

2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 19 AUG 2003	4. REQUISITION/PURCHASE REQ. NO. N/A	5. PROJECT NO. <i>(If applicable)</i> Spec No. 1315
6. ISSUED BY CODE		7. ADMINISTERED BY <i>(If other than Item 6)</i> CODE	
DEPARTMENT OF THE ARMY U.S. ARMY ENGINEER DISTRICT, SACRAMENTO SACRAMENTO, CALIFORNIA 95814-2922		DISTRICT ENGINEER U.S. ARMY ENGINEER DISTRICT, SACRAMENTO 1325 J STREET SACRAMENTO, CALIFORNIA 95814-2922	

8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i>	(✓)	9A. AMENDMENT OF SOLICITATION NO. DACW05-03-B-0008
	X	9B. DATED <i>(SEE ITEM 11)</i> 25 JUL 2003
		10A. MODIFICATION OF CONTRACTS/ORDER NO. N/A
		10B. DATED <i>(SEE ITEM 13)</i> N/A
CODE	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*
N/A

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER <i>(Specify type of modification and authority)</i>

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*
Lower American River Common Features II
SRA Revegetation, Sacramento County, California

NOTES: 1. The Bid Opening Date has been changed from 26 AUG 2003, to 27 AUG 2003 at 1:00 PM
2. The Emergency Repair Site River Mile 1.9L has been deleted in its entirety from the scope of work.
3. Section 02903L Live Cutting Collection has been deleted in its entirety.

- 2 Encl
1. Revised and new pages: SF-33, 4, 5, 6, 89A, 89B, 153, Table of Contents, 02901L (11 pages), 02911L (16 pages), 02379L (5 pages).
2. Revised drawings as indicated on the Table of Contents

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>	16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>
15B. CONTRACTOR/OFFEROR <i>(Signature of person authorized to sign)</i>	15C. DATE SIGNED
	16B. UNITED STATES OF AMERICA BY <i>(Signature of Contracting Officer)</i>
	16C. DATE SIGNED

SOLICITATION, OFFER AND AWARD			1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING	PAGE OF PAGES 1 154		
2. CONTRACT NO.		3. SOLICITATION NO. DACW05-03-B-0008	4. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED 25 Jul 2003	6. REQUISITION/PURCHASE NO.			
7. ISSUED BY DEPARTMENT OF THE ARMY CORPS OF ENGINEERS, SACRAMENTO 1325 J STREET SACRAMENTO CA 95814-2922			CODE DACW05	8. ADDRESS OFFER TO (If other than Item 7)		CODE		
			See Item 7					
TEL: FAX: (916) 557-5278					TEL: FAX:			
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".								
SOLICITATION								
9. Sealed offers in original and <u>0</u> copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in <u>See Item 7</u> until <u>01:00 PM</u> local time <u>27 Aug 2003</u> (Hour) (Date)								
CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.								
10. FOR INFORMATION CALL:		A. NAME CHERYL Y GANNAWAY		B. TELEPHONE (Include area code) (NO COLLECT CALLS) 916-557-6933		C. E-MAIL ADDRESS Cheryl.Y.Gannaway@usace.army.mil		
11. TABLE OF CONTENTS								
(X)	SEC.	DESCRIPTION		PAGE(S)	(X)	SEC.	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES				
X	A	SOLICITATION/ CONTRACT FORM		1	X	I	CONTRACT CLAUSES	17 - 89
X	B	SUPPLIES OR SERVICES AND PRICES/ COSTS		2 - 6	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS			
	C	DESCRIPTION/ SPECS./ WORK STATEMENT			X	J	LIST OF ATTACHMENTS	90 - 135
	D	PACKAGING AND MARKING			PART IV - REPRESENTATIONS AND INSTRUCTIONS			
X	E	INSPECTION AND ACCEPTANCE		7 - 9	X	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	136 - 144
X	F	DELIVERIES OR PERFORMANCE		11				
X	G	CONTRACT ADMINISTRATION DATA		11	X	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	145 - 153
X	H	SPECIAL CONTRACT REQUIREMENTS		13 - 17	X	M	EVALUATION FACTORS FOR AWARD	154
OFFER (Must be fully completed by offeror)								
NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.								
12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.								
13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)								
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):				AMENDMENT NO.		DATE		
15A. NAME AND ADDRESS OF OFFEROR		CODE	FACILITY		16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)			
15B. TELEPHONE NO (Include area code)		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>			17. SIGNATURE		18. OFFER DATE	
AWARD (To be completed by Government)								
19. ACCEPTED AS TO ITEMS NUMBERED			20. AMOUNT		21. ACCOUNTING AND APPROPRIATION			
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)() <input type="checkbox"/> 41 U.S.C. 253(c)()					23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)		ITEM	
24. ADMINISTERED BY (If other than Item 7) CODE				25. PAYMENT WILL BE MADE BY CODE				
26. NAME OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:					27. UNITED STATES OF AMERICA (Signature of Contracting Officer)		28. AWARD DATE	
IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.								

**52.222-43 FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT--PRICE ADJUSTMENT
(MULTIPLE YEAR AND OPTION CONTRACTS) (MAY 1989)**

(a) This clause applies to both contracts subject to area prevailing wage determinations and contracts subject to collective bargaining agreements.

(b) The Contractor warrants that the prices in this contract do not include any allowance for any contingency to cover increased costs for which adjustment is provided under this clause.

(c) The wage determination, issued under the Service Contract Act of 1965, as amended, (41 U.S.C. 351, et seq.), by the Administrator, Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract. If no such determination has been made applicable to this contract, then the Federal minimum wage as established by section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended, (29 U.S.C. 206) current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract.

(d) The contract price or contract unit price labor rates will be adjusted to reflect the Contractor's actual increase or decrease in applicable wages and fringe benefits to the extent that the increase is made to comply with or the decrease is voluntarily made by the Contractor as a result of:

(1) The Department of Labor wage determination applicable on the anniversary date of the multiple year contract, or at the beginning of the renewal option period. For example, the prior year wage determination required a minimum wage rate of \$4.00 per hour. The Contractor chose to pay \$4.10. The new wage determination increases the minimum rate to \$4.50 per hour. Even if the Contractor voluntarily increases the rate to \$4.75 per hour, the allowable price adjustment is \$.40 per hour;

(2) An increased or decreased wage determination otherwise applied to the contract by operation of law; or

(3) An amendment to the Fair Labor Standards Act of 1938 that is enacted after award of this contract, affects the minimum wage, and becomes applicable to this contract under law.

(e) Any adjustment will be limited to increases or decreases in wages and fringe benefits as described in paragraph (c) of this clause, and the accompanying increases or decreases in social security and unemployment taxes and workers' compensation insurance, but shall not otherwise include any amount for general and administrative costs, overhead, or profit.

(f) The Contractor shall notify the Contracting Officer of any increase claimed under this clause within 30 days after receiving a new wage determination unless this notification period is extended in writing by the Contracting Officer. The Contractor shall promptly notify the Contracting Officer of any decrease under this clause, but nothing in the clause shall preclude the Government from asserting a claim within the period permitted by law. The notice shall contain a statement of the amount claimed and any relevant supporting data, including payroll records, that the Contracting Officer may reasonably require. Upon agreement of the parties, the contract price or contract unit price labor rates shall be modified in writing. The Contractor shall continue performance pending agreement on or determination of any such adjustment and its effective date.

