant performance information in a statewide Grant management system.

Grantee's performance shall be subject to Evaluation and Review in accordance with the terms and conditions of this Grant, State law, including CRS §24-103.5-101, and State Fiscal Rules, Policies and Guidance. Evaluation and Review of Grantee's performance shall be part of the normal Grant administration process and Grantee's performance will be systematically recorded in the statewide Grant Management System. Areas of Evaluation and Review shall include, but shall not be limited to quality, cost and timeliness. Collection of information relevant to the performance of Grantee's obligations under this Grant shall be determined by the specific requirements of such obligations and shall include factors tailored to match the requirements of Grantee's obligations. Such performance information shall be entered into the statewide Grant Management System at intervals established herein and a final Evaluation, Review and Rating shall be rendered within 30 days of the end of the Grant term. Grantee shall be notified following each performance Evaluation and Review, and shall address or correct any identified problem in a timely manner and maintain work progress.

Should the final performance Evaluation and Review determine that Grantee demonstrated a gross failure to meet the performance measures established hereunder, the Executive Director of the Colorado Department of Personnel & Administration (Executive Director), upon request by the Colorado Department of Natural Resources, and showing of good cause, may debar Grantee and prohibit Grantee from bidding on future Grants. Grantee may contest the final Evaluation, Review and Rating by: (a) filing rebuttal statements, which may result in either removal or correction of the evaluation (CRS §24-105-102(6)), or (b) under CRS §24-105-102(6), exercising the debarment protest and appeal rights provided in CRS §§24-109-106, 107, 201 or 202, which may result in the reversal of the debarment and reinstatement of Grantee, by the Executive Director, upon a showing of good cause.

20. GENERAL PROVISIONS

A. Assignment, Subcontracts, and Subgrants

Grantee's rights and obligations hereunder are personal and may not be transferred, assigned or subgranted without the prior, written consent of the State. Any attempt at assignment, transfer, or subgranting without such consent shall be void. All assignments, subgrants, or Subgrantees approved by Grantee or the State are subject to all of the provisions hereof. Grantee shall be solely responsible for all aspects of subcontracting and/or subgranting arrangements and performance.

B. Binding Effect

Except as otherwise provided in §20(A), all provisions herein contained, including the benefits and burdens, shall extend to and be binding upon the Parties' respective heirs, legal representatives, successors, and assigns.

C. Captions

The captions and headings in this Grant are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

D. Counterparts

This Grant may be executed in multiple identical original counterparts, all of which shall constitute one agreement.

E. Entire Understanding

This Grant represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or affect whatsoever, unless embodied herein.

F. Indemnification-General

To the extent permitted by law, Grantee shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Grantee, or its employees, agents, Subgrantees, or assignees pursuant to the terms of this Grant; however, the provisions hereof shall not be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. 2671 et seq., as applicable, as now or hereafter amended.

G. Jurisdiction and Venue

All suits, actions, or proceedings related to this Grant shall be held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

H. Modification

i. By the Parties

Except as specifically provided in this Grant, modifications of this Grant shall not be effective unless agreed to in writing by the Parties in an amendment to this Grant, properly executed and approved in accordance with applicable Colorado State law, State Fiscal Rules, and Office of the State Controller Policies, including, but not limited to, the policy entitled MODIFICATIONS OF CONTRACTS - TOOLS AND FORMS.

ii. By Operation of Law

This Grant is subject to such modifications as may be required by changes in Federal or Colorado State law, or their implementing regulations. Any such required modification automatically shall be incorporated into and be part of this Grant on the effective date of such change, as if fully set forth herein.

I. Order of Precedence

The provisions of this Grant shall govern the relationship of the Parties. In the event of conflicts or inconsistencies between this Grant and its exhibits and attachments including, but not limited to, those provided by Grantee, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

- i.** Colorado Special Provisions,
- ii.** The provisions of the main body of this Grant,
- iii. Exhibit A**, Statement of Work,
- iv. Exhibit B**, Project Budget,
- v. Exhibit C**, Grant Assurances
- vi. Exhibit D**, Option Letter.

J. Severability

Provided this Grant can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof.

K. Survival of Certain Grant Terms

Notwithstanding anything herein to the contrary, provisions of this Grant requiring continued performance, compliance, or effect after termination hereof, shall survive such termination and shall be enforceable by the State if Grantee fails to perform or comply as required.

L. Taxes

The State is exempt from all federal excise taxes under IRC Chapter 32 (No. 84-730123K) and from all State and local government sales and use taxes under CRS §§39-26-101 and 201 et seq. Such exemptions apply when materials are purchased or services rendered to benefit the State; provided however, that certain political subdivisions (e.g., City of Denver) may require payment of sales or use taxes even though the product or service is provided to the State. Grantee shall be solely liable for paying such taxes as the State is prohibited from paying for or reimbursing Grantee for them.

M. Third Party Beneficiaries

Enforcement of this Grant and all rights and obligations hereunder are reserved solely to the Parties, and not to any third party. Any services or benefits which third parties receive as a result of this Grant are incidental to the Grant, and do not create any rights for such third parties.

N. Waiver

Waiver of any breach of a term, provision, or requirement of this Grant, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

O. CORA Disclosure

To the extent not prohibited by federal law, this Grant and the performance measures and standards under CRS §24-103.5-101, if any, are subject to public release through the Colorado Open Records Act, CRS §24-72-101, et seq.

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21. COLORADO SPECIAL PROVISIONS

These Special Provisions apply to all Grants except where noted in italics.

A. 1. CONTROLLER'S APPROVAL. CRS §24-30-202 (1).

This Grant shall not be deemed valid until it has been approved by the Colorado State Controller or designee.

B. 2. FUND AVAILABILITY. CRS §24-30-202(5.5).

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. 3. GOVERNMENTAL IMMUNITY.

No term or condition of this Grant shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

D. 4. INDEPENDENT CONTRACTOR.

Grantee shall perform its duties hereunder as an independent contractor and not as an employee. Neither Grantee nor any agent or employee of Grantee shall be deemed to be an agent or employee of the State. Grantee and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Grantee or any of its agents or employees. Unemployment insurance benefits will be available to Grantee and its employees and agents only if such coverage is made available by Grantee or a third party. Grantee shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Grant. Grantee shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. Grantee shall (a) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (b) provide proof thereof when requested by the State, and (c) be solely responsible for its acts and those of its employees and agents.

E. 5. COMPLIANCE WITH LAW.

Grantee shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. 6. CHOICE OF LAW.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this grant. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Grant, to the extent capable of execution.

G. 7. BINDING ARBITRATION PROHIBITED.

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this Grant or incorporated herein by reference shall be null and void.

H. 8. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00.

State or other public funds payable under this Grant shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Grantee hereby certifies and warrants that, during the term of this Grant and any extensions, Grantee has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Grantee is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Grant, including, without limitation, immediate termination of this Grant and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. 9. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. CRS §§24-18-201 and 24-50-507.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Grant. Grantee has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Grantee's services and Grantee shall not employ any person having such known interests.

J. 10. VENDOR OFFSET. CRS §§24-30-202 (1) and 24-30-202.4.

[Not applicable to intergovernmental agreements] Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

K. 11. PUBLIC GRANTS FOR SERVICES. CRS §8-17.5-101.

[Not applicable to agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental agreements, or information technology services or products and services] Grantee certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Grant and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Grant, through participation in the E-Verify Program or the State program established pursuant to CRS §8-17.5-102(5)(c), Grantee shall not knowingly employ or contract with an illegal alien to perform work under this Grant or enter into a grant with a Subgrantee that fails to certify to Grantee that the Subgrantee shall not knowingly employ or contract with an illegal alien to perform work under this Grant. Grantee (a) shall not use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Grant is being performed, (b) shall notify the Subgrantee and the granting State agency within three days if Grantee has actual knowledge that a Subgrantee is employing or contracting with an illegal alien for work under this Grant, (c) shall terminate the subgrant if a Subgrantee does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Grantee participates in the State program, Grantee shall deliver to the granting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Grantee has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Grantee fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the granting State agency, institution of higher education or political subdivision may terminate this Grant for breach and, if so terminated, Grantee shall be liable for damages.

L. 12. PUBLIC GRANTS WITH NATURAL PERSONS. CRS §24-76.5-101.

Grantee, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she (a) is a citizen or otherwise lawfully present in the United States pursuant to federal law, (b) shall comply with the provisions of CRS §24-76.5-101 et seq., and (c) has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this Grant.

SPs Effective 1/1/09

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THE PARTIES HERETO HAVE EXECUTED THIS GRANT

*** Persons signing for Grantee hereby swear and affirm that they are authorized to act on Grantee's behalf and acknowledge that the State is relying on their representations to that effect.**

<p style="text-align: center;">GRANTEE County of Boulder</p> <p>By: Deb Gardner Title: Chair, Board of Boulder County Commissioners</p> <hr/> <p style="text-align: center;">*Signature</p> <p>Date: _____</p>	<p style="text-align: center;">STATE OF COLORADO John W. Hickenlooper, Governor Department of Natural Resources Robert W. Randall, Executive Director</p> <p>By: _____ Christina Heltzel, CWCB Budget Analyst</p> <p>Signatory avers to the State Controller or delegate that Grantee has not begun performance or that a Statutory Violation waiver has been requested under Fiscal Rules</p> <p>Date: _____</p>
<p style="text-align: center;">2nd Grantee Signature if Needed</p> <p>By: INSERT-Name of Authorized Individual Title: INSERT-Official Title of Authorized Individual</p> <hr/> <p style="text-align: center;">*Signature</p> <p>Date: _____</p>	<p style="text-align: center;">LEGAL REVIEW Cynthia H. Coffman, Attorney General</p> <p>By: _____ Signature - Assistant Attorney General</p> <p>Date: _____</p>

ALL GRANTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Grants. This Grant is not valid until signed and dated below by the State Controller or delegate. Grantee is not authorized to begin performance until such time. If Grantee begins performing prior thereto, the State of Colorado is not obligated to pay Grantee for such performance or for any goods and/or services provided hereunder.

<p>STATE CONTROLLER Robert Jaros, CPA, MBA, JD</p> <p>By: _____</p> <p>Date: _____</p>

EXHIBIT A- STATEMENT OF WORK

**US DEPARTMENT OF AGRICULTURE NATURAL
RESOURCES CONSERVATION SERVICE**

OPERATION AND MAINTENANCE PLAN

Landowner/Operator:

Job Location _____ Sec: ____ T: ____ R:

Prepared By: _____ Date:

OVERVIEW

GENERAL RECOMMENDATIONS

- An effective operation and maintenance program includes:
- Maintain open channel vegetation for flow efficiency, erosion control and wildlife habitat and aesthetics.
- Repair or replace bank protection materials displaced by erosion, animals, vehicles and vandalism.
- Maintain grade control structures necessary for stream bottom and bank stability.
- Periodically remove sediment bars that may damage bank protection, reduce channel capacity, or damage stream channel stability. Sediment removal must consider wetland regulation, fill and removal permit regulation, fish and wildlife habitat needs, and period of the year work can be performed.
- Maintain improvements provided for wildlife habitat, and riparian vegetation.
- Maintain safety measures for protection of people and animals.
- Maintain travel-ways that provide access for operation and maintenance of open channel systems and associated measures.
- Maintain installed fences to control access.
- Repair any vandalism, vehicular or wildlife damage.

SITE SPECIFIC CONSIDERATIONS.

EXHIBIT A-2 QUALITY ASSURANCE PLAN

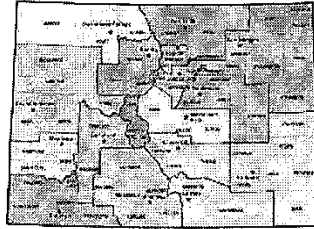
Prior to commencement of work and/or solicitation of bids, Grantee shall submit to CWCB for review by CWCB and NRCS and concurrence a Quality Assurance Plan (QAP), per the attached sample. The QAP shall outline technical and administrative expertise required to ensure the works of improvement are installed in accordance with the plans and specifications, identify individuals with the expertise, describe items to be inspected, list equipment required for inspection, outline the frequency and timing of inspection (continuous or periodic), outline inspection procedures, and record keeping requirements. A copy of the final QAP shall be provided to NRCS prior to commencement of construction.


XXX Repair Project

Project Sponsor

Prepared on
By

QUALITY ASSURANCE PLAN



 United States
Department of
Agriculture
Natural Resources
Conservation Service

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Denver, Colorado

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Overview

This quality assurance plan is for an EWP project using the following components (check all that apply and edit as necessary to match project components):

Streambank Shaping (excavation & fill)	Bioengineering
In-Stream Rock Structures	Live Stakes
Toe Rock and/or Rock Riprap	Brush Mattresses
Toe Wood Along Bottom of Bank	Tree Planting
Large Woody Debris Structures	Boulder Clusters
Combination Rock & Wood Structures	Bottomless Culvert
Open Drainage Ditches	Constructed Riffles
Tree Revetments	Water Diversions
Bankfull Bench Construction	Sediment Removal
Stream Crossing	Grade Control Structures

Personnel assigned to the project should have experience observing the installation of the components identified in the above table.

QA Personnel

Technical Representative (Tech Rep): someone with construction experience to assist with construction implementation of the project. This may be a soil conservation technician, soil conservationist, civil engineering technician, district conservationist, or consultant's representative.

Surveyor: someone with survey equipment and experience to assist with spot-checking structure grades and elevations; establishing survey control points for use by the contractor; and for completing as-built survey.

Stream Restoration Specialist (SRS): a person assigned to the project with specialized skills, training, education, and experience implementing stream restoration projects. Verify CWCB/NRCS partners available for this position at the time of contracting.

Design Engineer: the engineer, stream restoration specialist, or other qualified licensed person responsible for designing the project.

Specific Personnel Recommended for this Project

District Conservationist:	Greg Langer, NRCS
Technical	Greg Langer, NRCS
Construction Inspector:	To be determined.
Design Engineer:	Mark A. Morton, P.E., GMS, Inc., Consulting Engineers

Surveyor:	To be determined.
Utility (Water)	Kevin Walker, Cascade Metropolitan District

Quality Control (QC)

The Contractor is responsible for quality control (QC) to build the project according to the construction specifications and drawings. This responsibility is required by the general specifications section. Major QC items include:

1. **Surveys:** The Contractor is responsible for construction stakeout of the work, and meeting grades and elevations required by the drawings.
2. **Utilities:** Verify that the Contractor has located utilities before starting work at the project site. Ask the Contractor, visit the site to see the utility markings, and request utility locate reference number.
3. **Pollution Control:** The Contractor is responsible for preventing pollution of surface and ground water from contamination or from sediment runoff. See specifications for pollution control.
4. **Dewatering:** The Contractor is required to divert or remove water from the work site, or to work in low flow conditions.
5. **Excavations and Embankments:** The Contractor needs to meet the grades and slopes required by the drawings.
6. **Rock and Aggregates:** The rock must come from a CDOT-approved quarry (with a copy of test results or certifications), or from a source approved by the design engineer.
7. **Material Certifications:** The Contractor shall provide documentation which certifies that the materials provided comply with the contract requirements. If specified for this project, material certifications for the following are required (items not required for this project are shown in light gray):
 - (a) Crushed aggregates- test results as required by specifications.
 - (b) Erosion Control Fabric- manufacturer's product data showing compliance with specifications.
 - (c) Geotextile- manufacturer's information showing compliance with specifications.
 - (d) Structure Rock - quality and test results as required by the specifications.
 - (e) Seeding and mulching materials - documentation of seed mix
 - (f) Silt fence or Erosion Control Wattles- manufacturer's product data showing compliance with specifications.
 - (g) Trees & shrubs- invoice showing source and quantity.
 - (h) Erosion Control Wattles- manufacturer's product data showing compliance with specifications.
 - (i) Lumber and timber- manufacturer's certification of grade and species

Quality Assurance Plan (QAP)

The Natural Resources Conservation Service (NRCS) Quality Assurance Program will be conducted to assure that the specified contract quality of materials and workmanship is attained. The primary responsibility of the QA personnel is to observe the operations of the Contractor to assure compliance with the construction contract. This includes the physical examination of materials brought on to the site; observation of the placement of materials; observation of the construction techniques; observation of quality control and construction management operations by the Contractor; periodic and continuous observation of construction work. The Quality Assurance Plan may be updated to include changing project conditions and to reflect lessons-learned during construction.

The intensity/frequency of the quality assurance activities is shown in Table 1 - . Conduct periodic quality assurance observations and checks of the Contractor's Quality Control to verify that measurable qualities of the work meet the contract requirements.

The following is a description of the **minimum** quality assurance activities required:

1. The design engineer and technical representative shall attend the **preconstruction meeting** that should be arranged by the landowner to include the contractor. Design engineer will give an overview of the project with the drawings and answer questions related to the design.
2. Spot check **construction staking** and survey control to ensure the work is properly staked before work starts. Assist the Contractor with establishing survey control for each major work item, particularly in the identification of normal flow and bankfull flow elevations.
3. Read the construction specifications, drawings, design report, and the QAP. Review required **submittals** for compliance with the contract requirements. Contact the design engineer if or landowner if there is a problem.
4. Regularly **communicate** with the contractor to stay abreast of work in progress and upcoming work activities, including work requiring quality control tests. Keep the design engineer informed of project status and concerns.
5. Be familiar with sensitive plant and animal species and know how to identify them. Specific concerns for this project are: none.
6. Inspect **equipment and materials** to ensure they are clean and free of any material that could contain or hold seeds. This needs to be done before contractor starts work.
7. Make sure contractor is meeting **pollution control specifications** and only disturbing ground and vegetation as needed for construction.
8. Make sure the contractor has a **spill-response kit** on-site.
9. Take **digital photographs** of work progress to provide a representative photo record of the project. Photo-document key stages of major work items to record images of foundation preparations, installation of buried features, and completed work. Photographs should include date/time stamp. Share photographs with design engineer or SRS.
10. Review/observe **subgrade preparations** for all rock structures to ensure compliance with the drawings and specifications before contractor places the rock structure. Accomplish this in a timely manner to avoid delaying the contractor's work. Visually check the stability of the subgrade and foundation; rock, filter, fill, and/or geotextile.
11. Review/observe proper **placement and use of geotextile and coir fabric materials**. The fabrics must be installed properly to prevent backfill washout under the structures.
12. Verify the **backfill material** for rock structures is an acceptable mix of gravel and cobble per specifications.

Preconstruction Meeting

The Sponsor should work with the landowner, technical representative, inspector, and design engineer to establish a mutually agreeable date and time for meeting. Communications to the contractor should be by the landowner (or sponsor). Someone should be identified to take notes. Include a discussion of the following items in addition to standard pre-construction agenda items.

- (1) Introductions and lines of communications.
- (2) The design engineer will give an overview of the drawings and specifications.
- (3) Point out temporary benchmarks and any layout work accomplished, such as staking for major work items (structures, project start, and end).

- (4) Site conditions, special constraints, and site-specific safety concerns.
- (5) Contractor is responsible for utility locates. Ask the contractor to provide a copy of confirmation for utility locates.
- (6) Remind the contractor to limit disturbance to the site. Discuss **pollution control** requirements to include erosion and sediment control.
- (7) **Permit requirements** and conditions. Other special environmental concerns?
- (8) Equipment cleaning requirements.
- (9) Discuss tree planting, seeding, and live stakes. Live stakes should be installed during dormant season, but that isn't always possible.
- (10) Discuss working from bank or during low flow conditions whenever possible.
- (11) Discuss any time restrictions, such as winter shutdown, high flow months, and avoiding disturbance during spawning seasons.
- (12) Review equipment and material **cleaning requirements**. Importance of preventing spread of invasive species, such as didymo.
- (13) Construction surveying requirements- contractor is responsible for meeting lines, grades, and elevations for structures and bank shaping.
- (14) Discuss **fill material and rock source**- rock must be from a CDOT approved quarry or other source approved by the engineer.
- (15) Identify and discuss access routes and staging areas.
- (16) Discuss harvesting of on-site materials as applicable. Tree removal and use requires pre-approval by landowner.
- (17) Get contractor's estimate of **construction duration**. Some contractors may have a construction schedule they are trying to meet.
- (18) Discuss work sequencing including critical work activities, milestones and project deadlines.
- (19) Discuss disposition and protection of utility systems throughout the project site and identify special construction requirements associated with utilities.

Equipment

The QA personnel should have a minimum of the following equipment available when needed:

1. Survey Equipment
 - a. GPS or total station surveying equipment for setting survey control points, temporary benchmarks, spot-checks, and for as-built survey.
 - b. Survey level
 - c. Hand level for quick elevation checks
 - d. Survey rod, reflector, receiver, etc.
 - e. Measuring tape, 200 foot minimum.
 - f. Weather resistant field books for taking notes and pens or pencils
 - g. Stakes, flags, ribbon, permanent markers, etc.
2. Photographic Equipment

- a. Digital camera with the following minimum features: date/time stamping, video recording, and some zoom capability.

3. Special Clothing

- a. Backpack and clothing suitable for working at remote sites with highly variable weather conditions,
- b. Chest waders and personal safety equipment for working in stream, if necessary
- c. Studded wading boots
- d. Other clothing as appropriate to provide the required services

4. Other Special Equipment

- a. Mobile telephone
- b. Notebook computer or similar device for making notes while on-site (optional- nice-to-have).

Performance Time

For estimated project duration, see the performance time in the design report. The actual time for construction is subject to many changing variables, with site conditions at the top of the list.

Desirable Skills for Technical Representative

1. Skills

- a. Ability to understand the plans and specifications.
- b. Ability to maintain construction records.
- c. Basic photography.
- d. Basic math and reading.
- e. Ability to assist with basic layout, staking, quantity, and "as-built" surveys.
- f. Ability to get to the project site and walk across uneven terrain.
- g. Ability to operate the equipment required to meet the QAP requirements.
- h. Good communications skills to communicate with the Contractor, landowners, and personnel of other federal, state, and local government agencies. Ability to communicate in person, by email, written reports, telephone, fax, and through legible handwritten documentation.

2. Training & Experience

- a. On-the Job Training for stream restoration work.
- b. Attend stream restoration related training when it is made available.
- c. Some experience on a stream restoration project site.
- d. Some knowledge or training in geomorphic stream design, such as Rosgen Level I or equivalent.

Inspection and Requirements Checklist

At a minimum, all work shall be periodically observed for compliance with the construction documents. The following are items of work and QA activities for this project. Not Applicable items are shown in light gray.

Table 1 - Quality Assurance Activities and Frequencies

A.	Description	Staff	Inspection Frequency
	Field verification of design, setting or checking survey control for structures, and staking out structure locations	SRS and/or Design Engr & Surveyor	Once
	Attend preconstruction meeting - good opportunity for everyone to get familiar with project	Tech Rep and SRS or Design Engr	Once
	Mobilization and coordination with the landowner	Tech Rep	Periodic
	Approve clearing limits; make sure the contractor has coordinated access route with landowner; and make sure contractor doesn't disturb more vegetation than	Tech Rep	Periodic
	Monitoring of materials and equipment being delivered to the project site-random weekly spot checks with documentation in job diary. Frequency will vary depending on Contractor's delivery schedule and level of trust established.	Tech Rep	Weekly
	Pollution control work, including erosion & sediment control measures	Tech Rep	Weekly
	Conformance with grades, structure geometry, & elevations. Make sure contractor is using a level, tape, or other survey equipment. If in doubt, contact Design	Tech Rep	Periodic
	Seeding and mulching of disturbed areas after grading is completed and before work shutdowns (before holidays & weekends)	Tech Rep	Weekly
	Ensure the site is stabilized before predicted rain storms. Banks protected. Wood structures anchored. Equipment and materials out of flow path of rising stream levels.	Tech Rep	Periodic
	Coordination of tree removal with landowner and trees for project use flagged and approved by landowner	Tech Rep	Once
	Rock riprap and rock toe installation-verification of keys, proper geotextile installation, etc.	Tech Rep	Periodic
	Geotextile installation	Tech Rep	Continuous
	Crushed aggregate installation and compaction	Tech Rep	Periodic
	Seeding, mulching, and erosion control fabric	Tech Rep	Periodic
	Periodic site visits and at critical times during construction	Design Engr or SSR	Periodic
	Tree planting and restoration of temporary access roads/staging areas	Tech Rep	Periodic
	Call or email the Design Engr to discuss any work that doesn't seem right or to relay questions from the contractor	Tech Rep	As Needed
	Pre-completion inspection of work while contractor still has equipment and materials on-site	Tech Rep & Design Engr or SRS	Once
	Keep written field notes and take digital photographs of work progress	Tech Rep	Periodic
	Final inspection and certification of work completed	Design Engr or SRS	Once
	Construction status updates to Design Engr or SRS via mail	Tech Rep	Weekly
	Assist with data collection for as-built drawings	Tech Rep & Surveyor	Once
	Submit as-built drawings to NRCS	Design Engr	Once

EXHIBIT A-3 – STATEMENT OF WORK – ADMINISTRATIVE REQUIREMENTS

- 1.1 Program Overview. This grant will give financial support for a specific project under Emergency Watershed Protection (EWP) Assistance Phase II – 2013, Colorado Flood Recovery Project. Damage was caused by unusually heavy rainfall runoff and subsequent flooding in September, 2013, and resulting in Presidential Disaster Declaration #FEMA-4145-DR. Phase I of the recovery project consisted of installing exigent project measures and was completed in October, 2014. Phase II will consist of completing non-exigent projects. The specific work to be completed is described in **Exhibit A-1**. Those projects support long-term expenditures for approved projects in response to and recovery from the September 2013 floods. Federal funds are made available by the United States Department of Agriculture, Natural Resources Conservation Service, (NRCS) CFDA # 10.923. The State funds are provided from the State Disaster Emergency Fund.
- 1.2 Subaward Information. Funds for this subrecipient grant agreement are made available by the U.S. Department Of Agriculture, Natural Resources Conservation Service, Federal Award Identification Number (FAIN) #68-8B0517-**TBD** Federal Award Project Description: Boulder_St. Vrain_Reach 3: Breaches_2015_High project. This award is not for R&D. The indirect cost rate for the grantee is 0.
- 1.3 Project Expenses. All eligible expenses are listed in the budget table in **Exhibit B**. Expenses incurred by Grantee after the Effective Date are eligible for reimbursement under this Grant agreement.
- 1.4 Non-Federal Match: This Grant requires a non-federal Local Matching Funds of 12.5% of the total Grant budget. Documentation of expenditures for the non-federal Local Matching Funds is required with each drawdown request. The match may or may not include in-kind match.
- 1.5 Grantee accepts all financial and other responsibility for excess costs resulting from its failure to obtain, or its delay in obtaining, adequate land and water rights, permits, and licenses needed for the emergency watershed protection measures described in **Exhibit A-1**.
- 1.16 This agreement may become null and void 120 calendar days after the date CWCB has signed and executed this agreement if a solicitation for bids has not been publicly advertised or a contract has not been awarded.
- 1.17 The furnishing of financial, administrative and/or technical assistance above the original funding amount by NRCS is contingent on there being sufficient unobligated and/or uncommitted funding in the EWP Program that is available for obligation in the year in which the assistance will be provided. NRCS cannot make commitments in excess of funds authorized by law or made administratively available. Congress may impose obligational limits on program funding that constrains NRCS' ability to provide such assistance.
- 1.18 The furnishing of the administrative and technical services by CWCB and NRCS is contingent upon the continuing availability of appropriations by the Congress from which payment may be made and shall not obligate NRCS if the Congress fails to so appropriate.
- 1.19 In the event of default of a construction contract awarded pursuant to this Agreement, any additional funds properly allocable as construction costs required to ensure completion of the job are to be provided in the same ratio as construction funds are contributed by the parties under the terms of this Agreement. Any excess costs including interest resulting from a judgment collected from the defaulting contractor, or his or her surety, will be prorated between the Sponsor and NRCS in the same ratio as construction funds are contributed under the terms of the Agreement.
- 1.20 Additional funds, including interest properly allocable as construction costs as determined by NRCS, required as a result of decision of the CO or a court judgment in favor of a claimant will be provided in the same ratio as construction funds are contributed under the terms of this Agreement. CWCB and NRCS will not be obligated to contribute funds under any Agreement or commitment made by the Sponsor without prior concurrence of NRCS.
- 1.21 The State Conservationist may make adjustments in the estimated cost to CWCB and NRCS for constructing the EWP project measures. Such adjustments may increase or decrease the amount of estimated funds that are related to differences between such estimated cost and the amount of the awarded contract or to changes, differing site conditions, quantity variations, or other actions taken

under the provisions of the contract. No adjustment will be made to change the cost sharing assistance provided by CWCB and NRCS nor reduce funds below the amount required to carry out NRCS' share of the contract.

1.22 NRCS, at its sole discretion, may refuse to cost share should the Sponsor, in administering the contract, elect to proceed without complying with their responsibilities as set out in this agreement.

2. DELIVERABLES:

2.1 Grantee shall submit narrative and financial reports describing project progress and accomplishments, any delays in meeting the objectives and expenditures to date as described in §3 of this **Exhibit A-3**. Progress reports could include the number of planning efforts initiated, the number of planning efforts in progress, the number of planning efforts completed, and key issues and milestones reached during the quarter.

2.2 The following accomplishments and deliverables will be provided to the State and the NRCS:

- 2.2.1 Completion of the technical requirements for Boulder St. Vrain Reach 3: Breaches_2015_High project as described in **Exhibit A-1**.
- 2.2.2 One copy of the final engineering plans, specifications signed and sealed by a licensed professional engineer for the project per **Exhibit C-3 §1**,
- 2.2.3 Signed NRCS-ADS-78 supported by an attorney’s opinion (See **Exhibit C-3 §4** and **Exhibit C-6**),
- 2.2.4 One copy of the construction bid package with engineer’s cost estimate,
- 2.2.5 One copy of the quality assurance plan per **Exhibit A-4**,
- 2.2.6 One copy of the operation and maintenance plan per **Exhibit A-3** and **Exhibit C-3, §3**,
- 2.2.7 Certification that the project was installed in accordance with the plans and specifications,
- 2.2.8 As-built drawings of final construction sign by a licensed professional engineer within 30 days of completion of construction,
- 2.2.9 Quantities of the units of work applied for each site within 30 days of completion of Construction, and
- 2.2.10 Adhere to all work scope requirements outlined in **Exhibit A** and assurances outlined in **Exhibit C**.

3. REPORTING REQUIREMENTS:

3.1 Quarterly Financial Status and Progress Reports. The project(s) approved in this Grant are to be completed on or before the termination date stated in §5 of the Grant Agreement. Grantee may be required to submit quarterly financial status and programmatic progress reports for each project identified in this agreement using the forms provided by and/or in the manner requested by the Colorado Water Conservation Board throughout the life of the grant. One copy of each required report with original or electronic signatures shall be submitted in accordance with the schedule set by the project manager so that the State’s reporting requirements (below) can be met. (The order of the reporting period quarters below are irrelevant to the grant. If the grant is open during the “report period” reports for that period are due on the dates listed. If the grant is for more than one year, reports are due for every quarter that the grant remains open.)

Report Period	Report Due Date to CWCB
October – December	January 15
January –March	April 15
April – June	July 15
July – September	October 15

3.2 Final Reports: Grantee shall aid the State as necessary in the submission of final financial status and progress reports that provide final financial reconciliation and final cumulative grant/project accomplishments within 45 days of the end of the project/grant period. The final report may not include unliquidated obligations and must indicate the exact balance of unobligated funds. The final

reports may substitute for the quarterly reports for the final quarter of the grant period. If all projects are completed before the end of the grant period, the final report may be submitted at any time before its final due date.

4. TESTING AND ACCEPTANCE CRITERIA:

The CWCB shall evaluate this Project(s) through the review of Grantee submitted financial and progress reports. The CWCB and NRCS may also conduct on-site monitoring to determine whether the Grantee is meeting/has met the performance goals, administrative standards, financial management and other requirements of this grant. The CWCB will notify Grantee in advance of such on-site monitoring.

5. PAYMENT:

5.1 Payment Schedule: The CWCB will approve reimbursements as invoices and backup documentation is submitted by the Grantee. Invoices shall not be submitted more often than monthly.

5.2 Payment Amount: Local Matching Funds shall be documented with every payment request. Excess Local Matching Funds documented and submitted with one reimbursement request shall be applied to subsequent requests as necessary to maximize the allowable reimbursement.

5.3 Adjustments: If agreed to by the CWCB and NRCS, adjustments may be made to and between individual DSR costs without amending this agreement as long as the total estimated eligible construction costs described in Exhibit B is not exceeded.

6. ADMINISTRATIVE REQUIREMENTS:

Required Documentation: Grantees shall retain all procurement and payment documentation on site for inspection. This shall include, but not be limited to, purchase orders, receiving documents, invoices, vouchers, equipment/services identification, and time and effort reports.

6.1 Sufficient detail shall be provided with reimbursement requests to demonstrate that expenses are allowable and appropriate as detailed below:

6.1.1 Equipment or tangible goods. When requesting reimbursement for equipment items with a purchase price of or exceeding \$5,000, and a useful life of more than one year, the Grantee shall provide a unique identifying number for the equipment, with a copy of the Grantee's invoice and proof of payment. The unique identifying number can be the manufacturer's serial number or, if the Grantee has its own existing inventory numbering system, that number may be used. The location of the equipment shall also be provided. In addition to ongoing tracking requirements, Grantee shall ensure that equipment items with per unit cost of \$5,000 or more are prominently marked in a manner similar to the following: Purchased with funds provided by the USDA, NRCS.

6.1.2 Services. Grantees shall include contract/purchase order number(s) or employee names, the date(s) the services were provided and the nature of the services.

6.2 Procurement: A Grantee shall ensure its procurement policies meet or exceed local, state, and federal requirements. Grantees should refer to local, state, and federal guidance prior to making decisions regarding competitive bids, sole source or other procurement issues. In addition:

6.2.1 Any sole source transaction in excess of \$100,000 shall be approved by CWCB Procurement. Written documentation of purchases will be made available for review by CWCB staff upon request.

6.2.2 Grantees shall ensure that: (a) All procurement transactions, whether negotiated or competitively bid, and without regard to dollar value, are conducted in a manner that provides maximum open and free competition; (b) Grantee shall be alert to organizational conflicts of interest and/or non-competitive practices among contractors that may restrict or eliminate competition or otherwise restrain trade; (c) Contractors who develop or draft specifications, requirements, statements of work, and/or Requests for Proposals (RFPs) for a proposed procurement shall be excluded from bidding or submitting a proposal to compete for the award of such procurement; and (d) Any request for exemption of item a-c within this subsection shall be submitted in writing to, and be approved by the authorized Grantee official.

- 6.2.3 Grantee shall verify that the Contractor is not debarred from participation in state and federal programs. Subgrantees should review contractor debarment information on <http://www.epls.gov>.
- 6.2.4 When issuing requests for proposals, bid solicitations, and other published documents describing projects or programs funded in whole or in part with these grant funds, Grantee and Subgrantees shall use the phrase -“This project is supported by grants from the by the United States Department of Agriculture, Natural Resources Conservation Service, CFDA # 10.923 and State of Colorado funds are provided from the State Disaster Emergency Fund.”
- 6.2.5 Grantee shall ensure that no rights or duties exercised under this Grant, or equipment purchased with Grant Funds having a purchase value of \$5,000 or more, are assigned without the prior written consent of the USDA, Natural Resources Conservation Service.
- 6.2.6 Grantee shall ensure that all funds are needed to supplement and not to supplant the Grantee’s own funds.

6.3 Additional Administrative Requirements:

The Grantee must request approval in advance for any change to this Grant Agreement, using the forms and procedures established by the CWCB.

EXHIBIT B – PROJECT BUDGET

BUDGET:

Project/Activity Line	NRCS Funds (75%)	State Matching Funds (12.5%)	Local Matching Funds (12.5%)	Total
	\$	\$	\$	\$
	\$	\$	\$	\$
	\$	\$	\$	\$
	\$	\$	\$	\$
Total Budget	\$	\$	\$	\$

EXHIBIT C – GRANT ASSURANCES

ASSURANCES CONSTRUCTION PROGRAMS

By accepting this grant, the grantee certifies that it:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will ensure the design engineer will provide on-site supervision at the construction site to ensure that the complete work conforms to the approved design plans and specifications throughout the project and will furnish progress reports and such other information as may be required by CWCB. The grantee must request written approval of the design engineer replacement from the CWCB administrative contact and must include the qualifications and the signature of the replacement signifying his or her willingness to serve on the project.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol

and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

10. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
11. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
12. Reserved.
13. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
14. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
15. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
16. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
17. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
18. Pay the contractor(s) as provided in the contract(s).
19. For in-kind construction services (materials, labor, and/or equipment supplied by the Sponsor), develop a Plan of Operations describing the construction services to be performed including estimated quantities and values. The Plan of Operations shall be concurred in by CWCB at the pre-design conference. Construction services for equipment shall not exceed published FEMA equipment rates unless otherwise documented and concurred in advance by CWCB rates considered fair and reasonable by the CWCB Technical and/or Administrative Contact.

