215 Executive Court, Suite A, Yreka, CA 96097
(530) 572.3120
www.svrcd.org

SHASTA VALLEY RESOURCE CONSERVATION DISTRICT

Horse Creek Road Crossing Engineering Design
BID PACKET
March 15, 2021

Project Summary

The Shasta Valley Resource Conservation District has been awarded funding through the National Fish and Wildlife Foundation grant program to implement watershed restoration. The Horse Creek Project goals are to improve watershed health and reduce sediment sources within the Horse Creek drainage. The key objectives of are to treat road related sediment sources within the project area to improve watershed condition, and improve instream habitat.

The project is located within the Klamath River watershed and is designed in conjunction with Klamath National Forest to improve watershed health and protect road infrastructure from failures that could lead to sediment deposition into this critical Coho salmon rearing stream. The contractor will be required to design 25 road crossing upgrades or repairs and provide the SVRCD with drawing and descriptions of work to be accomplished in each crossing.

Implementation must not begin before receiving the notice to proceed.

Contractor's Obligations

The Bidder must analyze and respond to all sections of this Bid Packet providing sufficient information to allow the SVRCD to evaluate the bids. The Contractor, by submitting its bids, agrees that any costs incurred by the Contractor in responding to this Bid Packet, are to be borne by Contractor and may not be billed to the SVRCD.

The Bidder must complete and submit all attachments in Appendix in the order listed. If the SVRCD has any confusion or difficulty in retrieving the required information from a Contractor's bid, it may result in the disqualification of such bid.

Bid Submission Requirements

Submission of Bids:

Contractor should mail or hand deliver their **sealed bid** to the address listed below **by 2pm on May 11, 202**1.

Shasta Valley RCD
215 Executive Ct., Suite A
Yreka, CA 96097

The envelope shall be plainly marked in the upper left-hand corner with the name and address of the bidder and shall bear the words **"Bid for the Horse Creek Culvert Replacement Engineering Design"**.

Critical Dates

Pre-bid Site Visit: There is no site visit scheduled for this project.

Questions Regarding the Bid Packet:

Contractors may submit questions by email to dblessing@svrcd.org before **5:00 pm on April 26, 2021**. All pertinent questions will be answered and shared by e-mail with all other Contractors interested in bidding on the project by **April 30, 2021**. Contractor understands and agrees that it has a duty to inquire about and clarify any Bid Packet questions that the Contractor does not fully understand or believes may be interpreted in more than one way. The SVRCD, however, is not required to answer questions that are not pertinent to the Bid Packet or are considered to be proprietary information. The contact information is as follows:

Dan Blessing, Project Manager
Email: dblessing@svrcd.org
Phone: 805.458.2684

Bid Due Date: Bids shall be received by the SVRCD on or before **May11, 2021 at 2:00 pm** at the SVRCD address listed above. Late submissions will not be accepted.

Contract Dates: The Contractor shall not begin operations until the Notice to Proceed is issued. All work shall be completed by **September 30, 2021**.

Contractual Commitment of Bid

The contents of submitted bids will be considered obligations of the successful Contractor. No information should be submitted that is not intended to be incorporated into the bid and any contract, which may result from such bid. If there is any inconsistency between the terms herein and any of the contract documents, the terms in the contract documents shall prevail.

Labor Compliance

Contractor agrees to be bound by all the provisions of the California State Labor code.

Project Specifications

Scope of Work: Prepare a Final Design, Plans, Specifications, Cost Estimates, and Special Contract Requirements (SCR) for the design of 25 road crossing upgrades or repairs identified in Appendix I.

Site Description: The sites are in the Horse Creek drainage north of the community of Horse Creek California. All sites are located on the Klamath National Forest along forest system roads. Preliminary inspection and site analysis has been done by the KNF.

***Timing*:** This scope of work is intended to prepare a contract package to be advertised and awarded in 2021. As such, field work would be accomplished during the spring and early summer of 2021. Initial design concepts would be completed and agreed upon with the Shasta Valley RCD. Due dates for final design and contract preparation, including all necessary reviews and approvals are discussed below.

Contract Elements

1. **Field Data Collection and Processing:** All field work described below, at a minimum, shall be done for the project site. The design should maintain the channel dimensions so there is no restriction at high flow conditions. The hydraulic analysis may be completed using one dimensional, steady flow cross section models or water surface profile analysis.

2. **Preliminary Design and Consultation with SVRCD and KNF:** A conceptual design for the sites will be determined in coordination with the Project Manager for SVRCD and Engineering

staff for KNF. The road profile shall provide minimum cover over any proposed structures. The structure selection would be based on field observations and construction constraints. The intent is to minimize design costs by not requiring unnecessary evaluation of alternatives.

