

EXHIBIT B: COST ESTIMATE BREAKDOWN

COST FOR ENGINEERING SERVICES
 WATER TREATMENT PLANT OPTIMIZATION PROJECT
 TASK ORDER NO. 001 - PHASE 1 PRE-DESIGN
 MOUNTAIN REGIONAL WATER DISTRICT

TASK DESCRIPTION	CAROLLO TEAM													HOURS AND COSTS									
	Alan Domonoske Project Manager	Brad Buswell Assistant Project manager	Craig Ashcraft Quality Manager	Dan Hugaboom Overall Process Lead	Viking Edeback GAC Lead	Stetson Bassett Chemicals/Solids Lead	Jacob Baer Civil Lead	Chris Cavalho Electrical Lead	Matt Hatch Instrumentation Lead	Matt Yates Structural Lead	Jason Rozgony Cost Estimating Lead	Project Professionals	Professional Engineers	Assistant Professional Engineers	Senior Technicians	Technicians	Clerical / WPs	Total Labor Hours	Total Labor Costs	PECE	Other Direct Costs	TOTAL ESTIMATED COSTS	
Task 1 Project Management																							
2024 Labor Rate	\$280	\$220	\$280	\$250	\$220	\$220	\$250	\$250	\$250	\$220	\$220	\$190	\$170	\$160	\$130	\$99	\$15	\$19,139	\$1,215	\$600	\$20,954		
1.1 Project Management Activities	16	28	0	4	0	0	0	0	0	0	0	0	0	0	0	0	81	\$19,139	\$1,215	\$600	\$20,954		
1.2 Progress Meetings	8	14		4													26	\$6,320	\$390		\$6,710		
Task 2 Preliminary Activities																							
2.1 Project Kickoff Meeting	4	12	2	30	16	24	0	0	0	0	16	8	32	0	5	190	\$41,376	\$2,850	\$1,200	\$45,426			
2.2 Evaluation of Existing Information	4	24		8	8	8					8	8	16		1	84	\$17,760	\$1,260	\$600	\$19,020			
2.3 Initial Site Visits	12	16		16		12							16			56	\$13,520	\$840	\$1,200	\$15,560			
2.4 Develop solution to GAC contractor water level	2	4		2	8											30	\$5,760	\$450		\$6,210			
2.5 Initial stakeholder meetings	4	8	2	2												20	\$4,336	\$300		\$4,636			
Task 3 Bench-scale Testing																							
3.1 Develop bench testing protocol	10	40	4	10	0	10	0	0	0	0	22	16	176	0	4	292	\$53,856	\$4,380	\$80,000	\$138,236			
3.2 Jar testing activities	2	8	2	2	2	2					2	16	16			34	\$6,820	\$510		\$7,330			
3.3 MF-Zeolite bench testing at Water ARC®	4	24		4		4					16	16	120			188	\$34,040	\$2,820	\$70,000	\$106,860			
3.4 Bench Testing TM (draft and final)	4	8	2	4		4					4	40				0	\$0	\$0	\$10,000		\$10,000		
Task 4 Full-scale Testing																							
4.1 Develop modifications and testing plan	14	56	6	52	0	0	0	0	0	0	28	32	100	0	6	294	\$59,754	\$4,410	\$0	\$64,164			
4.2 Coordinate with Utah, DDW	4	12	2	8							8	8	24			66	\$13,440	\$990		\$14,430			
4.3 On-going testing support	2	4	2	4												14	\$3,198	\$210		\$3,408			
4.4 Full-scale testing TM (draft and final)	4	24		36							16	24	36			140	\$29,240	\$2,100		\$31,340			
Task 5 Conceptual Design																							
5.1 Develop alternatives	30	72	8	38	34	34	8	8	8	8	52	52	128	0	8	496	\$103,292	\$7,440	\$1,000	\$111,732			
5.2 Initial screening of alternatives	4	8		8	8	8	4	4	4	4			24			76	\$16,120	\$1,140		\$17,260			
5.3 Develop short-listed alternatives	4	8	4	4	2	2							8			28	\$6,040	\$420	\$500	\$6,960			
5.4 Evaluate and recommend alternative	12	36	4	16	16	16	4	4	4	4	48	48	48			268	\$56,680	\$4,020	\$500	\$60,700			
5.4 Conceptual Design TM (draft and final)	4	8		4	4	4							8			32	\$6,920	\$480	\$500	\$7,900			
Task 6 Funding Assistance																							
6.1 Funding Assistance	6	12	4	6	4	4					4	4	40			92	\$17,532	\$1,380	\$0	\$18,912			
TOTALS	96	260	20	134	50	68	8	8	8	8	138	108	436	0	23	1,373	\$281,817	\$20,595	\$82,800	\$385,212			