The following documentation is required to support the Grantee's request for reimbursement of in-kind construction services:

- a. Invoices covering actual costs of materials used in constructing the eligible EWP project measures.
 - b. Records documenting the type, quality, and quantities of materials actually used in constructing the eligible EWP project measures.
 - c. Daily time records for each employee showing name, classification, wage rate, hours, and dates actually employed for constructing the eligible EWP project measures.
 - d. Equipment operating records showing the type and size of equipment, hourly rate, actual hours of operation and dates used to install the eligible EWP project measures. Equipment idle time is not eligible in-kind construction services, even if on the job site, and should not be included in the equipment operating records.
20. Submit billings for reimbursement to the CWCB on a monthly basis. Final payment request shall be submitted within thirty (30) calendar days of completion of the works of improvement. All requests for reimbursement shall include all appropriate and complete documentation to support the reimbursement request. The required supporting documentation for reimbursement of construction costs include invoices and proof of payment to the contractor showing the items and quantities installed and certified by the engineer of record along with any supporting documentation such as quantity calculations, rock weight tickets, etc.
- The required supporting documentation for reimbursement of in-kind construction expenses will include employee time sheets, employee hourly rate, equipment operating logs, equipment hourly rate, and material quantities and invoices.
21. Take reasonable and necessary actions to dispose of all contractual and administrative issues arising out of the contract(s) awarded under this agreement. This includes, but is not limited to, disputes, claims, protests of award, source evaluation, and litigation that may result from the project. Such actions will be at the expense of the sponsor including legal expenses.
22. Ensure that any special requirements for compliance with environmental and/or cultural resource laws are incorporated into the project.
23. Will arrange and pay for any necessary location, removal, or relocation of utilities. EWP program regulations prohibit NRCS from reimbursing the Sponsor or otherwise paying for any such costs; nor do the costs qualify as a Sponsor cost-share contribution.
24. Ensure that technical and engineering standards and specifications of NRCS are adhered to during construction of the Project, as interpreted by CWCB Technical Contact. Provide CWCB Technical Contact progress reports as necessary and agreed to. Progress reports should include technical on-site inspections of work accomplished for the period, work planned, results of material tests, deficient work products and/or tests with corrective actions taken, modifications anticipated, technical problems encountered, contractual issues and other relevant information.
25. Ensure that all contractors on NRCS assisted projects are performing their work in accordance with OSHA regulations, NRCS Supplement to OSHA Parts 1910 and 1926, and the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5) (see Attachment). The Sponsor is responsible for periodically checking the contractor's compliance with safety requirements.
26. Arrange for and conduct a final inspection with the CWCB and NRCS representative of completed emergency watershed protection measures, and certify that the project was installed in accordance with contractual requirements.

27. Be responsible for ensuring their System for Award Management (SAM) registration is active throughout the life of the agreement so that reimbursements are not delayed.
28. That once the project is completed and all requests for reimbursement submitted, any excess funding remaining in the agreement (over and above the NRCS commitment of up to 75 percent of actual construction costs and within the not-to-exceed amount) will be de-obligated from the agreement.

EXHIBIT C-1 – APPLICABLE FEDERAL LAWS AND STATE GRANT GUIDANCE

The following are incorporated into this contract without limitation:

1. Age Discrimination Act of 1975, 42 U.S.C. Sections 6101, et seq.
2. Age Discrimination in Employment Act of 1967, 29 U.S.C. 621-634
3. Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. 12101, et seq.
4. Equal Pay Act of 1963, 29 U.S.C. 206(d)
5. Immigration Reform and Control Act of 1986, 8 U.S.C. 1324b
6. Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794
7. Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d
8. Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000e
9. Title IX of the Education Amendment of 1972, 20 U.S.C. 1681, et seq.
10. Section 24-34-301, et seq., Colorado Revised Statutes 1997, as amended
11. The applicable of the following:
 - 11.1. Cost Principals for State, Local and Indian Tribal Governments, 2 C.F.R. 225, (OMB Circular A-87);
 - 11.2. Cost Principals for Education Institutions, 2 C.F.R. 220, (OMB Circular A-21);
 - 11.3. Cost Principals for Non-Profit Organizations, 2 C.F.R. 230, (OMB Circular A-122), and
 - 11.4. Audits of States, Local Governments, and Non-Profit Organizations (OMB Circular A-133); and/or the Colorado Local Government Audit Law, 29-1-601, et seq, C.R.S., and State implementing rules and regulations.
 - 11.5. Immigration Status -Cooperation with Federal Officials, CRS 29-29-101, et seq.
 - 11.6. Copeland Act, 40 U.S.C. S 276c and 18 U.S.C. SS 874.
 - 11.7. Contract Work Hours and Safety Standards Act, 40 U.S.C. SS 327-333, regarding labor standards for federally assisted construction subawards.
 - 11.8. Wild and Scenic Rivers Act of 1968, 16 U.S.C. SS 1271 et. seq., related to protecting components or potential components of the national wild and scenic rivers system.
 - 11.9. National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470, Executive Order No. 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974, 16 U.S.C. 469a-1 et. seq.
 - 11.10. Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 U.S.C. 5121 et seq., as amended.
 - 11.11. National Flood Insurance Act of 1968, 42 U.S.C. 4001 et. seq.
 - 11.12. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 104.
 - 11.13. Department of Defense Authorization Act of 1986, Title 14, Part B, Section 1412, Public Law 99-145, 50 U.S.C. 1521.
 - 11.14. USA PATRIOT Act of 2001, (Pub. L. 107-56).
 - 11.15. Digital Television Transition and Public Safety Act of 2005, (Pub L. 109-171)
12. Reserved
13. Privacy Reserved
14. Prohibition against use of Federal Funds for Lobbying, 31 U.S.C. 1352
15. None of the funds made available through this agreement shall be used in contravention of the Federal buildings performance and reporting requirements of Executive Order No. 13123, part 3 of title V of the National Energy Conservation Policy Act, 42 U.S.C. 8251 et. Seq., or subtitle A of title I of the Energy Policy Act of 2005 (including the amendments made thereby).
16. None of the funds made available shall be used in contravention of section 303 of the Energy Policy Act of 1992, 42 U.S.C. 13212.
17. Buy American Act, 41 U.S.C. 10a et seq.
18. Relevant Federal and State Grant Program Guidance including all OMB guidance related to Federal Awards is in Title 2 of the CFR, subtitle A, Chapter II, Part 200, and 7 C.F.R. part 624 – Emergency Watershed Protection.

EXHIBIT C-2 – EMERGENCY WATERSHED PROTECTION TECHNICAL ASSURANCES

By accepting this grant, the grantee certifies that it:

1. Shall ensure that engineering services required to plan or implement the Scope of Work, **Exhibit A** are performed as follows:
 - a. Individuals and/or organizations providing engineering services shall employ a professional engineer licensed in Colorado who directly supervises the staff performing the services or who serves as a Principal.
 - b. Project designs, drawings and specifications must meet NRCS standards and technical criteria, and shall be timely forwarded to the CWCB for submittal to the NRCS State Conservation Engineer for functional review and concurrence. Prior to contracting for construction, submit project documents to the CWCB representative in **§16** of this agreement.
 - c. A Professional Engineer will seal engineering documents and the following statement shall appear with the engineer's signature on the cover sheet of construction drawings and within all reports:

“I certify to the best of my professional knowledge, judgment and belief, these plans (or this report, etc.) meets applicable NRCS standards.”

2. Working through the CWCB representative in **§16** of this agreement, obtain NRCS concurrence if the Grantee desires to increase the level of protection over and above that described in the NRCS Damage Survey Report (DSR) or authorized by EWP Program rules. The Grantee or another entity will be responsible for paying 100 percent of the costs attributable to upgrades or additional work.
3. Develop O&M (Operation and Maintenance) Plans for projects that have structural elements, working through the to the CWCB representative in **§16** of this agreement, submit O&M plans to CWCB for CWCB and NRCS review, and ensure O&M tasks are carried out in accordance with the plan. In accordance with EWP program regulations, grant funds cannot pay for performance of O&M tasks, nor can they be counted as an in-kind contribution by the CWCB or the Grantee. Upon completion of the project, assume responsibility for operation and maintenance as outlined in **Exhibit A-3**.
4. Secure property rights and submit an ADS-78 form(s), *Assurances Relating to Real Property Acquisition*, to the CWCB for submittal to the NRCS Program Manager, see **Exhibit C-6**. This includes any rights associated with required environmental mitigation. An attorney's opinion must be attached to the form certifying an examination of the real property instruments and files was made and found to provide adequate land title, rights, permission and authority for the purpose(s) of the project. All costs relative to obtaining property rights will be borne by the Grantee. In accordance with EWP program regulations, grant funds cannot reimburse these costs nor can they be counted as an in-kind contribution by the WCB or Grantee.
5. 6. Accept all financial and other responsibility for excess costs resulting from their failure to obtain, or their delay in obtaining, adequate land and water rights, permits and licenses needed for the Project
6. Ensure all applicable Federal, State, and local permits are obtained and work is performed in accordance with permit requirements. All costs relative to obtaining required permits will be borne by the Grantee or subrecipients. In accordance with EWP program regulations, NRCS cannot reimburse these costs nor can they be counted as an in-kind contribution by the CWCB or the Grantee.
7. Comply with all NEPA requirements, and Grantee must review the NRCS DSR prior to developing construction plans and starting construction and comply with NEPA restrictions identified in the DSR. NRCS may perform tasks associated with NEPA requirements, with CWCB support as needed.

8. Comply with all cultural resource requirements as determined by NRCS and CWCB in accordance with the National Historic Preservation Act.
9. Comply with Endangered Species Act requirements including implementation of U.S. Fish and Wildlife avoidance and minimization measures, and conservation measures identified for threatened and endangered species.
10. Procure and manage contracts for equipment or services in accordance with established Sponsor procurement policy and 2 CFR 200.317 through 200.326, "Procurement". The sponsor will ensure all applicable requirements of this agreement are included in agreements with subrecipients.
11. Create and manage implementation agreements with local entities to construct Phase II recovery projects in accordance with established Sponsor procurement policy and 2 CFR 200.317 through 200.326, "Procurement". The Grantee will ensure all applicable requirements of this agreement are included in any agreements with subrecipients.
12. Conduct all procurement activities in a manner that provides, to the maximum extent possible, free and open competition.
13. Submit monthly progress reports throughout the duration of this agreement to the CWCB representative in §16 of this agreement.
14. Submit a request for reimbursement of costs incurred under this agreement to CWCB. Reimbursement requests shall be submitted on a monthly basis to the the CWCB representative in §16 of this agreement, beginning at the end of the first full month after the agreement is signed. Final payment request shall be submitted within 30 calendar days after completion or expiration of this agreement.
15. All requests for reimbursement shall include all appropriate and complete documentation to support the reimbursement request such as: invoices; proof of payment to consultants; or employee time sheets along with the employee's hourly rate, hours worked, and date work was performed. Use the Federal Travel Regulations as a guideline for requesting reimbursement of any travel costs incurred in completing tasks authorized under this agreement.
16. Receive payment under this Agreement using electronic funds transfer (EFT) procedures in accordance with 31 C.F.R. § 208.
17. Be responsible, without recourse to the State of Colorado, NRCS or USDA, for the settlement and satisfaction of all contractual and legal issues arising out of arrangements entered into between the Sponsor and others to carry out approved project activities. Matters concerning violation of law should be referred to the federal, state, or local authority having proper jurisdiction.
18. To the extent allowed by law, hold and save NRCS free from any and all claims or causes of action whatsoever resulting from the obligations undertaken by the Sponsor under this agreement or resulting from the work provided for in this agreement
19. Be responsible for all administrative expenses (including but shall not be limited to facilities, clerical expenses), and legal counsel necessary including the fees of such attorney or attorneys deemed necessary by NRCS to resolve any legal matters.
20. Be responsible for 100 percent of all ineligible construction costs, and 100 percent of any unapproved upgrade to increase the level of protection over and above that described in the DSR.
21. For contracts, provide CWCB a copy of solicitation notice, bid abstract, and notice of contract award, or other basis of cost and accomplishment
22. Take reasonable and necessary actions, including legal action, if required, to dispose of any and all contractual and administrative issues arising out of the contract(s) awarded under this agreement to include but not be limited to, disputes, claims, protests of award, source evaluation, and litigation that may result from the project, and bringing suit to collect from the contractor any moneys due in

connection with the contract. Any monies collected will be distributed to the parties in the same ratio as contributions are made.

23. Retain all records dealing with the award and administration of contract(s) for three (3) years from the date of the sponsor's submission of the final Request for Reimbursement or until final audit findings have been resolved, whichever is longer. If any litigation is started before the expiration of the three (3) year period, the records are to be retained until the litigation is resolved or the end of the three (3) year period, whichever is longer. Make such records available to the Comptroller General of the United States or his or her duly authorized representative and accredited representatives of the U.S. Department of Agriculture or cognizant audit agency for the purpose of making audit, examination, excerpts, and transcripts.
 - a. Submit requests for a time extension to this agreement, (if necessary), in writing to the CWCB representative in **§16** of this agreement no less than thirty-five (35) days prior to the expiration date of the agreement. Submit the written, signed request to the CWCB Technical Contact in addition to the Administrative Contact.
21. This agreement shall be effective upon signature by the Colorado State Controller. All work required under this agreement shall be completed in accordance with this agreement. Any work performed prior to receiving a fully executed agreement is not eligible for reimbursement. Any change in the effective dates of this agreement must be by written amendment and signed by the grantee, the State and the Colorado State Controller prior to the expiration date.
22. The furnishing of financial and other assistance under this subrecipient agreement is contingent on the availability of funds appropriated by Congress from which payment may be made and shall not obligate the United States Department of Agriculture, NRCS or the State upon failure of the Congress to appropriate funds.
23. This agreement may be executed in any number of counterparts and all of said counterparts taken together shall be deemed to constitute one and the same instrument. By signing this agreement the Grantee assures the CWCB that the program or activities provided for under this agreement will be conducted in compliance with all applicable Federal civil rights laws, rules, regulations, and policies.
24. Employees of NRCS shall participate in efforts under this agreement solely as representatives of the NRCS. To this end, they shall not participate as directors, officers, employees, or otherwise serve or hold themselves out as representatives of the Sponsor or any member of the Sponsor. They also shall not assist the Grantee or any member the Grantee with efforts to lobby Congress, or to raise money through fundraising efforts. Further, NRCS employees shall report to their immediate supervisor any negotiations with the Grantee, or any member of the Grantee, concerning future employment and shall refrain from participation in efforts regarding such party until approved by the NRCS.
25. Employees of the State or Grantee shall remain its employees while carrying out their duties under this agreement and shall not be considered as Federal employees or agents of the United States for any purpose under this agreement.

EXHIBIT C-3

NATURAL RESOURCES CONSERVATION SERVICE U.S. DEPARTMENT OF AGRICULTURE

GENERAL TERMS AND CONDITIONS GRANTS AND COOPERATIVE AGREEMENTS

I. APPLICABLE REGULATIONS

- a. The recipient, and recipients of any subawards under this award, agree to comply with the following regulations, as applicable. The full text of Code of Federal Regulations references may be found at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1> and <http://www.ecfr.gov/>.
- (1) 2 CFR Part 25, "Universal Identifier and System of Award Management"
 - (2) 2 CFR Part 170, "Reporting Subaward and Executive Compensation Information"
 - (3) 2 CFR Part 180, "OMB Guidelines To Agencies On Governmentwide Debarment And Suspension (Nonprocurement)"
 - (4) 2 CFR Part 182, "Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)"
 - (5) 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles, And Audit Requirements for Federal Awards"
- b. The recipient, and recipients of any subawards under this award, assure and certify that they have and/or will comply with the following regulations, as applicable. The full text of Code of Federal Regulations references may be found at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1> and <http://www.ecfr.gov/>.
- (1) 2 CFR Part 175, "Award Term for Trafficking in Persons"
 - (2) 2 CFR Part 417, "Nonprocurement Debarment and Suspension"
 - (3) 2 CFR Part 418, "New Restrictions on Lobbying"
 - (4) 2 CFR Part 421, "Requirements for Drug-Free Workplace (Financial Assistance)"
- c. Allowable project costs will be determined in accordance with the authorizing statute, the purpose of the award, and to the extent applicable to the type of organizations receiving the award, regardless of tier. The following portions of the Code of Federal Regulations are hereby incorporated by reference (the full text of Code of Federal Regulations references may be found at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1> and <http://www.ecfr.gov/>).
- (1) 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles And Audit Requirements For Federal Awards"
 - (2) 48 CFR Part 31, "Contract Cost Principles and Procedures"

II. UNALLOWABLE COSTS

The following costs are not allowed:

- a. Costs above the amount authorized for the project
- b. Costs incurred after the expiration of the award including any no-cost extensions of time
- c. Costs that lie outside the scope of the approved project and any amendments thereto
- d. Compensation for injuries to persons or damage to property arising from project activities

This list is not exhaustive. For general information about the allow ability of particular items of costs, please see 2 CFR Part 200, "Subpart E - Cost Principles", or direct specific inquiries to the NRCS administrative contact identified in the award.

III. CONFIDENTIALITY

- a. Activities performed under this award may involve access to confidential and potentially sensitive information about governmental and landowner issues. The term “confidential information” means proprietary information or data of a personal nature about an individual, or information or data submitted by or pertaining to an organization. This information must not be disclosed without the prior written consent of NRCS.
- b. The recipient’s personnel will follow the rules and procedures of disclosure set forth in the Privacy Act of 1974, 5 U.S.C. Section 552a, and implementing regulations and policies with respect to systems of records determined to be subject to the Privacy Act. The recipient’s personnel must also comply with privacy of personal information relating to natural resources conservation programs in accordance with section 1244 of Title II of the Farm Security and Rural Investment Act of 2002 (Public Law 107-171).
- c. The recipient agrees to comply with NRCS guidelines and requirements regarding the disclosure of information protected under Section 1619 of the Food, Conservation, and Energy Act of 2008 (PL 110-246), 7 U.S.C. 8791.

IV. PRIOR APPROVAL REQUIREMENTS

The following are the most common situations requiring prior approval. However, the recipient is also bound by any other prior approval requirements of the applicable administrative provisions and Federal cost principles.

- a. Purpose or Deliverables.—When it is necessary for the recipient to modify the purpose or deliverables, the recipient must submit a written request and justification for the change along with the revised purpose or deliverables of the award to the NRCS administrative contact. The request should contain the following:
 - 1. Grant or agreement number
 - 2. Narrative explaining the requested modification to the project purpose or deliverables
 - 3. A description of the revised purpose or deliverables
 - 4. Signatures of the authorized representative, project director, or both
- b. Subcontractual Arrangement. — The recipient must submit a justification for the proposed subcontractual arrangements, a statement of work to be performed, and a detailed budget for the subcontract to the NRCS administrative contact. Subcontractual arrangements disclosed in the application do not require additional postaward approval.
- c. Absence or Change in Project Leadership.—When a project director or the person responsible for the direction or management of the project—
 - 1. Relinquishes active direction of the project for more than 3 consecutive months or has a 25 percent or more reduction in time devoted to the project, the grantee must notify the NRCS administrative contact in writing, identifying who will be in charge during the project director’s absence. The notification must include the qualifications and the signature of the replacement, signifying his or her willingness to serve on the project.
 - 2. Severs his or her affiliation with the grantee, the grantee’s options include—
 - i. Replacing the project director. The grantee must request written approval of the replacement from the NRCS administrative contact and must include the qualifications and the signature of the replacement signifying his or her willingness to serve on the project.
 - ii. Subcontracting to the former project director’s new organization. The grantee must request approval from the administrative contact to replace the project manager and retain the award, and to subcontract to the former project director’s new organization certain portions of the project to be completed by the former project director.
 - iii. Relinquishing the award. The grantee must submit to the NRCS administrative contact a signed letter by the grantee and the project director that indicates that the grantee is relinquishing the award. The letter must include the date the project director is leaving and a summary of progress to date. A final Standard Form (SF) 425 reflecting the total amount of funds spent by the recipient must be attached to the letter.

3. Transfers the award to his or her new organization, the authorized organization's representative at the new organization must submit the following to the NRCS administrative contact as soon as the transfer date is firm and the amount of funds to be transferred is known:
 - i. The forms and certifications included in the application package
 - ii. A project summary and work statement covering the work to be completed under the project (deliverables and objectives must be the same as those outlined in the approved proposal)
 - iii. An updated qualifications statement for the project director showing his or her new organizational affiliation
 - iv. Any cost-sharing requirements under the original award transfer to the new institution; therefore, cost-sharing information must be included in the proposal from the new organization

Note: The transfer of an award from one organization to another can take up to 90 days to accomplish, which may result in a delay in the project director resuming the project at the new organization.

- d. Budget Revisions.—Budget revisions will be in accordance with 2 CFR Part 200.308.
- e. No-Cost Extensions of Time. —When a no-cost extension of time is required, the recipient must submit a written request to the NRCS administrative contact no later than 35 days before the expiration date of the award. The request must contain the following:
 - The length of additional time required to complete the project and a justification for the extension
 - A summary of progress to date
 - An estimate of funds expected to remain unobligated on the scheduled expiration date
 - A projected timetable to complete the portions of the project for which the extension is being requested
 - Signature of the grantee and the project director
 - A status of cost sharing to date (if applicable)

Note: An extension will not exceed 12 months. Only in exceptional cases will more than one extension be granted. Requests for no-cost extensions received after the expiration of the award will not be granted.

V. PAYMENTS

- a. Payment by NRCS to the entity will be made monthly or quarterly (whichever is mutually agreed upon by both parties) on a reimbursable or advanced basis upon completion of work outlined herein. Payment will be executed upon the submission of a properly executed form SF-270. The SF-270 must cite the agreement number, remittance address, and billing period. The SF-270 must be sent to the NRCS administrative contact at the address identified in block 8 of the Notice of Grant/Agreement Award.
- b. Unless otherwise specified in the award, the recipient must receive payments through electronic funds transfers.
- c. Recipients requesting advances should request payments in amounts necessary to meet their current needs pursuant to procedures contained in the Federal administrative provisions and **31 CFR Part 205**.
- d. The method of payment between the recipient and its contractors will be in accordance with the policies and procedures established by the recipient except that the contractors may not use the USDA Office of Financial Management/National Finance Center method to request payments. If the grantee makes advance payments to contractors, the grantee must ensure that the timing of such payments is designed to minimize elapsed time between the advance payment and the disbursement of funds. Payment requests from the grantee's contractors will not be sent to NRCS for review or approval.
- e. Accounting records for all costs incurred under this award must be supported by source documentation. Such documentation includes, but is not limited to, canceled checks, paid bills, payroll records, and subcontract award documents. Labor cost charges to this award must be based upon salaries actually earned and the time actually worked on this award. All project costs must be incurred within the approved project period of this

award, including any approved no-cost extension of time. Costs that cannot be supported by source documentation or that are incurred outside of the approved project period and budget may be disallowed and may result in award funds being returned to the Federal Government by the recipient.

VI. FINANCIAL REPORTING

- a. Recipients must submit a Federal Financial Report (FFR), SF 425 and 425A, in accordance with the following schedule (recipients may download the applicable form at <http://www.forms.gov>):

<u>Quarterly Schedule</u>	<u>Report Due Date</u>
October 1 to December 31	January 31
January 1 to March 31	April 30
April 1 to June 30	July 30
July 1 to September 30	October 30

Reports must be submitted on an accrual accounting basis. Failure to submit reports in accordance with the above schedule may result in suspension or termination of award.

- b. A final Report must be submitted no later than 90 days after the completion of the award. For final FFRs, reporting end date must be the end date of the project or agreement period. The reports should be submitted to the NRCS administrative contact identified in award notifications.

VII. PERFORMANCE MONITORING AND REPORTING

- a. The recipient is responsible for monitoring day-to-day performance and for reporting to NRCS. If the project involves subcontractual arrangements, the recipient is also responsible for monitoring the performance of project activities under those arrangements to ensure that approved goals and schedules are met.
- b. Every 6 months the recipient must submit a written progress report. Each report must cover—
1. A comparison of actual accomplishments with the goals and objectives established for the reporting period and, where project output can be quantified, a computation of the costs per unit of output.
 2. The reasons why goals and objectives were not met, if appropriate.
 3. Additional pertinent information including, where appropriate, analysis and explanation of cost overruns or high unit cost.
- c. The recipient must submit a final performance report within 90 days after completion of project.

VIII. SPECIAL PROVISIONS

- a. The recipient assures and certifies that it will comply with the minimum-wage and maximum-hour provisions of the Federal Fair Labor Standards Act.
- b. Employees of NRCS will participate in efforts under this agreement solely as representatives of the United States. To this end, they may not participate as directors, officers, employees, or otherwise serve or hold themselves out as representatives of the recipient. They also may not assist the recipient with efforts to lobby Congress or to raise money through fundraising efforts. Further, NRCS employees must report to their immediate supervisor any negotiations with the recipient concerning future employment and must refrain from participation in efforts regarding such parties until approved by the agency.
- c. Employees of the recipient will not be considered Federal employees or agents of the United States for any purposes under this agreement.

IX. PATENTS, INVENTIONS, COPYRIGHTS, AND ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER

- a. Allocation of rights of patents, inventions, and copyrights must be in accordance with 2 CFR Part 200.315. This regulation provides that small businesses normally may retain the principal worldwide patent rights to any invention developed with USDA support.
- b. In accordance with 37 CFR Section 401.14, each subject invention must be disclosed to the Federal agency within 2 months after the inventor discloses it in writing to contractor personnel responsible for patent matters. Invention disclosure statements pursuant to 37 CFR Section 401.14(c) must be made in writing to:

Acquisitions Division
Grants and Agreements Team
1400 Independence Avenue, SW.
Room 6823 South Building
Washington, DC 20250

- c. USDA receives a royalty-free license for Federal Government use, reserves the right to require the patentee to license others in certain circumstances, and requires that anyone exclusively licensed to sell the invention in the United States must manufacture it domestically.
- d. The following acknowledgment of NRCS support must appear in the publication of any material, whether copyrighted or not, and any products in electronic formats (World Wide Web pages, computer programs, etc.) that is substantially based upon or developed under this award:
 - “This material is based upon work supported by the Natural Resources Conservation Service, U.S. Department of Agriculture, under number [recipient should enter the applicable award number here].”

In addition, all publications and other materials, except scientific articles or papers published in scientific journals, must include the following statement:

- “Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Agriculture.”

The recipient is responsible for ensuring that an acknowledgment of NRCS is made during news media interviews, including popular media such as radio, television, and news magazines, that discuss in a substantial way work funded by this award.

X. COST-SHARING REQUIREMENTS

- a. If the award has specific cost-sharing requirements, the cost-sharing participation in other projects may not be counted toward meeting the specific cost-share requirement of this award, and must come from non-Federal sources unless otherwise stated in the applicable program announcement.
- b. Should the recipient become aware that it may be unable to provide the cost-sharing amount identified in this award, it must—
 1. Immediately notify the NRCS administrative contact of the situation.
 2. Specify the steps it plans to take to secure replacement cost sharing.
 3. Indicate the plans to either continue or phase out the project in the absence of cost sharing.
- c. If NRCS agrees to the organization’s proposed plans, the recipient will be notified accordingly. If the organization’s plans are not acceptable to NRCS, the award may be subject to termination. NRCS modifications to proposed cost sharing revisions are made on a case-by-case basis.
- d. Failure by the recipient to notify NRCS in accordance with paragraph (b) above may result in the disallowance of some or all the costs charged to the award, the subsequent recovery by NRCS of some of the NRCS funds provided under the award, and possible termination of the award, and may constitute a violation

of the terms and conditions of the award so serious as to provide grounds for subsequent suspension or debarment.

- e. The recipient must maintain records of all project costs that are claimed by the recipient as cost sharing as well records of costs to be paid by NRCS. If the recipient's cost participation includes in-kind contributions, the basis for determining the valuation for volunteer services and donated property must be documented.

XI. PROGRAM INCOME

Income derived from patents, inventions, or copyrights will be disposed of in accordance with the recipient's own policies. General program income earned under this award during the period of NRCS support must be added to total project funds and used to further the purpose and scope of this award or the legislation under which this award is made.

XII. NONEXPENDABLE EQUIPMENT

Recipients purchasing equipment or products with funds provided under this award are encouraged to use such funds to purchase only American-made equipment and products. Title to nonexpendable equipment purchased with award funds will vest in the recipient upon completion of the award project and acceptance by NRCS of required final reports. When equipment is no longer needed by the recipient and the per-unit fair market value is less than \$5,000, the recipient may retain, sell, or dispose of the equipment with no further obligation to NRCS. However, if the per-unit fair market value is \$5,000 or more, the recipient must submit a written request to the NRCS administrative contact for disposition instructions.

XIII. LIMIT OF FEDERAL LIABILITY

The maximum financial obligation of NRCS to the recipient is the amount of funds indicated in the award as obligated by NRCS. However, in the event that an erroneous amount is stated on the approved budget, or any supporting document relating to the award, NRCS will have the unilateral right to make the correction and to make an appropriate adjustment in the NRCS share of the award to align with the Federal amount authorized.

XIV. MODIFICATIONS AND TERMINATIONS

NRCS may amend or modify the award through an exchange of correspondence between authorized officials of the recipient and NRCS. The award is subject to termination if NRCS determines that the recipient has failed to comply with the terms and conditions of the award. In the event that the award is terminated, the financial obligations of the parties will be those set forth in 2 CFR Part 200.339.

XV. AWARD CLOSEOUT

Award closeout is the process by which NRCS determines that all required project activities have been performed satisfactorily and all necessary administrative actions have been completed.

EXHBIT C-4
State of Colorado
Supplemental Provisions for
Federally Funded Contracts, Grants, and Purchase Orders
Subject to The Federal Funding Accountability and Transparency Act of 2006 (FFATA), As
Amended
(Revised as of 3-20-13)

The contract, grant, or purchase order to which these Supplemental Provisions are attached has been funded, in whole or in part, with an Award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the contract or any attachments or exhibits incorporated into and made a part of the contract, the provisions of these Supplemental Provisions shall control.

1. **Definitions.** For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.
 - 1.1. **“Award”** means an award of Federal financial assistance that a non-Federal Entity receives or administers in the form of:
 - 1.1.1. Grants;
 - 1.1.2. Contracts;
 - 1.1.3. Cooperative agreements, which do not include cooperative research and development agreements (CRDA) pursuant to the Federal Technology Transfer Act of 1986, as amended (15 U.S.C. 3710);
 - 1.1.4. Loans;
 - 1.1.5. Loan Guarantees;
 - 1.1.6. Subsidies;
 - 1.1.7. Insurance;
 - 1.1.8. Food commodities;
 - 1.1.9. Direct appropriations;
 - 1.1.10. Assessed and voluntary contributions; and
 - 1.1.11. Other financial assistance transactions that authorize the expenditure of Federal funds by non-Federal Entities.

Award *does not* include:

 - 1.1.12. Technical assistance, which provides services in lieu of money;
 - 1.1.13. A transfer of title to Federally-owned property provided in lieu of money; even if the award is called a grant;
 - 1.1.14. Any award classified for security purposes; or
 - 1.1.15. Any award funded in whole or in part with Recovery funds, as defined in section 1512 of the American Recovery and Reinvestment Act (ARRA) of 2009 (Public Law 111-5).
 - 1.2. **“Contract”** means the contract to which these Supplemental Provisions are attached and includes all Award types in §1.1.1 through 1.1.11 above.
 - 1.3. **“Contractor”** means the party or parties to a Contract funded, in whole or in part, with Federal financial assistance, other than the Prime Recipient, and includes grantees, subgrantees, Subrecipients, and borrowers. For purposes of Transparency Act reporting, Contractor does not include Vendors.
 - 1.4. **“Data Universal Numbering System (DUNS) Number”** means the nine-digit number established and assigned by Dun and Bradstreet, Inc. to uniquely identify a business entity. Dun and Bradstreet’s website may be found at: <http://fedgov.dnb.com/webform>.
 - 1.5. **“Entity”** means all of the following as defined at 2 CFR part 25, subpart C;
 - 1.5.1. A governmental organization, which is a State, local government, or Indian Tribe;
 - 1.5.2. A foreign public entity;

- 1.5.3. A domestic or foreign non-profit organization;
 - 1.5.4. A domestic or foreign for-profit organization; and
 - 1.5.5. A Federal agency, but only a Subrecipient under an Award or Subaward to a non-Federal entity.
- 1.6. **“Executive”** means an officer, managing partner or any other employee in a management position.
 - 1.7. **“Federal Award Identification Number (FAIN)”** means an Award number assigned by a Federal agency to a Prime Recipient.
 - 1.8. **“FFATA”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252. FFATA, as amended, also is referred to as the “Transparency Act.”
 - 1.9. **“Prime Recipient”** means a Colorado State agency or institution of higher education that receives an Award.
 - 1.10. **“Subaward”** means a legal instrument pursuant to which a Prime Recipient of Award funds awards all or a portion of such funds to a Subrecipient, in exchange for the Subrecipient’s support in the performance of all or any portion of the substantive project or program for which the Award was granted.
 - 1.11. **“Subrecipient”** means a non-Federal Entity (or a Federal agency under an Award or Subaward to a non-Federal Entity) receiving Federal funds through a Prime Recipient to support the performance of the Federal project or program for which the Federal funds were awarded. A Subrecipient is subject to the terms and conditions of the Federal Award to the Prime Recipient, including program compliance requirements. The term “Subrecipient” includes and may be referred to as Subgrantee.
 - 1.12. **“Subrecipient Parent DUNS Number”** means the subrecipient parent organization’s 9-digit Data Universal Numbering System (DUNS) number that appears in the subrecipient’s System for Award Management (SAM) profile, if applicable.
 - 1.13. **“Supplemental Provisions”** means these Supplemental Provisions for Federally Funded Contracts, Grants, and Purchase Orders subject to the Federal Funding Accountability and Transparency Act of 2006, As Amended, as may be revised pursuant to ongoing guidance from the relevant Federal or State of Colorado agency or institution of higher education.
 - 1.14. **“System for Award Management (SAM)”** means the Federal repository into which an Entity must enter the information required under the Transparency Act, which may be found at <http://www.sam.gov>.
 - 1.15. **“Total Compensation”** means the cash and noncash dollar value earned by an Executive during the Prime Recipient’s or Subrecipient’s preceding fiscal year and includes the following:
 - 1.15.1. Salary and bonus;
 - 1.15.2. Awards of stock, stock options, and stock appreciation rights, using the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2005) (FAS 123R), Shared Based Payments;
 - 1.15.3. Earnings for services under non-equity incentive plans, not including group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of Executives and are available generally to all salaried employees;
 - 1.15.4. Change in present value of defined benefit and actuarial pension plans;
 - 1.15.5. Above-market earnings on deferred compensation which is not tax-qualified;
 - 1.15.6. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the Executive exceeds \$10,000.
 - 1.16. **“Transparency Act”** means the Federal Funding Accountability and Transparency Act of 2006

(Public Law 109-282), as amended by §6202 of Public Law 110-252. The Transparency Act also is referred to as FFATA.

1.17 “Vendor” means a dealer, distributor, merchant or other seller providing property or services required for a project or program funded by an Award. A Vendor is not a Prime Recipient or a Subrecipient and is not subject to the terms and conditions of the Federal award. Program compliance requirements do not pass through to a Vendor.

- 2. Compliance.** Contractor shall comply with all applicable provisions of the Transparency Act and the regulations issued pursuant thereto, including but not limited to these Supplemental Provisions. Any revisions to such provisions or regulations shall automatically become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Contractor of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.
- 3. System for Award Management (SAM) and Data Universal Numbering System (DUNS) Requirements.**
 - 3.1. SAM.** Contractor shall maintain the currency of its information in SAM until the Contractor submits the final financial report required under the Award or receives final payment, whichever is later. Contractor shall review and update SAM information at least annually after the initial registration, and more frequently if required by changes in its information.
 - 3.2. DUNS.** Contractor shall provide its DUNS number to its Prime Recipient, and shall update Contractor’s information in Dun & Bradstreet, Inc. at least annually after the initial registration, and more frequently if required by changes in Contractor’s information.
- 4. Total Compensation.** Contractor shall include Total Compensation in SAM for each of its five most highly compensated Executives for the preceding fiscal year if:
 - 4.1.** The total Federal funding authorized to date under the Award is \$25,000 or more; and
 - 4.2.** In the preceding fiscal year, Contractor received:
 - 4.2.1.** 80% or more of its annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
 - 4.2.2.** \$25,000,000 or more in annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
 - 4.3.** The public does not have access to information about the compensation of such Executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d) or § 6104 of the Internal Revenue Code of 1986.
- 5. Reporting.** Contractor shall report data elements to SAM and to the Prime Recipient as required in §7 below if Contractor is a Subrecipient for the Award pursuant to the Transparency Act. No direct payment shall be made to Contractor for providing any reports required under these Supplemental Provisions and the cost of producing such reports shall be included in the Contract price. The reporting requirements in §7 below are based on guidance from the US Office of Management and Budget (OMB), and as such are subject to change at any time by OMB. Any such changes shall be automatically incorporated into this Contract and shall become part of Contractor’s obligations under this Contract, as provided in §2 above. The Colorado Office of the State Controller will provide summaries of revised OMB reporting requirements at <http://www.colorado.gov/dpa/dfp/sco/FFATA.htm>.
- 6. Effective Date and Dollar Threshold for Reporting.** The effective date of these Supplemental Provisions apply to new Awards as of October 1, 2010. Reporting requirements in §7 below apply to new Awards as of October 1, 2010, if the initial award is \$25,000 or more. If the initial Award is below \$25,000 but

subsequent Award modifications result in a total Award of \$25,000 or more, the Award is subject to the reporting requirements as of the date the Award exceeds \$25,000. If the initial Award is \$25,000 or more, but funding is subsequently de-obligated such that the total award amount falls below \$25,000, the Award shall continue to be subject to the reporting requirements.

7. Subrecipient Reporting Requirements. If Contractor is a Subrecipient, Contractor shall report as set forth below.

7.1 ToSAM. A Subrecipient shall register in SAM and report the following data elements in SAM *for each* Federal Award Identification Number no later than the end of the month following the month in which the Subaward was made:

- 7.1.1** Subrecipient DUNS Number;
- 7.1.2** Subrecipient DUNS Number + 4 if more than one electronic funds transfer (EFT) account;
- 7.1.3** Subrecipient Parent DUNS Number;
- 7.1.4** Subrecipient's address, including: Street Address, City, State, Country, Zip + 4, and Congressional District;
- 7.1.5** Subrecipient's top 5 most highly compensated Executives if the criteria in §4 above are met; and
- 7.1.6** Subrecipient's Total Compensation of top 5 most highly compensated Executives if criteria in §4 above met.

7.2 To Prime Recipient. A Subrecipient shall report to its Prime Recipient, upon the effective date of the Contract, the following data elements:

- 7.2.1** Subrecipient's DUNS Number as registered in SAM.
- 7.2.2** Primary Place of Performance Information, including: Street Address, City, State, Country, Zip code + 4, and Congressional District.

8. Exemptions.

8.1. These Supplemental Provisions do not apply to an individual who receives an Award as a natural person, unrelated to any business or non-profit organization he or she may own or operate in his or her name.

8.2 A Contractor with gross income from all sources of less than \$300,000 in the previous tax year is exempt from the requirements to report Subawards and the Total Compensation of its most highly compensated Executives.

8.3 Effective October 1, 2010, "Award" currently means a grant, cooperative agreement, or other arrangement as defined in Section 1.1 of these Special Provisions. On future dates "Award" may include other items to be specified by OMB in policy memoranda available at the OMB Web site; Award also will include other types of Awards subject to the Transparency Act.

