EXHIBIT A
Scope of Work
Amendment No. 2
City of Snoqualmie
Water Reclamation Facility Phase 3 Improvements
Kimball Creek Lift Station Services During Construction

December 2022

Background

The City of Snoqualmie (City) owns and operates the Water Reclamation Facility (WRF) and the Kimball Creek Lift Station (LS). To accommodate projected flows and loads, handle replacement of aging components installed over 20 years ago, and meet regulatory requirements, the City's 2021 *General Sewer Plan* (GSP) identified multiple projects for Phase 3 of the WRF Improvements and the Kimball LS. These projects will be sequenced to mitigate impacts to the existing facility and promote efficient construction. RH2 Engineering, Inc., (RH2) envisions this work as generally combined into the following two construction projects. RH2 completed the design of the improvements for the Kimball Creek LS in November 2022.

The previous Scope of Work included the following tasks:

Task 1 – Project Management
Task 2 – Preliminary Design of Major WRF Improvements
Task 3 – Preliminary and Final Design of Kimball Creek LS
Task 4 – Management Reserve
Task 5 – Services During Bidding (SDB) for Kimball Creek LS
Task 6 – Final Design of Major WRF Improvements
Task 7 – Washington State Department of Ecology (Ecology) Review and City Permitting for Major WRF Improvements
Task 8 – SDB for Major WRF Improvements

This Scope of Work includes the addition of the following tasks:

Task 9 – Services During Construction (SDC) for Kimball Creek LS
Task 10 – Supervisory Control and Data Acquisition (SCADA) Programming for Kimball Creek LS

Future tasks include the following:

Task 11 – SDC Major WRF Improvements
Task 12 – SCADA Programming for Major WRF Improvements
Task 13 – Preliminary Design for Minor WRF Improvements (as identified in the GSP)

This Scope of Work captures elements for SDC for the Kimball Creek LS project.

Task 9 – Services During Construction for Kimball Creek LS

Objective: Provide engineering services during construction for the Kimball Creek LS improvements project to the level of effort stated in the Fee Estimate. *If additional effort is needed, that extra work will be mutually determined by the City and RH2.*

Approach:

9.1 Attend Pre-Construction Meeting: Prepare pre-construction meeting agenda. Send notice of meeting location, date and time, and agenda to invitees. Facilitate the meeting. Prepare meeting minutes and distribute to attendees. Provide hard copies of the plans and specifications for use by the City, contractor, and RH2 during construction.

9.2 Provide Construction Document Reviews: Consult with the City on construction costs, scheduling, and constructability issues. Review shop drawings and catalog submittals for items requested in the technical specifications. Provide a written response to the contractor and the City accepting or rejecting each shop drawing and reviewed catalog submittal. Review written requests for information (RFIs) and change order proposals, and provide written responses to the contractor and the City. Review the contractor-provided operations and maintenance (O&M) manuals for consistency with installed valves and instrumentation.

9.3 Coordinate Temporary Pumping Startup Activities: Coordinate with the City and contractor for the contractor's set up of the temporary bypass of the sewage system. Attend two (2) site visits, one (1) each for the contractor's completed set up of the system and prior to commissioning the temporary pumping. Coordinate with the City and contractor for the scheduled testing and startup activities. *This coordination will include the review and supplementation of the testing protocols developed by the contractor and temporary pump representatives, and review of the tests and request for corrections*. Review and supplement startup protocols developed by the contractor and manufacturers' representatives.

9.4 Provide On-Site Observations and Attend Construction Progress Meetings: Provide up to fifty (50) on-site construction observations and attend up to ten (10) construction progress meetings as requested by the City. Prepare a construction observation report for each visit and meeting agenda and minutes for the construction progress meetings.

9.5 Attend City and RH2 Construction Coordination Meetings: Attend up to ten (10) meetings to occur between RH2 and the City prior to the construction progress meetings. These meetings will review the construction progress meeting agenda and cover design issues during construction. *It is assumed these meetings will be held virtually.*

9.6 Attend Startup and Final On-Site Observation: Provide on-site observation to document activities and coordinate with the City and contractor during startup. Discuss with the City and contractor work that has not been completed by the contractor (punch list) and discuss contractor rectification. Attend final on-site observation with the City and prepare a letter of recommendation for project acceptance to the City.

9.7 Prepare Construction Record Drawings: Obtain contractor and City construction field records. Review field records, including RH2's, and revise the design plan drawings to construction record plan drawings.