MOUNTAIN REGIONAL WATER SPECIAL SERVICE DISTRICT

WATER TREATMENT PLANT OPTIMIZATION

EXHIBIT A

TASK ORDER NO. 001

SCOPE OF WORK

Mountain Regional Water Special Service District (District) owns and operates the Signal Hill Water Treatment Plant (SHWTP). Due to increasing demand and challenges with the existing facility, the District is looking to improve and expand SHWTP from its current firm capacity of 2.6 MGD to 5.4 MGD, the maximum available raw water from the Lost Canyon Importation Project.

The key objectives of this project are to retrofit and optimize SHWTP to reliably treat 5.4 MGD, and improve operations, maintenance, and safety.

This Task Order No. 1 is the scope of work to provide engineering for Phase 1 of the project—preliminary design. Future task orders will cover subsequent phases, including final design and construction management services. The Phase 1 task order is divided into distinct tasks shown in the Table below.

PHASE	TASKS
1 – Pre-Design	1 Project Management 2 Initial Matters 3 Bench-scale Testing 4 Full-scale Testing 5 Conceptual Design 6 WIFIA Loan Assistance
2 – Detailed Design	Future Task Orders
3 – Construction	Future Task Orders

The details of Phase 1, including the associated tasks and subtasks that Carollo Engineers (ENGINEER) will complete are detailed herein. Scope and fee for Phases 2 and 3 will be determined after the project direction is defined during preliminary design and included in future task orders.

GENERAL ASSUMPTIONS

The following list of assumptions apply to all elements of this scope of work, unless specifically indicated otherwise.

1. General project collaboration and coordination between District and ENGINEER, outside workshops and meetings, shall be facilitated through email and phone/Teams (screensharing).
2. Submittals shall be provided in electronic copy (.pdf and .docx) and transmitted via email or secure file transfer. All deliverables shall be electronic only unless hard copies are

specifically indicated. Hard copy drawings, when provided, shall be half-size (11x17), unless specifically indicated otherwise.

3. Meeting minutes and reports will include both a draft version and a final version, unless specifically indicated otherwise. Final versions will incorporate responses to comments on the draft version. If no comments are provided within the agreed upon period, the draft version will be considered final.
4. Meeting notes and related materials shall be transmitted electronically (.pdf and/or .docx) via email.
5. District comments on meeting minutes and reports will be provided in a single, compiled, track changes word document or pdf file, submitted at the end of the District's review period. Design submittal reviews will be conducted in a shared Bluebeam review session (or alternative mutually agreed upon review/comment system). District's project manager (or their designee) will compile and edit comments as needed prior to distribution to the ENGINEER to eliminate and resolve conflicting comments. ENGINEER will incorporate and address comments.
6. ENGINEER shall provide workshop and meeting agendas and review documents at least two working days prior to workshops. Minutes will be prepared for each meeting or workshop and will be provided within one week following the meeting.
7. The District will have two weeks for review of each milestone pre-design and design deliverable.
8. District shall furnish the ENGINEER available studies, reports and other data pertinent to the ENGINEER's services; obtain or authorize the ENGINEER to obtain or provide additional reports and data as required; furnish to the ENGINEER services of others required for the performance of ENGINEER's services hereunder, and the ENGINEER shall be entitled to use and rely upon all such information and services provided by District or others in performing the ENGINEER's services under this Agreement.
9. All design deliverables and reports will receive a formal quality review, conducted internally by the ENGINEER team and documented, before being submitted to the District.
10. *Opinions of Probable Construction Cost:* OPCC's will include simplified estimating factors including scope and cost estimating contingency factors and an expected accuracy range consistent with prescribed Association for the Advancement of Cost Engineering (AACE) metrics.

PHASE 1 – PRE-DESIGN

The purpose of the pre-design phase is to review existing information, conduct bench-scale and full-scale testing, and develop conceptual design including alternatives evaluation. These evaluations will inform project decisions and direction, ultimately confirming a conceptual design that will define the project that will move into the detailed design phase.

Task 1: Project Management

The purpose of this task is to direct project pre-design activities, while maintaining the project within the contracted scope, schedule, and budget. This includes project setup, administration, monthly invoicing, and client and team coordination.

Subtask 1.1: Project Management Activities

ENGINEER will manage the project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete the project.