8.4 There are no Transparency Act reporting requirements for Vendors.

9. Event of Default. Failure to comply with these Supplemental Provisions shall constitute an event of default under the Contract and the State of Colorado may terminate the Contract upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Contract, at law or in equity.

EXHIBIT C-5 – ASSURANCES RELATING TO REAL PROPERTY ACQUISITION

U.S. Department of Agriculture
Natural Resources Conservation Service

NRCS-ADS-78
5-88

**ASSURANCES RELATING TO REAL
PROPERTY ACQUISITION**

A. **PURPOSE** – This form is to be used by sponsor(s) to provide the assurances to the Natural Resources Conservation Service of the U.S. Department of Agriculture which is required in connection with the installation of project measures which involve Federal financial assistance furnished by the Natural Resources Conservation Service.

B. **PROJECT MEASURES COVERED** –

Name of project _____

Identity of improvement or development _____

Location _____

C. **REAL PROPERTY ACQUISITION ASSURANCE** –

This assurance is applicable if real property interests were acquired for the installation of project measures, and/or if persons, businesses, or farm operations were displaced as a result of such installation; *and* this assurance was not previously provided for in the watershed, project measure, or other type of plan.

If this assurance was not previously provided, the undersigned sponsor(s) hereby assures they have complied, to the extent practicable under State law, with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. 4601-4655), as implemented in 7C.F.R. Part 21. Any exceptions taken from the real property acquisition requirements under the authority of 42 U.S.C. 4655 because of State law have been or is hereby furnished to the Natural Resources Conservation Service along with the opinion of the Chief Legal Officer of the State containing a full discussion of the facts and law furnished.

D. **PURPOSE** –

The undersigned sponsor(s) hereby assures that adequate real property rights and interests, water rights if applicable, permits and licenses required by Federal, State, and local law, ordinance or regulation, and related actions have been taken to obtain the legal right to install, operate, maintain, and inspect the above-described project measures, except for structures or improvements that are to be removed, relocated, modified, or salvaged before and/or during the installation process.

This assurance is given with the knowledge that sponsor(s) are responsible for any excess costs or other consequences in the event the real property rights are found to be inadequate during the installation process.

Furthermore, this assurance is supported by an attorney's opinion attached hereto that certifies an examination of the real property instruments and files was made and they were found to provide adequate title, right, permission and authority for the purpose(s) for which the property was acquired. If any of the real property rights or interests were obtained by condemnation (eminent domain) proceedings, sponsor(s) further assure and agree to prosecute the proceedings to a final conclusion and pay such damages as awarded by the court.

(Name of Sponsor)

By: _____

Title: _____

Date: _____

This action authorized at an official meeting _____

_____ on _____

day of _____, 20__,

at _____

State of _____

Attest: _____
(name)

(title)

(Name of Sponsor)

By: _____

Title: _____

Date: _____

This action authorized at an official meeting _____

_____ on _____

day of _____, 20__,

at _____

State of _____

Attest: _____
(name)

(title)

**THIS IS A SAMPLE ATTORNEY'S OPINION
<SPONSOR OR REPRESENTING FIRMS LETTERHEAD>**

OPINION OF TITLE

<Date>

<Name>

State Conservationist
USDA-Natural Resources Conservation Service

<Address 1>

<Address 2>

<City, ST Zip>

RE: Assurances Relating to Real Property Acquisition

Smith Creek Project, EWP, Smith County, State

Dear, <Name>:

As Attorney for the <Town/Village/County of _____>, I certify an examination of the real property instruments and files for the referenced project were made and they were found to provide adequate title, right, permission and authority for the purpose(s) for which the property was acquired.

<Signature of Attorney>

<Title Block>

EXHIBIT C-6

NATURAL RESOURCES CONSERVATION SERVICE SUPPLEMENT TO OSHA PARTS 1910 AND 1926 CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS

The Contractor shall comply with OSHA (Occupational Safety and Health Administration) Parts 1910 and 1926, Construction Industry Standards and Interpretations, and with this supplement.

Requests for variances or waiver from this supplement are to be made to the Contracting Officer in writing supported by evidence that every reasonable effort has been made to comply with the contractual requirements. A written request for a waiver or a variance shall include--

- (1) Specific reference to the provision or standard in question;
- (2) An explanation as to why the waiver is considered justified; and
- (3) The Contractor's proposed alternative, including technical drawings, materials, or equipment specifications needed to enable the Contracting Officer to render a decision.

No waiver or variance will be approved if it endangers any person. The Contractor shall not proceed under any requested revision of provision until the Contracting Officer has given written approval. The Contractor is to hold and save harmless the Natural Resources Conservation Service free from any claims or causes of action whatsoever resulting from the Contractor or subcontractors proceeding under a waiver or approved variance.

Copies of OSHA Parts 1910 and 1926, Construction Industry Standards and Interpretations, may be obtained from:

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

1.0 GENERAL CONTRACTOR REQUIREMENTS:

1.1 SAFETY PROGRAM. Each Contractor is to demonstrate that he or she has facilities for conducting a safety program commensurate with the work under contract. The Contractor is to submit in writing a proposed comprehensive safety program to the Contracting Officer for approval before the start of construction operations. The program is to specifically state what provisions the Contractor proposes to take for the health and safety of all employees, including subcontractors and rental equipment operators. The program shall be site specific and provide details relevant to the work to be done, the hazards associated with the work, and the actions that will be necessary to minimize the identified hazards.

1.2 PRECONSTRUCTION SAFETY MEETING. Representatives for the Contractor are to meet with the Contracting Officer (CO) or the CO's representative before the start of construction to discuss the safety program and the implementation of all health and safety standards pertinent to the work under this contract.

1.3 JOINT SAFETY POLICY COMMITTEE. The Contractor or designated on-site representative is to participate in monthly meetings of a joint Safety Policy Committee, composed of the Natural Resources Conservation Service (Contracting Local Organization in locally awarded contracts) and Contractor supervisory personnel. At these meetings the Contractor's project manager and the Contracting Officer will review the effectiveness of the Contractor's safety effort, resolve current health and safety problems, and coordinate safety activities for upcoming work.

1.4 SAFETY PERSONNEL. Each Contractor is to designate a competent supervisory employee satisfactory to the Contracting Officer to administer the safety program.

1.5 SAFETY MEETINGS. A minimum of one "on-the-job" or "toolbox" safety meeting is to be conducted each week by all field supervisors or foremen and attended by mechanics and all construction personnel at the jobsite. The Contractor is to also conduct regularly scheduled supervisory safety meetings at least monthly for all levels of job supervision.

1.6 SAFETY INSPECTION. The Contractor shall perform frequent and regular safety inspections of the jobsite, materials, and equipment, and shall correct deficiencies.

1.7 FIRST AID TRAINING. Every Contractor foreman's work crew must include an employee who has a current first aid certificate from the Mine Safety and Health Administration, American Red Cross, or other state-approved organization.

1.8 REPORTS. Each Contractor is to maintain an accurate record of all job-related deaths, diseases, or disabling injuries. The records shall be maintained in a manner approved by the Contracting Officer. A copy of all reports is to be provided to the Contracting Officer. All fatal or serious injuries are to be reported immediately to the Contracting Officer, and every assistance is to be given in the investigation of the incident, including submission of a comprehensive narrative report to the Contracting Officer. Other occurrences with serious accident potential, such as equipment failures, slides, and cave-ins, must also be reported immediately. The Contractor is to assist and cooperate fully with the Contracting Officer in conducting accident investigations. The Contracting Officer is to be furnished all information and data pertinent to investigation of an accident.

1.9 CERTIFICATION OF INSURANCE. Contractors are to provide the Contracting Officer or his or her authorized representative with certificates of insurance before the start of operations indicating full compliance with State Worker's Compensation statutes, as well as other certificates of insurance required under the contract.

2.0 FIRST AID AND MEDICAL FACILITIES:

2.1 FIRST AID KITS. A 16-unit first aid kit approved by the American Red Cross is to be provided at accessible, well-identified, locations at the ratio of at least 1 kit for each 25 employees. The first aid kits are to be moisture proof and dust tight, and the contents of the kits are to be replenished as used or as they become ineffective or outdated.

2.2 EMERGENCY FIRST AID. At least one employee certified to administer emergency first aid must be available on each shift and duly designated by the Contractor to care for injured employees. The names of the certified employees shall be posted at the jobsite.

2.3 COMMUNICATION AND TRANSPORTATION. Prior to the start of work, the Contractor is to make necessary arrangements for prompt and dependable communications, transportation, and medical care for injured employees. At least one stretcher and two blankets shall be readily available for transporting injured employees.

2.4 FIRST AID AND MEDICAL REPORTS. The Contractor is to maintain a record system for first aid and medical treatment on the jobsite. Such records are to be readily available to the Contracting Officer and are to include--

(a) A daily treatment log listing chronologically all persons treated for occupational injuries and illnesses;

- (b) Cumulative record of injury for each individual;
- (c) Monthly statistical records of occupational injuries, classified by type and nature of injury; and
- (d) Required records for worker's compensation.

2.5 SIGNS AND DIRECTIONAL MARKINGS. Adequate identification and directional markers are to be provided to readily denote the location of all first aid stations.

2.6 EMERGENCY LISTING. A listing of telephone numbers and addresses of doctor, rescue squad, hospital, police, and fire departments is to be provided at all first aid locations.

3.0 PHYSICAL QUALIFICATIONS OF EMPLOYEES:

3.1 GENERAL REQUIREMENTS. Persons employed throughout the contract are to be physically qualified to perform their assigned duties. Employees must not knowingly be permitted or required to work while their ability or alertness is impaired by fatigue, illness, or any other reason that may jeopardize themselves or others.

3.2 HOIST OPERATORS. Operators of cranes, cableways, and other hoisting equipment shall be examined annually by a physician and provided with a certification stating that they are physically qualified to safely operate hoisting equipment. The Contractor is to submit a copy of each certification to the Contracting Officer.

3.3 HEAVY EQUIPMENT OPERATORS. It is recommended that operators of trucks and heavy construction equipment be given physical examinations to determine if they are physically qualified to perform their assigned work without endangering themselves or others.

3.4 MOTOR VEHICLE OPERATORS. Operators of motor vehicles engaged primarily in the transportation of personnel are to be 18 years of age or older and have a valid state operator's permit or license for the equipment being operated. The operators must have passed a physical examination administered by a licensed physician within the past year showing that they are physically qualified to operate vehicles safely.

4.0 PERSONAL PROTECTIVE EQUIPMENT:

4.1 HARDHAT AREAS. The entire jobsite, with the exception of offices, shall be considered a hardhat area. All persons entering the area are, without exception, required to wear hardhats. The Contractor shall provide hardhats for visitors entering hardhat areas.

4.1.1 LABELS. Hardhats shall bear a manufacturer's label indicating design compliance with the appropriate ANSI (American National Standards Institute) standard.

4.2 POSTING. Signs at least 3 by 4 feet worded as follows with red letters (minimum 6 inches high) and white background shall be erected at access points to designated hardhat areas:

CONSTRUCTION AREA - HARDHATS REQUIRED BEYOND THIS POINT

These signs are to be furnished and installed by the Contractor at entries to shops, construction yards, and job access points.

4.3 SAFETY GOGGLES (DRILLERS)

4.3.1 DRILLERS AND HELPERS. Drillers and helpers operating pneumatic rock drills must wear protective safety goggles.

5.0 MACHINERY AND MECHANIZED EQUIPMENT:

5.1 SAFE CONDITION. Before any machinery or mechanized equipment is initially used on the job, it must be inspected and tested by qualified personnel and determined to be in safe operating condition and appropriate for the intended use. Operators shall inspect their equipment prior to the beginning of each shift. Any deficiencies or defects shall be corrected prior to using the equipment. Safety equipment, such as seatbelts, installed on machinery is to be used by equipment operators.

5.2 TAGGING AND LOCKING. The controls of power-driven equipment under repair are to be locked. An effective lockout and tagging procedure is to be established, prescribing specific responsibilities and safety procedures to be followed by the person or persons performing repair work. Mixer barrels are to be securely locked out before permitting employees to enter them for cleaning or repair.

5.3 HAUL ROADS FOR EQUIPMENT

5.3.1 ROAD MAINTENANCE. The Contractor shall maintain all roadways, including haul roads and access roads, in a safe condition so as to eliminate or control dust and ice hazards. Wherever dust is a hazard, adequate dust-laying equipment shall be available at the jobsite and utilized to control the dust.

5.3.2 SINGLE-LANE HAUL ROADS. Single-lane haul roads with two-way traffic shall have adequate turnouts. Where turnouts are not practical, a traffic control system shall be provided to prevent accidents.

5.3.3 TWO-WAY HAUL ROADS. On two-way haul roads, arrangements are to be such that vehicles travel on the right side wherever possible. Signs and traffic control devices are to be employed to indicate clearly any variations from a right-hand traffic pattern. The road shall be wide enough to permit safe passage of opposing traffic, considering the type of hauling equipment used.

5.3.4 DESIGN AND CONSTRUCTION OF HAUL ROADS. Haul road design criteria and drawings, if requested by the Contracting Officer, are to be submitted for approval prior to road construction. Sustained grades shall not exceed 12 percent and all curves shall have open-sight line with as great a radius as practical. All roads shall be posted with curve signs and maximum speed limits that will permit the equipment to be stopped within one-half the minimum sight distance.

5.3.5 OPERATORS. Machinery and mechanized equipment shall be operated only by authorized qualified persons.

5.3.6 RIDING ON EQUIPMENT. Riding on equipment by unauthorized personnel is prohibited. Seating and safety belts shall be provided for the operator and all passengers.

5.3.7 GETTING ON OR OFF EQUIPMENT. Getting on or off equipment while the equipment is in motion is prohibited.

5.3.8 HOURS OF OPERATION. Except in emergencies, an equipment operator shall not operate any mobile or hoisting equipment for more than 12 hours without an 8-hour rest interval away from the job.

5.4 POWER CRANES AND HOISTS (TRUCK CRANES, CRAWLER CRANES, TOWER CRANES, GANTRY CRANES, HAMMERHEAD CRANES, DERRICKS, CABLEWAYS, AND HOISTS)

5.4.1 PERFORMANCE TEST. Before initial onsite operation, at 12-month intervals, and after major repairs or modification, power cranes, derricks, cableways, and hoists must satisfactorily complete a performance test to demonstrate the equipment's ability to safely handle and maneuver the rated loads. The tests shall be conducted in the presence of a representative of the Contracting Officer. Test data shall be recorded and a copy furnished the Contracting Officer.

5.4.2 PERFORMANCE TEST—POWER CRANES (Crawler mounted, truck mounted and wheel mounted). The performance test is to be carried out as per ANSI requirements. The test is to consist of raising, lowering, and braking the load and rotating the test load through 360° degrees at the specified boom angle or radius. Cranes equipped with jibs or boom-tip extensions are to be tested using both the main boom and the jib, with an appropriate test load in each case.

5.4.3 PERFORMANCE TEST—DERRICKS, GANTRY CRANES, TOWER CRANES, CABLEWAYS, AND HOISTS, INCLUDING OVERHEAD CRANES. This equipment is to be performance tested as per ANSI requirements.

5.4.4 BOOM ANGLE INDICATOR. Power cranes (includes draglines) with booms capable of moving in the vertical plane shall be provided with a boom angle indicator in good working order.

5.4.5 CRANE TEST CERTIFICATION. The performance test required by 5.4.2 and 5.4.3 is fulfilled if the Contractor provides the Contracting Officer a copy of a certificate of inspection made within the past 12 months by a qualified person or by a government or private agency satisfactory to the Contracting Officer.

5.4.6 POSTING FOR HIGH VOLTAGE LINES. A notice of the 10-foot (or greater) clearance required by OSHA 1926.550, Subpart N, shall be posted in the operator's cab of cranes, shovels, boom-type concrete pumps, backhoes, and related equipment.

5.4.7 BOOM STOPS. Cranes or derricks with cable-supported booms, except draglines, shall have a device attached between the gantry of the A-frame and the boom chords to limit the elevation of the boom. The device shall control the vertical motions of the boom with increasing resistance from 83° or less, until completely stopping the boom at not over 87° above horizontal.

5.4.8 SAFETY HOOKS. Hooks used in hoisting personnel or hoisting loads over construction personnel or in the immediate vicinity of construction personnel shall be forged steel equipped with safety keepers. When shackles are used under these conditions, they shall be of the locking type or have the pin secured to prohibit turning.

5.5 ROLLOVER PROTECTIVE STRUCTURES (ROPS)

5.5.1 ROLLOVER PROTECTIVE STRUCTURES. OSHA 1926, Subpart W, Overhead Protection, Sections 1001 and 1002 are applicable regardless of the year in which the equipment was manufactured and regardless of the struck capacity of the equipment.

5.5.2 EQUIPMENT REQUIRING ROPS. The requirement for ROPS meeting 5.5.1 above applies to crawler and rubber-tired tractors such as dozers, push-and-pull tractors, winch tractors, tractors with backhoes, and mowers; off-highway, self-propelled, pneumatic-tired earthmovers, including scrapers, motor graders and loaders; and rollers, compactors, water tankers (excluding trucks with cabs). These requirements shall also apply to agricultural and industrial tractors and similar equipment.

5.5.3 EQUIPMENT REQUIRING SEATBELTS. The requirements for seatbelts as specified in OSHA Subpart O, Motor Vehicles, Mechanized Equipment, and Marine Operations, Section 1926.602 shall also apply to self-propelled compactors and rollers, and rubber-tired skid-steer equipment.

6.0 LADDERS AND SCAFFOLDING:

6.1 LADDERS. OSHA 1926, Subpart L - Section 450. Ladders shall be used as work platforms only when use of small hand tools or handling of light material is involved. No work requiring lifting of heavy materials or substantial exertion shall be done from ladders.

6.2 SCAFFOLDING. OSHA 1926, Subpart L - Section 451. Scaffolds, platforms or temporary floors shall be provided for all work except that which can be done safely from the ground or similar footing.

6.3 SAFETY BELTS, LIFELINE, AND LANYARDS. OSHA 1926, Subpart E, Section 104. Lifelines, safety belts and lanyards independently attached or attended, shall be used when performing such work as the following when the requirements of 6.1 or 6.2 above cannot be met.

(a) Work on stored material in hoppers, bins, silos, tanks, or other confined spaces.

(b) Work on hazardous slopes, structural steel, or poles; erection or dismantling of safety nets, tying reinforcing bars; and work from Boatswain's chairs, swinging scaffolds, or other unguarded locations at elevations greater than 6 feet.

(c) Work on skips and platforms used in shafts by crews when the skip or cage does not block the opening to within 1 foot of the sides of the shaft, unless cages are provided.

EXHIBIT C-7 – SUPPLEMENTAL PROVISIONS FOR FEDERAL AWARDS

Subject to The Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (“Uniform Guidance”), Federal Register, Vol. 78, No. 248, 78590

The agreement to which these Uniform Guidance Supplemental Provisions are attached has been funded, in whole or in part, with an award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the agreement or any attachments or exhibits incorporated into and made a part of the agreement, the provisions of these Uniform Guidance Supplemental Provisions shall control. In the event of a conflict between the provisions of these Supplemental Provisions and the FFATA Supplemental Provisions, the FFATA Supplemental Provisions shall control.

1. Definitions. For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.

1.1. “Award” means an award by a Recipient to a Subrecipient funded in whole or in part by a Federal Award. The terms and conditions of the Federal Award flow down to the Award unless the terms and conditions of the Federal Award specifically indicate otherwise. 2 CFR §200.38

1.2. “Federal Award” means an award of Federal financial assistance or a cost-reimbursement contract under the Federal Acquisition Requirements by a Federal Awarding Agency to a Recipient. “Federal Award” also means an agreement setting forth the terms and conditions of the Federal Award. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.

1.3. “Federal Awarding Agency” means a Federal agency providing a Federal Award to a Recipient. 2 CFR §200.37

1.4. “FFATA” means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252.

1.5. “Grant” or “Grant Agreement” means an agreement setting forth the terms and conditions of an Award. The term does not include an agreement that provides only direct Federal cash assistance to an individual, a subsidy, a loan, a loan guarantee, insurance, or acquires property or services for the direct benefit of use of the Federal Awarding Agency or Recipient. 2 CFR §200.51.

1.6. “OMB” means the Executive Office of the President, Office of Management and Budget.

1.7. “Recipient” means a Colorado State department, agency or institution of higher education that receives a Federal Award from a Federal Awarding Agency to carry out an activity under a Federal program. The term does not include Subrecipients. 2 CFR §200.86

1.8. “State” means the State of Colorado, acting by and through its departments, agencies and institutions of higher education.

1.9. “Subrecipient” means a non-Federal entity receiving an Award from a Recipient to carry out part of a Federal program. The term does not include an individual who is a beneficiary of such program.

1.10. “Uniform Guidance” means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, which supersedes requirements

from OMB Circulars A-21, A-87, A-110, and A-122, OMB Circulars A-89, A-102, and A-133, and the guidance in Circular A-50 on Single Audit Act follow-up. The terms and conditions of the Uniform Guidance flow down to Awards to Subrecipients unless the Uniform Guidance or the terms and conditions of the Federal Award specifically indicate otherwise.

1.11. “Uniform Guidance Supplemental Provisions” means these Supplemental Provisions for Federal Awards subject to the OMB Uniform Guidance, as may be revised pursuant to ongoing 22 guidance from relevant Federal agencies or the Colorado State Controller.

2. Compliance. Subrecipient shall comply with all applicable provisions of the Uniform Guidance, including but not limited to these Uniform Guidance Supplemental Provisions. Any revisions to such provisions automatically shall become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Subrecipient of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.

3. Procurement Standards.

3.1 Procurement Procedures. Subrecipient shall use its own documented procurement procedures which reflect applicable State, local, and Tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in the Uniform Guidance, including without limitation, §§200.318 through 200.326 thereof.

3.2 Procurement of Recovered Materials. If Subrecipient is a State Agency or an agency of a political subdivision of a state, its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

4. Access to Records. Subrecipient shall permit Recipient and auditors to have access to Subrecipient’s records and financial statements as necessary for Recipient to meet the requirements of §200.331 (Requirements for pass-through entities), §§200.300 (Statutory and national policy requirements) through 200.309 (Period of performance), and Subpart F-Audit Requirements of the Uniform Guidance. 2 CFR §200.331(a)(5).

5. Single Audit Requirements. If Subrecipient expends \$750,000 or more in Federal Awards during Subrecipient’s fiscal year, Subrecipient shall procure or arrange for a single or program-specific audit conducted for that year in accordance with the provisions of Subpart F-Audit Requirements of the Uniform Guidance, issued pursuant to the Single Audit Act Amendments of 1996, (31 U.S.C. 7501-7507). 2 CFR §200.501.

5.1 Election. Subrecipient shall have a single audit conducted in accordance with Uniform Guidance §200.514 (Scope of audit), except when it elects to have a program-specific audit conducted in accordance with §200.507 (Program-specific audits). Subrecipient may elect to have a program-specific audit if Subrecipient expends Federal Awards under only one Federal program (excluding research and development) and the Federal program’s statutes, regulations, or the terms and conditions of the Federal award do not require a financial statement audit of Recipient. A program-specific audit may not be elected for research and development unless

all of the Federal Awards expended were received from Recipient and Recipient approves in advance a program-specific audit.

5.2 Exemption. If Subrecipient expends less than \$750,000 in Federal Awards during its fiscal year, Subrecipient shall be exempt from Federal audit requirements for that year, except as noted in 2 CFR §200.503 (Relation to other audit requirements), but records shall be available for review or audit by appropriate officials of the Federal agency, the State, and the Government Accountability Office.

5.3 Subrecipient Compliance Responsibility. Subrecipient shall procure or otherwise arrange for the audit required by Part F of the Uniform Guidance and ensure it is properly performed and submitted when due in accordance with the Uniform Guidance. Subrecipient shall prepare appropriate financial statements, including the schedule of expenditures of Federal awards in accordance with Uniform Guidance §200.510 (Financial statements) and provide the auditor 23 with access to personnel, accounts, books, records, supporting documentation, and other information as needed for the auditor to perform the audit required by Uniform Guidance Part F-Audit Requirements.

6. Contract Provisions for Subrecipient Contracts. Subrecipient shall comply with and shall include all of the following applicable provisions in all subcontracts entered into by it pursuant to this Grant Agreement.

6.1 Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 shall include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

“During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to 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 to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.”

4.2 Reserved.

4.3 Rights to Inventions Made Under a Contract or Agreement. If the Federal Award meets the definition of “funding agreement” under 37 CFR §401.2 (a) and Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” Subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

4.4 Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended. Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

4.5 Debarment and Suspension (Executive Orders 12549 and 12689). A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

4.6 Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 25 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

7. Certifications. Unless prohibited by Federal statutes or regulations, Recipient may require Subrecipient to submit certifications and representations required by Federal statutes or regulations on an annual basis. 2 CFR §200.208. Submission may be required more frequently if Subrecipient fails to meet a requirement of the Federal award. Subrecipient shall certify in writing to the State at the end of the Award that the project or activity was completed or the level of effort was expended. 2 CFR §200.201(3). If the required level of activity or effort was not carried out, the amount of the Award must be adjusted.

8. Event of Default. Failure to comply with these Uniform Guidance Supplemental Provisions shall constitute an event of default under the Grant Agreement (2 CFR §200.339) and the State may terminate the Grant upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Grant, at law or in equity.

9. Effective Date. The effective date of the Uniform Guidance is December 26, 2013. 2 CFR §200.110. The procurement standards set forth in Uniform Guidance §§200.317-200.326 are applicable to new Awards made by Recipient as of December 26, 2015. The standards set forth in Uniform Guidance Subpart F-Audit Requirements are applicable to audits of fiscal years beginning on or after December 26, 2014.

10. Performance Measurement

The Uniform Guidance requires completion of OMB-approved standard information collection forms (the PPR). The form focuses on outcomes, as related to the Federal Award Performance Goals that awarding Federal agencies are required to detail in the Awards.

Section 200.301 provides guidance to Federal agencies to measure performance in a way that will help the Federal awarding agency and other non-Federal entities to improve program outcomes.

The Federal awarding agency is required to provide recipients with clear performance goals, indicators, and milestones (200.210). Also, must require the recipient to relate financial data to performance accomplishments of the Federal award.

EXHIBIT D - OPTION LETTER

SAMPLE OPTION LETTER

Date:	Original Grant CMS #:	Option Letter #	CMS Routing #
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1) **OPTIONS:** Choose all applicable options listed in §1 and in §2 and delete the rest.

- a. Option to extend the end date
- b. Change in the amount of goods within current term
- c. Change in amount of goods in conjunction with renewal for additional term
- d. Level of service change within current term
- e. Level of service change in conjunction with renewal for additional term
- f. Option to initiate next phase of a contract

2) **REQUIRED PROVISIONS.** All Option Letters shall contain the appropriate provisions set forth below:

- a. **For use with Options 1(a-e):** In accordance with Section(s) _____ of the Original Grant between the State of Colorado, Insert Name of Department or Higher Ed Institution , and Grantee's Name, the State hereby exercises its option for an additional term beginning Insert start date and ending on Insert ending date at a cost/price specified in Section _____, AND/OR an increase/decrease in the amount of goods/services at the same rate(s) as specified in Section _____. Identify the Section, Schedule, Attachment, Exhibit etc.
- b. **For use with Option 1(f), please use the following:** In accordance with Section(s) _____ of the Original Grant between the State of Colorado, Insert Name of Department or Higher Ed Institution , and Grantee's Name, the State hereby exercises its option to initiate Phase indicate which Phase: 2, 3, 4, etc for the term beginning Insert start date and ending on Insert ending date at the cost/price specified in Section _____.
- c. **For use with all Options 1(a-f):** The amount of the current Fiscal Year contract value is increased/decreased by \$ _____ amount of change to a new contract value of Insert New \$ Amt to as consideration for services/goods ordered under the grant for the current fiscal year indicate Fiscal Year. The first sentence in Section _____ is hereby modified accordingly. The total contract value including all previous amendments, option letters, etc. is Insert New \$ Amt.

3) **Effective Date.** The effective date of this Option Letter is upon approval of the State Controller or _____, whichever is later.

<p>STATE OF COLORADO John W. Hickenlooper, Governor Name of Agency or IHE</p> <hr/> <p>By: Insert Name & Title of Person Signing for Agency or IHE</p> <p>Date: _____</p>

ALL GRANTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State grants. This Option Letter is not valid until signed and dated below by the State Controller or delegate. Grantee is not authorized to begin performance until such time. If Grantee begins performing prior thereto, the State of Colorado is not obligated to pay Grantee for such performance or for any goods and/or services provided hereunder.

STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

By: _____

Date: _____

ATTACHMENT B

ADDENDUM TO CONTRACT

NATIONAL RESOURCES CONSERVATION SERVICES (NRCS)

EMERGENCY WATERSHED PROTECTION PROGRAM

REQUIREMENTS FOR PROCUREMENT CONTRACTS

This is an addendum to the [CONTRACT NAME], RFP _____, Agreement between [CONTRACTOR] ("Contractor"), and Boulder County, (the "County").

The parties acknowledge that the above-referenced contract is subject to the provisions of 7 CFR Part 624. This addendum is hereby expressly incorporated into the agreement between Boulder County and the Contractor. To the extent that the terms of the Agreement and this Addendum conflict, the terms of this Addendum shall control.

The following provisions are hereby added and incorporated into the above-referenced Agreement:

1. EQUAL EMPLOYMENT OPPORTUNITY

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 shall include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

"During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to 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 to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.”

2. **Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended.** Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
3. **Byrd Anti-Lobbying Amendment (31 U.S.C. 1352).** Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 25 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection.
4. **OSHA Compliance.** Contractors on NRCS assisted projects shall perform their work in accordance with OSHA regulations, NRCS Supplement to OSHA Parts 1910 and 1926, and the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5) as set forth in Attachment A.

Except as modified herein, all terms and conditions of the existing contract between the parties remain in full force and effect.

IF THIS ADDENDUM IS INCORPORATED BY REFERENCE INTO THE CONTRACT, THE PARTIES DO NOT NEED TO SIGN THE ADDENDUM, AND THE SIGNATURE BLOCKS MAY BE REMOVED

Accepted by **[CONTRACTOR]** on

By: _____
TITLE

Accepted by **BOULDER COUNTY** on

Elise Jones, Chair

EXHIBIT A

NATURAL RESOURCES CONSERVATION SERVICE SUPPLEMENT TO OSHA PARTS 1910 AND 1926 CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS

The Contractor shall comply with OSHA (Occupational Safety and Health Administration) Parts 1910 and 1926, Construction Industry Standards and Interpretations, and with this supplement.

Requests for variances or waiver from this supplement are to be made to the Contracting Officer in writing supported by evidence that every reasonable effort has been made to comply with the contractual requirements. A written request for a waiver or a variance shall include--

- (1) Specific reference to the provision or standard in question;
- (2) An explanation as to why the waiver is considered justified; and
- (3) The Contractor's proposed alternative, including technical drawings, materials, or equipment specifications needed to enable the Contracting Officer to render a decision.

No waiver or variance will be approved if it endangers any person. The Contractor shall not proceed under any requested revision of provision until the Contracting Officer has given written approval. The Contractor is to hold and save harmless the Natural Resources Conservation Service free from any claims or causes of action whatsoever resulting from the Contractor or subcontractors proceeding under a waiver or approved variance.

Copies of OSHA Parts 1910 and 1926, Construction Industry Standards and Interpretations, may be obtained from:
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

1.0 GENERAL CONTRACTOR REQUIREMENTS:

1.1 SAFETY PROGRAM. Each Contractor is to demonstrate that he or she has facilities for conducting a safety program commensurate with the work under contract. The Contractor is to submit in writing a proposed comprehensive safety program to the Contracting Officer for approval before the start of construction operations. The program is to specifically state what provisions the Contractor proposes to take for the health and safety of all employees, including subcontractors and rental equipment operators. The program shall be site specific and provide details relevant to the work to be done, the hazards associated with the work, and the actions that will be necessary to minimize the identified hazards.

1.2 PRECONSTRUCTION SAFETY MEETING. Representatives for the Contractor are to meet with the Contracting Officer (CO) or the CO's representative before the start of construction to discuss the safety program and the implementation of all health and safety standards pertinent to the work under this contract.

1.3 JOINT SAFETY POLICY COMMITTEE. The Contractor or designated on-site representative is to participate in monthly meetings of a joint Safety Policy Committee, composed of the Natural Resources Conservation Service (Contracting Local Organization in locally awarded contracts) and Contractor supervisory personnel. At these meetings the Contractor's project manager and the Contracting Officer will review the effectiveness of the Contractor's safety effort, resolve current health and safety problems, and coordinate safety activities for upcoming work.

1.4 SAFETY PERSONNEL. Each Contractor is to designate a competent supervisory employee satisfactory to the Contracting Officer to administer the safety program.

1.5 SAFETY MEETINGS. A minimum of one "on-the-job" or "toolbox" safety meeting is to be conducted each week by all field supervisors or foremen and attended by mechanics and all construction personnel at the jobsite. The Contractor is to also conduct regularly scheduled supervisory safety meetings at least monthly for all levels of job supervision.

1.6 SAFETY INSPECTION. The Contractor shall perform frequent and regular safety inspections of the jobsite, materials, and equipment, and shall correct deficiencies.

1.7 FIRST AID TRAINING. Every Contractor foreman's work crew must include an employee who has a current first aid certificate from the Mine Safety and Health Administration, American Red Cross, or other state-approved organization.

1.8 REPORTS. Each Contractor is to maintain an accurate record of all job-related deaths, diseases, or disabling injuries. The records shall be maintained in a manner approved by the Contracting Officer. A copy of all reports is to be provided to the Contracting Officer. All fatal or serious injuries are to be reported immediately to the Contracting Officer, and every assistance is to be given in the investigation of the incident, including submission of a comprehensive narrative report to the Contracting Officer. Other occurrences with serious accident potential, such as equipment failures, slides, and cave-ins, must also be reported immediately. The Contractor is to assist and cooperate fully with the Contracting Officer in conducting accident investigations. The Contracting Officer is to be furnished all information and data pertinent to investigation of an accident.

1.9 CERTIFICATION OF INSURANCE. Contractors are to provide the Contracting Officer or his or her authorized representative with certificates of insurance before the start of operations indicating full compliance with State Worker's Compensation statutes, as well as other certificates of insurance required under the contract.

2.0 FIRST AID AND MEDICAL FACILITIES:

2.1 FIRST AID KITS. A 16-unit first aid kit approved by the American Red Cross is to be provided at accessible, well-identified, locations at the ratio of at least 1 kit for each 25 employees. The first aid kits are to be moisture proof and dust tight, and the contents of the kits are to be replenished as used or as they become ineffective or outdated.

2.2 EMERGENCY FIRST AID. At least one employee certified to administer emergency first aid must be available on each shift and duly designated by the Contractor to care for injured employees. The names of the certified employees shall be posted at the jobsite.

2.3 COMMUNICATION AND TRANSPORTATION. Prior to the start of work, the Contractor is to make necessary arrangements for prompt and dependable communications, transportation, and medical care for injured employees. At least one stretcher and two blankets shall be readily available for transporting injured employees.

2.4 FIRST AID AND MEDICAL REPORTS. The Contractor is to maintain a record system for first aid and medical treatment on the jobsite. Such records are to be readily available to the Contracting Officer and are to include--

- (a) A daily treatment log listing chronologically all persons treated for occupational injuries and illnesses;
- (b) Cumulative record of injury for each individual;
- (c) Monthly statistical records of occupational injuries, classified by type and nature of injury; and
- (d) Required records for worker's compensation.

2.5 SIGNS AND DIRECTIONAL MARKINGS. Adequate identification and directional markers are to be provided to readily denote the location of all first aid stations.

2.6 EMERGENCY LISTING. A listing of telephone numbers and addresses of doctor, rescue squad, hospital, police, and fire departments is to be provided at all first aid locations.

3.0 PHYSICAL QUALIFICATIONS OF EMPLOYEES:

3.1 GENERAL REQUIREMENTS. Persons employed throughout the contract are to be physically qualified to perform their assigned duties. Employees must not knowingly be permitted or required to work while their ability or alertness is impaired by fatigue, illness, or any other reason that may jeopardize themselves or others.

3.2 HOIST OPERATORS. Operators of cranes, cableways, and other hoisting equipment shall be examined annually by a physician and provided with a certification stating that they are physically qualified to safely operate hoisting equipment. The Contractor is to submit a copy of each certification to the Contracting Officer.

3.3 HEAVY EQUIPMENT OPERATORS. It is recommended that operators of trucks and heavy construction equipment be given physical examinations to determine if they are physically qualified to perform their assigned work without endangering themselves or others.

3.4 MOTOR VEHICLE OPERATORS. Operators of motor vehicles engaged primarily in the transportation of personnel are to be 18 years of age or older and have a valid state operator's permit or license for the equipment being operated. The operators must have passed a physical examination administered by a licensed physician within the past year showing that they are physically qualified to operate vehicles safely.

4.0 PERSONAL PROTECTIVE EQUIPMENT:

4.1 HARDHAT AREAS. The entire jobsite, with the exception of offices, shall be considered a hardhat area. All persons entering the area are, without exception, required to wear hardhats. The Contractor shall provide hardhats for visitors entering hardhat areas.

4.1.1 LABELS. Hardhats shall bear a manufacturer's label indicating design compliance with the appropriate ANSI (American National Standards Institute) standard.

4.2 POSTING. Signs at least 3 by 4 feet worded as follows with red letters (minimum 6 inches high) and white background shall be erected at access points to designated hardhat areas:

CONSTRUCTION AREA - HARDHATS REQUIRED BEYOND THIS POINT

These signs are to be furnished and installed by the Contractor at entries to shops, construction yards, and job access points.

4.3 SAFETY GOGGLES (DRILLERS)

4.3.1 DRILLERS AND HELPERS. Drillers and helpers operating pneumatic rock drills must wear protective safety goggles.

5.0 MACHINERY AND MECHANIZED EQUIPMENT:

5.1 SAFE CONDITION. Before any machinery or mechanized equipment is initially used on the job, it must be inspected and tested by qualified personnel and determined to be in safe operating condition and appropriate for the intended use. Operators shall inspect their equipment prior to the beginning of each shift. Any deficiencies or defects shall be corrected prior to using the equipment. Safety equipment, such as seatbelts, installed on machinery is to be used by equipment operators.

