

# **SOLANO COUNTY WATER AGENCY**



## **CONTRACT DOCUMENTS**

### **STEBBINS COLD CANYON EROSION CONTROL AND REHABILITATION PROJECT**

#### **Invitation for Bid (IFB)**

Bids will be received at the office of the  
Solano County Water Agency  
810 Vaca Valley Parkway, Suite 203  
Vacaville, CA 95688

**Prior to 2:00 p.m. on April 1, 2020**

810 Vaca Valley Parkway, Suite 203 • Vacaville, CA 95688

Phone (707) 451-6090 • Fax (707) 451-6099



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## NOTICE TO BIDDERS

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SOLANO COUNTY WATER AGENCY  
810 Vaca Valley Parkway, Suite 203  
Vacaville, California 95688

Sealed Bid will be received at the office of the Solano County Water Agency, 810 Vaca Valley Parkway, Suite 203, Vacaville, California 95688 **no later than 2:00 p.m. on April 1, 2020** for the following work:

### **STEBBINS COLD CANYON EROSION CONTROL AND REHABILITATION PROJECT**

The Contract Documents, which include Specifications and Contract Drawings, may be obtained from the Solano County Water Agency's internet address at <http://www.scwa2.com>. Contract Documents will only be available in electronic form. Any problems or errors in downloading the documents should be reported to the Agency immediately.

The Bidder / Contractor is responsible for notifying **Alex Rabidoux** at [arabidoux@scwa2.com](mailto:arabidoux@scwa2.com), to be placed on the plan holders list. Plan holders on this list will be notified of the issuance of any addendums. Addendums will be posted at the same internet location as the Contract Documents, listed above.

The Agency will hold a Job Showing at the Project location to assist the contractors / contractors. **Attendance at the Job Showing by a representative employee of the contractor and completing the Job Showing sign-in sheet is mandatory.** Bids received from Contractors who did not attend the Job Showing will not be accepted. The Job Showing for the project will be at **10:00 a.m. on March 26, 2020.**

The work is "public work" subject to prevailing wages. Listings of the prevailing wage schedule for this work are available on the internet at <http://www.dir.ca.gov/DLSR/PWD>. Printed copies can also be provided by the Agency upon request. Relevant public work requirements are using the appropriate number of apprentices on the jobs site (Labor Code § 1777.5), maintaining necessary workers' compensation coverage (Labor Code §§ 1860, 1861), keep accurate records of the work performed on the project (Labor Code § 1812), permitting inspection of the payroll records (Labor Code § 1776; 8 CCR § 16400(e)), and complying with any other legal requirements, including but not limited to those found in Labor Code §§ 1720-1861 and California Code of Regulations title 8, §§ 16000-16414.

No bidder / contractor or subcontractor may be listed on the bid proposal unless registered with the Department of Industrial Relations pursuant to Labor Code § 1725.5 and in US Federal Database at [www.sam.gov/SAM](http://www.sam.gov/SAM). No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code 1725.5 and must also be registered in US Federal Database at <https://www.sam.gov/SAM/>

The Bids must be accompanied by a certified check or contractor's bond for ten percent (10%) of the amount of the proposal value and made payable to Solano County Water Agency. The certified check or contractor's bond shall be given as a guarantee that the contractor will enter into a contract, if awarded a contract, and will be declared forfeited if the contractor refuses or neglects to enter into said contract within 10 days after being requested to do so.

The successful bidder / contractor will be required to furnish a Performance Bond in an amount equal to one hundred percent (100%) of the contract price and a Payment Bond in an amount equal to one hundred percent (100%) of the contract price, said bonds to be secured from a financially responsible surety company, satisfactory to the Agency, authorized to do business in the State of California.

The Bidder / Contractor may substitute securities for any moneys withheld to insure performance under the contract in strict accordance with Sections 22300 and 10263 of the Public Contracts Code of the State of California.

Each Bid submitted in response to this invitation for bid (IFB) shall include the cost of all Work, labor and materials to complete specified Work. Each Bid will also explain the method(s) proposed as requested by the Work Plan submittal; the Project team and subcontractors experience on similar projects; and estimated tasks and schedule. Each Proposal shall, further more include all materials and labor of whatever kind required in regard to support the bid as needed.

The bids will be opened in public at the above-mentioned prescribed time and date. Award will be made to the lowest responsible contractor determined as specified in the Instructions to Contractors, however, the Agency reserves the right to reject any or all bids, to waive informalities in the bid, and to postpone the date of bid opening. In all respects, the successful contractor shall comply with requirements of law pertaining to public works contracts.

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General Manager  
Solano County Water Agency

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Date

## INSTRUCTION TO BIDDERS

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### 1. GENERAL.

The Work hereunder must be done in strict conformity with the Drawings and Specifications adopted and approved by the Solano County Water Agency (Agency).

### 2. CONTRACT DOCUMENTS.

The Notice to Bidders, the Instructions to Bidders the Contract, the Specifications, and the Drawings are the Documents that will form the Contract. Bidders must examine each of the Contract Documents, must visit the location of the Work and inform themselves of the conditions and make their own estimates of the facilities and difficulties attending the execution of the Work. **Attendance at the Agency Job Showing on March 26, 2020 is mandatory. Proposals will not be accepted from any bidders not attending the Job Showing.** The failure of any bidder to receive or examine any form, instrument, addendum or other document shall in no way relieve any Bidder

from any obligation with respect to his/her Proposal or to the Contract. The submission of a Proposal shall be taken as prima facie evidence of compliance with this section.

### 3. FORM AND CONTENT OF PROPOSAL.

Proposals shall be made properly upon the separate form provided therefore, a copy of which accompanies these Specifications with all items filled out in ink or typewritten; amounts shall be stated in figures and the signature of all persons signing shall be in writing. The completed form shall be without interlineations, alterations or erasures.

Proposals shall provide references for three ongoing and/or most recently completed projects. Most current project must be included.

Proposals shall contain only the quotation for which the form is prepared. No oral, telegraphic or telephonic Proposals or modifications will be considered. Proposals shall be accompanied by an unconditional check certified by a responsible bank in an amount not less than ten percent (10%) of the aggregate of the Proposal, payable to the order of the Agency, or by a bidder's bond for the said amount and so payable, written by a financially responsible surety company, satisfactory to the Agency, authorized to do business in the State of California. The check or bond shall be a guarantee that the bidder, if awarded the Work, will enter into a Contract within ten (10) calendar days after receiving the Notice of Award. In case of refusal or failure to enter into the Contract and/or to file acceptable bonds and proof of insurance as provided herein within the time set forth herein, the award made by

the Agency shall be annulled and the check or bond, as the case may be, shall be forfeited to the Agency, the proceeds there from being hereby agreed upon as liquidated damages to the Agency on account of the delay in the execution of the Contract and required bonds and the performance of the Work there under, and the necessity of accepting a higher or less desirable Proposal resulting from such failure or refusal to execute the Contract and bonds as required. Upon the execution of the Contract and the approval on behalf of the Agency of the accompanying bonds, all certified checks that accompanied Proposals and that have not theretofore been returned, will be returned each to its maker.

**4. INTERPRETATION OF CONTRACT DOCUMENTS.**

Should a bidder find discrepancies in, or omissions from, the Contract Documents, or should he/she be in doubt as to their meaning, he/she shall at once notify the Engineer; and should it be found that the point in question is not clearly and fully set forth, a written Addendum or Bulletin of Instructions will be made available to all bidders, notification will be provided to contractors on the plan holders list and posted on the Agency's website at <http://www.scwa2.com>. The Engineer or the Agency will not be responsible for any oral instructions.

**5. OPENING AND COMPARISON OF BIDS.**

Bid / proposals will be opened and read at the time and date indicated in the Notice to Contractors at the office of the Solano County Water Agency, 810 Vaca Valley Parkway, Suite 203, Vacaville, California 95688. Contractors or their representatives and other interested parties may be present at said opening and reading. The award will be made to the lowest responsible contractor complying with these Contract documents.

The bids will be compared on the basis of sums of the extensions of the unit prices and lump sum prices bid for doing the specified Work and by the Agency consideration of the Contractor's responsibility, financial resources, and ability to execute the Work. The Agency may request a contractor to furnish evidence that he/she has successfully performed similar Work.

The Agency, at its discretion, reserves the right to reject any or all Proposals. Without limiting the generality of the foregoing, any Proposal which is incomplete, obscure, irregular or deemed by the Agency to be non-responsive may be rejected; any Proposal having erasures or corrections in the price sheet may be rejected; any Proposal in which unit prices are omitted, may be rejected; if in the judgment of the Agency unit prices are unbalanced, or if the contractor is not responsible, it shall be considered sufficient grounds for rejection of the proposal.

**6. ACCEPTANCE OF PROPOSALS AND ITS EFFECT.**

The Agency will, within thirty (30) days subsequent to the opening of the bids, act

upon the Proposals. The acceptance of the Proposal will be by the Notice of Award in writing signed by a duly authorized representative of the Agency, and no other act of the Agency shall constitute the acceptance of a Proposal. The acceptance of a Proposal shall bind the successful contractor to execute the Contract Agreement with the Agency in the form attached hereto and obtain insurance and faithful Performance and Payment bonds of the types and character and in the amounts required in the Contract Documents, within ten (10) calendar days after receiving the Notice of Award, and to be responsible for liquidated damages as provided in Paragraph 3 herein. Failure by Contractor to meet and provide valid insurance and bonding instruments is a breach and authorizes Agency to select a replacement Contractor, at the Agencies' discretion. The rights and obligations provided for in the Contract shall become effective and binding upon the parties only with its formal execution by the Agency and the Contractor.

**7. TIME FOR BEGINNING AND COMPLETING THE WORK.**

The Contractor shall commence Work within **ten (10) calendar days** after the date of the Notice to Proceed is given by the Agency, and he/she shall complete all Work within **one hundred ten (110) calendar days** after the Notice to Proceed. If the Agency determines a need to stop Work, it will issue notification in writing to the Contractor's stated address, and the Contractor will immediately stop Work. If weather significantly delays completion of the Work, the Agency will issue a time-extension only.

**8. BONDS.**

A bidder/contractor to whom the Contract is awarded shall, within the time stated in Paragraph 6, furnish a surety bond conditioned upon the full and faithful performance and verity of all warranties and guarantees therein contained. Said bond shall be in an amount not less than one hundred percent (100%) of the Contract amount.

Also, within the time mentioned above, a bidder / contractor to whom the Contract is awarded shall furnish a surety bond for payment in an amount not less than one hundred percent (100%) of the Contract amount.

Said bonds shall meet all of the applicable provisions of the law and regulations of the State of California, and shall be furnished in the attached forms and shall be obtained from a financially responsible surety company, satisfactory to the Agency, authorized to do business in the State of California, which maintains in said State at least one office for the conduct of its business. Said surety (or sureties) shall furnish reports as to its financial conditions from time to time as requested by the Agency. The premiums for said bonds shall be paid by the contractor. If the Bidder fails to furnish such additional security, the Agency, at its sole option, may obtain the additional security in an amount equal to the value of the Work remaining to be

done under the contract, as deemed by the Agency, and recover the cost of such additional security from the Contractor. Agency is under no obligation to do so. Failure to do so will in no way create liability on the part of Agency, nor will it relieve the Contractor of any liability.

In accordance with Section 995.660 of the CA Code of Civil Procedure, the surety company shall also submit to the Agency the following:

- A. The original, or a certified copy, of the unrevoked appointment, power of attorney, bylaws, or another instrument which entitles and authorizes the person to execute the bond to do so. These documents must be provided within ten (10) calendar days of demand upon the insurer and are usually, routinely, included with the bond.
- B. A certified copy of the certificate of authority of the insurer issued by the Insurance Commissioner of the State of California. This also must be provided within ten (10) calendar days.
- C. A certificate from the clerk of the county in which the Agency is located which would state that the certificate of authority of the insurer (the bonding company) has not been surrendered, revoked, canceled, annulled, or suspended.
- D. Copies of the insurer's most recent annual statement and a quarterly statement filed with the Department of Insurance. This statement should indicate that the net worth of the insurer is greater than the amount of the bond.

If any surety becomes unacceptable to the Agency or fails to furnish reports as to its financial condition as requested by the Agency, the Contractor shall promptly furnish such additional security as may be required from time to time to protect the interests of the Agency and of persons supplying labor or materials in the prosecution of Work contemplated by this Contract. Failure to provide any of the bonds required by these contract documents is a material breach by the Contractor giving rise to a right of termination on the part of the Agency.

In the event of any conflict between the terms of the Contract and the terms of said bonds, the terms of the Contract shall control and said bonds shall be deemed to be amended thereby. Without limiting the foregoing, the Agency shall be entitled to exercise all rights granted to it by the Contract in the event of default, without control thereof by the surety, provided that the Agency gives the surety notice of such default at the time or before the exercise of any such right by the Agency, and, regardless of the terms of said bonds, the exercise of any such right by the Agency shall in no manner affect the liability of the surety under said bonds.



**9. PRICES.**

The prices set forth in the Proposal are to include the provision of all materials, equipment, tools, and all other facilities, and the performance of all labor and services necessary or proper for the completion of the Work, except such as may be otherwise expressly provided in the Contract Documents.

**10. WITHDRAWAL OF PROPOSAL.**

Proposals may be withdrawn by the bidder prior to, but not after, the time fixed for the opening of the Proposals.

**11. ADDENDA OR BULLETINS OF INSTRUCTIONS.**

An Addenda or Bulletins of Instruction supplementing the Contract Documents and issued prior to the time set for the opening of Proposals shall form a part of the documents furnished to the bidder for the preparation of his/her Proposal. These documents shall be made a part of the Contract. Bidders / Contractors on the plan holders' list will be notified of the issuance of Addenda or Bulletins of Instruction supplementing the Contract Documents. Addenda or Bulletins of Instruction shall be posted on the Solano County Water Agency's website at <http://www.scwa2.com>.

## PROPOSAL

(with Bid Schedule attached)

Proposal of

Bidder

Address

To furnish and deliver all materials and to do and perform all Work in accordance with the Contract Documents for the Stebbins Cold Canyon and Rehabilitation Project for the Solano County Water Agency (Agency).

To:

SOLANO COUNTY WATER AGENCY  
810 Vaca Valley Parkway, Suite 203  
Vacaville, California 95688

Sir / Madam:

The undersigned bidder/contractor has carefully examined the Contract Documents and Drawings, and also the site of the Work, and hereby proposes to provide all necessary labor, machinery, tools, apparatus, and other means of construction and do all the Work and provide all materials called for by the Contract Documents in the manner and time prescribed therein and in accordance with the requirements of the Contract Officer under them.

The undersigned hereby declares that the only persons or parties interested in this Proposal as principals are those named herein; that no director or officer of the Agency is in any manner interested, directly or indirectly, in this Proposal or in the profits to be derived from the Contract proposed to be taken; that this bid is made without any connection with any other person or persons making a bid for the same purpose; that the bid is in all respects fair and without collusion or fraud.

The undersigned bidder understands that the quantities of Work as shown herein are approximate only and are subject to increase or decrease, and offers to do the Work whether the quantities are increased or decreased, at the prices stated in the attached Schedule. The undersigned has checked carefully all figures inserted in said Bid Schedule and understands that the Agency will not be responsible for any errors or omissions on the part of the undersigned in making up this Proposal.

The undersigned also agrees to: Do any extra Work, not covered by the above schedule of prices, which may be ordered by the Agency, and to accept as full compensation therefore such prices as may be agreed upon in writing by the Agency and the Contractor in accordance with the Contract Documents or, in the absence of such agreement, to perform the Work and resolve the payments as provided in SECTION 1 – GENERAL CONDITIONS of the Contract Documents.

The undersigned hereby agrees to execute the Agreement and furnish the required bonds and insurance within ten (10) days after receiving the Notice of Award of his Proposal. A certified check or a bidder's bond made payable to the Solano County Water Agency in the amount of ten percent (10%) of the amount of the Proposal is attached hereto as a guarantee that the undersigned will so perform. If a bidder to whom an award is made, fails or refuses for any reason to execute the Contract or fails to furnish any or all of the required insurance or contract bonds, all within the time stated in the Instruction to Bidders and General Conditions, it is agreed and stipulated between the Agency and the bidder to whom the award is made, that damages will be sustained by the Agency and it is currently contemplated by the parties and estimated by the parties that it will be impracticable and extremely difficult to fully ascertain and determine the actual damage which the owner will sustain by such delay. The Agency and all parties who submit a bid under the notice of invitation to bid, shall be deemed to have jointly studied and attempted to estimate the damages suffered by the Agency by such delay under these circumstances and to agree and stipulate that the amount of the bidder's bond, cash or check specified, is agreed to as liquidated damages which shall be payable by such bidder and shall be collected and held by owner thereafter as the sole property of the Agency and for full compensation for the damages suffered by the Agency as a result of delay and all other damages suffered by the Agency.

The bidder/contractor further declares that the surety or sureties named in the spaces following have agreed to furnish bonds in the form and aggregate amounts set forth in the Instructions to Bidders / Contractors, in the event the Contract is awarded on the basis of this Proposal.

The bidder / contractor further declares that he/she is a licensed contractor under the laws of the State of California and registered in US FED Database.

Surety or Sureties:

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Dated \_\_\_\_\_, 2020

\_\_\_\_\_  
\_\_\_\_\_  
Bidder/Contractor

Bidder's / Contractor's place of business:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
By: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Seal if bidder is a Corporation)

Bidder/Contractor

License No. \_\_\_\_\_

Classification \_\_\_\_\_

Name and address of all members of the firm or names and titles of all officers.

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The bidder/contractor shall herein set forth the name and the location of the place of business of each subcontractor, who will perform Work or labor or render service to the general contractor in or about the construction of the Work or improvement in an amount in excess of one-half (1/2) of one percent (1%) of the general contractor's total bid, and the portion of the Work which will be done by each subcontractor.

Name of Subcontractor & License # (required)	Location of Place of Business	Type & Percent of Work to be Done

Percentage of intended Work performed by Contractor: \_\_\_\_\_

**Proof of registration with the Department of Industrial Relations for all bidder / contractors and subcontractors is required, in addition to Register and approved in US FED Database.**

<https://www.dir.ca.gov/Public-Works/Contractor-Registration.html>

<https://www.dir.ca.gov/Public-Works/Enforcement.html>

<https://www.sam.gov/SAM/>

**Provide references for three ongoing and/or most recently completed “Public Works” trail rehabilitation or similar projects:**

Project Name	Contact Name & Agency	Phone Number

NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER / CONTRACTOR AND  
SUBMITTED WITH THE BID

\_\_\_\_\_, being first duly sworn, deposes and says that he or she is  
(Name of Bidder Representative)

\_\_\_\_\_ of \_\_\_\_\_  
(Position or Title) (Bidder)

the party making the foregoing bid that the proposal submitted is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Date

BIDDER: \_\_\_\_\_

## BID SCHEDULE

### STEBBINS COLD CANYON EROSION CONTROL AND REHABILITATION PROJECT

This proposal shall be completed with the unit prices written in numerals, and the extensions shall be made by the bidder. Stipulations will not be considered.

The bidder hereby proposes to furnish all tools, equipment and materials specified in the Contract Documents for the Stebbins Cold Canyon Erosion Control and Rehabilitation Project in Napa & Solano County, complete and ready for use in accordance with the Contract Documents attached hereto for the following stipulated sums which shall include qualified personnel, all applicable taxes, and other expenses.

TRAIL CONSTRUCTION ITEMS	QUANTITY	UNITS	UNIT COST (\$)	TOTAL ITEM COST (\$)
Mobilization & Demobilization Efforts	1	lump		
Down Tree Removal, 1'-3' chainsaw	20	hrs		
Down Tree Whole, Rigging	60	hrs		
Trail Brushing Maintenance (heavy)	8,132	lin ft		
Clearing, stob removal (heavy)	8,132	lin ft		
Trail Obliteration (Social Trails), >20%<40%	30	hrs		
Trail Reconstruc. Switchback >40%<60% (mech.)	7	each		
Trail Reconstruc. (0-3158) >40%<60% (mech.)	3,158	lin ft		
Trail Reconstruc. (3158-4150) >20%<40% (mech.)	992	lin ft		
Trail Reconstruc. (4150-8132) (by hand)	3,982	lin ft		
Grade Dip, Mechanical (5' Tread)	41	each		
Grade Dip, Hand (3' Tread)	12	each		
Rock Energy Dissipater	1,564	cu ft		
Misc. Hauling of Materials >1800'<2500'	100	hrs		
Import Fill Material >1800'<2500' (w/ toters)	584	each		
Import Fill Material >300'<800' (by hand)	37	each		
Import Fill Material >800'<1300' (by hand)	75	each		
Import Fill Material >1300'<1800' (by hand)	56	each		
Import Fill Material >1800'<2500' (by hand)	124	each		
Excavate Rock (Medium)	720	cu ft		
Excavate Soil (Medium)	327	cu ft		
Rock Crush Fill, Distance <300'	1,200	cu ft		
Rock Wall Rock, <300' (w/ toters)	304	cu ft		
Rock Wall Rock, >300'<800' (w/ toters)	402	cu ft		
Rock Wall Rock, >800'<1300' (w/ toters)	364	cu ft		
Rock Wall Rock, >1300'<1800' (w/ toters)	100	cu ft		
Rock Wall Rock, >1800'<2500' (w/ toters)	652	cu ft		
Construct, Wood Interlocking Steps (3' Tread)	292	each		
Removal, Wood Steps	60	hrs		
Removal, Wood Water Bar	30	hrs		
<b>TOTAL BID =</b>				



In case of a discrepancy between the item unit cost and the item total cost, the item unit costs shall prevail; however if the amount set forth as an item unit cost is ambiguous, unintelligible or uncertain for any cause, or it is omitted, the amount set forth in the "Total Item Cost" column shall be divided by the estimated tools and effort needed for the item and the price thus obtained shall be the item unit cost. In case of discrepancy between the stipulated tools and the actual sum of the totals, the actual sum of all item totals shall prevail.

The foregoing quantities are approximate only, being given solely as the basis for the preparation and comparisons of bids, and the Agency does not expressly or by implication, agree that the actual amount of work will correspond therewith. The Agency reserves the right to increase or decrease the amount of any item or eliminate any item or items as may be deemed necessary or advisable by the Contract Manager. Such changes shall not affect the unit price of that or any item.

## CONTRACT

THIS AGREEMENT, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2020 by and between the Solano County Water Agency hereinafter called "Agency" and \_\_\_\_\_, hereafter called the "Contractor";

WITNESSETH: That the Agency and the Contractor, for the consideration hereinafter named, agree as follows:

1. This Contract is for the Rehabilitation / construction of the **STEBINS COLD CANYON EROSION CONTROL AND REHABILITATION PROJECT** for the Solano County Water Agency.
2. The Contract includes all of the Contract Documents, to wit: the Notice to Bidders, the Instructions to Bidders, the accepted Proposal and Proposal Bid Schedule, this Contract Agreement, the Specifications, the Specification Drawings, and all Addenda setting forth any modifications or interpretations of any said Documents. All said Documents are hereby incorporated in and made a part of this Agreement.
3. The Contractor shall provide all labor, materials, equipment, and other facilities and perform in a good and workmanlike manner all Work under the Contract for the Agency in strict conformity with the Contract Drawings and to the approval and entire satisfaction of the Agency.
4. This work is "public work" and therefore the Contractor and any subcontractors shall perform the work as "public work" pursuant to the prevailing wage laws, California Labor Code § 1720 et seq. Copies of the prevailing rate of per diem wages are available on the internet at <https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm> and upon request from the office of the Solano County Water Agency. The Contractor and any subcontractors shall comply with California Labor Code §§ 1720-1861, specifically including but not limited to § 1775 (payment of wages and penalties) and § 1776 (payroll records), and California Code of Regulations title 8, §§ 16000-16414, specifically including but not limited to § 16451 and § 16461. No Contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code § 1725.5. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The Contractor shall post job site notices as required by Labor Code § 1771.4(a)(2) and the relevant regulations, including but not limited to California Code of Regulations, title 8, § 16451(d).
5. The Agency will pay the Contractor in current funds for the performance of the Contract the sums stated in the Proposal Bid Schedule, in the

manner, at the time and upon the conditions as stated in the Contract Documents, and will otherwise fulfill its obligations as provided in the Contract. It is agreed and stipulated between the Agency and the Contractor, that damage will be sustained by the Agency from any delays in the performance of this Contract, and it is currently contemplated by the parties, and estimated by the parties, that it will be impracticable and extremely difficult to fully ascertain and determine the actual damage which the Agency will sustain by such delays. The parties agree that they shall be deemed to have jointly studied and attempted to estimate the damages suffered by the Agency by such a delay under these circumstances and to agree and stipulate by this Contract that the sum of two hundred fifty dollars (\$250) per day for each and every day's delay beyond the time prescribed to complete the Work has been agreed to by the parties as a fair estimate of the damages to be suffered by the Agency from and as direct result of such delay. The time set for the completion of this Work is set forth in the Instructions to Bidders.

6. Either party to this Contract has a right to litigate to enforce this Agreement. The Court shall award reasonable costs and expenses, including attorneys' fees, to the prevailing party in any action or proceeding to enforce this Agreement.
7. All time limits stated in the Contract Documents are of the essence of this Agreement.
8. This Agreement shall be binding upon and shall inure to the benefit of the heirs, successors and assigns of the parties.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written

SOLANO COUNTY WATER AGENCY

By: \_\_\_\_\_  
General Manager

\_\_\_\_\_  
Contractor

By: \_\_\_\_\_  
(Title)

And: \_\_\_\_\_  
(Title)

(Seal if a Corporation)

Contractor  
License No. \_\_\_\_\_

Classification \_\_\_\_\_

## PERFORMANCE BOND

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KNOW ALL MEN BY THESE PRESENTS: That we (1) \_\_\_\_\_  
\_\_\_\_\_ a (2) \_\_\_\_\_  
hereinafter called "Principal" and (3) \_\_\_\_\_  
of \_\_\_\_\_ State of \_\_\_\_\_  
hereinafter called the "Surety," are held and firmly bound unto Solano County Water  
Agency, hereinafter called "Agency," in the penal sum of  
\_\_\_\_\_ Dollars  
(\$ \_\_\_\_\_) in lawful money of the United States, for the payment of which sum  
well and truly to be made, we bind ourselves, our heirs, executors, administrators and  
successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS such that WHEREAS, the Principal entered  
into a certain Contract with the Agency, dated the \_\_\_\_\_ day of  
\_\_\_\_\_, 20\_\_\_\_, a copy of which is hereto attached and made a part hereof  
for the construction and installation of the required erosion control and reconstruction at  
the Stebbins Cold Canton property near \_\_\_\_\_, including all appurtenances thereto,  
all as set forth in the Contract Documents entitled "Stebbins Cold Canyon Erosion  
Control and Reconstruction Project".

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the  
undertakings, covenants, terms conditions and agreements of said Contract during the  
original term thereof, including the term of any warranty, and any extensions thereof which  
may be granted by the Agency, with or without notice to the Surety, and if he/she shall  
satisfy all claims and demands incurred under such Contract, including any claims or  
demands under the warranty, and shall fully indemnify and save harmless the Agency  
from all costs and damages which it may suffer by reason of failure to do so, and shall  
reimburse and repay the Agency all outlay and expense which the Agency may incur in  
making good any default, then this obligation shall be void; otherwise to remain in full force  
and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and  
agrees that no change, extension of time, alteration or addition to the terms of the Contract  
or to the work to be performed thereunder or the specifications accompanying the same  
shall in any way affect its obligation on this bond, and it does hereby waive notice of any  
such change, extension of time, alteration or addition to the terms of the Contract or to the  
work or to the specifications.

Said Surety hereby waives the provisions of Sections 2819 and 2845 of the Civil Code of the State of California.

IN WITNESS WHEREOF, this instrument is executed in two (2) counterparts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

ATTEST:

\_\_\_\_\_  
(Principal) Secretary

\_\_\_\_\_  
Principal

(Seal)

By \_\_\_\_\_,

\_\_\_\_\_  
(Witness as to Principal)  
(Address)

\_\_\_\_\_

\_\_\_\_\_  
(Address)

ATTEST:

\_\_\_\_\_  
(Surety) Secretary

\_\_\_\_\_  
Surety

(Seal)

\_\_\_\_\_  
(Witness as to Surety)

By \_\_\_\_\_  
Attorney-in-Fact

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of Contract:

- (1) Correct name of Bidder / Contractor.
- (2) A Corporation, A Partnership, or an Individual, as case maybe.
- (3) Correct name of Surety.
- (4) If Contractor is Partnership, all partners should execute bond.

## PAYMENT BOND

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KNOW ALL MEN BY THESE PRESENTS: That we (1) \_\_\_\_\_  
\_\_\_\_\_ a (2) \_\_\_\_\_  
hereinafter called "Principal" and (3) \_\_\_\_\_  
of \_\_\_\_\_ State of \_\_\_\_\_ hereinafter called the  
"Surety," are held and firmly bound unto \_\_\_\_\_ Solano County Water Agency  
hereinafter called "Agency," in the penalsum of \_\_\_\_\_ dollars  
(\$\_\_\_\_\_) in lawful money of the United States, for the payment of which sum well  
and truly to be made, we bind ourselves, our heirs, executors, administrators and  
successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS such that WHEREAS, the Principal entered  
into a certain Contract with the Agency, dated the \_\_\_\_\_ day of  
\_\_\_\_\_, 20\_\_\_\_, a copy of which is hereto attached and made a part  
hereof for the construction and installation of the required erosion control and  
reconstruction at the Stebbins Cold Canton property near \_\_\_\_\_, including all  
appurtenances thereto, all as set forth in the Contract Documents entitled "Stebbins Cold  
Canyon Erosion Control and Reconstruction Project".

NOW, THEREFORE, if the Principal, or a Subcontractor, fails to pay (1) any of the persons  
or entities identified in Civil Code Section 3181, (2) amounts due under the Unemployment  
Insurance Code with respect to work or labor performed under Contract, or  
(3) for any amounts required to be deducted, withheld, and paid over to the Employment  
Development Department from the wages of employees of the Contractor and  
Subcontractors pursuant to §13020 of the Unemployment Insurance Code with respect to  
the work and labor, then surety will pay for the same, and also, in case suit is brought  
upon this bond, a reasonable attorney's fee, to be fixed by the Court

PROVIDED, FURTHER, Surety's obligation hereunder shall inure to the benefit of any of  
the persons or entities identified in Civil Code § 3181 so as to give a right of action to those  
persons or entities or their assigns in any suit brought upon this bond, and no final  
settlement between the Agency and the Contractor shall abridge the right of any  
beneficiary hereunder, whose claim may be unsatisfied

PROVIDED, FURTHER, that no final settlement between the Agency and the Contractor  
shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in two (2) counter-parts, each one of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ATTEST:

\_\_\_\_\_  
(Principal) Secretary

\_\_\_\_\_  
Principal

(Seal)

By \_\_\_\_\_,

\_\_\_\_\_  
(Witness as to Principal)  
(Address)

\_\_\_\_\_  
\_\_\_\_\_  
(Address)

ATTEST:

\_\_\_\_\_  
(Surety) Secretary

\_\_\_\_\_  
Surety

(Seal)

\_\_\_\_\_  
(Witness as to Surety)

By \_\_\_\_\_,  
Attorney-in-Fact

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of Contract:

- (1) Correct name of Contractor.
- (2) A Corporation, A Partnership, or an Individual, as case maybe.
- (3) Correct name of Surety.
- (4) If Contractor is Partnership, all partners should execute bond.



## SECTION 1

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### **GENERAL CONDITIONS**

#### **1.1 INTENT OF THE CONTRACT DOCUMENTS.**

The Contract Documents as listed in the Instructions to Bidders are complementary, and what is called for by anyone shall be as binding as if called for by all. The intent of the Contract Documents is to require a complete and finished job. The Contract price shall include the cost of all labor and materials, fuel, tools, plant, equipment, light, transportation, and all other expenses as may be necessary for the proper execution of the Work. In interpreting the Contract Documents, words describing materials or Work which have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with such well-known meaning recognized by engineers and the trade.