(g) The Contracting Officer or an authorized representative shall have access to and the right to examine any directly pertinent books, documents, papers and records of the Contractor until the expiration of 3 years after final payment under the contract.

(End of clause)

252.245-7001 REPORTS OF GOVERNMENT PROPERTY (MAY 1994)

(a) The Contractor shall provide an annual report --

(1) For all DoD property for which the Contractor is accountable under the contract;

(2) Prepared in accordance with the requirements of DD Form 1662, DoD Property in the Custody of Contractors, or approved substitute, including instructions on the reverse side of the form;

(3) In duplicate, to the cognizant Government property administrator, no later than October 31.

(b) The Contractor is responsible for reporting all Government property accountable to this contract, including that at subcontractor and alternate locations.

(End of clause)

cannot be reached, please call the main Contracting Division telephone number, (916) 557-5201, in order to request assistance.

Please ensure that all courier and delivery personnel are aware of these procedures.

SPK 14-4006 TELEGRAPHIC BIDS (MAY 2000)

TELEGRAPHIC BIDS ARE NOT ACCEPTABLE. However, bids may be modified or withdrawn by written or telegraphic notice. Any telegram to modify or withdraw a bid sent to this office must be received in the office designated in the Invitation for Bids (IFB) for receipt of bids not later than the exact date and time set for bid opening. A telegraphic modification or withdrawal of a bid received in such office by telephone from the receiving telegraph office not later than the exact date and time set for bid opening shall be considered. However, the telephone message shall be confirmed by the telegraph company by sending a copy of the written telegram that formed the basis for the telephone call. The written telegram shall be sealed in an envelope by a proper official and sent to the office designated in the IFB for receipt of bids. The official shall write on the envelope (1) the date and time of receipt and by whom, and (2) the number of the IFB, and shall sign the envelope. The bidder is responsible to inform the telegraph company of these requirements. No one from this office will be dispatched to the local telegraph office to pick up any telegram for any reason.

//////////END OF TEXT//////////

SPK 14-4007 FACSIMILE BIDS (MAY 2000)

Facsimile bids, facsimile modifications to bids, or facsimile withdrawal of bids will not be accepted.

//////////END OF CLAUSE//////////

52.214-34 SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991)

Offers submitted in response to this solicitation shall be in the English language. Offers received in other than English shall be rejected.

(End of provision)

52.214-35 SUBMISSION OF OFFERS IN U.S. CURRENCY (APR 1991)

Offers submitted in response to this solicitation shall be in terms of U.S. dollars. Offers received in other than U.S. dollars shall be rejected.

(End of provision)

SECTION C

Lower American River Common Features II

Table of Contents

Technical Specifications

- Pricing Schedule

DIVISION ONE

- 01320L Project Schedule
- 01330L Submittal Procedures for Revegetation
- 01355L Environmental Protection for Revegetation
- 01500L Temporary Construction Facilities for Revegetation

DIVISION TWO

- 02201L Layout & Site Preparation for Revegetation
- 02379L Revegetation Infrastructure
- ~~02903L Live Cutting Collection~~
- 02810L Irrigation
- 02901L Planting
- 02911L Plant Establishment

List of Drawings

- | | | |
|---|----------------------------------|-------|
| 1 | ● Title Sheet | Rev 1 |
| 2 | ● Location Map | Rev 1 |
| 3 | ● Site Map – 1.9 left | |
| 4 | ● Site Map – 2.4 left | |
| 5 | ● Site Map – 5.7 right | |
| 6 | ●- Details 1 | Rev 1 |
| 7 | ●- Details 2 | Rev 1 |

SECTION C
Sub-Section 1
TECHNICAL SPECIFICATIONS

Section 02379L
REVEGETATION INFRASTRUCTURE

Table of Contents

Part 1 – GENERAL

- 1.1 Description
- 1.2 Definitions
- 1.3 References
- 1.4 Submittals
- 1.5 Inspections
- 1.6 Warranty
- 1.7 Shipment, Delivery, Storage and Handling
- 1.8 Timing and Conditions
- 1.9 Measurement and Payment

Part 3 – EXECUTION

- 3.1 Steel Pipe Gate & Hardware
- 3.2 Signs
- 3.3 Beaver Fence
- 3.4 Finalize As Built Drawings
- 3.5 As-built Drawings
- 3.6 Cleanup

SECTION C
Sub-Section 1
TECHNICAL SPECIFICATIONS

Section 02379
REVEGETATION INFRASTRUCTURE

Part 1 – GENERAL

1.1 DESCRIPTION

The work covered in this section consists of furnishing all labor equipment, material, and supplies for manufacturing and installing infrastructure components and other associated work.

1.2 DEFINITIONS

- 1.2.1 Contractor: The firm under contract with this scope of work and their subcontractors.
1.2.2 Government: U.S. Army Corps of Engineers, Sacramento District.

1.3 REFERENCES

All products listed herein shall be in accordance with

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Steel Pipe Gate;

Provide fabrication drawings.

Signs;

Provide fabrication drawings.

SD-03 Product Data

Provide data of all equipment and material used.

XXXX

1.5 INSPECTIONS

It is the Contractor's responsibility to notify the Contracting Officer at least 5 days prior to each anticipated inspection. The Contracting Officer may at anytime inspect work without notification. The undertaking and completion of the following tasks are key inspection events:

- A. Fences and Gates
- B. Signs

1.6 WARRANTY

All material and equipment shall be used to meet all State and local codes and regulations and guaranteed to function properly for the duration of the Installation and Establishment Periods.

1.7 SHIPMENT, DELIVERY, STORAGE AND HANDLING

All material and equipment shipped, delivered and stored shall be handled according to all State and local codes and regulations. Material and equipment shall be secured and stored within the staging area.

1.8 TIMING AND CONDITIONS

The installation of the infrastructure shall be performed only during periods when beneficial results can be obtained. Consideration shall be given to periods of potential flooding due to river flows and rain. The Contractor shall be responsible for the coordinating and scheduling the delivery of the equipment to the project site with the rest of the project requirements. The Contractor shall ensure each subcontractor's work is coordinated with entire work to be performed.

1.9 MEASUREMENT AND PAYMENT

Measurement and payment for each requirement stated herein shall be as indicated below:

1.9.1 Steel Pipe Gate

Steel pipe gate work and installation shall be measured by amount of gates installed in accordance with plans and specifications and as directed by the Contracting Officer. Payment for "Steel Pipe Gates" shall be made at their respective unit price per gate unit (a double-swung gate shall be classified as one gate), and shall be in full compensation for all labor, materials, and costs associated with steel pipe gate work and installation. Payment shall include, but not be limited to: clearing and grubbing, grading, posts, fabrication and installation of the completed gate system, bracing, placing and tightening wires, and attaching all support material and equipment.

1.9.2 Standard Revegetation Signs

XXXX

Standard Revegetation Sign work and installation shall be measured by amount of signs installed in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Standard Revegetation Sign” shall be made at their respective unit price per sign, and shall be in full compensation for all labor, materials, and costs associated with sign work and installation. Payment shall include, but not be limited to: fabrication, delivery, and installation.

1.9.3 Interpretive Revegetation Sign

Sign work and installation shall be measured by amount of signs installed in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Interpretive Revegetation Sign” shall be made at their respective unit price per sign, and shall be in full compensation for all labor, materials, and costs associated with sign work and installation. Payment shall include, but not be limited to: fabrication, delivery, and installation.