5.2 TAGGING AND LOCKING. The controls of power-driven equipment under repair are to be locked. An effective lockout and tagging procedure is to be established, prescribing specific responsibilities and safety procedures to be followed by the person or persons performing repair work. Mixer barrels are to be securely locked out before permitting employees to enter them for cleaning or repair.

5.3 HAUL ROADS FOR EQUIPMENT

5.3.1 ROAD MAINTENANCE. The Contractor shall maintain all roadways, including haul roads and access roads, in a safe condition so as to eliminate or control dust and ice hazards. Wherever dust is a hazard, adequate dust-laying equipment shall be available at the jobsite and utilized to control the dust.

5.3.2 SINGLE-LANE HAUL ROADS. Single-lane haul roads with two-way traffic shall have adequate turnouts. Where turnouts are not practical, a traffic control system shall be provided to prevent accidents.

5.3.3 TWO-WAY HAUL ROADS. On two-way haul roads, arrangements are to be such that vehicles travel on the right side wherever possible. Signs and traffic control devices are to be employed to indicate clearly any variations from a right-hand traffic pattern. The road shall be wide enough to permit safe passage of opposing traffic, considering the type of hauling equipment used.

5.3.4 DESIGN AND CONSTRUCTION OF HAUL ROADS. Haul road design criteria and drawings, if requested by the Contracting Officer, are to be submitted for approval prior to road construction. Sustained grades shall not exceed 12 percent and all curves shall have open-sight line with as great a radius as practical. All roads shall be posted with curve signs and maximum speed limits that will permit the equipment to be stopped within one-half the minimum sight distance.

5.3.5 OPERATORS. Machinery and mechanized equipment shall be operated only by authorized qualified persons.

5.3.6 RIDING ON EQUIPMENT. Riding on equipment by unauthorized personnel is prohibited. Seating and safety belts shall be provided for the operator and all passengers.

5.3.7 GETTING ON OR OFF EQUIPMENT. Getting on or off equipment while the equipment is in motion is prohibited.

5.3.8 HOURS OF OPERATION. Except in emergencies, an equipment operator shall not operate any mobile or hoisting equipment for more than 12 hours without an 8-hour rest interval away from the job.

5.4 POWER CRANES AND HOISTS (TRUCK CRANES, CRAWLER CRANES, TOWER CRANES, GANTRY CRANES, HAMMERHEAD CRANES, DERRICKS, CABLEWAYS, AND HOISTS)

5.4.1 PERFORMANCE TEST. Before initial onsite operation, at 12-month intervals, and after major repairs or modification, power cranes, derricks, cableways, and hoists must satisfactorily complete a performance test to demonstrate the equipment's ability to safely handle and maneuver the rated loads. The tests shall be conducted in the presence of a representative of the Contracting Officer. Test data shall be recorded and a copy furnished the Contracting Officer.

5.4.2 PERFORMANCE TEST—POWER CRANES (Crawler mounted, truck mounted and wheel mounted). The performance test is to be carried out as per ANSI requirements. The test is to consist of raising, lowering, and braking the load and rotating the test load through 360° degrees at the specified boom angle or radius. Cranes equipped with jibs or boom-tip extensions are to be tested using both the main boom and the jib, with an appropriate test load in each case.

5.4.3 PERFORMANCE TEST—DERRICKS, GANTRY CRANES, TOWER CRANES, CABLEWAYS, AND HOISTS, INCLUDING OVERHEAD CRANES. This equipment is to be performance tested as per ANSI requirements.

5.4.4 BOOM ANGLE INDICATOR. Power cranes (includes draglines) with booms capable of moving in the vertical plane shall be provided with a boom angle indicator in good working order.

5.4.5 CRANE TEST CERTIFICATION. The performance test required by 5.4.2 and 5.4.3 is fulfilled if the Contractor provides the Contracting Officer a copy of a certificate of inspection made within the past 12 months by a qualified person or by a government or private agency satisfactory to the Contracting Officer.

5.4.6 POSTING FOR HIGH VOLTAGE LINES. A notice of the 10-foot (or greater) clearance required by OSHA 1926.550, Subpart N, shall be posted in the operator's cab of cranes, shovels, boom-type concrete pumps, backhoes, and related equipment.

5.4.7 BOOM STOPS. Cranes or derricks with cable-supported booms, except draglines, shall have a device attached between the gantry of the A-frame and the boom chords to limit the elevation of the boom. The device shall control the vertical motions of the boom with increasing resistance from 83° or less, until completely stopping the boom at not over 87° above horizontal.

5.4.8 SAFETY HOOKS. Hooks used in hoisting personnel or hoisting loads over construction personnel or in the immediate vicinity of construction personnel shall be forged steel equipped with safety keepers. When shackles are used under these conditions, they shall be of the locking type or have the pin secured to prohibit turning.

5.5 ROLLOVER PROTECTIVE STRUCTURES (ROPS)

5.5.1 ROLLOVER PROTECTIVE STRUCTURES. OSHA 1926, Subpart W, Overhead Protection, Sections 1001 and 1002 are applicable regardless of the year in which the equipment was manufactured and regardless of the struck capacity of the equipment.

5.5.2 EQUIPMENT REQUIRING ROPS. The requirement for ROPS meeting 5.5.1 above applies to crawler and rubber-tired tractors such as dozers, push-and-pull tractors, winch tractors, tractors with backhoes, and mowers; off-highway, self-propelled, pneumatic-tired earthmovers, including scrapers, motor graders and loaders; and rollers, compactors, water tankers (excluding trucks with cabs). These requirements shall also apply to agricultural and industrial tractors and similar equipment.

5.5.3 EQUIPMENT REQUIRING SEATBELTS. The requirements for seatbelts as specified in OSHA Subpart O, Motor Vehicles, Mechanized Equipment, and Marine Operations, Section 1926.602 shall also apply to self-propelled compactors and rollers, and rubber-tired skid-steer equipment.

6.0 LADDERS AND SCAFFOLDING:

6.1 LADDERS. OSHA 1926, Subpart L - Section 450. Ladders shall be used as work platforms only when use of small hand tools or handling of light material is involved. No work requiring lifting of heavy materials or substantial exertion shall be done from ladders.

6.2 SCAFFOLDING. OSHA 1926, Subpart L - Section 451. Scaffolds, platforms or temporary floors shall be provided for all work except that which can be done safely from the ground or similar footing.

6.3 SAFETY BELTS, LIFELINE, AND LANYARDS. OSHA 1926, Subpart E, Section 104. Lifelines, safety belts and lanyards independently attached or attended, shall be used when performing such work as the following when the requirements of 6.1 or 6.2 above cannot be met.

- (a) Work on stored material in hoppers, bins, silos, tanks, or other confined spaces.
- (b) Work on hazardous slopes, structural steel, or poles; erection or dismantling of safety nets, tying reinforcing bars; and work from Boatswain's chairs, swinging scaffolds, or other unguarded locations at elevations greater than 6 feet.
- (c) Work on skips and platforms used in shafts by crews when the skip or cage does not block the opening to within 1 foot of the sides of the shaft, unless cages are provided.

ATTACHMENT C

BOULDER COUNTY CONTRACT FOR SERVICES

THIS CONTRACT ("Contract") is entered into between the COUNTY OF BOULDER, State of Colorado, acting by and through its Board of County Commissioners ("County") and LEGAL COMPANY NAME INCLUDING DBA ("Contractor"), (collectively, the "Parties").

In consideration of the rights and obligations specified below, the County and the Contractor agree as follows:

1. Incorporation into Contract: The following documents (the "Contract Documents") are each expressly incorporated into this Contract by reference:

a. The attached Bid Specifications of Boulder County BID No. XXXX-XX and Addendum including the National Resources Conservation Services (NRCS) Emergency Watershed Protection Program (EWP) Requirements for Procurement Contracts Addendum, together with any alterations and/or modifications to these Specifications ("the Bid Documents");

b. The attached Contractor's proposal in response to the Bid Document (the "Proposal") including the Contractor's fee schedule; and

c. The attached revised scope of services, attached hereto as Exhibit A (the "Scope of Services").

2. Work to be Performed: The Contractor agrees that it will, in a good and workmanlike manner, at its own cost and expense and strictly in accordance with this Contract, including all documents incorporated herein, furnish all labor, material and equipment and do all work necessary, or incidental to complete the following Boulder County project: NAME OF PROJECT, BID NO. XXXX-XX, AWARDED DATE, PROJECT SITE LOCATION (hereinafter referred to as the "Project").). Contractor shall be authorized to do business in the State of Colorado and shall provide the County a current Certificate of Good Standing evidencing such authorization. Furthermore, Contractor shall be responsible for all applicable sales and employment taxes.

3. Quality of Performance: The Contractor shall perform the Contract in a manner satisfactory and acceptable to the County. The County shall be the sole judge of the quality of performance.

4. Schedule of Work: The Contractor shall perform the Work during the hours designated by the County so as to avoid inconvenience to the County and its personnel and interference with the County's operations.

5. Payment: In consideration of the foregoing, the County hereby agrees to pay to the Contractor the amounts required for the completion of the project at the base bid amount of \$0.00, all according to the provisions and subject to the conditions as set forth in the GRANT AGREEMENT, and Contract Documents. Contractor shall submit, in writing, to Boulder County, a request for all payments. Upon receipt of applicable guaranties/warranties as specified in paragraph 8, Representations, Guaranty and Warranties, final payment shall be paid upon the satisfactory completion of the Project and provided that no claims are made against the Project, based upon responses from the Notice of Final Settlement. Contractor is responsible for submitting a final invoice for any retainage held. The County, in its sole discretion, shall determine satisfactory completion.

Invoices submitted must contain sufficient information detailing all expenses. Invoices shall be submitted on company letterhead and include, but not limited to, depending on the activity completed, designated project name, date(s), type of work performed, rate per hour, number of hours worked, mileage, mileage rate, and any associated administrative fees. Additionally, all invoices should contain the current date, invoice number, amount due and current return address.

- a. Send completed invoices to:
pospayables@bouldercounty.org or to
Boulder County
Parks and Open Space Department
Attention: A/P
5201 St. Vrain Road
Longmont, CO 80503
- b. Failure to submit invoices in a timely manner and in accordance with the terms of this Contract may cause a delay in payment.
- c. The County reserves the right to recoup any damages incurred as a result of Contractors failure to submit invoices pursuant to the terms of this paragraph.

6. Term and Time: This Contract shall begin and become effective on and as of the date of execution by the parties which date is specified on the signature page of this Contract. It is further agreed that time is of the essence and work shall begin

within five (5) days of execution of the Contract, and when a "Notice to Proceed" has been issued by the County, unless determined differently by the County, in its sole discretion, and be COMPLETED IN XXX DAYS FROM DATE OF NOTICE TO PROCEED, WEATHER PERMITTING, unless additional time shall be allowed by the County, in writing. The Contract shall be in full force and effect, subject to the Termination provisions as set forth in paragraph 21 of this Contract.

7. Retainage: The County reserves the right to withhold a retainage of ten percent (10%) on any or all payments until all of the work is accepted by the County, at its sole discretion, as satisfactory and complete.

8. Representations, Guaranty and Warranties: Contractor shall furnish the County with a written guaranty covering all labor, materials and workmanship incorporated in the work for one year upon completion of the Project. Where the specifications require additional warranties or guarantees, the Contractor shall procure such warranties and deliver them to the County on completion of the work. Such warranties will not lessen the Contractor's responsibilities under the purchase order documents. Whenever warranties or guarantees are required by the specifications for a period longer than one year, such longer period shall govern. Contractor acknowledges final payment terms as specified in paragraph 5, Payment.

Contractor represents and warrants the following to The County, as a material inducement to the County to execute this Contract, which representations and warranties shall survive the execution and delivery of this Contract, any termination of this Contract, and the final completion of the work.

- a. Execution of this Contract and performance thereof is within the Contractor's duly authorized powers;
- b. Any individual executing this Contract is authorized to do so by the Contractor;
- c. The Contractor is authorized to do business in the State of Colorado and is properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over the Work and the project; and
- d. The Contractor and its subcontractors, if any, are financially solvent, able to pay all debts as they mature, and possessed of sufficient working capital to complete the work and perform all obligations under the Contract.

9. Bond Submittal: The combined bonds are required and must be in an amount equal to one hundred percent (100%) of the contract amount as specified in paragraph 5, Payment.

a. Payment Bond: This Contract shall not take effect or be in force until said Contractor shall have furnished and delivered to the County a surety bond acceptable to the County, in a penal sum equal to the nearest integral \$100.00 in excess of the estimated Contract price as per proposal hereto attached, duly executed by a corporate surety, qualified and licensed to do business in Colorado and maintaining a general agent therein.

b. Performance Bond: This Contract shall not take effect or be in force until said Contractor shall have furnished and delivered to the County a surety bond acceptable to the County, in a penal sum equal to the nearest integral \$100.00 in excess of the estimated Contract price as per proposal hereto attached, duly executed by a corporate surety, qualified and licensed to do business in Colorado and maintaining a general agent therein.

10. Permits, Licenses, Locates and Codes: The Contractor shall have full responsibility for identifying and obtaining, prior to the start of work under this Contract, and for maintaining throughout the term of this Contract, any permits and licenses which may be required in order to carry out the work. The Contractor shall also be responsible for following all State and County codes, which may be required in order to carry out the Project. The Contractor shall also be responsible for all "locates" of all public utilities related to performing work under the terms of this Contract. The Contractor shall also be responsible for insuring that any of its subcontractors performing work under the terms of this Contract also satisfy the provisions of this paragraph.

11. Contractor Licensing: General contractors, HVAC contractors, and roofing contractors require licensing through Boulder County. Electricians and plumbers must be state-licensed and registered with the Boulder County Building Safety and Inspection Division. It is the responsibility of the Contractor to apply for and ensure the appropriate Contractor's license is obtained prior to project commencement. In addition, the Contractor is responsible for submitting a copy of the current license to the Parks and Open Space Contract Coordinator as listed in paragraph 23, Notices. Project shall not proceed until said document is received by the Parks and Open Space Contract Coordinator, if applicable, as determined by the Boulder County Building Safety and

Inspection Division. The Contractor will comply with all state and local licensing requirements, including but not limited to, filing the State of Colorado Statement of Foreign Entity Authority paperwork, if Contractor is not a Colorado company.

12. Sustainability: The County encourages the Contractor to incorporate the practice of recycling and/or reuse of construction and/or de-construction materials in a manner that will allow maximum recycling/reuse of Project materials.

13. Indemnity: The Contractor shall be liable and responsible for any and all damages to persons or property caused by or arising out of the actions, obligations, or omissions of the Contractor, its employees, agents, representatives or other persons acting under the Contractor's direction or control in performing or failing to perform the Work under this Contract. The Contractor will indemnify and hold harmless the County, its elected and appointed officials, and its employees, agents and representatives (the "indemnified parties"), from any and all liability, claims, demands, actions, damages, losses, judgments, costs or expenses, including but not limited to attorneys' fees, which may be made or brought or which may result against any of the indemnified parties as a result or on account of the actions or omissions of the Contractor, its employees, agents or representatives, or other persons acting under the Contractor's direction or control.

14. Governmental Immunity: Nothing in this Contract shall be construed in any way to be a waiver of the County's immunity protection under the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, et seq., as amended.

15. Insurance Requirements: The Contractor shall procure and maintain at its own expense, and without cost to the County, the following kinds and minimum amounts of insurance for purposes of insuring the liability risks which the Contractor has assumed until this Contract has expired or is terminated:

a. Commercial General Liability.

Coverage should be provided on an Occurrence form, ISO CG0001 or equivalent. The policy shall be endorsed to include Additional Insured endorsements CG 2010 (or equivalent), Designated Construction Projects General Aggregate Endorsement CG2503 (or equivalent) and Additional Insured (for products/completed operations) CG 2037 (or equivalent). Minimum limits required of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products Completed Operations Aggregate". The County requires Products/Completed

Operations coverage to be provided 3 years after completion of construction. An endorsement must be included with the certificate.

b. Automobile Liability.

Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of the Contract. Minimum limits \$1,000,000 Each Accident.

c. Workers' Compensation and Employer's Liability.

Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.

d. Umbrella / Excess Insurance

Umbrella/Excess Liability insurance in the amount \$3,000,000.00, following form.

e. Professional Liability (Errors and Omissions).

Professional liability coverage with minimum limits of \$1,000,000 Per Loss and \$1,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims made basis. The contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years beginning at the time work under this Contract is completed.

f. Pollution Liability.

Coverage shall cover the Contractor's completed operations. The coverage must also include sudden and gradual pollution conditions including clean-up costs when mandated by governmental authority, when required by law or as a result of a third party claim. Minimum limits required are \$1,000,000 Per Loss and \$1,000,000 Aggregate. If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3)

years beginning from the time that work under this contract is completed.

The Contractor shall forward certificates of insurance directly to the Boulder County Parks and Open Space Department, 5201 St. Vrain Road, Longmont, Colorado, 80503, Attention: XXXX demonstrating that the insurance requirements have been met prior to the commencement of Work under this Contract.

Boulder County shall be named as an additional insured for General Liability and Pollution Liability, as designated in the contract. Additional insured shall be endorsed to the policy.

The additional insured wording shall be as follows:

County of Boulder, State of Colorado, a body corporate and politic, is named as Additional Insured.

Certificate Holder:

Boulder County
Attn: Risk Manager
P.O. Box 471
Boulder, CO 80306

Notice of Cancellation: If any insurance company refuses to provide the required notice, the Contractor or its insurance broker shall notify the County of any cancellation, suspension, and/or nonrenewal of any insurance within seven (7) days of receipt of insurers' notification to that effect.

16. Nondiscrimination: The Contractor agrees to comply with the letter and spirit of the Colorado Anti-Discrimination Act, C.R.S. § 24-34-401, et seq., as amended, and all applicable local, state and federal laws respecting discrimination and unfair employment practices. Boulder County prohibits unlawful discrimination on the basis of race, color, religion, gender, gender identity, national origin, age 40 and over, disability, socio-economic status, sexual orientation, genetic information, or any other status protected by applicable federal, state or local law and the Boulder County Policy manual (of which is available upon request).

17. Nondiscrimination Provisions Binding on Subcontractors: In all solicitations, either by competitive bidding or negotiation, by the Contractor for any Work related to this Contract to be performed under a subcontract, including procurement of materials or equipment, the Contractor shall notify each potential subcontractor of the Contractor's obligations under this Contract, and of all pertinent regulations relative to nondiscrimination and unfair employment practices, as set forth above.

18. Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, as determined by the County within its sole discretion, the County shall impose such contract sanctions as it may determine to be appropriate, including, but not limited to:

- a. withholding of payments to the Contractor under the Contract until the Contractor complies with the nondiscriminatory provision set forth in paragraph 16 of this Contract; and/or
- b. cancellation, termination, or suspension of the Contract, in whole or in part, effective upon seven (7) days written notice to the Contractor pursuant to paragraph 21 of this Contract.

19. Subcontractors: The Contractor will include the provisions of paragraphs 16 through 18 in every subcontract, including procurement of materials and leases of equipment. The Contractor will take such action with respect to any subcontractor or procurement as the County of Boulder may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the County may, at its own discretion, enter into such litigation to protect the interests of the County.

20. Post Completion: Final payment made to the Contractor, on account of the work, shall not operate to relieve the Contractor of responsibility for faulty material or workmanship, and unless otherwise provided, the Contractor shall remedy any defect due thereto and pay for any damages resultant there from.

21. Termination and Related Remedies:

- a. The other provisions of this Contract notwithstanding, financial obligations of Boulder County payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted and otherwise made available. Boulder County is prohibited by law from making financial commitments beyond the term of its current fiscal year. The County has contracted for goods and/or services under this Contract and has reason to believe that sufficient funds will be available for the full term of the Contract. Where, however, for reasons beyond the control of the Board of County Commissioners as the funding entity, funds are not allocated for any fiscal period beyond the one in which this Contract is entered into, the County shall have the right to terminate

this Contract by providing seven (7) days written notice to the Contractor pursuant to paragraph 23, and will be released from any and all obligations hereunder. If the County terminates the Contract for this reason, the County and the Contractor shall be released from all obligations to perform Work and make payments hereunder, except that the County shall be required to make payment for Work which has been performed by the Contractor prior to the effective date of termination under this provision; and, conversely, the Contractor shall be required to complete any Work for which the County has made payment prior to providing written notice to the Contractor of the termination. In such an event, Boulder County is released from all liability whatsoever and will not be responsible for payment of any costs or expenses incurred in reliance upon this Contract beyond that amount which has been appropriated and made available for this Contract and neither party shall have any further liability hereunder, said Contract to cease and terminate as of such date.

b. If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract, or fails to perform any provision of the Contract, the County, after seven (7) days written notice to the Contractor and without prejudice to any other remedy it may have, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor or, at its option, may terminate the Contract and may finish the Work by whatever method it may deem expedient, if such expense exceeds the unpaid balance of the Contract, the Contractor shall pay the difference to the County.

c. In the event the County exercises either of the termination rights specified in paragraphs 21(a) or 21(b), this Contract shall cease to be of any further force and effect, with the exception of all Contract remedies which are specified herein and may otherwise be available to the parties under the law, and with the exception of any rights or liabilities of the parties which may survive by virtue of this Contract.

d. The preceding provisions notwithstanding, the County may terminate this Contract, either in whole or in part, for any reason, whenever the County determines that such termination is in the County's best interests. Such termination shall be effective after the County provides seven (7) days written notice to the Contractor pursuant to paragraph 23.

Termination of work hereunder shall be effected by the delivery to the Contractor of a "Notice of Termination" specifying the extent

to which performance of work, under the Contract, is terminated and the date upon which such termination becomes effective. After receipt of the "Notice of Termination", the Contractor shall cancel its outstanding commitments hereunder covering the procurement of materials, supplies, equipment and miscellaneous items. In addition, the Contractor shall exercise all reasonable diligence to accomplish the cancellation or diversion of its outstanding commitments covering personal services and extending beyond the date of such termination to the extent that they relate to the performance of any work terminated by the notice. The Contractor shall then submit a written claim for all outstanding amounts to the County, due within the timeframe as specified, thirty (30) days, upon receipt of "Notice of Termination", from the County.

22. Independent Contractor: The Parties recognize and agree that the Contractor is an independent contractor for all purposes, both legal and practical, in performing services under this Contract, and that the Contractor and its agents and employees are not agents or employees of Boulder County for any purpose. As an independent contractor, the Contractor shall be responsible for employing and directing such personnel and agents as it requires to perform the services purchased under this Contract, shall exercise complete authority over its personnel and agents, and shall be fully responsible for their actions.

Contractor acknowledges that it is not entitled to unemployment insurance benefits or workers' compensation benefits from Boulder County, its elected officials, agents, or any program administered or funded by Boulder County. Contractor shall be entitled to unemployment insurance or workers' compensation insurance only if unemployment compensation coverage or workers' compensation coverage is provided by Contractor, or some other entity that is not a party to this Contract. Contractor is obligated to pay federal and state income tax on any monies earned pursuant to this Contract.

23. Notices: For purposes of the notices required to be provided under paragraphs 15, and 21, all such notices shall be in writing, and shall be either sent by Certified U.S. Mail - Return Receipt Requested, Electronic Mail (Email) or hand-delivered to the following representatives of the parties at the following addresses:

For the County:	Parks and Open Space Department Attention: 5201 St. Vrain Road Longmont, CO 80503 <u>Contract_Staff@bouldercounty.org</u>
-----------------	---

For the Contractor: Name of Company
 Project Contact
 Address
 City, State ZIP
 EMAIL

In the event a notice is mailed pursuant to the provisions of this paragraph, the time periods specified in paragraph 21 shall commence to run on the day after the postmarked date of mailing.

24. Statutory Requirements: This Contract is subject to all statutory requirements that are or may become applicable to counties or political subdivisions of the State of Colorado generally. Without limiting the scope of this provision, the Contract is specifically subject to the following statutory requirement:

Contract payments may be withheld pursuant to C.R.S. § 38-26-107 if the County receives a verified statement that the Contractor has not paid amounts due to any person who has supplied labor or materials for the project.

25. Prohibitions on Public Contract for Services: Pursuant to Colorado Revised Statutes (C.R.S.), § 8-17.5-101, et seq., as amended, the Contractor shall meet the following requirements prior to signing this Contract (public contract for service) and for the duration thereof:

A. The Contractor shall not knowingly employ or contract with an illegal alien to perform work under this public contract for services.

B. The Contractor shall not enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this public contract for services.

C. At the time of signing this public contract for services, the Contractor has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services through participation in either the E-Verify Program or the Department Program.

D. The Contractor shall not use either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while this public

contract for services is being performed.

E. If Contractor obtains actual knowledge that a subcontractor performing work under this public contract for services knowingly employs or contracts with an illegal alien, the Contractor shall: notify the subcontractor and the County within three days that the Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and, terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to the previous sentence, the subcontractor does not stop employing or contracting with the illegal alien; except that the contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

F. Contractor shall comply with any reasonable requests by the Department of Labor and Employment (the Department) made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).

G. If Contractor violates any provisions of this Section of this Contract, the County may terminate this Contract for breach of contract. If the Contract is so terminated, the Contractor shall be liable for actual and consequential damages to the County.

26. Amendments: This Contract may be altered, amended or repealed only on the mutual agreement of the County and the Contractor by a duly executed written instrument.

27. Assignment: This Contract shall not be assigned or subcontracted by the Contractor without the prior written consent of the County.

28. Complete Agreement/Binding Effect: This agreement represents the complete agreement between the Parties hereto and shall be fully binding upon the successors, heirs, and assigns of the Parties, if any, during the term hereof.

29. Governing Law: The laws of the State of Colorado shall govern the interpretation and enforcement of this Contract. Any litigation that may arise between the parties involving the interpretation or enforcement of the terms of this Contract shall be initiated and pursued by the parties in the Boulder Courts of

the 20th Judicial District of the State of Colorado and the applicable Colorado Appellate Courts.

30. Breach: Any waiver of a breach of this Contract shall not be held to be a waiver of any other or subsequent breach of this Contract. All remedies afforded in this Contract shall be taken and construed as cumulative, that is, in addition to every other remedy provided herein or by law.

31. Termination of Prior Agreements: This Contract cancels and terminates, as of its effective date, all prior agreements between the parties relating to the services covered by this Contract, whether written or oral or partly written and partly oral.

32. Invalidity Provision: Should any of the provisions of this Contract be held to be invalid or unenforceable, then the balance of the agreement shall be held to be in full force and effect as though the invalid portion was not included; provided, however, that should the invalidity or unenforceability go to the essence of the agreement or be of substantial nature, then the Party or Parties who would receive the benefit of the provision, were it not invalid or unenforceable, shall have the option to terminate this Contract, forthwith.

33. Third Party Beneficiary: The enforcement of the terms and conditions of this Contract and all rights of action relating to such enforcement shall be strictly reserved to the County and the Contractor, and nothing contained in this Contract shall give or allow any claim or right of action whatsoever by any other or third person. It is the express intent of the parties to this Contract that any person receiving services or benefits under this Contract shall be deemed an incidental beneficiary only.

34. Conflict of Provisions: In the event of any conflict between the terms of this Contract and the terms of any attachments or addenda, the terms of this Contract shall control.

35. Information and Reports: The Contractor will provide to authorized governmental representatives, including those of the County, State and Federal Government, all information and reports which they may require for any purpose authorized by law. The Contractor will permit such authorized governmental representatives access to the Contractor's facilities, books, records, accounts, and any other relevant sources of information. Where any information required by any such authorized government representative is in the exclusive possession of a person other than the Contractor, then such Contractor shall so certify to the

County, and shall explain what efforts it has made to obtain the information.

36. Execution by Counterparts; Electronic Signatures: This Contract may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument. The Parties approve the use of electronic signatures for execution of this Contract. Only the following two forms of electronic signatures shall be permitted to bind the Parties to this Contract: (1) Electronic or facsimile delivery of a fully executed copy of a signature page; (2) The image of the signature of an authorized signer inserted onto PDF format documents. All use of electronic signatures shall be governed by the Uniform Electronic Transactions Act, CRS §§ 24-71.3-101 to -121.

37. No Suspension or Debarment: The undersigned parties certify that they are not suspended or debarred, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549.

IN WITNESS WHEREOF, the Parties have executed and entered into this Contract as of the latter day and year indicated below.

Executed by BOULDER COUNTY on _____.

COUNTY OF BOULDER
STATE OF COLORADO

ATTEST: _____

Chair, Board of
County Commissioners

Clerk to the Board
Of Commissioners
(SEAL)

CONTRACTOR
A COLORADO CORPORATION

Name & Title

Executed by CONTRACTOR on _____
(Date)

CONTRACTOR'S CERTIFICATION OF COMPLIANCE

Pursuant to Colorado Revised Statute, § 8-17.5-101, et seq., as amended 5/13/08, as a prerequisite to entering into a contract for services with Boulder County, Colorado, the undersigned Contractor hereby certifies that at the time of this certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under the attached contract for services and that the Contractor will participate in the E-Verify Program or Department program, as those terms are defined in C.R.S. § 8-17.5-101, et seq., in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the attached contract for services.

CONTRACTOR:

Company Name

Date

Name (Print or Type)

Signature

Title

Note: Registration for the E-Verify Program can be completed at:
<https://e-verify.uscis.gov/enroll/>.

ATTACHMENT D

Quality Assurance Plan

St. Vrain Creek Reach 3 Restoration

Boulder County, Colorado

Prepared for:

Colorado Water Conservation Board
Department of Local Affairs CDBG-DR

Prepared by:



and



Project No. 110666

April 2017

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1.0 OVERVIEW

This *quality assurance plan* is for an Emergency Watershed Protection (EWP) project using the following components:

X	Streambank Shaping (excavation & fill)	X	Bioengineering
X	In-Stream Rock Structures	X	Live Stakes
X	Toe Rock and/or Rock Riprap		Brush Mattresses
X	Toe Wood Along Bottom of Bank	X	Tree Planting
X	Large Woody Debris Structures	X	Boulder Clusters
X	Combination Rock & Wood Structures		Bottomless Culvert
	Open Drainage Ditches	X	Constructed Riffles
X	Tree Revetments		Water Diversions
X	Bankfull Bench Construction	X	Sediment Removal
X	Structures	X	Embankment Repairs

Personnel assigned to the project should have experience observing the installation of the components identified in the above table.

2.0 PERSONNEL

2.1 QA Personnel

Sponsor's Representative (SR): someone with the authority to act on behalf of the sponsor.

Technical Representative (TR): someone with construction experience to assist with construction implementation of the project. This may be a soil conservation technician, soil conservationist, civil engineering technician, district conservationist, or consultant's representative.

Stream Restoration Specialist (SRS): a person assigned to the project with specialized skills, training, education, and experience implementing stream restoration projects.

Design Engineer (DE): the engineer, stream restoration specialist, or other qualified person responsible for designing the project.

Vegetation Specialist (VS): person responsible for implementing the project's vegetation plan. They shall have education and experience with selecting and installing native riparian plant species. They shall oversee all re-vegetation activities.

2.2 Specific Personnel Recommended for this Project

Sponsor's Representative:	Jesse Rounds and/or Obadiah Broughton
Technical Representative:	County Project Engineer or County Inspector
Stream Restoration Specialist:	County Project Engineer and/or Claire DeLeo
Design Engineer:	Clint Brown and/or representative
Vegetation Specialist:	Claire DeLeo and/or representative

3.0 QUALITY CONTROL (QC)

The Contractor is responsible for quality control (QC) to build the project according to the construction specifications and drawings. This responsibility is required by the general specifications section. Quality Assurance personnel will verify that QC tasks are being done. Major QC items include:

1. **Surveys:** The Contractor is responsible for construction stakeout of the work, and meeting grades and elevations required by the drawings.
2. **Utilities:** Verify that the Contractor has located utilities before starting work at the project site. Ask the Contractor, visit the site to see the utility markings, and request utility locate reference number.
3. **Pollution Control:** The Contractor is responsible for preventing pollution of surface and ground water from contamination or from sediment runoff. See specifications for pollution control.
4. **Dewatering:** The Contractor is required to divert or remove water from the work site, as possible, or to work in low flow conditions.
5. **Excavations and Embankments:** The Contractor needs to meet the grades and slopes required by the drawings.
6. **Rock and Aggregates:** The rock must come from a CDOT-approved quarry (with a copy of test results or certifications), or from a source approved by the design engineer.
7. **Material Certifications:** The Contractor shall provide documentation, which certifies that the materials provided comply with the contract requirements. If specified for this project, material certifications for the following are required (items not required for this project are shown in light gray):
 - (a) Crushed aggregates – the material used to resurface any road should be tested for gradation.
 - (b) Erosion Control Fabric – manufacturer’s product data showing compliance with specifications.
 - (c) Geotextile – manufacturer’s information showing compliance with specifications.
 - (d) Riprap –visual inspection by the Technical Representative or Inspector.
 - (e) Seeding and mulching materials – documentation of a weed-free seed mix
 - (f) Silt fence or Erosion Control Wattles – manufacturer’s product data showing compliance with specifications.
 - (g) Trees & shrubs – invoice showing source, species, and quantity.
 - (h) Erosion Control Wattles – manufacturer’s product data showing compliance with specifications.
 - (i) Concrete – Mix design and certification tests. All concrete needs to be tested for air and slump according to the specifications. Additionally the all truck batch tickets need to indicate mix proportions and the amount of water that can be added onsite.
 - (j) Clay core – Compaction and moisture testing results
 - (k) Large Wood for bank stabilization – invoice showing source, species, and quantity
 - (l) All structural fill – Material gradations and compaction testing results

4.0 QUALITY ASSURANCE PLAN (QAP)

The *Natural Resources Conservation Service* (NRCS) Quality Assurance Program assures that the specified contract quality of materials and workmanship is attained. The primary responsibility of the QA personnel is to observe the operations of the Contractor to assure compliance with the construction contract. This includes the physical examination of materials brought on to the site; observation of the placement of materials; observation of the construction techniques; observation of quality control and construction management operations by the Contractor; periodic and continuous observation of construction work. The Quality Assurance Plan may be updated to include changing project conditions and to reflect lessons-learned during construction.

The intensity/frequency of the quality assurance activities is shown in Table 1. Conduct periodic quality assurance observations and checks of the Contractor's Quality Control to verify that measurable qualities of the work meet the contract requirements.

The following is a description of the minimum quality assurance activities required:

1. The design engineer and stream restoration specialist and technical representative shall attend the preconstruction meeting arranged by the sponsor to include the contractor. Design engineer will give an overview of the project with the drawings and answer questions related to the design.
2. The design engineer and stream restoration specialist (or technical representative) shall spot check construction staking and survey control to ensure the work is properly staked before work starts. They will also assist the Contractor with establishing survey control for each major work item, particularly in the identification of normal flow and bankfull flow elevations.
3. All listed personnel shall read the construction specifications, drawings, design report, and the QAP.
4. Sponsor and/or Technical Rep shall review required submittals for compliance with the contract requirements. Contact the design engineer or sponsor if there is a problem.
5. The Technical Rep should be in daily communication with the contractor to stay abreast of work in progress and upcoming work activities, including work requiring quality control tests. All onsite personnel shall keep a weekly log of construction activities to provide to the design engineer to keep them informed on project status and concerns.
6. All onsite personnel shall be familiar with sensitive plant and animal species and know how to identify them. Specific concerns for this project are: osprey and Preble's Meadow Jumping Mouse (PMJM).
7. Technical Representative should provide oversight of inspection of equipment and materials to ensure they are clean and free of any material that could contain or hold seeds. This should be a continual process and referenced in daily logs. Do this before contractor starts work, and whenever new materials and equipment arrive on-site. Technical Representative in concert with Vegetation Specialist should ensure that the contractor adheres to all cleaning practices.
8. Technical Representative should verify that the contractor is meeting pollution control specifications and only disturbing ground and vegetation as needed for construction. This should be referenced in daily logs.

9. Technical Representative should ensure the contractor has a spill-response kit on-site on a weekly basis and after use.
10. Take digital photographs of work progress to provide a representative photo record of the project. Photo-document key stages of major work items to record images of foundation preparations, installation of buried features, and completed work. Photographs should include date/time stamp. Share photographs with design engineer and SRS on a weekly basis.
11. Design Engineer shall review/observe subgrade preparations for all rock structures to ensure compliance with the drawings and specifications before contractor places the rock structure. Accomplish this in a timely manner to avoid delaying the contractor's work. Visually check the stability of the subgrade and foundation; rock, filter, fill, and/or geotextile.
12. Design Engineer shall review/observe proper placement and use of geotextile. The geotextile must be installed properly to prevent backfill washout under the structures.
13. Design Engineer or SRS or Vegetation Specialist shall review and observe proper placement of erosion control fabric according to drawings and specifications.
14. Design Engineer or SRS shall verify the backfill material for rock structures is an acceptable mix of gravel and cobble per specifications. Check for proper compaction or consolidation of backfill materials.
15. Design Engineer or SRS shall spot check cut and fill slopes to verify elevations with the drawings. Completed structural elevations (cross vanes, log vanes, etc.) must be within 0.25' of the specified elevations on the drawings unless the material or subgrade (bedrock) prevents this; final grade for benches, floodplains, and slopes must be within 0.5' of the specified elevations on the drawings.
16. SRS and Design Engineer may direct the creation of micro-topography at their discretion to create small scale river and landscape features not shown on the plan set provided they are in-line with the vision of the project and not time intensive.
17. SRS and Design Engineer may direct the installation of rock and wood features at their discretion to create small scale river and landscape features not shown on the plan set provided they are in-line with the vision of the project and not time or material intensive.
18. Design Engineer shall inspect all forms and rebar prior to pouring concrete.
19. SRS and Design Engineer shall be present for the grading, placement of forms, and pouring required for all concrete required for the project.
20. Design Engineer and Technical Representative shall observe the installation of all embankment repairs to verify construction and material specifications are met for foundation material, invert elevations, size and type of flow conveyance structure, fill material, compaction and protective armoring.
21. Vegetation Specialist shall be present for the initiation of all seeding and mulching operations as well as the initiation of the planting of container plants.
22. Vegetation Specialist shall be present for the initiation of all bioengineering treatments that include live staking.