#### **1.2 DEFINITIONS.**

AGENCY/OWNER	Solano County Water Agency, acting through its Board of Directors.
FEMA	The Federal Emergency Management Agency
DHS	The United State Department of Homeland Security
CONTRACTOR	The person, firm, or corporation duly licensed in the State of California, to whom the within Contract is awarded by the Agency and who is subject to the terms hereof. The word "Contractor in printed form of Contract shall be the same as the "General Contractor".
CONTRACT OFFICER	The Solano County Water Agency, acting either directly through its employees, or through properly maintained agents; ("CO").
CONSTRUCTION MANAGER	The Solano County Water Agency, acting either directly through its employees, or through properly maintained agents; ("CM").

ENGINEER	The Solano County Water Agency, acting either directly through its employees, or through properly maintained agents.
SUPERINTENDENT	The executive representative of the Contractor, present on the Work at all times, authorized to receive and fulfill instructions from the Agency.
ACT OF GOD	Acts of God shall include only the following occurrences or conditions and effects: earthquakes in excess of a magnitude 3.5 on the Richter Scale and tidal waves.
DRAWINGS	The Plans, profiles, maps, working Drawings, and supplemental Drawings, which show the location, character, dimensions, and details of the Work to be done.
WORK/PROJECT	All the work specified in the Contract Documents or indicated in the Drawings
ACTIVITY(S)	A subset of specified Work.
SITE, WORKSITE	The area or areas or spaces occupied by the project and including adjacent areas and other related areas occupied or used by the Contractor for construction activities, either exclusively or with others performing other construction on the project. The extent of the site is shown on the Drawings and may or may not be identical with the description of the land upon which the project is to be built.
AND/OR	If used, shall mean that either or both of the items so joined are required.
APPLICABLE	As appropriate for the particular condition, circumstance, or situation.
APPROVE(D)	Limited to duties and responsibilities of Engineer of CM stated in the conditions of the Contract, for actions performed in the professional judgment of the Engineer or CM, in conjunction with submittals, applications, and requests. Approvals shall be valid only if obtained in writing and shall not apply to matters regarding the means, methods, techniques, sequences, and procedures of construction. Approval shall not relieve Contractor from responsibilities to fulfill Contract requirements.

DIRECTED	Limited to duties and responsibilities of the Engineer state in the conditions of the Contract, meaning as instructed by the Engineer, in writing regarding matters other than the means, methods, techniques, sequences, and procedures of construction. No implied meaning shall be interpreted to extend the Engineer's responsibility to the Contractor's supervision of construction.
REQUIRED	Necessary for performance of the Work in conformance with the requirements of the Contract Documents, excluding matters regarding the means, methods, techniques, sequences, and procedures of construction.
PROPER	As determined by the Agency as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences, and procedures of the construction, which are solely the Contractor's responsibility to determine.
NECESSARY	With due consideration of the conditions of the project and as determined in the professional judgment of the Engineer as being necessary for performance of the work in conformance with the requirements of the Contract Documents, but excluding matters regarding the means, methods, techniques, sequences, and procedures of construction.
SHOWN, NOTED	Refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or schedules in the specifications, and similar requirements in the Contract Documents.
SELECTED	As selected by the Agency from the full national product selection of the manufacturer, unless otherwise specifically limited in the contract documents to a particular quality, color, texture, or price range.
PROVIDE	Contractor shall both 'furnish' and "install' indicated products.
FURNISH	Contractor shall procure indicated products or perform indicated services. Where used regarding products, the term 'furnish' is understood and intended to mean delivery of the products to site of the Work but is not intended to include the installation, application or other action to incorporate products into the Work.

INDICATED	Graphic representations, notes, or schedules on the Drawings, or other paragraphs or schedules in the Specifications and Contract Documents.
INSTALL	Contractor shall receive, unload, transport, and temporarily store products at the site of the Work and perform assembly, fitting, installation, application, erection, and similar actions as necessary to incorporate products complete in place and ready for use, including provision of necessary labor, materials, tools, equipment, and transportation.
EQUAL / EQUIVALENT	As determined by the Agency as being equivalent, considering such attributes as durability, finish, function, suitability, quality, utility, performance, and aesthetic features.
USACE	United States Army Corps of Engineers; a regulatory agency with jurisdiction over Work.
CDFW	California Department of Fish and Wildlife; a regulatory agency with jurisdiction of Work.
RWQCB	California Regional Water Quality Control Board of the parent State Water Resources Control Board (SWRCB); a regulatory agency with jurisdiction over Work.
SWPPP	Storm Water Pollution Prevention Plan.
BMP(S)	Best Management Practice(s).
ASTM	American Society for Testing Materials; current designation.
AASHTO	American Association of State Highway Officials; current designation.
AWWA	American Water Works Association; current designation.
SSPC	Steel Structures Painting Council; current designation.
NSF	National Sanitation Foundation.
DAY	All references to “day” are meant to be calendar day unless noted.

### **1.3 BONDS.**

1. BID BOND. Bid Bond will be required as provided in Paragraph 3 of Instructions to Bidders.

2. PERFORMANCE BOND. The bidder to whom the Contract is awarded shall furnish a Performance Bond as provided in Paragraph 8 of Instructions to Bidders.

3. PAYMENT BOND. The bidder to whom a Contract is awarded shall provide a Payment Bond as provided in Paragraph 8 of Instructions to Bidders.

### **1.4 WORKERS' COMPENSATION AND EMPLOYERS LIABILITY INSURANCE.**

By his/her/its signature hereunder, Contractor certifies that he/she/it is aware of the provisions of Section 3700 of the California Labor code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and he/she/it will comply with such provisions before commencing the performance of the Work of this Contract. The Contractor and all sub-contractors shall insure (or be a qualified self-insured) under the applicable laws relating to workers' compensation insurance for all of their employees working on or about the construction site, in accordance with the "Workers' Compensation and Insurance Act", Division IV of the Labor Code of the State of California and any Acts amendatory thereof. The Contractor shall provide employer's liability insurance with limits of no less than \$1,000,000 each accident, \$1,000,000 disease policy limit, and \$1,000,000 disease each employee.

### **1.5 COMMERCIAL GENERAL LIABILITY AND AUTOMOBILE LIABILITY INSURANCE.**

The Contractor shall provide and maintain commercial general liability and automobile liability insurance as follows:

.1 COVERAGE. Coverage for commercial general liability and automobile liability insurance shall be at least as broad as the following:

- A. Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 001)
- B. Insurance Services Office (ISO) Business Auto Coverage (Form CA0001), covering Symbol 1 (any auto)

Such liability insurance shall indemnify the Contractor, his/her/its subcontractors and additional insureds against loss from liability imposed by law upon, or assumed under contract by, the Contractor or his/her/its subcontractors and additional

insureds for damages on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.

The automobile liability policy shall cover all owned, non-owned, and hired automobiles for or on behalf of Contractor.

.2 POLICY LIMITS. The Contractor shall maintain limits no less than the following:

- A. General Liability. Two million dollars (\$2,000,000) per occurrence for bodily injury, death, personal injury, property damage, products liability, blanket contractual liability, ongoing operations and completed operations liability. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the Work/location (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to the Agency) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.
- B. Automobile Liability. Two million dollars (\$2,000,000) per accident for bodily injury and property damage.

.3 REQUIRED PROVISIONS. Contractor shall make certain that the general liability and automobile liability policies contain or are endorsed to contain, the following provisions:

- A. The Agency, and its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers are to be given additional insured status (via ISO endorsement CG 2010, CG 2033, or insurer's equivalent, if approved in writing, for general liability coverage) with respect to: liability arising out of (i) any and all construction activities, including those related to the Work and ongoing operations performed by or on behalf of the Contractors; (ii) the completed operations or completed products; (iii) use of premises owned, occupied or used by or on behalf of the Contractor; (iv) use of any vehicles owned, leased, hired or borrowed by or on behalf of the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Agency, and its directors, officers, employees, subcontractors, design professionals or authorized agents and volunteers.

- B. For any claims related to this Work, the Contractor's insurance shall be the primary insurance with respect to the Agency, and its directors, officers, employees, subcontractors, design professionals or authorized agents and volunteers. Any insurance, self-insurance, or other coverage maintained by the Agency, and its directors, officers, employees, subcontractors, design professionals or authorized agents and volunteers shall not contribute to any claims related to this Work.
- C. Contractor's failure to comply with reporting or other provisions of the insurance policies including breaches of warranties shall not affect coverage provided to the Agency, and its directors, officers, subcontractors, design professionals, employees, or authorized agents and volunteers.
- D. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- E. Each insurance policy required by this Agreement shall state, or be endorsed to state, that coverage shall not be canceled by: (i) the insurance carrier, except after 10 days for non-payment of premium, or (ii) the Contractor, except after thirty (30) days prior written notice by U.S. mail has been given to the Agency.
- F. If any policy is cancelled for any reason, the Insurance carrier shall provide written notice of such cancellation within three (3) business days to all those named on the Additional Insured endorsements.
- G. The Contractor shall waive all rights of subrogation against the Agency, and its directors, officers, employees, or authorized agents and volunteers for any liability arising out of this Agreement.

## **1.6 GENERAL INSURANCE REQUIREMENTS.**

.1 DEDUCTIBLES AND SELF-INSURED RETENTIONS. Any deductible or self-insured retention must be declared to and approved in writing by the Agency. At the option of the Agency, the insurer shall either reduce or eliminate such deductibles or self-insured retentions.

.2 ACCEPTABILITY OF INSURERS. All insurance policies shall be provided through insurance companies with a current A.M. Best financial strength rating of no

less than "A-" and a class of no less than "VII" or as otherwise approved in writing by the Agency.

.3 EVIDENCES OF INSURANCE. Prior to execution of the Agreement, the Contractor shall file with the Agency a certificate of insurance (Acord Form 25-S or equivalent) signed by the insurer's representative evidencing the coverage required by this Agreement. Also prior to the execution of this Agreement, the Contractor shall deliver to the Agency: (i) an additional insured endorsement signed by the insurer's representative; (ii) an executed waiver of rights of subrogation against the Agency; and (iii) confirmation that insurance coverage includes or has been modified to include the Required Provisions described above.

The Contractor shall, upon demand of the Agency, deliver to the Agency the complete insurance policy (or policies), including any and all endorsements, and the receipts for payment of premiums, within three (3) business days of such demand.

.4 CONTINUATION OF COVERAGE. If any of the required coverages expire during the term of this Agreement, the Contractor shall deliver the renewal certificate(s) including the general liability additional insured endorsement and evidence of waiver of rights of subrogation against the Agency to the Agency at least ten (10) calendar days prior to the expiration date.

.5 SUBCONTRACTORS. In the event that the Contractor employs other contractors (subcontractors) as part of the work covered by this agreement, it shall be the Contractor's responsibility to require and confirm that each subcontractor meets the minimum insurance requirements specified above. The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for the Agency or be construed as relieving the Contractor or his/her subcontractors of responsibility for loss from any personal injury, bodily injury, death, physical loss, damage or destruction.

The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for the Agency or be construed as relieving the Contractor or his/her subcontractors of responsibility for loss from any personal injury, bodily injury, death, physical loss, damage or destruction.



## **1.7 INDEMNIFICATION.**

.1 CONTRACT TO INDEMNIFY AGENCY. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless and defend the Agency, its directors, officers, employees, or authorized agents and volunteers, and each of them from and against:

- A. Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind or nature whatsoever for, but not limited to, injury to or death of any person including Contractor and/or Agency, or any directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers of Agency or Contractor, and damages to or destruction of property of any person, including but not limited to, Agency and/or Contractor or their directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers, arising out of or in any manner directly or indirectly connected with the work to be performed under this Agreement, including the completed operations, work to be performed under this Agreement, including the completed operations, however caused, regardless of any negligence of Agency or its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers, except the willful misconduct or active negligence of Agency or its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers;
- B. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor;
- C. Any and all losses, expenses, damages (including damages to the Work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the Work and all of the Contractor's obligations under the Agreement. Such costs, expenses, and damages shall include all costs and attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

.2 CONTRACTOR TO DEFEND AGENCY. Contractor shall defend Agency, at Contractor's own cost, expense and risk, any and all such aforesaid suits, actions, or other legal proceedings of every kind that may be brought or instituted against Agency or its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers.

Contractor shall pay and satisfy any judgment, award or decree that may be rendered against Agency or its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers, in any and all such suits, actions, or other legal proceedings.

Contractor shall reimburse Agency or its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers, for any and all legal expenses, costs or actual damages incurred by each of them in connection therewith or in enforcing the indemnity herein provided.

Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the Agency, or its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers.

Contractor's obligation to indemnify Agency or its directors, officers, employees, subcontractors, Engineer, design professionals or authorized agents and volunteers shall survive the termination or expiration of this Agreement.

The provisions of this Indemnity section shall survive termination of the Agreement as to any actions covered by this indemnification occurring during the term of the Agreement.

## **1.8 RATES AND WAGES.**

The contractor and subcontractors shall not pay less than the prevailing rates of wages. Pursuant to the Statutes of the State of California, the Agency has ascertained and determined the general prevailing rate of per diem wages and rates for overtime and legal holidays in the locality in which this Work is to be performed for each craft or type of workman or mechanic needed to execute the Contract. The prevailing wage rate for this Work are on file at the Agency's principal office, which shall be made available to any interested party on request. The prevailing wage rate is also available on the Internet at <http://www.dir.ca.gov/dlsr/pwd>. If those prevailing rates should change during the term of the Contract, the altered rates shall apply to the Work performed after the date of change. The attention of the Contractor is directed to Section 1770 through Section 1780 of the Labor Code, which provides that the Contractor shall forfeit as penalty to the Agency, up to \$200.00, as determined by the Labor Commissioner, for each calendar day or portion thereof for each workman (whether employed by the Contractor or subcontractor), paid less than the stipulated prevailing rates for any Work done under the Contract in violation of the provisions of such Labor Code. The Agency will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wages set forth in the Contract Document. A possibility of wage increases is one of the elements to be considered by the Contractor in determining his proposal and will not under any circumstances be considered as a basis of a claim against the

Agency on the Contract. Sections 1810 through 1814 of the Labor Code provide that eight (8) hours labor constitutes a legal day's work. The contractor or subcontractor shall forfeit as penalty to the Agency \$25.00 for each workman employed in the execution of the Contract by the respective contractor or subcontractor for each calendar day during which any workman is required or permitted to labor for more than eight (8) hours in violation of the provisions of the Labor Code except as provided for in Section 1815 of the Labor Code.

#### **1.9 LABOR REQUIREMENTS.**

The Contractor shall comply with all applicable requirements of the Labor Code, including but not limited to provisions concerning the employment of apprentices. This work is a public work. Contractor and its subcontractors are subject to the requirements of Chapter 1, Part 7 of the Labor Code, commencing with section 1720, pertaining to public works, and are responsible for ascertaining and applying those requirements. Any person who willfully violates Article 2 of Chapter 1 (Wages) is guilty of a misdemeanor. See Labor Code section 1777. Violations may also result in debarment. See Labor Code section 1777.1.

#### **1.10 PROGRESSIVE ESTIMATES.**

Within ten (10) days of each calendar month, the Contract Officer (or designee) will make in writing and certify to the Agency an estimate which in his opinion is just and fair of the amount and value of the Work completed by the Contractor during the preceding month in the performance of the Contract. In case of Work for which unit prices are named in the Contract, the estimate shall be computed on the basis of said unit prices. In the case of Work for which a lump sum is named in the Contract, the Contract Officer (or designee) may use a breakdown of the lump sum price submitted by the Contractor, provided that such breakdown is submitted within twenty (20) calendar days after the execution of the Contract Agreement in a form acceptable to the Contract Officer (or designee). No payment will be made to the Contractor until such schedule has been submitted to and approved by the Contract Officer. To the figure thus arrived at shall be added any amounts due the Contractor for extra Work and the amount of any approved claims for extra cost to the date of the Progress Estimate. The retained percentage hereinafter provided for shall be deducted from the total thus computed and from the remainder there shall be further deducted any amounts due the Agency from the Contractor for supplies or materials provided or services rendered and any other amounts that may be due the Agency under the terms of the Contract. From the balance thus determined shall be deducted the amount of all previous payments and the remainder shall constitute the partial estimate for the period. Partial estimates shall not be required to be made by strict measurement, but may be made by measurement or by estimation or partly by one method and partly by the other and it shall be sufficient if they are approximate only. Partial estimates may be withheld or reduced if, in the opinion of the Contract Officer (or designee), the Contractor is

not diligently and efficiently endeavoring to comply with the intent of the Contract.

#### **1.11 PROGRESS PAYMENTS.**

- A. Per Public Contract Code Section 20104.50, the Agency shall make any progress payment to the Contractor within 30 days after receipt of an undisputed and properly submitted payment request from the Contractor, or shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure. Upon receipt of a progress payment request, the Agency shall act in accordance with the following:
  - 1. Each payment request shall be reviewed by the Contract Officer as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.
  - 2. Any payment request determined not to be a proper payment request suitable for payment shall be returned to the Contractor as soon as practicable, but not later than seven days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
- B. The number of days available for the Agency to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which the Agency exceeds the seven-day return requirement set forth in paragraph A.2, above.
- C. Said progress payment shall equal ninety-five percent (95%) of the amount earned by the Contractor during the preceding pay period based on the findings of the Contract Officer (or designee). The five percent (5%) retained will be held by the Agency until the final completion and acceptance of all Work under the Contract. No such progress payment or estimate shall constitute an acceptance of the Work or any portion thereof.
- D. The Contractor shall comply with and is subject to the provisions of Public Contract Code Section 7200 et seq, pertaining to retention proceeds withheld from a subcontractor.

#### **1.12 ACCEPTANCE AND FINAL PAYMENT**

- A. Upon receipt of written notice that the Work is ready for final inspection and acceptance, the Contract Officer will promptly make such inspection, and when the Contract Officer finds the Work acceptable under the Contract and the Contract fully performed, the Contract Officer will promptly issue a final certificate, over the Contract Officer's own signature, stating that the Work

required by this Contract has been completed. The Agency will then file a Notice of Completion with the County Recorder's Office within ten (10) days after the date of completion as required by the Civil Code of the State of California.

- B. Undisputed portions of the final payment and of the retained percentage shall become due the Contractor upon delivery of a complete release by Contractor and all subcontractors of all liens, stop payment notices and claims against the Agency, and the Contract Officer as agent of the Agency, arising out of this Contract, or receipts in full or other acceptable evidence of conformance, in lieu thereof, that there is no indebtedness, including liens, payrolls or material bills connected with the Work which have not been paid for or completely satisfied, relating to said undisputed amounts, and an affidavit that so far as the Contractor has knowledge or information, that the releases and receipts include all the labor and materials for which a lien or stop payment notice could be filed relating to said undisputed amounts. Disputed contract claims in stated amounts may be specifically excluded by the Contractor from the operation of the release. The Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Agency or deposit securities eligible for investment under Public Contract Code Section 22300(c) with Agency or into escrow pursuant to an escrow agreement in a form substantially similar to that set forth in Public Contract Code Section 22300(f), to indemnify the Agency against any lien or stop payment notice. If any lien or stop payment notice remains unsatisfied after all payments are made, the Contractor shall refund to the Agency all monies that the latter may be compelled to pay in discharging such a lien or stop payment notice, including all costs and reasonable attorney's fees.
- C. Per the Agency procedure and Public Contract Code section 7107, the retention proceeds withheld from any payment by the Agency from the Contractor, or by the Contractor from any subcontractor, shall be subject to the following:
  - 1. Between thirty-five (35) and sixty (60) days of the date of the completion of the Work of improvement, and subject to the Contractor's furnishing the Agency with releases per Section B, above, the retention withheld by the Agency shall be released, and all monies due the Contractor under the provisions of these Contract Documents shall be paid. In the event of a dispute between the Agency and the Contractor, the Agency may withhold from the final payment an amount not to exceed 150 percent of the disputed amount.
  - 2. Within seven days from the time that all or any portion of the retention proceeds are received by the Contractor, the Contractor shall pay each

of its subcontractors from whom retention has been withheld, each subcontractor's share of the retention received. However, if a retention payment received by the Contractor is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor, if the payment is consistent with the terms of the subcontract.

3. The Contractor may withhold from a subcontractor its portion of the retention proceeds if a bona fide dispute exists between the subcontractor and the Contractor. The amount withheld from the retention payment shall not exceed 150 percent of the estimated value of the disputed amount.
  4. In the event that retention payments are not made within the time periods required by this section, the Agency or the Contractor withholding the unpaid amounts shall be subject to a charge of two (2) percent per month on the improperly withheld amount, in lieu of any interest otherwise due. Additionally, in any action for the collection of funds wrongfully withheld, the prevailing party shall be entitled to attorney's fees and costs.
- D. Neither the acceptance of a portion or all of the Work by the Agency or Contract Officer, nor any possession taken by the Agency or its employees of any part of the Work, shall operate as a waiver of any provision of this Contract or any power herein reserved to the Agency or any right of the Agency to collect damages as herein provided. No payment shall operate to release the Contractor or his sureties from obligations under this Contract and under the Performance Bond, Labor and Materials Bond, and other bonds and warranties as herein provided. All prior certificates, upon which partial payments may have been made, being merely estimates, shall be subject to correction in the final payment. The provision of Public Contract Code Section 7100 shall apply to these Acceptance Provisions.
- E. Pursuant to Public Contract Code Section 7103.5, the Contractor offers and agrees to assign to the Agency all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2, commencing with Section 16700, of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract. This assignment shall be made and become effective at the time the Agency tenders final payment to the Contractor, without further acknowledgement by the parties.
- F. Contractor may request the Agency disburse any earned retentions into an escrow to be maintained at the Contractor's expense subject to an escrow

agreement in a form substantially similar to that set forth in Public Contract Code Section 22300(f). Contractor may direct the investment of those funds and receive the interest and proceeds of the investments on the satisfactory completion of the Project. Contractor is required to pay each subcontractor its portion of sums due, including interest earned from the retention funds.

**1.13 QUANTITIES AND UNIT PRICES.**

The quantities noted in the schedule are approximations for comparing proposals, and no claim shall be made against the Agency for excess or deficiency therein. Payment at the unit and lump sum prices set forth in the schedule will constitute payment in full for the completed Work and will include materials, supplies, labor, tools, machinery, and all other expenditures incident to satisfactory compliance with the Contract, unless otherwise specifically provided.

Under all payment methods, payment shall be considered full compensation for completion of the Work. Compensation for any items of Work described in the contract but not specifically listed in the bid schedule will be included in the payment for item of the Work to which it is subsidiary.

**1.14 MEASUREMENT OF QUANTITIES.**

The quantities of Work performed will be computed by the Contract Officer (or designee) on the basis of measurements taken by the Contract Officer (or designee), and these measurements shall be final and binding.

**1.15 RESOLUTION OF CLAIMS.**

Notwithstanding any other provision of this Contract, resolution of claims by the Contractor against the Agency in any amount shall be processed in accordance with the provisions of Article 1.5, Chapter 1, Part 3, Division 2 of the Public Contracts Code, Sections 20104 *et seq.* relating to informal conferences, non-binding judicially supervised mediation and judicial arbitration.

**1.16 DISPUTES.**

Except as otherwise provided in this Contract, any dispute concerning matters relating to execution, or progress of Work, or interpretation of the Contract shall be decided by the Contract Officer, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor within 15 days. If the Contractor disagrees with the decision, the Contractor may file a claim pursuant to Section 1.15, Resolution of Claims. Provided that if no such claim is filed, the decision of the Contract Officer shall be final and conclusive. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract and in accordance with the Contract Officer's decision.

### **1.17 EXTRA WORK.**

The Agency, without invalidating the Contract, may order extra Work or make changes by altering, adding to or deducting from the Work, the Contract sum being adjusted accordingly. All such Work shall be executed under the conditions of the original Contract. In giving instructions, the Contract Officer (or designee) shall have authority to make minor changes in the Work, not involving extra cost, and not inconsistent with the purposes or the Work, but otherwise, except in an emergency endangering life or property, no extra Work or change shall be made unless in pursuance of a written order by the Contract Officer and no claim for an addition to the Contract sum shall be valid unless so ordered. The value of any such extra Work or change shall be determined in one or more of the following ways:

- A. By estimate and acceptance in a lump sum.
- B. By unit prices named in the Contract or subsequently agreed upon.
- C. If a lump sum or unit price cannot be mutually agreed upon, the Contractor shall be entitled to the sum of the following costs of doing the extra Work:
  - 1. Direct Labor Costs: Charges for cost of all of the labor provided and used by the Contractor shall be made for manual classification up to and including general foremen. It will not include charges for Assistant Superintendents, Superintendents, Office Personnel, Time Keepers and Maintenance Mechanics. The time charged to extra Work shall be subject to the daily approval of the Contract Officer and evidence of such daily approval shall be submitted with the billing. Labor rates used to calculate the costs shall be those so designated in the Notice to Contractors. No time or charges will be allowed except when the men are actually engaged in the proper, efficient and diligent performance or completion of the extra Work as authorized. Overtime shall not be worked without prior approval by the Contract Officer.
  - 2. Equipment Costs: Charges for the rental and operations of the equipment provided and used by the Contractor shall be made for all prime construction and automotive equipment. It will not include charges for equipment or tools with a new cost of one thousand dollars (\$1,000.00) or less. Equipment time charges must be subject to the daily approval of the Contract Officer and evidence of such daily approval submitted with the billing. The equipment rental and operation rates used shall be those agreed upon by the Contract Officer and Contractor prior to commencement of the extra Work. No time or charges will be allowed except when equipment is actually being used for the proper and efficient



performance or completion of the extra Work as authorized.

3. **Material Costs:** Charges for the cost of materials furnished by the Contractor shall be made providing such furnishing was specifically authorized in the Extra Work Order and the actual use verified by the Contract Officer. Charges must be net cost to the Contractor delivered at the job, and vendor's invoice must accompany the billing along with verification use of such materials by the Contract Officer.
4. **Tools, Supplies, Overhead, Supervision, and Profit.** A charge for tools, supplies, overhead, supervision and profit will be allowed in the amount of fifteen percent (15%) of the total direct Labor Costs, Equipment Cost and Material Costs, as defined above. A maximum charge of an additional five percent (5%) for the prime contractor if Work is performed by a subcontractor. In the case of joint ventures, each party is considered a prime contractor.

Any extra Work performed hereunder shall be subject to all of the provisions of the Contract and the Contractor's sureties shall be bound. Contractor shall be responsible to increase Bond coverages upon execution of Extra Work Orders.

**1.18 CLAIMS FOR EXTRA WORK.**

If the Contractor claims any instructions by drawings or otherwise involve extra cost, or if the contractor disagrees with the Contract Officer's determination as to the value of the extra Work or change, the Contractor may file a claim pursuant to Section 1.15, Resolution of Claims. Provided, that no such claim is filed, the determination of the Contract Officer shall be final and conclusive.

**1.19 CONTRACT CHANGES AND PAYMENT THEREON.**

The Agency may make changes in the Work in the course of construction to bring the completed improvements into compliance with environmental requirements or standards established by state and federal statutes and regulations enacted after the Contract has been awarded. The Contractor shall be paid for such changes in accordance with the provisions of the Contract governing payment for extra Work or change, Sections 1.17 and 1.18, above.

**1.20 ASSIGNMENTS.**

Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Agency. Any attempted assignment without prior written consent of the Agency is void and of no effect.

### **1.21 SUBCONTRACTS.**

The Contractor shall comply with the "Subletting and Subcontracting Fair Practices Act" of the CA Public Contracts Code and FEMA Guidelines for Subcontracting. Each contractor shall set forth in his Proposal the name and the location of the place of business of each subcontractor who will perform Work or labor or render service to the General Contractor in or about the construction of the Work in an amount in excess of one-half (1/2) of one percent (1%) of the General Contractor's total bid, and the portion of Work which will be done by each such subcontractor. Only competent subcontractors shall be employed on the Work. Workers whom the Contract Officer determines to be incompetent, intemperate, troublesome, disorderly or otherwise objectionable, or who fail to perform Work properly and acceptably shall be immediately removed from the Work by the Contractor at the direction of the Contract Officer. No changes will be allowed from the approved subcontractor list without the written approval of the Contract Officer. The Contractor agrees that he/she/it is fully responsible to the Agency for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them as he/she/it is for the acts and omissions of persons directly employed by him. Nothing contained in the Contract Documents shall create any contractual relation between any subcontractor and the Agency.

### **1.22 SEPARATE CONTRACTS.**

The Agency reserves the right to let other contracts in connection with this Work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work, and shall properly connect and coordinate his/her/its Work with theirs. If any part of the Contractor's Work depends for proper execution or results upon the Work of any other contract, the Contractor shall inspect and promptly report to the Contract Officer any defects in such Work that render it unsuitable for such proper execution and results. The Contractor's failure to so inspect and report shall constitute his acceptance of the other contractor's Work as fit and proper for the reception of his Work, except as to defects which may develop in the other contractor's Work after the execution of his Work. To ensure the proper execution of his subsequent Work, the Contractor shall measure Work already in place and shall at once report to the Contract Officer any discrepancy between the executed Work and the Drawings.

### **1.23 LIENS OR STOP PAYMENT NOTICES.**

Neither the final payment nor any part or the retained percentage shall become due until the Contractor delivers to the Agency a complete release of all liens or stop payment notices arising out of this Contract, or receipts in full in lieu thereof and in either case, an affidavit that so far as he/she/it has knowledge or information, the releases and receipts include all the labor and material for which a lien or stop payment notice could be filed; but the Contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish either: (1) a bond satisfactory to the

Agency, to indemnify the Agency against any lien or stop payment notice; or (2) securities pursuant to Section 1.25 below. If any lien or stop payment notice remains unsatisfied after all payments are made, the Contractor shall refund to the Agency all monies that the latter may be compelled to pay in discharging such a lien or stop payment notice, including all costs and a reasonable attorney's fee. The provisions outlined in Public Contract Code Section 7107 shall be a part of any action taken on liens or stop payment notices.

**1.24 CONTRACTOR'S RIGHT TO SUBSTITUTE SECURITIES.**

The Contractor may substitute securities for any monies withheld to insure performance under the Contract in strict accordance with Section 22300(c) of the Public Contracts Code of the State of California.

**1.25 AGENCY'S RIGHT TO TERMINATE CONTRACT.**

- A. If the Contractor should be adjudged bankrupt, make a general assignment for the benefit of creditors, if a receiver should be appointed on account of his insolvency, or if he/she/it should fail to meet the requirements of the Contract, the Agency upon the certificate of the Contract Officer that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy, provide the Contractor with written notice terminating the Contractor's employment under this Contract. Upon receipt of such notice, the Contractor shall preserve site construction materials and equipment and undertake immediate steps to remedy such default. If the Contractor fails to remedy such default within seven (7) calendar days after receipt of such written notice, the Agency may terminate the Contractor's employment and take possession of the premises and of all materials, tools and appliance thereon and finish the Work by whatever method the Agency may deem expedient. Upon such action the Contractor shall cooperate with the Agency in all respects in order to allow the Agency to proceed to completion of the Work. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract price shall exceed the expense of finishing the Work, including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Agency. The expense incurred by the Agency as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Agency.
- B. The Agency may terminate the Contract upon ten (10) days written notice to the Contractor, if Agency finds reasons beyond the control of the parties, which make it impossible, or against Agency's interest to complete the Work. In such a case, the Contractor shall have no claims against the Agency, except for the value of the Work performed to the date of the termination, and

the cost of materials and equipment on hand, in transit, or on definite commitment, as of the date of termination if such materials and equipment would be needed in the Work. The value of the Work performed and the cost of materials and shipment delivered to the site shall be determined by the Contract Officer in accordance with the procedure prescribed for the making of a final estimate and payment.

**1.26 CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT.**

If all of the Work of the Project shall be stopped under an order of any court or other public authority for a period of three (3) calendar months through no fault or act of the Contractor or of any employee, subcontractors or agents of the Contractor, then the Contractor may on seven (7) days written notice to the Agency elect to terminate this Contract and recover from the Agency payment for all Work executed to such date of election, any losses sustained on any plant or material and a reasonable profit on the Work completed or done by the Contractor to the date of such written notice. This shall be the sole remedy of the Contractor under this Contract against the Agency, the Engineer, their agents or employees, but the Contractor shall retain all rights and causes of action against any other party than the forenamed for interference with the Contract.

**1.27 CONTRACTOR'S UNDERSTANDING.**

It is understood and agreed that the Contractor has, by careful examination, satisfied himself/herself/itself as to the nature and location of the Work, existing utilities, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the Work, local traffic, the general and local conditions, applicable environmental laws, and all other matters which can in any way affect the Work under this Contract. No verbal agreement or conversation with any officer, agency or employee of the Engineer or the Agency, either before or after the execution of this Contract, shall affect or modify any one of the terms or obligations herein contained.