The preliminary project design includes culvert size, gradient, location and material size. The design methodology shall follow that presented by (USDA 2008). Where appropriate, structures shall be placed consistent with longitudinal profile to prevent excessive aggradation or headcutting. Use of riprap will be minimized and generally used only to protect the slopes of the fill around the structure ends. Only moderate alignment or elevation changes of the channel are expected. Minimal alignment changes of the road are expected; in some cases the finish grade of the road over the structures may be raised/lowered.

Source of embankment (if insufficient source on site), aggregate and rock products are commercial. Riprap source must be approved by the Project Manager. Riprap shall be of sufficient size to be retained during peak flow conditions. Road surfacing shall match the existing road surface.

Design criteria are as follows:
Design Loadings: Per AASHTO;
Design Vehicle: HS-25 Loading;
Roadway Width: 14-20 feet clear width, varies by site. Road width shall match existing over corrugated metal structures;
Hydraulics: HW/D ratio no greater than 0.8 during 100-year flood for corrugated metal structures.

3. **Final Design and Contract Preparation:** Final design for this project shall include construction plans, a list of applicable standard and special contract requirements (SCR), a list of applicable submittals, an engineering cost estimate (unit costs and quantities), engineering calculations (structural, unit cost, and quantity), and a schedule of items. Final design plans shall be prepared utilizing provided Forest Service title blocks and borders. All documents shall be prepared using the most current version of the appropriate software, i.e., AutoCAD, MS Word, MS Excel, etc.

4. **Specifications:** Culvert design and construction specifications shall comply with Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-014, Publication No. FHWA-FLH-14-001. Plans and special specifications shall be in English units.

5. **Permitting:** Acquisition of necessary permits and clearances will be the responsibility of the Shasta Valley RCD and the Forest Service. However, input from the consultant will be required for permit preparation. Specific permit-related sub tasks include:

Calculation of anticipated areas of disturbance, including cut and fill volumes;
Calculation of permanent and temporary riparian and wetland disturbance acreage;
Development of site erosion control plan.

Deliverables and Due Dates

The 100% and PS&E submittal sets shall include but not be limited to:

1. A complete set of construction drawings with plan view, profile data, and necessary typical details and cross sections. All plan sets shall be half sized on 11"x 17" Sheets. An example of required design work is included in Appendix II.

2. Listing of anticipated Standard Specifications and Special Contract Requirements to accompany the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-03 listed. The specifications name and numbers shall correspond to the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-14, Publication No. FHWA-FLH-14-001.

3. A cost estimate and Schedule of Items that lists the specific item numbers, item description, units, quantities, unit costs, item total cost, and total estimated project cost.

4. Design assumptions and applicable engineering design calculations.

5. Meetings with Shasta Valley RCD Project Manager to 1) review the sites in the field, 2) finalize structure selection and design alternatives via conference call, and 3) discuss and incorporate review comments via conference call.

6. Locations of culverts and rolling dips shall be staked in the field by the contractor.

Schedule and Requirements

1. Two (2) sets of the 100% review submittal– due **August 31, 2020**.

2. One (1) set of the PS&E package shall be submitted to verify the incorporation of 100% comments or stipulate why a 100% comment was not done – the due date shall be determined at the 100% review meeting.

3. Once all 100% comments have been resolved, four (4) sets of final PS&E package including design, quantity, and unit cost calculations, and a construction schedule shall be submitted by **September 30, 2021**. The final PS&E package shall include, but not be limited to, one (1) set of final design plans, specifications, schedule of items, construction schedule, and any calculation revisions. The electronic formats shall consist of AutoCAD and PDF for all Plans, MS Word for the specifications and schedule of items, MS Excel for the engineering estimate, and Adobe Acrobat for all other documents (*.PDF) files. The PDF document names shall correspond to the titles given the documents. The plans, list of specifications, and all calculations shall be sealed, signed and dated by a Professional Engineer licensed in the state where the project will be constructed.

Government Furnished Items

1. Forest Maps with the approximate road crossing location shown.
2. Design review and feedback.
3. Site meeting to explain site survey and project design expectations.
4. Standard AutoCAD details, as available.
5. A list of any Threatened and Endangered Species that are affected by the construction.
6. An electronic copy of possible bid items and special contract requirement sections.

Review

Shasta Valley RCD and Forest Service review of the work at the various submittals shall be for overall conformance with the project scope of work, design criteria, and generally accepted practices of design and drawing preparation.

Payment Schedule

Contractor will be paid for expenses based on the invoices submitted on a monthly basis. The schedule is negotiable and will be refined during the contracting process. The SVRCD must receive invoices no later than the 5th of each month in order to adhere to the SVRCD's billing schedule.