5.0 PRECONSTRUCTION MEETING

The *Sponsor* should work with the technical representative, stream restoration specialist, and design engineer to establish a mutually agreeable date and time for meeting. Communications to the contractor should be through any of the personnel listed in this document. Someone should be identified to take notes. Include a discussion of the following items in addition to standard pre-construction agenda items.

1. Introductions and lines of communications.
2. Overview of the drawings and specifications by *design engineer*.
3. Point out temporary benchmarks and any layout work accomplished, such as staking for major work items (structures, project start, and end).
4. Site conditions, special constraints, and site-specific safety concerns.
5. Contractor is responsible for utility locates. Ask the contractor to provide a copy of confirmation for utility locates.
6. Remind the contractor to limit disturbance to the site. Discuss pollution control requirements to include erosion and sediment control.
7. Permit requirements and conditions. Other special environmental concerns? Cultural Resources? Historical sites?
8. Discuss tree planting, seeding, and live stakes. Live stakes should be installed during dormant season, but realize that isn't always possible.
9. Discuss working from bank or during low flow conditions whenever possible.
10. Discuss any time restrictions, such as winter shutdown, high flow months, and avoiding disturbance during spawning seasons.
11. Review equipment and material cleaning requirements. Importance of preventing spread of invasive species, such as *Didymosphenia geminate* (didymo), Eurasian milfoil, etc..
12. Construction surveying requirements – contractor is responsible for meeting lines, grades, and elevations for structures and bank shaping.
13. Discuss LWD source and quantity
14. Discuss Osprey nest
15. Discuss PMJM issues
16. Identify and discuss access routes and staging areas.
17. Discuss harvesting of on-site materials as applicable. Are on-site materials available?
18. Get contractor's estimate of construction duration.
- 19.

6.0 EQUIPMENT

The QA personnel should have a minimum of the following equipment available when needed:

1. Survey Equipment
 - a. GPS, total station, or laser level for setting survey control points, temporary benchmarks, spot-checks, and for as-built survey.
 - b. Survey level
 - c. Hand level for quick elevation checks
 - d. Survey rod, reflector, receiver, etc.
 - e. Measuring tape, 200 foot minimum.
 - f. Weather resistant field books for taking notes and pens or pencils
 - g. Stakes, flags, ribbon, permanent markers, etc.
2. Photographic Equipment
 - a. Digital camera with the following minimum features: date/time stamping, video recording, and some zoom capability.
3. Special Clothing
 - a. Backpack and clothing suitable for working at remote sites with highly variable weather conditions,
 - b. Chest waders and personal safety equipment for working in stream, if necessary
 - c. Studded wading boots
 - d. Other clothing as appropriate to provide the required services
4. Other Special Equipment
 - a. Mobile telephone
 - b. Notebook computer or similar device for making notes while on-site (optional – nice-to-have).
5. Safety Gear
 - a. Hard hat
 - b. Bright-colored safety vest.
 - c. Appropriate footwear, such as boots with toe and ankle protection.
 - d. Other applicable safety gear for site-specific conditions

7.0 PERFORMANCE TIME

For estimated project duration, see the performance time in the design report. Actual construction times vary due to weather, site conditions, flow levels, contractor efficiency, material delivery times, quantity of equipment, size of equipment, size of labor force, fuel availability, unforeseen problems, mechanical problems, personnel availability, traffic, accidents, and other unpredictable factors.

8.0 DESIRABLE SKILLS FOR QA PERSONNEL

1. Skills

- a. Ability to understand the plans and specifications.
- b. Ability to maintain construction records.
- c. Basic photography.
- d. Basic math and reading.
- e. Ability to assist with basic layout, staking, quantity, and “as-built” surveys.
- f. Ability to get to the project site and walk across uneven terrain.
- g. Ability to operate the equipment required to meet the QAP requirements.
- h. Good communications skills to communicate with the Contractor, sponsors, and personnel of other federal, state, and local government agencies. Ability to communicate in person, by email, written reports, telephone, and through legible handwritten documentation.

2. Training & Experience

- a. On-the Job Training for stream restoration work.
- b. Attend stream restoration related training when it is made available.
- c. Some experience on a stream restoration project site.
- d. Some knowledge or training in geomorphic stream design, such as Rosgen Level I or equivalent.

9.0 INSPECTION AND REQUIREMENTS CHECKLIST

At a minimum, periodically observe all work for compliance with the construction documents. The following are items of work and QA activities for this project.

Table 1 – Quality Assurance Activities and Frequencies

✓	Description	Staff	Inspection Frequency
	Field verification of design, setting or checking survey control for structures, and staking out structure locations	SRS and DE	Once
	Attend preconstruction meeting – good opportunity for everyone to get familiar with project	SR, TR, SRS, DE and VS	Once
	Mobilization and coordination with the sponsor	TR	Periodic
	Approve clearing limits; make sure the contractor has coordinated access route with sponsor; and make sure contractor doesn't disturb more vegetation than necessary.	TR	Periodic
	Monitoring of materials and equipment being delivered to the project site – random weekly spot checks with documentation in job diary. Frequency will vary depending on Contractor's delivery schedule and level of trust established.	TR	Weekly
	Pollution control work, including erosion & sediment control measures	TR	Weekly
	Conformance with grades, structure geometry, & elevations. Make sure contractor is using a level, tape, or other survey equipment.	TR and/or DE	Periodic
	Seeding and mulching of disturbed areas after grading is completed and before work shutdowns (before holidays & weekends)	TR and VS	Weekly
	Ensure the site is stabilized before predicted rainstorms. Banks protected. Wood structures anchored. Equipment and materials out of flow path of rising stream levels.	TR	Periodic
	Coordination of tree removal with sponsor and trees for project use flagged and approved by sponsor	TR and VS	Once
	Rock riprap and rock toe installation – verification of keys, proper geotextile installation, etc.	TR and/or SRS and/or DE	Periodic
	Geotextile installation	TR	Continuous
	Seeding, mulching, and erosion control fabric	VS	Periodic

	Periodic site visits and at critical times during construction	SRS, DE, and/or VS	Periodic
	Tree planting and restoration of temporary access roads/staging areas	TR and/or VS	Periodic
	Call or email the <i>design engineer</i> to discuss any work that doesn't seem right or to relay questions from the contractor	TR	As Needed
	Pre-completion inspection of work while contractor still has equipment and materials on-site	TR	Once
	Request Construction Quality Assurance Testing	TR and/or DE	Periodic
	Keep written field notes and take digital photographs of work progress	TR	Periodic
	Final inspection and certification of work completed	DE, SRS, and/or VS	Once
	Construction status updates to design engineer or SRS via email	TR	Weekly
	Assist with data collection for as-built drawings	TR	Once
	Submit as-built drawings to NRCS	SR	Once



ATTACHMENT E

OPERATION, INSPECTION, & MAINTENANCE PLAN

ST VRAIN CREEK REACH 3

RESTORATION PROJECT

Local Sponsor:	Boulder County Parks and Open Space	County:	Boulder
Nearest Town:	Lyons, CO.	Date:	4/25/2017
Prepared by	L. Clint Brown, P.E.		

OVERVIEW

Properly maintained stream channels and banks are beneficial to individual properties and surrounding landscape. Estimated life span for this installation is 20 years under normal flow conditions; however the actual O&M period will be as specified in the O&M agreement. You can usually increase the life span by effectively inspecting and maintaining the installation regularly. This document is sometimes referred to as an O&M Plan or an OIM Plan.

GENERAL RECOMMENDATIONS

An effective operation, inspection, and maintenance program includes:

- Visually inspect the bank treatment and any installed structures at least annually, after spring runoff, and after other large flows. Make inspections after stream flow has returned to a safe level and other site conditions are safe. Repair damages as soon as practical.
- Check all banks, rock, wood, and structures for accelerated weathering, displacement, or significant changes not in line with the original design (ie. unacceptable movement of structures). However, note that the original design allows for natural movement and creation of riffle-pools. Repair as necessary.
- Check for excessive scour, erosion, or aggradation that threatens to undermine critical constructed features and/or compromise project goals. Make corrective adjustments to address instabilities. Bankfull channel dimension changes and/or minor bank erosion is a natural occurrence. Minor adjustment of the bankfull channel is expected as stream channels adjust and natural stream processes occur. Adjustments that do not compromise the project goals do not warrant intervention.
- Inspect vegetation and plantings more frequently during the first year after construction. During the first part of the growing season, check the vegetation every week or two. Maintaining good bank vegetation is important to the success of the project.

- Maintain vigorous growth of desirable vegetation. This includes reseeding, watering, weeding, replanting, mulching, and removal of invasive plants when necessary.
- Monitor vegetation and plantings for damage caused by animals, insects, and disease. If necessary to protect vegetation, install fencing or other methods of protection.
- Investigate settlement or large cracks in the soil, streambanks, or structures to determine their cause and if repairs are needed.
- Remove debris that could cause damage to installed structures or bank treatments. Some debris is acceptable. Look for indications that debris is causing a variation in flow pattern that is directing water into the bank. Does debris appear to be adding pressure to the installed structure?
- Control burrowing animals that are causing damage. Repair any damage caused by their activity. Typically, they need to be filled or clogged to prevent water flow through them.
- We recommend that you DO NOT mow or fertilize the vegetation within 35 feet of the edge of normal water flow, at a minimum.
- Mowing is only to be conducted for weed control.
- Take some photographs of the installation for your own records and to share with BCPOS technical representatives. Your feedback will help BCPOS improve future installations. Also, if you have any questions regarding the severity of a potential maintenance problem, contact an BCPOS representative or engineer for help.
- Monitor the installation as required by permit conditions (if applicable).

SPECIFIC RECOMMENDATIONS FOR YOUR INSTALLATION

- Follow the above general recommendations with emphasis on monitoring and maintaining all planted materials.
- For instream structures (boulder clusters, riffles, pools, point bars, etc.), repair configurations that exhibit damage is not in line with the original design (ie. unacceptable movement of structures). However, note that the original design allows for natural movement and creation of riffle-pools. Repair any damage to the streambanks where structures tie-into bank.
- Consult with Longmont Supply Ditch, ditch rider: Kevin Boden to discuss issues with bifurcation structure.
- If in doubt, contact an BCPOS representative or engineer for assistance evaluating the problem. The sooner a problem is identified, the better

ATTACHMENT F

St. Vrain Creek Reach 3 Restoration Construction Specifications Highway 36 to Crane Hollow Road Boulder County, Colorado

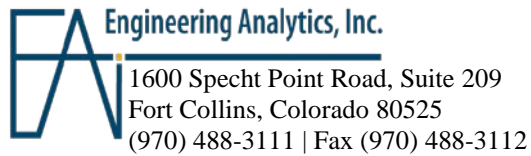
Prepared for:

Colorado Water Conservation Board
Department of Local Affairs CDBG-DR

Prepared by:



and



Project No. 110666

May 2017

PREFACE

These Construction Specifications are to be used on ST VRAIN CREEK REACH 3 RESTORATION Project (Project). These specifications are a modification of the Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction 2011 (CDOT 2011). Individual specifications can be found by referencing CDOT 2011. Copies of CDOT 2011 may be obtained from the Colorado Department of Transportation, Office of Bid Plans, 4201 E. Arkansas Avenue, Denver, CO 80222.

The Table of Contents has been modified from CDOT 2011 to reflect specifications that are applicable to the Project. Specifications that are deemed to not apply are omitted from the table of contents. If during the construction, a specification that has been omitted is deemed applicable the Contractor will be notified.

These specifications are expressed in United States Standard Measure (English units). The international System of Units (SI, Modernized Metric) is used only where standardized testing requires metric units. For clarity, aggregate sieve sizes appear in both SI and English Units. The dimensions, measurements, and requirements stated in English units are the specification requirements. All Contractor submittals shall be prepared in English Units. Pay item quantities will be measured in English units.

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1.0 GENERAL INFORMATION

1. The Contractor shall have a copy of the Colorado Department of Transportation "Standard Specifications for Road and Bridge Construction", 2011 on the project site at all times.
2. Contractor must follow QA plan, which will be included in the bid documents (includes specs for as-builts), as well as all provided Construction Documents listed in the Invitation to Bid.
3. All work must be completed by December 31, 2017.

2.0 PROJECT ADMINISTRATION

REQUIREMENTS OF THE 404 PERMIT

Regarding Prevention of the Spread of Aquatic Invasive Species

Equipment and gear that were previously used in another stream, river, lake, pond or wetland, and that are to be used in or near the waters on the project, shall be treated to prevent the spread of aquatic invasive species. These species include, but are not limited to:

- (1) Eurasian watermilfoil
- (2) Zebra mussel
- (3) Quagga mussel
- (4) New Zealand mudsnail

Equipment that shall be treated includes all parts of machinery and vehicles of all types and sizes that came into contact with the live water.

Gear that must be treated includes boots, waders, hand tools, and all other materials and attire used previously in the live water.

The Contractor shall use one of the following treatments:

1. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) Spray/soak equipment with a solution of commercial grade quaternary ammonium disinfectant compound containing at least 8.0% active ingredient diluted in solution to achieve at least 0.8% concentration (roughly 12 ounces of product per gallon of water). Specifically, a 1:15 solution of Quat 4 or Super HDQ Neutral institutional cleaner and water, could be used for effective treatment. Treated equipment should be kept moist for at least 10 minutes, managing rinsate as a solid waste in accordance with local, county, state, or federal regulations
2. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.). Spray/soak equipment with water hotter than 140 degrees Fahrenheit for at least 10 minutes. Do not move water from one water body to another Be sure Equipment is dry before use.

Prior to moving such equipment onto the project, the Contractor shall submit to the Engineer a written list of the equipment and a signed certification that it was treated using one of the two methods specified above.

After project completion, this equipment shall be treated prior to its use in another stream, river, lake, pond or wetland.

PROTECTED PLANTS AND WILDLIFE CONSERVATION MEASURES

1) SUMMARY

- a) Section includes pertinent criteria relating to the:
 - i) Endangered Species Act
 - ii) Migratory Bird Treaty Act
 - iii) Bald and Golden Eagle Protection Act

2) General

- a) Coordination with BCPOS is critical and shall be implemented early in the construction process to limit or avoid construction delays.
- b) The reach of St. Vrain Creek encompassed in the project area is designated as a Mouse Management Area under the map of Preble's Meadow Jumping Mouse - Habitat Conservation Areas in the Boulder County Comprehensive Plan – Environmental Resources Element. Preble's meadow jumping mice (Preble's) are protected under the Endangered Species Act. (See Preble's Habitat Conservation Area map in Boulder County Comprehensive Plan Environmental Resources Element).
- c) Compliance with Migratory Bird Treaty Act and the Bald and Golden Eagle Act is required. A known bald eagle nests exist just outside the project area and the recommended ½ mile buffer does NOT overlap this project area. However, haul routes and access points need to consider the location of this protective buffer. There are a number of known raptors nests within the project area. CPW recommended buffers shall be observed. Contractor's MBTA survey consultant will identify all nesting and roosting areas. If identified, contractor must adhere to all CPW buffer recommendations
- d) Project Specifics (these dates supersede all other dates with regard to species and vegetation protection)
 - i) The Preble's active season is from May 1 through November 1.
 - ii) Coordination with CPW on appropriate measures for protection for raptors is required.
 - iii) Primary nesting season for migratory birds is from April 1st through July 31st.
 - iv) Primary nesting season for nesting raptors is from February 1st through August 31st.
 - v) Primary nesting season for Bald and Golden eagles is from October 15th through July 31st and December 15th through July 15th, respectively.
- e) Conservation measures for plant and animal species protected under the Endangered Species Act (Preble's Meadow Jumping Mouse, Ute Ladies' Tresses Orchid, and Colorado Butterfly Plant)
 - i) Pre-Construction:
 - (1) Minimize footprint of disturbance by limiting access points, staging, etc.
 - (2) Locate access routes and haul routes in previously disturbed areas and existing roads.
 - (3) Contractor shall delineate areas of no entry for equipment on the ground with plastic construction fencing.
 - (4) Project engineer will debrief onsite personnel of area-of-disturbance, Project Area, no entry areas and other conservation pertinent measures.
 - (5) Follow stormwater guidelines and utilize best management practices to limit sedimentation, contamination, erosion.

ii) Project Implementation:

- (1) The Contractor shall contact the Engineer or Owner to contact US Fish and Wildlife Service if Preble's, Colorado Butterfly plant, or Ute Ladies' Tresses are found within project area.
- (2) Limit disturbance (crushing) or removal of vegetation. (Willows, trees, shrubs, and herbaceous plants within riparian and adjacent upland habitat.
 - (a) Limit disturbance to vegetation to the area-of-disturbance as defined in the project plan set.
 - (b) Choose equipment size/type appropriately to minimize disturbance and soil compaction.
- (3) Stage, operate, locate and refuel equipment outside of riparian habitat and immediately adjacent upland habitats.
 - (a) Operate equipment from previously disturbed or modified roadbeds or shoulders above riparian, when possible.
 - (b) Limit entrance and exit points in project area.
 - (c) Stockpile topsoil and debris outside of riparian area and protect from stream flows.
- (4) During Preble's active season (May 1-November 1), work only during daylight hours. (Preble's are nocturnal).
- (5) Promptly remove waste to minimize site disturbance and attraction of predators.
- (6) Cover exposed holes or loose dirt with tarps/boards to prevent entrapment.
- (7) Use best management practices to limit construction disturbance.
 - (a) Soil compaction: Establish one access route preferably along existing disturbed surface or route.
 - (b) Soil compaction: Temporarily line access routes with geotextiles in wet, unstable soil.
 - (c) Weed control: Wash and inspect vehicles and equipment before entering or leaving project area.
 - (d) Weed control: Use only weed free certified materials, including gravel, sand, topsoil, mulch, and seed.
- (8) Complete construction before beginning restoration activities.

iii) Post-Construction:

- (1) Upon completion of project, revegetate all disturbed areas with native vegetation.
- (2) Rip compacted areas prior to replanting with native vegetation, unless BCPOS Plant Ecologists recommend other restoration methods.
- (3) Fill and reseed with weed free material and native seed mixtures.
- (4) Consider monitoring the revegetated area for success.

f) Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act:

- i) Migratory Birds: If work requiring ground disturbance and/or removal of woody and herbaceous vegetation occurs during the primary breeding season (April 1st through August 31st), pre-construction surveys, using accepted bird survey protocols, for nesting migratory birds must be completed within one week prior to commencement of work (contractor's responsibility) by a qualified wildlife biologist. Contractor must follow the 'CDOT Standard Specifications Section 240: Protection of Migratory Birds Biological Work Performed by the Contractor's Biologist' for requirements and survey protocol.

- ii) Raptors: If work occurs during the nesting season for raptors (February 1st through August 31st), pre-construction surveys for nesting raptors must be completed within one week prior to commencement of work. If nesting raptors are discovered, contractor will abide by the Colorado Parks and Wildlife Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors
<https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf>). Notification must be provided to OWNER to receive guidance.
- iii) Eagles: Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act. The project area is just outside the Colorado Parks and Wildlife ½ mile recommended buffer zone of a known bald eagle nest. If work occurs during the nesting period for bald eagles (October 15th through July 31st) and construction activities (including hauling of material) encroach on the ½ mile buffer, PRIOR to initiating work, the contractor must coordinate with the Colorado Parks and Wildlife Bird Conservation Coordinator (Liza Rossi – 970.871.2861) and the U.S. Fish and Wildlife Service (303-236-4773) to receive guidance.
 - (1) Although there are currently no known bald nests within one mile of the project site, bald eagles have historically nested in this area. If a bald eagle chooses to nest within one half mile of the project area between October 15th and July 31st, all work within the ½ mile buffer zone of the nest must stop and notification must be provided to Owner, Colorado Parks and Wildlife Bird Conservation Coordinator and the U.S. Fish and Wildlife to receive guidance.

3.0 SUPPLEMENTAL SPECIFICATIONS

SECTION 109.11 - MEASUREMENT AND PAYMENT

General: This Section is provided to more specifically detail the scope of work outlined in the Contract Agreement and the method of payment.

The Contractor agrees to supply and include in this cost proposal the entire cost of all materials, equipment, labor, labor supervision, construction tools and equipment, construction services and utilities, all overhead, expendable, guarantees, and fuel costs as required for the St. Vrain Creek Reach 3 Restoration project as set forth in the Drawings and Contract Documents and has included all such costs in the Schedule of the Contract Documents.

It is understood that Unit Price Items in the Schedule shall be adjusted for additions or deductions to the Contract amount as measured after installation. Items that are Lump Sum prices as listed in the Schedule will not be adjusted unless a change in scope of work is initiated by Change Order. It is understood that payment for increases to the Contract amount and quantities as listed in the Schedule shall be by Change Order only.

Schedule Items:

1. Surveying

This item shall include all surveying as required for the Contractor to perform his work as indicated on the Drawings. The Contractor is responsible for all surveying to layout and measure the work and shall provide red-lined, as-constructed drawings to the Engineer at the completion of the project showing any changes from the plans and Specifications.

Payment for this item shall be made on a lump sum basis to be paid on a monthly, pro-rated basis throughout the construction period.

2. Mobilization and Demobilization

This item shall include, but not be limited to, all of the Contractor's move-in and move-out costs, including delivering equipment to the site, erection and maintenance of all temporary facilities and controls such as Contractor's field office, temporary toilets, temporary electricity, temporary heat, and completion and erection of the temporary signs. This item will also include the restoration of the staging areas to the pre-construction condition at the completion of the project. Also included in this item shall be the Contractor's cost of the performance bonds, payment bonds, insurance, permits, and any other such general requirements as may be set forth for the completion of this project. This item shall also include all contractor permits (not covered by other bid items), personnel, signs, traffic barriers, and plans that may be required to complete the project.

Payment will be made as the work progresses. Fifty-percent (50%) of the lump sum bid price will be paid at the time of the first monthly progress payment. An additional thirty-percent (30%) will be paid when one-half the original contract amount is earned. The remaining twenty percent (20%) will be paid upon final acceptance of the project.

3. Erosion and Sediment Control

This item shall include, but not be limited to, all work required by the Contractor to care for storm water on the site in accordance with the Specifications. This shall include control of all surface water runoff to prevent sedimentation and/or degradation of all streams, tributaries, and lakes. Included in this cost is the removal of these items post-construction. This item shall include, but not be limited to, all costs for temporary dikes, culverts, pumping systems, electricity or fuel, and all other such items, and shall include all permitting, management, and supervision required by the Specifications or government regulations. This can include, but is not limited to, silt fences, erosion control bales, tracking pads, and the storm water management plan. Included in this item is the cost of materials (and disposal of materials post-construction) required for any erosion and sediment control measures taken.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

4. Ramey Staging Area & Access Road

This item shall include all materials, equipment, and labor required to restore access road and staging area by ripping, regrading and seeding disturbed areas to pasture at the conclusion of the project as shown on the Drawings. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

5. Removal of Waste and Inorganic Debris

This item shall include the equipment and labor required for the removal of concrete, buried metals, and other inorganic waste from the construction zone as shown on the Drawings and Specifications. Also included in this item is the cost for the proper disposal of the wastes. This item does not include the disposal of general waste (trash) generated by the contractor.

Payment for this item shall be made on a per load basis with progress payments made based on each 10 cubic yard truck load of waste removed.

6. Removal of Organic Debris

This item shall include the equipment and labor required for the removal of organic debris that cannot be disposed of onsite from the construction zone as shown on the Drawings and Specifications. Also included in this item is the cost for the proper disposal of the removed debris. This item does not include the disposal of general waste (trash) generated by the contractor.

Payment for this item shall be made on a per load basis with progress payments made based on each 10 cubic yard truck load of waste removed.

7. *Protection of Migratory Birds*

This item shall include, but not be limited to, all work required by the Contractor for the Protection of Migratory Birds as outlined in the Specifications. This work includes actual authorized number of hours a wildlife biologist is on site performing the required tasks, removal of nests and netting etc.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed. During this period, the Contractor shall submit to the Engineer each week for approval a list of the workers who removed nests and the number of hours each one spent removing nests.

8. *Ancillary Services*

- a. Traffic Control – This item shall include, but not be limited to, all work required by the Contractor to develop a Traffic Control Plan to be approved by Boulder as required to obtain a Limited Use permit. This item shall also include all costs associated with labor, materials, equipment and devices required to implement the Traffic Control Plan as required by Boulder County in conjunction with the Limited Use permit.

Payment will be made as the work progresses. Fifty-percent (50%) of the lump sum bid price will be paid at the time of the first monthly progress payment. An additional fifty-percent (50%) will be paid when one-half the original contract amount is earned.

- b. QC Materials Testing – This item includes field testing of earthwork compaction and cast in place concrete and the associated laboratory testing required to support the field testing. Frequency of field compaction testing shall be will at every 2000 CY for fill placed and at every 500 CY for clay core placed. Testing and sampling of concrete shall be at every 50 CY of concrete placed. A set of four cylinders shall be cast and tested at 7 days, 28 days (2) and one retained. Locations of tests and variations from the stated frequency shall be agreed to between the Contractor and Engineer. The testing shall be scheduled by the contractor.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

9. *Breach 1 Repair*

This set of items includes all work necessary to construct the Breach 1 Repair according to the Drawings and Specifications. At a minimum, this item includes the following:

- a. Clear, Strip and Grub – This item shall include clearing, stripping, and grubbing all construction areas and removal of any trees in the required construction areas of the Breach 1 repair. The cost shall include spoiling waste materials in stockpiles as outlined in the Specifications. The cost shall also include stockpiling of topsoil material for later use in the project.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- b. Access Road Improvements – This item shall include all materials, equipment, and labor required to improve access roads as shown on the Drawings. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- c. Care and Diversion of Stream Water – This item shall include costs associated with diverting the streams, or any other consistently flowing water, as needed for construction of the Breach 1 repair and in accordance with the Specifications and Drawings. Also included in this item is any temporary pipes, walls, trenches, or other structures used in the care and diversion of the stream.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- d. Dewatering - This item shall include, but not be limited to, all work required by the Contractor to care for dewatering for the Breach 1 repair in accordance with the Specifications. This shall include control of ground water and seepage at individual excavations as required throughout construction and the prevention of sedimentation and/or degradation of all streams and tributaries. This item shall include, but not be limited to, all costs for temporary dikes, culverts, pumping systems, electricity or fuel, casings, sumps, wells, and all other such items, and shall include all permitting, management, and supervision required by the Specifications or government regulations.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- e. Excavation – This item of work shall include all work necessary to excavate the existing Breach 1 berm, river bed, and surrounding area to the lines and grades shown on the Drawings. The cost shall also include all work necessary to spoil excavated materials in the areas indicated on the Drawings or by the Engineer.

Payment for this item shall be made on a unit price basis per cubic yard of material excavated. Excavated volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after excavation.

- f. Borrow and Fill – This item of work shall include all work necessary to borrow, fill and compact the Breach 1 berm and surrounding areas to the lines and grades shown on the Drawings. The cost shall also include all work necessary to excavate and transport borrow materials from an onsite location. The cost shall also include all work necessary to compact and condition the materials for placement in the foundation and embankment as indicated on the Drawings and stated in the Construction Specifications. This item shall not include the placement of the clay core.

Payment for this item shall be made on a unit price basis per cubic yard of fill. Fill volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements performed by the contractor and conducted before and after fill.

- g. Non-woven Geotextile – This item of work shall include all work necessary to provide and place 6 oz. / sy. geotextile beneath the riprap as shown on the Drawings. This item includes the cost of the material and delivery to the construction area.

Payment for this item shall be made on a unit price basis per square yard of non-woven geotextile supplied and placed.

- h. Remove and Stockpile Riprap – This item of work shall include all work necessary to remove existing riprap in the Breach 1 location as shown in the Drawings. This item also includes the sorting and stockpiling of the riprap for later use.

Payment for this item shall be made on a unit price basis per cubic yard of riprap removed, sorted, and stockpiled. Volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after removal of existing riprap.

- i. Type M Riprap Delivered – This item of work shall include all work necessary to supply Type M Riprap to the Breach 1 location. The riprap shall be in accordance to the Drawings and Specifications. This item is to supplement the existing stockpiled riprap.

Payment for this item shall be made on a unit price basis per ton of riprap delivered to the Breach 1 location.

- j. Riprap Placement – This item of work shall include all work necessary to place both the existing stockpiled riprap and the Type M Riprap delivered in the thickness and locations as shown in the Drawings.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- k. Clay Core – The clay core material is provided by BCPOS. It is located in a stockpile at Swede Lake. Swede Lake is located at the intersection of 67th Street and Pike Road in Boulder County approximately 7 miles south of the site. This item of work shall include all work necessary to transport and place the clay core fill in the Breach 1 berm according to the lines, grades, and compaction requirements as shown on the Drawings and in the Specifications.

Payment for this item shall be made on a unit price basis per cubic yard of clay core placed, conditioned, and compacted.

10. Breach 2 Repair

This set of items includes all work necessary to construct Breach 2 Repair according to the Drawings and Specifications. At a minimum, this item includes the following:

- a. Clear, Strip and Grub – This item shall include clearing, stripping, and grubbing all construction areas and removal of any trees in the required construction areas of the Breach 2 repair. The cost shall include spoiling waste materials in stockpiles as outlined in the Specifications. The cost shall also include stockpiling of topsoil material for later use in the project.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- b. Access Road Improvements - This item shall include all materials, equipment, and labor required to improve access roads as shown on the Drawings. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- c. Care and Diversion of Stream Water - This item shall include costs associated with diverting the streams, or any other consistently flowing water, as needed for construction of the Breach 2 repair and in accordance with the Specifications and Drawings. Also included in this item is any temporary pipes, walls, trenches, or other structures used in the care and diversion of the stream.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- d. Dewatering - This item shall include, but not be limited to, all work required by the Contractor to care for dewatering for the construction of the Breach 2 repair in accordance with the Specifications. This shall include control of ground water and seepage at individual excavations as required throughout construction and the prevention of sedimentation and/or degradation of all streams and tributaries. This item shall include, but not be limited to, all costs for temporary dikes, culverts, pumping systems, electricity or fuel, casings, sumps, wells, and all other such items, and shall include all permitting, management, and supervision required by the Specifications or government regulations.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- e. Excavation – This item of work shall include all work necessary to excavate the existing Breach 2 berm, river bed, and surrounding area to the lines and grades shown on the Drawings. The cost shall also include all work necessary to spoil excavated materials in the areas indicated on the Drawings.

Payment for this item shall be made on a unit price basis per cubic yard of material excavated. Excavated volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after excavation.

- f. Borrow and Fill – This item of work shall include all work necessary to borrow fill and compact the Breach 2 berm and surrounding areas to the lines and grades shown on the Drawings. The cost shall also include all work necessary to excavate and transport borrow materials from an onsite location. The cost shall also include all work necessary to compact and condition the materials for placement in the foundation and embankment as indicated on the Drawings and stated in the Construction Specifications. This item shall not include the placement of the clay core.

Payment for this item shall be made on a unit price basis per cubic yard of fill. Fill volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after fill.

- g. Non-woven Geotextile – This item of work shall include all work necessary to provide and place 6 oz./sy. geotextile beneath the riprap as shown on the Drawings. This item includes the cost of the material and delivery to the construction area.

Payment for this item shall be made on a unit price basis per square yard of non-woven geotextile supplied and placed.

- h. Remove and Stockpile Riprap – This item of work shall include all work necessary to removed existing riprap in the Breach 2 location as shown in the Drawings. This item also includes the sorting and stockpiling of the riprap for later use.

Payment for this item shall be made on a unit price basis per cubic yard of riprap removed, sorted, and stockpiled. Volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after removal of existing riprap.

- i. Type H Riprap Delivered – This item of work shall include all work necessary to supply Type H Riprap to the Breach 2 location. The riprap shall be in accordance to the Drawings and Specifications. This item is to supplement the existing stockpiled riprap.

Payment for this item shall be made on a unit price basis per ton of riprap delivered to the Breach 2 location.

- j. Riprap Placement – This item of work shall include all work necessary to place both the existing stockpiled riprap and the Type H Riprap delivered in the thickness and locations as shown in the Drawings.

Payment shall be made on a lump sum basis with progress payments made based on the percentage of total work completed.

- k. Clay Core – The clay core material is provided by BCPOS. It is located in a stockpile at Swede Lake. Swede Lake is located at the intersection of 67th Street and Pike Road in Boulder County approximately 7 miles south of the site. This item of work shall include all work necessary to transport and place the clay core fill in the Breach 2 berm according to the lines, grades, and compaction requirements as shown on the Drawings and in the Specifications.

Payment for this item shall be made on a unit price basis per cubic yard of clay core placed, conditioned, and compacted.

11. Breach 6 Repair

This set of items includes all work necessary to construct Breach 6 Repair according to the Drawings and Specifications. At a minimum, this item includes the following:

- a. Clear, Strip and Grub – This item shall include clearing, stripping, and grubbing all construction areas, and removal of any trees in the required construction areas for the Breach 6 repair. The cost shall include spoiling waste materials in stockpiles as outlined in the Specifications. The cost shall also include stockpiling of topsoil material for later use in the project.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- b. Access Road Improvements - This item shall include all materials, equipment, and labor required to improve access roads and restore at the completion of the project to the “pre-construction condition” as shown on the Drawings. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- c. Care and Diversion of Stream Water - This item shall include costs associated with diverting the streams, or any other consistently flowing water, as needed for construction of the Breach 6 repair and in accordance with the Specifications and Drawings. Also included in this item is any temporary pipes, walls, trenches, or other structures used in the care and diversion of the stream.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- d. Dewatering - This item shall include, but not be limited to, all work required by the Contractor to care for dewatering for the construction of the Breach 6 repair in accordance with the Specifications. This shall include control of ground water and seepage at individual excavations as required throughout construction and the prevention of sedimentation and/or degradation of all streams and tributaries. This item shall include, but not be limited to, all costs for temporary dikes, culverts, pumping systems, electricity or fuel, casings, sumps, wells, and all other such items, and shall include all permitting, management, and supervision required by the Specifications or government regulations.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- e. Excavation – This item of work shall include all work necessary to excavate the existing Breach 6 berm, river bed, and surrounding area to the lines and grades shown on the Drawings. The cost shall also include all work necessary to spoil excavated materials in the areas indicated on the Drawings.

Payment for this item shall be made on a unit price basis per cubic yard of material excavated. Excavated volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after excavation.

- f. Borrow and Fill – This item of work shall include all work necessary to borrow, fill and compact the Breach 6 berm and surrounding areas to the lines and grades shown on the Drawings. The cost shall also include all work necessary to excavate and transport borrow materials from an onsite location. The cost shall also include all work necessary to compact and condition the materials for placement in the foundation and embankment as indicated on the Drawings and stated in the Construction Specifications. This item shall not include the placement of the clay core.

Payment for this item shall be made on a unit price basis per cubic yard of fill. Fill volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after fill.

- g. Non-woven Geotextile – This item of work shall include all work necessary to provide and place 6 oz./sy. geotextile beneath the riprap as shown on the Drawings. This item includes the cost of the material and delivery to the construction area.

Payment for this item shall be made on a unit price basis per square yard of non-woven geotextile supplied and placed.

- h. Type H Riprap Delivered – This item of work shall include all work necessary to supply Type H Riprap to the Breach 6 location. The riprap shall be in accordance to the Drawings and Specifications. This item is to supplement the salvageable existing riprap.

Payment for this item shall be made on a unit price basis per ton of riprap delivered to the Breach 6 location.

- i. Riprap Placement – This item of work shall include all work necessary to place both the recycled riprap salvaged from other breach locations and the Type H Riprap in the thickness and locations as shown in the Drawings.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- j. Clay Core – The clay core material is provided by BCPOS. It is located in a stockpile at Swede Lake. Swede Lake is located at the intersection of 67th Street and Pike Road in Boulder County approximately 7 miles south of the site. This item of work shall include all work necessary to transport and place the clay core fill in the Breach 6 berm according to the lines, grades, and compaction requirements as shown on the Drawings and in the Specifications.

Payment for this item shall be made on a unit price basis per cubic yard of clay core placed, conditioned, and compacted.

12. Breach 7 Repair

This set of items includes all work necessary to construct Breach 7 according to the Drawings and Specifications. At a minimum, this item includes the following:

- a. Clear, Strip and Grub – This item shall include clearing, stripping, and grubbing all construction areas, removal of any trees in the required construction areas of the Breach 7 repair. The cost shall include spoiling waste materials in stockpiles as outlined in the Specifications. The cost shall also include stockpiling of topsoil material for later use in the project.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- b. Access Road Improvements - This item shall include all materials, equipment, and labor required to improve access roads and restore at the completion of the project to the “pre-construction condition” as shown on the Drawings. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- c. Care and Diversion of Stream Water - This item shall include costs associated with diverting the streams, or any other consistently flowing water, as needed for construction of the Breach 7 repair and in accordance with the Specifications and Drawings. Also included in this item is any temporary pipes, walls, trenches, or other structures used in the care and diversion of the stream.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- d. Dewatering - This item shall include, but not be limited to, all work required by the Contractor to care for dewatering of the Breach 7 repair in accordance with the Specifications. This shall include control of ground water and seepage at individual excavations as required throughout construction and the prevention of sedimentation and/or degradation of all streams and tributaries. This item shall include, but not be limited to, all costs for temporary dikes, culverts, pumping systems, electricity or fuel, casings, sumps, wells, and all other such items, and shall include all permitting, management, and supervision required by the Specifications or government regulations.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- e. Excavation – This item of work shall include all work necessary to excavate the existing berm, river bed, and surrounding area to the lines and grades shown on the Drawings. The cost shall also include all work necessary to spoil excavated materials in the areas indicated on the Drawings.

Payment for this item shall be made on a unit price basis per cubic yard of material excavated. Excavated volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after excavation

- f. Borrow and Fill – This item of work shall include all work necessary to borrow, fill and compact the Breach 7 berm and surrounding areas to the lines and grades shown on the Drawings. The cost shall also include all work necessary to excavate and transport borrow materials from an onsite location. The cost shall also include all work necessary to compact and condition the materials for placement in the foundation and embankment as indicated on the Drawings and stated in the Construction Specifications. This item shall not include the placement of the clay core.

Payment for this item shall be made on a unit price basis per cubic yard of fill. Fill volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after fill.