**1.28 DRAWINGS AND SPECIFICATIONS FURNISHED.**

Drawings furnished herewith are for bidding purposes. The Agency will furnish to the Contractor, free of charge, all copies of working Drawings and Specifications reasonably necessary for the execution of the Work.

**1.29 DRAWINGS AND SPECIFICATIONS ON THE WORK.**

The Contractor shall keep one copy of all current Drawings and Specifications on the Work. If the Contractor, in the course of the Work, finds any discrepancy between the Drawings and the physical condition of the locality, or any errors or omissions in Drawings, or in the layout as given by points and instructions, it shall be his duty to immediately inform the Contract Officer in writing and the Contract Officer shall promptly verify the same. Any Work done after such discovery, until

authorized, will be done at the Contractor's risk.

**1.30 OWNERSHIP OF DRAWINGS.**

All copies of Drawings and Specifications furnished by the Agency are property of the Agency. They are not to be used on other Work, and with the exception of the signed Contract set, are to be returned to the Agency on request, at the completion of the Work.

**1.31 CONFLICTS BETWEEN THE SPECIFICATIONS AND THE DRAWINGS.**

In case of conflict between the Specifications and the Drawings, the conflict shall be brought to the attention of the Contract Officer who shall resolve such conflict.

**1.32 SUPERINTENDENCE AND SUPERVISION.**

The Contractor shall keep on the Work during its progress a Superintendent, necessary assistants, and workmen, all of whom are competent and satisfactory to the Agency. The Superintendent shall not be changed except with the consent of the Agency. The Superintendent shall not be changed except with the consent of the Agency, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The Superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. The Contractor shall give proper supervision to the Work, using his best skill and attention. Neither party shall employ or hire any employee of the other party without his consent.

Daily reports shall be maintained by Contractor and Subcontractors and submitted to the Agency no later than weekly or by request from Agency. Daily reports must contain, at a minimum, the information outlined in the sample "Foreman's Daily Report" provided by Agency.

**1.33 TOOLS AND EQUIPMENT.**

The Contractor must provide adequate equipment and facilities to perform properly the Work in a responsible manner in accordance with these Contract Documents. If, at any time before the commencement or during the progress of the Work, tools, plant, or equipment appear to the Contract Officer to be insufficient, inefficient, or inappropriate to secure the quality of the Work required or the proper rate of progress, the Contract Officer may order the Contractor to increase their efficiency, to improve their character, to augment their number, or to substitute new tools, plant, or equipment as the case may be, and the Contractor must conform to such order; but the failure of the Contract Officer to demand such increase in efficiency, number, or improvement shall not relieve the Contractor of his obligation to secure the quality of Work and the rate of progress necessary to complete the Work within the time required by the Contractor to the satisfaction of the Agency.

#### **1.34 INSPECTION OF WORK.**

The Agency and their authorized agents, as well as the Engineer and his representatives shall at all times have access to the Work wherever it is in preparation or progress and the Contractor shall provide proper facilities for such access and for inspection. If the Specifications, the Contract Officer's instructions, law, ordinances or any public authority require any Work to be specially tested or approved, the Contractor shall give the Contract Officer (or designee) timely notice of its readiness for inspection and, if the inspection is by an authority other than the Contract Officer (or designee), of the time fixed for such inspection. Inspections by the Contract Officer (or designee) shall be made promptly and where practicable, at the source of supply. If any Work should be performed without approval or consent of the Contract Officer (or designee), it must, if required by the Contract Officer, be exposed for examination at the Contractor's expense, irrespective of whether the Work exposed is found to be defective or not. Re-examination of questioned Work may be ordered by the Contract Officer, and if so ordered, the Work must be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the Agency will pay the cost of re-examination and replacement. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such cost, unless he shall show that the defect in the Work was caused by another contractor, and in that event, the Agency will pay such cost. The inspection of the Work shall not relieve the Contractor of any of his obligations to fulfill his Contract as herein prescribed, and defective Work shall be made good, and unsuitable materials may be rejected, notwithstanding that such Work and materials have been previously overlooked by the Contract Officer (or designee) and accepted or estimated for payment. If the Work, or any part thereof, shall be found defective at any time before the final acceptance of the whole Work, the Contractor shall within ten (10) calendar days make good such defect without compensation in a manner satisfactory to the Contract Officer. If the Contractor shall fail or neglect to make ordered repairs of defective Work or to remove condemned materials from the Work within ten (10) calendar days after direction by the Contract Officer in writing to do such repair Work or remove such materials, the Agency may make the ordered repairs or remove the condemned materials and deduct the cost thereof from any monies due the Contractor.

#### **1.35 SAMPLES AND TESTS.**

At the option of the Contract Officer (or designee), the source of supply of each of the materials shall be approved by Contract Officer (or designee) before the delivery is started and before such material is used in the Work. Representative preliminary samples of the character and quality prescribed shall be submitted by the Contractor or producer of all materials to be used in the Work for testing or examination as requested by the Contract Officer (or designee). All tests of

materials provided by the Contractor shall be made in accordance with the commonly recognized standards of national technical organizations and such special methods and tests as are prescribed in these Specifications. The Contractor shall provide the Agency three certified copies of all required factory and mill test reports. Any materials shipped by the Contractor from a factory or mill prior to having satisfactorily passed such testing and inspection by a representative of the Agency shall not be incorporated in the Work, unless the Contract Officer shall have notified the Contractor in writing that such testing and inspection will not be required. The Contractor shall provide, without charge, such samples of materials as are requested by the Contract Officer (or designee). No material shall be used until it has been approved by the Contract Officer (or designee). Samples will be secured and tested whenever necessary to determine the quality of the material. Independent inspection and/or testing of Work and materials may be required as a part of this contract and may be specified in the appropriate subsection. The inspection of materials shall not relieve the Contractor of the obligations under the Contract, and the Contractor shall replace or repair such equipment, materials, or Work found to be defective or otherwise not to comply with the requirements of the Contract up to the end of the guaranty period.

#### **1.36 CONTRACT OFFICER'S STATUS.**

The Contract Officer will have general supervision and direction of the Work. Where appropriate, the Contract Officer may designate some Contract Officer's duties stipulated in the Contract Documents to authorized agents, such as the Engineer or others, for assistance and performance without relinquishing any authority or final decision and veto power over decisions made by authorized agents. The Contract Officer shall give all orders, lines, grades and directions contemplated under the Contract. Contract Officer has authority to stop the Work whenever such stoppage may be necessary to insure the proper execution of the Contract. Contract Officer shall also have authority to reject all Work and materials, which do not conform to the Contract, to direct the application of forces to any portion of the Work, as in his judgment is required, and to order the force increased or diminished, and to decide questions, which arise in the execution of the Work. The undertaking of periodic inspections by the Contract Officer shall not be construed as supervision of the actual construction nor make the Contract Officer or the Agency responsible for providing a safe place for the performance of the Work by the Contractor, subcontractors or suppliers, or by agents or employees of the Contractor, subcontractors or suppliers; or for access, visits, use, Work, travel or occupancy by any person.

#### **1.37 PROTECTION OF WORK AND PROPERTY.**

The Contractor shall maintain continuously adequate protection, including the erection of temporary fences if required, of all his Work from damage and shall protect private landowner or Agency property from injury or loss arising in

connection with this Contract. Contractor shall make good any such damage, injury or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the Agency. Contractor shall protect adequately adjacent property which shall include livestock and crops.

Contractor shall provide and maintain all rights-of-way, passageways, barricades, lights, and other facilities for protection required by public authority or local conditions. The Contractor shall use extreme care during construction to prevent damage from dust to adjacent property. The Contractor shall sprinkle the right-of-way or take other dust abatement preventive measures as directed by the Contract Officer (or designee). The Contractor shall be responsible for all damage or injury, which may be caused on any property by trespass by the Contractor or his employees in the course of their employment, whether the said trespass was committed with or without the consent or knowledge of the Contractor. The Contractor shall be responsible for any damage caused by drainage or storm water run-off from construction areas and from construction plant areas. In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Contract Officer, is hereby permitted to act, at his discretion, to prevent such threatened loss or injury, and he/she/it shall so act, without appeal, if so instructed or authorized.

#### **1.38 RESPONSIBILITY FOR REPAIR OF WORK.**

All Work under and implied by this Agreement shall be under the Contractor's responsible care and charge. The Contractor shall rebuild, repair, and restore any damages or defects that occur under its care regardless of the cause of damage.

#### **1.39 GOVERNING LAWS.**

FEMA is part of a larger team of federal agencies, state, local, tribal, and territorial (SLTT) governments, and non-governmental partners that share responsibility for emergency management and national preparedness.

FEMA has the statutory authority to deliver numerous disaster and non-disaster financial assistance programs in support of FEMA's mission, largely through grant agreements and cooperative agreements (grants). These programs account for a significant amount of the Federal funds for which FEMA is accountable. FEMA officials are responsible and accountable for the proper administration of these funds pursuant to Federal laws and regulations. Based on FEMA Hazard Mitigation Grant Program (HMGP) funds were approved for Solano County Office of the Emergency Services as a Subrecipient of federal funds.

FEMA provides Federal assistance through various financial assistance programs under the authority of various Federal laws. Non-Federal Entity ("NFE") that are recipients and subrecipients of Federal financial assistance provided by FEMA under these programs are generally required to comply with the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards ("Uniform Rules") at 2 C.F.R. Part 200, as adopted by DHS at 2 C.F.R. Part 3002. Chapter I, ¶



3 of this document contains a detailed list of these programs and authorizing statutes.

- (<https://www.fema.gov/media-librarydata/1519395888776af5f95a1a9237302af7e3fd5b0d07d71/StaffordAct.pdf>)

<https://www.fema.gov/media-library/assets/documents/15271>

#### **Applicability (Sec 4a and 4b)**

4a. With one exception identified in Sec. 4.b., below, financial assistance associated with emergencies or major disasters declared under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (“Stafford Act”), the procurement standards at 2 C.F.R. §§ 200.317 to 200.326 are the default standards that apply to those grants associated with emergencies or major disasters declared on or after December 26, 2014. See 79 Fed. Reg. 75871, 75872 (Dec. 19, 2014). For awards made by FEMA, or for emergency or major disasters declared, prior to December 26, 2014 (this includes awards associated with prior emergencies or disasters, but not started until after this date), Federal financial assistance awards are governed by the Uniform Administrative Requirements at either 44 C.F.R. Part 13 (for state, local, and Indian tribal governments) or 2 C.F.R. Part 215 (for institutions of higher education, hospitals, and other nonprofit organizations), depending upon the type of entity.

4b. **Grace Period**: A Non-Federal Entity (also known as a “NFE”), however, may continue to comply with the former procurement standards applicable to FEMA awards at 44 C.F.R. Part 13 (for states, local, and Indian tribal governments) or 2 C.F.R. Part 215 (for institutions of higher education, hospitals, and other nonprofit organizations) until the completion of two additional fiscal years after December 26, 2014. This is an elective grace period. If a NFE elects to use the previous procurement standards, it must affirmatively document this decision in its internal procurement policies, including the date upon which its grace period (based upon the two additional fiscal years) will end and it will accordingly transition to the new procurement standards. 2 C.F.R. § 200.110(a). See also, Ch. 1, par. 2.e., below for additional amplifying guidance.

#### **FEMA Procurement Guidance: (Attached)**

This document is intended to supplement the FEMA Field Manual, Public Assistance Grantee and Subgrantee Procurement Requirements Under 44 C.F.R. Pt. 13 and 2 C.F.R. pt. 215, dated, December 2014 (“PDAT1 Field Manual” or “Field Manual”) by providing up to date identification, analysis and discussion of the current Federal procurement standards found at 2 C.F.R. pt. 215, which went into effect on December 26, 2014. The Field Manual can be found online at the following web link: <https://www.fema.gov/media•library/assets/documents/96773> and provides in depth discussion of the previous Federal procurement standards, to include analysis of Department of Homeland Security (“DHS”) Office of Inspector General (“OIG”) audits related to various procurement violations and real world procurement scenarios. Together, both documents provide a comprehensive analysis of the Federal procurement standards that apply to procurements associated with disaster financial

assistance provided both after and prior to December 26, 2014.

### **Hazard Mitigation Grant Program (HMGP)**

Is authorized by Section 404 of the Stafford Act, Solano County Water Agency 42 U.S.C. 5170c. The key purpose of HMGP is to ensure that the opportunity to take critical mitigation measures to reduce the risk of loss of life and property from future disasters is not lost during the reconstruction process following a disaster. HMGP funding is available, when authorized under a Presidential major disaster declaration, in the areas of the State requested by the Governor. Federally recognized tribes may also submit a request for a Presidential major disaster declaration within their impacted areas (see <http://www.fema.gov/media-library/assets/documents/85146>).

### **CA Cost Accounting Policies and Procedures Manual (2019 Edition)**

The Uniform Public Construction Cost Accounting Act (Act), enacted in 1983 under Public Contract Code section 22000 et seq., allows local agencies to perform public project work of up to \$60,000 with their own workforces if the agencies elect to follow the cost accounting procedures set forth in the Cost Accounting Policies and Procedures Manual by the California Uniform Construction Cost Accounting Commission. Every five years, the California Uniform Construction Cost Accounting Commission reviews the informal proposal limits for inflation and other factors to determine whether adjustments should be made. If an adjustment is made, the State Controller notifies the affected public agencies. The adjustment may become effective before it appears as a formal change in the Public Contract Code pursuant to Public Contract Code section 22020. The most recently posted proposal limits can be found at [www.sco.ca.gov/ard\\_cuccac.html](http://www.sco.ca.gov/ard_cuccac.html) titled under New Informal Proposal Limit Increase (Pursuant to PCC 22032). Any local agency can voluntarily elect to become a participating agency of the Act. Local agencies include cities, counties, redevelopment agencies, special districts, school districts, and community college districts. Participating agencies benefit from the raised force account limit and the informal proposal ding procedures. More projects are completed in a timely manner as a result of the streamlined awards process and the reduction in paperwork related to advertising and report filing.

### **CA Department of Industrial Relations – Office of the Labor Commissioner Public Works Manual (2018).**

Office of the Labor Commissioner (CA) releases this updated Public Works Manual. <https://www.dir.ca.gov/dlse/PWManualCombined.pdf>

This Manual has been revised to reflect the most recent changes in prevailing wage laws, including:

- Enhanced penalties for violations of Public Works Contractor Registration requirements, including penalties on awarding agencies who use unregistered contractors and the power of the Labor Commissioner to issue a stop order (SB 96); and
- Additional streamlining of investigative tools and processes to effectively combat prevailing wage theft while educating the public and law-abiding contractors to create a more level playing field and promote economic justice for the middle-

class. This Manual is designed to be used by the Labor Commissioner's Office to ensure consistent, timely, and accurate enforcement of the law statewide and is also intended as an educational tool for our public works stakeholder community.

This Public Works Manual is designed as a training tool for the Division of Labor Standards Enforcement ("Labor Commissioner Office") staff to better understand the Labor Commissioner's functions in carrying out its responsibilities to conduct investigations and undertake enforcement actions under the Public Works Chapter of the California Labor Code (LC § 1720-1861).

Those statutory provisions are collectively referred to in the Manual as the prevailing wage laws. The Manual relies in part on judicial and administrative decisions whenever case-specific resolutions of legal issues are available.

It is not intended as a comprehensive summary of existing law or duly promulgated regulations, or a pronouncement of the Labor Commissioner's enforcement policies, with regard to prevailing wage compliance. Rather, the purpose of the Manual is to familiarize staff assigned to prevailing wage enforcement with processes and historical issues which have arisen, and may continue to arise, as investigations are conducted and enforcement actions are initiated, and administratively reviewed, under the statutory scheme.

To the extent the Manual's text might be viewed as purporting to establish rules of general application, but fails to present interpretations as a restatement or summary of existing laws, regulations or judicial and administrative decisions, it is invalid and should not be relied upon for that purpose.

The Manual's text, standing alone, is therefore not binding on the enforcement activities of the Labor Commissioner, or the Department of Industrial Relations ("DIR"), in subsequent proceedings or litigation, or on the courts when reviewing DIR proceedings under the prevailing wage laws. (<https://www.dir.ca.gov/dlse/PWManualCombined.pdf>)

### **Solano County and Solano County Water Agency Memorandum of Understanding**

Based on the Memorandum of Understanding dated May 1, 2019 between the Solano County and the Solano County Water Agency (SWCA) pursuant to which the County passes through FEMA grant funds. As a result of a Presidential Disaster Declaration, the Federal Emergency Management Agency (FEMA) funds plans and projects that reduce the effects of future natural disasters through the Hazard Mitigation Grant Program (HMGP) and in California these funds are administered by the California Governor's Office of Emergency Services (**CalOES**) Hazard Mitigation Grant Program Unit. CalOES requires applicants (such as local state agencies, local governments, special districts and some private non-profits) to have a approved Local Hazard Mitigation Plan (**LHMP**) to submit an application for a project.

WHEREAS, the County and SCWA have an approved LHMP and SCWA submitted its Notice of Intent (NOI) for this Project to CalOES, which was determined to represent an eligible HMPG activity, and for which CalOES confirmed the invitation to develop a application for consideration of HMGP funding.

SCWA was approved and accepted as the only eligible recipient of HMGP funds for the County and to allow for implementation of this Project. County will serve as pass through agent of the FEMA funds and SCWA will serve as a project manager for the Project and be responsible for ensuring that the Project is coordinated with the County.

**Electronic Code of Federal Regulations (e-CFR) - Procurement Guidelines for States**

[https://www.ecfr.gov/cgi-bin/text-idx?SID=8fa2890df66fb12d1701cb29979f6231&mc=true&node=sg2.1.200\\_1316.sg3&rqn=div7](https://www.ecfr.gov/cgi-bin/text-idx?SID=8fa2890df66fb12d1701cb29979f6231&mc=true&node=sg2.1.200_1316.sg3&rqn=div7)

When procuring property and services under a Federal award, a state must follow the same policies and procedures it uses for procurements from its non-Federal funds. The state will comply with §200.322 Procurement of recovered materials and ensure that every purchase order or other contract includes any clauses required by section §200.326 Contract provisions. All other non-Federal entities, including subrecipients of a state, will follow §§200.318 General procurement standards through 200.326 Contract provisions.

[https://www.ecfr.gov/cgi-bin/text-idx?SID=8fa2890df66fb12d1701cb29979f6231&mc=true&node=sg2.1.200\\_1316.sg3&rqn=div7](https://www.ecfr.gov/cgi-bin/text-idx?SID=8fa2890df66fb12d1701cb29979f6231&mc=true&node=sg2.1.200_1316.sg3&rqn=div7)

**§200.318 General procurement standards**

(a) The non-Federal entity must 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 this part.

(b) Non-Federal entities must maintain oversight to ensure that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders.

(c) (1) The non-Federal entity must maintain written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award and administration of contracts. No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a Federal award if he or she has a real or apparent conflict of interest. Such a conflict of interest would arise when the employee, officer, or agent, 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 a tangible personal benefit from a firm considered for a contract. The officers, employees, and agents of the non-Federal entity may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. However, non-Federal entities may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the non-Federal entity.

(2) If the non-Federal entity has a parent, affiliate, or subsidiary organization that is not a state, local government, or Indian tribe, the non-Federal entity must also maintain written standards of conduct covering organizational conflicts of interest. Organizational conflicts of interest means that because of relationships with a parent company, affiliate, or subsidiary organization, the non-Federal entity is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.

(d) The non-Federal entity's procedures must avoid acquisition of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. Where appropriate, an analysis will be made of lease versus purchase alternatives, and any other appropriate analysis to determine the most economical approach.

(e) To foster greater economy and efficiency, and in accordance with efforts to promote cost-effective use of shared services across the Federal Government, the non-Federal entity is encouraged to enter into state and local intergovernmental agreements or inter-entity agreements where appropriate for procurement or use of common or shared goods and services.

(f) The Non-Federal entity is encouraged to use Federal excess and surplus property in lieu of purchasing new equipment and property whenever such use is feasible and reduces project costs.

(g) The Non-Federal entity is encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering is a systematic and creative analysis of each contract item or task to ensure that its essential function is provided at the overall lower cost.

(h) The Non-Federal entity must award contracts only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance, and financial and technical resources. See also §200.213 Suspension and debarment.

(i) The Non-Federal entity must maintain records sufficient to detail the history of procurement. These records will include but are not necessarily limited to the following: rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for the contract price.

(j)(1) The Non-Federal entity may use a time and materials type contract only after a determination that no other contract is suitable and if the contract includes a ceiling price that the contractor exceeds at its own risk. Time and materials type contract means a contract whose cost to a non-Federal entity is the sum of:

(i) The actual cost of materials; and

(ii) Direct labor hours charged at fixed hourly rates that reflect wages, general and administrative expenses, and profit.

(2) Since this formula generates an open-ended contract price, a time-and-materials contract provides no positive profit incentive to the contractor for cost control or labor efficiency. Therefore, each contract must set a ceiling price that the contractor exceeds at its own risk. Further, the non-Federal entity awarding such a contract must assert a high degree of oversight in order to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls.

(k) The non-Federal entity alone must be responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the non-Federal entity of any contractual responsibilities under its contracts. The Federal awarding agency will not substitute its judgment for that of the non-Federal entity unless the matter is primarily a Federal concern. Violations of law will be referred to the local, state, or Federal authority having proper jurisdiction.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75885, Dec. 19, 2014; 80 FR 43309, July 22, 2015]

#### **§200.319 Competition.**

(a) All procurement transactions must be conducted in a manner providing full and open competition consistent with the standards of this section. In order to ensure objective contractor performance and eliminate unfair competitive advantage, contractors that develop or draft specifications, requirements, statements of work, or invitations for proposals or requests for proposals must be excluded from competing for such procurement

#### **§200.320 Methods of procurement to be followed.**

The non-Federal entity must use one of the following methods of procurement.

(d) Procurement by competitive proposals. The technique of competitive proposals is normally conducted with more than one source submitting an offer, and either a fixed price or cost-reimbursement type contract is awarded. It is generally used when conditions are not appropriate for the use of sealed proposals. If this method is used, the following requirements apply:

(1) Requests for proposals must be publicized and identify all evaluation factors and their relative importance. Any response to publicized requests for proposals must be considered to the maximum extent practical;

(2) Proposals must be solicited from an adequate number of qualified sources;

(3) The non-Federal entity must have a written method for conducting technical evaluations of the proposals received and for selecting recipients;

(4) Contracts must be awarded to the responsible firm whose proposal is most

advantageous to the program, with price and other factors considered; and

(5) The non-Federal entity may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. The method, where price is not used as a selection factor, can only be used in procurement of A/E professional services. It cannot be used to purchase other types of services though A/E firms are a potential source to perform the proposed effort.

**§200.321 Contracting with small and minority businesses, women's business enterprises, and labor surplus area firms.**

(a) The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

(b) Affirmative steps must include:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;

(4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;

(5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and

(6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (1) through (5) of this section.

**§200.322 Procurement of recovered materials.**

A non-Federal entity that is a state agency or agency of a political subdivision of a state and 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.

#### **§200.323 Contract cost and price.**

(a) The non-Federal entity must perform a cost or price analysis in connection with every procurement action in excess of the Simplified Acquisition Threshold including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, the non-Federal entity must make independent estimates before receiving proposals or proposals.

(b) The non-Federal entity must negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration must be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

(c) Costs or prices based on estimated costs for contracts under the Federal award are allowable only to the extent that costs incurred, or cost estimates included in negotiated prices would be allowable for the non-Federal entity under Subpart E—Cost Principles of this part. The non-Federal entity may reference its own cost principles that comply with the Federal cost principles.

(d) The cost plus a percentage of cost and percentage of construction cost methods of contracting must not be used.

#### **§200.324 Federal awarding agency or pass-through entity review.**

(a) The non-Federal entity must make available, upon request of the Federal awarding agency or pass-through entity, technical specifications on proposed procurements where the Federal awarding agency or pass-through entity believes such review is needed to ensure that the item or service specified is the one being proposed for acquisition. This review generally will take place prior to the time the specification is incorporated into a solicitation document. However, if the non-Federal entity desires to have the review accomplished after a solicitation has been developed, the Federal awarding agency or pass-through entity may still review the specifications, with such review usually limited to the technical aspects of the proposed purchase.

(b) The non-Federal entity must make available upon request, for the Federal awarding agency or pass-through entity pre-procurement review, procurement documents, such as requests for proposals or invitations for proposals, or independent cost estimates, when:



- (1) The non-Federal entity's procurement procedures of operation fails to comply with the procurement standards in this part;
  - (2) The procurement is expected to exceed the Simplified Acquisition Threshold and is to be awarded without competition or only one proposal or offer is received in response to a solicitation;
  - (3) The procurement, which is expected to exceed the Simplified Acquisition Threshold, specifies a "brand name" product;
  - (4) The proposed contract is more than the Simplified Acquisition Threshold and is to be awarded to other than the apparent low contractor under a sealed proposal procurement; or
  - (5) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the Simplified Acquisition Threshold.
- (c) The non-Federal entity is exempt from the pre-procurement review in paragraph (b) of this section if the Federal awarding agency or pass-through entity determines that its procurement systems comply with the standards of this part.
- (1) The non-Federal entity may request that its procurement system be reviewed by the Federal awarding agency or pass-through entity to determine whether its system meets these standards in order for its system to be certified. Generally, these reviews must occur where there is continuous high-dollar funding, and third party contracts are awarded on a regular basis;
  - (2) The non-Federal entity may self-certify its procurement system. Such self-certification must not limit the Federal awarding agency's right to survey the system. Under a self-certification procedure, the Federal awarding agency may rely on written assurances from the non-Federal entity that it is complying with these standards. The non-Federal entity must cite specific policies, procedures, regulations, or standards as being in compliance with these requirements and have its system available for review.

#### **§200.325 Bonding requirements.**

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

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

(b) A performance bond on the part of the contractor for 100 percent of the contract price. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

### **§200.326 Contract provisions.**

The non-Federal entity's contracts must contain the applicable provisions described in Appendix II to Part 200—Contract Provisions for non-Federal Entity Contracts Under Federal Awards.

Solano County Water Agency Procurement Policy and Procedures Manual

### **Grant Policy – Office of Management and Budget**

#### **Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards**

The Office of Management and Budget's (OMB) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (commonly called "Uniform Guidance") was officially implemented in December 2014 by the Council on Financial Assistance Reform (COFAR - now dissolved).

The Uniform Guidance – a "government-wide framework for grants management" is an authoritative set of rules and requirements for Federal awards that synthesizes and supersedes guidance from earlier OMB circulars.”

The reforms that comprise the Uniform Guidance aim to reduce the administrative burden on award recipients and, at the same time, guard against the risk of waste and misuse of Federal funds.

Among other things, the OMB's Uniform Guidance does the following:

- Removes previous guidance that is conflicting and establishes standard language;
- Directs the focus of audits on areas that have been identified as at risk for waste, fraud and abuse;
- Lays the groundwork for Federal agencies to standardize the processing of data;
- Clarifies and updates cost reporting guidelines for award recipients.

\*The Uniform Guidance was drawn from OMB Circulars A–21, A–87, A–110, and A–122 (which have been placed in past OMB guidance's); Circulars A–89, A–102, and A–133; and the guidance in Circular A–50 on Single Audit Act follow-up.

### **Compliance:**

SCWA will comply with the federal regulations governing HMGP as set forth in 44 C.F.R. PARTS 201 and 206 and 2 C.F.R. part 200, National Environmental Policy Act (NEPA) regulations as set forth in C.F.R. parts 1500-1508 and 44 C.F.R. part 10; and California Environmental Quality Act (CEQA) regulations as set forth in 14 C.C.R. Sec 15000-15387.

#### **1.40 SANITATION.**

The Contractor shall provide adequate sanitary facilities according to Federal and state laws and local ordinances.

#### **1.41 SAFETY.**

The Contractor shall execute and maintain Work so as to avoid injury or damage to any person or property. The Contractor shall comply with the requirements of the specifications relating to safety measures applicable in particular operations or kinds of Work.

In carrying out Work, the Contractor shall at all times exercise all necessary precautions for the safety of employees appropriate to the nature of the Work and the conditions under which the Work is to be performed, and be in compliance with all applicable federal, state and local statutory and regulatory requirements including California Department of Industrial Relations (Cal/OSHA) regulations; and the U.S. Department of Transportation Omnibus Transportation Employee Testing Act. Safety precautions, as applicable, shall include but shall not be limited to: adequate life protection and life-saving equipment; adequate illumination; instructions in accident prevention for all employees, such as the use of machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, fall protection, and other safety devices; equipment and wearing apparel as are necessary or lawfully required to prevent accidents, injuries, or illnesses; and adequate facilities for the proper inspection and maintenance of all safety measures.

The names and telephone numbers of at least two medical doctors practicing in the vicinity and the telephone number of the local ambulance service shall be prominently displayed at the active construction site.

#### **1.42 ACCIDENTS.**

The Contractor shall provide, at the site, such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the Work. The Contractor must promptly report in writing to the Agency all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on, or adjacent to, the site, which caused death, personal injury, or property damages, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused,

the accident shall be reported immediately by telephone or messenger to both the Contract Officer and the Agency. If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Agency, giving full details of the claim.

#### **1.43 NON-DISCRIMINATIONS OF EMPLOYMENT.**

The Contractor's attention is called to Section 1735 of the CA Labor Code which reads as follows:

*A contractor shall not discriminate in the employment of persons upon public works on any basis listed in subdivision (a) of Section 12940 of the Government Code, as those bases are defined in Sections 12926 and 12926.1 of the Government Code, except as otherwise provided in Section 12940 of the Government Code. Every contractor for public works who violates this section is subject to all the penalties imposed for a violation of this chapter.*

The Contractor shall post all necessary notices and provide the Agency certification that he/she/it is in full conformance with these regulations.

#### **1.44 FAIR EMPLOYMENT PRACTICES.**

- A. In the performance of this contract, the Contractor will not discriminate against any employee or applicant as detailed in Government Code Section 12940. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without respect to any discriminatory practice. The Contractor shall post in conspicuous places available to employees and applicants' provisions of the Fair Employment Practices Act.
- B. The Contractor will permit access to his records of employment, employment advertisements, application forms, and other pertinent data and records by the State Fair Employment Practices Commission, or any other agency of the State of California designated by the Agency, for the purpose of investigation to ascertain compliance with the Fair Employment Practices section of this Contract.

#### **1.45 MINORITY AND SMALL BUSINESS PARTICIPATION.**

Positive efforts shall be made by the Contractor to utilize small business and minority owned business sources of supplies, service and Work. Positive efforts should be such as to allow such sources the maximum feasible opportunity to compete for all Work.

#### **1.46 POLLUTION.**

The Contractor shall conform to all federal, state and local requirements regarding environmental pollution. Comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act of 1970.

**1.47 CLIMATIC CONDITIONS.**

The Contract Officer may order the Contractor to suspend Work that may be subject to damage by climatic conditions.

**1.48 RIGHT-OF-WAY.**

Except as noted herein, the Agency will provide the right-of-way for permanent works and access to the Worksite. The Contractor will be permitted to use the right-of-way for access and construction purposes. The Contractor shall properly maintain or restore all private roads, lanes, walkways, bridges, culverts, gates, fences and other structures that are damaged or removed by him. Upon completion of the construction Work, the Contractor shall restore ground surfaces and access roads to the original condition and to the satisfaction of the Contract Officer at no additional cost to the Agency. The Contractor shall not be entitled to extra compensation for hardships and increased cost caused by the Work being routed adjacent to telephone, telegraph or communication lines and guy wires, power-lines and guy wires, pipelines, drains, and other obstacles which may physically restrict or limit the use of the construction right-of-way. In some cases, such physical confinement may necessitate special methods of construction of the Work.

**1.49 ROYALTIES AND PATENTS.**

The Contractor shall pay all royalties and license fees. Defend all suits for infringement of any patent rights and shall save the Agency harmless from loss on account thereof, except that the Agency shall be responsible for all such loss when a particular process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has information that the process or article specified is an infringement of a patent he shall be responsible for such loss unless he promptly gives such information to the Contract Officer.

**1.50 PERMITS AND RESPONSIBILITIES.**

The Contractor shall, without additional expense to the Agency, obtain all licenses and permits, unless specified otherwise, required for the prosecution of his Work. Copies of all such licenses and permits shall be provided to the Agency before commencement of such Work. Contractor shall be responsible for all damages to persons or properties that occur as a result of his fault or negligence in connection with the prosecution of the Work.