1.9.4 Beaver Fence

Beaver fence and installation shall be measured by the linear feet installed in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Beaver Fence” shall be made at their respective length (linear feet), and shall be in full compensation for all labor, materials, and costs associated with sign work and installation. Payment shall include, but not be limited to: fabrication, delivery, and installation.

Part 2 – PRODUCTS

2.1 SIGNS

Sign graphics and wording shall be as designated on the drawings. Sign plate shall be primed and painted as per drawings. Posts shall be 3”x1-3/8” new channel section steel, unless noted otherwise on Drawings. Sign plate shall be fastened using two ½” galvanized steel nuts and bolts with washers. All exposed bolt threads shall be stripped after installation.

2.1.1 Standard Revegetation Sign

Standard revegetation signs shall be as per detail, layout and approved by the Contracting Officer prior to manufacture. Signs shall be professionally fabricated.

2.1.2 Interpretive Revegetation Sign

Interpretive revegetation signs shall be as per detail, graphics to be shown on drawing sheet L05 detail 3. The sign shall have all of the features as the Standard Detail Sign except for the signage. See detail 3 for signage content. Interpretive signs shall be installed 4 feet apart from the Standard Revegetation Signs. See plans for locations of signs.

Part 3 – EXECUTION

XXXX

3.1 STEEL PIPE GATE & HARDWARE

The gate shall be constructed of 2.5-inch diameter galvanized steel pipe. The gate shall be 4 feet in length. Bottom of gate shall be no more than 4 inches above finish grade. Chain link gates shall be installed at locations as indicated on plans. Gates shall open towards the water and be self-closing and latching. The gates shall be painted green. See detail on plan page L05. Contractor shall use a contract washout area at least 25 feet away from the American River for all concrete work for all concreted work. See detail no. 7 on sheet L06 for further information.

3.2 SIGNS

Provide and install signs at locations as indicated on detail 2 and 3, sheet L05. Contractor shall provide a contract washout area at least 25 feet away from the American River for all concrete work. See detail no. 7 on sheet L06 for further information.

3.3 BEAVER FENCE

Install Beaver Fence in locations shown on sheet L03 and L04 per detail 1, sheet L05. **The posts are to be T-Posts of 1.25LBS./FT. steel and be painted green.** The T-Posts shall be installed to a depth of 3 feet. Contractors shall fit plastic or vinyl caps on top of each post. Contractor shall inspect fence every month and replace missing caps at each inspection. Fence shall have post every 10 feet. Chain link gates shall be installed as indicated on plans. Gates shall open towards the water and be self-closing.

FINALIZE AS-BUILT DRAWINGS

The Contractor shall finalize as-built drawings for the work completed herein. The as-builts shall be current with progress of work.

3.4 CLEANUP

Access roads, pavements and facilities that have been damaged from the planting operation shall be restored to original condition at the Contractor's expense. Excess and waste material from the planting operation shall be removed and disposed of off the site according to all federal, state and local codes. Adjacent paved areas shall be cleared.

SECTION C
Technical Specifications

Section 02901L
PLANTING

Table of Contents

Part 1 – GENERAL

- 1.1 Description
- 1.2 Definitions
- 1.3 References
- 1.4 Submittals
- 1.5 Inspections
- 1.6 Warranty
- 1.7 Shipment, Delivery, Storage and Handling
- 1.8 Times and Conditions
- 1.9 Measurement and Payment

Part 2 – PRODUCTS

- 2.1 Plants
- 2.2 Pesticides and Herbicides
- 2.3 Backfill
- 2.4 Soil Amendments
- 2.5 Mulch
- 2.6 Antidesiccant
- 2.7 Plant Protection

Part 3 – EXECUTION

- 3.1 Excavating Planting Pits
- 3.2 Setting, Fertilizing and Backfilling
- 3.3 Installing Plant Protection
- 3.4 Building Water Basins
- 3.5 Mulching
- 3.6 Maintenance During the Installation Period
- 3.7 Finalize As-built Drawings
- 3.8 Restoration and Cleanup

SECTION C Technical Specifications

Section 02901L PLANTING

Part 1 – GENERAL

1.1 DESCRIPTION

The work covered in this section consists of furnishing all labor equipment, material, and supplies for installing plants and other associated work.

1.2 DEFINITIONS

- 1.2.1 Contractor: The firm under contract with this scope of work and their subcontractors.
- 1.2.2 Government: U.S. Army Corps of Engineers, Sacramento District.
- 1.2.3 Weeds: Vegetative growth including all grasses, forbes and other herbaceous plants, and woody vegetation that has not been planted and competes for environmental and climatic elements necessary for healthy plant growth of installed plants, such as, soil moisture and sunlight.
- 1.2.4 Woody Transplants: Woody transplants are plants with a woody structure, not herbaceous, such as, tree and shrub species, which contain a viable root structure containing soil around the roots.
- 1.2.5 Herbaceous Transplants: Herbaceous transplants are plugs taken directly from the field, along with a minimum of 6 inch cube of soil with its roots.
- 1.2.6 Friable: Friable soil is soil that is pulverized to the degree it is workable without clumps. It is of such size as to compact around the plants root structure without voids.
- 1.2.7 Pesticides: Pesticides are defined herein as all herbicides, insecticides, fungicides, nematocides, rodenticides, and miticides.

1.3 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN ASSOCIATION OF NURSERYMEN (AAN)

AAN-01 (1990) American Standard for Nursery Stock

COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-1909 (Basic; Notice 1) Fertilizer

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330L SUBMITTAL PROCEDURES FOR REVEGETATION:

SD-03 Product Data

Fertilizer;

For chemical analysis and composition percent.

Plant Material;

For botanical and common name, size, quantity by species, grade, nursery grown.

Inoculants;

For EPA registration number and registered uses.

;

For compliance to contract requirements.

Geotextile Fabric Mulch;

For compliance to contract requirements.

SD-05 Design Data

Delivery Schedule;

Provide a Delivery Schedule at least 10 days prior to the intended date of the first delivery.

As-builts; G

The Contractor shall maintain one set of records to show as-built conditions. The drawings shall be on 22"x34" standard Corps of Engineer sheets. Hard copies and electronic files of the original site drawings will be provided upon request. These records shall be kept current and available to the Government when requested. All information, which might be uncovered during the course of planting shall be

accurately and neatly recorded as they occur by means of drawings, sketches, details, and notes. The record shall show, as a minimum, a complete list of all plants by species, size, location and date(s) planted. The location of the plantings shall be documented by marking-up a copy of the contract drawings. The exact location of each planting need not be determined with surveys, but shall be representative of their location in relation to their surroundings.

1.5 INSPECTIONS

It is the Contractor's responsibility to notify the Contracting Officer at least 5 days prior to each anticipated inspection. The Contracting Officer may at anytime inspect work without notification. The following are key inspection events:

1.5.1 Plant Inspection at Nursery

Plant materials shall be subject to inspection at the growing site by the Contracting Officer and the Contractor.

1.5.1.1 Government Furnished Plants

The Contracting Officer and Contractor shall inspect the Government provided nursery stock for conformance to contract specification. The Contracting Officer shall have final determination of the Government-Furnished plants. Inspection shall occur prior to plant delivery. The Government shall provide replacement for the rejected plants. See 02902L1 GOVERNMENT PLANT ACQUISITION.

1.5.2 Plant Inspection at Job Site

The Contracting Officer and Contractor shall inspect the plant material upon delivery at the job site (and prior to installation) for conformity to the Container Plant Standards, this section. Any unacceptable plant material shall be removed from the job site.