- g. Remove and Stockpile Riprap – This item of work shall include all work necessary to removed existing riprap in the Breach 7 location as shown in the Drawings. This item also includes the sorting and stockpiling of the riprap for later use at different breach location.

Payment for this item shall be made on a unit price basis per cubic yard of riprap removed, sorted, and stockpiled. Volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after removal of existing riprap.

- h. Clay Core – The clay core material is provided by BCPOS. It is located in a stockpile at Swede Lake. Swede Lake is located at the intersection of 67th Street and Pike Road in Boulder County approximately 7 miles south of the site. This item of work shall include all work necessary to transport and place the clay core fill in the Breach 7 berm according to the lines, grades, and compaction requirements as shown on the Drawings and in the Specifications.

Payment for this item shall be made on a unit price basis per cubic yard of clay core placed, conditioned, and compacted.

13. Breaches 8, 9, and Hygiene Road Approach

This set of items includes all work necessary to construct Breach 8, 9, and Hygiene Road Approach according to the Drawings and Specifications. At a minimum, this item should include the following:

- a. Clear, Strip, and Grub – This item shall include clearing, stripping, and grubbing all construction areas, removal of any trees in the required construction areas of the Breaches 8, 9, and Hygiene Road Approach. The cost shall include spoiling waste materials in stockpiles as outlined in the Specifications. The cost shall also include stockpiling of topsoil material for later use in the project.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- b. Access Road Improvements - This item shall include all materials, equipment, and labor required to improve access roads and restore at the completion of the project to the “pre-construction condition” as shown on the Drawings. This item also includes the two access roads and staging areas for the Crane Hollow reach of the project. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a lump sum basis at the end of project.

- c. Care and Diversion of Stream Water - This item shall include costs associated with diverting the streams, or any other consistently flowing water, as needed for construction of Breaches 8, 9, and Hygiene Road Bridge Approach in accordance with the Specifications and Drawings. Also included in this item is any temporary pipes, walls, trenches, or other structures used in the care and diversion of the stream.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- d. Dewatering - This item shall include, but not be limited to, all work required by the Contractor to care for dewatering of the Breaches 8, 9, and Hygiene Road Bridge Approach in accordance with the Specifications. This shall include control of ground water and seepage at individual excavations as required throughout construction and the prevention of sedimentation and/or degradation of all streams and tributaries. This item shall include, but not be limited to, all costs for temporary dikes, culverts, pumping systems, electricity or fuel, casings, sumps, wells, and all other such items, and shall include all permitting, management, and supervision required by the Specifications or government regulations.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- e. Non-woven Geotextile – This item of work shall include all work necessary to provide and place 6 oz./sy. geotextile beneath the riprap as shown on the Drawings. This item includes the cost of the material and delivery to the construction area.

Payment for this item shall be made on a unit price basis per square yard of non-woven geotextile supplied and placed.

- f. Remove and Stockpile Riprap – This item of work shall include all work necessary to removed existing riprap in the Breaches 8, 9, and Hygiene Road Approach locations as shown in the Drawings. This item also includes the sorting and stockpiling of the riprap for later use at different breach location.

Payment for this item shall be made on a unit price basis per cubic yard of riprap removed, sorted, and stockpiled. Volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after removal of existing riprap.

- g. Type H Riprap Delivered – This item of work shall include all work necessary to supply Type H Riprap to Breaches 8 and 9 and Hygiene Road Bridge location. The riprap shall be in accordance to the Drawings and Specifications. This item is to supplement the salvageable existing riprap.

Payment for this item shall be made on a unit price basis per ton of riprap delivered to the Breaches 8, 9, and Hygiene Road Approach location.

- h. Riprap Placement – This item of work shall include all work necessary to place both the recycled riprap salvaged from other breach locations and the Type H Riprap in the thickness and locations as shown in the Drawings.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

14. Stream Channel Restoration

This set of items includes all work necessary to shape and grade instream sections according to the Drawings and Specifications. At a minimum, this item should include the following:

- a. Clear, Strip and Grub – This item shall include clearing, stripping, and grubbing all construction areas, removal of any trees in the required construction areas. The cost shall include spoiling waste materials in stockpiles as outlined in the Specifications. The cost shall also include stockpiling of topsoil material for later use in the project.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- b. Restore, Grade & Shape Channel – This item shall include all work required by the Contractor to restore, shape and grade the stream channel in the locations and manner as shown in the Drawings and Specifications. This item includes cost of borrowing materials, labor, and equipment.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- c. Stream Access Restoration - This item shall include all materials, equipment, and labor required to improve stream access locations and restore at the completion of the project to the “pre-construction condition” as shown on the Drawings. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a unit price basis for each stream access restored and approved by the Engineer.

- d. Material Sorting – This item shall include all work required by the Contractor to sort materials for riffles, channel shaping, boulder clusters and bank stabilization as shown in the Drawings and Specifications. This item includes cost of labor and equipment required for sorting.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- e. Riffle/Pool Sequences – This item shall include all work required by the Contractor to construct riffle/pool sequences in the location and manner as shown in the Drawings and Specifications. This item includes costs of moving sorted materials, material installation, labor and equipment.

Payment for this item shall be made on a unit price basis per each riffle/pool sequence supplied and placed.

- f. Instream Fill Placement – This item shall include all work required by the Contractor to place excavated stream material in the location and manner as shown in the Drawings and Specifications. This item includes cost of materials delivered from borrow location or other channel excavation, wetting and compaction, material installation, labor, and equipment.

Payment for this item shall be made on a unit price basis per cubic yard material supplied and placed.

- g. Boulders Delivered – This item of work shall include all work necessary to supply supplemental boulders for use in boulder clusters locations as designated on the Drawings. Boulders shall be approximately 18” in diameter and round. The boulders shall be used to supplement onsite boulders when necessary and shall be used in accordance to the Drawings and Specifications and with prior approval by Engineer.

Payment for this item shall be made on a unit price basis per each of boulder delivered to the Stream Channel Restoration locations.

- h. Boulder Clusters – This item shall include all work required by the Contractor to place boulder clusters using salvaged material and supplemental (as approved) in the place boulder clusters in the location directed by the field engineer and manner as shown in the Drawings and Specifications. This item includes cost of materials delivered to the construction area, material installation, labor, and equipment. Materials should be taken from the site area if possible. This item excludes the cost of boulders delivered to site but includes the installation of all boulders.

Payment for this item shall be made on a unit price basis per each boulder cluster supplied and placed.

- i. Erosion Control Fabric – This item shall include all work required by the Contractor to supply and place erosion control fabric (North American Green “BioNet SC150BN” or Engineer Approved Equal) as shown in the Drawings and Specifications. This item includes cost of materials delivered to the construction area, material installation, labor, and equipment.

Payment for this item shall be made on a unit price basis per square yard supplied and placed.

15. Bifurcation Structure

This set of items includes all work necessary to construct the stream bifurcation according to the Drawings and Specifications. At a minimum, this item should include the following:

- a. Clear, Strip and Grub – This item shall include clearing, stripping, and grubbing all construction areas, removal of any trees in the required construction areas. The cost shall include spoiling waste materials in stockpiles as outlined in the Specifications. The cost shall also include stockpiling of topsoil material for later use in the project.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- b. Access Road Improvements - This item shall include all materials, equipment, and labor required to improve access roads and restore at the completion of the project to the “pre-construction condition” as shown on the Drawings. This item also includes the cost of repairs for any damaged access during construction.

Payment for this item shall be made on a lump sum basis at the end of project.

- c. Care and Diversion of Stream Water - This item shall include costs associated with diverting the streams, or any other consistently flowing water, as needed for construction and in accordance with the Specifications and Drawings. Also included in this item is any temporary pipes, walls, trenches, or other structures used in the care and diversion of the stream.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- d. Dewatering - This item shall include, but not be limited to, all work required by the Contractor to care for dewatering on the site in accordance with the Specifications. This shall include control of ground water and seepage at individual excavations as required throughout construction and the prevention of sedimentation and/or degradation of all streams and tributaries. This item shall include, but not be limited to, all costs for temporary dikes, culverts, pumping systems, electricity or fuel, casings, sumps, wells, and all other such items, and shall include all permitting, management, and supervision required by the Specifications or government regulations.

Payment for this item shall be made on a lump sum basis with progress payments made based on percentage of total work completed.

- e. Excavation – This item of work shall include all work necessary to excavate the river banks, river bed, and surrounding area to the lines and grades shown on the Drawings. The cost shall also include all work necessary to spoil excavated materials in the areas indicated on the Drawings.

Payment for this item shall be made on a unit price basis per cubic yard of material excavated. Excavated volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after excavation

- f. Borrow and Fill – This item of work shall include all work necessary to borrow, fill the surrounding areas to the lines and grades shown on the Drawings. The cost shall also include all work necessary to excavate and transport borrow materials from an onsite location. The cost shall also include all work necessary to compact and condition the materials for placement in the foundation and embankment as indicated on the Drawings and stated in the Construction Specifications. This item shall not include the placement of the clay core.

Payment for this item shall be made on a unit price basis per cubic yard of fill. Fill volume shall be the in-place volume computed from the average end area method, or other appropriate survey and volume calculation methods, taken from field survey cross section measurements conducted before and after fill.

- g. Bifurcation Structure – The Contractor shall provide all materials, concrete, reinforcing steel, formwork, handrails, gates, trash racks, embedments, bolts, labor, and other items required to construct the bifurcation structure, and gate operator support as shown on the Drawings. This item shall also include all excavation, grading, and backfill required to construct the structure as shown on the Drawings.

Payment shall be made on a lump sum basis with progress payments made based on the percentage of total work completed.

- h. Non-woven Geotextile – This item of work shall include all work necessary to provide and place 6 oz./sy. geotextile beneath the riprap as shown on the Drawings. This item includes the cost of the material and delivery to the construction area.

Payment for this item shall be made on a unit price basis per square yard of non-woven geotextile supplied and placed.

- i. Type M Riprap Delivered – This item of work shall include all work necessary to supply Type M Riprap to the bifurcation location. The riprap shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per ton of riprap delivered to the bifurcation location.

- j. Riprap Placed – This item of work shall include all work necessary to place both the recycled riprap from other breach locations and the Type M Riprap in the thickness and, locations for the bifurcation structure, and associated riffle/pool sequence as shown in the Drawings.

Payment shall be made on a lump sum basis with progress payments made based on the percentage of total work completed.

16. Bank Stabilization

This set of items includes all work necessary to construct Bank Stabilization items according to the Drawings and Specifications. At a minimum, this item should include the following:

- a. Type VL Riprap Delivered – This item of work shall include all work necessary to supply Type VL Riprap for stream restoration to the locations shown on the Drawings. The riprap shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per ton of riprap delivered to the Stream Restoration locations.

- b. Type A Bank Stabilization – This item of work shall include all work necessary to supply and install Type A Bank Stabilization for stream restoration to the locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications. This item excludes the cost of Type VL Riprap delivered.

Payment for item shall be made on a unit price basis per linear foot of bank stabilization supplied and installed including soil for soil filled riprap.

- c. Type B Bank Stabilization – This item of work shall include all work necessary to supply and install Type B Bank Stabilization for stream restoration to the locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications. This item excludes the cost of Type VL Riprap delivered.

Payment for item shall be made on a unit price basis per linear foot of bank stabilization supplied and installed including soil for soil filled riprap.

- d. Type C Bank Stabilization – This item of work shall include all work necessary to supply and install Type C Bank Stabilization for stream restoration to the locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for item shall be made on a unit price basis per linear foot of bank stabilization supplied and installed.

- e. Type D Bank Stabilization – This item of work shall include all work necessary to supply and install Type D Bank Stabilization for stream restoration to the locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications. This item includes supplying and installing all rootwads needed for construction.

Payment for item shall be made on a unit price basis per linear foot of bank stabilization supplied and installed.

17. Vegetation

This set of items includes all work necessary to install vegetation items according to the Drawings and Specifications. These items shall also include the costs of maintenance and replacement for the time period of one-year including watering. At a minimum, this item should include the following:

- a. Willow Cuttings – This item of work shall include all work, labor, and equipment necessary to harvest and transplant Willow Cuttings 4' long x ¾" min. diameter to the locations in Zones 2C and 2D as shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per each cutting harvested and transplanted.

- b. Deciduous Trees & Shrubs 14" Tall 1-GAL – This item of work shall include all work, labor and equipment necessary to transport and install Boulder County Supplied Deciduous Trees & Shrubs 14" Tall 1-GAL to the locations in Zones 2A, 2B, 2C, and 3 as shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

The materials and installation shall be in accordance to the Drawings and Specifications. Payment for this item shall be made on a unit price basis per each tree/shrub Installed.

- c. Deciduous Trees & Shrubs 40 CI – This item of work shall include all work, labor and equipment necessary to transport and install Boulder County Supplied Deciduous Trees & Shrubs 40 CI to the locations in Zones 2A, 2B, 2C, and 3 as shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per each tree/shrub installed.

- d. Willow Transplant (Clump) – This item of work shall include all work, labor and equipment necessary to harvest and transplant Willow Transplant (Clump) to the locations in Zone 2 as shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per each tree/shrub harvested and transplanted.

- e. Herbaceous Plants (10 CI) – This item of work shall include all work, labor and equipment necessary to transport and install Boulder County Supplied Herbaceous Plants 10 CI to the locations in Zone 1 as shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per each Herbaceous Plants installed.

- f. Lower Riparian Seeding – This item of work shall include all work, labor, equipment and materials necessary to supply and install a Boulder County approved Lower Riparian Native Seeding Mix to the Zone 1 and Zone 2 locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per acre of lower riparian native seed supplied and installed.

- g. Upper Riparian Seeding – This item of work shall include all work, labor, equipment and materials necessary to supply and install a Boulder County approved Upper Riparian Native Seeding Mix to the Zone 3 and other areas identified as “Seeding Only” locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per acre of upper riparian native seeding supplied and installed.

- h. Wood Straw – This item of work shall include all work, labor, equipment and materials necessary to supply and install a Boulder County approved “Weed Free” Wood Straw Mix to the Zone 3 and “Seeding Only” locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per acre wood straw is applied.

- i. Beaver and Vole Protection – This item of work shall include all work, labor, equipment and materials necessary to supply and install a Beaver Protection Fence and Vole Protection Fence for the trees and shrubs planted as part of this project. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment shall be made on a lump sum basis with progress payments made based on the percentage of total work completed.

18. Topsoil

This set of items includes all work necessary to install topsoil items according to the Drawings and Specifications. At a minimum, this item should include the following:

- a. Imported Topsoil – This item of work shall include all work, labor, equipment and materials necessary to supply a Boulder County approved topsoil to the locations shown on the Drawings. This material will supplement any topsoil that has been stockpiled during Clearing and Grubbing or as directed by the Engineer. The materials shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per cubic yard topsoil supplied and placed.

- b. Class 1 Compost – This item of work shall include all work, labor, equipment and materials necessary to supply a Boulder County approved A-1 Organics Biocomp (or equivalent), Class 1 Compost at 130 CY/AC to the Zone 3 areas locations shown on the Drawings. The materials shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per acre material supplied and placed.

- c. Granular Endo Mychorrizal Inoculum – This item of work shall include all work, labor, equipment and materials necessary to supply a Boulder County approved Granular Endo Mychorrizal Inoculum at 20#/AC to the Zone 3 areas locations shown on the Drawings.

The materials shall be in accordance to the Drawings and Specifications. Payment for this item shall be made on a unit price basis per acre material supplied and placed.

- d. Granular Humate – This item of work shall include all work, labor, equipment and materials necessary to supply a Boulder County approved Granular Humate at 250#/AC to the Zone 3 areas locations shown on the Drawings. The materials shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per acre material supplied and placed.

- e. Biosol 7-2-1 Organic Fertilizer – This item of work shall include all work, labor, equipment and materials necessary to supply a Boulder County approved Biosol 7-2-1 Organic Fertilizer at 800#/AC to the Zone 3 only areas locations shown on the Drawings.

The materials shall be in accordance to the Drawings and Specifications. Payment for this item shall be made on a unit price basis per acre material supplied and placed.

- f. Biochar - This item of work shall include all work, labor, equipment and materials necessary to supply a Boulder County approved Biochar at 4 CY/AC to the Biochar Test Plot area shown on the Drawings.

The materials shall be in accordance to the Drawings and Specifications. Payment for this item shall be made on a unit price basis per acre material supplied and placed.

- g. Application and Tillage – This item of work shall include all work, labor, equipment and materials necessary to transport, spread, apply and till at 6" - 12" depth multiple passes the topsoil and amendments to the Zone 3 locations shown on the Drawings. The materials and installation shall be in accordance to the Drawings and Specifications.

Payment for this item shall be made on a unit price basis per acre tilled.

SECTION 211 – DEWATERING

Section 211 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

This work consists of dewatering temporary excavations in accordance with Colorado Department of Health and Environment dewatering regulations to facilitate construction activities.

MATERIALS

The Contractor shall provide all required materials and equipment to facilitate dewatering. On-site materials meeting specifications may be used within the limits of construction to construct temporary dams and berms. Other materials such as plastic sheeting and sandbags may also be used if desired by the Contractor.

CONSTRUCTION REQUIREMENTS

The Contractor shall dewater, by pumping or by excavating trenches leading to a positive gravity outlet.

General: For all work, the Contractor shall provide suitable equipment and labor to remove water, and he shall keep the excavations dewatered so that construction can be carried on under dewatered conditions where required by the Drawings and Specifications. Water control shall be accomplished such that no damage is done to adjacent banks or structures. The Contractor is responsible for investigating and familiarizing himself with all site conditions that may affect the work including surface water, level of groundwater and the time of year the work is to be done. All excavations made as part of dewatering operations shall be backfilled with the same type material as was removed and compacted to 95 percent of maximum density (ASTM D698) or to 75 percent relative density (ASTM D2049), except where replacement by other materials and/or methods are required.

Surface Water Control: Surface water control generally falls into the following categories:

- 1) Normal low flows along St Vrain Creek;
- 2) Storm/flood flows along St Vrain Creek;
- 3) Flows from existing storm drain pipelines; and
- 4) Local surface inflows.

The Contractor shall coordinate, evaluate, design, construct, and maintain temporary water control conveyance systems. These systems will not worsen flooding, alter major flow paths, or worsen flow characteristics during construction. The Contractor is responsible to ensure that any such worsening of flooding does not occur. The following is approximate storm flow data for St Vrain Creek is for information only. This information was obtained from St. Vrain Creek 30% Design Report (Engineering Analytics, 2016).

<i>Design Point</i>	Design Storm Hydrology (Years)		
	10	25	100
St Vrain Creek through Project Area	2,212 ft ³ /sec	4,912 ft ³ /sec	12,268 ft ³ /sec

The 100-year flood flow of 12,268 cfs has a one percent probability of being equaled or exceeded in any given year.

The Contractor will be responsible for diverting surface flow around the construction area so that the excavation for boulders and riprap remain free of surface water for the time it takes to install these materials, and the time required for curing of the concrete in the channel structures.

The contractor shall have the option of completing instream channel work while working in the live stream. Appropriate erosion control measures shall be employed when working in the live stream.

The Contractor shall, at all times, maintain a flow channel or route for St Vrain Creek. Temporary structures such as berms, sandbags, pipeline diversions, etc., shall be permitted for the control of creek flow, as long as such measures are not a major obstruction to flood flows, do not worsen flooding, or alter historic flow routes. Existing trees and vegetation should be preserved as possible.

Groundwater Control: The Contractor shall install adequate measures to maintain the level of groundwater below the foundation subgrade elevation and maintain sufficient bearing capacity for structures, pipelines, earthwork, and rock work. Such measures may include, but are not limited to, installation of perimeter subdrains, pumping from drilled holes or by pumping from sumps excavated below the subgrade elevation. The foundation bearing surfaces are to be kept dewatered and stable until the structures or other types of work are complete and backfilled. Disturbance of foundation subgrade by Contractor operations shall not be considered as originally unsuitable foundation subgrade and shall be repaired at Contractor's expense.

Special Dewatering Provisions for Instream Structures: The Contractor shall isolate the work area from surface waters, and then drawdown the groundwater level to an elevation below subgrade in a manner which will prevent "quick" conditions. The dewatering operation will be continuous, 24 hours per day, until the affected portion of the stream work is complete and the groundwater level can be allowed to rise without endangering the stability of existing or new features.

The Contractor should anticipate that even with the groundwater level lowered below subgrade where subgrade features are to be placed, conditions will be moist and possibly soft and easily disturbed by his activities. The Contractor is responsible to control such conditions and prevent loosening of the subgrade material and refrain from activities which would make the materials more permeable and/or inadequate to support the structure.

The Contractor may use special drain zones in his design for dewatering trenches or well points, as long as the system does not harm the permanent weep drain system or toe drain filter system's effectiveness. Any temporary dewatering trenches or well points will be restored following dewatering operations to reduce permeability in those areas as approved by the Engineer. Dewatering trenches are not acceptable on slopes where they may compromise the integrity of the sloped subgrade material.

SECTION 240 - PROTECTION OF MIGRATORY BIRDS

BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

Section 240 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

240.01 This work consists of protecting migratory birds during construction.

MATERIALS AND CONSTRUCTION REQUIREMENTS

240.02 The Contractor shall schedule clearing and grubbing operations, earth work, soil disturbance and work on structures (hereinafter "Construction Activities") to avoid taking (pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess) and minimize disturbance to migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall retain a qualified wildlife biologist for this project. The wildlife biologist shall have a minimum of three years' experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to the Engineer and BCPOS biologist for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Engineer and BCPOS biologist based on review of the biologist's qualifications.

(a) To protect migratory birds, the Contractor will take the following actions prior to commencement of construction activities:

1. *Nest Surveys.* The Contractor shall notify the Engineer at least ten working days prior to the start of construction activities. During the active nesting season, a survey for active nests shall be conducted by a qualified wildlife biologist within the seven days immediately prior to the commencement of construction and prior to each construction phase of the project.
 - i. Primary nesting season for migratory birds is from April 1st through July 31st.
 - ii. Primary nesting season for nesting raptors is from February 1st through August 31st.
 - iii. Primary nesting season for Bald and Golden eagles is from October 15th through July 31st and December 15th through July 15th, respectively.

The wildlife biologist shall survey the area-of-disturbance and a 50-foot buffer around the area-of-disturbance for each area and/or phase of the project for active bird nests in all bird nesting habitat types (standing vegetation, herbaceous ground cover, bare ground, cavities, exposed earthen banks, cliffs and rock ledges, and structures). The wildlife biologist shall record the location of each active nest, bird species, the method used to protect the nest, and the date of installation of the protection measure(s). A copy of these records shall be submitted to the Engineer and BCPOS biologist. If the status of a nest (active/inactive) cannot be readily determined, the biologist shall monitor the nest up to three separate occasions, with at least three and no more than seven days between monitoring events. After three negative surveys, a nest shall be deemed inactive.

The wildlife biologist shall conduct raptor nest surveys within 0.5 mile of the area-of-disturbance within the seven days immediately prior to the commencement of construction activities and prior to each construction phase. This survey can be done with binoculars. If construction activities are located within the Colorado Parks and Wildlife (CPW) recommended buffer zone for specific raptors, "NO WORK" zones shall be established around active nest sites during construction according to the CPW standards or as recommended by the wildlife biologist in consultation with CPW. The "NO WORK" zone shall be marked with either fencing or signing. Work shall not proceed within a

“NO WORK” zone until the wildlife biologist has determined that the young have fledged or the nest is unoccupied. Coordination with CPW on appropriate measures for protection for raptor nest sites is required.

2. *Vegetation Removal and Trimming (including trees, shrubs, and other vegetation).* When possible, vegetation shall be cleared prior to the time when active nests are present. Vegetation removal activities shall be timed to avoid the migratory bird breeding season, when possible.
3. *Grasses and Other Vegetation Management.* The undisturbed ground cover to 50 feet beyond the area-of-disturbance, or to Project Area, whichever is less, shall be maintained at a height of 6 inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work, whichever comes first.
4. *Work on structures.* The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless the following actions are taken:
 - i. The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and the Owner has removed existing nests, then the monitoring of nest building shall become the Contractor’s responsibility upon Notice to Proceed.
 - ii. During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.
 - iii. If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.
 - iv. Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are $\frac{3}{4}$ inch by $\frac{3}{4}$ inch or less.

If an active nest become established, (i.e., there are eggs or young in the nest), all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the wildlife biologist and approved by the Engineer. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged.

If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure.

- (b) *If Active Nests are Discovered:* If active nests containing eggs or young birds are found within the survey area, an appropriate buffer of 50 feet will be established around the nest by the wildlife biologist. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer and BCPOS biologist. The Contractor shall install fence (plastic) at the perimeter of the buffer. The Contractor shall avoid all active migratory bird nests. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive. Work shall not proceed within the buffer until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

Inactive nest removal and other necessary measures shall be incorporated into the work as follows:

- (c) *If inactive nests are discovered:*

1. Inactive nests outside the limits of ground disturbance and vegetation removal shall be left in place.
2. Inactive nests shall not be monitored.

- (c) *Taking of a Migratory Bird.* The taking of a migratory bird shall be reported to the Engineer and BCPOS biologist. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

SECTION 519 - ROCK STRUCTURES

GENERAL

This work includes construction of in-channel and floodplain rock structures within the St. Vrain Creek in accordance with these specifications and in conformity with the lines and grades shown on the plans. Each feature contains a variable number of boulders and rocks from on-site sources, and can be supplemented by imported rock from an off-site source to be identified by the Contractor. Work includes the selection and placement of approved boulders and rocks into distinct features as shown on the plans, and bid items for classes of rock, including:

- a. Riffle structures
- b. Type A Bank Stabilization
- c. Type B Bank Stabilization
- d. Type C Bank Stabilization
- e. Boulder Clusters
- f. Native Streambed Mix

Delineations of what constitutes a single “feature” is depicted on the plans. Construction will be limited to areas as shown on the plans or as approved by the Engineer.

MATERIALS

Stone shall be hard, durable, resistant to weathering and to water action, free from overburden, spoil, shale, structural defects, and organic material, and shall meet the size class specified. Neither breadth nor thickness of a single stone shall be less than one-third its length.

Boulders for use in-channel features shall be rounded to subrounded, and diameters as specified in the plan set (measured on the secondary axis, or B-axis). Rocks that make up subgrade materials or other less prominent portions of each feature may be angular. Specific details of the boulder and rock materials required for each feature are depicted in the typical details in the plans.

Boulders and rocks for use in the channel features shall be salvaged during construction activities per requirements in Section 203 and as approved by the Engineer and/or Owner’s representative. The Contractor may not remove boulders from existing bank stabilization measures unless approved by the Engineer in the field.

If additional rock and/or boulders are required for completion of the Work as shown on the plans, the Contractor will notify the Engineer immediately. Upon approval by the Engineer, the Contractor shall purchase and haul additional rock and/or boulders to the site. Material shall be supplied within a reasonable time frame to complete the Work per the Project Schedule. Rock color shall be similar to natural material found in the project area.

Table 511-1: Rock Mix Gradation Summary (inches)

Rock Mix Type	Dmin	D50	Dmax	Potential Sources of Material
Native streambed mix	Sand	1 to 4	18	Salvage: Stockpile from limits of in stream and other excavation.
Boulders mix	12	NA	48	Salvage and Import: Remove and stockpile boulders as they are uncovered during excavation. Import remaining quantities.
Bifurcation Riffle	Sand	9	24	Salvage: Stockpile from limits of in stream and other excavation.
Riffle Head	Sand	6	12	Salvage: Stockpile from limits of in stream and other excavation.
Point Bar Edge	Sand	4	12	Salvage: Stockpile from limits of in stream and other excavation.
Type C Stabilization	Sand	6	18	Salvage: Stockpile from limits of in stream and other excavation.

Angular rock material may be used to construct riffle beginnings, bank stabilization and the bifurcation riffle.

CONSTRUCTION REQUIREMENTS

Arrangement of boulders and rock within each feature and spacing between channel features will be as shown on the plans. The Contractor may be required to reposition or adjust the installation as directed in the field by the Engineer or their designated representative.

Rock shall be placed to minimize voids and form as smooth a surface as practical. This may require placing rock in multiple lifts, and backfilling voids with native streambed material, unless otherwise specified on the plans. Boulders may be machine-placed and then arranged as necessary by use of an excavator with a multi-prong grappling device or by hand to interlock and form a substantial bond.

During ground preparation for each rock structure, the Contractor shall remove and replace unsatisfactory material with satisfactory materials in areas to receive fill, as directed by the Engineer. Fill voids of substrate material to provide uniform surface for proposed fills.

The Contractor is responsible for protection and maintenance of the rock structures including all individual elements during construction and until final acceptance of the work. Disturbance of adjacent, previously-constructed work shall be repaired by the Contractor at the Contractor's expense.

Any dewatering required during construction shall follow the approved construction dewatering permit requirements and/or water control plan.

4.0 REVISIONS TO CDOT SPECS

REVISION OF SECTION 101 - DEFINITION OF TERMS

Technical Specifications related to construction materials and methods for the Work embraced under this Contract shall consist of the "Colorado Department of Transportation's Standard Specifications for Road and Bridge Construction", dated 2011.

All reference to the Colorado Division of Highways, Colorado Department of Transportation, and / or Department or Division shall also mean Boulder County Parks & Open Space

Certain terms utilized in the Specifications referred to in the paragraph above shall be interpreted to have different meanings within the scope of this Contract. A summary of redefinitions follows:

- Subsection 101.01: Abbreviations.
"NRCS" Natural Resources Conservation Service
"CWCB" Colorado Water Conservation Board
"BCPOS" Boulder County Parks and Open Space
"EWP" Emergency Watershed Protection
"CDBG-DR" Community Development Block Grant – Disaster Relief
"SVC" St Vrain Creek
"Reach 3" St Vrain Creek Reach 3 Restoration
- Subsection 101.28: "Department" shall mean the Boulder County Parks and Open Space.
- Subsection 101.29: "Chief Engineer" shall mean the Engineer, Boulder County Parks and Open Space or their designated representative.
- Subsection 101.51: "Project Engineer" or "Project Manager" shall mean the Engineer, Boulder County Parks and Open Space or their designated representative.
"Owner" shall be Boulder County Parks and Open Space
"Owners Representative" shall be Boulder County Parks and Open Space
"Boulder County Parks and Open Space", "Boulder County", "Owner", and "Sponsor" are all interchangeable.
- Subsection 101.76: "State" shall mean Boulder County Parks and Open Space (where applicable).

"DBH" refers to Diameter at Breast Height which is considered to be 4.5 feet above ground for this project

Below is a table outlining the specific personnel recommended for this project:

Sponsor's Representative:	Jesse Rounds (Boulder County), and/or representative
Technical Representative:	Obadiah Broughton (Boulder County), and/or representative
Project Engineer	XXXXXXXXXX XXXXXXXXX (Boulder County), and/or representative
Vegetation Specialist:	Claire DeLeo (Boulder County), and/or representative
Stream Restoration Specialists:	Claire DeLeo (Boulder County), Project Engineer (Boulder County), and/or representative
Design Team:	Clint Brown (Design Engineer, Engineering Analytics), Troy Thompson (Design Engineer, Ecological Resource Consultants, Inc.), Grant Gurnée (Senior Restoration Ecologist, Ecosystem Services, LLC), Jon Dausvardis (Senior Restoration Ecologist, Ecosystem Services, LLC) and/or representatives

REVISION OF SECTION 105 - CONTROL OF WORK

Section 105 of the Standard Specifications is hereby revised for this project as follows:

Subsection 105.01 shall be modified to include the following:

105.01 This section includes quality control/quality assurance (QA/QC) and performance criteria related to planting and seeding.

Subsection 105.02 shall be modified to include the following:

105.02 All plant and seed materials and workmanship associated with planting and seeding, including any other materials defined in Sections 207, 212, 213, 214, 215 and 217.

Subsection 105.03 shall be modified to include the following:

105.03 Performance criteria. The contractor shall be responsible for achieving the following performance criteria for planting and seeding.

- All vegetation (woody or herbaceous) shall be “ecotypic” or native to the northern Colorado Front Range and Boulder and/or Larimer Owner.
- Trees and shrubs shall be maintained and replaced up to an 80% minimum survival rate.
- Willow clumps, cuttings, or tublings shall be maintained and replaced up to an 80% minimum survival rate.
- Perennial wetland plant materials harvested/salvaged, if specified, shall be maintained and replaced up to an 80% minimum survival rate.
- Initial seed germination of all seeded areas shall produce a minimum of one (1) mature, viable native plant per square foot.
- Seeded areas shall be considered successful when no bare areas in excess of five (5) square feet are present.
- 80% of the seeded areas shall be comprised of the designed seed mix (as specified in the plans) or other desirable species (i.e., native or naturalized colonizers).
- Noxious & restricted weeds (as per State or local statute) shall not exceed a mean foliar cover of 5% for those on the A, B or C lists. Annual weeds (not listed) shall not exceed a mean foliar cover of 5%
- Performance criteria will be assessed by the Vegetation Specialist.

Table 105-1 should be replaced as follows:

Table 105-1
SUMMARY OF CONTRACTOR SUBMITTALS

Section No.	Description	Type	Contractor P.E. Seal Required?
108	Debris Removal Plan	Working Drawing/ Methods	No
108	Disposal Site Permission	Written Letter from Property Owners	No
108	Trees to be salvaged	List	No
514	Rock Screening Plan	Working Drawing/Methods	No
214	Planting Plan	Shop Drawing	No
514	Pedestrian and Bikeway Railing	Working Drawing	No
518	Expansion Devices: 0-6", 9", 12"...	Shop Drawing	Yes
602	Reinforcing Steel	Working Drawing	No
614	Traffic Control Plan	Working Drawing	No
618	Prestressed Concrete (Pre-tensioned)	Shop Drawing	Yes*
618	Prestressed Concrete (Post-tensioned)	Shop Drawing	Yes*
618	Steel Diaphragms between Prestressed Girders	Working Drawing	No
628	Pre-fabricated Pedestrian Bridges	Shop Drawing	Yes
<p>*A PE seal is required where the Contractor has provided the design for the item, or performed engineering to modify the details shown on the plans. The PE seal is not required where complete details are provided on the plans.</p>			

105.09 COORDINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS

Subsection 105.09 shall have the second paragraph replaced as follows:

In case of discrepancy the order of precedence is as follows:

- (a) Special Provisions
1. Project Special Provisions
 2. Standard Special Provisions

- 3. Boulder County Special Provisions
 - 4. Boulder County Permit Provisions
- (b) Plans
- 1. Detailed Plans
- (d) Supplemental Specifications
- (e) Standard Specifications

A hard copy of the Boulder County Special Provisions may also be obtained from the Boulder County Parks and Open Space.

Section 105 of the Standard Specifications is hereby revised for this project to include:

REVISION OF SECTION 106 - CONTROL OF MATERIAL

Section 106.08 shall include the following:

Site Access and Storage

1.1 GENERAL

- A. The Contractor shall take all necessary precautions for the protection of the Work and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The Contractor shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the requirements of the "Manual on Uniform Traffic Control Devices" 2009 Edition including the latest revisions.

1.2 HIGHWAY LIMITATIONS

- A. The Contractor shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to and from the site of the Work. It shall be the Contractor's responsibility to construct and maintain any access or haul roads required for its construction operations.
- B. All hauling by motor vehicles shall be confined to truck routes, except where otherwise authorized in writing by the County.

1.3 CONTRACTOR'S WORK AND STORAGE AREA

- A. The Contractor shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the Work. The Contractor shall submit a site plan, drawn to scale, of the proposed storage/trailer and/or construction site to the County for review and approval.
- B. The County will designate and arrange for the Contractor's use, a portion of the property (adjacent to the Work) for its exclusive use during the term of the contract as storage and shop area for its construction operations relative to this contract.
- C. Lands to be furnished by the County for construction operations, roads, and other purposes are as shown on the plans and/or specified herein. Should the Contractor find it necessary to use any additional land for its purposes during the construction of the Work, it shall provide for the use of such lands at its own expense. The Contractor shall obtain the County's or private property owner's written approval prior to using any additional land.

1.4 TEMPORARY STREET USE

- A. Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, alley, way, or parking area during the performance of the Work hereunder, and it shall so

conduct its operations as not to interfere unnecessarily with the authorized work of the Boulder County, utility companies, or other agencies in such streets, roadways, or parking areas.

- B. No Street shall be closed to the public without first obtaining the permission of the Board of County Commissioners and other proper governmental authority, where applicable. Where excavation is being performed in primary streets or highways, one lane of traffic shall be kept open in each direction at all times unless otherwise noted in the plans under the terms of the permits issued by the County, State, or other public agencies, as required.
- C. Fire hydrants on or adjacent to the Work shall be kept accessible to firefighting equipment at all times.
- D. Temporary provisions shall be made by the Contractor to assure the use of sidewalks and the proper functioning of all gutters, sewer inlets, and other drainage facilities.
- E. Wherever necessary or required for the convenience of the public or individual residents or business places at street or highway crossings, private driveways, or elsewhere, the Contractor shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the Contractor shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges or steel plates, which written consent shall be delivered to the County prior to beginning the excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation.
- F. Temporary bridges or steel plates for street and highway crossings shall conform to the requirements of the authority having jurisdiction in each case, and the Contractor shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required.

Replace Tables 106-2 and 106-3 with Table 106-2

Table 106-2 – Testing Schedule – Item 412 Portland Cement Criteria

Element	Minimum Testing Frequency Contractor's Quality Control
Aggregate Gradation and Sand Equivalent	For the first five days, minimum of 1/day, then 1/10,000 sq. yds. After 5 days, 1/40,000 sq. yds.
Slump	First three loads each day, then as needed for control.
Water Cement Ratio	First three loads each day, then as needed for control.
Air Content and Yield	First three loads each day, then as needed for control.
Compressive Strength	1/100 cu. yds.

REVISION OF SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

Section 107 of the Standard Specifications is hereby revised for this project as follows:

107.02 PERMITS, LICENSES, AND TAXES

Subsection 107.02 shall include the following:

Unless otherwise specified, the Contractor shall procure or ensure that all required permits and licenses are acquired; pay all charges, fees, and taxes, including permits procured for this project by others; and give all notices necessary and incidental to the due and lawful prosecution of the work. The costs of these permits will not be paid for separately, but shall be included in the work.

