AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

AgendaTitle:
Authorization for County Manager Signature; Design of Maintenance Repairs to Two Existing Whitewater Features and Support for Public Process; Gunnison County Whitewater Park Repair Project; McLaughlin Whitewater Design Group; $19,634

Action Requested: County Manager Signature

Parties to the Agreement: McLaughlin Whitewater/Gunnison County

Term Begins: July 2014 **Term Ends:** 12/31/2014 **Grant Contract #:**

Summary:
GOCO advised us that for our next grant submittal we needed additional engineering and more public input. This proposal will provide the needed engineering and the drawings needed for our public outreach.

Fiscal Impact: $19,634.00

Submitted by: Marlene D. Crosby **Submitter's Email Address:** mcrosby@gunnisoncounty.org

Finance Review: (●) Required ( ) Not Required

Comments:

This project isn't included in the 2014 adopted budget as there wasn't enough specific information available at that time. There has been discussion regarding moving a project along with GOCO and other funding partners. A budget amendment will be finalized when totals are known for the 2014 portion.

Reviewed by: GUNCOUNTY1\lNienhueser Discharge Date: 7/24/2014

County Attorney Review: (●) Required ( ) Not Required

Comments:

Reviewed by: GUNCOUNTY1\atrezise Discharge Date: 7/23/2014 Certificate of Insurance Required Yes ( ) No (●)

County Manager Review:

Comments:

Reviewed by: GUNCOUNTY1\mbirnie Discharge Date: 7/25/2014

(●) Consent Agenda ( ) Regular Agenda ( ) Worksession Time Allotted:

Agenda Date: 8/5/2014 Follow Up Agenda Date:

Revised April 2013

McLaughlin Whitewater
design group
A DIVISION OF MERRICK & COMPANY

July 10, 2014

Marlene Crosby
Gunnison County Public Works
195 Basin Park Drive
Gunnison, CO 81230

RE: Gunnison Whitewater Park Maintenance – Professional Design Services

Dear Ms. Crosby:

McLaughlin Whitewater Design Group (MWDG), a Division of Merrick & Company, is submitting this scope of work and budget to complete professional services for the design of maintenance repairs to two existing whitewater features and provide support for public process.

BACKGROUND

Gunnison County retained MWDG in the fall of 2013 to evaluate three existing whitewater features (designed by others) part of the Whitewater Park in Gunnison, CO. MWDG prepared a report from the site evaluation titled *"Gunnison Whitewater Park Site Evaluation"* dated October 25, 2013. Evaluations found that two of the features had moderate to significant structural damage. It was recommended that Feature #2 and #3 (downstream most structures) be repaired due to potential safety issues and channel/bank instability that could result from complete failure of the structures. A planning budget of approximately $700k was presented for construction of recommended improvements. The design scope presented herein is based on the site evaluations and recommendations in this report.

Gunnison County is currently seeking a GOCO grant from the State of Colorado. An application was completed past spring. John Messner worked as a consultant for the County in preparing the grant application with support on technical items from MWDG. Unfortunately, the project was not selected for a grant. Debrief with GOCO revealed two areas of needed improvement: Public process and further design development. A second round of grant applications are due in September. The scope herein is intended to improve on the identified weak areas.

Permitting is an important aspect in planning, designing and building the project, as well as, the grant application. Permits from the United States Army Corps of Engineers (CWA 404), the Colorado State Department of Public Health and Environment (CWA 401) and local entities will be required. It should be anticipated that the CWA 401 and 404 permits will take 6-8 months to obtain, depending on project specific requirements (Nationwide 404 vs. Individual 404 permit – unclear which will be required at this time). Mr. Messner has made initial contact with the Colorado Parks & Wildlife regarding this project and Tim Lapello at Bio-Environs provided a review of required permits as part of the grant application work. Our experience is that permitting for whitewater projects similar to this one usually dictates the project schedule and

should therefore be pursued as soon as possible. Permitting/support is not addressed in this proposal, but MWDG can add permitting services as requested.

Alpine Survey in Gunnison completed topographic and bathymetric survey of the project area. Water surface elevations have been measured at various river flows. MWDG will use the survey as the basis of the design and hydraulic modeling. The survey mapping has been provided to MWDG in ACAD format.