1.5.3 Plant Installation

Plant installation will be inspected by the Contracting Officer for conformance with the plans and specifications.

1.5.4 Installation Acceptance Inspection

For each individual site (river mile 1.9L, river mile 2.4L, and river mile 5.7R) installation acceptance shall be initiated only after all collective project requirements for each site have been completed, which includes, but is not limited to: site preparation, irrigation, native grass seeding, infrastructure, planting, and all other associated work. Inspection on single sites shall be allowed. No partial inspection of a single site shall be conducted.

1.5.4.1 Preliminary Installation Acceptance Inspection

Prior to the completion of the Installation Period, a preliminary inspection will be held by the Contracting Officer. Time for the inspection shall be requested in writing by the Contractor at least 5 working days prior to desired date. The quantity and type of plants installed, clean up requirements and the acceptability of the plants installed, in accordance with the requirements stated herein, shall be determined and noted in writing.

1.5.4.2 Final Installation Acceptance Inspection

A final inspection shall be requested in writing by the Contractor at least 5 working days prior to the desired date. At the final inspection, the Contracting Officer will evaluate the deficiencies noted in the preliminary inspection, to ensure they have been corrected for each individual site. Time for the inspection shall be established in writing. An "Installation Acceptance" will be given after all installation requirements have been satisfactorily completed for each individual site and approved by the Contracting Officer. A written acceptance by the Contracting Officer shall constitute the beginning of the Establishment Period after all three sites have been inspected individually and approved by the Contracting Officer.

1.6 WARRANTY

All plants shall be guaranteed to be healthy and in a vigorous growing condition at the time of Installation Acceptance, as determined by the Contracting Officer.

1.7 SHIPMENT, DELIVERY, STORAGE AND HANDLING

1.7.1 Shipment

Preparation for shipment shall be done in a manner that will not cause shock or damage to branches, trunk, root systems or seeds.

1.7.1.1 Container-Grown Plants

Containers shall be sufficiently rigid to hold ball shape and protect root mass during shipping. Plants shall be protected from the direct impacts of sun and wind during transport

1.7.2 Delivery

Plants shall be picked up by the Contractor from the nursery and/or collection source(s) and delivered to the installation site.

1.7.2.1 Plant Protection During Delivery

Plants shall be protected during delivery to prevent desiccation of the plant or damage to the roots or balls. Plants shall be delivered in a covered vehicle capable of providing protection from sun and wind damage. Branches of plants shall be protected by tying-in the branches and covering all exposed branches.

1.7.2.2 Other

The Contractor shall be responsible for picking up and delivery of all required materials from the supplier and deliver it to the job site, unless otherwise specified.

1.7.3 Storage

1.7.3.1 Container – Grown Plants

Container plants not installed on the day of arrival at the site shall be stored and protected in areas designated by the Contracting Officer. Plants shall be protected from exposure to wind and shall be shaded from the sun. Covering that will allow air to circulate and prevent internal heat from building up shall be provided. Plants shall be kept in a moist condition by watering with a fine mist spray until planted.

1.7.3.2 Other Materials

Soil amendments shall be stored in dry locations away from contaminants. Pesticide materials shall not be stored with other landscape materials. Storage of materials shall be in areas designated or as approved by the Contracting Officer.

1.7.4 Handling

Care shall be taken to avoid injury to plants. Materials shall not be dropped from vehicles. Container-grown plants shall be handled by the container and by the trunk or stems.

1.8 TIMING AND CONDITIONS

Planting operations shall be performed only during periods when beneficial results can be obtained. When excessive moisture, winds or other unsatisfactory conditions prevail, the work shall be stopped when directed by the Contracting Officer. The Contractor shall schedule planting in the mornings to avoid stressing plants during installation, if the planting schedule calls for installation when the temperature is expected to be 90 degrees Fahrenheit/32 degrees Centigrade or greater. When special conditions warrant a variance to the planting operations, proposed planting times shall be submitted in writing to, and approved by, the Contracting Officer. The Contractor shall be prepared to install plants at the earliest time when all conditions (weather, moisture, temperature, tides and river flows, etc...) are acceptable.

1.8.1 Installation Period

The Installation Period begins, when the Notice to Proceed (NTP) is given and continues until all requirements indicated in this specification and accompanying drawings are completed and approved and the Contracting Officer gives a written acceptance.

1.9 MEASUREMENT AND PAYMENT

1.9.1 Deepot Plant Installation at River Miles 2.4L and 5.7R

Deepot plant installation shall be measured by the number of individual plants installed in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Deepot Plant Installation at River Miles 2.4L and 5.7R” shall be made at their respective unit price per individual plant, and shall be in full compensation for all labor, materials, and costs associated with deepot plant installation. Payment shall include, but not be limited to: plant material, delivery, layout, excavation, plant installation, water basin, mulch, fertilizer and plant protection.

~~1.9.2 Pole Cutting Installation and Deepot Installation at River Mile 1.9L~~

~~Pole cutting installation shall be measured by the number of individual plants installed in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Pole Cutting Installation and Deepot Installation at River Mile 1.9L” shall be made at their respective unit price per individual plant, and shall be in full compensation for all labor, materials, and costs associated with pole cuttings. Payment shall include, but not be limited to: plant material harvesting, delivery, layout, excavation, installation, water basin, mulch, fertilizer and plant protection.~~

~~1.9.31.9.2~~ Maintenance During Installation Period

Maintenance during the Installation Period shall not be measured. Payment for “Maintenance During Installation Period” shall be at the lump sum price in accordance with plans and specifications and as directed by the Contracting Officer. Payment shall be in full compensation for all labor, materials and cost associated with, but not limited to; watering, weeding, pesticide application, planting protection adjustments and cleanup during the Installation Period, as well as, irrigation system and infrastructure maintenance required to maintain operability.

Part 2 – PRODUCTS

2.1 PLANTS

The plants as indicated in the Planting Schedule will be provided by the Government.

2.1.1 Varieties

Plants (except pole cuttings, direct seed and transplants) shall be nursery or plantation grown stock conforming to the Container Plant Standards as indicated herein and shall be of the varieties specified in the plant list bearing botanical names listed in one or more of the publications under "Nomenclature" in AAN-01.

2.1.2 Quality

Well shaped, vigorous, healthy plants having proper top growth balanced with well branched root systems shall be provided. Plants shall be provided free from disease, harmful insects and insect eggs, sun-scald injury, disfigurement and abrasion. Plants shall be provided that are typical of the species or variety and as specified herein. Seeds shall be viable free from insect damage, desiccation and abrasion.

2.1.3 Size

Plants shall be furnished in sizes indicated. No variation in size will be permitted without prior written permission by the Contracting Officer. All variations requested by the Contractor shall be at no additional cost to the Government.

2.1.4 Source

Container planting material shall be Government furnished.. Government furnished plants are being grown at Bitterroot Nursery, 11760 Atwood Rd. Ste 5, Auburn, CA, 95603, (530) 745-9814, and shall be coordinated with prior to delivery to the project site.

2.1.5 Substitutions

If the species specified cannot be secured, the Contractor Officer shall submit alternate species.. The Contracting Officer will not permit substitutions without written request from the Contractor for approval.

2.2 PESTICIDES

Pesticide shall be insecticide, herbicide, fungicide, nematocide, rodenticide, and miticide. Pesticide material shall be labeled for use and applied only as registered by EPA and approved.

2.3 BACKFILL

Backfill shall be the existing soil stripped of all rocks and root matter so that it is friable and thoroughly mixed.