Payments to the contractors shall be paid within thirty (30) days from receipt of the funds by the SVRCD from the funding agency, *which can be as much as three months after invoice submittal for this particular grant*. SVRCD will make every effort to expedite payment to the contractor.

Bid Details

This contract will *not* be awarded based solely on the lowest bid. This project requires experience and references as described in the Additional Information section under the subheading *References & Required Experience* (p. 7). Bidders will be evaluated using the Contracting Services Scoring Sheet (See Appendix I: Bid Form Attachment No. 5).

The Contractor shall submit the bid for activities identified in this Bid Packet using the Bid Forms within Appendix I. Bid may be rejected if the Bid Forms are not used or are incomplete.

Additional Information

Directions to the Project location: The project area is located in the upper watershed of Horse Creek Northwest of the community of Horse Creek, California west of Yreka in the County of Siskiyou (see vicinity map).

Access: The contractor will work to minimize road disturbance from vehicular travel by limiting travel during wet periods on native surface roads.

Subcontracting: It is not expected that subcontractor will be used for this project.

References & Required Experience: Contractor will provide proof of completion and references three (3) projects of similar size and scope (as determined by the SVRCD Project Manager). References should speak to the contractor's experience in the type of work identified in the Project Specifications (p. 3). References should include a contact name and current phone numbers.

Disputes: Disputes regarding awarding of bids will be decided by the SVRCD Board. Written appeal must be received within 10 days of award.

Maps and Measurements: The maps are provided as Attachments. They are intended to show only the general location of the treatment areas. If the maps conflict with the field marking, the field markings shall govern. Positions of features are approximate.

Attachments

Appendix I

- Bid Form Attachment No. 1: Site location and proposed treatment table
- Bid Form Attachment No. 2: Contractor Information

- Bid Form Attachment No. 3: Bid Schedule
- Bid Form Attachment No. 4: Project Questionnaire
- Bid Form Attachment No. 5: Contractor Scoring Sheet Example (Contractor does ***not*** fill out)
- Bid Form Attachment No. 6: Work Plan

Appendix II

- Exhibit A: Site Location Map

  Project Map
- Exhibit B: USFS Engineering Estimates
- Exhibit C: Example design for crossings

Appendix I

BID FORM ATTACHMENT NO. 1: Site location and proposed treatment table

HORSE CREEK WATERSHED LEGACY SITES		
SITE_ID	**Comments/Fix descrtiption**	**Channel Type**
47N05YD - 0.42	Bigger Pipe and Dip	Int
47N05YD - 0.50	FEUP, very high rustline, undersized pipe. Install new properly sized CMP	Int
47N26 - 0.37	Crushed inlet and outlet. Partially clogged, has a high rustline. Install an upsized CMP.	Per
47N26 - 0.71	Swale with annual scour. Crushed 12'' pipe. Install an 18'' CMP	Eph
47N67 - 0.45	Needs larger pipe and dip	Int
47N67 - 0.68	Needs Dip	Int
47N67 - 1.22	High rustline and very corroded, Install new properly sized CMP	Int
47N67 - 1.32	Rotten ditch relief. Needs replacing	Ditch relief
47N67 - 1.88	Undersized pipe, install properly sized CMP	Int
47N67 - 2.40	Existing pipe undersized & highly corroded, Install new properly sized	Int
47N70 - 1.21	Existing undersized pipe. Install properly sized CMP & perform fill reduction	Int
47N70 - 1.32	Install a rolling dip	Eph
47N70 - 4.75	Inlet bent, has FEUP, Install new properly sized CMP and rolling dip	Int
47N70 - 4.81	Culvert clogged and backing up, Install new properly sized CMP & rolling dip	Int
47N70 - 5.07	Outlet partially plugged, FEUP, high rustline. Install new properly sized CMP	Int
47N70 - 5.14	Existing undersized pipe. Install properly sized CMP & rolling dip	Int
47N70A - 0.18	Install a rolling dip	Int
47N70Y - 1.30	Install new properly sized CMP & rolling dip	Int
47N74A - 0.36	Existing undersized pipe. Install new properly sized CMP	Int
47N74A - 0.44	Existing undersized pipe. Install new properly sized CMP	Eph
47N74A - 0.46	Existing undersized pipe. Install new properly sized CMP	Eph
WP 112 47N70	Drafting site with undersized pipe. Install new properly sized CMP	Drafting Site drainage
WP 120 47N67	Spring drainage drop inlet covered by a slump, totally blocked, Install new properly sized CMP	Eph Spring
WP 121 47N67	Drop inlet with rotten bottom, Install new properly sized CMP	Ditch Relief
WP 122 47N67	Drop inlet with rotten bottom, Install new properly sized CMP	Ditch Relief

BID FORM ATTACHMENT NO. 2: Contractor Information

Bid Due Date: May 11, 2021 at 2:00 pm

General Information:

Company Name: _____

Company Address: _____

Contact Name: _____

Phone: _____ _____

Email: _____ _____

Years in Business: _____ _____

References: Provide 3 references, with contact names and phone numbers for each reference.