MWDG is unaware of current property ownership or construction access of the Whitewater Park and associated infrastructure. The proposed maintenance repairs are expected to be constructed generally within the existing site. However, it is recommended that the County research existing property ownership and easements to confirm the proposed project is within current ownership and/or easements. Temporary construction access easement and agreements should be sought by the County. MWDG could perform this work if requested by the County.

The project cannot negatively impact flood conveyance of the Gunnison River. A flood analysis is likely required to evaluate flood conveyance of the repairs. It is anticipated that the County will provide the FEMA "Effective" flood model in electronic HEC-RAS format including the work maps showing the location of model cross section. If not available, replication of the Effective model or work maps will likely increase the cost to complete the flood analysis. MWDG will complete an initial flood analysis during preliminary design to evaluate flood conveyance. A formal analysis, report and permit applications will be completed during the final design phase.

SCOPE

The professional services scope of work has been divided into Special Services and Preliminary Design.

Special Services

Task S1: GOCO Grant Application Support

MWDG will provide technical support in preparing the revised GOCO grant application (effort headed by others):

- Assist in updated write-up of the project description.
- Update of Engineer's Opinion of Costs based on concept design completed (Task P1).
- Project Schedule update
- Write-up describing whitewater park details including design, structures, and other ancillary improvements per any design changes.

Deliverables:

1. *Updated write-ups*
2. *Updated Engineer's Opinion of Costs*
3. *Updated Project Schedule*

Task S2: Public Meeting

MWDG will attend a public meeting, in Gunnison, coordinated and setup by the County to communicate with the public including fisherman, rafters, Ditch 75 representatives, kayakers, and other stakeholders about the project. The goal of the meeting will be to identify/confirm existing issues with the Whitewater Park, create dialogue and buy-in from the public, and ultimately establish goals/objectives to shape the design of the repairs.

Deliverables:

1. *Prepare for & attend Two (2) public meeting (one trip - sequential nights) – Prepare maps & color rendered exhibit of proposed project, deliver a Power Point presentation, collect project input, complete a memorandum summarizing the meeting outcomes.*

Preliminary Design

The objective of preliminary design is to develop the design to support a GOCO grant application due September and complete a 30% design.

Task P1: Concept Plan

Following public meetings (Task S2), MWDG will incorporate design elements desired by the public into a concept plan for submission with the GOCO application. Plan use recent survey base mapping and will build on the MWDG prepared exhibits submitted to GOCO the past spring.

Deliverables:
-Updated Concept Plan (11"x17") for GOCO submission

Task P2: Preliminary Design Coordination Meetings

Conduct meetings with Gunnison County and other Stakeholders (as determined by the County) during preliminary design phase for coordination and review. Meetings will focus on County project requirements, recreation, park spaces, utility conflicts, and approval processes.

Deliverables:
-Conduct up to two (2) meetings by phone
-Meeting Agendas & Minutes

Task P3: Hydrologic & Hydraulic Analysis

River hydrology will be determined based on available USGS and State of Colorado gage data near the site. Hydrologic analysis will focus on recreation months (spring & summer) and include exceedance curves and annual average daily flows. Existing available flood hydrology will be used for flood analysis.

MWDG will perform initial hydraulic analysis for development of the preliminary design using HEC-RAS computer software. Hydraulic calculations will be performed to establish crest geometry for whitewater features and feature hydraulic profiles. An initial flood analysis will be conducted to evaluate potential conveyance impacts.

Adjustable features will be evaluated. Range of adjustment and level of automation will be considered.

Deliverables: -River Hydrology – Graphical results included in design report (Task P6)

Task P4: Structural Analysis

Initial structural calculations and analysis for in-river structures including seepage and piping, uplift, shear forces, and toe scour will be performed to determine the design of subsurface cutoffs, and boulder and riprap sizing. Analysis based on available site soils information. MWDG recommends that a soils investigation be completed at the site. MWDG can coordinate geotechnical work if requested by the County.

Deliverables: -None (analysis summary and results included in design report)

Task P5: Preliminary Design Drawings

Preliminary design will include in-river and bank improvements to a 30% completion level. Site plans, typical sections and details will be completed.