2.4 SOIL AMENDMENTS

Soil amendments shall consist of fertilizer and inoculants. Soil amendments shall be as specified and as required to meet soil suitability for proper plant growth.

2.4.1 Fertilizer

Fertilizer shall be commercial grade, free flowing, uniform in composition and conforming to CID A-A-1909. Shall consist of nitrogen- phosphorous- potassium ratio: [14-14-14] [10-20-5] or as recommended by Contractor provided soil test and Contracting Officers approval. Fertilizer may be in granular packet, pellet or tablet form.

2.4.2 Inoculants

The endomycorrhizal biological inoculum contains one or more species of mycorrhizal fungi at a minimum rate of 100 propagules/cc. The ectomycorrhizal inoculum contains a suite of the following species: Pisolithus tinctorius, four species of Rhizopogon & Scleroderma at a min. rate of 600,000 spores/cc.

Part 3 – EXECUTION

3.1 EXCAVATING PLANTING PITS

Site preparation, layout and irrigation to be completed prior to undertaking planting.

3.1.1 Container Planting Pits

In sites with no surface revetment, the planting pit for all container material shall be pre-formed (dug, drilled or water-jetted) and shall have a size as indicated on the Drawings. Plant pits shall be dug to produce vertical sides and uncompacted bottoms. Remove only enough soil within the pits so that the rootball can be freely placed without restriction. The pit shall be of sufficient size as to accept the container material without damage to plant material. The pit size shall be sufficient as to maintain continuous soil contact for the entire root ball. The method of creating the pit shall not cause soil erosion.

3.1.1.1 Container Planting Pits in Reveted Sites

In sites with surface revetment, remove revetment within the immediate vicinity of the planting location and excavate planting pit as per container plants. The method of creating the pit shall not permanently displace the adjacent rock revetment or cause soil erosion in the vicinity of the pit. Site 1.9 left is a revetted site without sediment. For planting on 1.9left, see sheet L06 detail 8.

3.1.1.2 Pole Cutting Planting Pits in Reveted Sites

~~In sites with surface revetment, planting pit excavation for pole cutting material may be performed by hand or mechanical power, as determined by the Contractor. The method shall be coordinated with the availability of the cutting material, as well as, the size of material required. The plant material shall be of sufficient strength to withstand the equipment used to insert it into the substrate without damage to the material. It is the Contractor's responsibility to determine if access to the top of the rock revetment and berm is sufficient for tractor driven and 4-wheel drive vehicles. The method of creating the pit shall not permanently displace the adjacent rock revetment or cause soil erosion in the vicinity of the pit.~~

3.2 SETTING, FERTILIZING AND BACKFILLING

3.2.1 Setting Container Plants & Transplants

Provide and remove container plants from their containers without damage to the plant or root system. Place plant where indicated on the drawings. Provide and place soil amendments in the planting pit in packet, pellet or tablet form in the immediate vicinity of the feeding roots in accordance with the manufacturer's recommendations. Provide and place fertilizer so that it does not make direct contact with feeding roots. Quantity of fertilizer shall be equal to .7 ounces/21 grams per plant pit. Provide and place inoculants so that they are not in contact with the roots. Set plant stock upright in relation to surrounding grade so that the root crown is slightly above the surrounding soil or as indicated on the drawings. Backfill carefully, with existing soil, and work around the rootball. Tamp soil so that the plant is secure and at the proper grade.

3.2.1.1 Setting Container Plants in Reveted Sites

In sites with surface revetment, provide, set and fertilize plant material as stated for container plants without surface revetment. Replace all displaced revetment around the container stock. Leave site grade consistent with conditions existing prior to plant installation.

3.3 MAINTENANCE DURING THE INSTALLATION PERIOD

3.3.1 General Maintenance

Maintained installed plants in a healthy growing condition. Maintenance shall begin immediately after each plant is installed and continue throughout the Installation Period. The maintenance includes watering, weeding, herbicide and pesticide spraying, pruning, straightening, adjusting, repairing and other necessary operations to ensure each plant is maintained in a healthy growing condition. The area immediately around the plant 18 in. / 450 mm radius shall be kept free of weeds, grass and other undesired vegetation. Plants shall be checked for settlement and shall be reset to proper grade as necessary. Run-off, puddling and wilting shall be prevented and corrected as necessary. Grasses and weeds shall be kept below 3 in. / 75 mm in height

3.3.2 Watering-In

Water-in plant material immediately (within 8 hours) after installation.

3.3.3 Operation of Irrigation System

The Contractor shall consider in his/her design the fluctuations of the river and/or tides in operating and maintaining the system. The Contractor is responsible for its operation, damage and repair for the duration of the Installation and Establishment periods.

3.3.4 Application Frequency, Rate and Duration

Water installed plants immediately after planting and continuously per 02911L Plant Establishment until an "Installation Acceptance" is given in writing by the Government. During the Establishment Period, requirements specified in section 02911L Plant Establishment shall apply.

3.3.5 Application of Pesticides and Herbicides

When pesticide and/or herbicides becomes necessary to remove disease, weeds or pest, a state-certified applicator shall provide and apply required pesticide and/or herbicide in accordance with State EPA label restrictions and recommendations. Hydraulic equipment shall be provided for the liquid application of pesticides with a leak-proof tank, positive agitation methods, controlled application pressure and metering gauges.

3.4 FINALIZE AS-BUILT DRAWINGS

The Contractor shall prepare and finalize as-built drawings for the work completed herein. The as-builts shall be current with progress of work.

3.5 RESTORATION AND CLEANUP

Access roads, pavements and facilities that have been damaged from the planting operation shall be restored to original condition at the Contractor's expense. Excess and waste material from the planting operation shall be removed and disposed of off the site according to all federal, state and local codes. Adjacent paved areas shall be cleared.

SECTION C
Technical Specifications

Section 02911L
PLANT ESTABLISHMENT

Table of Contents

Part 1 – GENERAL

1.1	Description	02996-2
1.2	Definitions	02996-2
1.3	References	02996-2
1.4	Submittals	02996-3
1.5	Inspections	02996-5
1.6	Warranty	02996-6
1.7	Shipment, Delivery, Storage and Handling	02996-6
1.8	Times and Conditions	02996-6
1.9	Measurement and Payment	02996-7

Part 2 – PRODUCTS

2.1	Water	02996-9
2.2	Plant Material	02996-9
2.3	Pesticides	02996-9
2.4	Weeding Equipment	02996-10

Part 3 – EXECUTION

3.1	General Maintenance	02996-10
3.2	Watering	02996-10
3.3	Weeding	02996-11
3.4	Resetting Plants	02996-11
3.5	Replacing Plants	02996-12
3.6	Infrastructure Maintenance	02996-14
3.7	Adaptive Management	02996-14
3.8	Preparing Reports, Records and As-maintained Drawings	02996-15
3.9	Cleanup	02996-15

SECTION C
Technical Specifications

Section 02911L
PLANT ESTABLISHMENT

Table of Contents

Part 1 – GENERAL

1.1 DESCRIPTION

The work covered in this section consists of furnishing all labor equipment, material, and supplies for maintaining plants, irrigation, infrastructure, and other associated work.