Subtask 1.2: Progress Meetings

ENGINEER shall conduct regular project manager phone check-ins with the District's Project Manager to discuss project progress, identify issues, and answer project questions as they arise.

Task 1 Assumptions:

- Invoices for the ENGINEER's Services and expenses shall be reviewed and signed by the ENGINEER's Project Manager before being sent to the District. Invoice format and content shall conform with the District's invoicing requirements. Invoices will be submitted monthly.
- The assumption for PM progress meetings is 1-hour virtual meetings every other week.
- The assumed duration of Phase 1 is 7 months (late May through Dec 31, 2024).

Task 1 Meetings/Workshops:

1. Bi-weekly progress meetings

Task 1 ENGINEER Deliverables:

1. Monthly Progress Reports and Invoices

Task 2: Preliminary Activities

The purpose of this task is to review the necessary information and background to successfully deliver this project. This includes evaluation of existing data, review of previous investigations, site visits, and initial meetings with key stakeholders. Additionally, ENGINEER will provide assistance to identify solutions to maintain the water level in the lag GAC contactors.

Subtask 2.1: Project Kickoff Meeting

A kickoff meeting will be held at the District's facilities. The kick-off meeting will confirm overall project goals, review our project and management approach, identify roles and responsibilities, establish project communication and collaboration protocols, and review scope and schedule. The kickoff meeting will confirm the evaluation methodology and criteria that will be used to select a preferred alternative. ENGINEER will identify any data gaps or additional data needs based on the information received prior to the kickoff meeting.

Subtask 2.2: Evaluation of Existing Information

The ENGINEER will review all previous investigations conducted by the District and previous ENGINEERs, including process evaluations and recommendations, alternative analyses, distribution system modeling, and demand projections. The ENGINEER will conduct a desktop evaluation of existing water quality data (including raw, plant operational, finished, and distribution system) and discuss a summary of our information review and ask the District any follow-up questions in a Data Review Workshop.

Subtask 2.3: Initial Site Visits

The District will host the ENGINEER on a site visit of the SHWTP. This site visit will be a key opportunity for the ENGINEER to get familiar with plant details and discuss current operations and any challenges with plant staff, and to brainstorm the improvements to the GAC and the modifications for full-scale testing.

The District and ENGINEER will conduct a site visit of Park City's Quinn's Junction WTP (QJWTP). Since SHWTP and QJWTP treat the same source water, this site visit will provide lessons learned from QJWTP's process train, plant modifications since original construction, and current operations.

Subtask 2.4: Develop solution to GAC contactor water level

The ENGINEER will assist the District in developing a solution and piping modifications to ensure full submergence in the GAC contactors during normal operations. The deliverable will consist of Bluebeam markups of existing drawings and photos as needed.

Subtask 2.5: Initial Stakeholder meetings

The ENGINEER will attend initial meetings between the District and key stakeholders and provide background or conceptual materials to facilitate conversation.

Task 2 Assumptions:

- Kick-off meeting shall be hybrid (in-person and virtual) and attended in-person by four ENGINEER team members: Alan, Dan, Brad, and one other. Virtual attendees may be added to provide additional insights or expertise, where needed. Meeting duration shall be three hours.
- The District will provide water quality data, SCADA downloads, and reports/presentation slides from previous investigations for ENGINEER review. ENGINEER will provide a list of SCADA data requests. District will provide as much of this content as possible prior to the kickoff meeting.
- The site visits to SHWTP and QJWTP are assumed to be 1 full day each and will be attended by four ENGINEER team members (half days at QJWTP for two of the team members). To accommodate out-of-state travel for one team member, it is assumed that the site visits will be scheduled to occur during the same trip (e.g., on back-to-back days).

- Modifications to address GAC contactor water level will be self-performed by the District. ENGINEER will provide Bluebeam markups of drawings and photos as needed—it is assumed that neither CAD drawings nor Utah Division of Drinking Water (Utah DDW) permitting will be required.
- The District will take the lead on key stakeholder meetings, including coordination with key stakeholders, scheduling, agenda development, and leading the meeting. The ENGINEER will provide assistance, including providing background or conceptual materials and attending the meetings.
- Initial stakeholder meetings shall be hybrid (in-person and virtual) and attended in person by two ENGINEER team members. Virtual attendees may be added to provide additional insights or expertise, where needed. It is assumed that there will be two initial stakeholder meetings (e.g., District Board and Park City Municipal Corporation) with a 2-hour duration each, and that two ENGINEER team members will attend in person.