**1.51 TAXES AND FEES.**

The Contractor shall pay all sales and other taxes that may be required by law, and all license and other fees that may be required by an agency having jurisdiction.

**1.52 DELAYS AND EXTENSION OF TIME.**

If the Contractor be delayed at any time in the progress of the Work by any act or

neglect of the Agency or its agents or employees, or by any other contractor employed by the Agency, or by changes ordered in the Work, or by strikes, lockouts, fire, climatic conditions, unusual delay in transportation, Act of God, unavoidable casualties or any causes beyond the Contractor's control, or by delay authorized by the Contract Officer, or by any cause which the Contract Officer shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the Contract Officer may order in writing. No such extension shall be made for delay occurring more than seven (7) calendar days before claim, therefore, is made in writing to the Contract Officer. In the case of a continuing cause of delay, only one claim is necessary. If no schedule or agreements stating the dates upon which Drawings shall be provided is made, then no claim for delay shall be allowed on account of failure to provide Drawings until two (2) weeks after demand for such Drawings and not then unless such claim be reasonable. If the Contractor disagrees with the Contract Officer's decision, the Contractor may file a claim pursuant to Section 1.16, Resolution of Claims. Provided that if no such claim is filed, the decision of the Contract Officer shall be final and conclusive.

**1.53 CONTRACTOR NOT RESPONSIBLE FOR COSTS RELATED TO DAMAGE FROM ACTS OF GOD.**

In accordance with CA Public Contract Code Section 7105, the Contractor shall not be responsible for the cost of repairing or restoring damage to the Work, which damage is determined to have been proximately caused by an Act of God, in excess of five percent (5%) of the contracted amount, provided, that the Works damaged were built in accordance with the Plans and Specifications.

**1.54 CLEAN-UP.**

During the progress of the Work, the Contractor shall maintain the site and related structures and equipment in a clean, orderly condition and free from unsightly accumulations of rubbish. Upon completion of the Work, the Contractor shall remove from the vicinity of the Work all buildings, unused materials, rubbish, staged materials, and other like items, belonging to him or used under his direction during construction, and in the event of his failure to do so, the same may be removed by the Agency after ten (10) calendar days notice to the Contractor at the expense of the Contractor, and his surety or sureties shall be liable therefore. No direct payment will be made to the Contractor for any clean-up Work, but all compensation, therefore, shall be included in the prices bid in the schedule for the various items of Work.

## SECTION 2

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### **SPECIAL CONDITIONS**

#### **2.1 AMENDMENT TO GENERAL CONDITIONS.**

*SECTION 1 – GENERAL CONDITIONS are amended per this sub-section as follows:*

##### **AMENDMENTS to SECTION 1.2:**

USACE	The USACE will not be a regulatory agency with jurisdiction over Work.
CDFW	The California Department of Fish and Wildlife (CDFW) will not be a regulatory agency with jurisdiction over Work.
RWQCB	The RWQCB will not be a regulatory agency with jurisdiction over Work.
SWPPP	A Storm Water Pollution Prevention Plan will not be required for the Trail Rehabilitation Work, as the disturbed work location will be under one acre. However, the Contractor will still need to abide by standard SWPPP and erosion control practices throughout the Project Site.

#### **2.2 REQUIREMENTS.**

It is required that there be completed in accordance with the Contract Documents the Stebbins Cold Canyon Erosion Control and Rehabilitation Project for the Solano County Water Agency (Agency).

#### **2.3 DESCRIPTION OF THE WORKSITE.**

Stebbins Cold Canyon Reserve is a unit of the University of California Natural Reserve System and is administered by the University of California, Davis. It is within the Blue Ridge Berryessa Natural Area, the Northern Inner California Coast Ranges.

It is located in Solano and Napa County 10 km (6 mi.) west of Winters, California and 0.8 km (0.5 mi.) east of Monticello Dam on the south side of Putah Creek. The reserve is 258 hectares (638 acres) in size with elevations ranging from 300–2,500 feet (91–762 m).

## **2.4 DESCRIPTION OF THE WORK.**

On July 22, 2015 the Wragg Fire started and quickly spread due to high winds and very high temperatures and low humidity. The fire burned incredibly hot and as it burned through the Stebbins Cold Canyon Reserve, it inflicted a high level of damage on the trail infrastructure in addition to the surrounding natural environment. In addition, prior to the Wragg Fire, the trail system at Stebbins Cold Canyon Reserve was already prone to erosion due to many causes including highly erosive soils, poor trail alignment (much of which was inherited from old roads and use trails) and heavy visitor use.

The purpose of this Work, is to conduct extensive trail rehabilitation to address prior issues as well as more recent impacts from the Wragg Fire. The Work will consist of tree and brush removal, grade dip improvements, installation of rock energy dissipators, the import and hauling of fill material for steps and rebar, installation of rock walls, excavation of soil, construction of interlocking wood steps, trail rehabilitation along switchbacks, trail reconstruction using mechanical and hand labor for 8,132 linear feet of trail, and other appurtenances included in the Contract Documents.

## **2.5 COMMENCEMENT, PROSECUTION, COMPLETION OF WORK.**

The Contractor shall begin and complete all work within the time stated in the Instructions to Bidders. The capacity of the Contractor's construction plant, operating sequence and methods, and forces and equipment employed shall, at all times during the continuance of the Contract, be subject to approval by the Contract Officer to ensure the completion of the work within the dates specified.

## **2.6 ORDER OF COMPLETION.**

The Contractor shall submit to the Contract Officer within fourteen (14) days after the date of the Notice to Proceed, a Project Schedule which shall show the date in which the Contractor will start the work and estimated date of completion. Order of Completion is at the discretion of the Contractor.

## **2.7 WORK CONSTRAINTS.**

Contractor will need to adopt sustainable construction techniques, to ensure trail longevity and reduce the degradation process.

## **2.8 PRECONSTRUCTION CONFERENCE.**

Prior to the start of construction, the Contract Officer will conduct a preconstruction conference. At the conference the Contract Officer will review the Project with the Contractor and other interested parties.



## **2.9 PROVISIONS BY THE CONTRACTOR.**

Unless otherwise stipulated, Contractor shall provide and pay for all materials, labor, tools, equipment, light, power, water, transportation and other facilities necessary for execution and completion of Work. All provisions shall be serviceable and clean. Materials shall be of good quality. Contractor shall, if requested, provide satisfactory evidence as to the kind and quality of materials.

## **2.10 PROVISIONS BY THE AGENCY.**

The Agency can provide mulch and wood chip material as needed. The Contractor will need to load and transport the material from the Putah Diversion Office at 4020 Canal Lane, Winters. The Contractor shall notify the Agency at least 48-hrs in advance if materials are needed. These materials are not required to be used but can be provided at the Contractor's request.

## **2.11 ACCESS TO THE WORK.**

The Contractor shall access the site as directed by the Agency. Control and restriction of public access to the property shall be the Contractor's responsibility. Contractor shall daisy-chain in a lock to all access points to allow access for themselves to the job site, and ensure all access points are closed and locked at the conclusion of each day.

## **2.12 LIQUIDATED DAMAGES.**

Agency and the Contractor agree and stipulate that damage will be sustained by the Agency from any delays in the performance of this Contract, and it is currently contemplated by the parties, and estimated by the parties, that it will be impracticable and extremely difficult to fully ascertain and determine the actual damage which the Agency will sustain by such delays. The parties agree that they shall be deemed to have jointly studied and attempted to estimate the damages suffered by the Agency by such a delay under these circumstances and to agree and stipulate by this Contract that the sum of two hundred fifty dollars (\$250) per day for each and every additional calendar day beyond the full time of completion provided to complete all Work on the project has been agreed to by the parties as a fair estimate of the damage to be suffered by the Agency from and as a direct result of additional delays. The time set for completion of Work is set forth in the Instructions to Contractors.

## **2.13 GUARANTY.**

In addition to specific guaranties where stated elsewhere, the Contractor hereby agrees to pay to the Agency or to make at their own expense all repairs, replacements, or payments necessitated by defect in materials or workmanship supplied under the terms of this Contract which exist within one year after the date of final acceptance of the Work. The Contractor shall be fully responsible for all

direct and indirect damages and expenses to the Agency caused by such defects in materials or workmanship, including defects in materials and workmanship supplied to the Contractor by a subcontractor or manufacturers of equipment. As to any equipment or materials, which bear a guaranty or warranty in writing or by law for a period longer than one year, the guaranty or warranty shall be for such longer periods. The effective date for the start of the guaranty or warranty period for equipment qualifying as substantially complete, shall be upon the time the Agency takes possession and operation of such equipment or materials. The Contractor also agrees to hold the Agency harmless from liability of any kind, arising from damage due to such defects. The Contractor shall make all repairs and replacements or payments promptly upon receipt of written order for the same from the Agency. If the Contractor fails to make the repairs or replacements or payments promptly, the Agency may do the Work and the Contractor, and his surety shall be liable for the costs thereof. Any additional requirements for the Project relative to correction of defective Work after final acceptance are provided for hereafter in this agreement.

#### **2.14 EXPLOSIVES.**

Explosives will not be permitted for any work in this contract.

#### **2.15 WATER AND AIR POLLUTION REQUIREMENTS.**

The Contractor shall implement all possible measures to minimize any potential impacts on water quality.

(1) All Contractor fuels, oils, greases, and other petroleum products shall be stored away from any tributary drainage or marsh areas.

(2) All Contractor vehicles and equipment shall undergo periodic inspection and maintenance to minimize the potential of leaks or spills of oils, grease, or hydraulic fluid.

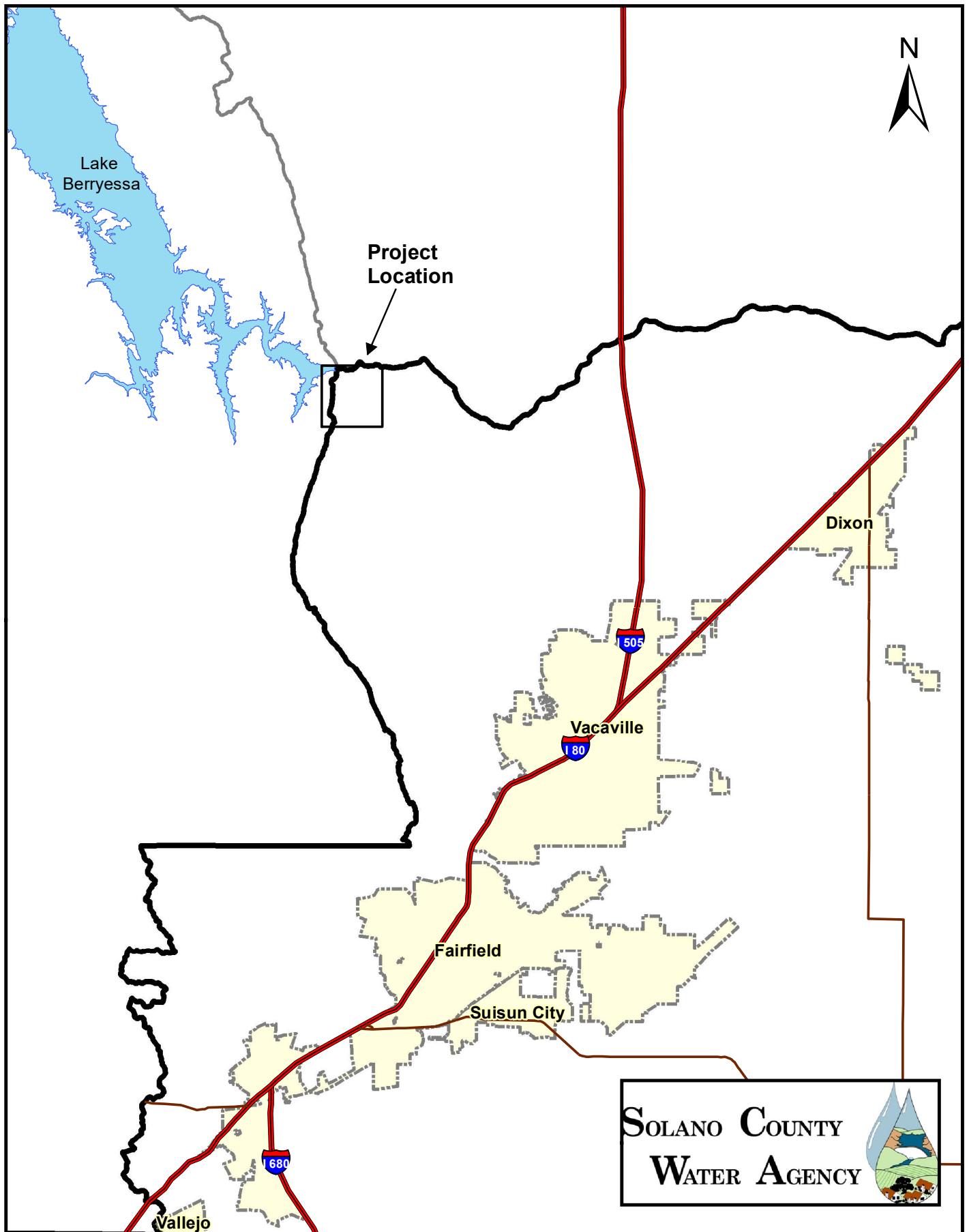
The Contractor shall comply with all laws set by the Yolo–Solano Air Quality Management District regarding smoke and dust generated within the project area.

#### **2.16 PLANS AND DRAWINGS.**

The following figures are made a part of these Specifications:

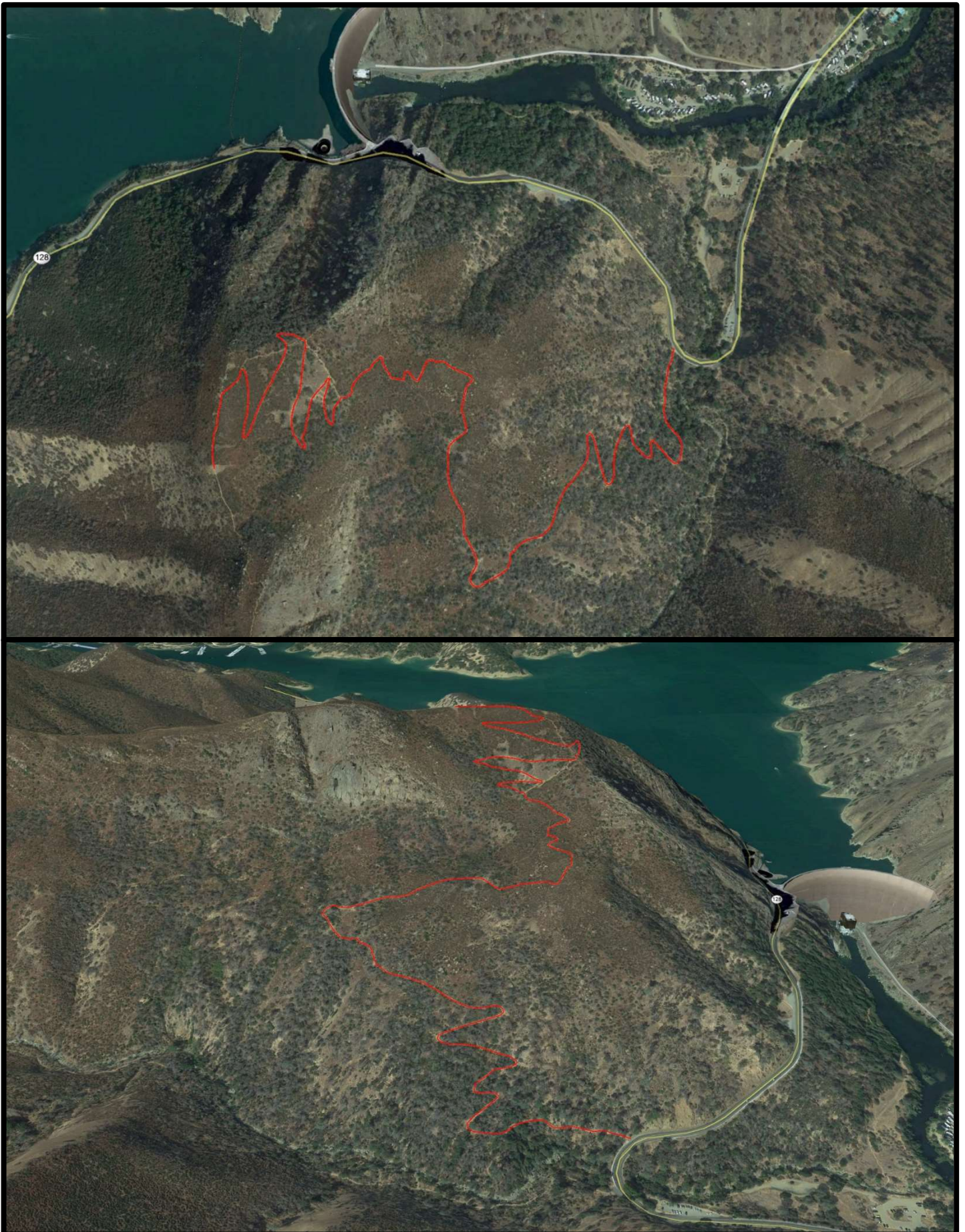
<b>Sheet No.</b>	<b>Title</b>
1	Location Map
2	Aerial Photo / Site Plan

Figure 1 - Location Map of Trail Project (Napa & Solano County)





**Figure 2: (A) Plan View and (B) West Facing View of the Stebbins Cold Canyon Trail**





## **SECTION 3**

### **TRAIL REHABILITATION TREATMENTS**

#### **Overview**

In July 2015 the Wragg Fire burned through the Stebbins Cold Canyon Reserve. It inflicted a high level of damage on the trail infrastructure in addition to the surrounding natural environment. Extensive repairs are needed on the Blue Ridge Trail to reduce erosion and sedimentation into the Cold Canyon watershed. Over four years have passed since the fire occurred and the project site has changed drastically from when the initial assessment and scope of work was compiled. Vegetation has grown in and further erosion from a few heavy precipitation years has occurred, as well as increased public use. On December 16, 2019 a detailed site assessment and trail inventory was done of the Blue Ridge Trail to help establish the updated scope of work and recommended treatments that follows.

#### **Summary of Site Assessment**

While the entire trail infrastructure within Stebbins Cold Canyon Reserve was damaged in the Wragg Fire, it was determined that the Blue Ridge Trail was the area most in need of repair due to the high fire intensity that occurred here and the very unique stacked switchback trail alignment, which amplifies soil erosion and increases sedimentation.



**Above:** You can see the Blue Ridge Trail is a series of switchbacks mostly in the same fall line, which means drainage issues on one section of trail can multiply down the trail towards the creek

As expected, the site of the Wragg Fire within Stebbins Cold Canyon Reserve has changed substantially over the past four years. Immediately after the fire, the site was bare of most vegetation as well as the trail infrastructure being heavily damaged. This created a fragile condition of hydrophobic soils, no tree canopy cover, minimal organic material on the ground surface, and a lack of erosion control structures to reduce sedimentation. Additionally, the 2016/17 and 2018/19 winters were both very wet, which magnified and expanded the damage to the trail infrastructure. As of December 2019, thick chaparral vegetation has regrown along the entire trail corridor, which has helped to stabilize the overall landform as it has regenerated surface organic matter, which supports water infiltration into the soil. That being said, the thick vegetation will make repairs to the trail slightly more time consuming as project areas will need to be cleared of vegetation in order to reshape the tread surface and build erosion control structures. Some of the original work prescriptions from 2015, like wood chip infiltration basins and armored drain swales, are no longer needed since the vegetation has grown in and has taken on the function of those structures. That being said, much of the original scope of work and treatments do still apply and are covered below



**Above:** Photos showing site conditions immediately after the fire (left) and current conditions (right)

There is a severe lack of hydrologic connectivity in the area of the Blue Ridge Trail due to the trail having a large outside berm and channeling water down the trail corridor and not along it's natural path on the hillside.

### **Overall Project Goals:**

1. Restore hydrologic connectivity to reduce erosion
2. Reduce trail capturing of water flow
3. Reduce square footage of compacted, bare soil

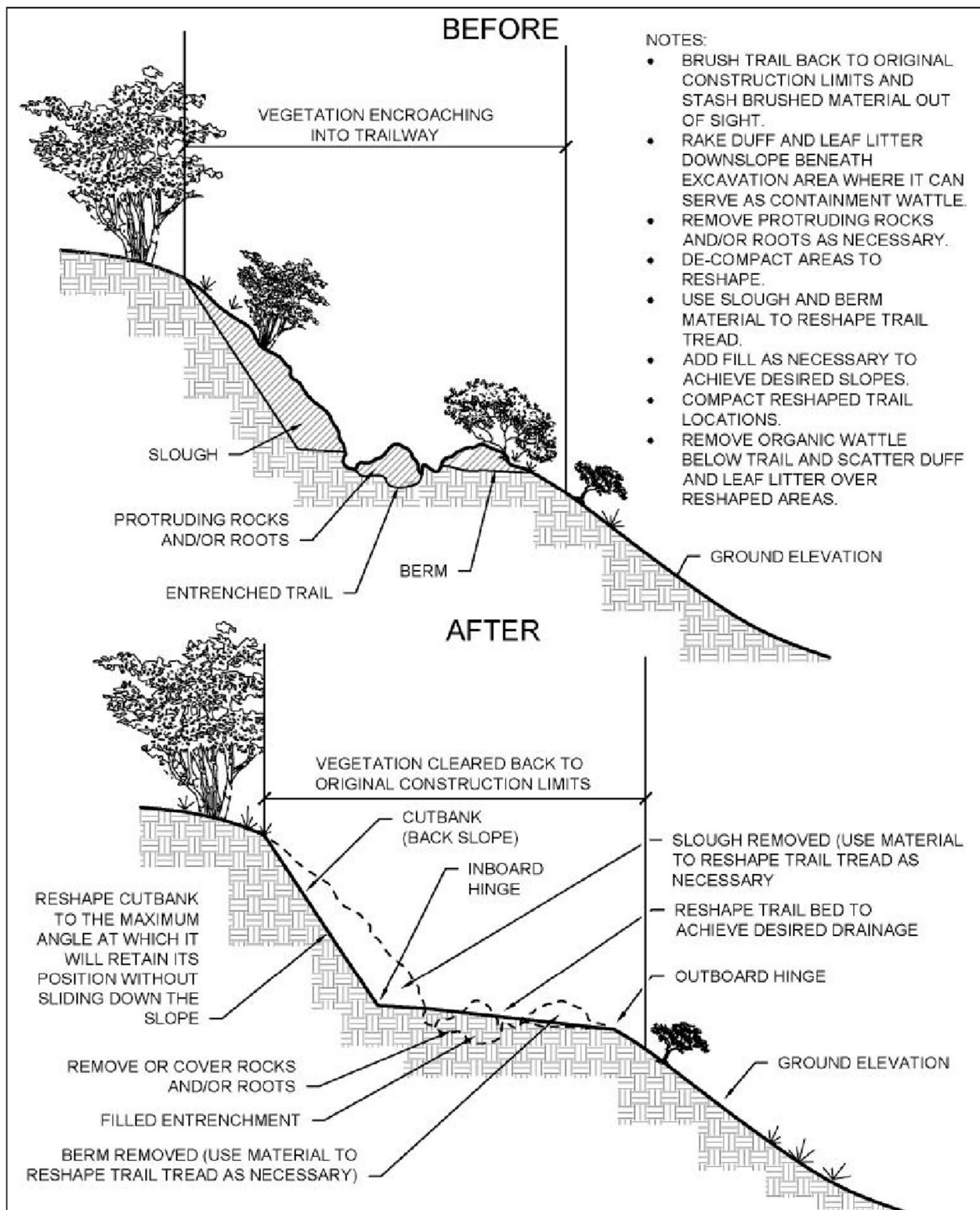
#### 4. Repair damaged trail infrastructure

### **Treatments**

Three primary treatments:

#### **3.1 Trail Reconstruction**

Trail Reconstruction involves returning the trail back to its original design standards and construction specifications and may include minor reroutes that are within the original trail corridor. Using curvilinear techniques, these adjustments can reduce the linear grade and improve drainage by lengthening the trail and decoupling it from natural watercourses. Linear grades can also be reduced by installing steps where appropriate. Trail reconstruction involves reshaping the back slope, removing the berm, scarifying the tread, and restoring designed tread elevations and drainage. A trail reconstruction project needs to be managed similarly, to new trail construction in terms of logistics, crew management, utilization of native materials, and balancing cuts and fills.



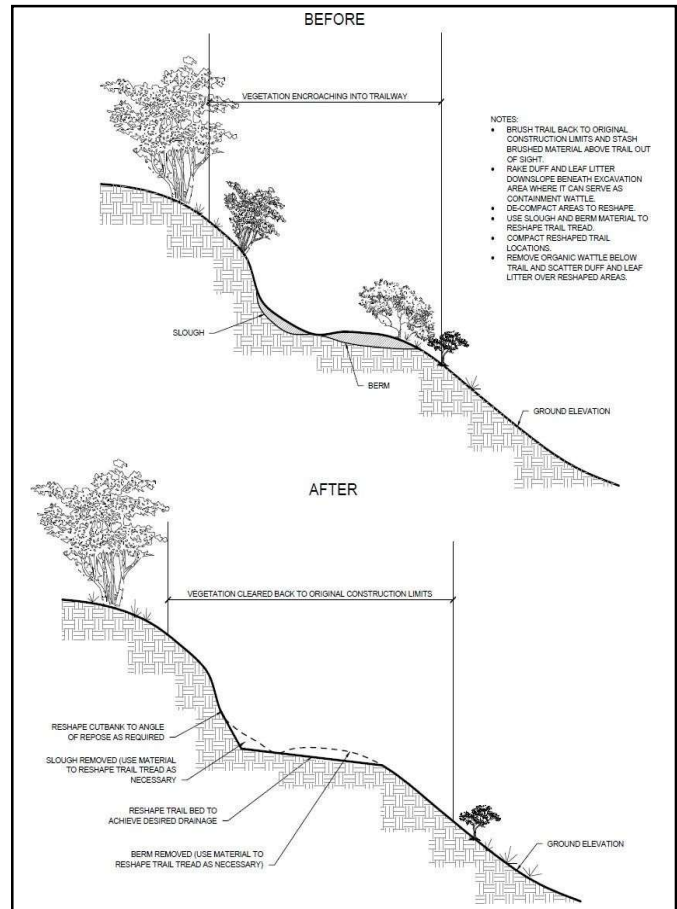
**Above:** Trail Reconstruction Diagram



## DESCRIPTION

Trail reconstruction involves the repair and restoration of the current trail conditions to the conditions originally intended to maximize sheet flow across the trail and minimize the impacts of the trail on the natural hydrologic conditions of the landform. This is done by removing slough material from the inboard hinge of the trail as well as the berm on the outside edge of the trail. This material will be used to reshape the trail tread. This begins with decompaction or scarification of the soil in all areas that will receive slough and berm material. This is necessary for the soils to bond and compact. Then the cut bank or backslope is reshaped to its angle of repose. See image at right with the only difference

being that brush will not be removed if possible due to the burn conditions. The trail tread will end up outsloped at 6-10%.



Outsloped trails disperse water and reduce erosion by allowing for natural sheet flow across the landform without collecting water in the trail prism. Outsloping is useful in most locations, particularly for dispersing surface drainage on gentle trail grades. Outsloping is often combined with other trail treatments, including rolling dips and armored crossings to control water and prevent degradation of the trail tread itself.

In the initial trail assessment at Stebbins Cold Canyon, it was noticed that much of the trail would benefit from this trail reconstruction and outsloping. Existing trail condition are often severely trenched due to berm accumulation on the outside edge of the trail.



This has caused unnatural channelization of water to develop within the trail itself, causing water to travel at higher rates of speed and carry more sediment. This will be magnified in the post-burn condition.

The percent of outslope needed for a trail is variable. The percentage of outslope needed to facilitate sheet flow across the trail tread depends on the steepness of the linear grade, soil strength and durability, amount and magnitude of rainfall received, amount of surface area (watershed) above the trail, percent gradient of hillslope the trail is traversing, amount of canopy cover above the trail, mechanical wear associated with user types, and the volume of traffic. Based on these factors, the percent of outslope required can vary significantly. A common mistake made by trail builders is to construct their trails with too little outslope. The image at right shows current conditions on part of the Stebbins Cold Canyon Trail near the trailhead. This section needs trail reconstruction to remove the berm in order to ensure an outsloped tread. Additionally, rolling drain dips could be utilized as well. See that section for more details.

### **LIMITATIONS FOR TRAIL RECONSTRUCTION AND OUTSLOPING**

Trail tread reconstruction should only be utilized on moderate to gentle trail grades. In locations with steeper trail grades it is likely that other structures will be needed to stabilize the tread including steps and/or trail armoring.



**Above: (Left)** A severely damaged section of the Blue Ridge Trail to be reconstructed with a mini-excavater And hand crew. All the material to the left of the dashed yellow line needs to be removed and regraded into the entrenched section of trail and the overall trail outsloped.

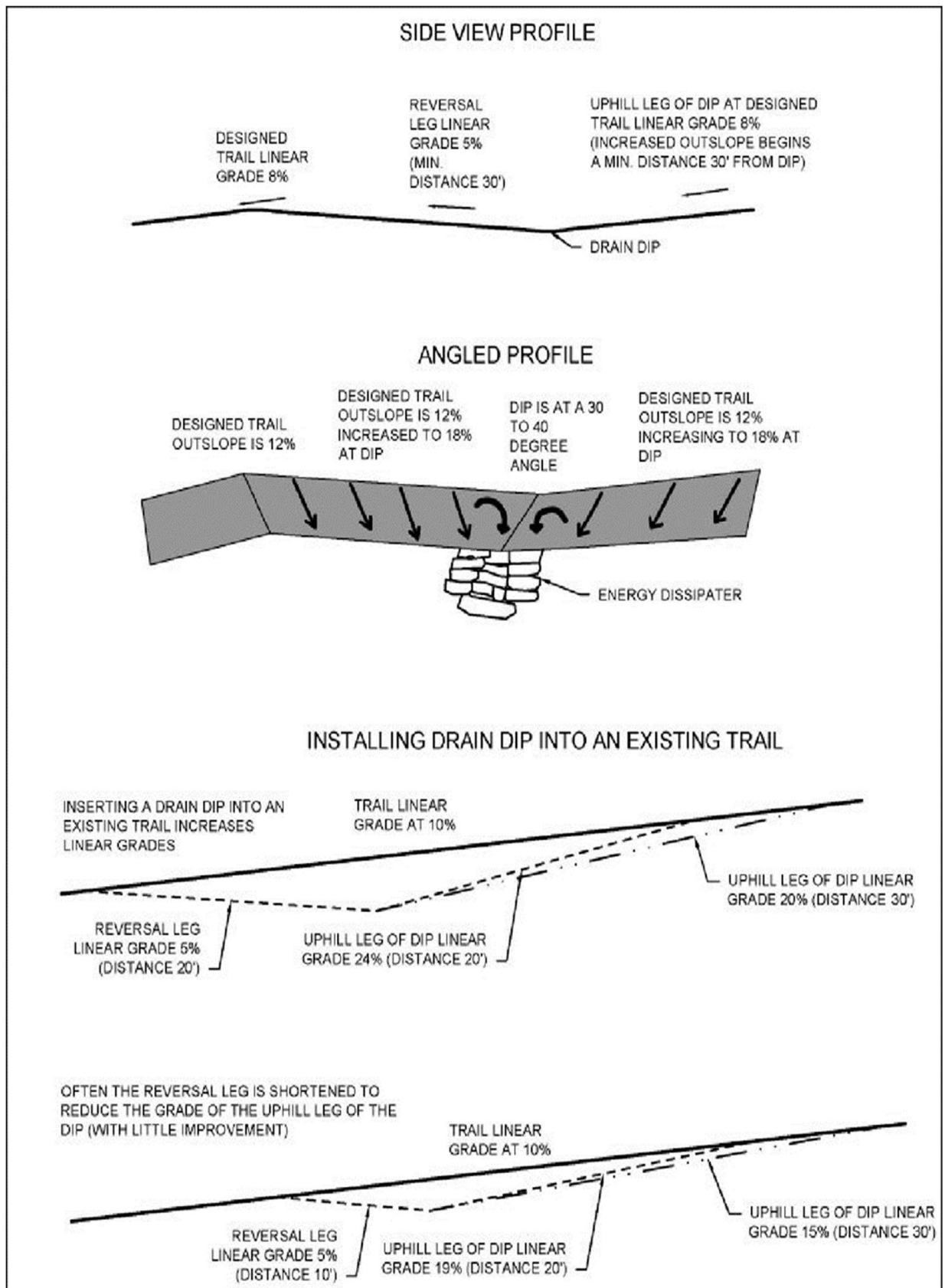
**(Right)** An example of the Blue Ridge Trail near the top that will be reconstructed by hand.

