CONTRACT FOR CONSULTANT SERVICES BETWEEN THE CITY OF WATSONVILLE AND CAROLLO ENGINEERS, INC.

THIS CONTRACT, is made and entered into this _____, by and between the **City of Watsonville,** a municipal corporation, hereinafter called “City,” and **Carollo Engineers, Inc.** hereinafter called "Consultant."

WITNESSETH

WHEREAS, the City needs to obtain certain professional, technical and/or specialized services of an independent contractor to assist the City in the most economical manner; and

WHEREAS, Consultant has the requisite skill, training, qualifications, and experience to render such services called for under this Contract to City.

THE PARTIES HEREBY AGREE AS FOLLOWS:

SECTION 1. SCOPE OF SERVICES. Consultant shall perform those services as specified in detail in Exhibit "A," entitled "SCOPE OF SERVICES" which is attached hereto and incorporated herein.

SECTION 2. TERM OF CONTRACT. The term of this Contract shall be from May 28, 2024 to June 30, 2026, inclusive.

SECTION 3. SCHEDULE OF PERFORMANCE. The services of Consultant are to be completed according to the schedule set out in Exhibit "B," entitled "SCHEDULE OF PERFORMANCE," which is attached hereto and incorporated herein. Consultant will diligently proceed with the agreed Scope of Services and will provide such services in a timely manner in accordance with the "SCHEDULE OF PERFORMANCE."

SECTION 4. COMPENSATION. The compensation to be paid to Consultant including both payment for professional services and reimbursable expenses as well as the rate and schedule of payment are set out in Exhibit "C" entitled "COMPENSATION," which is attached hereto and incorporated herein.

SECTION 5. METHOD OF PAYMENT. Except as otherwise provided in Exhibit "C," each month, Consultant shall furnish to the City a statement of the work performed for compensation during the preceding month. Such statement shall also include a detailed record of the month's actual reimbursable expenditures.

SECTION 6. INDEPENDENT CONSULTANT. It is understood and agreed that Consultant, in the performance of the work and services agreed to be performed by Consultant, shall act as and be an independent Consultant and not an agent or employee of City, and as an independent Consultant, shall obtain no rights to retirement

benefits or other benefits which accrue to City's employees, and Consultant hereby expressly waives any claim it may have to any such rights.

SECTION 7. ASSIGNABILITY. Consultant shall not assign or transfer any interest in this Contract nor the performance of any of Consultant's obligations hereunder, without the prior written consent of City, and any attempt by Consultant to so assign this Contract or any rights, duties or obligations arising hereunder shall be void and of no effect.

SECTION 8. INDEMNIFICATION.

To the full extent permitted by law (subject to the limitations of Civil Code section 2782.8 for any “design professional services” performed under this Contract), Consultant will indemnify, hold harmless, release and defend the City (including its officers, elected or appointed officials, employees, volunteers or agents) from and against any and all liability or claims (including actions, demands, damages, injuries, settlements, losses or costs [including legal costs and attorney’s fees])(collectively “Liability”) of any nature, to the extent arising out of, pertaining to, or relating to Consultant’s negligence, recklessness, or willful misconduct in the performance of this Contract. In no event shall the cost to defend charged to the Consultant exceed the Consultant’s proportionate percentage of fault. Consultant’s indemnification obligations under this Contract are not limited by any limitations of any insurance held by Consultant, including, but not limited to, workers compensation insurance.

SECTION 9. INSURANCE.

A. Errors and Omissions Insurance. Consultant shall obtain and maintain in full force throughout the term of this Contract a professional liability insurance policy (Errors and Omissions), in a company authorized to issue such insurance in the State of California, with limits of liability of not less than Ten Million Dollars ($10,000,000.00) to cover all professional services rendered pursuant to this Contract.