Prior to beginning work, the Contractor shall furnish the Engineer with a written list of all permits required for the proper completion of the contract. The list shall clearly identify the types of permits that must be obtained before work on any particular phase or phases of work can be started. Copies of the fully executed permits shall be furnished to the Engineer upon request. Below is a list of some applicable permits for this project. This list is not all inclusive and should be compared to list developed by contractor.

BCPOS and the Engineer will support the contractor in applying for permits required as part of this project. Permits are in various stages of process and contractor should be able to obtain permits not acquired prior to the start of the project by BCPOS or the Engineer. Permits that are may be required are:

1. Boulder County Land Use Department Limited Impact Special Use Permit
2. Boulder County Stream Restoration Permit (A Combined Boulder County Grading Permit and Boulder County Floodplain Development Permit).
3. Boulder County Department of Transportation Right of Way Permit
4. US Army Corps Clean Water Act Section 404 Nationwide Permit 37
5. Stormwater Discharge Permit Colorado Department of Public Health and Environment
6. Construction Dewatering Wastewater Discharge Permit CDPHE
7. State Department of Revenue Tax Exempt Permit
8. Boulder County Oversize/Overweight permit (if applicable)
9. Colorado Department of Transportation special use and/or access permit (if applicable)

Contractor shall verify all appropriate permits have been acquired and transferred to their name, as applicable, prior to starting any work. Contractor must meet requirements of all permits acquired for this project.

Contractor shall obtain relevant permits required for construction, including but not limited to the following:

1. Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division Storm Water General Permit for Construction Activities.
2. CDPHE Construction Dewatering Wastewater Discharge Permit

3. Oversize/Overweight permits (if applicable).

The BCPOS will obtain the following permits or clearances:

1. US Army Corps Clean Water Act Section 404 Nationwide Permit 37
2. Boulder County Land Use Department Limited Impact Special Use Permit
3. Boulder County Stream Restoration Permit; including Floodplain Development Permit and Grading permit (subject to Contractor permit commitments and collaboration)
4. Section 7 – Endangered Species Act: US Fish and Wildlife Service (USFWS)
5. Section 106 – National Historic Preservation Act
6. Colorado Parks and Wildlife - SB40 Review

The Contractor and BCPOS shall collaborate to obtain the Boulder County Stream Restoration Permit, which upon approval results in the issuance of a Boulder County Floodplain Development Permit and Boulder County Grading Permit. A preliminary Boulder County Floodplain Development Permit has already been applied for by the County Project Team. Contractor shall address remaining requirements of the Boulder County Stream Restoration Permit and Boulder County Limited Impact Special Use Permit including grading permit, erosion control, traffic control plan, transportation management plan, haul routes, stream access routes, Boulder County Oversize/Overweight permit (if applicable), and all other necessary information required by Boulder County to obtain permit approvals.

Some clearances have been developed by the engineers and BCPOS, but will need to be verified by contractor prior to starting any work. Some clearances require review of the work area prior to start of work by a qualified individual. Please review requirements in this document for specifics. Contractor must meet requirements of all clearances acquired for this project.

107.12 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

Subsection 107.12 shall include the following:

The Contractor shall protect in place existing riparian, wetlands, and other vegetation, except for those what must be removed to accommodate construction of the project. The Contractor shall fence specific areas of vegetation to be protected in the field as shown in the plans or as directed by the Engineer. All trees designated to be protected on the design plans and within the specifications will receive plastic fencing on all sides facing either direct construction or access routes.

The Contractor shall perform all the work in such a manner that the least environmental damage will result. Any questionable areas or items shall be brought to the attention of the Engineer for approval prior to vegetation removal or any damaging activity. Damaged or destroyed fenced trees, shrubs, or wetlands, which could have been avoided as determined by the Engineer, shall be replaced in kind at the expense of the Contractor.

If the protective vegetation fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is repaired to the Engineer's satisfaction. Replacement of the protective fence shall be at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

Before beginning construction, the contractor shall determine the location of all the existing approved OWTS components in the project area. The documents are scanned into septicmart.org. If there are unapproved OWTS, there may not be any information online. In this case, the owner should help with the general location of the system.

Heavy equipment shall be restricted from the surface of the absorption fields of nearby residences. Detailed information about the location of OWTS components can be found at www.bouldercounty.org/env/water/pages/septicmartcheckrecords.aspx.

107.15 RESPONSIBILITY FOR DAMAGE CLAIMS

Subsection 107.15 shall include the following:

All Insurance Policies and Certificates of Insurance issued for this project shall name as additional insured(s), Boulder County Parks and Open Space, whether private or governmental, the Boulder County Parks and Open Space officers and employees, and the Engineer and its agents and employees, and any other person(s), company(ies), or entity(ies) deemed necessary by the Boulder County Parks and Open Space.

Subsection 107.24 shall include the following:

The emission of dust into the atmosphere shall be minimized during handling and storage of construction materials, and the Contractor shall use such methods and equipment as are necessary to minimize or prevent dust during these operations.

Equipment and vehicles that are found to have emissions of exhaust gases or particulates that exceed applicable limits established by Federal, State or local laws or authorities, shall not be operated until corrective repairs or adjustments are made. If required by the County, the Contractor shall provide acceptable evidence that equipment and vehicles have been tested for exhaust emissions and have been found to be in compliance with applicable limits.

The Contractor shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance, and to prevent dust from damaging crops, orchards, cultivated field, and dwellings, or causing a nuisance to persons. The Contractor shall be held liable for any damage resulting from dust originating from his operations under these specifications on County property or elsewhere.

107.25 WATER QUALITY CONTROL

Subsection 107.25 (b) *Construction Requirements* is hereby revised to include the following:

25. This project is subject to permits with the Colorado Department of Health for Stormwater Discharges and Dewatering Discharges Associated with Construction Activities. The permits shall be obtained by the Contractor. The Contractor shall prepare all applications required and submit to the Colorado Department of Health. The Contractor shall submit a copy of certification of the permit to the Engineer prior to the start of construction. The Contractor is

responsible for all application permit fees.

26. This project is subject to US Army Corps of Engineers Nationwide Permit 37 for Emergency Watershed Protection and the Pre-Construction Notifications for the St Vrain Creek Reach 3 Restoration.
27. Dewatering work for earthwork operations adjacent to or encroaching on, streams or water courses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or water courses by construction of intercepting ditches, bypass channels, barriers, evaporation ponds, or by other approved means. Excavated materials or other construction materials shall not be stockpiled or deposited near or on streambanks, lake shorelines, or other water course perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon the water course itself, except as approved by the County. Turbidity limits from the Dewatering Permit shall be followed.
28. Turbidity increases in a stream or other bodies of water that are caused by construction activities shall be limited to the increases above the natural turbidities permitted under the water quality standards prescribed for that stream or body of water. When necessary to perform required construction work in a stream channel, the prescribed turbidity limits may be exceeded, as approved by the Colorado Department of Public Health and Environment (CDPHE), and the County, for the shortest practicable period required to complete such work. This required construction work may include such work as diversion of a stream, or specified earthwork in or adjacent to a stream channel, and construction of turbidity control structures. Mechanized equipment shall not be allowed to operate in flowing water except as necessary and permitted to construct crossings or to perform the required construction.

Abatement of Noise pollution:

Work Hours:

Hours of operations shall be limited to 7:30 a.m. to 5:00 p.m. Monday through Friday.

Hauling Hours:

Hours of hauling shall be limited to 8:30 a.m. to 4:00 p.m. Monday through Friday.

Work on Saturdays and Sundays, nights, and federal holidays shall not be allowed unless approved in writing by the County.

For information on required steps to secure the Stormwater Discharge Permit and the Construction Dewatering Permit, the Contractor shall contact:

Colorado Department of Public Health and Environment
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530
Attn: Permits Unit, % Nathan Moore
Phone: (303) 692-3555

REVISION OF SECTION 201 - CLEARING AND GRUBBING

Section 201 of the Standard Specifications is hereby revised for this project as follows:

Subsection 201.01 shall be deleted and replaced with the following:

This work consists of clearing, grubbing, removing, and disposing of vegetation within the limits of disturbance required by the work. Vegetation and objects designated to remain shall be preserved free from injury or defacement. Clearing and Grubbing includes the removal of woody material that is measured to have a Diameter at Breast Height (DBH) less than 6 inches at 4.5 feet above ground surface. This work also includes stockpiling the limited quantity of topsoil within the project limits.

Subsection 201.02 shall be deleted and replaced with the following:

Areas of protection shall be designated by the Engineer and/ or Owner prior to construction. All trees, shrubs, plants, grasses and other vegetative materials within those areas of protection shall remain, except as approved by the Engineer. Every object that is designated to remain and is damaged shall be repaired or replaced as directed, at the Contractor's expense. Once all clearing and grubbing is completed and approved, no additional clearing shall be allowed unless approved, in writing, by the Engineer.

Clearing and Grubbing shall typically extend to the toe of fill or the top of cut slopes and shall not extend beyond the limits of disturbed area for the project. The Contractor shall install temporary plastic fence or demarcation flagging, acceptable to the Engineer, along the limits of construction prior to commencing with the clearing and grubbing. Clearing and Grubbing limits, area of disturbance fencing and flagging, and woody material to be removed shall be approved by BCPOS and Engineer in the field prior to work.

Contractor shall harvest the limited quantity of topsoil within the limits of disturbance for the project and stockpile for later placement on the floodplain. Topsoil removal should be according to the following specifications:

Topsoil Removal: After the construction area and its access have been delineated, the vegetation should be mowed to a maximum height of four (4) inches over the area to be disturbed. If the amount of vegetation exceeds what can be incorporated into the soil without interfering with establishing a proper seedbed, then excess vegetation shall be removed.

Topsoil should be removed by a front-end loader (preferred method) or grader. **Under no circumstances should upland topsoil be removed under wet soil moisture conditions.** The depth of the topsoil layer may vary. Topsoil may be delineated from the subsoil by a higher organic matter content (usually, but not always, indicated by a darker color) **and** a relatively loose and friable soil structure. Typically, topsoil is between four (4) and eight (8) inches in depth.

Under no circumstances shall subsoil be mixed with topsoil, and subsoil shall not be placed on top of the topsoil. If necessary, salvaged topsoil shall be cordoned off to delineate the topsoil from subsoil or other materials. The topsoil shall be protected from contamination by subsoil material, weeds, etc. and from compaction by construction equipment and vehicles.

Woody material removed under Clearing and Grubbing that are less than 1-inch DBH will be shredded on site for use as mulch at Engineer's direction. See Section 213.02 for specifications on Wood Shreds.

Woody material removed under Clearing and Grubbing that are between 1 and 6 inch DBH will be used in fascines, slash material for large wood structures, and other design elements as laid out in the Plans at the direction of the Engineer. Woody material of this size shall be stockpiled with branches intact to the extent possible. For trees with diameters equal to or less than 6 inches in diameter, the Contractor shall leave the stump and roots in place if they are below the proposed final grade. The portion of the stump and roots that are above the proposed final grade shall either, (a) be removed and chipped, or; (b) salvaged intact with the rest of the tree for incorporation into large wood structures as slash debris. Woody material that cannot be re-used in project elements will be chipped and spread across the floodplain as approved by BCPOS or Engineer. Crack willows shall be hauled off site. Siberian elms are to be removed, but can be reused on site. Locusts shall not be used. Owner or engineer can provide support as needed.

Avoid the unnecessary removal of trees or shrubs; for example, prune the aerial portions of trees and shrubs that hang over a project area and interfere with equipment. All trimming shall be done in accordance with good tree surgery practices.

Existing willows should be harvested and paid for separately per Section 215 (Transplanting Plant Material).

Non-native woody vegetation removed and not utilized on site under Clearing and Grubbing shall be hauled off-site to an approved disposal site. Removal of non-native woody material is included in Clearing and Grubbing. Non-native material will be cleared and hauled away offsite. Burning of cleared material will not be permitted.

Sediment and debris removal shall be planned and performed according to Colorado NRCS Conservation Practice Standard 326- Clearing and Snagging- (Website Link: Colorado eFOTG- https://efotg.sc.egov.usda.gov/efotg_locator.aspx?map=US), and the following:

The contractor must provide a disposal plan for clearing and snagging for review and approval by the NRCS/sponsor/owner's representative. The disposal plan for anthropogenic debris must be according to all applicable local regulations and Colorado Department of Health and Environment requirements titled: 2013 Floods - Guidance: Management and Disposal of Flood Debris.

Except in areas to be excavated, all holes resulting from the removal of vegetation and obstructions shall be backfilled with suitable material and compacted.

Migratory birds, as well as their eggs and nests, are protected under the Migratory Bird Treaty Act (MBTA). The active nesting season for most migratory bird species in Colorado is between April 1 and August 31. To avoid a violation of the MBTA, conduct habitat-disturbing activities (F, clearing and grubbing, etc.) in the non-breeding season (August 16 to March 31). If work activities are planned between April 1 and August 31, remove or alter vegetation within construction footprints and road right-of-ways (ROW) prior to April 1 to discourage nesting within areas scheduled for summer construction. If the Contractor is unable to meet these requirements, the Contractor shall notify the Engineer prior to any vegetation removal. A qualified biologist shall conduct a nest survey within 1 one week of

construction. If no nests are present, construction may commence with the Engineers or Owners approval. See Revision of Section 240 for additional information.

If already on-site, some large downed woody material shall remain, particularly if embedded in stream deposits. Standing dead trees (snags) shall remain standing. Approval from the engineer is required to remove snags not indicated in the demo plan.

Areas of existing vegetation that are to be protected shall be delineated in the field so that heavy machinery is prevented from entering the areas and disturbance is avoided.

Clearing and snagging should only remove as much large wood as needed to reestablish the pre-flood capacity of the channel and floodplain. Leave large wood in the riparian zone where it does not create a risk to life or property, and where possible consider using logs to construct channel and bank stabilization measures.

REVISION OF SECTION 202 - REMOVAL OF STRUCTURES AND DEBRIS

Section 202 of the Standard Specifications is hereby revised for this project to include the following:

Subsection 202.01 shall include the following:

This work includes removal of abandoned utilities appurtenances in the project area and flood generated trash and debris that requires removal as directed by the engineer.

CONSTRUCTION REQUIREMENTS

Subsection 202.02 shall include the following:

The contractor shall submit to the Engineer methods that will be utilized to remove debris along the project corridor. Methods proposed by the contractor will need approval by the Engineer, especially for areas that impact the active stream environment.

The Contractor shall remove and dispose of all visible abandoned utility appurtenances and flood generated debris that are located within the work area and abandoned as a result of this project. These items shall not be disposed of within the project limits.

The Contractor shall make all arrangements to obtain written permission from property owners for disposal locations outside the limits and view of the project. Copies of this written agreement shall be furnished to the Engineer before the disposal area is used.

Any object that is not designated to be removed and is damaged shall be repaired or replaced as directed by the Engineer, at the Contractor's expense. BCPOS will be required to approve replacement of any items removed in error.

1. Within 10 calendar days after the Notice to Proceed is issued, the Contractor shall submit to the County for review and approval, a Materials Handling Plan.
2. The Materials Handling Plan must be approved in writing by the County prior to the Contractor's commencement of work within the defined areas.
3. The Materials Handling Plan shall, at a minimum include: Detailed written procedures to be used to load and transport the debris to an approved landfill or recycling facilities.
4. The County will establish the limits of areas where debris is to be removed, or areas, objects or features that are designated to remain undisturbed.
5. In general, the work areas shall include the road section, stream channels, ditches, temporary approaches to bridges, detours and other areas as shown in the contract documents or directed by the County.
6. Debris removal beyond the areas of construction shall be done only where specified or directed by the County.

7. As detailed on the plans, it is expected that all materials encountered at the site will be classified as uncontaminated debris. If any material is encountered that can be classified as contaminated debris, it shall be reported to the County and at the County's direction stockpiled, tested and disposed of in accordance with all applicable regulations.
8. Removal and disposal of uncontaminated debris shall be taken to facilities accepting such designated wastes.

The Contractor is responsible for choosing appropriate disposal facilities and specifying those facilities to the County.

202.02.1 Removal of Trees.

Trees removed on this project will fall into one of the following categories:

- All trees measured to have a Diameter at Breast Height (DBH) greater than 12 inches at 4.5 feet above ground surface will be salvaged with rootwad intact for potential re-use as key members in the various large wood structures proposed for this project. Desired rootwad width is 3 to 4 times the DBH of the tree. Salvaged trees will have a minimum length of 25 feet (if possible) and will be limbed to a limb length of no more than 24 inches, unless otherwise directed by engineer. Exceptions to salvage rootwad trees are those trees that are not in locations accessible with an excavator, or trees that have root systems growing out of rock.
- Trees less than 12-inch DBH are not designated for reuse as key logs in Large Wood Structures, but they will be re-used for fascines or slash material in the large wood structures. Any trees not used as such and trees less than 1" DBH will be shredded on site for use as mulch (see Section 213.02, Wood Shreds).

Tree removal with rootwads intact shall follow a detail provide by the Engineer at pre-construction meeting. Process includes excavating trench around rootwad of tree and use of excavator to topple tree over, and may necessitate climbing tree to cut to length prior to toppling..

Native woody material will be re-used to the extent possible on-site. Contractor shall take care to protect the intact rootwads and limbs, if present, from damage during handling, stockpiling, and eventual installation in large wood structures. Trees, branches, and rootwads that are not re-used in project elements shall be chipped and spread onsite at the direction of the Engineer in the field.

Only invasive trees that do not sprout new growth from dead material (e.g., Elm) will be considered for re-use onsite, as approved by BCPOS. Crack willows (*Salix fragilis*) shall not be re-used on site. All other non-native woody material shall become the property of the contractor, and hauled off-site to an approved disposal site at the Contractor's expense. The Contractor shall make all arrangements to obtain written permission from property owners for disposal locations outside the limits and view of the project. Copies of this written agreement shall be furnished to the Engineer before the disposal area is used.

Full removal of tree roots will be required for all trees that are in conflict with structure excavation limits.

All trees cut and removed, leaving roots intact in the ground, shall have remaining stumps cut as flush to the ground as possible, with no more than 4” protruding above finished grades. All non-native tree species, as designated by the Project Manager or Ecologist, shall have the cut stumps treated with an appropriate herbicide (refer to Section 217) within five minutes of cutting to prevent re-sprouting.

The Contractor shall identify and mark each tree to be removed. The Engineer shall be notified for inspection and approval of these marked trees. No tree greater than 6 inch DBH shall be removed without prior approval by the Engineer. Trees removed without prior approval of the Engineer shall be replaced at the Contractor’s expense.

Materials being stored for future use shall be stockpiled in areas designated on plans or approved by the Engineer. Areas shall be protected with fence and erosion control measures.

REVISION OF SECTION 203 - EXCAVATION AND EMBANKMENT

Section 203 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

Subsection 203.02 shall include the following:

This work consists of excavation and fills within the St. Vrain Creek channel and floodplain and hauling excess material off site. This work includes the selective stripping, stockpiling and replacement of existing native river bottom material (sand, gravel, cobbles) as described herein.

This work also consists of the final excavation and fills (shaping) of the reconstructed or rehabilitated St Vrain Creek bottom as shown on the plans, after other mass grading has been completed. This includes fine grading to create riffles, pools, bank contouring, and creating a low flow channel with the typical dimensions and planforms indicated on the Plans. The Engineer may provide additional direction in the field on the location and dimensions of these channel features. The Engineer may direct the creation of micro-topography at their discretion to create small-scale stream channel and landscape features not shown on the plan set.

This work also includes the sorting, screening, and stockpiling of in-situ larger, alluvial rounded rock and boulder material located within the grading limits. This salvaged material will be used in later stages of construction to form river features and design elements.

Contractor shall provide a Rock Screening Plan as part of this work to describe the proposed methods to achieve/meet required rock mix gradations for instream rock structures and bank stabilization structures as depicted in design plans. The Rock Screening Plan shall include available equipment, proposed screening and stockpile areas, methods of creating and verifying accurate gradations for each specified rock mix, expected schedule for screening activities, a detailed list of assumptions for developing the price quote in the bid (including expected volume of material to be screened), and a brief summary of the Contractor's past experience with similar screening work. The Rock Screening Plan shall be submitted to Engineer and approved prior to implementation.

CONSTRUCTION REQUIREMENTS

Subsection 203.05 shall include the following:

Existing river conditions prior to ground disturbing activities shall be carefully documented with photographs or other approved method. The Contractor shall immediately notify the Engineer if the existing conditions appear to significantly vary from the surveyed topography shown on the Plans.

Channel grading is performed in multiple steps, beginning with mass grading. The proposed channel and floodplain shall be formed according to the typical sections and grading contours as shown on the plans. During this stage, all boulders greater than 30-inches in diameter that are suitable for use with design features shall be removed and stockpiled as close to the work area as possible. The Contractor shall also salvage and screen all rock excavated from within designated coarse sediment deposits in the floodplain and within the vicinity of pre-flood channels. In addition, a 45-foot wide and 18-inch thick

layer of the existing river bottom material along the existing channel alignment is to be scraped and stockpiled/salvaged for eventual replacement as the surface layer of the design channel.

After the mass grading surface is prepared, fine grading will then occur in the bottom of the final multi-stage channel. The channel bottom will be reshaped by excavating a 12-inch (average) deep thalweg and pools, as shown on the plans. This excavated material will then be placed and graded into slightly elevated areas adjacent to the thalweg in the form of point bars and riffles as shown on the plans. Bed material cut during fine channel grading shall be used as fill for areas in the channel requiring alluvial fill. The placed material will then be track packed. This process is repeated until design depths and shaping are achieved. This work is often concurrent with the construction of riffle structures and placement of habitat boulders (separate pay items). Most of this work is performed by utilizing an excavator equipped with a thumb and assisted by either a second excavator, loader, tracked skid steer or small dozer. Graded channel elements shall be inspected and approved by the Engineer.

Where practicable, fine grading in run segments shall consist of shifting river substrate across the channel to enhance the existing low-flow channel shape without extensive disturbance to the bed.

The specific location of certain riffle crests and pool tail-outs may be adjusted under the supervision of the Engineer to better match existing conditions and minimize bed disturbance if field conditions differ from the existing conditions shown in the Plans.

If additional rock material is necessary for a given size class, the Contractor will need to sort, screen, and stockpile coarse rock during excavation to limit the quantity of imported material. It is the Contractor's responsibility to identify potential salvage areas in the field to collect substrate material for screening, but the Engineer will provide additional guidance. Target areas for screening will likely include relic (pre-flood) channels, and coarse rock uncovered during floodplain excavations. If additional material is still necessary to meet the project demand, the Contractor shall import material from an off-site source (separate pay item) as a last resort, if approved by the Engineer.

Screening shall be used to split the salvaged rock material into at least three size classes: 6-inch, 12-inch, and 24+ inch. This sorted and screened rock material shall be combined with the native streambed mix to form a well-graded mix. Refer to Section 506 (Rock Structures) for more detailed information about the required gradation of each rock mix. Rock shall continue to be sorted and screened until the demand is met for the coarse substrate mix, floodplain sill mix, and boulder mix, unless otherwise directed by the Engineer. For reference, pebble Count data collected during the design phase of the project, along with maps, can be found in the "30% Planning and Design Report, St. Vrain Creek Restoration Highway 36 to Crane Hollow Road Boulder County, Colorado", submitted to Boulder County by Engineering Analytics in March 2017. It is important to note that these pebble counts were typically collected at existing riffles, and may represent a coarser substrate gradation than may be found elsewhere in the channel and floodplain. No bulk substrate samples have been collected.

Soils Compaction Testing:

1. The County may require the Contractor to perform QA/QC testing of geotechnical materials and work product in areas with substantial fill to determine the conformance of the Work with the requirements of the Contract Documents.

2. The Contractor will retain a qualified consultant to perform any necessary Contractor's QA/QC testing to assist the Contractor in determining the state of materials incorporated into the Work.
3. The County's QA/QC program is for the sole use of the County to determine the quality of the Work and is in no way intended to replace the Contractor's QA/QC.
4. The frequency of the County's QA/QC compaction testing will be in conformance with the accepted industry standard of care and at the Engineer's discretion.
5. Areas of noncompliance, as determined by the County's QA/QC testing, shall be removed and re-compacted to conform to requirements of the Contract Documents upon receipt of test results. Costs for reworking and retesting backfill material to meet the requirements of the Contract Documents are at the Contractor's expense.
6. Fill materials shall be thoroughly mixed to achieve uniform moisture content, placed in uniform lifts not exceeding 8 inches in loose thickness, and properly compacted, unless otherwise approved by the Engineer. Soils that classify as GP, GW, GM, GC, SP, SW, SM, or SC in accordance with the USCS classification system (granular materials) should be compacted to 95 percent of the maximum standard Proctor density at moisture contents from 2 percent below to 2 percent above the optimum moisture content as determined by ASTM D698. Soils that classify as ML, MH, CL, or CH should be compacted to 95 percent of the maximum standard Proctor density at moisture contents from 2 percent below to 2 percent above the optimum moisture content as determined by ASTM D698. It may be necessary to rework the fill materials more than once by adjusting moisture and replacing the materials, in order to achieve the recommended compaction and moisture criteria.

REVISION OF SECTION 207 - TOPSOIL

Section 207 of the Standard Specification is hereby revised as follows:

Subsection 207.01, shall include the following:

All topsoil shall be either secured from the site or imported and shall be approved by Boulder County at the source prior to import. It shall also include the placing of topsoil upon constructed cut and fill slopes after grading operations are completed and prior to seeding.

Subsection 207.02 shall include the following:

Imported topsoil shall be a minimum thickness of 4" of topsoil placed to final grade or as directed by the Engineer or Vegetation Specialist. Imported topsoil shall consist of roughly equal parts sand, clay & loam (i.e., a sandy clay loam) and capable of supporting plant life. Imported topsoil shall be free of subsoil, refuse, stumps, woody roots, rocks, brush, noxious weed seed and reproductive plant parts from current state and Owner weed lists (as feasible), heavy clay, hard clods, toxic substances, or other material which would be detrimental to its use on the project.

Imported topsoil shall not be toxic to plant life and exhibit the following qualities:

- pH between 6.0 and 8.0
- Salts shall be less than 2.0 mmhos/cm or EC and sodium less than 10 esp or meq/100g soil
- CEC no less than 15.0

An agronomic soil nutrient analysis of existing and imported soil shall be provided by the Contractor a minimum of four weeks before its use on the project site for the Vegetation Specialist's approval. Topsoil analysis shall be current and have been conducted within 60 days from the submittal date. The analysis shall indicate any deficiencies or excesses, and recommended amendments and rates, including macro- and micro-nutrients for native seeding. The Contractor shall provide as many samples and analyses from as many sources as necessary until a suitable topsoil is found or can be amended to be suitable. The Vegetation Specialist reserves the right to waive specific requirements set forth herein.

Topsoil and/or seeding surfaces shall be amended as per Section 212 – Seeding, Fertilizer and Soil Conditioner to obtain the above qualities, including the addition of other soil conditioners.

Subsection 207.03, paragraph two, shall include the following:

Relieving Compaction: Areas to receive topsoil that have been compacted by heavy equipment shall be ripped or chiseled **prior to redistribution of topsoil**. Construction areas and other compacted areas will be chiseled to a minimum depth of 10 inches, with no more than a 10 inch interval between chiseled furrows. Two passes with a chiseler may be necessary, with the second pass chiseling between the first furrows, or perpendicular to original furrows.

Subsection 207.03, paragraph four, shall include the following:

Redistribution of Topsoil and Application of Soil Conditioning: The topsoil should be redistributed uniformly over the disturbed areas, minimizing compaction by equipment. **Topsoil redistribution**

shall not occur under wet soil conditions. Topsoil shall be ripped again after it is placed as specified above in the paragraph “Relieving Compaction” if compaction has occurred during topsoil redistribution. See Specification 212 for Seeding, Fertilizer, Soil Conditioning, and Sodding application. Soil conditioning shall be incorporated evenly throughout the topsoil.

REVISION OF SECTION 208 - EROSION CONTROL STORMWATER MANAGEMENT

Section 208 shall include:

“Erosion control” is interchangeable with “Stormwater Management Plan”.

Stormwater Management plans are provided as guidelines for the contractor. A permit from the CDPHE must be acquired prior to starting the project. Temporary stream crossings might be required as part of this project depending on contractor means and methods. Temporary stream crossings should follow Boulder County Standards and will be included in the cost of the work being completed.

Erosion control will also include dust control on haul routes through watering and sweeping.

Available erosion control reference documents include UDFCD Volume 3 Stormwater Quality and CDOT M&S Standards.

Appropriate erosion control measures shall be installed downslope and parallel to contours for all disturbed areas including staging areas. The location of erosion control shall be shown on site plans submitted for building permit approval.

Stockpiled fill piles not disturbed over 30 days shall be properly covered and/or stabilized with temporary vegetation.

Subsection 208.02 is hereby revised to include the following:

- (n) Straw wattle. Shall be the following types unless otherwise shown on the plans:
100% biodegradable netting with a core of noxious weed free rice, wheat or barley straw.
Photodegradable netting shall not be allowed.

Subsection 208.05 shall include the following:

- (5) (n) *Straw wattles*. Straw wattles shall be installed according to manufacturer recommendations and be anchored securely to the ground with wood stakes. *Wood Stakes* stake shall be constructed out of untreated wood at a minimum nominal dimension of 1.5 inches by 1.5 inches by 18 inches long. If used on slopes, straw wattles shall be installed in a 2-3 inch deep trench. Straw wattles may be used in place of silt fencing.

REVISION OF SECTION 209 – WATERING AND DUST PALLIATIVES

Section 209 of the Standard Specifications are hereby revised for this project as follows:

Delete Subsection 209.06, Landscaping and replace with the following:

209.06 Landscaping. The Contractor shall furnish water for seeding, mulching, planting, transplanting, and any other landscape work required for the project. The contractor will be responsible for watering through the one-year warranty period.

REVISION OF SECTION 212 - SEEDING, FERTILIZER, SOIL CONDITIONER, AND SODDING

Section 212 of the Standard Specification is hereby revised as follows:

DESCRIPTION

Delete subsection 212.01 and replace with the following:

This work consists of soil preparation, application of fertilizer, soil conditioners, or both, and furnishing and placing seed. The work shall be in accordance with the Contract and accepted horticultural practices.

MATERIALS

Subsection 212.02 (a) shall include the following:

Maximum crop and weed content shall follow the Colorado Seed Certification Standards for certified seed:

Prohibited noxious weeds	None
Restricted noxious weeds	Less than 0.1%
Total other crop seed	Less than 1.0%

Seed shall be free of prohibited noxious weeds including, but not limited to: Canada thistle, diffuse knapweed, spotted knapweed, Russian knapweed, field bindweed, hoary cress, jointed goat grass, leafy spurge, musk thistle and yellow toadflax. The Contractor shall furnish to the engineer a signed statement certifying from supplier that the seed is from a lot that has been tested by a recognized laboratory for seed testing within thirteen months prior to the date of seeding. In addition, seed shall be free from cheatgrass (*Bromus japonicus* and *Bromus tectorum*). The Contractor shall furnish all copies of seed tests for purity (inert matter, other crop, and weed seed) and germination for all seed lots for approval by the Engineer/Vegetation Specialist. An All States Noxious Weed test will be required. Germination tests must be within twelve months prior to the date of seeding. Approved facilities for seed testing include official state seed laboratories in Arizona, California, Colorado, Idaho, Montana, Nevada, Oregon, South Dakota, North Dakota, Nebraska Crop Improvement, Utah, Washington, and Wyoming. Approved private Seed laboratories include the following: AV Seed Testing, Agri-Quality Testing, Inc., Agri-Seed Testing Services, Mid-West Seed Testing Services, Ransom Seed Laboratory, and J&T Green. The Contractor shall not use a seed lab with which they have close business connections, such as a financial interest, controlling interest, or associated interests. The Engineer/Vegetation Specialist reserves the right to refuse any seed lot with excessive weed seeds and non-native contaminant seed for all native seed mixes, and to require the use of a different seed lot. The Contractor shall be responsible for replacing any refused seed at no additional cost to the project.

If specified type or variety of seed is not available, substitutions must be submitted and approved by the Vegetation Specialist.

Subsection 212.02 (b) 1 shall include the following:

Fertilizer shall be Biosol Forte or approved equal and consist of a granular slow release all natural organic fertilizer with no chemical content, consisting of a fungal and bacterial biomass. The nutrient source shall be derived from fermented plant material along with nutrients such as cottonseed meal, soybean meal and trace elements all under constant sterile conditions with a minimum Nutrient (N-P-K) content of 7-2-1.

Nutrients shall be derived from fermented plant material and not contain any urea, animal waste, animal by-products or sewage material. Nutrient content of fertilizer shall be as follows:

Organic Matter > 75%, Carbon/Nitrogen ratio 5:1, Nitrogen (total) >7%. Nitrogen (water soluble) <0.5%, Phosphorus (P205) 2-4%, Potassium (K20) 1%, pH level of 6.5 -7.5. Nutrients shall be derived from fermented plant material and not contain any urea, animal waste, animal by-products or sewage material.

Subsection 212.02 (b) 2, paragraph four, last sentence shall be replaced with the following:

Compost: Compost must be purchased from a facility fully permitted by the Colorado Department of Public Health and Environment or appropriate state agency and bare the US Composting Council STA certification. Compost must be Class 1 weed-free and organic. Material must meet the following specification: a carbon to nitrogen ratio between 10:1 and 20:1, pH between 6.0 and 8.0, soluble salts not greater than 10 mmhos/cm, moisture content between 30 and 60%, a stability of 8 or below, a minimum of 40% organic matter. Compost may consist of one or more of the following, or include other appropriate composts:

1. Well-aged dairy cattle manure
2. Composted yard wastes
3. Food waste

The Contractor shall provide a participation certificate and test data showing the lab analysis on a Compost Technical Data sheet that verifies that the compost meets the requirements. Laboratory analysis must be done within six months prior to use. Biosolids (from sewage treatment facilities) are not considered a viable ingredient in compost.

Subsection 212.02 (b) 2, shall include the following:

Biochar: Biochar shall be a USDA Certified Biobased Product. Biochar shall be made in a slow pyrolysis process and exceed 70% carbon content in the delivered product. The size of an individual piece of char shall range between 0.25 inches to 1.25 inches.

Delete subsection 212.02 (c).

CONSTRUCTION REQUIREMENTS

Subsection 212.03, paragraph one, table shall be replaced with the following:

Zone	Fall Seeding
Below 6000'	September 1 to April 15 or the end of the project, whichever is first.

Delete subsection 212.06 (a) and replace with the following:

- (a) *Soil Preparation.* Disturbed areas shall be loosened to a minimum depth of twelve (12) inches, with no more than a 10 inch interval between chiseled furrows. All slopes shall be left in a roughened condition. Uneven grading of the soil surface is acceptable and encouraged to prevent further compaction from excess heavy machinery operation. All slopes shall be free of concrete and asphalt. Slopes flatter than 2:1, shall be tilled into an even and loose seed bed 4 inches deep. Harrowing, disking, or other operation may be required to breakdown large soil clods greater than 4 inches in diameter and provide an acceptable seed bed. No soil preparation for seeding shall occur when soil is frozen or in an extreme wet or dry condition.

Slopes shall be free of soil clods, sticks, stones, and debris in excess of four (4) inches in any dimension, and be brought to the desired grade and line. Uneven grading of the soil surface is acceptable and encouraged to prevent further compaction from excess heavy machinery operation. All slopes shall be free of concrete and asphalt. No soil preparation for seeding shall occur when soil is frozen or in an extreme wet or dry condition.

Delete subsection 212.06 (b) and replace with the following:

- (b) *Soil Conditioning.* Prior to seeding, soil conditioner shall be applied evenly to the soil surface designated as Zone 3 areas as designated on the plans. The following amendments shall be applied at the following rates to all seeding (upland) areas, combined seeding areas, and floodplain benches to be planted with willows:

1. Fertilizer – Biosol Forte or approved equal applied at 800 lbs/acre
2. Compost – Applied at three (3) cubic yards (CY) per 1,000 square feet
3. Humic acid (Humates) – 250 pounds per acre.
4. Granular Endo Mychorrizal Inoculum - 20 pounds per acre.

The following amendments shall be applied at the following rates to the Biochar Test Plot area designated on the plan including Zones 1-3

Biochar shall be applied to areas to be planted with perennial (tubelings) and areas to be seeded with ‘combined seeding’ on river right (looking downstream) as shown on plans at a rate of 5% by volume (4 cubic yards per acre).

All soil amendments shall be applied uniformly over the soil surface and incorporated into the top eight (8) inches of soil. No measurable quantity of organic amendment shall be present on the surface after incorporation.

Delete subsection 212.06 (c) and replace with the following:

- (b) *Seeding.* Seeding shall be accomplished within 24 hours of tilling or scarifying to make special seed bed preparation unnecessary. The seeding application rate shall be as designated in the Contract. All slopes flatter than 2:1 shall be seeded with grass or no-till drills followed by packer wheels. Drag chains are not allowed. Drills shall have depth bands set to maintain a planting depth between $\frac{1}{2}$ and $\frac{3}{4}$ inch and shall be set to space the rows not more than seven (7) inches apart. Packer wheels that firm the soil over the drill row are required. Seed that is extremely small shall be sowed from a separate hopper adjusted to the proper rate of application. The Contractor shall notify the Engineer and Vegetation Specialist 24 hours in advance and request inspection of seeding areas prior to installation.

Seed drills must be clean of seed from previous seeding jobs before any seeding begins.

If strips greater than seven (7) inches between the rows have been left unplanted or other areas skipped, the Engineer or Vegetation Specialist will require additional seeding at the Contractor's expense.

When requested by the Contractor and approved by the Engineer or Vegetation Specialist, seeding may be accomplished by broadcasting at twice the rate specified in the Contract at no additional cost to the project.

All seed sown by broadcast-type seeders shall be "raked in" or covered with soil to a depth of at least $\frac{1}{4}$ inch. Broadcasting seed will be permitted only on small areas not accessible to machine methods or areas too rocky to use a seed drill. Broadcast seeding shall proceed on freshly disturbed (raked or harrowed) soil surface and broadcast seed shall be immediately raked or harrowed into the surface. Raking shall be accomplished using metal-tined garden or landscape rakes; no plastic leaf rakes shall be allowed. If harrowing is used, an English harrow or its equivalent shall be required.