Assumptions:

- *The City will be the primary point of contact for the general contractor during construction. RH2 will provide daily construction observation services for up to fifty (50) days.*
- *The City will review monthly pay requests by the contractor. RH2's support of the pay request process will be limited to assisting the City's tracking of schedule of values progress.*
- *The observation for the grouting around the pre-rotation basin for Pump No. 1 is included in one of the on-site observations task.*
- *RH2 is not responsible for site safety, for determining means and methods, or for directing the contractor in their work.*

Provided by City:

- Meeting space and attendance at the pre-construction meeting and the construction progress meetings.
- Primary point of contact for the general contractor.
- Construction documentation correspondence and construction activities scheduling coordination with RH2.
- Review and process payments to the contractor.
- Contractor and City construction field records.

RH2 Deliverables:

- One (1) PDF and one (1) Word file (for the City) of the pre-construction meeting agenda and hard copies for attendees.
- Notice to invitees of the pre-construction meeting location, date, and time.
- One (1) PDF and one (1) Word file (for the City) of the weekly construction meeting agenda and hard copies for attendees.
- One (1) hard copy, one (1) PDF, and one (1) Word file of the pre-construction meeting minutes.
- One (1) hard copy, one (1) PDF, and one (1) Word file of the weekly construction meeting minutes.
- Two (2) full-size hard copies and two (2) half-size hard copies of the bid-ready construction plans, two (2) hard copies of the bid-ready construction specifications and appendices, and one (1) PDF of the bid-ready construction plans, specifications, and appendices for the contractor.

- Five (5) hard copies, one (1) PDF, and one (1) Word file (specifications) of the bid-ready construction plans (half-size), specifications, and appendices for the City and RH2.
- Written responses for contractor-provided shop drawings and submittals, O&M manuals, RFIs, and change orders in PDF format.
- Construction observation reports in PDF and Word formats.
- Written responses to contractor-provided testing and startup protocols and for requests to contractor for correction in PDF format.
- Startup checklists and summaries of startup results in PDF and Excel formats.
- Written punchlist to contractor and one (1) hard copy, one (1) PDF, and one (1) Word file for the City.
- One (1) hard copy, one (1) PDF, and one (1) Word file of letter of recommendation for project acceptance to the City.
- Two (2) full-size hard copies, one (1) PDF, and AutoCAD .dwg files of the construction record plan drawings.
- Attendance at factory testing, field testing, startup, and commissioning.

Task 10 – SCADA Programming for Kimball Creek LS

Objective: Provide software services for the new Kimball Creek LS control panel equipment, factory testing, commissioning, startup, and training.

10.1 Prepare SCADA Control Strategy: Document supervisory control and data acquisition (SCADA) control strategy in a technical memorandum for approval by City project staff.

- Identify standards for programmable logic controller (PLC), operator interface (OI), and human machine interface (HMI) software development.
- Identify the control strategy for the facility.
- Identify OI features.
- Provide communications methodology for monitoring and control.

10.2 Develop PLC and OI Software: Develop PLC ladder logic software as required for monitoring and controlling equipment. Develop OI software as required for monitoring and controlling lift station equipment.

10.3 Develop HMI Software: Develop HMI modifications only to add new lift station features to existing application.

10.4 Attend Factory Testing: Attend control panel equipment factory testing at the panel shop fabricators site. Testing report will be included with O&M materials at the end of the project.

10.5 Attend Field Testing, Startup, and Commissioning: Attend field testing, startup, and commissioning, to include the following:

- Attend factory witness testing of the motor control center and pump control panel.
- Test control panel in field.
- Test PLC, OI, SCADA computer systems, and communications equipment for end-to-end data transmission integrity and accuracy.
- Test OI screens for connectivity, software completeness, and accuracy of information displayed.
- Test SCADA alarm, navigation, and intrusion security configurations and functions.

10.6 Develop O&M Materials: Develop Kimball Creek LS SCADA system O&M material.

10.7 Provide Training: Provide on-site Kimball Creek LS SCADA system training to City staff on manual, program, communications, and software operation aspects of the system utilizing the O&M manual as a training aid.

Assumptions:

- *RH2 will use the current City of Snoqualmie LS2 as a standard for the software development (PLC, OI, HMI) where applicable. All new tag names in HMI following LS2 standard.*
- *RH2 will have remote access to Kimball PLC/OI/VFD over the city VPN.*

RH2 Deliverables:

- SCADA control strategy technical memorandum developed during subtask 10.1.
- PLC, OI, and HMI software developed in subtasks 10.2 and 10.3.
- Attendance at factory testing.
- One (1) electronic copy of PLC and OI software.
- One (1) electronic copy of the following items:
    - Project spreadsheet file that includes information about the software configuration, addressing, data point names, alarms, control loops, and descriptions.
    - Kimball Creek LS O&M material for SCADA system software.
    - Testing reports.
- On-site Kimball Creek LS SCADA system training for City staff.

Project Schedule

RH2 anticipates that this project will begin in January 2023 with a target completion of the end of October 2024.

EXHIBIT B

Fee Estimate
Amendment No. 2
City of Snoqualmie
Water Reclamation Facility Phase 3 Improvements
Kimball Creek Lift Station Services During Construction
Dec-22

	Description	Total Hours	Total Labor	Total Expense	Total Cost
Task 9	**Services During Construction for Kimball Creek LS**	**560**	**$ 117,630**	**$ 8,597**	**$ 126,227**
9.1	Attend Pre-Construction Meeting	18	$ 3,962	$ 1,520	$ 5,482
9.2	Provide Construction Document Reviews	104	$ 21,436	$ 775	$ 22,211
9.3	Coordinate Temporary Pumping Startup Activities	16	$ 3,442	$ 188	$ 3,630
9.4	Provide On-Site Observations and Attend Construction Progress Meetings	276	$ 58,204	$ 3,808	$ 62,012
9.5	Attend City and RH2 Construction Coordination Meetings	50	$ 10,600	$ 265	$ 10,865
9.6	Attend Startup and Final On-Site Observation	52	$ 11,774	$ 576	$ 12,350
9.7	Prepare Construction Record Drawings	44	$ 8,212	$ 1,465	$ 9,677
Task 10	**SCADA Programming for Kimball Creek LS**	**127**	**$ 30,487**	**$ 1,286**	**$ 31,773**
10.1	Prepare SCADA Control Strategy	16	$ 3,818	$ 98	$ 3,916
10.2	Develop PLC and OI Software	22	$ 5,406	$ 135	$ 5,541
10.3	Develop HMI Software	18	$ 4,554	$ 114	$ 4,668
10.4	Attend Factory Testing	8	$ 1,864	$ 109	$ 1,973
10.5	Attend Field Testing, Startup, and Commissioning	44	$ 10,676	$ 634	$ 11,310
10.6	Develop O&M Materials	10	$ 2,058	$ 96	$ 2,154
10.7	Provide Training	9	$ 2,111	$ 100	$ 2,211
	PROJECT TOTAL	**687**	**$ 148,117**	**$ 9,883**	**$ 158,000**

EXHIBIT C RH2 ENGINEERING, INC. 2023 SCHEDULE OF RATES AND CHARGES		
RATE LIST	**RATE**	**UNIT**
Professional I	$161	$/hr
Professional II	$178	$/hr
Professional III	$198	$/hr
Professional IV	$217	$/hr
Professional V	$233	$/hr
Professional VI	$247	$/hr
Professional VII	$265	$/hr
Professional VIII	$278	$/hr
Professional IX	$278	$/hr
Technician I	$126	$/hr
Technician II	$137	$/hr
Technician III	$154	$/hr
Technician IV	$169	$/hr
Technician V	$184	$/hr
Technician VI	$203	$/hr
Technician VII	$220	$/hr
Technician VIII	$231	$/hr
Administrative I	$84	$/hr
Administrative II	$98	$/hr
Administrative III	$117	$/hr
Administrative IV	$137	$/hr
Administrative V	$158	$/hr
CAD/GIS System	$27.50	$/hr
CAD Plots - Half Size	$2.50	price per plot
CAD Plots - Full Size	$10.00	price per plot
CAD Plots - Large	$25.00	price per plot
Copies (bw) 8.5" X 11"	$0.09	price per copy
Copies (bw) 8.5" X 14"	$0.14	price per copy
Copies (bw) 11" X 17"	$0.20	price per copy
Copies (color) 8.5" X 11"	$0.90	price per copy
Copies (color) 8.5" X 14"	$1.20	price per copy
Copies (color) 11" X 17"	$2.00	price per copy
Technology Charge	2.50%	% of Direct Labor
Mileage	$0.6250	price per mile (or Current IRS Rate)
Subconsultants	15%	Cost +
Outside Services	at cost	

Rates listed are adjusted annually.