B. Auto and Commercial General Liability Insurance. Consultant shall also maintain in full force and effect for the term of this Contract, automobile insurance and commercial general liability insurance with an insurance carrier satisfactory to City, which insurance shall include protection against claims arising from bodily and personal injury, including death resulting therefrom, and damage to property resulting from any actual occurrence arising out of the performance of this Contract. The amounts of insurance shall not be less than the following:

(1) Commercial general liability insurance, or equivalent form, with a combined single limit of not less than $10,000,000.00 per occurrence. If such insurance contains a general aggregate limit, such limit shall apply separately to each project Consultant performs for City. Such insurance shall (a) name City, its appointed and elected officials, and its employees as insureds; and (b) be primary with respect to insurance or self-insurance programs maintained by City and (c) contain standard separation of insured's provisions.

(2) Business automobile liability insurance, or equivalent form, with a combined single limit of not less than $500,000.00 per occurrence. Such insurance shall include coverage for owned, hired and non-owned automobiles.

C. Workers' Compensation Insurance. In accordance with the provisions of Section 3700 of the Labor Code, Consultant shall be insured against liability for Workers' Compensation or undertake self-insurance. Consultant agrees to comply with such provisions before commencing performance of any work under this Contract.

D. Proof of Insurance to City before Notice to Proceed to Work. Consultant shall satisfactorily provide certificates and endorsements of insurance to the City Clerk before Notice to Proceed to Work of this Contract will be issued. Certificates and policies shall state that the policy shall not be canceled or reduced in coverage without thirty (30) days written notice to City. Approval of insurance by City shall not relieve or decrease the extent to which Consultant may be held responsible for payment of damages resulting from services or operations performed pursuant to this Contract. Consultant shall not perform any work under this Contract until Consultant has obtained the required insurance and until the required certificates have been submitted to the City and approved by the City Attorney. If Consultant fails or refuses to produce or maintain the insurance required by these provisions, or fails or refuses to furnish City required proof that insurance has been procured and is in force and paid for, City shall have the right at City's election to forthwith terminate this Contract immediately without any financial or contractual obligation to the City. As a result of such termination, the City reserves the right to employ another consultant to complete the project.

E. Written notice. Contractor shall provide immediate written notice if (1) any insurance policy required by this Contract is terminated; (2) any policy limit is reduced; (3) or any deductible or self insured retention is increased.

F. Limitation of Liability: Consultant's total liability under this Agreement shall not exceed the Consultant's current level of insurance coverage at the time of any subject claim.

SECTION 10. NON-DISCRIMINATION. Consultant shall not discriminate, in any way, against any person on the basis of age, sex, race, color, creed, national origin or disability in connection with or related to the performance of this Contract.

SECTION 11. TERMINATION.

A. City and Consultant shall have the right to terminate this Contract, without cause, by giving not less than ten (10) days written notice of termination.

B. If Consultant fails to perform any of its material obligations under this Contract, in addition to all other remedies provided by law, City may terminate this Contract immediately upon written notice.

C. The City Manager is empowered to terminate this Contract on behalf of City.

D. In the event of termination, Consultant shall deliver to City copies of all work papers, schedules, reports and other work performed by Consultant and upon receipt thereof, Consultant shall be paid in full for services performed and reimbursable expenses incurred to the date of termination.

SECTION 12. COMPLIANCE WITH LAWS. Consultant shall comply with all applicable laws, ordinances, codes and regulations of the federal, state and local governments. Consultant shall obtain and maintain a City of Watsonville business license during the term of this Contract.

SECTION 13. GOVERNING LAW. City and Consultant agree that the law governing this Contract shall be that of the State of California. Any suit brought by either party against the other arising out of the performance of this Contract shall be filed and maintained in the Municipal or Superior Court of the County of Santa Cruz.

SECTION 14. PRIOR CONTRACTS AND AMENDMENTS. This Contract represents the entire understanding of the parties as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This Contract may only be modified by a written amendment.

SECTION 15. CONFIDENTIAL INFORMATION. All data, documents, discussions or other information developed or received by or for Consultant in performance of this Contract are confidential and not to be disclosed to any person except as authorized by the City Manager or his designee, or as required by law.

SECTION 16. OWNERSHIP OF MATERIALS. All reports, documents or other materials developed or received by Consultant or any other person engaged directly by Consultant to perform the services required hereunder shall be and remain the property of City without restriction or limitation upon their use.