Deliverables: -Preliminary Design Drawings (22”x34”) (Hardcopies (3), Electronic files)
-Total Estimated Sheets: 7
-Cover (1)
-River Plan & Profile (1)
-River Plans (2)
-Wave Shaper Adjustable Feature Details (1)
-Sections & Details (2)

Task P6: Preliminary Design Report

A technical memorandum will summarize design objectives, preliminary design analysis/results, and present an Engineer's Opinion of Costs. Preliminary design plans and details will also be attached to the memorandum. Preliminary design is intended to support permitting efforts for the project.

Deliverables: -Preliminary Design report

ITEMS NEEDED FROM OWNER

MWDG requests the following items from the County to complete the work:

- Existing topographic and bathymetric survey data & mapping including existing whitewater features, jetties, deflectors, bank stabilization, parking areas, structures, vegetation, roads, utilities, accesses, and other site features. Mapping in AutoCAD format with raw survey point files and field notes.
- Water surface elevations in the project reach at varying river flows.
- "Effective" flood model (HEC-RAS electronic files) and work map showing location of model cross sections.
- Available site data – soil investigations/reports, diversion operations data
- Soil Investigation – borings, soil profiles, soil properties from samples, lane weighted creep coefficient, foundation/wall bearing design capacity

METHOD OF PAYMENT

Preliminary Design Phase services will be billed on a not to exceed (unless authorized by the County) hourly rate plus expenses basis using the rates in the existing contract (rates shown in Attachment A). To support the Town's ability to undertake this effort, a discount of over $4,000 on labor has been applied. The resulting budget for design services is **$19,600.**

Special Services will be billed as hourly rate plus expenses. The amount of time required to provide these services is difficult to predict and often outside of the control of MWDG. It is also dependent on work requested by the County. A budget for Special Services of **$7,000** has been included and will not be exceeded without previous written authorization by the County.

Rates will be per existing contract between MWDG and the County.

SCHEDULE

MWDG will make reasonable efforts to perform the scope of work with expedience to meet the following schedule:

- Public Meetings – July 29th and 30th
- GOCO Grant Application Support (including concept rendering) – September 1, 2014

- Preliminary Design – November 15, 2014

ATTACHMENTS

The following attachments are made part of this proposal:

Attachment A Work Task Order

Please feel free to contact us at (303) 964-3333 if you have any questions or if you would like to discuss this proposal further. We look forward to working with the County toward a successful project.

Very truly yours,
McLaughlin Whitewater Design Group, a Division of Merrick & Company

Benjamin Nielsen, P.E.
Project Manager

ATTACHMENT A
WORK TASK ORDER

McLaughlin Whitewater design group

ESTIMATED HOURS

July 2014		McLaughlin Whitewater Design Group								
	TASK	Senior Project Manager $160	Senior Project Engineer $115	Project Engineer $97	Senior Technician Drafter-Designer $95	Landscape Architect $100	Expenses	MWDG Total 100%	Extended Task	Subtotal Cost
		20	24	146	48	8	$ 1,200	$26,682	$26,682	$26,682
	SPECIAL SERVICES									
S1	GOCO Grant Application Support	3		24				$2,808	$2,808	
S2	Public Meeting - Two day trip, rendering, powerpoint presentation, meeting memorandum	6		32		8	700	$5,564	$5,564	
	Discount - Travel Time & Preparation	-1		-12				-$1,324	-$1,324	
	SUB TOTAL SPECIAL SERVICES									$7,048
	PRELIMINARY DESIGN							$0	$0	
P1	Concept Plan - 11"x17" for GOCO application			8				$776	$776	
P2	Preliminary Design Coordination Meetings(by phone)			8				$776	$776	
P3	Hydrology & Hydraulic Analysis	4	16	48				$7,136	$7,136	
P4	Structural & Subsurface Supporting Analysis	4		16				$2,192	$2,192	
P5	Preliminary Design Drawings - 4 Sheets	4	8	24	48		300	$8,748	$8,748	
P6	Preliminary Design Report	2		12			100	$1,584	$1,584	
P7	QA/QC	8		1			100	$1,477	$1,477	
	Discount - QA/QC, Phone Meetings, Rpt	-10		-15				-$3,055	-$3,055	
	SUB TOTAL PRELIMINARY DESIGN									$19,634