### **3.2 Drainage Dips (aka “grade reversals”)**

Drain dips are located along the trail between naturally occurring watercourse features. Drain dips are located where they will be most effective, often above a steeper section of trail. The uphill side of the trail maintains the designed linear grade. At the upper end of the dip, the outslope begins to increase until it reaches the bottom of the dip. At the bottom of the dip, the outslope should be a minimum of one and half times the designed outslope of the trail segment. The dip is angled across the trail at approximately 30 to 45 degrees to turn the water off the trail and toward the outflow of the dip. Below the outflow, an energy dissipater is installed, as site conditions require, to slow and absorb the energy of the water. The energy dissipater is sized according to the volume of water generated by the drain dip.

From the dip the trail grade reverses and the trail begins to rise rather than descend. This rise in grade should not exceed the designed grade for the trail segment or the maximum sustainable grade. The outslope prescription for the reversal is also reversed since it begins at the minimum 1.5 times the designed outslope and ends at the top of the reversal at the designed outslope. The reversal side of the dip must be long enough that the transition in and out of the dip is gradual and not abrupt. The terrain and volume of water encountered determine the length and the degree of

outslope in the dip. Steep terrain and high flows require longer drain dips with more outslope. Climbing out too rapidly over a short distance or with too much linear grade will result in substantial mechanical wear.

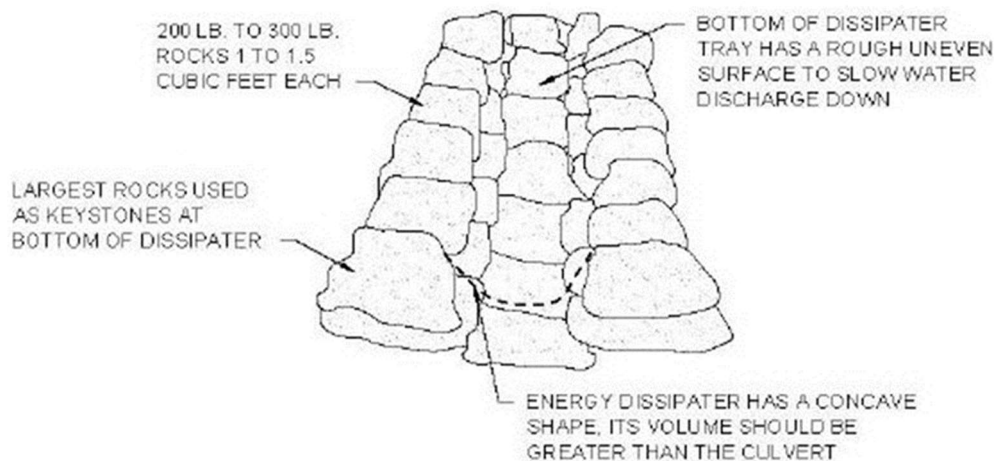


**Above:** Diagram of a grade reversal



### 3.3 Energy Dissipaters

Energy dissipaters constructed of rock are needed to protect the slope below the drain points along the trail corridor, whether this is a natural drainage crossing or simply a constructed drain dip. An energy dissipater is installed with a collection basin large enough to accept the maximum discharge of the watercourse and not deflect water onto the surrounding slope. This water is discharged onto the slope below the trail and can erode the hillslope if its energy is not reduced. Energy dissipaters are not always needed if the grade of the cross slope, soil type and surrounding vegetation are sufficient to naturally absorb the water and not head-cut the trail. Energy dissipaters are generally not prescribed on the upper half of the trail. The trail log identifies which structures need energy dissipaters at the outflow.





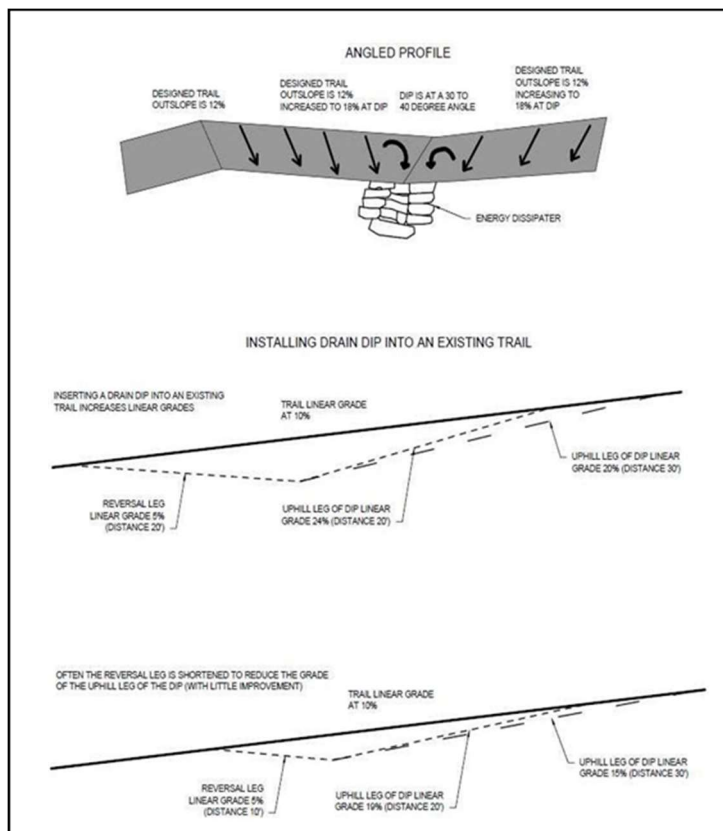
**Above:** Example of an energy dissipater where a trail crosses a natural drainage. Size is dependent on expected flows and steepness of the cross slope.



**Above:** Before and after photos of an example of an energy dissipater

## INSTALLING ROLLING DRAIN DIP/GRADE REVERSALS WITH AN ENERGY DISSIPATER

While these have many names, rolling drain dips are implemented in high- and moderate-burn severity watersheds where loss of control of water and subsequent impacts to the watershed are resulting. Rolling dips are used where existing trail drainage is inadequate to handle increased runoff, sediment, and debris associated with the effects of the fire. This treatment may be implemented in connection with other trail drainage improvement measures like outsloping.



From the uphill side of the trail, the trail grade maintains the designed linear grade. At the upper end of the dip the outslope begins to increase until it reaches the bottom of the dip. At the bottom of the dip the outslope should be a minimum of 1.5 times the designed outslope for the trail segment. The dip is angled across the trail at approximately 30 to 45 degrees. This angle is required to turn the water off the trail and towards the outflow of the dip. Below the outflow, an energy dissipater is installed to slow and absorb the energy of the water. The energy dissipater is sized according to the volume of water generated by the drain dip. Sometimes an infiltration basin can be installed at the base of the energy dissipater to allow water to seep into the hillside rather than travel on the surface of fire impacted soils.



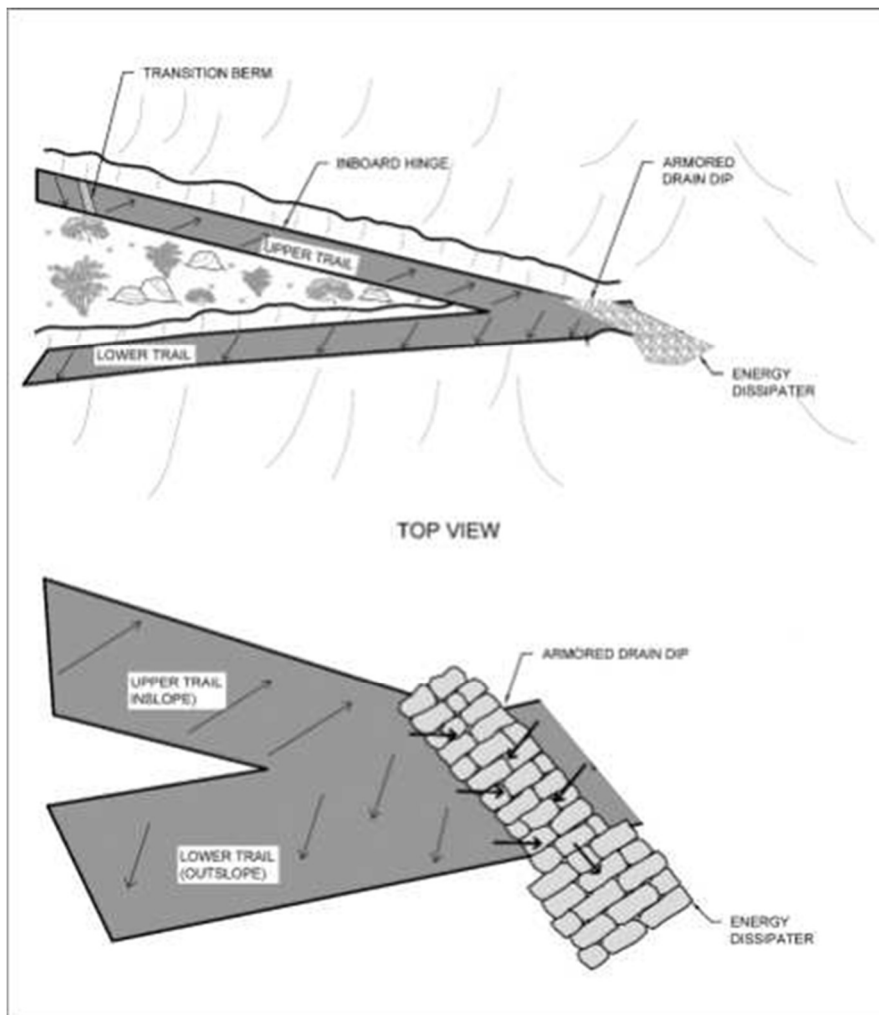
(detail of energy dissipater at right)

From the dip the trail grade reverses and the trail begins to rise rather than descend.

This rise in grade should not exceed the designed grade for the trail segment or the maximum sustainable grade limit. The outslope prescription for the reversal is also re-versed as it begins at the minimum 1.5 times the designed linear grade and ends at the top of the reversal at the designed linear grade. The reversal side of the dip must be long enough that the transition in and out of the dip is gradual and not abrupt. The terrain and volume of water encountered determines the length and the degree of out-slope in the dip. Steeper terrain and higher flows require longer drain dips with more outslope. Climbing out too rapidly over too short of a distance or with too much linear grade will result in substantial mechanical wear. See images at right.

#### **3.4 Reconstruction of switchbacks and installation of drains at turns**

Maintenance of switchbacks and climbing turns involves re-shaping the upper leg, turn, and lower leg. The upper leg should have a transition where the outsloped trail switches to an insloped trail, creating a subtle berm that crosses the trail at an angle of approximately 45 degrees. This berm may need to be re-shaped to facilitate drainage from outslope to inslope. The inboard hinge of the trail may need clearing, due to sloughing from the cut bank and soil migration from the tread. The drain at the end of the turn is cleared and dug out as necessary. If there is a channel beyond the drain from the upper leg, it should be unobstructed, and the drainage ditch armored with a rock energy dissipater to protect the slope below the drain point. Scarify any entrenched or deformed tread, and use the excess soil from the inboard hinge and drain to fill and restore the tread to its designed specifications. If there are insufficient materials, surplus materials from maintenance activities elsewhere on the trail can be used.



**Above:** Switchback diagram with energy dissipater on outlet



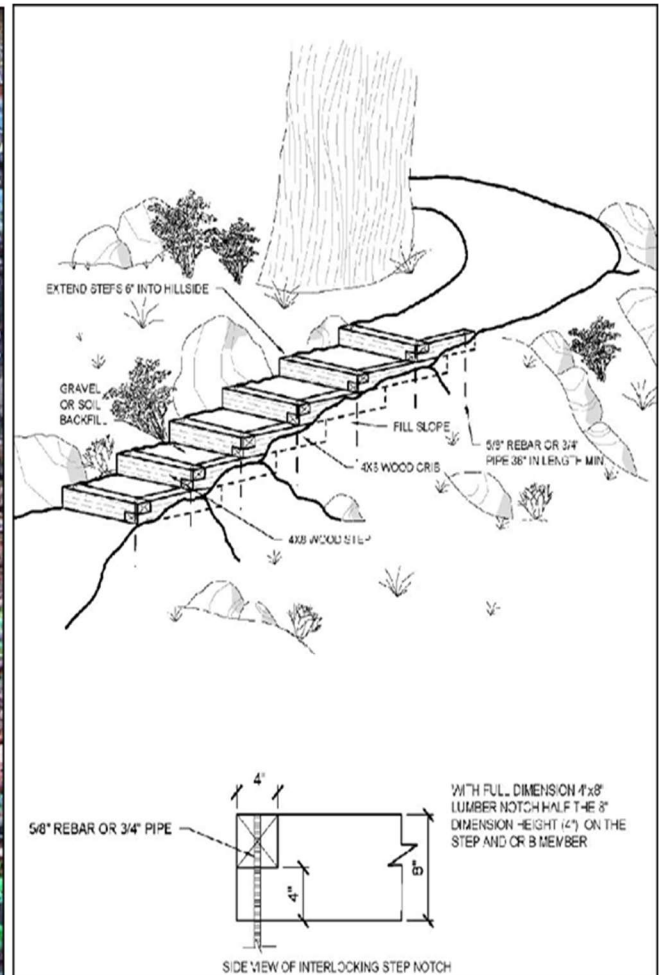
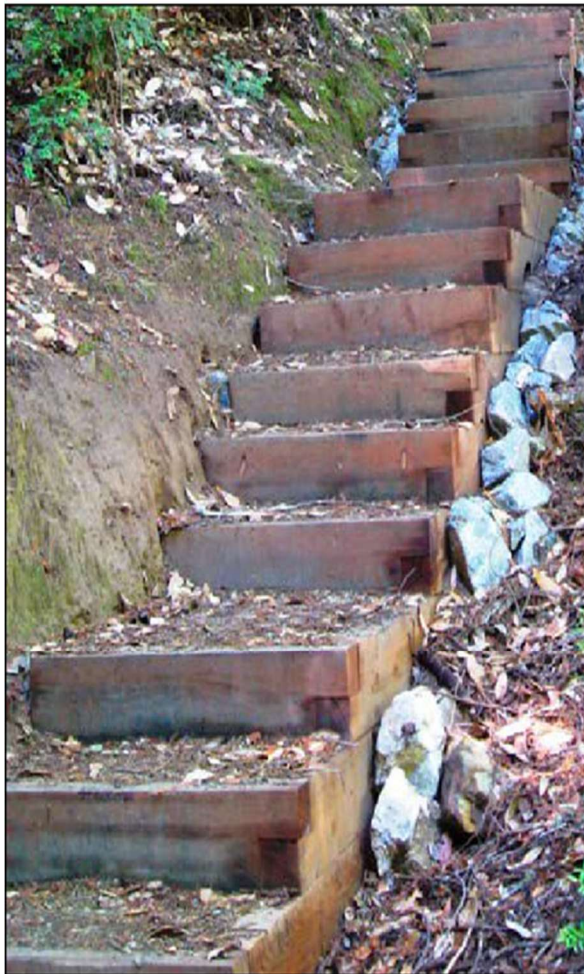
**Above:** Example of a switchback needing repair on the Blue Ridge Trail. Dashed yellow area

is showing the part of the switchback that would need to be reshaped and insloped

### **3.5 Step Construction**

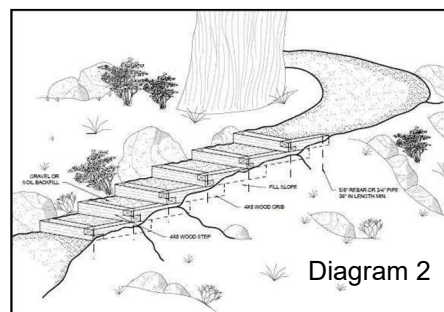
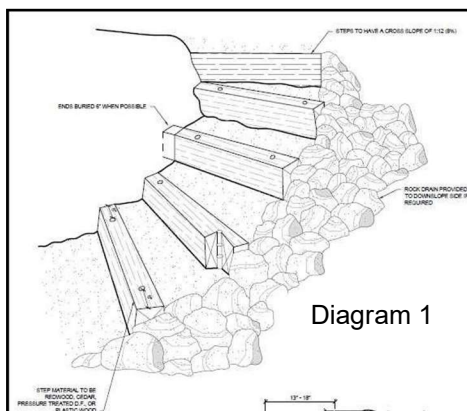
Steps can be an effective method for stabilizing the trail tread in steeper sections where standard trail construction will not be sustainable. It is imperative that accurate measurements are taken to ensure the proper number of steps so that they don't become undercut and also to ensure hikers will not try and hike around them. Using rocks or lumber/trees to block passage around the outside edge is a good method, and it can also help to retain the fill within the steps.

Partial cribbed steps, called interlocking steps, are built with an additional cribbed wall or walls that frame the step tread. When the step carriage traverses the hillslope at an oblique angle, the steps require a cribbed wall on the outside of the trail. In a carriage, the steps are interlocked as the cribbed wall is notched and pinned to both the bottom step and step above it. The notch depth is half the 8-inch height of the step and 8-inch height of the cribbed member (full dimension lumber). When notched in this manner, the cribbed wall is flush with the top of the step below and with the bottom of the step above. A 9/16-inch hole is drilled through the center of the notch and the steps and cribbed wall are secured with a 5/8-inch piece of rebar.



**Above:** Example of single interlocking steps as well as construction diagram

See diagrams 1 and 2 for schematics on step construction. Image 1 shows an existing staircase with steps that burned and need replacement.

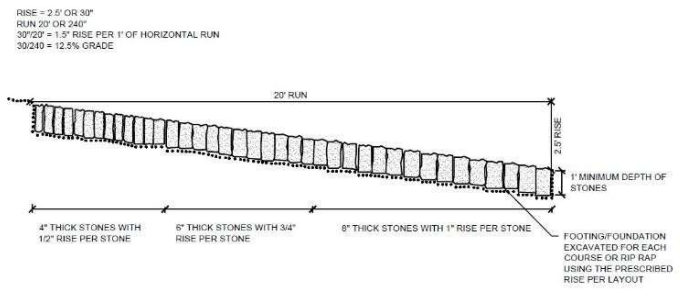




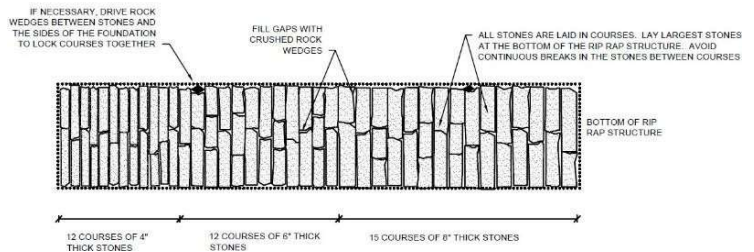
### 3.6 Trail Armoring

Trail armoring is a technique that is used primarily on equestrian trails but is also used to harden the trail tread when the parent soils are weak (like you would find in a burn area) and the linear grades are steep. It is similar to stone pitching in that the trail tread is comprised of large stones. However, these stones are laid on end rather than flat. They are laid in courses or rows that are perpendicular to the direction of the trail. Each course or row progressively rises above the previous course to match the trail grade (see photo to the right). This is an extremely long-lasting solution when done properly and should be looked to when trail grades are steep and local rock is available with minimal transportation.

SIDE VIEW



PLAN VIEW



**Left:** Section at Stebbins Cold Canyon that would benefit from trail armoring due to its steepness and local rock being available

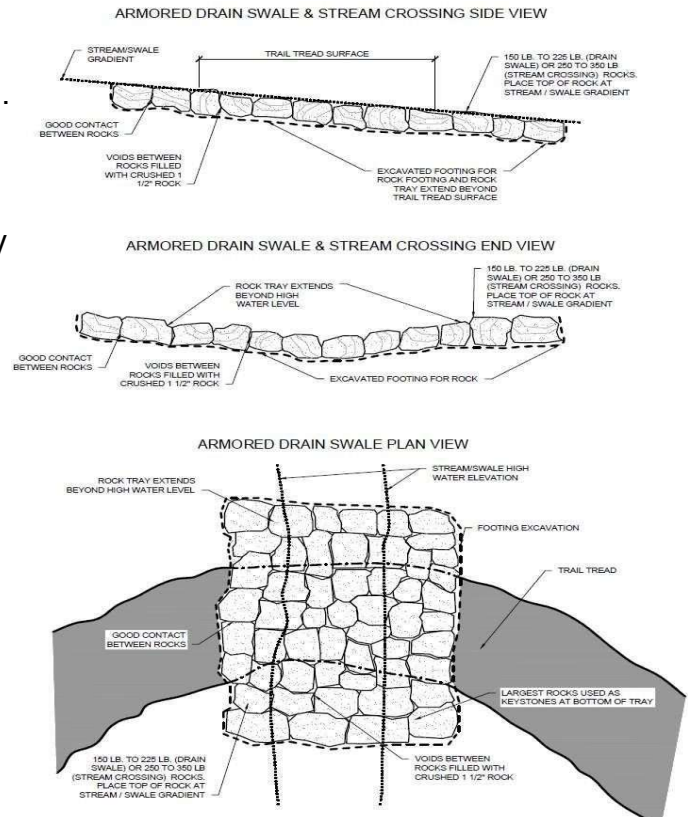


**Left:** Example of trail hardening

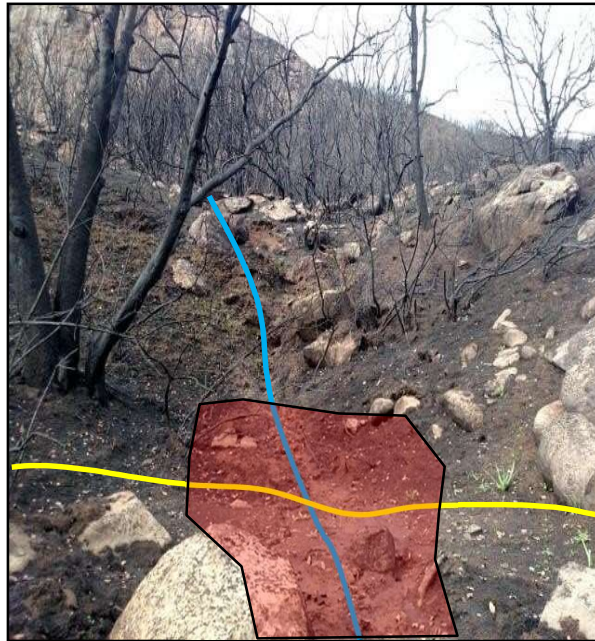
## Installing Armored Drain Swales

While similar to rolling drain dips, armored drain swales are located where the trail crosses a natural drainage on the landform. Due to the increased flow that could be expected due to the trail crossing a natural drainage, the armoring covers the tread surface within the drainage rather than only the downhill slope. In addition, the soils in the bottom of the drainage may become saturated to the extent that they lose their structure and become a quagmire.

Drain swales are armored by installing a rock tray within the crossing and the approaching banks. The rock tray is a method of armoring or hardening the trail treads by installing large rocks tightly together,



surface resembles a cobblestone walkway, but the armoring uses larger rocks with flat surfaces (see figure at right). When the armoring is installed it is laid on grade to stabilize a surface and/or to control drainage, while providing good footing. Used as a surfacing material, rock armoring is relatively flat and has a rough and coarse texture. These attributes make it an ideal surfacing material for drainage crossings.



This shows a drain swale within Stebbins Cold Canyon that could use armoring within the highlighted area (red) where the trail (yellow) and drainage (blue) intersect.

### 3.7 Stream Crossing

Where the trail crosses streams of higher flow than drain swales is especially sensitive in a post-fire state due to increased run off, debris flows and also because existing stream crossing structures have been destroyed. See 'Image 1' at right of burned trail bridge within Stebbins Cold Canyon that will need to be replaced.

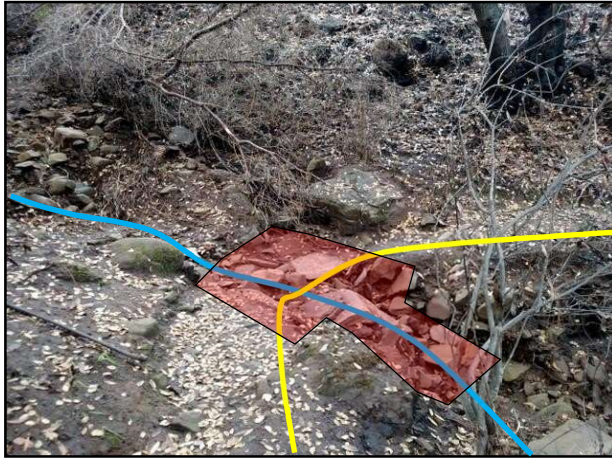
Not all stream crossing within Stebbins Cold Canyon had bridges however, and those crossings are



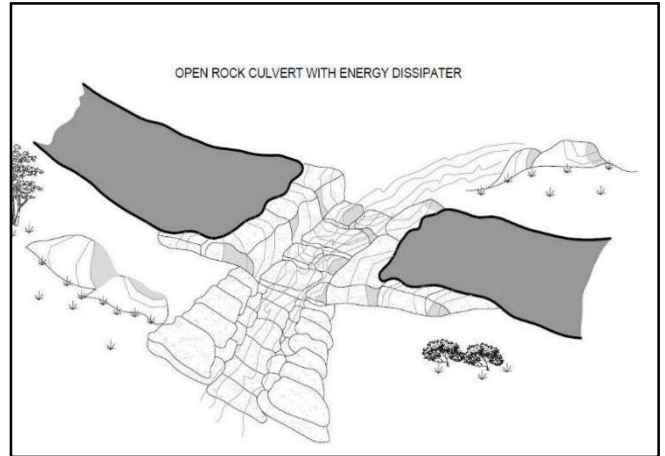
*Image 1*



showing signs of increased erosion. Normally (re)placing a small trail bridge (puncheon) would be standard for many of these crossings. However, due to the risk of higher than normal water runoff and increased risk of debris flows 'open top' structures made of rock are recommended. Structures like Open Rock Culverts would be very effective in many of the stream crossings within Stebbins Cold Canyon. 'Image 2' shows one such crossing and 'Diagram 1' would be an effective solution.



*Image 2—Blue line shows stream; Yellow line shows outside edge of trail; Shaded red area shows where Open Rock Culvert would be built using local rock.*



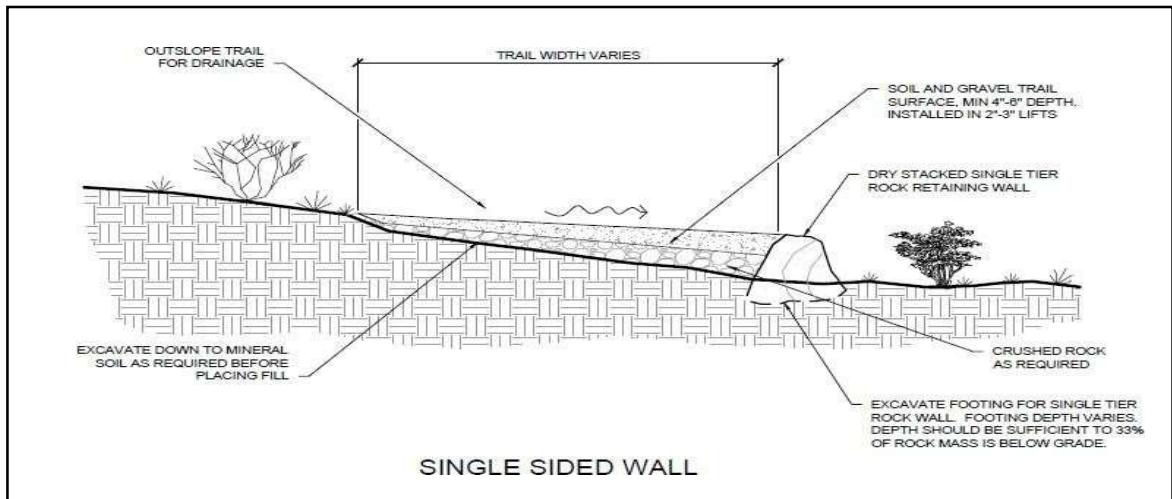
*Diagram 1*



### 3.8 Retaining Walls

Certain sections within Stebbins Cold Canyon are suffering severe erosion on the outer edge of the trail due to vegetation that has now burned that used to support the trail. Rock retaining walls will be a useful structure to maintain the integrity of the trail and prevent trail creep as users try and navigate these areas. The example at right shows where the outside edge has collapsed, and the red line shows where a wall should be built to maintain the trail integrity. This section of trail is immediately above the creek. The diagram below shows an example of a single tier stone wall supporting the trail tread.





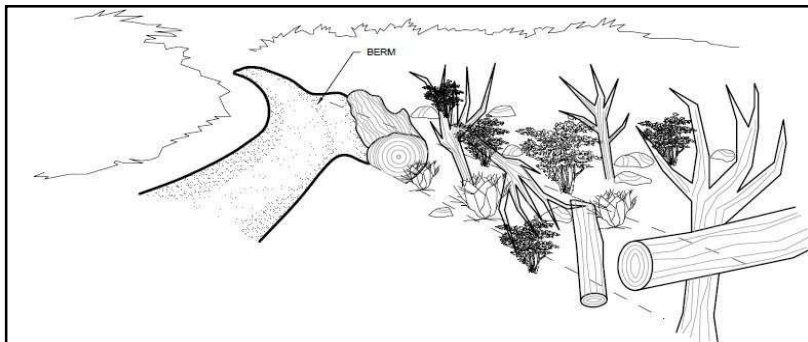
Along the ridgeline that the trail traverses at Stebbins Cold Canyon there are a number of rocky outcrops. Dense chaparral vegetation used to contain hikers to the trail corridor. Now that the vegetation is gone hikers may find other paths of least resistance to avoid these rocky sections. It is recommended that a path of least resistance be constructed in these areas

by maneuvering these rocks and building walls to allow an easy path for hikers to follow. The picture at right shows the current state with the trail barely discernable because all the vegetation is gone. The rocks can be maneuvered with wall constructed along the red line to allow for an easier to follow path that will prevent the creation of social trails.

### 3.9 Social Trail Removal and Discouragement

Prior to the Wragg Fire, social trails were a large issue. From small shortcuts to avoid steps, to long cuttings of switch-backs. Social trails are an even larger concern in this post-burn environment due to the dense chaparral being gone. Existing social trails need to be better restored through scarification, check dam construction and landform re-contouring to match the landscape and eliminate channels for runoff to collect. Normally chaparral would have been used to choke up social trails to discourage use. Now, dead hazard trees will be cross felled near social trails and maneuvered into place to keep users away.

In the image on the right you can see the existing conditions in an area with social trails (red lines) near switchbacks in the existing trail (yellow line). The trees that have burned are now dead and could be felled across the path of the switchbacks to discourage trail cutting and slow the flow of water.



*Example of social trail restoration.*



## **Appendix 1: Bid Notes**

Contractor to purchase and supply all materials and equipment including rock for energy dissipaters, lumber/rebar for steps, etc. Materials can be staged at trailhead:



**Above:** Materials Staging location (38.5092, -122.0979)

Some energy dissipaters can use local rock to build, but a majority of rock will need to be bought and delivered from a quarry to the staging area and transported to project sites.

Native crush rock to back fill rock and step structures can be found and gathered around the project sites easier than importing from quarry and transporting to sites.



## **Appendix 2: Trail Log**

The trail log was created using a 3' rolatape. Start at gate near road (see image below). Please note that there are discrepancies with each time the trail is measured due to the rocky nature of the trail and the path taken will vary slightly each time, especially as work is done and the trail surface changes. The trail was measured at 8,134' in 2015 and 8,132' in 2019.

Notes are made in the trail log of certain fixed locations, like trail junctions and mileage signs in order to recalibrate. These locations can also be referenced to certain key GPS placemarks.