SECTION 17. COVENANT AGAINST CONTINGENT FEES. The Consultant covenants that Consultant has not employed or retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure the Contract, and that Consultant has not paid or agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fees, commissions, percentage, brokerage fee, gift, or any other consideration contingent on or resulting from the award or making of this Contract, for breach or violation of this covenant, the City shall have the right to annul this Contract without liability, or in its discretion, to deduct from the Contract price or consideration or otherwise recover, the full amount of such fee, commission, percentage fee, gift, or contingency.

SECTION 18. WAIVER. Consultant agrees that waiver by City or any one or more of the conditions of performance under this Contract shall not be construed as waiver of any other condition of performance under this Contract.

SECTION 19. CONFLICT OF INTEREST.

A. A Consultant shall avoid all conflict of interest or appearance of conflict of interest in performance of this Contract. Consultant shall file a disclosure statement, if required by City Council Resolution, which shall be filed within thirty (30) days from the effective date of this Contract or such Resolution, as applicable.

B. No member, officer, or employee of the City, during their tenure, or for one (1) year thereafter, shall have any interest, direct or indirect, in this Contract or the proceeds thereof and Consultant agrees not to allow, permit, grant, transfer, or otherwise do anything which will result in such member, officer, or employee of the City from having such interest.

SECTION 20. AUDIT BOOKS AND RECORDS. Consultant shall make available to City, its authorized agents, officers and employees, for examination any and all ledgers and books of account, invoices, vouchers, canceled checks and other records or documents evidencing or related to the expenditures and disbursements charged to the City, and shall furnish to City, its authorized agents and employees, such other evidence or information as City may require with respect to any such expense or disbursement charged by Consultant.

SECTION 21. NOTICES. All notices shall be personally served or mailed, postage prepaid, to the following addresses, or to such other address as may be designated by written notice by the parties:

CITY	**CONSULTANT**
City Clerk's Office 275 Main Street, Suite 400 Watsonville, CA 95076 (831) 768-3040	Carollo Engineers, Inc. 2795 Mitchell Drive Walnut Creek, CA 94598 (925) 932-1710

SECTION 22. EXHIBITS:

Exhibit A: Scope of Services
Exhibit B: Schedule of Performance
Exhibit C: Compensation

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WITNESS THE EXECUTION HEREOF, on the day and year first hereinabove written.

CITY	**CONSULTANT**
CITY OF WATSONVILLE	**CAROLLO ENGINEERS, INC.**
BY _____	BY DocuSigned by: Elaine Simmons D0645F2B61D3453...
Tamara Vides, Interim City Manager	Elaine L. Simmons, Associate Vice-President

ATTEST:

BY _____	BY DocuSigned by: Anne E. Prudhel F4460416554445A...
Irwin I. Ortiz, City Clerk	Anne Prudhel, Senior Vice President

APPROVED AS TO FORM:

BY _____
Samantha W. Zutler, City Attorney

EXHIBIT "A"

SCOPE OF SERVICES

The scope of services is as follows:

Please see Attachment A for Scope of Services.

EXHIBIT “B”

SCHEDULE OF PERFORMANCE

Services shall commence immediately upon execution of this Contract. All services performed under the provisions of this Contract shall be completed in accordance with the following schedule: May 28, 2024, to June 30, 2026.

EXHIBIT “C”

COMPENSATION

a. Total Compensation. The total obligation of City under this Contract shall not exceed _____$746,558_____.

b. Basis for Payment. Payment(s) to Consultant for services performed under this Contract shall be made as follows and shall include payment for reimbursable expenses:

c. Payment Request. Consultant shall submit a request for payment for services on a monthly basis by letter to Director, or said Director's designated representative. Such request for payment shall cover the preceding monthly period during the term hereof, shall note the City's purchase order number for this Contract, shall contain a detailed listing of the total number of items or tasks or hours for which payment is requested, the individual dates on which such services were rendered, and invoices for reimbursable expenses, if any. Upon receipt in the Office of Director of said payment request, Director shall cause payment to be initiated to Consultant for appropriate compensation.