1. (CONTACT NAME) _____ (PHONE) _____

   (BUSINESS NAME) _____

2. (CONTACT NAME) _____ (PHONE) _____

   (BUSINESS NAME) _____

3. (CONTACT NAME) _____ (PHONE) _____

   (BUSINESS NAME) _____

Bid Validity Please specify the length of time this bid is valid for (must be a minimum of 30 days).

_____

Bid Information

Bidder agrees to accept as full payment the following total base bid price:

_____ dollars
(in words)

_____
(in numerals)

In the event of a discrepancy, amount in words shall prevail.

The bidder hereby acknowledges that the total base bid price is based solely on the bidder's own estimate of costs and includes all applicable taxes, overheads, and profit.

Contractor
Signature_____

Additional bid Information: Please provide detailed information as outlined in the bid schedule below. Costs shown above should include all materials, labor, taxes, overheads, and profit, which must also be included in following schedule.

BID FORM ATTACHMENT NO. 3: Bid Schedule

Task No.	DESCRIPTION (confirm based on plans and specifications)	QTY.	UNIT	UNIT PRICE	TOTAL
1.0	Site review and investigation	1	each		
2.0	Layout and staking of sites	1	each		
3.0	As Built Specifications for legacy sites	25	designs		
Total Bid Cost:					

Pay items Description:

1.0 Site review and investigation

The bid price for this item shall include all equipment, manpower, mobilization, insurance, and bonding to complete the work described in the specifications. The contactor will visit each site and collect necessary data to complete design work.

2.0 Layout and staking of sites

The bid price for this item shall include all **labor** and **equipment** to identify treatment locations and stake the area for implementation contract.

3.0 As Built Specifications and drawings for legacy site treatments

The bid price for this item shall include labor for engineering design and drawing for treatments described in the solicitation.

BID FORM ATTACHMENT NO. 4: PROJECT QUESTIONNAIRE

Please fill in the Contractor's project schedule below:

SVRCD Schedule

Bid Packet: March 15, 2021
Question Deadline: April 26, 2021; 5:00 pm
Answers provided to contractor from SVRCD: April 30, 2021
Bids Due and Opened: May 11, 2021; 2:00 pm
Bidder Selected and Awarded: By May 14, 2021
Project Complete: By September 30, 2021

Contractor's Schedule (please write dates in space provided after each milestone **)

**Review sites and collect data by:

**Layout and staking of sites completed by:

**Final 100% designs provided to SVRCD by:

**Final Invoice to SVRCD by:

Please Initial _____ if Contractor understands that the above schedule is binding and will be *used to determine contractor's suitability for the project*, as well as evaluating contractor performance.

BID FORM ATTACHMENT NO. 5: Contractor Bid Scoring Sheet to be completed by SVRCD. **(Contractor does NOT fill out)**

Contractor Bid Scoring Sheet			
Funding Source:	National Fish and Wildlife Foundation grant		
Project Title:	Horse Creek Road Crossing Engineering Design		
Bidder/Contractor:			
Lump Sum Bid Amount:			
Where does this Bid rank?			
		Y	N
	License(s) necessary to perform project:		
Experience with similar projects (based on References and/or RCD experience with Contractor and/or what is listed as experience):			
Exhibits an understanding of project through experience or has provided a sufficient workplan:			
Following requirements will be evaluated on the following scoring criteria:			
Scoring Criteria:	*5 = Excellent*		
	3 = Adequate		
	0 = Inadequate (cause for rejection of bid)		
	Guarantee on Services:		
	Engineering Design Experience:		
	Ability to implement project within stipulated timeframe:		
	Licensed to perform work:		
	Proposal for completing tasks:		

BID FORM ATTACHMENT NO. 6: WORK PLAN

Please use the following space to describe in sufficient detail the work plan or methods you will employ to gain site access and accomplish the project according to specifications. This will include a full description of how the project will meet the site requirements and prevent damage to infrastructure. You may attach a written response to this packet if needed.

Appendix II

Attached Files

Exhibit A – Vicinity map
Project map

Exhibit B – USFS Engineering Estimates

Exhibit C – Example Design Drawings