**Above:** Location of “0” mark on trail log.



## Appendix 3 – Blue Ridge Trail (12/16/2019)

Trail: **Blue Ridge Trail**

Date: December 16, 2019

Segment From road to top of ridge

Land Unit: UC Davis Stebbins Cold Canyon Reserve

Begin Feet	End Feet	Action	Feature	Feature Attribute	Trail Width	Modified	Access	Wood / Pile	Size/Qty			Units	Comment	Total
									L/each	H	W			
0	0	Monitor	Trail Head										Start wheel at concrete post on outside edge of trail	
0	8132	Brush	Trail Brushing Maintenance	Heavy					8132.0			lin ft		8132.0
0	8132	Brush	Trail Clearing Stob Removal	Heavy					8132.0			lin ft	lots of stob removal on outside edge of trail	8132.0
0	3158	Reconstruct	Trail Reconstruction		5	X			3158.0			lin ft	8-10 feet wide on road. Needs to become 3-4 ft. Slope 40-60%	3158.0
42		Construct	Drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
42		construct	Energy Dissipater Rock						16.0	4.0	2.0	cu ft		128.0
42		Excavate	Soil	soil medium					16.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	16.0
42		Import	Rock Wall Rock	Distance <300'		x			16.0	4.0	2.0	cu ft	Import via toter	128.0
42		Gather	Rock Crush Fill	Distance <300'					16.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	16.0
245		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
245		construct	energy Dissipater Rock						15.0	4.0	2.0	cu ft		120.0
245		Excavate	Soil	soil medium					15.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	15.0
245		Import	Rock Wall Rock	distance <300'		x			15.0	4.0	2.0	cu ft	Import via toter	120.0
245		gather	Rock Crush Fill	distance <300'					15.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	15.0
340		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
340		construct	energy Dissipater Rock						18.0	4.0	2.0	cu ft		144.0
340		Excavate	Soil	soil medium					18.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	18.0
340		Import	Rock Wall Rock	Distance >300'<800'		x			18.0	4.0	2.0	cu ft	Import via toter	144.0
340		gather	Rock Crush Fill	Distance <300'					18.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	18.0
527		monitor	Trail Junction										Trail Junction down to creek and parking area	
648		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea	At turn	1.0
648		construct	energy Dissipater Rock						16.0	1.0	4.0	cu ft	at exit of turn drain	64.0
648		Excavate	Soil	soil medium					16.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	16.0
648		Import	Rock Wall Rock	Distance >300'<800'		x			16.0	1.0	4.0	cu ft	Import via toter	64.0
648		gather	Rock Crush Fill	Distance <300'					16.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	16.0
648		Reconstruct	Switchback	Hillslope >40%<60%	5				1.0			ea		1.0
716		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
716		construct	energy Dissipater Rock						13.0	1.0	4.0	cu ft		52.0
716		Excavate	Soil	soil medium					13.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	13.0
716		Import	Rock Wall Rock	Distance >300'<800'		x			13.0	1.0	4.0	cu ft	Import via toter	52.0
716		gather	Rock Crush Fill	Distance <300'					13.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	13.0
839		reconstruct	switchback	Hillslope >40%<60%		x			1.0			ea		1.0
839		construct	drainage Dip Reverse Grade Dip						1.0			ea		1.0
839		construct	energy Dissipater Rock						18.0	1.0	4.0	cu ft	at exit of turn drain	72.0
839		Excavate	Soil	soil medium					18.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	18.0
839		Import	Rock Wall Rock	Distance >800'<1300'		x			18.0	1.0	4.0	cu ft	Import via toter	72.0
839		gather	Rock Crush Fill	Distance <300'					18.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	18.0
957		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
957		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
957		construct	energy Dissipater Rock						14.0	1.0	4.0	cu ft		56.0
957		Excavate	Soil	soil medium					14.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	14.0
957		Import	Rock Wall Rock	Distance >800'<1300'		x			14.0	1.0	4.0	cu ft	Import via toter	56.0
957		gather	Rock Crush Fill	Distance <300'					14.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	14.0
1102		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
1102		construct	energy Dissipater Rock						11.0	1.0	4.0	cu ft		44.0
1102		Excavate	Soil	soil medium					11.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	11.0
1102		Import	Rock Wall Rock	Distance >800'<1300'		x			11.0	1.0	4.0	cu ft	Import via toter	44.0
1102		gather	Rock Crush Fill	Distance <300'					11.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	11.0
1200		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
1200		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
1200		construct	energy Dissipater Rock						16.0	1.0	4.0	cu ft	at exit of turn drain	64.0
1200		Excavate	Soil	soil medium					16.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	16.0
1200		Import	Rock Wall Rock	Distance >800'<1300'		x			16.0	1.0	4.0	cu ft	Import via toter	64.0
1200		gather	Rock Crush Fill	Distance <300'					16.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	16.0
1600		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
1600		construct	drainage Dip Reverse Grade Dip		5	x			15.0			ea		15.0
1600		construct	energy Dissipater Rock						15.0	1.0	4.0	cu ft	at exit of turn drain	60.0
1600		Excavate	Soil	soil medium					15.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	15.0
1600		Import	Rock Wall Rock	Distance >1300'<1800'		x			15.0	1.0	4.0	cu ft	Import via toter	60.0
1600		gather	Rock Crush Fill	Distance <300'					15.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	15.0
1740		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
1740		construct	energy Dissipater Rock						12.0	1.0	4.0	cu ft		48.0
1740		Excavate	Soil	soil medium					12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
1740		Import	Rock Wall Rock	Distance >800'<1300'		x			12.0	1.0	4.0	cu ft	Import via toter	48.0



Begin Foot	End Foot	Action	Feature	Feature Attribute	Tree/With Machined	Accessible	Wood / Plastic	Size/Qty			Units	Comment	Total
								L/each	H	W			
1740		gather	Rock Crush Fill	Distance <300'				12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
1853		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0
1853		construct	energy Dissipater Rock					12.0	1.0	4.0	cu ft		48.0
1853		Excavate	Soil	soil medium				12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
1853		Import	Rock Wall Rock	Distance >1800'<2500'		x		12.0	1.0	4.0	cu ft	Import via toter	48.0
1853		gather	Rock Crush Fill	Distance <300'				12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
1917		reconstruct	switchback	Hillslope >40%<60%	5	x		1.0			ea		1.0
1917		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0
1917		construct	energy Dissipater Rock					17.0	1.0	4.0	cu ft	at exit of turn drain	68.0
1917		Excavate	Soil	soil medium				17.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	17.0
1917		Import	Rock Wall Rock	Distance >1800'<2500'		x		17.0	1.0	4.0	cu ft	Import via toter	68.0
1917		gather	Rock Crush Fill	Distance <300'				17.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	17.0
2095		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0
2095		construct	energy Dissipater Rock					10.0	1.0	4.0	cu ft		40.0
2095		Excavate	Soil	soil medium				10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
2095		Import	Rock Wall Rock	Distance >1800'<2500'		x		10.0	1.0	4.0	cu ft	Import via toter	40.0
2095		gather	Rock Crush Fill	Distance <300'				10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
2252		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea	Below steep rocky section of trail	1.0
2252		construct	energy Dissipater Rock					10.0	1.0	4.0	cu ft		40.0
2252		Excavate	Soil	soil medium				10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
2252		Import	Rock Wall Rock	Distance >1800'<2500'		x		10.0	1.0	4.0	cu ft	Import via toter	40.0
2252		gather	Rock Crush Fill	Distance <300'				10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
2260		Excavate	Rock	rock medium				180.0	1.0	4.0	cu ft	excavating rock out of trail surface. Save for use for structures.	720.0
2440		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea	Above steep rocky section	1.0
2440		construct	energy Dissipater Rock					12.0	1.0	4.0	cu ft		48.0
2440		Excavate	Soil	soil medium				12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
2440		Import	Rock Wall Rock	Distance >1800'<2500'		x		12.0	1.0	4.0	cu ft	Import via toter	48.0
2440		gather	Rock Crush Fill	Distance <300'				12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
2590		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0
2590		construct	energy Dissipater Rock					14.0	1.0	4.0	cu ft		56.0
2590		Excavate	Soil	soil medium				14.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	14.0
2590		Import	Rock Wall Rock	Distance >1800'<2500'		x		14.0	1.0	4.0	cu ft	Import via toter	56.0
2590		Import	Rock Wall Rock	Distance <300'		x		14.0	1.0	4.0	cu ft	Import via toter	56.0
2590		gather	Rock Crush Fill	Distance <300'				14.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	14.0
2854		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0
2854		construct	energy Dissipater Rock					12.0	1.0	4.0	cu ft		48.0
2854		Excavate	Soil	soil medium				12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
2854		Import	Rock Wall Rock	Distance >1800'<2500'		x		12.0	1.0	4.0	cu ft	Import via toter	48.0
2854		Import	Rock Wall Rock	Distance >300'<800'		x		12.0	1.0	4.0	cu ft	Import via toter	48.0
2854		gather	Rock Crush Fill	Distance <300'				12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
2980		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea	below steeper section that has makeshift steps. May need steps?	1.0
2980		construct	energy Dissipater Rock					10.0	1.0	4.0	cu ft		40.0
2980		Excavate	Soil	soil medium				10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
2980		Import	Rock Wall Rock	Distance >1800'<2500'		x		10.0	1.0	4.0	cu ft	Import via toter	40.0
2980		Import	Rock Wall Rock	Distance >300'<800'		x		10.0	1.0	4.0	cu ft	Import via toter	40.0
2980		gather	Rock Crush Fill	Distance <300'				10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
2995	3075	monitor	Trail Hardening Rip Rap					80.0				Steep section of trail that may need steps, armoring	80.0
3075		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0
3075		construct	energy Dissipater Rock					12.0	1.0	4.0	cu ft		48.0
3075		Excavate	Soil	soil medium				12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
3075		Import	Rock Wall Rock	Distance >1800'<2500'		x		12.0	1.0	4.0	cu ft	Import via toter	48.0
3075		Import	Rock Wall Rock	Distance >300'<800'		x		12.0	1.0	4.0	cu ft	Import via toter	48.0
3075		gather	Rock Crush Fill	Distance <300'				12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
3142		reconstruct	switchback	Hillslope >40%<60%	5	x		1.0			ea		1.0
3142		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0
3142		construct	energy Dissipater Rock					14.0	1.0	4.0	cu ft	at exit of turn drain	56.0
3142		Excavate	Soil	soil medium				14.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	14.0
3142		Import	Rock Wall Rock	Distance >1800'<2500'		x		14.0	1.0	4.0	cu ft	Import via toter	56.0
3142		Import	Rock Wall Rock	Distance >300'<800'		x		14.0	1.0	4.0	cu ft	Import via toter	56.0
3142		gather	Rock Crush Fill	Distance <300'				14.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	14.0
3158	4150	Reconstruct	Trail Reconstruction	0	5	x		992.0			lin ft	side slope mellow. 20-40%	992.0
3270		construct	drainage Dip Reverse Grade Dip		5	x		1.0			ea		1.0



Begin Foot	End Feet	Action	Feature	Feature Attribute	Tree/Width	Mounded	Accessible	Wood/Plank	Size/Qty			Units	Comment	Total
									L/each	H	W			
3270		construct	energy Dissipater Rock						10.0	1.0	4.0	cu ft		40.0
3270		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
3270		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3270		import	Rock Wall Rock	Distance >300'<800'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3270		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
3440		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea	major drain	1.0
3440		construct	energy Dissipater Rock						25.0	1.0	4.0	cu ft		100.0
3440		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
3440		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3440		import	Rock Wall Rock	Distance >800'<1300'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3440		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
3545		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea	mellow drain exit, no energy dissipater needed	1.0
3650		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
3650		construct	energy Dissipater Rock						10.0	1.0	4.0	cu ft		40.0
3650		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
3650		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3650		import	Rock Wall Rock	Distance >800'<1300'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3650		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
3825		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea	At Mile 4.25 sign. Mellow drain exit, no energy dissipater needed	1.0
4115		construct	drainage Dip Reverse Grade Dip		5	x			1.0			ea		1.0
4115		construct	energy Dissipater Rock						10.0	1.0	4.0	cu ft		40.0
4115		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
4115		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
4115		import	Rock Wall Rock	Distance >1300'<1800'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
4115		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
4150	8132	reconstruct	Trail Reconstruction		3				3982.0			lin ft	By hand beyond this point	3982.0
4320		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4375		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4380		construct	Steps	Wood Interlocking Single	3			W	9.0			ea		9.0
4380		import	Fill Material	Distance >1800'<2500'		x			9.0			ea	Hauling steps and rebar in with toters	9.0
4380		import	Fill Material	Distance >1800'<2500'		x			9.0			ea	Hauling steps and rebar in with toters	9.0
4380		import	Fill Material	Distance >300'<800'					9.0			ea	Hauling steps and rebar in by hand	9.0
4380		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
4550		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4640		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4730		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
4745		construct	Steps	Wood Interlocking Single	3			w	28.0			ea		28.0
4745		import	Fill Material	Distance >1800'<2500'		x			28.0			ea	Hauling steps and rebar in with toters	28.0
4745		import	Fill Material	Distance >1800'<2500'		x			28.0			ea	Hauling steps and rebar in with toters	28.0
4745		import	Fill Material	Distance >300'<800'					28.0			ea	Hauling steps and rebar in by hand	28.0
4745		gather	Rock Crush Fill	Distance <300'					28.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	84.0
4868		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
4870		construct	Steps	Wood Interlocking Single	3			w	14.0			ea		14.0
4870		import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
4870		import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
4870		import	Fill Material	Distance >800'<1300'					14.0			ea	Hauling steps and rebar in by hand	14.0
4870		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0
4930		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	At mile 4.0 sign. Mellow drain exit, no energy dissipater needed	1.0
5044		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
5045		construct	Steps	Wood Interlocking Single	3			w	14.0			ea		14.0
5045		import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
5045		import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
5045		import	Fill Material	Distance >800'<1300'					14.0			ea	Hauling steps and rebar in by hand	14.0
5045		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0



Begin Foot	End Feet	Action	Feature	Feature Attribute	Tread/Width	Machine	Access	Wood/Plastic	Size/Qty			Units	Comment	Total
									L/each	H	W			
5110		construct	Steps	Wood Interlocking Single	3			W	9.0			ea	set of 3, then bench before next 6 at turn	9.0
5110		Import	Fill Material	Distance >1800'<2500'		X			9.0			ea	Hauling steps and rebar in with toters	9.0
5110		Import	Fill Material	Distance >1800'<2500'		X			9.0			ea	Hauling steps and rebar in with toters	9.0
5110		Import	Fill Material	Distance >800'<1300'					9.0			ea	Hauling steps and rebar in by hand	9.0
5110		gather	Rock Crush Fill	Distance <300'					9.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	27.0
5154		construct	Steps	Wood Interlocking Single	3			W	16.0			ea		16.0
5154		Import	Fill Material	Distance >1800'<2500'		X			16.0			ea	Hauling steps and rebar in with toters	16.0
5154		Import	Fill Material	Distance >1800'<2500'		X			16.0			ea	Hauling steps and rebar in with toters	16.0
5154		Import	Fill Material	Distance >800'<1300'					16.0			ea	Hauling steps and rebar in by hand	16.0
5154		gather	Rock Crush Fill	Distance <300'					16.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	48.0
5250		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
5260		construct	Steps	Wood Interlocking Single	3			W	22.0			ea		22.0
5260		Import	Fill Material	Distance >1800'<2500'		X			22.0			ea	Hauling steps and rebar in with toters	22.0
5260		Import	Fill Material	Distance >1800'<2500'		X			22.0			ea	Hauling steps and rebar in with toters	22.0
5260		Import	Fill Material	Distance >800'<1300'					22.0			ea	Hauling steps and rebar in by hand	22.0
5260		gather	Rock Crush Fill	Distance <300'					22.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	66.0
5395		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	Mellow drain exit, no energy dissipater needed	1.0
5425		construct	Steps	Wood Interlocking Single	3			W	21.0			ea		21.0
5425		Import	Fill Material	Distance >1800'<2500'		X			21.0			ea	Hauling steps and rebar in with toters	21.0
5425		Import	Fill Material	Distance >1800'<2500'		X			21.0			ea	Hauling steps and rebar in with toters	21.0
5425		Import	Fill Material	Distance >1300'<1800'					21.0			ea	Hauling steps and rebar in by hand	21.0
5425		gather	Rock Crush Fill	Distance <300'					21.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	63.0
5545		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	Mellow drain exit, no energy dissipater needed	1.0
5615		construct	Steps	Wood Interlocking Single	3			W	21.0			ea		21.0
5615		Import	Fill Material	Distance >1800'<2500'		X			21.0			ea	Hauling steps and rebar in with toters	21.0
5615		Import	Fill Material	Distance >1800'<2500'		X			21.0			ea	Hauling steps and rebar in with toters	21.0
5615		Import	Fill Material	Distance >1300'<1800'					21.0			ea	Hauling steps and rebar in by hand	21.0
5615		gather	Rock Crush Fill	Distance <300'					21.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	63.0
5727		construct	Steps	Wood Interlocking Single	3			W	14.0			ea		14.0
5727		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
5727		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
5727		Import	Fill Material	Distance >1300'<1800'					14.0			ea	Hauling steps and rebar in by hand	14.0
5727		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0
5803		monitor	Trail Junction						1.0			ea	bottom of social trail cutting switchbacks	1.0
5861		construct	Steps	Wood Interlocking Single	3			W	13.0			ea	steps at turn	13.0
5861		Import	Fill Material	Distance >1800'<2500'		X			13.0			ea	Hauling steps and rebar in with toters	13.0
5861		Import	Fill Material	Distance >1800'<2500'		X			13.0			ea	Hauling steps and rebar in with toters	13.0
5861		Import	Fill Material	Distance >1800'<2500'					13.0			ea	Hauling steps and rebar in by hand	13.0
5861		gather	Rock Crush Fill	Distance <300'					13.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	39.0
6106		construct	Steps	Wood Interlocking Single	3			W	8.0			ea		8.0
6106		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
6106		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
6106		Import	Fill Material	Distance >1800'<2500'					8.0			ea	Hauling steps and rebar in by hand	8.0
6106		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
6173		construct	Steps	Wood Interlocking Single	3			W	14.0			ea		14.0
6173		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
6173		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
6173		Import	Fill Material	Distance >1800'<2500'					14.0			ea	Hauling steps and rebar in by hand	14.0

Begin Feet	End Feet	Action	Feature	Feature Attribute	Trail Width	Mechanical	Access	Wood / Plastic	Size/Qty			Units	Comment	Total
									L/each	H	W			
6173		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0
6271		construct	Steps	Wood Interlocking Single	3			w	8.0			ea		8.0
6271		Import	Fill Material	Distance >1800'<2500'		x			8.0			ea	Hauling steps and rebar in with toters	8.0
6271		Import	Fill Material	Distance >1800'<2500'		x			8.0			ea	Hauling steps and rebar in with toters	8.0
6271		Import	Fill Material	Distance >1800'<2500'					8.0			ea	Hauling steps and rebar in by hand	8.0
6271		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
6635		monitor	Trail Junction						1.0			ea	top of social trail cutting switchbacks	1.0
6842		construct	drainage Dip Reverse Grade Dip		3				1.0			ea	top of big drainage ditch at outlet of drain.	1.0
6865		monitor	Trail Junction						1.0			ea	Junction with unofficial trail to lookout	1.0
6867		construct	Steps	Wood Interlocking Single	3			w	10.0			ea		10.0
6867		Import	Fill Material	Distance >1800'<2500'		x			10.0			ea	Hauling steps and rebar in with toters	10.0
6867		Import	Fill Material	Distance >1800'<2500'		x			10.0			ea	Hauling steps and rebar in with toters	10.0
6867		Import	Fill Material	Distance >1800'<2500'					10.0			ea	Hauling steps and rebar in by hand	10.0
6867		gather	Rock Crush Fill	Distance <300'					10.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	30.0
6941		construct	Steps	Wood Interlocking Single	3			w	20.0			ea		20.0
6941		Import	Fill Material	Distance >1800'<2500'		x			20.0			ea	Hauling steps and rebar in with toters	20.0
6941		Import	Fill Material	Distance >1800'<2500'		x			20.0			ea	Hauling steps and rebar in with toters	20.0
6941		Import	Fill Material	Distance >1800'<2500'					20.0			ea	Hauling steps and rebar in by hand	20.0
6941		gather	Rock Crush Fill	Distance <300'					20.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	60.0
6996		construct	Steps	Wood Interlocking Single	3			w	16.0			ea	steps at turn	16.0
6996		Import	Fill Material	Distance >1800'<2500'		x			16.0			ea	Hauling steps and rebar in with toters	16.0
6996		Import	Fill Material	Distance >1800'<2500'		x			16.0			ea	Hauling steps and rebar in with toters	16.0
6996		Import	Fill Material	Distance >1800'<2500'					16.0			ea	Hauling steps and rebar in by hand	16.0
6996		gather	Rock Crush Fill	Distance <300'					16.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	48.0
7298		construct	Steps	Wood Interlocking Single	3			w	17.0			ea		17.0
7298		Import	Fill Material	Distance >1800'<2500'		x			17.0			ea	Hauling steps and rebar in with toters	17.0
7298		Import	Fill Material	Distance >1800'<2500'		x			17.0			ea	Hauling steps and rebar in with toters	17.0
7298		Import	Fill Material	Distance >1800'<2500'					17.0			ea	Hauling steps and rebar in by hand	17.0
7298		gather	Rock Crush Fill	Distance <300'					17.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	51.0
7605		construct	Steps	Wood Interlocking Single	3			w	8.0			ea	steps at turn	8.0
7605		Import	Fill Material	Distance >1800'<2500'		x			8.0			ea	Hauling steps and rebar in with toters	8.0
7605		Import	Fill Material	Distance >1800'<2500'		x			8.0			ea	Hauling steps and rebar in with toters	8.0
7605		Import	Fill Material	Distance >1800'<2500'					8.0			ea	Hauling steps and rebar in by hand	8.0
7605		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
7947		construct	Steps	Wood Interlocking Single	3			w	10.0			ea		10.0
7947		Import	Fill Material	Distance >1800'<2500'		x			10.0			ea	Hauling steps and rebar in with toters	10.0
7947		Import	Fill Material	Distance >1800'<2500'		x			10.0			ea	Hauling steps and rebar in with toters	10.0
7947		Import	Fill Material	Distance >1800'<2500'					10.0			ea	Hauling steps and rebar in by hand	10.0
7947		gather	Rock Crush Fill	Distance <300'					10.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	30.0
8132		Monitor	Trail Junction	0					1.0			ea	End of Blue Ridge Trail at old waterbar at top of trail	1.0
MISC Tasks														
0		Remove	Water Bar wood						30.0			hrs	remove and transport of old waterbars back to trailhead	30.0
0		remove	steps	Wood Standard Single					60.0			hrs	remove and transport of old steps back to trailhead	60.0
0		Perform	Down Tree Removal Chain Saw	Tree dia. 1'-3'					20.0			hrs	Felling and clearing of trees for project	20.0
0		Perform	Down Tree Whole by Rigging	0					60.0			hrs	Removal of hazard trees by rigging	60.0
0		perform	Trail Obliteration	Hillslope >20%<40%					30.0			hrs	Obliteration of social trails shown on map in red	30.0
0		Export	Fill Material	Distance >1800'<2500'					100.0			hrs	Misc hauling of materials/tool/equipment during project	100.0



Trail: **Blue Ridge Trail**

Date: December 16, 2019

Segment From road to top of ridgeLand Unit: UC Davis Stebbins Cold Canyon Reserve

Begin Feet	End Feet	Action	Feature	Feature Attribute	Tree Width	Slope	Access	Wood / Peak	Size/Qty			Units	Comment	Total
									L/each	H	W			
0		Perform	Down Tree Removal Chain Saw	Tree dia. 1'-3'					20.0			hrs	Felling and clearing of trees for project	20.0
				<b>Tree dia. 1'-3' Total</b>										20.0
0		Perform	Down Tree Whole by Rigging	0					60.0			hrs	Removal of hazard trees by rigging	60.0
				<b>Rigging down trees</b>										60.0
42		Construct	Drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
245		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
340		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
648		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea	At turn	1.0
716		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
839		construct	drainage Dip Reverse Grade Dip	0					1.0			ea		1.0
957		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
1102		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
1200		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
1600		construct	drainage Dip Reverse Grade Dip	0	5	x			15.0			ea		15.0
1740		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
1853		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
1917		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
2095		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
2252		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea	Below steep rocky section of trail	1.0
2440		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea	Above steep rocky section	1.0
2590		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
2854		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
2980		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea	below steeper section that has makeshift steps. May need steps?	1.0
3075		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
3142		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
3270		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
3440		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea	major drain	1.0
3545		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea	mellow drain exit, no energy dissipater needed	1.0
3650		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
3825		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea	At Mile 4.25 sign. Mellow drain exit, no energy dissipater needed	1.0
4115		construct	drainage Dip Reverse Grade Dip	0	5	x			1.0			ea		1.0
				<b>Mech Grade Dip Total</b>										41.0
4320		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4375		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4550		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4640		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	mellow drain exit, no energy dissipater needed	1.0
4730		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
4868		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
4930	Blue Ridge Trail	construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	At mile 4.0 sign. Mellow drain exit, no energy dissipater needed	1.0

Begin Feet	End Feet	Action	Feature	Feature Attribute	Tread Width	Metal Head	Assemble	Wood / Plastic	Size/Qty			Units	Comment	Total
									L/each	H	W			
5044		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
5250		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	At bottom of steps. Mellow drain exit, no energy dissipater needed	1.0
5395		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	Mellow drain exit, no energy dissipater needed	1.0
5545		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	Mellow drain exit, no energy dissipater needed	1.0
6842		construct	drainage Dip Reverse Grade Dip	0	3				1.0			ea	top of big drainage ditch at outlet of drain.	1.0
				Hand Built Grade Dip Total										12.0
42		construct	Energy Dissipater Rock	0					16.0	4.0	2.0	cu ft		128.0
245		construct	energy Dissipater Rock	0					15.0	4.0	2.0	cu ft		120.0
340		construct	energy Dissipater Rock	0					18.0	4.0	2.0	cu ft		144.0
648		construct	energy Dissipater Rock	0					16.0	1.0	4.0	cu ft	at exit of turn drain	64.0
716		construct	energy Dissipater Rock	0					13.0	1.0	4.0	cu ft		52.0
839		construct	energy Dissipater Rock	0					18.0	1.0	4.0	cu ft	at exit of turn drain	72.0
957		construct	energy Dissipater Rock	0					14.0	1.0	4.0	cu ft		56.0
1102		construct	energy Dissipater Rock	0					11.0	1.0	4.0	cu ft		44.0
1200		construct	energy Dissipater Rock	0					16.0	1.0	4.0	cu ft	at exit of turn drain	64.0
1600		construct	energy Dissipater Rock	0					15.0	1.0	4.0	cu ft	at exit of turn drain	60.0
1740		construct	energy Dissipater Rock	0					12.0	1.0	4.0	cu ft		48.0
1853		construct	energy Dissipater Rock	0					12.0	1.0	4.0	cu ft		48.0
1917		construct	energy Dissipater Rock	0					17.0	1.0	4.0	cu ft	at exit of turn drain	68.0
2095		construct	energy Dissipater Rock	0					10.0	1.0	4.0	cu ft		40.0
2252		construct	energy Dissipater Rock	0					10.0	1.0	4.0	cu ft		40.0
2440		construct	energy Dissipater Rock	0					12.0	1.0	4.0	cu ft		48.0
2590		construct	energy Dissipater Rock	0					14.0	1.0	4.0	cu ft		56.0
2854		construct	energy Dissipater Rock	0					12.0	1.0	4.0	cu ft		48.0
2980		construct	energy Dissipater Rock	0					10.0	1.0	4.0	cu ft		40.0
3075		construct	energy Dissipater Rock	0					12.0	1.0	4.0	cu ft		48.0
3142		construct	energy Dissipater Rock	0					14.0	1.0	4.0	cu ft	at exit of turn drain	56.0
3270		construct	energy Dissipater Rock	0					10.0	1.0	4.0	cu ft		40.0
3440		construct	energy Dissipater Rock	0					25.0	1.0	4.0	cu ft		100.0
3650		construct	energy Dissipater Rock	0					10.0	1.0	4.0	cu ft		40.0
4115		construct	energy Dissipater Rock	0					10.0	1.0	4.0	cu ft		40.0
				Rock Energy Dissipater Total										1564.0
0		Export	Fill Material	Distance >1800'<2500'					100.0			hrs	Misc hauling of materials/tool/equipment during project	100.0
				Distance >1800'<2500' Total										100.0
5425		Import	Fill Material	Distance >1300'<1800'					21.0			ea	Hauling steps and rebar in by hand	21.0
5615		Import	Fill Material	Distance >1300'<1800'					21.0			ea	Hauling steps and rebar in by hand	21.0
5727		Import	Fill Material	Distance >1300'<1800'					14.0			ea	Hauling steps and rebar in by hand	14.0
				Distance >1300'<1800' Total										56.0
4380		Import	Fill Material	Distance >1800'<2500'		x			9.0			ea	Hauling steps and rebar in with toters	9.0
4380		Import	Fill Material	Distance >1800'<2500'		x			9.0			ea	Hauling steps and rebar in with toters	9.0
4745		Import	Fill Material	Distance >1800'<2500'		x			28.0			ea	Hauling steps and rebar in with toters	28.0
4745		Import	Fill Material	Distance >1800'<2500'		x			28.0			ea	Hauling steps and rebar in with toters	28.0
4870		Import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
4870		Import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
5045		Import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
5045		Import	Fill Material	Distance >1800'<2500'		x			14.0			ea	Hauling steps and rebar in with toters	14.0
5110		Import	Fill Material	Distance >1800'<2500'		x			9.0			ea	Hauling steps and rebar in with toters	9.0
5110		Import	Fill Material	Distance >1800'<2500'		x			9.0			ea	Hauling steps and rebar in with toters	9.0
5154		Import	Fill Material	Distance >1800'<2500'		x			16.0			ea	Hauling steps and rebar in with toters	16.0
5154		Import	Fill Material	Distance >1800'<2500'		x			16.0			ea	Hauling steps and rebar in with toters	16.0
5260		Import	Fill Material	Distance >1800'<2500'		x			22.0			ea	Hauling steps and rebar in with toters	22.0
5260		Import	Fill Material	Distance >1800'<2500'		x			22.0			ea	Hauling steps and rebar in with toters	22.0
5425		Import	Fill Material	Distance >1800'<2500'		x			21.0			ea	Hauling steps and rebar in with toters	21.0