1.2 DEFINITIONS

- 1.2.1 Contractor: The firm under contract with this scope of work and their subcontractors.
- 1.2.2 Government: U.S. Army Corps of Engineers, Sacramento District.
- 1.2.3 Weeds: Vegetative growth including all grasses, forbes and other herbaceous vegetation that competes for environmental and climatic elements necessary for healthy plant growth of target habitat species, such as, soil moisture and sunlight.
- 1.2.4 Weed Control Program: The weed control program shall consist of all work to be undertaken which deals with controlling weeds on the project site. Work shall include pesticide spraying, weeding immediately around installed plants, mowing site for access and fire control and grass seeding.
- 1.2.5 Infrastructure: Includes access roads, fences and gates, and signs.
- 1.2.6 Pesticides: Pesticide is used herein as a generic term, which most often refers to herbicides, but also includes insecticides, fungicides, nematocide, rodenticides and miticides.

1.3 REFERENCES

ARICULTURAL MARKETING SERVICE (AMS)

AMS-01 Amended thru: Aug. 1988) Federal Seed Act Regulations (Part 201-202)

AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM D 2607 (1969) Peats, Mosses, Humus, and Related Products

COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-1909 (Basic; Notice 1) Fertilizer

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330L SUBMITTAL PROCEDURES:

SD-05 Design Data

Monthly Establishment Records;

The Contractor shall provide and maintain monthly establishment records of all establishment work performed. Within 5 working days following the end of each month, submit monthly establishment records of the preceding month to the Government. Records shall be prepared and submitted for each month through the duration of the Establishment Period.

1st Year Report

The Contractor shall provide a yearly report, which documents activities and site conditions throughout the previous year. Each report shall include, previous Monthly Establishment Records, Survival Summaries, and colored photographs representative of site and plant conditions.

2nd Year Report- Option 1

The Contractor shall provide a yearly report, which documents activities and site conditions throughout the previous year. Each report shall include, previous Monthly Establishment Records, Survival Summaries, and colored photographs representative of site and plant conditions.

Final (3rd Year) –Option 2

The Contractor shall provide a yearly report, which documents activities and site conditions throughout the previous year. Each report shall include, previous Monthly Establishment Records, Survival Summaries, and colored photographs representative of site and plant conditions. The Final Report shall summarize the plant survival totals of all 3 years.

1.5 INSPECTIONS

Inspections of plant establishment shall be accomplished according to the schedule herein and conducted jointly with the Contracting Officer and an approved representative of the Contractor. All inspections shall be arranged by the Contractor according to the following schedule and shall give at least [14 calendar days] notice to the Contracting Officer. Inspections shall be for the purpose of checking adherence to the specifications and to the drawings. All corrections necessitated as a result of the inspections will be put in writing by the Contracting Officer and acted upon by the Contractor within [14 calendar days] notice at his/her own expense.

1.5.1 Seasonal Inspections

Two times a year the Contracting Officer and the Contractor's representative shall make joint periodic inspections to the site(s). All maintenance work determined to be deficient by the Contracting Officer shall be corrected immediately by the Contractor. All watering deficiencies shall be corrected within [7 calendar days] of the inspection. All maintenance work deficiencies shall be corrected by the Contractor within [14 calendar days] of the inspection. Plants determined to be dead at these inspections need not be replaced at this time. Periodic inspections will be conducted approximately; early May and September and shall be initiated and coordinated by the Contractor.

1.5.2 Yearly Inspections

Yearly inspections, for each year of establishment, shall be conducted jointly by the Contracting Officer and the Contractor at the site. These yearly inspections shall take place at the end of each year (as affixed from the start of the "Establishment Period") and will continue throughout the duration of the Contract. Plant replacement will be required at this time for all plants over the allowable mortality rate. See paragraphs 3.5 Replacing Plants. The Contracting Officer may conduct follow up inspections, if he/she so desires. Follow up inspections will determine that deficiencies noted in the yearly inspection have been corrected or upon completion of work.

1.5.3 Final Inspection & Acceptance

The final inspection shall consist of a minimum of two inspection events; a preliminary final and a final.

1.5.3.1 Preliminary Final Inspection

Prior to the completion of the Establishment Period, a preliminary final inspection shall be held by the Contracting Officer. The quantity and type of plants installed and the acceptability of the plants installed, in accordance with the requirements stated herein, shall be determined and noted in writing. A punch list of items to be corrected by the Contractor prior to the final inspection shall be determined at this time.

1.5.3.2 Final Inspection

The last yearly inspection shall serve as the final inspection. At the final inspection, the Contracting Officer will evaluate the deficiencies noted in the preliminary inspection, to determine if they have been satisfactorily corrected. The Contractor shall submit the final report and record to the Contracting Officer within 30 days following the written "Acceptance of Establishment Period"

1.5.3.3 Acceptance of Establishment Period

After all establishment items and cleanup have been satisfactorily completed, as determined by the Contracting Officer, the Government will issue an "Acceptance of Establishment Period" in writing. PARTIAL ACCEPTANCE OF ANY ITEM OR COMBINATION OF ITEMS WILL NOT BE GIVEN. A written acceptance by the Contracting Officer shall constitute the completion of the Establishment Period.

1.6 WARRANTY

All plant material and infrastructure installed under this Contract shall be guaranteed against poor quality, and of inferior workmanship or improper establishment, as determined by the Contracting Officer. All identified deficiencies shall be replaced by the Contractor at his/her own expense with no additional cost to the Government. **Acts of Nature and vandalism will not be the responsibility of the Contactor.- In such cases, the contractor shall notify the Contracting Officer's Representative immediately.**

SHIPMENT, DELIVERY, STORAGE AND HANDLING

Where applicable, see specification section, 02901L PLANTING.

1.7 TIMING AND CONDITIONS

Maintenance and establishment operations shall be performed only during periods when beneficial results can be obtained. When excessive, winds or other unsatisfactory conditions prevail, the work shall be stopped when directed by the Contracting Officer. The Contractor shall schedule resetting and replanting in the mornings to avoid stressing plants during installation, if the planting schedule calls for installation when the temperature is expected to be 90 degrees Fahrenheit/32 degrees Centigrade or greater. When special conditions warrant a variance to the planting operations, proposed planting times shall be submitted in writing to, and approved by, the Contracting Officer. The Contractor shall be prepared to install plants at the earliest time when all conditions (weather, moisture, temperature, tides and river flows, etc...) are acceptable.

1.7.1 Establishment Period

The "Establishment Period" begins, when all items indicated in the Technical Specifications and shown on the Drawings have been satisfactorily completed and an "Installation Acceptance" has been given in writing by the Contracting Officer. The "Establishment Period" shall be for a continuous duration of [1,095 days (3 years)].

1.8 MEASUREMENT AND PAYMENT

1.8.1 Yearly Reports

Yearly Reports shall be measured by the number of Establishment Years required in accordance with plans and specifications and as directed by the Contracting Officer. Payment for "Yearly Reports" shall be made at their respective unit price per yearly reports, and shall be in full

compensation for all labor, materials, and costs associated with yearly reports. Payment shall include, but not be limited to: documenting events, vigor assessments (if necessary), write-up, preparing monthly and submitting establishment records, preparation of As-built / As-maintained drawings, photographs for submission and reproduction of record, reports and drawings.

1.8.2 Watering and Weeding - First Year

First year watering and weeding shall not be measured. Payment for “Watering and Weeding - First Year” shall be by lump sum weekly, and shall be in full compensation for all labor, materials, and costs associated with watering and weeding. Payment shall include, but not be limited to: watering, weeding, and irrigation system operation and repair until Establishment Period Acceptance.