Hydraulic seeding will not be accepted.

Seeded areas damaged due to circumstances beyond the Contractor's control shall be repaired and reseeded as ordered. Payment for this corrective work, when ordered, shall be at the contract prices.

Multiple seeding operations shall be performed as portions of job are completed to take advantage of growing conditions and to comply with Section 208 and subsection 212.03.

1. Seeding (Upper Riparian) – Prior to seeding, the soil conditioner shall be applied at 3 CY per 1000 SF and incorporated into the top eight (8) inches of soil.

Seed shall be applied at the percent of mix (% of mix) and application rate (PLS/Acre) that is designated on the plans under Seeding (Upper Riparian). Seed

shall be applied to Planting Zone 3 and Seeding Only areas shown on plans.

2. Seeding (Lower Riparian) - Seed shall be applied at the percent of mix (% of mix) and application rate (PLS/Acre) that is designated on the plans under Seeding (Riparian). Seed shall be applied to Planting Zones 1 and 2 areas shown on plans.

All seeding shall occur between September 1st and December 31st as long as the ground is not frozen or too wet. Engineer or Vegetation Specialist shall approve the onsite conditions are suitable for seeding prior to seeding.

REVISION OF SECTION 213 – MULCHING

Section 213 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 213.01 shall include the following:

This work includes furnishing and applying WoodStraw Engineered Erosion Control Mulch (ECM) Model LS64-100 (Forest Concepts, LLC™) or Wood Shreds after seeding for reclamation of disturbed areas as approved and inspected by the Engineer and Vegetation Specialist.

MATERIALS

Subsection 213.02, shall include the following:

Delete the last paragraph in subsection 213.02 and replace with the following:

Materials for mulching shall consist of WoodStraw ECM Model LS64-100 (Forest Concepts, LLC™) a manufactured wood-strand erosion control mulch, comprised of a blend of loose thin wood pieces, each with a high length-to-width ratio such that the pieces form a protective matrix when distributed on the soil. Model LS64-100 is composed of long and short wood strands that have the following nominal properties:

“L” Length: 6.3 inch

“S” Length: 2.5 inch

Width: 3/16 inch

Thickness: 1/10 – 1/8 inch

Ratio of L:S 50:50 by area (mass)

The components of the WoodStraw ECM blend shall be as specified in the Manufacturer’s technical data for the model number specified (<http://www.forestconcepts.com/docs/LS64-100.Technical.Specification.2016.09.20.pdf>). The materials are baled in green or air-dried condition and inherently free of noxious weed seeds and other chemicals/additives detrimental to plant life.

Wood-strand mulch is packaged in bales tied with poly bale twine and placed on pallets with 20-24 regular bales per pallet and 3 large bales per pallet.

- Regular bales are 14” x 18” x 18”-22”.
- Large bales are 30” x 40” x 42”-54”.

The small bales are readily available from the Manufacturer’s licensed representative (listed below) and are used for hand and straw blower application. The large bales are special order product and recommended for aerial application.

Contact information for the Manufacturer’s licensed representative for CO, WY, ND, SD, KS & Eastern MT:

Wood Shreds may be used as a substitute for WoodStraw.

- 1) Wood shreds are limited to pine, spruce or fir trees. Wood shreds from urban tree removal that may have material from undesirable tree species such as Russian olive trees (*Elaeagnus angustifolia*) will not be accepted. Other trees may be used for wood shreds at the approval of the Vegetation Specialist.
- 2) The wood shredding process should include screening that will ensure the size range of the wood mulch. The size of the mulch shall be in two dominant sizes to allow interlocking of mulch material and provide the most resistance to water runoff, soil erosion and wind removal of mulch. The size shall consist of a relatively even mix or composition of smaller length strands (between about 2-3 inches) and larger length strands (about 8 inches). Finer materials (less than about 1 inch) will be present, but should be much lower percentage compared to the two dominant size classes described above. The mulch will be appropriately mixed before application to assure effective interlocking of mulch materials on hillslopes. The thickness of the mulch is generally from 1/8-1/4 inch for smaller length shreds to 1 inch for larger length shreds.
- 3) The wood shreds shall be free from dirt and rocks.
- 4) The County will inspect and approve the wood shreds, where possible, prior to purchase. If the County is unable to inspect the wood shreds on site, a sample of the wood shreds will be required. The County will provide approval of the wood shreds, in writing, to the Contractor.
- 5) A sample truck weight for every 20th truckload may be required.

CONSTRUCTION REQUIREMENTS

Subsection 213.03 shall include the following:

No work shall occur when soil is extremely wet.

(g) *WoodStraw ECM/Wood Shreds*. After seeding has been completed or when required for erosion control (pursuant to the Plans and as directed by the Vegetation Specialist), WoodStraw ECM/Wood Shreds shall be applied via hand application or straw blower with an approximate coverage rate of 70% soil cover. The coverage rate is estimated by the manufacturer as follows:

Soil Cover	Regular Bales		Large Bales	
	Sq. Ft. per Bale	Bales per Acre	Sq. Ft. per Bale	Bales per Acre
70% Soil Cover	158	276	1,819	24

A Coverage Rate Calculator is also provided by the Manufacturer at: <http://www.woodstraw.com/index.php?wspage=10003>

Application of WoodStraw ECM/Wood Shreds mulch must be evenly distributed over the designated mulch areas on the plan sheets.

(1) *Straw Blower Application*. **WoodStraw/Wood Shreds shall not be applied with the type of**

straw blowers that chop up/break materials apart, as they will break down the WoodStraw/Wood Shreds and destroy the manufactured dimensions and properties for the product (thus the product will no longer meet the Manufacturer's specifications and will not meet the specification for the Project). As such, the Finn, Reinco, or similar type straw blower is required for proper application.

REVISION OF SECTION 214 - PLANTING

Section 214 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Delete Subsection 214.01, and replace with the following:

This work consists of furnishing and planting potted trees and shrubs, wetland perennial tublings, willow cuttings and willow clump transplants (from sources designated by the Vegetation Specialist) as shown on the plans.

MATERIALS

Subsection 214.02 shall include the following:

Boulder County has a supply of native wetland plants, shrubs and trees. Contractor shall use this source of plants, if available. Contractor should notify Boulder County at least two months in advance of the requested quantities, species and delivery date. If Boulder County is unable to supply the plants, contractor is responsible for obtaining plant materials.

Plant material, with the exception of willow cuttings and willow clump transplants, shall be procured from a licensed, qualified and competitive nursery facility specializing in the production of native plant materials, or from the willow cutting and willow clump collection areas as designated below. All plant material shall be "ecotypic" which is defined for this specification as native to the northern Colorado Front Range and Boulder and/or Larimer County.

Plants shall be of the species, variety, and quantities designated on the Plant Schedules. All plants shall be in healthy condition with normal well developed branch and root systems, free from disease, harmful insects and insect eggs, sun-scald injury, disfigurement or abrasion; and shall conform to the requirements of the current "American Standard for Nursery Stock." The Contractor shall obtain certificates of inspection of plant materials that are required by Federal, State, or local laws, and submit the certificates to the Boulder County Plant Ecologist and Vegetation Specialist.

Plant material shall be kept shaded, watered, and maintained in good health during transport. All plant materials shall be covered during transport to avoid desiccation and damage to the branches, trunk, root systems, or root ball. Branches shall be protected by tying-in.

Upon delivery, the Contractor shall count and confirm the plant delivery is accurate compared to the plant quantities in the contract. Plant material shall be staged by species in separate and identifiable groups during unloading, and then the Boulder County Plant Ecologist and/or Vegetation Specialist shall inspect all plant material to ensure it is in good condition and health prior to accepting delivery of plant materials.

Plant materials shall be stored and protected in a designated temporary on-site nursery area. If over the course of the project the Vegetation Specialist discovers the Contractor has failed to properly store, install and maintain any previously accepted plant material, said material will be removed and replaced

with acceptable material at the expense of the Contractor.

Plants shall be of the species, variety, and quantities designated on the Plant Schedules. All plants shall be in healthy condition with normal well developed branch and root systems, free from disease, harmful insects and insect eggs, sun-scald injury, disfigurement or abrasion; and shall conform to the requirements of the current "American Standard for Nursery Stock." The Contractor shall obtain certificates of inspection of plant materials that are required by Federal, State, or local laws, and submit the certificates to the Boulder County Plant Ecologist and Vegetation Specialist.

Plant material shall be kept shaded, watered, and maintained in good health during transport. All plant materials shall be covered during transport to avoid desiccation and damage to the branches, trunk, root systems, or root ball. Branches shall be protected by tying-in.

Upon delivery, the Contractor shall count and confirm the plant delivery is accurate compared to the plant quantities in the contract. Plant material shall be staged by species in separate and identifiable groups during unloading, and then the Boulder County Plant Ecologist and/or Vegetation Specialist shall inspect all plant material to ensure it is in good condition and health prior to accepting delivery of plant materials.

Plant materials shall be stored and protected in a designated temporary on-site nursery area. If over the course of the project the Vegetation Specialist discovers the Contractor has failed to properly store, install and maintain any previously accepted plant material, said material will be removed and replaced with acceptable material at the expense of the Contractor.

Substitutions will not be permitted without written request and approval from the County. Before any substitution of plants will be considered, the Contractor shall furnish to BCPOS and the Vegetation Specialist written statements from three sources verifying that the plants designated on the plans are not available. All substitutions must represent native species that are "ecotypic" as defined above and appropriate for the elevation where the plant material will be planted.

The Boulder County Plant Ecologist and/or Vegetation Specialist may reject any nursery stock not meeting the Contract at any of the following times and locations:

- (1) At the named supplier's location. The Boulder County Plant Ecologist and/or Vegetation Specialist will notify the Contractor when nursery stock will be inspected at the supplier's location, if applicable.
- (2) On the project site at the time of delivery, prior to planting.
- (3) On the project site following delivery and prior to planting (while stored in the temporary on-site nursery area).
- (4) At the time of installation. Final acceptance of all plant material will be made at the time of installation on the project site.

Subsection 214.02 shall include the following:

Time-Release Water shall be Aquasorb as manufactured by SNF SAS., ZAC de Milieux, 42163 Andrezieux Cedex - France, or approved equal. Product unit shall consist of a polyacrylamide-based, cross-linked polymers ranging from 1 to 4 millimeters in size.

Aquasorb product shall be placed in water to hydrate per manufacturer's recommendations prior to installing. Aquasorb will be evenly distributed around the entire root ball of the plant, at 2 oz. wet product per plant, then back filled with amended soil.

Delete subsection 214.02 (a), and replace with the following:

(a) Willow cuttings. Willow cuttings shall be collected in areas within 1,000 vertical feet of elevation, and of similar hydrology to those existing at the planting site as directed by a qualified ecologist.

No more than 20 percent of middle age plant material shall be taken from willow collection sites unless plant will be removed or transplanted during excavation and grading. Written consent from the property owner must be received in areas where harvesting will occur, and will specify if it is beneficial to take more than 20 percent of the plant material.

Willows shall be cut by hand. Transport of willow cuttings on the collection site may be by hand or machinery. No machinery will be used on any property without consent of the owner. Written consent of the owner including explanation of machinery type and limits of machinery travel shall be provided to the Engineer before machinery is used for willow transport.

All Willow Cuttings will be harvested while dormant, stripped of all branches. Willow cuttings taken from designated plants shall be at least 0.5 inch in diameter or larger at the narrow end. Willow cuttings shall be 48 inches long with the bottom end cut off at a 45-degree angle and the top end with a straight cut. The top end of each cutting shall be dipped in latex paint to minimize desiccation. The cuttings will be placed into water within one hour of cutting and soaked at a water depth of one (1) foot for 5-7 days prior to planting. Cuttings shall be maintained in a shaded, moist, and cool condition from the time of harvest through the time of installation, including during transportation and upon delivery to the site. The cuttings will be kept wet until placed into the ground and will not be allowed out of water for more than 30 minutes during planting.

The collection team will be aware of all property lines and maintain cutting practices on lands that have provided consent only. Collections made on public lands must be permitted and carried out in accordance with local, state, and federal law. Willow cuttings grown in an approved nursery will be allowed.

Willow collection sites shall be left in good condition following the collection process. All slash will be removed and disposed of as part of the work.

The Contractor shall provide the Engineer and Vegetation Specialist two weeks' notice prior to beginning willow collection.

Delete subsection 214.02 (b), and replace with the following:

(b) Perennial Wetland Tublings (Tublings): Tublings shall be supplied in 10 cubic inch (CI)

containers as designated in the contract. All plants shall be “ecotypic” as defined above. Tublings shall have been growing at least one growing season in the nursery. Tublings shall not be shipped while in a dormant condition. Tublings shall be a minimum of 6 inches in height when applicable to species and a root mass filling 75% of a 10-cubic inch container. At no time shall the plants be trimmed or cropped.

Subsection 214.02 (c) delete the 2nd sentence.

Delete subsection 214.02 (d), and replace with the following:

(c) Soil Conditioning and Fertilizer. Soil conditioner shall adhere to Section 212 of the Project Specifications.

(d) Mature Willow Transplants: Mature Willows (Willow Clumps) shall be harvested while dormant (if feasible, depending on project schedule) from locations identified by the Boulder County Plant Ecologist and/or Vegetation Specialist and immediately planted in locations designated by the Vegetation Specialist and pursuant to Section 215. Exact locations and elevations for individual Mature Willows shall be field located by Vegetation Specialist.

(e) Potted trees and shrubs. Potted trees and shrubs shall be in 14”-tall one-gallon or 40 cubic inch (CI) containers used in standard nursery practice. Each species shall be identified by means of grower’s label affixed to the plant. Label shall be waterproof labels and use weather resistant ink. The grower’s label shall include the source, correct scientific and common name.

(f) Wildlife depredation. Beaver Protection Fence shall be installed around all cottonwoods, alders and birch. See plans for detail of Beaver Protection Fence. Vole Protection Fence shall be installed around all cottonwoods, alders, birch, chokecherry, plum and dogwood. See plans for detail of Vole Protection Fence. Trees that receive both (cottonwoods, alders and birch), the Vole Protection Fence shall be installed prior to Beaver Protection Fence.

Beaver Protection Fence shall be surrounded by a hoop of metal mesh or hardware cloth 2” x 2” staked or anchored at ground level, 4 feet high and 1 foot in diameter, for protection from beavers.

Vole Protection Fence shall be caged with hardware cloth to prevent small mammal herbivory. Hardware cloth shall be 1/8” to 1/4” size openings. Each fence shall be cut to one foot (1’) high and be long enough to completely circle the base of the plant with space allowing for three years growth. Caging shall be secured to the ground with landscape staples and level with the ground such that small mammals cannot get underneath. Hardware cloth shall be secured above ground with zip ties or cable ties.

(g) Backfill. Backfill soil shall be composed of 50 percent native soil and 50% topsoil as specified in Section 207. If native soil is greater than 50 percent rock then topsoil shall be used.

CONSTRUCTION REQUIREMENTS

Subsection 214.03 (a) shall include the following:

(a) Planting Seasons. Plants shall be planted in accordance with the Contract. Areas to be planted shall be brought to the lines and grades designated or approved. The location of plants shown in the Contract is approximate to the degree that unsuitable planting locations shall be avoided. Locations and layouts shall be approved by the Vegetation Specialist before preparatory work for planting is started.

All staking, pin flags or ground paint marking for planting layout shall be done by the Contractor and shall be approved by the Vegetation Specialist before planting holes are prepared.

Subsection 214.03 (c) shall include the following:

Planting pits shall be dug to a minimum of two (2) times the width of the ball or container being planted.

Perennial Wetland Tublings shall be installed in locations shown on plans. Tublings shall be planted following the placement of Erosion Control Fabric (as applicable). All Tublings shall be field located by Contractor and approved by the Vegetation Specialist prior to planting.

Subsection 214.03 (d) shall include the following:

(d) Backfilling. Backfill shall be thoroughly mixed with native soil and worked and watered-in to eliminate air pockets. Watering shall be done immediately after the plant is placed. Backfilling of the planting pit shall be resumed after this water is absorbed. Roots and crown shall be covered with soil at this time. After the soil has settled, plants must be in the proper position and at the proper depth. Saucers shall be prepared around each plant to the dimensions shown on the planting details using material excavated from the pit. Saucers shall be covered with a 4 inch thick layer of fresh moist wood mulch conforming to Section 213. After completion of all planting and before acceptance of the work, the Contractor shall water plants installed under this Contract, as needed to maintain a moist root zone optimum for plant growth. Plants damaged by the Contractor's operations shall be replaced at the Contractor's expense.

Subsection 214.03 (d) shall include the following:

Contractor shall install time-release watering to all Trees and Shrubs.

Subsection 214.03 (e) shall include the following:

(e) Pruning. All deciduous trees and shrubs shall be pruned (if necessary) in accordance with standard horticultural practice, preserving the natural character of the plant. Guidelines for pruning are indicated in the planting details. Pruning cuts shall be made with sharp clean tools. Clippings from pruning may be evenly distributed on site or shall become the property of the Contractor and be removed from the site.

Delete subsection 214.03 (f), and replace with the following:

(f) Staking. All deciduous trees 2 inch caliper and greater shall be staked with three stakes. Stakes shall conform to subsection 214.02(c). Stakes shall be driven 2 feet into the ground with one stake on the

side of the prevailing wind (generally the northwest side) and the other stakes shall be spaced equally around the tree approximately 120° apart as shown on the planting details. Stakes shall be driven at least 1 foot outside of each edge of the planting pit. Trees shall be guyed with 3 to 4 inch wide strips of nylon webbing with metal grommets. Trees specified to be guyed with wire shall be secured with No. 12 gage annealed galvanized steel wire free of bends and kinks.

Delete subsection 214.03 (g) and replace with the following:

Willow Cuttings. Cuttings shall be installed while dormant in early spring or before bud break, or in late fall after leaf drop. Cuttings shall not be planted when the ground is frozen. Willow cuttings may be cold stored, but no longer than 6 months. Immediately prior to planting, the cuttings shall be submerged at least 2/3 of their length in containers of water for a period of 5-7 days. Water shall be free from any harmful oil, chemical, sprays, or other materials. The containers shall be kept in the shade. Only the number of willow cuttings that can be planted in one day will be removed from storage and delivered to the planting site. Failure to properly stored and hydrate willow cuttings or if cuttings linger on site more than 2 days before planting will be replaced by the contractor at no cost to the client if said cuttings fail to thrive.

Willow Cuttings shall be planted in areas shown on plans and pursuant to the Willow Cutting detail. Final locations and elevations for Willow Cuttings shall be approved by Vegetation Specialist prior to installation.

Using a rock bar, mechanical stinger, or other tool, holes at least 42 inches deep shall be made in the streambank or other areas. The cuttings shall be planted by inserting angled end first into the ground a minimum of 42 inches extending 6-8 inches into the water table or capillary fringe. If in riprap, the hole shall be backfilled with soil to within 3 inches of the riprap surface. The top 3 inches of the void shall be filled with gravel/sand from the streambank or streambed and compacted slightly. All cuttings will be trimmed after installation to ensure that no more than 6 inches and no fewer than 3 to 4 live buds are left above ground. Care will be taken to avoid damage to buds during handling. Bark must not be separated from the cambium layer.

The placement of these cuttings shall be in areas shown on the plans that remain damp, seasonally inundated, or where subsurface alluvial interflow is within 36 of the surface, or as directed. Willow cuttings shall be planted at a density and/or spacing specified on the plant schedules on streambank or other designated areas. The planting zone that is most successful for willow cutting establishment is typically only several yards wide and approximately, plus or minus, 2 feet from the ordinary high water line.

Water shall be applied to the willow cutting planted areas until the soil mass is saturated. Willow cuttings shall be watered thoroughly as per 214.04 (b) 1.

Perennial Wetland Tublings, Willow Clump Transplants, and Potted trees and shrubs. Perennial Wetland Tublings, Willow Clump Transplants, and Potted trees and shrubs shall be installed in locations shown on plans, shall be field located by Contractor, and approved by BCPOS and Vegetation Specialist prior to planting.

(i) Irrigation. Plants shall be watered within 15 minutes of initial planting and watered thereafter until

final acceptance according to the watering rates specified in Section 214.04 (b) 1.

(j) Saucers. Soil excavated from the plant pit will be handled deliberately to form a 4-6" high (min.) plant saucer and will not be carelessly wasted or cover existing vegetation or seeded areas. When inter-planting in existing, mature grassland or wetland, excavated soil will be placed on a tarp or similar to avoid indiscriminate spoils from burying adjacent, existing vegetation. Excess soil excavated from the plant pit that is not used to form the saucer shall be removed from the site and disposed of by the Contractor at sites/locations approved by the Vegetation Specialist.

LANDSCAPE ESTABLISHMENT

Section 214.04 shall include the following:

From the time of installation, during construction, and throughout the Landscape Establishment period the Contractor shall maintain all plant material and seeded areas in a healthy and vigorous growing condition, and ensure the successful establishment of vegetation. This includes performing establishment, replacement work, watering, and landscape maintenance work as described below.

Section 214.04 (a) shall include the following:

After all planting on the project is complete, a plant inspection shall be held including the Contractor, Vegetation Specialist, and BCPOS to determine acceptability of plant material. During the inspection, an inventory of rejected material will be made, and corrective and necessary cleanup measures will be determined.

Subsection 214.04 (b) shall include the following:

The detailed maintenance plan is subject to review and approval by the Vegetation Specialist. The Vegetation Specialist will not issue the Notice of Substantial Completion until the Vegetation Specialist has received and approved the maintenance plan.

The Contractor shall keep a project diary documenting all landscape and irrigation maintenance activities including work locations and time spent. The Contractor shall provide copies of the diary to the Vegetation Specialist upon request.

All planting saucers shall be inspected and the following maintenance activities completed as necessary:

- Removal (by pulling or string trimmer, depending on conditions) of any plants that are not of the species planted.
- Re-building of saucers and repair of blow-outs, if needed, to a minimum height of 4 inches.
- Application of additional wood mulch up to the 4 inches that may have blown away or been displaced.

Observation of the health of trees and reporting to the Vegetation Specialist if any evidence of damage is noticed.

Subsections 214.04 (b) 1. and 214.04 (b) 2. Shall be deleted and replaced with the following:

1. Watering

Every effort has been made in the development of the planting plans to specify species and locate plants in zones that will be naturally sustained by surface and alluvial subsurface flow. However, run-off and precipitation, either in the form of rain or snow, cannot be guaranteed. Therefore, this section is provided to provide on-going watering maintenance of installed plants until time of final acceptance.

All woody plant material specified, including trees, shrubs, and cuttings, shall be watered by the contractor by hand, hose, bucket, portable or fixed pump, water tank or truck, temporary or permanent irrigation system (overhead spray and/or drip), or other effective method or watering device as determined by the Contractor.

BCPOS will make available an on-site water source or water rights (if necessary) that can be used to irrigate and maintain plant material and seeding areas. Thereafter, the Contractor shall be responsible for delivery of the water to individual plant locations.

At the time of initial watering at the time of installation and until final acceptance, the Contractor shall continue to water all plant materials according to the following general parameters:

Trees & shrubs

Year 1 - Watering will need to occur on the following schedule during the first growing season:

- November - February: once every three weeks
- March - May: once every two weeks
- June - August: once every week
- September - October: once every two weeks

The Contractor shall diligently monitor the plants, soil moisture levels, and the amount of natural precipitation they are receiving. If trees & shrubs need to be watered more or less frequently than outlined above, the Contractor shall make adjustments to the schedule accordingly to ensure that the plants are watered appropriately.

Willow Cuttings & Tublings

Willow cuttings and/or tublings (if soil is not naturally & persistently saturated) shall be watered to completely saturate the soil at least once a week in accordance with the year 1 watering schedule for trees & shrubs.

Seeding Areas

Seeded areas shall be allowed to establish naturally without irrigation if a temporary or permanent overhead irrigation and water source is not available, cost effective, or feasible. If feasible, water shall be applied using a method determined by the Contractor at a frequency and time of day (early morning

or late evening) to ensure that seedlings thrive. The duration of each irrigation session shall not produce gullies, rills or otherwise erode the soil.

Gully, rill and erosional areas caused by poorly managed irrigation will be repaired as necessary as per Section 212 until seeding areas have established and erosion problems cease. Erosion control blanket and/or fabric may need to be installed, reinstalled or repaired at the Contractor's expense.

Quantity of Water:

1. At each watering, woody plants shall receive the following minimum amounts of water based on container size or an amount sufficient to saturate the soil within the planting saucer to a depth of 12 inches:

- A. 40 CI and Quart-sized containers shall receive 1 gallon
- B. One-gallon sized containers shall receive 2.5 gallons,
- C. Five-gallon sized containers shall receive 5 gallons
- D. Seven-gallon-sized containers shall receive 7.5 gallons
- E. Ten-gallon sized containers shall receive 10 gallons
- F. 2" caliper-sized trees shall receive 20 gallons
- G. Twenty-five gallon sized containers shall receive 25 gallons

Water shall be distributed evenly within the saucer and not breach or damage the saucer. Water shall be distributed evenly over seeded areas. Watering shall be accomplished without damage to existing or recently planted vegetation.

The contract performance bond, shall guarantee replacement work during the plant establishment period.

If all other work is completed on a project, no contract time will be charged during the plant establishment period.

Subsections 214.04 (b) 1. and 214.04 (b) 2. Shall be deleted and replaced with the following:

REVISION OF SECTION 215 - TRANSPLANTING

Section 215 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

This work consists of transplanting Mature Willows in accordance with this specification and as directed by the Engineer.

MATERIALS

Mature willow plants shall be selected by Contractor and approved by Vegetation Specialist from plants presently growing in areas within the limits of disturbance.

CONSTRUCTION REQUIREMENTS

Willow Cuttings shall be taken from approved mature willow plants while dormant before buds appear. Contractor shall harvest Willow Cuttings from mature willow plants in accordance with the requirements in section 214.03 Willow Cuttings. All cuttings available for harvesting shall be collected, limits in section 214.03 do not apply.

Provisions of CDOT Specification 240, Protection of Migratory Birds, shall be observed in the cutting and planting sites.

The Contractor shall provide the Engineer and Vegetation Specialist two weeks' notice prior to beginning Transplanting Mature Willows.

Mature Willows shall be harvested while dormant and immediately planted in locations shown on plans. Exact locations and elevations for individual Mature Willows shall be field located by Vegetation Specialist

Maintain 1' of cutting above ground. Mature Willows shall have a rootball between 3-5 feet deep and between 2-3 feet wide. Contractor can divide approved mature willow plants that will be used for Mature Willows if necessary.

Mature Willows shall consist of one willow plant harvested onsite and planted at 6 foot on-center. See Mature Willow detail in the Revegetation Plans. The Mature Willows shall be planted a minimum of 3 feet into the creek bank with the rootball extending a minimum of 6 inches into the water table or capillary fringe.

A minimum of 6 inches shall extend above the finished grade with no fewer than 3 to 4 live buds per cutting left above ground. Care will be taken to avoid snapping cuttings or damaging the rootball.

Contractor shall backfill Mature Willow planting with a slurry of native bank or streambed material. Mature Willow shall be watered in so as the ground is thoroughly saturated immediately following planting.

REVISION OF SECTION 216 - SOIL RETENTION COVERING

Section 216 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

Soil Retention Blanket (Special) consists of stabilizing vegetation and utilized as erosion control.

MATERIALS

Soil Retention Blanket (Special) shall be Nedia C400B or approved equal. The blanket shall be 100% coconut fiber matrix stitch bonded between two biodegradable nettings with a total thickness of 0.31 inches and a tensile strength of 240 x 164 lb./ft.

CONSTRUCTION REQUIREMENTS

Soil Retention Blanket (Special) shall be installed in locations seeded with Seeding (Riparian) or areas where Perennial (Tubelings) are to be planted. See plans for locations.

Prior to the installation of the Soil Retention Blanket (Special) areas shall have soil conditioner and riparian seeding applied as described in the plans and Section 212 of the specifications. Perennial (Tubelings) shall be planted after the installation of the Soil Retention Blanket (Special).

Soil Retention Blanket (Special) shall be installed and secured according to the manufacturer's recommendations.

Contractor shall contact Vegetation Specialist and Engineer prior to Soil Retention Blanket (Special) order. Approval of locations and quantities shall be given by BCPOS prior to order.

REVISION OF SECTION 506 - RIPRAP

Section 506 of the Standard Specifications is hereby revised for this project to include the following:

Table 506-2

Pay Item		Percent of Material Smaller Than Typical Stone ²	Typical Stone Dimensions ³ (Inches)	Typical Stone Weight ⁴ (Pounds)
	Stone Size d50 ¹ (Inches)			
Type VL Riprap	6	70-100	12	85
		50-70	9	35
		35-50	6	10
		2-10	2	0.4
Type L Riprap	9	70-100	15	160
		50-70	12	85
		35-50	9	35
		2-10	3	1.3
Type M Riprap	12	70-100	21	440
		50-70	18	275
		35-50	12	85
		2-10	4	3
Type H Riprap	18	100	30	1280
		50-70	24	650
		35-50	18	275
		2-10	6	10
Type VH Riprap	24	100	42	3500
		50-70	33	1700
		35-50	24	650
		2-10	9	35

¹d50 = nominal stone size
²based on typical rock mass
³equivalent spherical diameter
⁴based on a specific gravity = 2.5

Nominal stone size and total thickness of the riprap shall be as shown on the plans.

DESCRIPTION

Soil Retention Blanket (Special) consists of stabilizing vegetation and utilized as erosion control.

REVISION OF SECTION 625 - CONSTRUCTION SURVEYING

Section of the Standard Specifications is hereby revised for and shall include the following: Subsection 625.01, first paragraph shall be modified to include:

This work consists of the construction surveying, calculating, and staking necessary for the construction of all elements of the project. Following the completion of the project, as-built surveys will be required. This work shall be done under the supervision of a Professional Land Surveyor (PLS) or Professional Engineer (PE) who is experienced and competent in road and bridge construction surveying and licensed in the State of Colorado.

CONSTRUCTION REQUIREMENTS

Subsection 625.03 shall include the following:

A pre-construction survey shall be conducted to mark the limits of grading and location of proposed in-stream features as indicated in the construction plan set.

A post-construction survey shall be conducted to survey the final stations, elevations, and dimensions of constructed in-channel features and bench grading, at a minimum. Post-construction surveying and as-built requirements are in Appendix A3 of the EWP Project Engineering Guidance for the 2013 Colorado Flood Recovery Phase 2 on the Colorado EWP website:

<https://coloradoewp.com/document/emergency-watershed-protection-ewp-program-2013-colorado-flood-recovery-phase-2-project>

Please anticipate the following as a minimum for the post construction as-built survey:

1. Thalweg survey capturing overall stream profile and grade breaks for instream structures.
2. Detailed in-stream structure survey following rock crests or edges and/or select survey at structures showing conformance to plans or changes from plans.
3. Cross section survey at minimum of 200 feet (or as specified by the Engineer – to match hydraulic modeling used for Floodplain Development Permit) spanning the entire regulatory floodplain. Cross sections shall capture all grade breaks along a section including thalweg, toe of slope on each bank, flood benches, and other significant geographic features.
4. All as-built survey to be provided in AutoCAD format and also include a PDF version certified by a Professional Land Surveyor.

The Contractor shall be responsible for coordinating with local Utility owners (i.e. Colorado811) and conducting a private utility survey to locate utilities on-site.

REVISION OF SECTION 626 - MOBILIZATION

Section of the Standard Specifications is hereby revised for and shall include the following:

Subsection 626.01 shall be modified to include:

Mobilization shall cover all work including labor, material and any incidental work and equipment necessary for mobilization of personnel, equipment and supplies at the project site. This item shall also include the establishment of the Contractor's offices, buildings, and other necessary facilities. This item may also include providing of required bonds, insurance and preparation of the project schedule. The removal of the Contractor's equipment, supplies, excess materials, and cleanup of the site is also included in this item. No mobilization can take place until all permits have been acquired along with applicable planning documents required of the permits.

Steam cleaning of all equipment is mandatory, before it is transported to the site, to remove both noxious plant seeds and aquatic nuisance species. Prior to the initial arrival onto the project site, all equipment shall be thoroughly steam cleaned, including the undercarriages and tires. Equipment must be clean of all mud, vegetative matter, and other debris to prevent importation of non-native and noxious weed seeds and aquatic nuisance species from other project sites.

All hydraulic fluid used in machines on this project shall be biodegradable. Biodegradable hydraulic fluids shall be utilized for all equipment operating in surface waters. The Contractor shall submit a list of equipment operating with certified non-toxic, biodegradable hydraulic fluids to the engineer prior to use. All fueling, oiling, or maintenance of equipment shall be performed in designated upland locations, with adequate BMPs to contain potential spills.

A spill kit must be on-site during all work with heavy machinery. A spill kit, including absorbent socks and booms, shall be kept onsite during all work with machinery (emergency pollutant isolation and clean-up materials, with procedures). All crew members shall be trained on how to use the spill kit equipment and where the materials are kept onsite. The Engineer shall approve the Contractor's plan for leaking equipment extraction from the creek (spill plan information to be included in SWMP).

During mobilization to the construction site, minimize disturbance to the primary stream channel, side channels, and streambanks.

REVISION OF SECTION 630 – CONSTRUCTION ZONE TRAFFIC CONTROL

Section 630 of the Standard Specifications is hereby revised for this project to include the following:

The Contractor shall submit five (5) copies of a Traffic Control Plan (TCP) to the Engineer for approval at the preconstruction meeting. The TCP shall be in conformance to the Manual of Uniform Traffic Control Devices (MUTCD) and the CDOT standards. The TCP will be reviewed by the Boulder County Transportation, BCPOS and the Engineer.

Flaggers and all necessary traffic control devices shall be supplied and installed by the Contractor.

County Transportation Staff will provide a transportation management plan for the project at the time of building permit application. The plan will outline how progress and other information, such as commute interruptions, will be communicated to the public. The plan will include the following provisions:

- The applicant shall coordinate with the Transportation Department’s Public Information Officer, Andrew Barth (303-441-1032) and/or representative. The contractor may provide their own transportation management plan if desired for staff approval.
- Hours of hauling shall be from 8:00 AM to 4:30 PM to limit impacts on regular vehicular traffic, especially during peak commuter periods.
- Workers’ vehicles can be parked in designated approved areas that are outside of the road traveled way that do not conflict with the project work. Parking plans shall be shown on the site plans for approval.

The Contractor shall submit a traffic control plan completed by a Traffic Control Supervisor (TCS) to the Transportation Department for review and approval. The TCS shall refer to the transportation management plan when developing the traffic control plan. The traffic control plan shall be submitted at the time of building application. The traffic control plan shall include, at a minimum:

- Flaggers and/or other traffic control measures shall be used at the intersections of the access points to roadways during hauling operations.
- Locations and types of warning signs along the roads shall be shown.
- If applicable, the applicant shall coordinate with the Colorado Department of Transportation (CDOT) about the potential for traffic control at access points on State Highways. Contact Gloria Hice-Idler and/or representative at CDOT (970-350-2148).

END OF SPECIFICATIONS

ATTACHMENT G

DROPBOX LINK TO

BID #6671_17

ST VRRAIN CREEK REACH 3 RESTORATION DESIGN DRAWINGS

Copy and paste

<https://www.dropbox.com/s/w1zvv93evihy581/Attachment%20G%20-%20Design%20Drawings.pdf?dl=0>

ATTACHMENT H

BOULDER COUNTY, COLORADO

STREAM RESTORATION PROJECT PARTICIPANT AGREEMENT

Project Area	
Property Owner	
Property Address/Location	

The undersigned property owner or owner's representative hereby grants permission to the Boulder County, its contractors, agents, and all others deemed necessary by the County, to enter the property identified above, submit applications to the appropriate agencies for approval of stream restoration work, and perform the following activities:

DESCRIPTION OF WORK TO BE DONE

Stream restoration, which may include:

- Planning and/or evaluation activities such as survey, assessment of wildlife, botanical, riparian and hydrological conditions, and perform such other activities as may be reasonably necessary for planning or evaluating a stream restoration project
- Earthmoving
- Stream alignment modification
- Changes to the contours of the stream and banks
- Placement of root wads, earth fill, logs and/or rocks for bank stabilization or habitat improvement
- Revegetation of disturbed areas

Operation and maintenance, which may include:

- Annual monitoring and assessment
- Repair and maintenance of improvements as needed

Permission is NOT granted to Boulder County for any purposes other than those required to complete the stream restoration project on the described property. Boulder County or its representatives will give property owners or their representative 72-hours' notice via e-mail or phone prior to entering the property for the purposes of this project.

WORK AREA

The work area will be limited to that necessary to stabilize the bank of the ordinary high flow channel of the creek and, at select locations, for stabilization of slopes that threaten the sustainability of the project. If Boulder County or its contractor damage any property or improvements outside the Work

Area, Boulder County or its contractor will restore the property or improvements to substantially the same condition as prior to entry on the property.

TERM

The term of this permission will begin the date it is granted and run for 3 (three) years from project completion. Upon finalization of construction, access will only be granted for operation and maintenance purposes.

WAIVER AND RELEASE

By signing this Participant Agreement, I am certifying that I am the owner or the owner's authorized agent of the described property. I, on behalf of myself and my heirs, successors and assigns, grant freely and without coercion the right of access and entry to my property to the Boulder County only for the purposes set forth above. I understand that this permission does not create an obligation upon the County to perform any particular work on my property. I release, discharge, and waive any action, either legal or equitable, that might arise by reason of any action of Boulder County while performing stream restoration work.

Permission granted by: (check one)			
<input type="checkbox"/> Property owner	<input type="checkbox"/> Property owner's representative	<input type="checkbox"/> Other	
_____ Name (please print)		_____ Name (please print)	
_____ E-mail address		_____ E-mail address	
(____) _____ Phone	(____) _____ Work Phone	(____) _____ Phone	(____) _____ Work Phone
_____ <u>Property Address</u>		_____ <u>Mailing Address</u>	
_____ Land Owner's Signature(s)		_____ Date _____	
_____ _____		_____ Date _____	
Permission received by:			
_____ Name & title (please print)		_____ Email Address	
_____ Boulder County Signature		_____ Date _____	