Task 2 Meetings/Workshops:

1. Project Kick-off Meeting
2. Data Review Workshop
3. SHWTP Site Visit
4. QJWTP Site Visit
5. Initial Stakeholder Meetings

Task 2 ENGINEER Deliverables:

1. Pre-meeting materials and meeting minutes for project kickoff meeting
2. Agenda and meeting minutes for the data review workshop
3. Meeting minutes for the initial stakeholder meetings

Task 3: Bench-scale Testing

The purpose of this task is to conduct comprehensive bench scale testing to evaluate chemical optimization for both TOC removal and membrane performance. This task includes jar testing multiple coagulants and doses to maximize TOC removal and to achieve target zeta potentials that previous projects have shown to be optimum for removing solids from membrane modules. A subtask is included to do bench testing in Carollo's WaterArc water laboratory in Boise.

Subtask 3.1: Develop bench testing protocol

ENGINEER will prepare bench testing protocol, including materials, methods, tasks, and roles/responsibilities.

Subtask 3.2: Jar testing activities

ENGINEER will complete jar testing with District assistance on site at the SHWTP using District jar tester and field/lab equipment. ENGINEER will provide data analysis and interpretation and

hold weekly virtual Teams meeting with the District at the completion of each week to summarize results.

Subtask 3.3: MF-Zeta bench testing at Water ARC®

This subtask includes bench testing of SHWTP water using Water ARC's MF pencil module testing apparatus to identify the optimum zeta for solids removal. Raw water samples will be shipped to Water Arc for pencil module testing.

Subtask 3.4: Bench Testing TM (draft and final)

ENGINEER will provide draft and final versions of the Bench Scale Testing TM that summarizes results and makes recommendations.

Task 3 Assumptions:

- ENGINEER staff will conduct jar testing at SHWTP. Three weeks full-time for a junior engineer is assumed, as well as additional support hours from process engineering staff. Senior ENGINEER staff will join weekly virtual update meetings.
- The District will provide the jar testing apparatus and field/lab equipment for pH, turbidity, temperature. ENGINEER will procure and help set up a bench scale zeta meter for the District, including training for District staff.
- The District will provide coagulants and chemicals and be responsible for outside laboratory testing for TOC analysis.
- ENGINEER will provide a zetameter for the duration of the jar testing.
- District will send a 5-gallon carboy of raw water to Water Arc for pencil module testing.

Task 3 Meetings/Workshops:

1. Weekly virtual update meetings during jar testing

Task 3 ENGINEER Deliverables:

1. Bench Testing Protocol
2. Bench Testing TM (Draft and final)

Task 4: Full-scale Testing

The purpose of this task is to conduct full scale testing to evaluate direct filtration performance, including lower flux rates and rerouting XR to treat prior to recycle.

Subtask 4.1: Develop modifications and testing plan

ENGINEER will develop required modifications and a testing plan to conduct full-scale testing. This subtask includes coordination with the District's integrator to make required SCADA modifications.

Subtask 4.2: Coordinate with Utah DDW

ENGINEER will provide coordination support with the Utah Division of Drinking Water to get the full-scale testing plan approved.

Subtask 4.3: On-going testing support

ENGINEER will provide on-going testing support including initial field support to optimize plant operations, on-going data analysis and interpretation, process support, and weekly progress update meetings.

Subtask 4.4: Full-scale Testing TM (draft and final)

ENGINEER will provide draft and final versions of the Full-scale Testing TM that summarizes results and makes recommendations for Phase 1 conceptual design and Phase 2 design.

Task 4 Assumptions:

- Modifications to allow for full-scale testing will be self-performed by the District. ENGINEER will provide Bluebeam markups of drawings and photos as needed—it is assumed that CAD drawings will not be required or provided.
- The District will provide any new equipment for the full-scale testing (e.g., pump to send flocculated water directly to a membrane rack inlet tank). ENGINEER will provide support on equipment selection.
- Coordination with Utah DDW will include one two-hour hybrid meeting (in-person and virtual) attended in person by two ENGINEER team members. Virtual attendees may be added to provide additional insights or expertise, where needed. Any additional coordination with Utah DDW will be via email or phone/Teams.
- ENGINEER will have 1 staff member onsite for 2 days to support initial full-scale startup.
- The District and ENGINEER will conduct weekly 2-hour progress meetings for the first three months after full-scale testing startup. These meetings will be attended by Dan Hugaboom and one other ENGINEER team member.
- ENGINEER will conduct and summarize data analysis of plant operational data for a total of 5 months to compare performance of existing membrane racks and the modified membrane rack. This includes 2 hours per month of Dan Hugaboom's time and 6 hours per month of another team member.
- Fee estimate includes an additional 1 hour per week for 5 months for general support.
- It is possible that full-scale testing will continue beyond the Phase 1 (Task Order No. 1) timeframe. If so, additional on-going support will be provided as part of a future task order.