Blue Ridge Trail

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Begin Foot	End Feet	Action	Feature	Feature Attribute	Tread Width	Sloped	Accurate	Wood / Plastic	Size/Qty			Units	Comment	Total
									L/each	H	W			
5425		Import	Fill Material	Distance >1800'<2500'		X			21.0			ea	Hauling steps and rebar in with toters	21.0
5615		Import	Fill Material	Distance >1800'<2500'		X			21.0			ea	Hauling steps and rebar in with toters	21.0
5615		Import	Fill Material	Distance >1800'<2500'		X			21.0			ea	Hauling steps and rebar in with toters	21.0
5727		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
5727		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
5861		Import	Fill Material	Distance >1800'<2500'		X			13.0			ea	Hauling steps and rebar in with toters	13.0
5861		Import	Fill Material	Distance >1800'<2500'		X			13.0			ea	Hauling steps and rebar in with toters	13.0
6106		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
6106		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
6173		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
6173		Import	Fill Material	Distance >1800'<2500'		X			14.0			ea	Hauling steps and rebar in with toters	14.0
6271		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
6271		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
6867		Import	Fill Material	Distance >1800'<2500'		X			10.0			ea	Hauling steps and rebar in with toters	10.0
6867		Import	Fill Material	Distance >1800'<2500'		X			10.0			ea	Hauling steps and rebar in with toters	10.0
6941		Import	Fill Material	Distance >1800'<2500'		X			20.0			ea	Hauling steps and rebar in with toters	20.0
6941		Import	Fill Material	Distance >1800'<2500'		X			20.0			ea	Hauling steps and rebar in with toters	20.0
6996		Import	Fill Material	Distance >1800'<2500'		X			16.0			ea	Hauling steps and rebar in with toters	16.0
6996		Import	Fill Material	Distance >1800'<2500'		X			16.0			ea	Hauling steps and rebar in with toters	16.0
7298		Import	Fill Material	Distance >1800'<2500'		X			17.0			ea	Hauling steps and rebar in with toters	17.0
7298		Import	Fill Material	Distance >1800'<2500'		X			17.0			ea	Hauling steps and rebar in with toters	17.0
7605		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
7605		Import	Fill Material	Distance >1800'<2500'		X			8.0			ea	Hauling steps and rebar in with toters	8.0
7947		Import	Fill Material	Distance >1800'<2500'		X			10.0			ea	Hauling steps and rebar in with toters	10.0
7947		Import	Fill Material	Distance >1800'<2500'		X			10.0			ea	Hauling steps and rebar in with toters	10.0
				<b>Haul w/ toters</b>										<b>584.0</b>
5861		Import	Fill Material	Distance >1800'<2500'					13.0			ea	Hauling steps and rebar in by hand	13.0
6106		Import	Fill Material	Distance >1800'<2500'					8.0			ea	Hauling steps and rebar in by hand	8.0
6173		Import	Fill Material	Distance >1800'<2500'					14.0			ea	Hauling steps and rebar in by hand	14.0
6271		Import	Fill Material	Distance >1800'<2500'					8.0			ea	Hauling steps and rebar in by hand	8.0
6867		Import	Fill Material	Distance >1800'<2500'					10.0			ea	Hauling steps and rebar in by hand	10.0
6941		Import	Fill Material	Distance >1800'<2500'					20.0			ea	Hauling steps and rebar in by hand	20.0
6996		Import	Fill Material	Distance >1800'<2500'					16.0			ea	Hauling steps and rebar in by hand	16.0
7298		Import	Fill Material	Distance >1800'<2500'					17.0			ea	Hauling steps and rebar in by hand	17.0
7605		Import	Fill Material	Distance >1800'<2500'					8.0			ea	Hauling steps and rebar in by hand	8.0
7947		Import	Fill Material	Distance >1800'<2500'					10.0			ea	Hauling steps and rebar in by hand	10.0
				<b>Haul by hand</b>										<b>124.0</b>
4380		Import	Fill Material	Distance >300'<800'					9.0			ea	Hauling steps and rebar in by hand	9.0
4745		Import	Fill Material	Distance >300'<800'					28.0			ea	Hauling steps and rebar in by hand	28.0
				<b>Distance &gt;300'&lt;800'</b>										<b>37.0</b>
				<b>Total</b>										
4870		Import	Fill Material	Distance >800'<1300'					14.0			ea	Hauling steps and rebar in by hand	14.0
5045		Import	Fill Material	Distance >800'<1300'					14.0			ea	Hauling steps and rebar in by hand	14.0
5110		Import	Fill Material	Distance >800'<1300'					9.0			ea	Hauling steps and rebar in by hand	9.0
5154		Import	Fill Material	Distance >800'<1300'					16.0			ea	Hauling steps and rebar in by hand	16.0
5260		Import	Fill Material	Distance >800'<1300'					22.0			ea	Hauling steps and rebar in by hand	22.0
				<b>Distance &gt;800'&lt;1300'</b>										<b>75.0</b>
				<b>Total</b>										



Begin Foot	End Foot	Action	Feature	Feature Attribute	Tread Width	Mechanical	Accessories	Wood / Plastic	Size/Qty			Units	Comment	Total
									L/each	H	W			
2260		Excavate	Rock	rock soft					180.0	1.0	4.0	cu ft	excavating rock out of trail surface. Save for use for structures.	720.0
				<b>rock medium Total</b>										<b>720.0</b>
42		Gather	Rock Crush Fill	Distance <300'					16.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	16.0
245		gather	Rock Crush Fill	distance <300'					15.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	15.0
340		gather	Rock Crush Fill	Distance <300'					18.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	18.0
648		gather	Rock Crush Fill	Distance <300'					16.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	16.0
716		gather	Rock Crush Fill	Distance <300'					13.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	13.0
839		gather	Rock Crush Fill	Distance <300'					18.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	18.0
957		gather	Rock Crush Fill	Distance <300'					14.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	14.0
1102		gather	Rock Crush Fill	Distance <300'					11.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	11.0
1200		gather	Rock Crush Fill	Distance <300'					16.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	16.0
1600		gather	Rock Crush Fill	Distance <300'					15.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	15.0
1740		gather	Rock Crush Fill	Distance <300'					12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
1853		gather	Rock Crush Fill	Distance <300'					12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
1917		gather	Rock Crush Fill	Distance <300'					17.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	17.0
2095		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
2252		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
2440		gather	Rock Crush Fill	Distance <300'					12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
2590		gather	Rock Crush Fill	Distance <300'					14.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	14.0
2854		gather	Rock Crush Fill	Distance <300'					12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
2980		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
3075		gather	Rock Crush Fill	Distance <300'					12.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	12.0
3142		gather	Rock Crush Fill	Distance <300'					14.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	14.0
3270		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
3440		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
3650		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
4115		gather	Rock Crush Fill	Distance <300'					10.0	1.0	1.0	cu ft	Gather rock from hillside for energy dissipater backfill	10.0
4380		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
4745		gather	Rock Crush Fill	Distance <300'					28.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	84.0
4870		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0
5045		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0
5110		gather	Rock Crush Fill	Distance <300'					9.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	27.0
5154		gather	Rock Crush Fill	Distance <300'					16.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	48.0
5260		gather	Rock Crush Fill	Distance <300'					22.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	66.0
5425		gather	Rock Crush Fill	Distance <300'					21.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	63.0
5615		gather	Rock Crush Fill	Distance <300'					21.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	63.0
5727		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0
5861		gather	Rock Crush Fill	Distance <300'					13.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	39.0
6106		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
6173		gather	Rock Crush Fill	Distance <300'					14.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	42.0
6271		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
6867		gather	Rock Crush Fill	Distance <300'					10.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	30.0
6941		gather	Rock Crush Fill	Distance <300'					20.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	60.0
6996		gather	Rock Crush Fill	Distance <300'					16.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	48.0
7298		gather	Rock Crush Fill	Distance <300'					17.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	51.0
7605		gather	Rock Crush Fill	Distance <300'					8.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	24.0
7947		gather	Rock Crush Fill	Distance <300'					10.0	1.0	3.0	cu ft	gather rock from hillside to back fill steps	30.0
				<b>Distance &lt;300' Total</b>										<b>1200.0</b>
42		Import	Rock Wall Rock	Distance <300'		x			16.0	4.0	2.0	cu ft	Import via totor	128.0
245		import	Rock Wall Rock	distance <300'		x			15.0	4.0	2.0	cu ft	Import via totor	120.0
2590		import	Rock Wall Rock	Distance <300'		x			14.0	1.0	4.0	cu ft	Import via totor	56.0
				<b>Distance &lt;300' Total</b>										<b>304.0</b>
1600		import	Rock Wall Rock	Distance >1300'<1800'		x			15.0	1.0	4.0	cu ft	Import via totor	60.0
4115		import	Rock Wall Rock	Distance >1300'<1800'		x			10.0	1.0	4.0	cu ft	Import via totor	40.0
				<b>Distance &gt;1300'&lt;1800' Total</b>										<b>100.0</b>
1853		import	Rock Wall Rock	Distance >1800'<2500'		x			12.0	1.0	4.0	cu ft	Import via totor	48.0
1917		import	Rock Wall Rock	Distance >1800'<2500'		x			17.0	1.0	4.0	cu ft	Import via totor	68.0
2095		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via totor	40.0
2252		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via totor	40.0
2440		import	Rock Wall Rock	Distance >1800'<2500'		x			12.0	1.0	4.0	cu ft	Import via totor	48.0
2590		import	Rock Wall Rock	Distance >1800'<2500'		x			14.0	1.0	4.0	cu ft	Import via totor	56.0
2854		import	Rock Wall Rock	Distance >1800'<2500'		x			12.0	1.0	4.0	cu ft	Import via totor	48.0
2980		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via totor	40.0
3075		import	Rock Wall Rock	Distance >1800'<2500'		x			12.0	1.0	4.0	cu ft	Import via totor	48.0
3142		import	Rock Wall Rock	Distance >1800'<2500'		x			14.0	1.0	4.0	cu ft	Import via totor	56.0
3270	Blue Ridge Trail	import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via totor	40.0



Begin Feet	End Feet	Action	Feature	Feature Attribute	Tread Width	Mechanized	Accessible	Wood / Plastic	Size/Qty			Units	Comment	Total
									L/each	H	W			
3440		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3650		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
4115		import	Rock Wall Rock	Distance >1800'<2500'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
				<b>Distance &gt;1800'&lt;2500' Total</b>										<b>652.0</b>
340		import	Rock Wall Rock	Distance >300'<800'		x			18.0	4.0	2.0	cu ft	Import via toter	144.0
648		import	Rock Wall Rock	Distance >300'<800'		x			16.0	1.0	4.0	cu ft	Import via toter	64.0
716		import	Rock Wall Rock	Distance >300'<800'		x			13.0	1.0	4.0	cu ft	Import via toter	52.0
2854		import	Rock Wall Rock	Distance >300'<800'		x			12.0	1.0	4.0	cu ft	Import via toter	48.0
2980		import	Rock Wall Rock	Distance >300'<800'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3075		import	Rock Wall Rock	Distance >300'<800'		x			12.0	1.0	4.0	cu ft	Import via toter	48.0
3142		import	Rock Wall Rock	Distance >300'<800'		x			14.0	1.0	4.0	cu ft	Import via toter	56.0
3270		import	Rock Wall Rock	Distance >300'<800'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
				<b>Distance &gt;300'&lt;800' Total</b>										<b>492.0</b>
839		import	Rock Wall Rock	Distance >800'<1300'		x			18.0	1.0	4.0	cu ft	Import via toter	72.0
957		import	Rock Wall Rock	Distance >800'<1300'		x			14.0	1.0	4.0	cu ft	Import via toter	56.0
1102		import	Rock Wall Rock	Distance >800'<1300'		x			11.0	1.0	4.0	cu ft	Import via toter	44.0
1200		import	Rock Wall Rock	Distance >800'<1300'		x			16.0	1.0	4.0	cu ft	Import via toter	64.0
1740		import	Rock Wall Rock	Distance >800'<1300'		x			12.0	1.0	4.0	cu ft	Import via toter	48.0
3440		import	Rock Wall Rock	Distance >800'<1300'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
3650		import	Rock Wall Rock	Distance >800'<1300'		x			10.0	1.0	4.0	cu ft	Import via toter	40.0
				<b>Distance &gt;800'&lt;1300' Total</b>										<b>364.0</b>
42		Excavate	Soil	soil medium					16.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	16.0
245		Excavate	Soil	soil medium					15.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	15.0
340		Excavate	Soil	soil medium					18.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	18.0
648		Excavate	Soil	soil medium					16.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	16.0
716		Excavate	Soil	soil medium					13.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	13.0
839		Excavate	Soil	soil medium					18.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	18.0
957		Excavate	Soil	soil medium					14.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	14.0
1102		Excavate	Soil	soil medium					11.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	11.0
1200		Excavate	Soil	soil medium					16.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	16.0
1600		Excavate	Soil	soil medium					15.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	15.0
1740		Excavate	Soil	soil medium					12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
1853		Excavate	Soil	soil medium					12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
1917		Excavate	Soil	soil medium					17.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	17.0
2095		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
2252		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
2440		Excavate	Soil	soil medium					12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
2590		Excavate	Soil	soil medium					14.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	14.0
2854		Excavate	Soil	soil medium					12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
2980		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
3075		Excavate	Soil	soil medium					12.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	12.0
3142		Excavate	Soil	soil medium					14.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	14.0
3270		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
3440		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
3650		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
4115		Excavate	Soil	soil medium					10.0	1.0	1.0	cu ft	Excavate soil for energy dissipater construction	10.0
				<b>soil medium Total</b>										<b>327.0</b>
4380		construct	Steps	Wood Interlocking Single	3			W	9.0			ea		9.0
4745		construct	Steps	Wood Interlocking Single	3			w	28.0			ea		28.0
4870		construct	Steps	Wood Interlocking Single	3			w	14.0			ea		14.0
5045		construct	Steps	Wood Interlocking Single	3			w	14.0			ea		14.0
5110		construct	Steps	Wood Interlocking Single	3			w	9.0			ea	set of 3, then bench before next 6 at turn	9.0
5154		construct	Steps	Wood Interlocking Single	3			w	16.0			ea		16.0
5260		construct	Steps	Wood Interlocking Single	3			w	22.0			ea		22.0
5425		construct	Steps	Wood Interlocking Single	3			w	21.0			ea		21.0
5615		construct	Steps	Wood Interlocking Single	3			w	21.0			ea		21.0
5727		construct	Steps	Wood Interlocking Single	3			w	14.0			ea		14.0
5861		construct	Steps	Wood Interlocking Single	3			w	13.0			ea	steps at turn	13.0
6106		construct	Steps	Wood Interlocking Single	3			w	8.0			ea		8.0
6173		construct	Steps	Wood Interlocking Single	3			w	14.0			ea		14.0
6271		construct	Steps	Wood Interlocking Single	3			w	8.0			ea		8.0

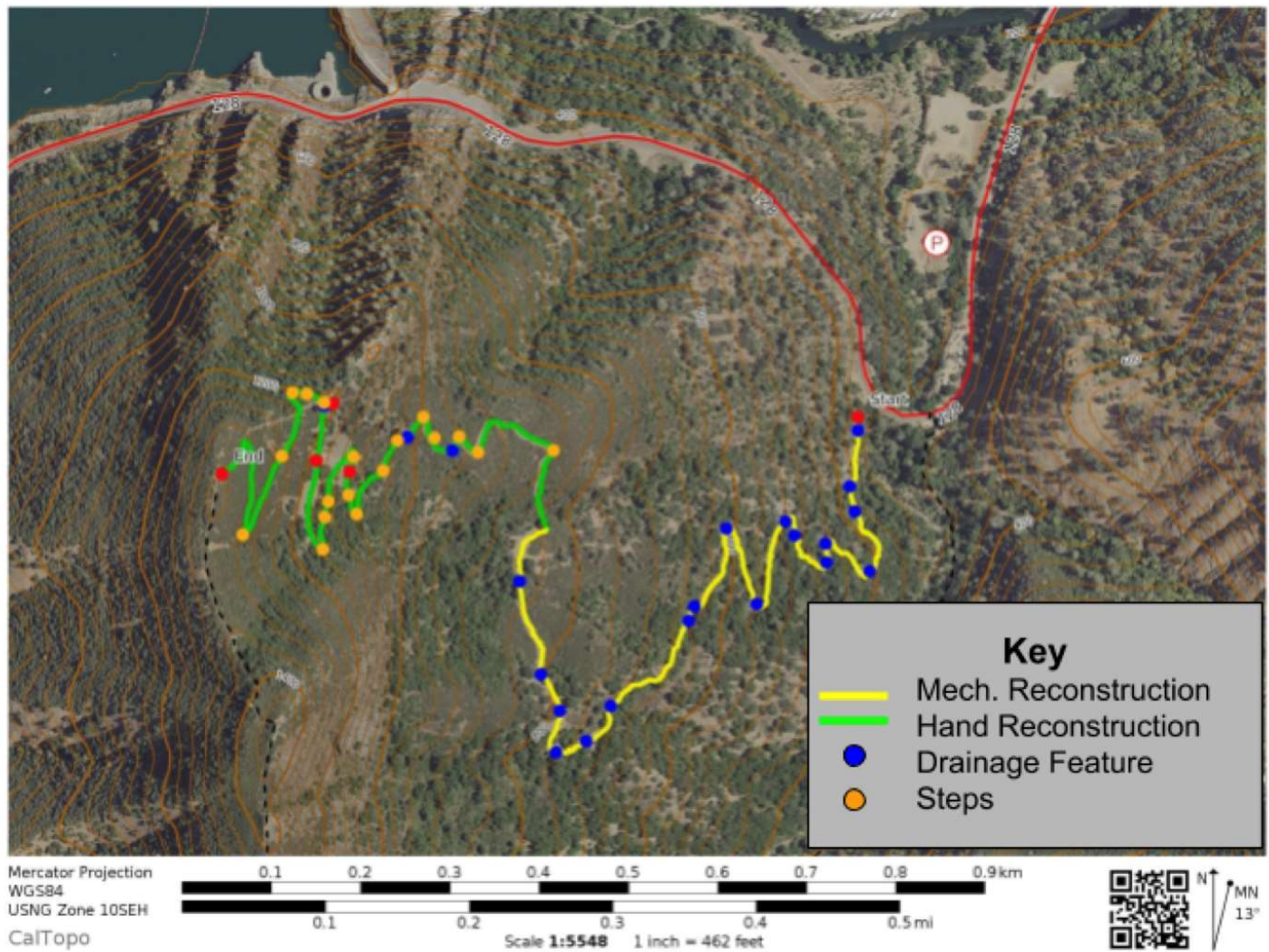
Blue Ridge Trail

5

Begin Foot	End Feet	Action	Feature	Feature Attribute	Trail Width	Mechanized	Accessible	Wood / Plastic	Size/Qty			Units	Comment	Total
									L/each	H	W			
6867		construct	Steps	Wood Interlocking Single	3			W	10.0			ea		10.0
6941		construct	Steps	Wood Interlocking Single	3			W	20.0			ea		20.0
6996		construct	Steps	Wood Interlocking Single	3			W	16.0			ea	steps at turn	16.0
7298		construct	Steps	Wood Interlocking Single	3			W	17.0			ea		17.0
7605		construct	Steps	Wood Interlocking Single	3			W	8.0			ea	steps at turn	8.0
7947		construct	Steps	Wood Interlocking Single	3			W	10.0			ea		10.0
				<b>Wood Interlocking Single Total</b>										<b>292.0</b>
0		remove	steps	Wood Standard Single					60.0			hrs	remove and transport of old steps back to trailhead	60.0
				<b>Wood Standard Single Total</b>										<b>60.0</b>
648		Reconstruct	Switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
839		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
957		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
1200		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
1600		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
1917		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
3142		reconstruct	switchback	Hillslope >40%<60%	5	x			1.0			ea		1.0
				<b>Hillslope &gt;40%&lt;60% Total</b>										<b>7.0</b>
0	8132	Brush	Trail Brushing Maintenance	Heavy					8132.0			lin ft		8132.0
0	8132	Brush	Trail Clearing Stob Removal	Heavy					8132.0			lin ft	lots of stob removal on outside edge of trail	8132.0
2995	3075	monitor	Trail Hardening Rip Rap	0					80.0				Steep section of trail that may need steps, armoring	80.0
0	0	Monitor	Trail Head	0									Start wheel at concrete post on outside edge of trail	
527		monitor	Trail Junction	0									Trail Junction down to creek and parking area	
5803		monitor	Trail Junction	0					1.0			ea	bottom of social trail cutting switchbacks	1.0
6635		monitor	Trail Junction	0					1.0			ea	top of social trail cutting switchbacks	1.0
6865		monitor	Trail Junction	0					1.0			ea	Junction with unofficial trail to lookout	1.0
8132		Monitor	Trail Junction	0					1.0			ea	End of Blue Ridge Trail at old waterbar at top of trail	1.0
0		perform	Trail Obliteration	Hillslope >20%<40%					30.0			hrs	Obliteration of social trails shown on map in red	30.0
				<b>Hillslope &gt;20%&lt;40% Total</b>										<b>30.0</b>
0	3158	Reconstruct	Trail Reconstruction	0	5	X			3158.0			lin ft	8-10 feet wide on road. Needs to become 3-4 ft. Slope 40-60%	3158.0
3158	4150	Reconstruct	Trail Reconstruction	0	5	x			992.0			lin ft	side slope meadows. 20-40%	992.0
4150	8132	reconstruct	Trail Reconstruction	0	3				3062.0			lin ft	By hand beyond this point	3062.0
0		Remove	Water Bar wood	0					30.0			hrs	remove and transport of old waterbars back to trailhead	30.0



#### Appendix 4: Overview Map Showing Some Key Features of Project



## **SECTION 4**

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### **MISC. TRAIL SPECIFICATIONS**

#### **4.1 TRAIL DESIGN**

The rehabilitation of this trail shall abide by the USDA's Trail Construction and Maintenance Notebook.

#### **4.2 TRAIL CONSTRUCTION BEST PRACTICES**

To satisfy erosion and sediment control requirements, the trail must be finished as the project advances. Ideally, all roughed-in corridor will be finished the same day. Any segments requiring delayed finishing must be approved in advance by client.

#### **4.3 CORRIDOR CLEARING**

Corridor clearing shall be confined to within five (5') feet of the trail and back-slope edges.

#### **4.4 TRAIL FLAGGING**

A flag line will be pre-installed by Client (at a minimum of every 50 feet) marking the desired corridor for the trail roughly 20 feet wide, but only suggests the tread location based on the Master Trail Plan. The actual tread location depends on finer analysis and will need to be laid out using pin flags at a minimum of 20' intervals.

#### **4.5 DEBRIS**

Cut and scatter all branches and brush cut as part of the trail development. No debris shall be left within ten (10) feet of the trail. Butt-ends of any sawed limbs must face away from the trail.

#### **4.6 ROCKS**

All rock embedded in the trail surface should be stable. When used in structures, care will be taken to match construction rock to rocks native to the area.

#### **4.7 WOODY MATERIAL**

Woody material such as stumps, logs and brush shall be removed from the trail tread. No stumps less than twelve (12") inches in diameter shall be left within five (5') feet of the trail tread.

#### **4.8 FALL ZONE CLEARING**

Areas adjacent to dynamic trail segments where visitors have a greater potential to exit the immediate trail corridor will be cleared of impact focusers; butt-end branches, stumps and rocks under six (6) inches in diameter.

#### **4.9 BACK-SLOPE**

Back-slope of trail should be graded to three-to-one (3:1) slope or until it matches the existing slope. In areas where the back-slope has the potential to become part of the active tread it must be finished to trail tread specifications.

#### **4.10 TRAIL FINISHING CONDITIONS**

Hand finishing and grading of the trail tread, back-slope, down-slope spoils, and drainage features shall result in a surface that matches the texture of the surrounding forest floor while enabling water to drain off the trail.

#### **4.11 SPOILS STABILIZATION**

All excavated material not used in the trail tread or other trail structures must be stabilized. Spoils shall be distributed in a thin layer adjacent to the trail tread. Spoils may not be placed in drainages or swales. When possible, spoils should be mulched with native materials to discourage erosion while native seed stocks reestablished.

#### **4.12 TURNS**

All turns are in-sloped ("bermed"). Use generally acceptable values for turn radii and grades across the turns. All turns must include an entrance and exit rolling grade dip.

#### **4.13 GRADE REVERSALS**

A designed grade reversal or constructed rolling grade dip should occur at least every sixty (60) feet and preferably more frequently. Any grade reversal must be strongly anchored to discourage short cutting. Grade reversals also double as flow elements: rollers, jumps and pump/rhythm sections. In this context, grade reversal shape, size and placement should reflect its placement within the system. Specific details will be determined by the contractor in partnership with the client.

#### **4.14 ABOVE GRADE EARTHEN STRUCTURES**

Any portion of trail above the grade of its surroundings must be composed of mineral soil. If soil is scarce, a rock core may be used so long as it provides less than fifty percent (50%) of the total volume of the structure.

Use of organic materials, duff, woody material, etc. is prohibited for above grade earthed structures. Above ground earthen structures should rarely exceed 24" above grade as to offer a natural aesthetic.

Fill structures must have a fill slope of at least two-to-one (2:1) or the angle of repose of the local soil, whichever is greater. A retaining wall may be substituted for a fill slope with permission of the client. Fill structures must be completely stabilized and compacted.

Acceptable techniques include track-packing or compaction via a dedicated tamping unit. Hand tamping is not acceptable. Raw soil faces that do not become tread must be mulched and seeded in the same fashion as spoils and satisfy the terms of the project erosion control methodologies. Examples of above-grade earthen structures include aggressive grade-reversals ("rollers", "jumps") and turn pads on in-sloped switchbacks.

#### **4.15 WATER DISPERSIONS**

The majority of the tread should be out-sloped at five percent (5%). When not possible or desirable due to purpose-built in-sloping, resource concerns or obstruction, water can be directed down the trail for up to six (6) feet before a water diversion location.

#### **4.16 INVASIVE SPECIES**

To reduce the spread of invasive plant species, the following protocols are required:

1. All hand tools and mechanized equipment must be free of invasive seeds and clean of any dirt and mud when entering the project site.
2. Consideration should be made while trail clearing and construction through areas occupied by invasive species as to not propagate as construction progresses.
3. Imported surface/organic material is prohibited.

#### **4.17 FILTER STRIPS**

Filter strips are vegetated areas down-slope of the trail corridor intended to treat sheet flows coming off the tread. Filter strips function by slowing down flow velocities, filtering out sediments and providing an opportunity for infiltration into the underlying soils.

Properly mulched spoils may be designated as part of the filter strip. Filter strips shall not be used as regular travel-ways for equipment and materials. Areas with inadequate filter strip capacity above water-ways

may require installation of formal erosion control measures to satisfy erosion and sediment control methodologies.

#### **4.18 MECHANIZED EQUIPMENT BEST PRACTICES**

All track marks will be raked smooth. Affected area will be finished to have a nature shape, spoils piles rounded, smoothed and cleared of significant brush, blade edges blended, etc. A spill kit suitable for five gallons of fluid will be onsite and within 200 yards of mechanized equipment whenever equipment is being operated.

#### **4.19 PRESERVATION OF VEGETATION**

The Contractor shall exercise care to preserve the natural landscape, including trees and shrubs, and shall conduct construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works or excavation operations, all trees, native shrubbery, and vegetation, shall be preserved and protected from damage by the Contractor's construction operations and equipment.

All unnecessary destruction, scarring, damage or defacing of the landscape resulting from the Contractor's operations, shall be repaired, replanted, reseeded or otherwise corrected as directed by the Client and at the Contractor's expense.

After completion of the work, all areas disturbed by construction that do not require landscaping or planting, shall be scarified and left in a condition which will facilitate natural vegetation, provide for proper drainage and prevent erosion.

#### **4.20 GROUND DISTURBANCE**

The grading limits along the trail corridor are defined by the approved tread width plus additional width defined by the required back-sloping, unless further excavation is required for prescribed features, as approved. Equipment therein should not exert ground pressures greater than 6-psi and rutting should be avoided outside grading limits along the corridor, by limiting traffic intensity and avoiding wet soil conditions.

Machine traffic outside the trail corridor or logging roads must be limited and may occur only when required for safe operation, emergency, repair or as part of a pre-approved haul plan. Equipment must not exert ground pressures greater than 6psi and rutting/disturbance must be corrected.

#### **4.21 CONTRACT MANAGER**

Contractor's lead Project Manager shall have received Professional Trail building instructions with the Professional Trail builders Association (PTBA) or equivalent.

#### **4.22 SAFETY TRAINING**

Contractor/Subcontractor and all contractor's personnel must have current chainsaw safety training certificate (at least level 1) through USFS Chainsaw Training, PTBA Chainsaw Training or the Game of Logging or Equivalent.

Contractor/Subcontractors must have Wilderness First Aid certification through American Red Cross or equivalent.

Contractor/Subcontractors must submit an Environmental and Safety Management Plan with the Proposal.

#### **4.23 TOOL & EQUIPMENT EXPERIENCE**

Contractor/ Subcontractor must demonstrate experience with the following tools and equipment that would apply with this project:

- Mini-trail dozers
- Mini Excavators
- Mini Crawler Carriers
- Chainsaw Bucking and Limbing
- Felling with a Chainsaw
- Cross -cut saw use
- Rigging and Highline set-up and operation
- Helical Pier Installers

#### **4.24 TREAD**

The surface portion of a trail upon which users travel. Consideration must be made to stabilize trail tread. Specific tread widths are a function of their location in the system. Tread widths in areas of dynamic flow, landings and in-sloped turns, for example, may be wider. Significant deviations from these examples require approval from the Agency.

## **SECTION 5**

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### **U.S. FEDERAL RULES AND REGULATIONS**

Contractor agrees to comply with all the US FEDERAL LAWS RELATED TO FEMA, they are as follows:

#### **5.1 APPENDIX II TO THE UNIFORM RULES**

#### **5.2 C.F.R. PART 200**

Contracts for more than the simplified acquisition threshold, currently set at \$250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

#### **5.3 TERMINATION FOR CAUSE AND CONVENIENCE**

This contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this contract through no fault of the terminating party, provided that no termination may be effected unless the other party is given:

- a) Not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate; and
- b) An opportunity for consultation with the terminating party prior to termination.

This contract may be terminated in whole or in part in writing by the local government for its convenience, provided that the other party is afforded the same notice and consultation opportunity specified in (a) above.

If termination for default is effected by the local government, an equitable adjustment in the price for this contract shall be made, but no amount shall be all owed for anticipated profit on unperformed services or other work, and any payment due to the contractor at the time of termination may be adjusted to cover any additional costs to the local government because of the contractor's default.

#### **5.4 FLOW DOWN**

Subcontracts: If the vendor subcontracts any of the work required under this Agreement, a copy of the signed subcontract must be forwarded to the Agency for review and approval.

The vendor agrees to include in the subcontract that

- (i) the subcontractor is bound by the terms of this Agreement,
- (ii) the subcontractor is bound by all applicable state and federal laws and regulations, and
- (iii) the subcontractor shall hold the Department and Recipient harmless against all claims of whatever nature arising out of the subcontractor's performance of work under this Agreement, to the extent allowed and required by law.

The recipient shall document in the quarterly report the subcontractor subcontractor's progress in performing its work under this agreement.

For each subcontract, the Recipient shall provide a written statement to the Department as to whether the subcontractor is a minority vendor as defined in Section 288.703, Fla. Stat.

#### **5.5 COMPLIANCE WITH EXECUTIVE ORDER 11246**

As of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations.

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

The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, 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, creed, color, 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.

**5.6 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT OF 1962, 40 U.S.C. 327 ET SEQ.**

The Contractor agrees it will require that mechanics and laborers (including watchmen and guards) employed on this federally assisted contract be paid wages of not less than one and one-half times their basic wage rates for all hours worked in excess of forty hours in a work week.

**5.7 FEDERAL FAIR LABOR STANDARDS ACT, 29 U.S.C. SECTION 201 ET SEQ.**

The Contractor agrees it will require that covered employees be paid at least the minimum prescribed wage, and also that they be paid one and one-half times their basic wage rates for all hours worked in excess of the prescribed workweek.

**5.8 COPELAND "ANTI-KICKBACK" ACT (U.S.C. SECTION 51)**

The Contractor agrees to comply with the Anti-Kickback Act of 1968 which outlaws and prescribes penalties for "kickbacks" of wages in federally financed or assisted construction activities.

**5.9 REPORTING**

The contractor will provide any information required to comply with the grantor agency requirements and regulations pertaining to reporting.

**5.10 RETENTION OF RECORDS**

The contractor shall retain all records relating to this contract for five (5) years after the local government makes final payment and all other pending matters are closed.

**5.11 CLEAN AIR ACT, FEDERAL WATER POLLUTION CONTROL ACT, EXECUTIVE ORDER 11738, AND US EPA REGULATIONS**

Contracts and subgrants of amounts in excess of \$100,000 shall contain a provision that requires the Contractor or recipient to comply with all applicable standards, orders, or requirements issued under Section 112 and 306 of the Clean Air Act (42 U.S.C. 1857 (h), Section 508 of the Clean Water Act (33 U.S. 1368), Executive Order 11738, and the U.S. Environmental Protection Agency regulations (40 CFR Part 15 and 61). Violations shall be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Contractor agree to comply with the Clean Air Act.

**5.12 ENERGY POLICY AND CONSERVATION ACT (PUB. L. 94-163, 89 STAT.871)**

The contractor shall comply with any mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

## **SECTION 6**

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### **FEMA PROCUREMENT GUIDELINES**

#### **6.1 BACKGROUND**

- a) In addition to complying with the Uniform Rules and the enabling laws, implementing regulations, and FEMA policies for a grant or cooperative agreement program, each Non-Federal Entities (“**NFE**”) must also comply with all other applicable Federal laws, regulations, and executive orders.
- b) Many of these laws, regulations, and executive orders will need to be included in third party contracts to the lowest tier necessary, and others, although not expressly referenced in a contract, will have a direct and indirect effect on a NFE’s third party contracts.
- c) DHS issues, on an annual basis, Standard Terms and Conditions that apply to recipients of Federal awards from all DHS Components, including FEMA. In addition, a recipient executes a Standard Form (“**SF**”) 424B or 424D with its grant or cooperative agreement application to FEMA that contains standard assurances. The DHS Standard Terms and Conditions and SF 424B and D contain references to many cross cutting Federal laws and regulations that may apply to a FEMA award.
- d) The following provides a no exhaustive list and description of some of the cross-cutting laws, regulations, and executive orders that may affect a NFE’s procurement.