1.8.3 Watering and Weeding - Second Year

Second year watering and weeding shall be measured by the number of weekly watering events in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Watering and Weeding - Second Year” shall be made at their respective unit price per weekly watering events, and shall be in full compensation for all labor, materials, and costs associated with watering and weeding. Payment shall include, but not be limited to: watering, weeding, and irrigation system operation and repair until Establishment Period Acceptance.

1.8.4 Watering and Weeding - Third Year

Third year watering and weeding shall be measured by the number of bi-weekly watering events in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Watering and Weeding - Third Year” shall be made at their respective unit price per bi-weekly watering events, and shall be in full compensation for all labor, materials, and costs associated with watering and weeding. Payment shall include, but not be limited to: watering, weeding, and irrigation system operation and repair until Establishment Period Acceptance.

1.8.5 Resetting and Replacing - First Year

First year resetting and replacing shall not be measured. Payment for “Resetting and Replacing - First Year” shall be at a lump sum price in accordance with plans and specifications and as directed by the Contracting Officer. Payment shall be in full compensation for all labor, materials, and costs associated with resetting and replacing plants, but not limited to: plant resetting, plant replacing, plant protection adjusting and mulch repair or replacing, and water basin rebuilding until Establishment Period Acceptance.

1.8.6 Resetting and Replacing - Second Year

Second year resetting and replacing shall not be measured. Payment for “Resetting and Replacing - Second Year” shall be at a lump sum price in accordance with plans and specifications and as directed by the Contracting Officer. Payment shall be in full compensation for all labor, materials, and costs associated with resetting and replacing plants, but not limited

to: plant resetting, plant replacing, plant protection adjusting and mulch repair or replacing, and water basin rebuilding until Establishment Period Acceptance.

1.8.7 Infrastructure Maintenance

Infrastructure maintenance shall not be measured. Payment for “Infrastructure Maintenance” shall be at a lump sum price in accordance with plans and specifications and as directed by the Contracting Officer and include all infrastructure items, i.e., access roads, fencing and gates, and signs, etc... Payment shall be in full compensation for all labor, materials, and costs associated with, but not limited to: infrastructure maintenance, repair and replacing during the Establishment Period.

1.8.8 Herbicide Spraying

Herbicide spraying shall be measured by the number of spraying events in accordance with plans and specifications and as directed by the Contracting Officer. Payment for “Herbicide Spraying” shall be made at their respective unit price per spraying event, and shall be in full compensation for all labor, materials, and costs associated with Herbicide Spraying.

1.8.9 Cleanup

Cleanup during the Establishment Period shall not be measured. Payment for “Cleanup” shall be at the lump sum price in accordance with plans and specifications and as directed by the Contracting Officer. Payment shall be in full compensation for all labor, materials and cost associated with excess material, discarded material, and debris removal and disposal offsite during the Establishment Period.

Part 2 – PRODUCTS

All products used shall conform to the other associated specifications and the Drawings.

2.1 WATER

Water shall be as stated in specification section 02810L Irrigation.

2.2 PLANT MATERIAL

Plant material for replacement shall be as per specification section 02901L PLANTING.

2.3 PESTICIDES

Pesticide shall be insecticide, herbicide, fungicide, nematocide, rodenticide, and miticide. Pesticide material shall be labeled for use and applied only as registered by EPA. All herbicides shall be State and County approved for land or aquatic applications. All work shall be performed by a licensed applicator. Apply as per manufacturer, State, and/or Agriculture Extension

specifications and recommendations. All pesticides used near water shall be approved by the State and County for this type of use.

All post-seeding pesticide treatments shall be as per Agricultural Extension recommendations and manufacturer's specifications. Chemical control is acceptable provided type and application meet all Federal, State and local health and water quality regulations. Application rate must be as recommended by the manufacturer and must be controlled so that planted or adjacent vegetation is unaffected. All safety measures recommended by the manufacturer will be strictly adhered to. The Contractor shall be responsible for any damage to lands, vegetation, and water resulting from improper use of chemicals.

2.3.1 Contact Herbicide

The contact herbicide shall be selected by the Contractor and approved by the Contracting Officer before application. It shall be glyphosate based spraying or wicking.

2.3.2 Selective Herbicide

The selective herbicide shall be selected by the Contractor and must be approved by the Contracting Officer before application. It shall be 2-4D, MCPA, bromozynil, dicamba or approved others.

2.3.3 Pre-emergent Herbicide

The pre-emergent herbicide shall be selected by the Contractor and must be approved by the Contracting Officer before application. It shall be diuron, chlor-sulfuron, pendamenthalin, or approved others.

2.4 WEEDING EQUIPMENT

The use or operation of weeding equipment shall not damage volunteer woody vegetation, as well as, the installed plants. Mowing weeds with power equipment is acceptable provided all fire restrictive controls are adhered to for both equipment and use.

Part 3 – EXECUTION

3.1 GENERAL MAINTENANCE

The following establishment items are required as part of the maintenance and establishment items and shall be kept current by the Contractor as necessary or as directed by the Contracting Officer.

3.2 WATERING

All plants, except as stated otherwise shall require irrigation as specified in this section.

3.2.1 Operation of Irrigation System

The Contractor shall water the plants throughout the Establishment Period. Application method shall be as approved in the technical specifications and shall be within the guidelines of these specifications, see specification section 02810L Irrigation and 02901L Planting. Any method proposed that might encourage weed growth shall reflect the additional effort in the weeding requirements.

3.2.2 Watering Frequency, Rate & Duration

The Contractor shall provide and water the newly installed plants during the Establishment Period. Watering shall start at the earliest time during the required months following "Installation Acceptance" of all plants installed under this contract and continue through the duration of the Establishment Period. The Contractor shall be responsible for ensuring the plants receive water during the transition between the Installation and Establishment Periods and during the times specified herein. Additional applications shall be required during November through March, if a minimum of one-half (.5") inch of precipitation does not fall on the plants during any six week period, with no additional cost to the Government. Water shall not be applied at a rate that will cause erosion, damage to the plant, or cause runoff.

3.2.2.1 First Year Watering

Each plant shall receive a minimum of one (1) application every [seven (7) days] during the months of April through October. Each application shall include a minimum of [five (5)] gallons per plant. For overhead spray applications, wet soil to a minimum depth of 12-inches.

3.2.2.2 Second Year Watering

Each plant shall receive a minimum of one (1) application every [seven (7) days] during the months of April through October. Each application shall include a minimum of [fifteen (15)] gallons per plant. For overhead spray applications, wet soil to a minimum depth of 12-inches.

3.2.2.3 Third Year Watering

Each plant shall receive a minimum of one (1) application every [fourteen (14) days] during the months of April through October. Each application shall include a minimum of [thirty (30)] gallons per plant. For overhead spray applications, wet soil to a minimum depth of 12-inches.

3.2.3 Irrigation System Maintenance

The Contractor shall maintain the irrigation system during the Establishment Period. Maintenance shall include the repair and replacement of parts, ensuring the system is delivering the required amount of water, and ensuring the system is fully operational.

3.3 WEEDING

The Contractor shall remove weed and vegetative growth competing for the installed plants moisture, nutrients, and sunlight. At a minimum, the Contractor shall remove weeds from within the immediate vicinity (18" radius) of each plant during the required watering schedule as indicated herein. Weeds growing through the mulch shall be removed.

3.3.1 Herbicide Spraying

The Contractor shall spot spray for Himalayan Blackberries and for other woody exotics twice a year for the establishment period. The spraying events shall occur in April and before November for a total of 6 sprayings during the establishment period.