Task 4 Meetings/Workshops:

1. Meeting with Utah DDW
2. Weekly full-scale testing progress update meetings for the first 3 months
3. Monthly data summaries for 6 months

Task 4 ENGINEER Deliverables:

1. Full-scale Testing Plan
2. Agenda and minutes for meeting with Utah DDW
3. Agendas and minutes for weekly full-scale testing progress update meetings
4. Full-scale Testing TM

Task 5: Conceptual Design

The purpose of this task is to evaluate alternatives for full-scale optimization and expansion of the SHWTP and to develop conceptual (approximately 10%) design for the recommended alternative.

Subtask 5.1: Develop alternatives

ENGINEER and the District will develop a list of alternatives to be considered. ENGINEER will provide some initial development of alternatives, including 2D layouts and simple pros/cons list for each alternative.

Subtask 5.2: Initial screening of alternatives

ENGINEER will conduct a workshop with the District to screen the initial list of alternatives down to a short list of no more than 3 alternatives.

Subtask 5.3: Develop short-listed alternatives

ENGINEER will further develop the short-listed alternatives including conceptual layouts, Class 5 cost estimates, implementation plan, and big-picture constructability analysis.

Subtask 5.4: Evaluate and recommend alternative

ENGINEER will present developed short-listed alternatives in a workshop with the District. This workshop will serve as the forum for evaluation of the short-listed alternatives. It is anticipated that a decision for the recommended alternative will be made during this workshop.

Subtask 5.5: Conceptual Design TM (draft and final)

ENGINEER will provide draft and final versions of a Conceptual Design TM that documents the short-listed alternatives, evaluation methodology/evaluation criteria, results, and provides a recommended alternative to carry forward into Phase 2 – Detailed Design. This subtask includes a meeting with the District's Administrative Control Board to summarize the conceptual design.

Task 5 Assumptions:

- The initial alternatives will include a wide range of available options. Alternatives that are not clearly viable due to incompatibility with existing District infrastructure, high costs, or historical poor performance will not be evaluated.

- The short list of alternatives will be made during the initial screening workshop and will include no more than 3 alternatives. Initial screening will be based on general feasibility, high level (order of magnitude) costs for typical installations and typical performance at similar facilities.
- The initial screening workshop will be hybrid (virtual and in person) and attended in person by three ENGINEER team members. Other virtual attendees may attend as needed. Workshop duration will be four hours.
- Detailed alternatives evaluation (after screening) will include Class 5 comparative capital cost estimates and comparative O&M costs (for basic operations metrics including power use, chemical use, and annual maintenance).
- It is assumed that the recommended alternative will be selected without the use of complex evaluation methods (e.g., scoring and/or pairwise comparisons of non-economic criteria, etc.). Rather, criteria such as pros/cons, capital and O&M costs, and general District priorities will be used to select a recommendation.
- ENGINEER will present evaluation of alternatives in a Shortlist Evaluation Workshop. This workshop will be attended by four ENGINEER team members in person, with other attendees joining virtually as needed. Workshop duration will be four hours.
- The meeting to present conceptual design to the District's Administrative Control Board shall be hybrid (in-person and virtual) and attended in person by three ENGINEER team members. Virtual attendees may be added to provide additional insights or expertise, where needed. It is assumed that the meeting will have a 2-hour duration.

Task 5 Meetings/Workshops:

1. Initial Screening Workshop
2. Shortlist Evaluation Workshop
3. Conceptual Design Meeting with the District's Administrative Control Board

Task 5 ENGINEER Deliverables:

1. Agenda and minutes for Initial Screening Workshop
2. Agenda and minutes for Shortlist Evaluation Workshop
3. Agenda and minutes for the Conceptual Design Meeting with the Administrative Control Board
4. Conceptual Design TM

Task 6: Funding Assistance

This task provides an allowance for support from Carollo's funding experts to assist the District in obtaining WIFIA or other types of funding.

Subtask 6.1: Funding assistance

PHASE 2 – DETAILED DESIGN

Detailed scope for Phase 2 will be determined after completion of Phase 1.

PHASE 3 – CONSTRUCTION

Detailed scope for Phase 3 will be determined after completion of Phase 2.