#### **6.2 DEPARTMENT AND SUSPENSION**

- a. NFEs and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, *Debarment and Suspension* (1986) and Executive Order 12689, *Debarment and Suspension* (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security’s regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension). These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities.
- b. The regulations at 2 C.F.R. Part 180 and 2 C.F.R. Part 3000 specifically prohibit an NFE from entering into a “covered transaction” with a party listed on the System for Award Management Exclusions (“SAM Exclusions”). SAM

Exclusions is the list maintained by the General Services Administration that 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. SAM exclusions can be accessed at [www.sam.gov](http://www.sam.gov). See 2 C.F.R. §§ 180.530.

- c. The Department of Homeland Security regulations at 2 C.F.R. Part 3000 include, within the meaning of a “covered transaction,” a third party contract at any tier of \$25,000 or more; a third party contract at any tier for a Federally required audit (irrespective of the contract amount); and a third party contract at any tier that must be approved by an FEMA official irrespective of the contract amount. 2 C.F.R. § 3000.220; 2 C.F.R. § 180.220.
- d. The Uniform Rules require a NFE to include contract provisions that require compliance with debarment and suspension prohibitions. See Chapter IV, ¶¶ 6.d and 12.a.ix; 2 C.F.R. Part 200, Appendix II, ¶ I; DHS Standard Terms and Conditions, v 3.0, ¶ X (Dec. 4, 2013)

### **6.3 ACKNOWLEDGEMENT OF FEMA FUNDING**

An NFE must acknowledge its use of Federal funding when issuing statements, press releases, requests for proposals, bid invitations, and other documents describing projects or programs funded in whole or in part with FEMA financial assistance. Specifically, the document shall indicate that FEMA is providing the funds, the Catalog of Federal Domestic Assistance Number, as applicable, and the amount provided. See Financial Services and General Government Appropriations Act, 2015, Pub. L. No. 113•83, Division E, § 724 (2015); DHS Standard Terms and Conditions, v 3.0, ¶ II (Dec. 4, 2013).

### **6.4 LOBBYING CERTIFICATION AND DISCLOSURE**

- a. A NFE must comply with 31 U.S.C. § 1352 and 44 C.F.R. Part 18, which provides that no FEMA financial assistance may be expended by a recipient, subrecipient, contractor, or subcontractor to pay any person to influence, or attempt to influence, an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any Federal action concerning the award or renewal.
- b. If a third-party contract will exceed \$100,000, before awarding the contract, the NFE must obtain a lobbying certification and, if applicable, a lobbying disclosure from a prospective third-party contractor. 44 C.F.R. § 18.110.

- c. The Uniform Rules require a contractor to include provisions in its contracts of \$100,000 or more for compliance with lobbying certification and disclosure requirements. See Chapter IV, ¶ 12.a.x; 2 C.F.R. Part 200, Appendix II, ¶ J; DHS Standard Terms and Conditions, v. 3.0, ¶ XVIII (Dec. 4, 2013).

## 6.5 CIVIL RIGHTS REQUIREMENTS

A NFE is required to follow various civil rights requirements when carrying out activities under a FEMA award, and these requirements will flow down to a NFE's contractors at every tier.

### a. Nondiscrimination.

- i. Nondiscrimination on the Basis of Race, Color, and National Origin. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*), FEMA's implementing regulations at 44 C.F.R. Part 7 (*Nondiscrimination in Federally Assisted Programs*), and the Department's implementing regulations at 6 C.F.R. Part 21 (*Nondiscrimination on the Basis of Race, Color, or National Origin in Programs or Activities Receiving Federal Financial Assistance*) provide that no person in the United States will, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. See DHS Standard Terms and Conditions, v 3.0, ¶ VII (Dec. 4, 2013); Standard Form 424D, ¶ 10.
- ii. Nondiscrimination on the Basis of Sex. Title IX of the Education Amendments of 1972 (codified as amended at 20 U.S.C. § 1681 *et seq.*), FEMA's implementing regulations at 44 C.F.R. Part 19 (*Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance*), and the Department's implementing regulations at 6 C.F.R. Part 15 (*Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance*) prohibit discrimination on the basis of sex in any education program or activity receiving Federal financial assistance. See DHS Standard Terms and Conditions, v 3.0, ¶ IX (Dec. 4, 2013); Standard Form 424D, ¶ 10.
- iii. Nondiscrimination on the Basis of Disability. The Americans with Disability Act of 1990 (codified as amended at 42 U.S.C. §§ 12101•12213) prohibits discrimination against qualified individuals with disabilities in programs, activities, and services, and imposes specific requirements on public and private public and private entities. Contractors must comply with the responsibilities under Titles I, II, III, IV, and V of the Americans with

Disability Act of 1990 in employment, public services, public accommodations, telecommunications, and other provisions, many of which are subject to regulations issued by other Federal agencies. See DHS Standard Terms and Conditions, v 3.0, ¶ V (Dec. 4, 2013); Standard Form 424D, ¶ 10.

- iv. Nondiscrimination on the Basis of Handicap. Section 504 of the Rehabilitation Act of 1973 (codified as amended at 29 U.S.C. § 794) and FEMA's implementing regulations at 44 C.F.R. Part 16 (*Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the Federal Emergency Management Agency*) provide that no otherwise qualified handicapped individual in the United States will, solely by reason of handicap, be excluded from participation in, be denied the benefits of, or be subjected to, discrimination under any program or activity receiving Federal financial assistance. See DHS Standard Terms and Conditions, v 3.0, ¶ XXIII (Dec. 4, 2013); Standard Form 424D, ¶ 10.
- v. Nondiscrimination on the Basis of Age. The Age Discrimination Act of 1975 (codified as amended at 42 U.S.C. § 6101 *et seq.*), and Department of Health and Human Services implementing regulations at 45 C.F.R. Part 90 (*Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance*) prohibit discrimination against individuals on the basis of age in any program or activity receiving Federal financial assistance. See DHS Standard Terms and Conditions, v 3.0, ¶ IV (Dec. 4, 2013); Standard Form 424D, ¶ 10.
- vi. Nondiscrimination on the Basis of Limited English Proficiency. Title VI of the Civil Rights Act of 1964 prohibition against discrimination on the basis of national origin requires that recipients and subrecipients of FEMA assistance take reasonable steps to provide meaningful access to persons with limited English proficiency. Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency* (Aug. 11, 2000), requires Federal agencies to issue guidance to recipients, assisting such organizations and entities in understanding their language access obligations. The Department published the required guidance, which is entitled DHS Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons, 76 Fed. Reg. 21755-21768 (Apr. 18, 2011). See DHS Standard Terms and Conditions, v 3.0, ¶ XVII (Dec. 4, 2013).

vii. Consistent with the preceding nondiscrimination requirements, a NFE's contractors must comply with the following requirements.

- (1) A contractor of a NFEs must not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, English proficiency, or disability.
- (2) A contractor of a NFE carrying a program or activity under a FEMA award must not, on the grounds of race, color, creed, national origin, sex, age, English proficiency, or disability, exclude a person from participation in, deny him/her benefits, or subject him/her to discrimination.
- (3) Contractors must adhere to any Federal implementing regulations and other requirements that the Department and the FEMA have with respect to nondiscrimination.

b. Equal Opportunity

- i. Race, Creed, National Origin, Sex. A contractor must, in accordance with Title VII of the Civil Rights Act of 1968, comply with all applicable equal employment opportunity requirements of U.S. Department of Labor regulations at 41 C.F.R Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor), which implement Executive Order No. 11246, *Equal Employment Opportunity*, as amended by Executive Order No. 11375, *Amending Executive Order 11246 Relating to Equal Employment Opportunity*, 42 U.S.C. § 2000e note. The Contractor must take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. 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. See DHS Standard Terms and Conditions, v 3.0, ¶ VII (Dec. 4, 2013); Standard Form 424D, ¶ 10.
- ii. Age. A contractor must refrain from discrimination against present and prospective employees for reason of age in accordance with section 4 of the Age Discrimination in Employment Act of 1967 (codified as amended at 29 U.S.C. § 623).
- iii. Disabilities. A contractor must, in accordance with Section 102 of the Americans with Disabilities Act of 1990 (codified as amended at 42 U.S.C. § 12112) and the requirements of the U.S. Equal Employment

Opportunity Commission at 29 C.F.R. Part 1630 (Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act) pertaining to employment of persons with disabilities.

- iv. Except as otherwise provided under 41 C.F.R. Part 60, the Uniform Rules require that all contracts that meet the definition of “Federally assisted construction contract” in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. § 60-1.4(b), in accordance with Executive Order 11246, *Equal Employment Opportunity* (30 Fed. Reg. 12319, 12935, 3 C.F.R. 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 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See Chapter IV, ¶ 12.a.iii; 2 C.F.R. Part 200, Appendix II, ¶ C.

## **6.6 ENVIRONMENTAL AND HISTORIC PRESERVATION PROTECTIONS**

Federal laws, regulations, and executive orders and the terms and conditions of specific FEMA award require the NFE to comply with applicable environmental and historic preservation requirements, which will, in turn, necessitate the NFE’s implementation of these requirements as necessary in its third-party contracts. See Standard Form 424D, ¶¶ 15, 16, and 17.

### **a) General – Environmental and Historic Preservation Compliance**

FEMA will identify various environmental and historic preservation mitigation measures with which a NFE must comply when performing the scope of work under a FEMA award. FEMA expects the NFE to include adequate third party provisions to facilitate compliance with such measures that the NFE has agreed to implement as a term and condition of the FEMA award. The following sections provide brief discussion of a few of the applicable environmental and historic preservation statutes.

### **b) National Environmental Policy Act**

- i. The National Environmental Policy Act (“NEPA”) requires FEMA to consider the environmental impact of proposed actions (such as awarding Federal grants and cooperative agreements), including adverse consequences and reasonable alternatives, before making decisions or taking actions that may significantly affect the quality of the human environment. See National Environmental Policy Act of 1969, Pub. L. No. 91-190 (1969) (codified as amended at 42 U.S.C. §§4321-4347);



Standard Form 424D, ¶ 15.

- ii. A NFE should not have a contractor proceed with contract work until FEMA has completed any necessary NEPA review and awarded the grant, cooperative agreement, and individual project under such grant or cooperative agreement.
- iii. Occasionally, a NFE will request funding for an action that has been initiated and/or completed before FEMA has completed environmental review and documentation as required by NEPA and FEMA's implementing regulations at 44 C.F.R. Part 10 (Environmental Considerations) and the Council for Environmental Quality implementing regulations at title 40 of the C.F.R.
- iv. It is FEMA policy that actions initiated and/or completed without fulfilling the specific documentation and procedural requirements of NEPA may not be considered for funding. There are, notably, statutory exclusions to this requirement, and FEMA may provide additional exceptions in emergency situations. See FEMA Environmental Planning and Historic Preservation Policy No. 108.024.4, *Projects Initiated Without Environmental Review Required by the National Environmental Policy Act* (NEPA) (Dec. 18, 2013).
- v. The statutory exclusions and exceptions do not relieve FEMA of the responsibility to comply with other legal requirements under the National Historic Preservation Act, Endangered Species Act, Clean Water Act, other laws, and various executive orders. Furthermore, FEMA may not consider for funding work commenced before FEMA has completed review under these other legal requirements, even where NEPA review is not required.

c. Endangered Species Act

- i. The Endangered Species Act ("**ESA**") requires all Federal agencies to consider the effects of their actions (such as grants and cooperative agreement awards) on listed species and their critical habitats. See Endangered Species Act of 1973, Pub. L. No. 93•205 (1973) (codified as amended at 16 U.S.C. §§ 1531•1544); Standard Form 424D, ¶ 15.
- ii. FEMA must consult with the National Marine Fisheries Service or U.S. Fish and Wildlife Services to ensure that any proposed action funded under a grant or cooperative agreement is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of a

habitat. This consultation, if necessary, must take place before the action is taken, although there are exceptions for emergency actions.

d. Clean Air Act

- i. The Clean Air Act establishes the basic structure for regulating air pollutants, which requires the Environmental and Protection Agency (“EPA”) to establish national air quality standards and states to adopt enforceable plans to achieve the standards. 42 U.S.C. §§ 7401•7671q.
- ii. Section 306 of the Clean Air Act (42 U.S.C. § 7606) and EPA’s implementing regulations at 2 C.F.R. Part 1523, subpart J, disqualify persons convicted of certain offenses from eligibility to receive any contract, subcontract, assistance, sub assistance, loan, or other non-procurement benefit or transaction that is prohibited by a Federal agency under the government debarment and suspension system if a person will perform any part of the transaction or award at the facility giving rise to the conviction and the person owns, leases, or supervises the facility.
- iii. The Uniform Rules require a contractor to agree to comply with this and all other applicable standards, orders, or regulations issued pursuant to the Clean Air Act for contracts over \$150,000. See Chapter IV, ¶ 12.a.vii and 2 C.F.R. Part 200, Appendix II, ¶ G; Standard Form 424D, ¶ 15.

e. Federal Water Pollution Control Act

- i. The Federal Water Pollution Control Act (“**Clean Water Act**”) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. 33 U.S.C. §§ 1251•1387.
- ii. Section 508 of the Clean Water Act (33 U.S.C. § 1368) and EPA’s implementing regulations at 2 C.F.R. Part 1523, subpart J, disqualify persons convicted of certain offenses from eligibility to receive any contract, subcontract, assistance, sub assistance, loan, or other non-procurement benefit or transaction that is prohibited by a Federal agency under the government debarment and suspension system if a person will perform any part of the transaction or award at the facility giving rise to the conviction and the person owns, leases, or supervises the facility.
- iii. The Uniform Rules require a contractor to agree to comply with this and all other applicable standards, orders, or regulations issued pursuant to the Clean Water Act for contracts over \$150,000. See Chapter IV, ¶ 12.a.vii and 2 C.F.R. Part 200, Appendix II, ¶ G; Standard Form 424D

## Recycled Products

- iv. A NFE that is a State agency or agency of a political subdivision of a State and its contractors must comply with section 6002 of the Resource Conservation and Recovery Act of 1976. 42 U.S.C. § 6962; 2 C.F.R. § 200.322.
- v. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. 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 by 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.
- vi. The Uniform Rules require a NFE to include provisions in its contracts for compliance with section 6002 of the Resource Conservation and Recovery Act of 1976. See Chapter IV, ¶ 12.a.xi and Chapter V, ¶ 7; 2 C.F.R. Part 200, Appendix II, ¶ K.

## **6.7 DAVIS-BACON ACT**

- a. When required by FEMA grant or cooperative agreement program legislation, all prime construction contracts in excess of \$2,000 awarded by NFEs must include a provision for compliance with the Davis Bacon Act (40 U.S.C. §§ 3141•3144 and 3146•3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See Chapter IV, ¶ 12.a.iv; 2 C.F.R. Part 200, Appendix II, ¶ D.
- b. In accordance with the statute, a NFE's contractors must pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.
- c. The Davis Bacon Act only applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program. It does not apply to other FEMA grant and cooperative agreement programs, such as the Public Assistance Grant Program.

## **6.8 COPELAND “ANTI-KICKBACK” ACT**

- a. The Copeland “Anti-Kickback” Act (40 U.S.C. § 3145), as supplemented by its implementing regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States) apply to any NFE contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. This law prohibits a contractor from inducing, by any means, any employee to give up any part of his or her compensation to which he or she is otherwise entitled.
- b. The Uniform Rules require a NFE to include a provision for compliance with the Copeland Anti-Kickback Act in all contracts *subject to* the Davis Bacon Act. See Chapter IV, ¶ 12.a.iv; 2 C.F.R. Part 200, Appendix II, ¶ D.

## **6.9 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

- a. The Uniform Rules require, where applicable, all contracts awarded by the NFE in excess of \$100,000 that involve the employment of mechanics or laborers to include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 and 29 C.F.R. Part 1926. See Chapter IV, ¶ 12.a.v; 2 C.F.R. Part 200, Appendix II, ¶ E.
- b. Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week.
- c. The requirements of 40 U.S.C. § 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of property or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence

## **6.10 SEISMIC SAFETY**

- a. All construction of new buildings for which FEMA award funding will be used must use appropriate seismic design and construction standards and practices

pursuant to the Earthquake Hazard Reduction Act of 1977, Pub. L. No. 95•124 (1977) (codified as amended at 42 U.S.C. §§ 7701•7709) and Executive Order 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction* (1990).

- b. A NFE should include compliance with seismic safety provisions in its third party contracts for construction.

## 6.11 BUY AMERICAN ACT

- a. General. The Buy American Act is a major domestic preference statute governing procurement by the Federal government. 41 U.S.C. §§ 8301•8305; 48 C.F.R. Part 25. In brief, the Federal government is required to buy domestic “articles, materials, and property” when they are acquired for public use unless a specific exception applies. The Buy American Act, however, only applies to direct procurements by the Federal government and does not apply to procurement by NFEs even when using FEMA assistance funding.
- b. “Little Buy American Acts.” In addition to the Buy American Act, Congress has passed numerous “Little Buy American Acts” to govern specific types of procurements that are not covered by the Buy American Act. There are currently no such Little Buy American Acts for FEMA grant and cooperative agreements subject to this circular.
- c. Stafford Act Grant Programs. The Disaster Mitigation Act of 2000 amended various provisions of the Stafford Act—this included Sections 404, 406, and 408 of the Stafford Act, which are the enabling authorities for the Hazard Mitigation Grant Program, Public Assistance Grant Program, and Individual and Households Program. Notably, Section 306(a) of the Disaster Mitigation Act of 2000 also had a general provision that provided that “No funds **authorized to be appropriated** under...any amendment made by [the Disaster Mitigation Act of 2000] may be expended by an entity unless the entity, in expending the funds, complies with chapter 83 of title 41.” Disaster Mitigation Act of 2000, Pub. L. No. 106•390, § 306(a) (2000) (codified at 42 U.S.C. § 5206(a)) (emphasis added). There is, however, currently no authorization of appropriations for the Stafford Act, rendering Section 306(a) of the Disaster Mitigation Act of 2000 inapplicable to Stafford Act grant and cooperative agreements.

## 6.12 FEDERAL CRIMINAL LAW

A NFE may not use funding under a FEMA award to violate any Federal criminal law either directly or through its contractors. Any such activity that FEMA administratively determines to violate a criminal law is ineligible for FEMA assistance, and FEMA may terminate an entire award based on the violation. The following provides a summary of several of those laws.

- a. Representational Statutes. Sections 203 and 205 of title 18 of the United

States Code impose restrictions on outside activities of Federal employees involving representation of others before the Federal government. The prohibitions under 18 U.S.C. §§ 203 and 205 apply to all FEMA employees, including Disaster Reservists. Disaster Reservists are personnel authorized by the special hiring authority in the Stafford Act that are not fulltime employees, but rather work on an on call, intermittent basis to perform disaster response and recovery activities. In some cases, a NFE may hire a contractor to perform work under a FEMA award, and the contractor may have employees who are also Disaster Reservists (not currently activated by FEMA) perform that work. These Disaster Reservists are prohibited from performing any representational activity on behalf of the contractor and NFE before any Federal agency, including FEMA.

#### **6.13 FEDERAL STATEMENT ACT**

The False Statement Act sets forth liability for, among other things, any person who knowingly submits a false claim to the Federal government or causes another to submit a false claim to the government or knowingly makes a false record or statement to get a false claim paid by the government. 31 U.S.C. §§ 3729- 3733. For example, a false claim could include false billing documentation submitted by a NFE from a third party contractor under a FEMA award.



## **SECTION 7**

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### **CERTIFICATION REGARDING DEBARMENT**

#### **Solano County Water Agency**

#### **Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primary Covered Transactions**

(1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (l)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Name Project Name \_\_\_\_\_

Title Project Number \_\_\_\_\_

Name of the Company \_\_\_\_\_

Firm Tax ID Number \_\_\_\_\_

DUNS Number \_\_\_\_\_

CAGE / NCAGE CODE: \_\_\_\_\_

Street Address Number \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

## **SECTION 8**

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### **Solano County Water Agency (SCWA)**

#### **CERTIFICATION REGARDING LOBBYING**

The undersigned \_\_\_\_\_ (Vendor/ Contractor) certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, et seq.)]

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C.

§ 1352 (as amended by the Lobbying Disclosure Act of 1995).

Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. [Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less

than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Vendor/Contractor, \_\_\_\_\_, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, et seq., apply to this certification and disclosure, if any.

\_\_\_\_\_  
Signature of Vendor/Contractor's Authorized Official

\_\_\_\_\_  
Name and Title of Vendor/Contractor's Authorized Official

\_\_\_\_\_  
Date

## **SECTION 9**

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### **FLOW DOWN AGREEMENT (Solano County Water Agency)**

#### **Acknowledgement of Terms. Conditions**

##### **Flow Down Terms and Conditions**

##### **Subcontracts:**

If the Contractor/vendor subcontracts any of the work required under this Agreement, a copy of the signed subcontract must be available to the SCWA for review and approval.

The vendor agrees to include in the subcontract that

- (i) the subcontractor is bound by the terms of this Agreement,
- (ii) the subcontractor is bound by all applicable federal and state laws and regulations, and
- (iii) the subcontractor shall hold the SCWA and Recipient harmless against all claims of whatever nature arising out of the subcontractor's performance of work under this Agreement, to the extent allowed and required by law.

The recipient shall document in the quarterly report the subcontractor's progress in performing its work under this agreement. For each subcontract, the Recipient shall provide a written statement to the SCWA as to whether the subcontractor is a minority vendor.

On behalf of my firm, I acknowledge, and agree to perform all of the specifications and grant requirements identified in this solicitation document(s).

Solicitation # \_\_\_\_\_

Contractor / Vendor Name: \_\_\_\_\_

Date \_\_\_\_\_

Authorized Signature \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

## **SECTION 10**

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### **CONFLICT OF INTEREST CERTIFICATION (Solano County Water Agency)**

Solano County Water Agency Solicitation Number \_\_\_\_\_

I, \_\_\_\_\_, hereby certify that to the best of my knowledge, neither I nor my spouse, dependent child, general partner, or any organization for which I am serving as an officer, director, trustee, general partner or employee, or any person or organization with whom I am negotiating or have an arrangement concerning prospective employment has a financial interest in this matter. I further certify to the best of my knowledge that this matter will not affect the financial interests of any member of my household.

Also, to the best of my knowledge, no member of my household; no relative with whom I have a close relationship; no one with whom my spouse, parent or dependent child has or seeks employment; and no organization with which I am seeking a business relationship nor which I now serve actively or have served within the last year are parties or represent a party to the matter. I also acknowledge my responsibility to disclose the acquisition of any financial or personal interest as described above that would be affected by the matter, and to disclose any interest I, or anyone noted above, has in any person or organization that does become involved in, or is affected at a later date by, the conduct of this matter.

Name \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_



## SECTION 11

### SUBCONTRACTING PLAN

SMALL BUSINESS SUBCONTRACTING PLAN			
Offeror name and address:		Date:	
		Type of plan (check one): If Individual, supply solicitation number; if Commercial, supply effective period.	
		<div style="display: flex; justify-content: space-between;"> <span>Individual _____</span> </div>	
		<div style="display: flex; justify-content: space-between;"> <span>Commercial _____</span> </div>	
		<div style="display: flex; justify-content: space-between;"> <span>Solicitation number</span> </div>	
		<div style="display: flex; justify-content: space-between;"> <span>Effective begin date</span> <span>Effective end date</span> </div>	
<b>The following, along with any attachments, is hereby submitted as a Subcontracting Plan to satisfy the applicable requirements of Public Law 95-507, Public Law 99-661, and paragraph (d) of FAR Clause 52.219-9, Small Business Subcontracting Plan.</b>			
<b>TERMS AND DEFINITIONS</b>			
<p>The following terms and acronyms are used throughout this form:</p> <ul style="list-style-type: none"> <li>• <b>Commercial Plan</b> – a subcontracting plan (including goals) that covers the offeror's fiscal year and that applies to the entire production of commercial items sold by either the company or a portion thereof (e.g. division, plant, or production line).</li> <li>• <b>Individual Plan</b> – a subcontracting plan that covers the entire contract period.</li> <li>• <b>SB</b> – Small Business concern</li> <li>• <b>VOSB</b> – Veteran Owned Small Business concern</li> <li>• <b>SD-VOSB</b> – Service-Disabled Veteran Owned Small Business concern</li> <li>• <b>HUBZone</b> – Historically Underutilized Business Zone</li> <li>• <b>SDB</b> – Small Disadvantaged Business concern</li> <li>• <b>WOSB</b> – Women-Owned Small Business concern</li> <li>• <b>Direct and Indirect Cost</b> – Overhead activities may be used to supplement direct charge activities. Contractors are encouraged to use indirect costs to meet goals when direct costs subcontracting opportunities are restrictive toward meeting established goals.</li> </ul>			
<b>PART 1 – SUBCONTRACTING GOALS</b>			
<b>A. Total dollars planned to be subcontracted: \$</b>			
		Dollars	Percentage
B. Dollars and percentages planned to be subcontracted to large business concerns.	LB	\$	%
	SB	\$	%
C. Dollars and percentages planned to be subcontracted to SB concerns. Percentages should be expressed as a percentage of the total dollars planned to be subcontracted. The offeror shall include all subcontracts that contribute to contract performance.	VOSB	\$	%
	SD-VOSB	\$	%
	HUBZone	\$	%
	SDB	\$	%
	WOSB	\$	%
<b>D. Description of principal types of supplies and services to be subcontracted to each of the SB concerns:</b>			
SB			
VOSB			
SD-VOSB			
HUBZone			
SDB			
WOSB			

## SMALL BUSINESS SUBCONTRACTING PLAN

E. Describe method used to develop these goals (e.g. based on procurement history, available resources, etc.):

F. Were indirect costs included in establishing these goals?

Yes

No

If yes, describe the method used to determine proportionate share of indirect costs to be incurred with each of the SB concerns:

SB

VOSB

SD-VOSB

HUBZone

SDB

WOSB

## PART 2 – SUBCONTRACTING PROCEDURES

A. Individual who will administer the offeror's subcontracting program

(Reference FAR Part 52.219-9, Small Business Subcontracting Plan, (Para 9-11) for specific duties as they relate to the firm's subcontracting program and include additional duties the company has designated).

Name:

Title:

E-Mail

Phone:

Description of Duties:

B. Indicate methods used to identify potential sources for solicitation purposes:

***Existing company source lists***

***National Minority Purchasing Council Vendor Information Service***

***Trade Associations***

***Federal government development centers such as DoD's Procurement Technical Assistance Center (PTAC), SBA's Small Business Development Center (SBDC) and Department of Commerce's Minority Business Development Center (MBDC)***

***Other:*** \_\_\_\_\_

## **SMALL BUSINESS SUBCONTRACTING PLAN**

C: Describe methods used to assure that SB, VOSB, SD-VOSB, HUBZone, SDB and WOSB concerns are provided an equitable opportunity to compete for subcontracts.

### **PART 3 – SUBCONTRACTING PLAN MANAGEMENT**

The offeror certifies, by signature on this plan, that the following procedures regarding management of this subcontracting plan will be enacted and maintained. The contractor agrees to provide the following:

- (1) Assist small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns by arranging solicitations, time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.
- (2) Provide adequate and timely consideration of the potentialities of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all "make-or-buy" decisions.
- (3) Counsel and discuss subcontracting opportunities with representatives of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business firms.
- (4) Confirm that a subcontractor representing itself as a HUBZone small business concern is identified as a certified HUBZone small business concern by accessing the SAM database or by contacting SBA.
- (5) Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as small, veteran-owned small business, HUBZone small, small disadvantaged or women-owned small business for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.
- (6) Assurances that the offeror will include the clause of this contract entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that the offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$700,000 (\$1,500,000 for construction of any public facility with further subcontracting possibilities) to adopt a plan similar to the plan that complies with the requirements of this clause.
- (7) Assurances that the offeror will --
  - (i) Cooperate in any studies or surveys as may be required;

## SMALL BUSINESS SUBCONTRACTING PLAN

(ii) Submit periodic reports so that the Government can determine the extent of compliance by the offeror with the subcontracting plan;

(iii) Submit the Individual Subcontracting Report (ISR) and/or the Summary Subcontract Report (SSR), in accordance with the paragraph (I) of this clause using the Electronic Subcontracting Reporting System (eSRS) at <http://esrs.gov>. The reports shall provide information on subcontract awards to small business concerns, (including ANCs and Indian tribes that are not small businesses), veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with this clause, or as provided in agency regulations;

(iv) Ensure that its subcontractors with subcontracting plans agree to submit the ISR and/or the SSR using eSRS;

(v) Provide its prime contract number, its DUNS number, and the e-mail address of the offeror's official responsible for acknowledging receipt of or rejecting the ISRs, to all first-tier subcontractors with subcontracting plans so they can enter this information into the eSRS when submitting their ISRs; and

(vi) Require that each subcontractor with a subcontracting plan provide the prime contract number, its own DUNS number, and the e-mail address of the subcontractor's official responsible for acknowledging receipt of or rejecting the ISRs, to its subcontractors with subcontracting plans.

(8) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the offeror's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

(i) Source lists (e.g., SAM), guides, and other data that identify small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business concerns.

- (iii) Records on each subcontract solicitation resulting in an award of more than \$150,000, indicating:
- (A) Whether small business concerns were solicited and if not, why not;
  - (B) Whether veteran-owned small business concerns were solicited and, if not, why not;
  - (C) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;
  - (D) Whether HUBZone small business concerns were solicited and, if not, why not;
  - (E) Whether small disadvantaged business concerns were solicited and if not, why not;
  - (F) Whether women-owned small business concerns were solicited and if not, why not; and
  - (G) If applicable, the reason award was not made to a small business concern.

- (iv) Records of any outreach efforts to contact --
- (A) Trade associations;
  - (B) Business development organizations;
  - (C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, and woman - owned small business sources; and
  - (D) Veterans service organizations.
- (v) Records of internal guidance and encouragement provided to buyers through --
- (A) Workshops, seminars, training, etc., and
  - (B) Monitoring performance to evaluate compliance with the program's requirements.
- (vi) On a contract-by-contract basis, records to support award data submitted by the offeror to the Government, including the name, address, and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.
- (vii) Assurances that the Contractor will make a good faith effort to acquire articles, equipment, supplies, services, or materials, or obtain the performance of construction work from the small business concerns that it used in preparing the proposal for the modification, in the same or greater scope, amount, and quality used in preparing and submitting the modification proposal. Responding to a request for a quote does not constitute use in preparing a proposal. The Contractor used a small business concern in preparing the proposal for a modification if --
- (A) The Contractor identifies the small business concern as a subcontractor in the proposal or associated small business subcontracting plan, to furnish certain supplies or perform a portion of the subcontract; or
  - (B) The Contractor used the small business concern's pricing or cost information or technical expertise in preparing the proposal, where there is written evidence of an intent or understanding that the small business concern will be awarded a subcontract for the related work when the modification is executed.

(viii) Assurances that the Contractor will provide the Contracting Officer with a written explanation if the Contractor fails to acquire articles, equipment, supplies, services or materials or obtain the performance of construction work as described in (d)(12) of this clause. This written explanation must be submitted to the Contracting Officer within 30 days of contract completion.

(ix) Assurances that the Contractor will not prohibit a subcontractor from discussing with the Contracting Officer any material matter pertaining to the payment to or utilization of a subcontractor.

(x) Assurances that the offeror will pay its small business subcontractors on time and in accordance with the terms and conditions of the underlying subcontract, and notify the contracting officer when the prime contractor makes either a reduced or an untimely payment to a small business subcontractor (see 52.242-5).

#### A. Offeror's agreement

Offeror's signature

\_\_\_\_\_  
Typed name and title

\_\_\_\_\_  
Date

#### B. Reviewed By:

Contract Specialist 's signature

\_\_\_\_\_  
Typed name, title, and Business Unit

\_\_\_\_\_  
Date

#### C. Contracting Officer's Approval

Contracting Officer's  
signature

\_\_\_\_\_  
Typed name, title, and Business  
Unit

\_\_\_\_\_  
Date