3.4 RESETTING PLANTS

The Contractor shall reset all plant material that becomes dislodged or otherwise unseated in its natural growing condition. In addition to resetting the plant material, the Contractor shall repair and provide and replace associated planting items, such as, but not limited to, plant protection, water basin, mulch, identification tags, etc.

3.5 REPLACING PLANTS

The Contractor shall replace all plants, due to mortality, as stated herein. The replacement species, and its container size, shall be the same as it is replacing, unless directed otherwise by the Contracting Officer. Plant replacement is required for each planting zone, as identified on the Drawings, within a site and does not represent the totality of the project site. Replacement determination shall take place at the "Yearly Inspections", but shall be adjusted to the nearest planting window (typically from November through March). It is the Contractor's responsibility to anticipate and pre-grow the required replacement plants necessary to meet the replacement requirements.

3.5.1 Partial Replacement Approach

The Contractor shall replace all plant material, which does not meet the project standards or which needs replaced due to mortality. The Government will accept as a maximum the following mortalities for each planting zone without the need for replacement:

3.5.1.1 Mortality Standards

Acceptable mortality shall be measured for EACH year of the original number of plants installed for EACH individual site. Note: This is not a cumulative number of all sites or the project as a whole, but for each identified. Each site identified on the Drawings shall achieve the standards below. Mortalities experienced less than those listed below does not relieve the Contractor from establishment of all viable plants. Acceptable mortality for all plants at the end of the Yearly Inspections shall be as follows:

- A. End of First Yearly Inspection: 15% mortality
- B. End of Second Year Inspection: 30% mortality

C. End of Third Year Inspection: No requirement

3.6 INFRASTRUCTURE MAINTENANCE

The Contractor shall provide materials and perform all infrastructure maintenance for the duration of the Establishment Period. Maintenance shall include, but not be limited to: , fences and gates, signs, and the irrigation system.

3.6.1 Fences and Gates

The Contractor shall maintain the fences and gates to ensure they are in good working condition and capable of keeping **cattle beavers** from going through **the fence and gates**.- Fence maintenance includes, not only the newly installed fences and gates, but also those fences and gates that existed prior to work activities described herein, but for a perimeter function for the site. Repair and replace all damaged material.

3.6.2 Signs

The Contractor shall maintain all signs installed as part of this project. Minor damage is acceptable, such as projectile holes and slight bending of the metal, however, where major damage occurs, such as, sign conditions which make it unreadable, either from fading, holes or bending of the metal sign or post, the Contractor shall repair or replace as appropriate.

3.7 ADAPTIVE MANAGEMENT

During the course of the project, it may become evident that certain site conditions have changed and some requirements as stated herein may have a negative effect to the intent of the project. If this occurs in the opinion of the Contractor, he/she shall notify the Contracting Officer, identify the detrimental condition(s), and suggest and document in the monthly maintenance reports alternative action(s) to arrest the situation and bring the maintenance approach into harmony with site conditions. The Contractor shall take no action contrary to the requirements of this contract, unless prior written permission is given by the Contracting Officer.

3.8 PREPARING REPORTS, RECORDS AND AS-MAINTAINED DRAWINGS

The Contractor shall prepare as-maintained drawings of the work completed herein. The as-maintained drawings shall be based upon the as-built drawings. These drawings shall be updated to include all current conditions, impacts and results of the planting survival, and infrastructure items. Yearly reports shall be based upon the information recorded on the As-maintained Drawings, as well as, observations in the field. The Contractor shall also keep and provide monthly establishment records of all maintenance and site conditions.

3.8.1 As-Maintained Drawings

The Contractor shall prepare as-maintained drawings of the work completed herein. The as-maintained drawings shall be based upon the as-built drawings. These drawings shall be updated to include all current conditions, impacts and results of the plants.

3.8.2 Monthly Establishment Records

The Contractor shall prepare and keep current a record of monthly maintenance performed on the project. The report shall identify at a minimum, project name, planting zones, date and establishment period. It shall identify and discuss weed control performed, irrigation activity and maintenance, plant health, vandalism, site feature conditions, general observations, total precipitation for the month, personnel onsite, and any other pertinent information describing site conditions and activities performed during the month. See Form A for example of outline attached at the end of this section.

3.8.3 Yearly Reports

The Contractor shall submit a yearly report to the Government (at the end of each year following "Installation Acceptance"). Each report shall be submitted in 8.5"x11" report format, as well as a current electronic copy in MS Word. When drawings are submitted, folded 11"x17" sheets are acceptable.

The yearly reports shall document current plant and site condition, as well as, conditions during the past year. The Contractor shall survey plant survival and document in tables showing plants installed, plants dead, plants alive, survival percentage, replacement plants and pertinent observations. See Form B for example of table attached at the end of this section. Provide survival summaries for each planting zone and the project as a whole. Also, provide survival summaries per plant species. Provide a summary table showing survival comparison for each year to date. See Form C for example of table attached at the end of this section.

The yearly reports shall be bound with a title sheet and table of contents and include copies of the following: As-Maintained Drawings (reduced to 8.5"x11" or 11"x17" format), Monthly Establishment Records, Survival Summary Tables, and a color photographic documentation of the site which is representative of plant and site conditions, as well as, a discussion of the maintenance activities performed.

3.9 CLEANUP

The Contractor shall maintain the project site in a condition clean of all installation and establishment debris throughout the Establishment Period. Immediately prior to the conclusion of the Establishment Period, and before final inspection, the Contractor shall remove all evidence of installation and establishment material appropriate to the requirements herein. All items designated shall be removed and discarded to a State and locally approved facility in accordance with all local laws and regulations. Items to be noted, but not limited to, are:

3.9.1 Irrigation Equipment

Remove and discard properly all above ground irrigation equipment and piping used on the project. If a water well has been installed, remove all above ground equipment, fill casing and cap as per State and local laws and regulations.

3.9.2 Flags and Stakes

Remove all plant identification/location flags or tags from site and discard/recycle in a manner compliant with local regulations.

3.9.3 Mulch

Where geotextile fabric is used, remove from around each plant and discard in a manner compliant with local regulations.

3.9.4 Browse Guards

Where plant browse guards have been used, and they are visible from above ground, remove and discard properly. Sever all constricting fasteners or wires used that remain below grade. The Contractor shall continually monitor the plant guards throughout the Establishment Period and loosen as appropriate so that the guards do not constrict the plant in any negative way. Ensure the plant does not embed itself into the guard or supports.

3.9.5 Beaver Guards

Where beaver guards are used, they shall be left in place as part of the site. Prior to completion of cleanup operations, the beaver guards shall be readjusted and secured firmly to the posts and ground.

3.9.6 Fences and Gates

All excess fence wire and fabric shall be collected, removed and discarded from the site. Gates shall be left in an operable condition with lock and keys. The entire electric fence, including material and its equipment, shall be disassembled and removed from site.

3 ENCLOSURES ATTACHED

1. Form A, Monthly Establishment Record
2. Form B, Yearly Survival Summary
3. Form C, Overall Survival Summary

(Example)
FORM A
Monthly Establishment Record
For Revegetation Projects

Project:
Planting Zone:
Date:
Establishment Period:

OUTLINE

Briefly discuss the events listed below

1. Weed Control: (discuss when, where, and what was done)
Mowing, Pesticide Application, Discing, Burning, etc...
2. Plant Health:
3. Vandalism:
4. Site Feature Condition:
Access Road, Fences, Signs, etc...
5. Site Condition:
6. General Observations:
7. Precipitation (total for month):
8. Personnel:
9. Other:

