FIRST AMENDMENT TO AGREEMENT

This First Amendment to Agreement ("First Amendment") is entered into this ____ day of January 2021 by the City of Pleasanton ("City") and Carollo Engineers, Inc. ("Consultant").

Whereas, on September 2, 2020 the City and Consultant entered into a Design Professional Services Agreement to prepare the basis of design for the Well 5, 6, and 8 PFAS Treatment and Rehabilitation Project ("Agreement"); and

Whereas, additional design professional services are needed from the Consultant related to preparing the basis of design; and

Whereas, the parties desire to amend the Agreement for additional compensation and time for such additional services.

Now, therefore, in exchange for valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1. Section 1 of the Agreement, "Consultant's Services" is amended to read:
"Consultant shall diligently perform the services described in Exhibit A of the Agreement and as supplemented by Exhibit A-1 of this First Amendment, attached and incorporated to the extent consistent with this First Amendment."

2. Section 4 of the Agreement, "Term" is amended to read:
"Time is of the essence. Consultant shall begin work September 7, 2020. The work as described in Exhibit A of the Agreement and as supplemented by Exhibit A-1 of this First Amendment shall be completed by December 31, 2021."

3. The first paragraph of Section 5 of the Agreement, "Compensation" is amended to read:
"For the services to be rendered, City shall pay Consultant on a time and material cost basis with not to exceed limits as defined in Exhibit B of Agreement and supplemented by Exhibit B-1 of this First Amendment, attached and incorporated to the extent consistent with this First Amendment; and shall be in accordance with the Rate Schedule contained in Exhibit B of Agreement. Payment shall be made on a monthly basis upon receipt and approval of Consultant's invoice. Total compensation for Consultant Services and reimbursement for costs shall not exceed $537,374 unless the parties agree pursuant to Section 8, below."

4. This amendment may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with U.S. federal E-Sign Act of 2000 (15 U.S. Code §7001 et seq.), California Uniform Electronic Transactions Act (Cal. Civil Code §1633.1 et seq.), or other applicable law) or other transmission method, and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

5. All other terms and conditions of the Agreement shall remain in full force and effect.

In witness whereof, authorized representatives of the parties have executed this First Amendment to the Agreement as of the date and year first above written.

CITY OF PLEASANTON

_____
Nelson Fialho, City Manager

ATTEST:

_____
Karen Diaz, City Clerk

APPROVED AS TO FORM:

_____
Daniel G. Sodergren, City Attorney

CONTRACTOR

By: _____
Signature

_____
Print name

Title: _____

[If Consultant is a corporation, signatures must comply with California Corporations Code §313]

By: _____
Signature

_____
Print name

Title: _____

Rev. 8/20

Exhibit A-1

Well 5, 6 AND 8 PFAS TREATMENT AND REHABILITATION PROJECT

BASIS OF DESIGN – AMENDMENT 1

SCOPE OF WORK

BACKGROUND

Carollo Engineers, Inc. (CONSULTANT) is currently under contract with the City to perform the Wells 5, 6 and 8 PFAS Treatment and Rehabilitation Project (Project). This scope of work is proposed as an amendment to the Project that includes investigating options for either rehabilitating or replacing the Well 5 and 6 casings and to evaluate treatment alternatives for chromium-6. This work will be integrated with the other improvements being considered at Wells 5, 6, and 8 as part of the Project

Well 5, 6 and 8 Investigation Background:

The original scope of work for the Project (executed September 2, 2020) included a field investigation to evaluate the condition Wells 5, 6 and 8 casings (while the pumps remain in place to avoid disruption to operations and for a lower cost) under "Task 3.1 - Well Analysis at Well 5, 6 and 8". Carollo's sub-consultant (Luhdorff and Scalmanini (LSCE)) mobilized to perform the video inspection of Well 8 (out of service) on September 28, 2020. LSCE was not able to complete the work because the "dummy tool" used to confirm downhole clearances for the camera became unexpectedly stuck between the casing and well pump. LSCE did not attempt to test the camera clearance at Well #6 to avoid the risk of interrupting City operations.

LSCE also reviewed the historical well inspection videos performed previously (by others) under Task 3.1. The well videos provided a visual assessment of the down-hole conditions, which indicated varying degrees of casing corrosion, scale accumulation, and minor structural defects. LSCE summarized the well video reviews in the "Well 5 Video Evaluation", "Well 6 Video Evaluation", and "Well 8 Video Evaluation" Technical Memoranda (LSCE, October 2020).

Based on observations and concerns identified from the historic well videos, and in order to more accurately estimate the remaining life of the well casings, LSCE recommended performing additional field investigations to verify the integrity of the Well 5 and 6 casings by measuring the remaining casing thickness. The inspection requires shutting down each well to remove the pump and perform the inspection. Depending on the well, the shutdown could range from 1 – 4 months. Instead of proceeding with this additional inspection, the City is first recommending to determine the feasibility of rehabilitating or installing new casings for Wells 5 and 6 for the following reasons:

- Based on age, Wells 5 and 6 are beyond the useful life of "typical" well casings (approximately 50 years). It is highly unlikely that the additional field inspections will determine the well casings have a life of more than 5-10 years which would be significantly below the life (20-30 years) of the new PFAS treatment equipment. It is highly likely the investigations are going to determine that significant rehabilitation (i.e. casing lining) or casing replacement is required to get the desired useful life. Therefore, evaluating the feasibility of rehabilitation or replacement seems more appropriate as a first step.
- To the best of the City's knowledge, the Well 6 pump and motor have not been replaced since the original installation in 1964 (pump was possibly rehabilitated in 1999). The City and Carollo agree that removing the Well 6 pump (as part of a casing inspection) presents a significant risk of damage as it is disassembled and that the well pump will likely require replacement. The well would be out of service for 2-3 months if the pump needs replacement.
- Considering Well 8 is off-line until PFAS treatment is installed, Wells 5 and 6 are critical water supply facilities. If these supplies are not available, additional water would need to be purchased from Zone 7, which results in higher operational costs due to the water purchase of Zone 7 water supply.

In conclusion, given the risks associated with pulling Well 5 and 6 pumps to perform downhole investigations, and the high probability that extensive rehabilitation or replacement will be recommended to extend the life of the wells to align with the life of PFAS treatment facilities, the City is recommending to first proceed with evaluating the cost, site constraints, and technical/regulatory feasibility of rehabilitation and replacement alternatives. If the evaluation determines that rehabilitation and/or replacement is not feasible or desirable by the City, additional field investigations to more accurately determine the remaining life of the existing well casings can still be performed at that time. Additionally, if rehabilitation is determined to be preferable by the City, then future field investigations can be optimized at that time to facilitate its design.

Chromium-6 Investigation Background:

The City has reviewed sampling data from Wells 5, 6, and 8 for chromium-6 from 1986 to 2018. The data shows chromium-6 concentrations in the range of 3-8.3 ppb. The California DDW is currently in the process of redeveloping the MCL for chromium-6 and the City would like to evaluate alternatives for providing chromium-6 treatment at the well facilities. This work will be integrated with the other improvements being considered at Wells 5, 6, and 8 as part of the Project.

SCOPE OF WORK

Revisions to the contract tasks are included in this amendment as described below and will be incorporated into the base scope of work.

Task 1.1 - Additional Project Administration

CONSULTANT will provide project administration and management necessary to perform planning, execution, monitoring, quality control, and reporting for the tasks defined by this scope of work.

Task 3.1 – Additional Well Analysis at Wells 5, 6 and 8

LSCE has reviewed the Well 5, 6 and 8 inspection videos and completed this portion of the original scope under Task 3.1. The remaining LSCE tasks defined in "Task 3.1 Well Analysis at Wells 5, 6 and 8" in the original contract (executed 9/2/2020) will be cancelled and $20,000 of budget from the cancelled LSCE tasks has been applied to the additional Task 3.1 scope of services described below.

Carollo's sub-consultant (LSCE) will lead this task. The purpose of this task is to evaluate well rehabilitation and replacement alternatives to extend the life of the wells commensurate with PFAS treatment facilities. Rehabilitation methods will focus on lining the existing well casing and replacement feasibility will focus on site and regulatory constraints. Preliminary cost estimates (AACE Level 4) will be developed for rehabilitating and replacing the well casings. The key deliverables and assumptions are listed in Attachment 1 to Exhibit A-1.

Carollo will coordinate with the City and LSCE to evaluate potential siting alternatives, review deliverables and provide QA/QC, develop workshop materials, and provide overall project management of this task.

Task 3.0 Additional Deliverables:

- The Well 5 and 6 casing rehabilitation and replacement evaluation findings will be presented as part of the Task 3.1 -Well Analysis Workshop.
- Draft/Final Technical Memorandum to summarize the Well 5 and 6 casing investigation.

Task 3.0 Additional Assumptions:

- CITY will provide the CONSULTANT site maps of the existing wells showing the locations of the existing wells and all previous well facilities.
- CITY will provide CONSULTANT with site parcel maps indicating property boundaries.

Task 6.0 – Chromium-6 Treatment Investigation

Task 6.1 - Regulatory Background

The CONSULTANT will review and summarize the status of the California Division of Drinking Water (DDW) and EPA's Office of Drinking Water's management approach to chromium-6, along with currently-projected plans for implementing MCLs. Based on the anticipated MCL, treatment goals will be discussed with and defined by the City.

Task 6.2 - Groundwater Quality

The CONSULTANT will request, review, and tabulate historical chromium-6 data provided by the City. It is anticipated that data from CITY Wells 5, 6 and 8 will be included in this summary. Water sources exceeding the treatment goals defined above will be identified.

Task 6.3 - Treatment Alternatives Evaluation

The CONSULTANT will develop a treatment alternatives evaluation for chromium-6. For the purposes of streamlining the alternative evaluations, the CONSULTANT and CITY staff will work together to simplify/limit the variations of each item listed below based on the CONSULTANT's experience with similar

facilities and CITY staff preferences. The evaluation will consider the following Chromium-6 potential treatment processes:

- Reduction coagulation filtration (RCF)
- Strong base Ion exchange (SBA IX)

The evaluation of each treatment alternative will include the following presented in graphical or tabular format for a single target MCL:

- Simplified process flow schematic.
- Treated water quality.
- Conceptual design criteria (including conceptual level power requirements).
- A brief comparative assessment of "non-cost" advantages and disadvantages of each alternative including compatibility with other Well 5, 6 and 8 facility upgrades.
- Conceptual opinion of probable cost (capital and annual operation and maintenance).
- Present worth comparison of cost opinion.
- Conceptual site plan.
- The CONSULTANT will host a meeting with DDW to discuss the preferred alternative.

Task 6.4 - Treatment Alternatives Workshop

This task includes a treatment alternatives workshop to summarize and discuss the evaluation and recommendations developed in Tasks 6.1 – 6.3. This information will be used to facilitate a discussion to help the CITY identify the preferred alternative.

Task 6.0 Deliverables:

- Treatment alternatives workshop to summarize the alternatives analysis and determine the City's preferences.
- Prepare and submit a Draft technical memorandum (TM) documenting the results of Tasks 6.1 – 6.4. Submit Draft TM for CITY staff review in *.pdf format.
- Incorporate the CITY review comments and prepare a Final TM. The Final TM will be delivered as five (5) hard copies and electronically in *.pdf format.
- CONSULTANT will also host a meeting with DDW to discuss the preferred alternative.
- Consultant will integrate chromium 6 treatment recommendations with other project improvements as part of the BODR deliverables.

Task 6.0 Assumptions:

- City will provide chromium-6 concentration sampling data for the CONSULTANT'S review.
- Cost opinions will be consistent with Class 5 Estimates as defined by the Association for the Advancement of Cost Engineering (AACE) International. This level of engineering cost estimating is

generally for concept screening and accuracy typically ranges from -50% to +100%.

- All Chromium-6 treatment is co-located and sited near Well 8.

Task 7.0 – Optional Services

Task 7.1 Optional Services

This task includes an allowance for optional services related to the project that may be desired by the City after further development of the BODR. Prior to performing services under this task, the Consultant shall receive written authorization that includes an agreed upon scope and not to exceed limit price that shall be invoiced against this Task. Anticipated optional services may include increased water sampling as part of design confirmation testing for improved breakthrough estimations, additional cost estimation services to support the Water Rate Study, and development of a PFAS treatment media procurement strategy.

Schedule

The updated project schedule, including this scope of work, is shown in Attachment 2 to Exhibit A-1.

Attachment 1

Luhdorff & Scalmanini
Consulting Engineers

December 20, 2020
LSCE No. 20-2-162

Mr. Darren Baune, P.E.
Project Manager
Carollo Engineers
2795 Mitchell Drive
Walnut Creek, California 94598

SUBJECT: SCOPE OF WORK AND BUDGET TO EVALUATE FEASIBILITY OF REHABILITATING OR REPLACING WELLS 5 AND 6

Dear Mr. Baune:

Luhdorff and Scalmanini, Consulting Engineers (LSCE) has prepared this Scope of Work and Budget to conduct a feasibility study to evaluate rehabilitating or replacing Wells 5 and 6 for the City of Pleasanton (City). The purpose of this scope is to evaluate well rehabilitation and replacement alternatives to extend the life of the wells commensurate with PFAS treatment facilities. Rehabilitation methods will focus on lining the existing well casing and the replacement feasibility will focus on siting and regulatory constraints.

For siting of new well facilities, LSCE will evaluate potential sites (the existing Well 5 and 6 sites, Amador Park, and the City's Operations Service Center) in terms of environmental compliance, California Department of Water Resources set-back requirements, probable yield, probable water quality, and constructability. The proposed work would generally consist of the following elements:

- Collect, review, and analyze available information, data, and records to refine our current understanding of the hydrogeologic conditions in the study area and in the vicinity of each potential well site.
- Collect, review, and analyze available information, data, records regarding the construction, yield, and water quality of existing City wells in the study area and in the vicinity of each potential well site.
- Collect, review, and analysis of available information, data, records to identify known and potential environmental hazards at and in the vicinity of each potential well site.
- Assess each site in terms of well and pump station constructability, station operation and maintenance, proximity of utilities, and connection to existing distribution system.
- Coordinate with CA SWRCB, Division of Drinking Water (District 4), County Environmental Health and Zone 7 Staff. LSCE believes that early communications with DDW is essential to address any

concerns that the agency may have regarding well siting and design before proceeding with additional planning activities.

- Prepare a site evaluation and well siting report.

SCOPE OF WORK

Task 1 – Feasibility of Replacing Wells at Existing Sites

This task includes evaluating the feasibility of installing replacement wells at the existing Well 5 and 6 sites by using the following criteria:

- Identify potential well locations at each site considering site constraints and distance from existing wells and other infrastructure.
- Request and review existing well design drawings to determine the location of existing infrastructure and utilities at each site.
- Conduct a site visit to each well site to review and confirm specific items needed for the evaluation of the constructability of new wells at the sites.
- Determine the requirements to abandon the existing wells.
- Estimate the life of a new well.
- Determine permitting requirements for new well installations and what impact that may have to the overall project schedule.
- Identify if DDW's requirements allow for the well facility to be located within a vault or if it must be installed above grade in a building.
- Prepare a budgetary cost estimate to install two production wells.

The Well 5 site is small and likely does not have adequate space for a new well. Wells 3 and 4 are also located on the Well 5 site and have been abandoned, which further complicates installing a new well on the Well 5 site. Therefore, this evaluation will also include the feasibility of installing a new well in Amador Park (across Santa Rita from the existing Well 5 and 6 site) or at the City's Operations Service Center site (please reference Task 3 below for additional details).

Task 2 – Feasibility of Rehabilitating Existing Wells

LSCE will identify potential rehabilitation methods for Wells 5 and 6 based on information gathered from developing the well evaluation technical memorandums and previous work on these wells. The evaluation will summarize feasible rehabilitation methods, estimate the useful life of the rehabilitated facility, and estimate the rehabilitation cost. The study will also summarize the recommended field investigations and next steps, including video inspection, casing inspection thickness evaluation, and potentially other field investigations.

Task 3 – Feasibility of Installing new wells at Amador Park and Operational Service Center Locations

LSCE will complete an onsite inspection/assessment of the Amador Park and the City's Operational Service Center potential well locations. Specifically, LSCE will evaluate the well sites related to siting and constructability of the new well and with regards to DDW setback distances from sanitary features and control zone requirements. Specific items to be reviewed include:

- Site size
- Site access
- Equipment layout
- Minimum required setbacks from sanitary features
- Land use – site and vicinity
- Seasonal ground conditions
- Utilities (existing and future)
- Water supply for drilling
- Fluids disposal
- Cuttings storage and disposal
- Neighbors
- Need for sound attenuation
- Safety/security

LSCE will also perform an Initial desktop Hydrogeologic Review. The goal of the hydrogeologic review is to determine probable yield, water quality, the anticipated well depth, screen intervals, static and pumping water levels, specific capacity, and water level impacts to nearby wells due to pumping of the new well. LSCE will perform a review of the following available documents:

- Well construction details, water quality, water levels, and well performance of other wells in the vicinity of the project site that have already been provided by the City
- State of California Well Drillers Completion Reports
- Reports prepared for the City, Zone 7 and other consultants
- Hydrogeologic reports prepared by California Department of Water Resources (DWR) United States Geological Survey (USGS), California Department of Oil and Gas, and others
- California State Water Resources Control Board, Division of Drinking Water (DDW)
- Previous work completed by LSCE
- Local drilling and pump contractors

LSCE will also evaluate Potential Impacts to Groundwater Quality. LSCE will investigate possible sources of groundwater contamination in the vicinity of the potential project sites. The available information on contaminated sites, if identified, could be incorporated into the design, and construct the proposed production well with the appropriate conductor casing, seals, and well screen intervals to eliminate or minimize the potential for contamination. This task will also identify specific requirements needed to

install a new well(s) including permitting requirements, summary of additional technical analysis required by DDW or Zone 7, engineers estimate of new well(s) costs and project schedule.

Task 4 – Workshop and Technical Memorandum

LSCE will prepare and submit the following deliverables:

- LSCE will participate in a workshop with the City and Carollo Engineers to present preliminary findings from Task 1, Task 2, and Task 3. LSCE will develop workshop materials for the investigations listed in Tasks 1, 2 and 3 above.
- After the City provides feedback from findings presented in the workshop, LSCE will develop a draft and final Technical Memorandum (TM) to summarize findings and recommendations.
- We assume Carollo Engineers will incorporate the TM into the Basis of Design Report for the project.

The TM will evaluate each candidate well site considering potential yield, water quality, and constructability. Recommendations will be made for the next phase of a well installation project which may include a site-specific investigation (test hole drilling, monitoring well installation, water quality analysis, DWSAP document preparation, CEQA requirements survey) to gather water quality and design data required to design new wells and define all regulatory and permitting requirements. Planning level cost estimates and schedules for the next phase of the project will also be prepared.

BUDGET ESTIMATE

The estimated budget to complete the Scope of Work described above is based on our current understanding of the project. The cost estimate is based on the effort that would be reasonably expected for a project of this size and scope. The table below summarizes the estimated costs per Task:

Task	Description	LSCE Cost
1	Feasibility of Installation of Wells at Existing Sites	$5,000
2	Feasibility of Rehabilitating Existing Wells	$5,000
3	Feasibility of Installing New Wells	$5,000
4	Presentation and Technical Memorandum	$15,000
	Total	**$30,000**

LSCE proposes to perform the work described in this proposal for a sum of $30,000. The proposed project budget includes LSCE's labor under each task as delineated in this proposal. LSCE will bill monthly for labor and materials, only as incurred, in accordance with LSCE's Schedule of Fees (attached). In the event that LSCE is directed to deviate from the proposed scope, or as dictated by unforeseen conditions, LSCE will provide notification of any potential changes in the estimated cost and time to complete the work. LSCE

will not proceed with any work that deviates from the approved scope and budget until approval to proceed is granted.

SCHEDULE

LSCE is staffed and prepared to begin the work described herein immediately pending notice to proceed.

Task	Description	Start	End
1	Feasibility of Installation of Wells at Existing Sites	1/19/2021	2/5/2021
2	Feasibility of Rehabilitating Existing Wells	1/19/2021	2/5/2021
3	Feasibility of Installing New Wells	1/19/2021	2/5/2021
4	Presentation and Technical Memorandum	2/15/2021	3/1/2021

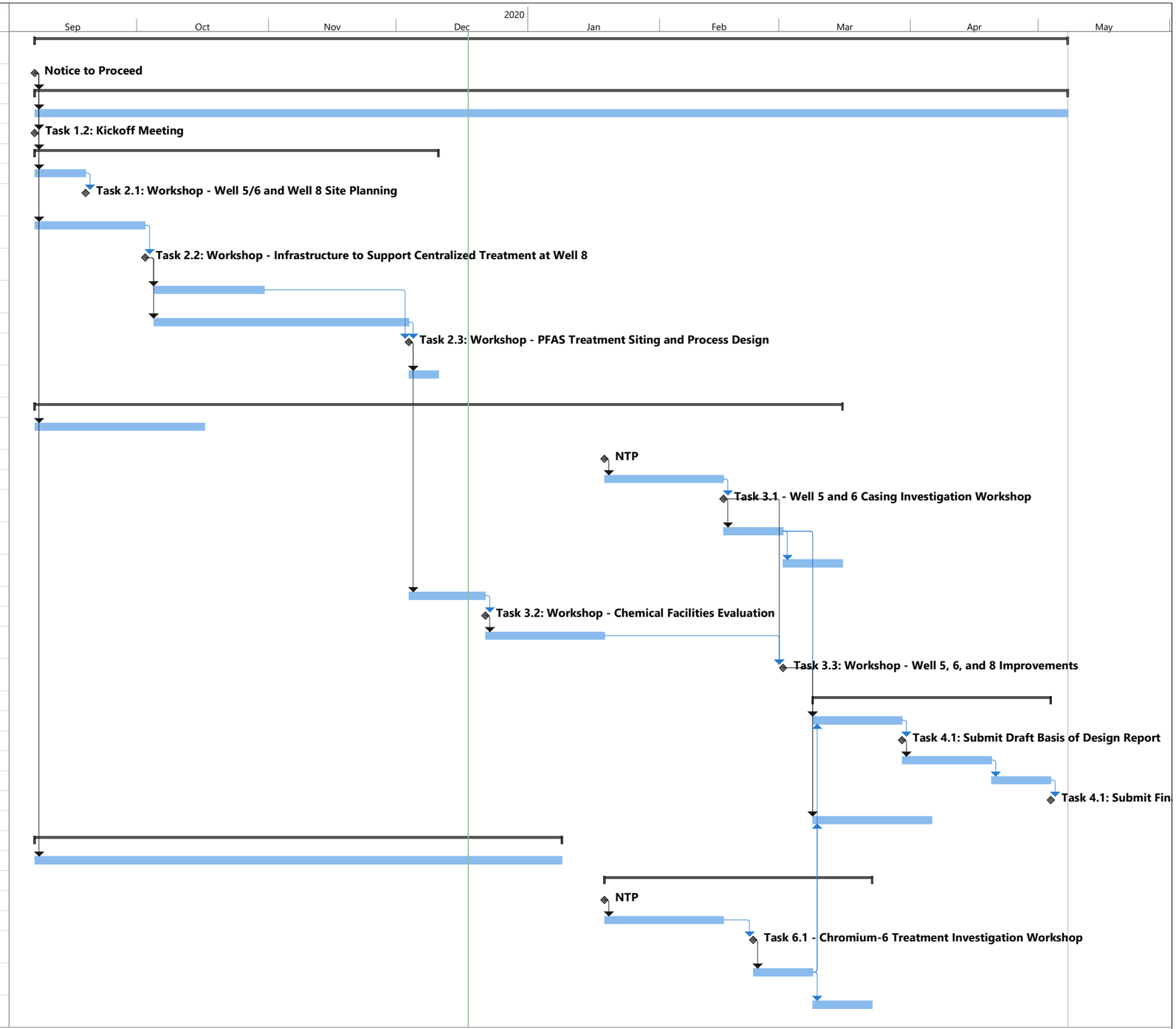
Ultimately, we view our role as providing an extension of your team as a technical resource; moreover, we share the importance of meeting your goals as our highest priority. Thank you for considering us for this work. We look forward to working with you.

Sincerely,
LUHDORFF & SCALMANINI
CONSULTING ENGINEERS

Eddy Teasdale, P.G., CH.G.
Supervising Hydrogeologist

Attachment 2

ID	Task Name	Duration	Start	Finish	Predecessors
1	**Well 5, 6, and 8 PFAS Treatment and Rehabilitation Project**	**175 days**	**Mon 9/7/20**	**Fri 5/7/21**	
2	Notice to Proceed	0 days	Mon 9/7/20	Mon 9/7/20	
3	**Task 1.0 - Project Management**	**175 days**	**Mon 9/7/20**	**Fri 5/7/21**	**2**
4	Task 1.1: Project Administration	8.75 mons	Mon 9/7/20	Fri 5/7/21	2
5	Task 1.2: Kickoff Meeting	0 days	Mon 9/7/20	Mon 9/7/20	2
6	**Task 2.0 - PFAS Treatment Siting Evaluation**	**69 days**	**Mon 9/7/20**	**Thu 12/10/20**	**2**
7	Task 2.1: Well 5/6 and Well 8 Site Planning	2 wks	Mon 9/7/20	Fri 9/18/20	5
8	Task 2.1: Workshop - Well 5/6 and Well 8 Site Planning	0 days	Fri 9/18/20	Fri 9/18/20	7
9	Task 2.2 - Infrastructure to Support Centralized Treatment at Well 8 Analysis	4 wks	Mon 9/7/20	Fri 10/2/20	2
10	Task 2.2: Workshop - Infrastructure to Support Centralized Treatment at Well 8	0 days	Fri 10/2/20	Fri 10/2/20	9
11	Task 2.3: PFAS Treatment Process Design Development	4 wks	Mon 10/5/20	Fri 10/30/20	10
12	Task 2.3: PFAS Treatment Siting Evaluation	44 days	Mon 10/5/20	Thu 12/3/20	10
13	Task 2.3: Workshop - PFAS Treatment Siting and Process Design	0 days	Thu 12/3/20	Thu 12/3/20	11,12
14	Task 2.3 - PFAS Treatment Siting Evaluation and Process Design Workshop Meeting Notes	1 wk	Fri 12/4/20	Thu 12/10/20	13
15	**Task 3 - Well 5, 6 and 8 Improvements**	**136 days**	**Mon 9/7/20**	**Mon 3/15/21**	
16	Task 3.1: Well 6 and 8 Investigation (by Luhdorff and Scalmanini)	30 days	Mon 9/7/20	Fri 10/16/20	2
17	NTP	0 days	Tue 1/19/21	Tue 1/19/21	
18	Task 3.1 - Well 5 and 6 Casing Investigation	4 wks	Tue 1/19/21	Mon 2/15/21	17
19	Task 3.1 - Well 5 and 6 Casing Investigation Workshop	0 days	Mon 2/15/21	Mon 2/15/21	18
20	Task 3.1 - Well 5 and 6 Casing Investigation Draft TM	2 wks	Tue 2/16/21	Mon 3/1/21	19
21	Task 3.1 - Well 5 and 6 Casing Investigation Final TM	2 wks	Tue 3/2/21	Mon 3/15/21	20
22	Task 3.2: Chemical Facilities Evaluation and Sizing	12 days	Fri 12/4/20	Mon 12/21/20	13
23	Task 3.2: Workshop - Chemical Facilities Evaluation	0 days	Mon 12/21/20	Mon 12/21/20	22
24	Task 3.3: Well 5, 6, and 8 Recommended Improvements	4 wks	Tue 12/22/20	Mon 1/18/21	23
25	Task 3.3: Workshop - Well 5, 6, and 8 Improvements	0 days	Mon 3/1/21	Mon 3/1/21	24,19FS+10 days
26	**Task 4.0 - Basis of Design**	**40 days**	**Tue 3/9/21**	**Mon 5/3/21**	
27	Task 4.1: Develop Draft Basis of Design Report	3 wks	Tue 3/9/21	Mon 3/29/21	25,39,20
28	Task 4.1: Submit Draft Basis of Design Report	0 days	Mon 3/29/21	Mon 3/29/21	27
29	City Review Basis of Design Report	3 wks	Tue 3/30/21	Mon 4/19/21	28
30	Task 4.1: Develop Final Basis of Design Report	2 wks	Tue 4/20/21	Mon 5/3/21	29
31	Task 4.1: Submit Final Basis of Design Report	0 days	Mon 5/3/21	Mon 5/3/21	30
32	Task 4.2: 10% Design Drawings	4 wks	Tue 3/9/21	Mon 4/5/21	25,39,20
33	**Task 5.0 - PFAS Process Design Confirmation Testing**	**90 days**	**Mon 9/7/20**	**Fri 1/8/21**	
34	Task 5.1 - PFAS Confirmation Testing	90 days	Mon 9/7/20	Fri 1/8/21	2
35	**Task 6.0 - Chromium-6 Treatment Investigation**	**45 days**	**Tue 1/19/21**	**Mon 3/22/21**	
36	NTP	0 days	Tue 1/19/21	Tue 1/19/21	
37	Task 6.1 - Chromium-6 Treatment Investigation	4 wks	Tue 1/19/21	Mon 2/15/21	36
38	Task 6.1 - Chromium-6 Treatment Investigation Workshop	0 days	Mon 2/22/21	Mon 2/22/21	37FS+5 days
39	Task 6.1 - Chromium-6 Treatment Investigation Draft TM	2 wks	Tue 2/23/21	Mon 3/8/21	38
40	Task 6.1 - Chromium-6 Treatment Investigation Final TM	2 wks	Tue 3/9/21	Mon 3/22/21	39



Project: Well 5, 6 and 8 Rehab. & PFAS Treatment Project
Date: Fri 12/18/20

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Progress | Manual Progress

EXHIBIT B-1
ESTIMATED ENGINEERING BUDGET

CITY OF PLEASANTON

WELL 5, 6, AND 8 PFAS TREATMENT AND REHABILITATION PROJECT
Basis of Design - Amendment 1
12/21/2020

TASK	CAROLLO													SUBCONSULTANTS						COST SUMMARY	
	PIC Principal	PM PM	PE PE	Civil AP	QA/QC Lead Prof	Struct Lead Prof	Elec Lead Prof	Senior CAD Tech	Tech	Admin	Word Processo	Subtotals		Luhdorff & Scalmanini [1]	Eurofins Lab	Sub Markup 10%	PECE $ 13.00	Misc. Costs and Printing	Travel	Total ODCs	Total Cost
Rates	$315	$293	$230	$188	$293	$230	$230	$198	$142	$125	$125	Hours	Budget								
Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Task 1 - Project Management																					
1.1 Additional Project Administration	2	8	0	0	0	0	0	0	0	16	0	26	$ 4,974	$ -	$ -	$ -	$ 338	0	147	$ 485	$ 5,459
Task 1 Total Hours	**2**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**26**									
Task 1 Total Budget	**$ 630**	**$ 2,344**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,000**	**$ -**		**$ 4,974**	**$ -**	**$ -**	**$ -**	**$ 338**	**$ -**	**$ 147**	**$ 485**	**$ 5,459**
Task 3 - Well 5, 6 and 8 Improvements																					
3.1 Additional Well Analysis	0	16	24	32	8	0	0	0	0	0	0	80	$ 18,568	$ 10,000	$ -	$ 1,000.00	$ 1,040	0	145	$ 12,185	$ 30,753
Task 3 Total Hours	**0**	**16**	**24**	**32**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**80**									
Task 3 Total Budget	**$ -**	**$ 4,688**	**$ 5,520**	**$ 6,016**	**$ 2,344**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ 18,568**	**$ 10,000**	**$ -**	**$ 1,000**	**$ 1,040**	**$ -**	**$ 145**	**$ 12,185**	**$ 30,753**
Task 6 - Chromium-6 Treatment Investigation																					
6.1 Regulatory Background	0	4	8	8	0	0	0	0	0	0	0	20	$ 4,516	$ -	$ -	$ -	$ 260	0	0	$ 260	$ 4,776
6.2 Groundwater Quality	0	4	8	8	0	0	0	0	0	0	0	20	$ 4,516	$ -	$ -	$ -	$ 260	0	0	$ 260	$ 4,776
6.3 Treatment Alternatives Evaluation	0	4	16	16	0	0	0	0	0	0	0	36	$ 7,860	$ -	$ -	$ -	$ 468	0	0	$ 468	$ 8,328
6.4 Treatment Alternatives Workshop and TM	0	8	24	32	8	0	0	0	0	16	0	88	$ 18,224	$ -	$ -	$ -	$ 1,144	0	0	$ 1,144	$ 19,368
Task 6 Total Hours	**0**	**20**	**56**	**64**	**8**	**0**	**0**	**0**	**0**	**16**	**0**	**164**		$ -	$ -						
Task 6 Total Budget	**$ -**	**$ 5,860**	**$ 12,880**	**$ 12,032**	**$ 2,344**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,000**	**$ -**		**$ 35,116**	**$ -**	**$ -**	**$ -**	**$ 2,132**	**$ -**	**$ -**	**$ 2,132**	**$ 37,248**
Total Amendment Hours (without optional services):	**2**	**44**	**80**	**96**	**16**	**0**	**0**	**0**	**0**	**32**	**0**	**270**									
Total Amendment Cost (without optional services):	**$ 630**	**$ 12,892**	**$ 18,400**	**$ 18,048**	**$ 4,688**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,000**	**$ -**		**$ 58,658**	**$ 10,000**	**$ -**	**$ 1,000**	**$ 3,510**	**$ -**	**$ 292**	**$ 14,802**	**$ 73,460**
Task 7 - Optional Services																					
7.1 Optional Services	2	24	24	36	0	0	0	0	0	0	0	86	$ 19,922	$ -	$ 5,000.00	$ 500.00	$ 1,118	0	0	$ 6,618	$ 26,540
Optional Task 7 Total Hours	**2**	**24**	**24**	**36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**86**									
Optional Task 7 Total Budget	**$ 630**	**$ 7,032**	**$ 5,520**	**$ 6,768**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ 19,922**	**$ -**	**$ 5,000**	**$ 500**	**$ 1,118**	**$ -**	**$ -**	**$ 6,618**	**$ 26,540**
Total Amendment Hours (including optional services):	**4**	**68**	**104**	**132**	**16**	**0**	**0**	**0**	**0**	**32**	**0**	**356**									
Total Amendment Cost (including optional services):	**$ 1,260**	**$ 19,924**	**$ 23,920**	**$ 24,816**	**$ 4,688**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,000**	**$ -**		**$ 78,580**	**$ 10,000**	**$ 5,000**	**$ 1,500**	**$ 4,628**	**$ -**	**$ 292**	**$ 21,420**	**$ 100,000**
																			New Agreement Total including this Amendment 1:		**$ 537,374**

Notes:
(1) Luhdorff & Scalmanini budget includes a $20,000 credit from the cancelled Task 3.1 work.

Title Abbreviations:
PIC = Principal in Charge
PM = Project Manager
PE = Project Engineer
AP = Assistant Professional
QA/QC = Quality Assurance/Quality Control
Lead Prof = Lead Professional
Struct = Structural Engineer
Elec = Electrical Engineer