2795 Mitchell Drive
Walnut Creek, California 94598
P 925-932-1710
carollo.com

May 17, 2024

Ms. Danielle Green, P.E.
Assistant Director of Public Works
City of Watsonville
250 Main Street
Watsonville, CA 95076

Subject: Scope and Fee Proposal for Hexavalent Chromium Well Treatment Improvements Project Phase 1, Preliminary Design Reevaluation

Dear: Ms. Green:

Thank you for requesting this scope and fee proposal from Carollo Engineers, Inc. (Carollo) and our subconsultants: Corona Environmental Consulting, LLC (Corona) for process evaluation and Beecher Engineering, Inc. (BEI) for electrical, instrumentation and controls evaluation. This proposal is for Phase 1, Preliminary Design Reevaluation services for the City's Hexavalent Chromium Well Treatment Improvements Project.

Please feel free to contact us if you have any questions or require additional information on this submittal.

Sincerely,

CAROLLO ENGINEERS, INC.

Elaine Simmons, P.E.
Proposal Contact/Assistant Project Manager
esimmons@carollo.com

Scott Weddle, P.E.
Project Manager
sweddle@carollo.com

EXHIBIT A

SCOPE OF SERVICES

CITY OF WATSONVILLE
(City)

AND

CAROLLO ENGINEERS, INC.
(Consultant)

Hexavalent Chromium Well Treatment Improvements Project

Phase 1, Preliminary Design Reevaluation
(Project)

PROJECT INTRODUCTION

This Scope of Services is to define the Consultant's scope, schedule, and budget for furnishing preliminary design services for the **Hexavalent Chromium Well Treatment Improvements Project – Phase 1, Preliminary Design Reevaluation (Project)**. The City of Watsonville (City) supplies and distributes potable water for drinking, fire protection and supplemental agricultural irrigation to its customers within both City limits and in unincorporated areas of Santa Cruz County. The purpose of the Project is to reevaluate, confirm, and update the preliminary design criteria for treating the City's affected potable groundwater extraction wells for hexavalent chromium (Cr6). On April 17, 2024, the State Water Resources Control Board adopted a Cr6 Maximum Contaminant Level (MCL) of 10 micrograms per liter and the MCL is anticipated to be finalized by October 1, 2024.

Previously, Carollo Engineers, Inc. (Carollo) and Corona Environmental Consulting, LLC (Corona) completed preliminary design and began final design for Cr6 treatment at selected City wells when the Cr6 MCL was originally set in 2014. After the MCL was invalidated in 2017 for administrative reasons, the City put the final design project on hold in approximately June 2017, pending new promulgation of the MCL. For this project, current raw water quality, current water production data, and the updated 2020 Urban Water Management Plan future water demands must be used as the project basis. Additionally since 2017, the City has developed a new water distribution system hydraulic model, completed various planning projects including a water system condition assessment and Capital Improvements Plan update, as well as implemented infrastructure improvements such as sewer and water piping upgrades, a new well, and plans for a new Zone 2 tank. Hence, updated preliminary design information is needed to establish the Cr6 treatment approach to achieving regulatory compliance while also incorporating the City's current infrastructure needs.

The City's wells proposed to be evaluated with the current Project are:

- Wells 2 and 3 (Pressure Zone 1)
- Wells 7, 10 (if needed) and 15 (Pressure Zone 1)
- Wells 14, 17, 18 and if needed, new Well 4 on Roache Road (Pressure Zone 2)
- Well 19 (Pressure Zone 3)

The previous evaluations and deliverables that are currently scoped for reevaluation and updating are summarized below. Previously, the wells affected by the 2014 Cr6 MCL were Wells 2, 3, 7, 14, 17 and 18. Various treatment and blending alternatives were evaluated during preliminary design and concurrent pilot studies, which resulted in a Draft Preliminary Design Report (June 2016) and Draft Engineering Report (November 2016). By early final design (circa April 2017), Cr6 treatment with Reduction Coagulation Filtration (RCF) technology was anticipated to be located at or near Wells 2, 3, 14, 17, and 18. Additionally, blending of Wells 14, 17 and 18 in lieu of RCF was being considered during final design. Blending of Well 7 water with Well 15 water was recommended during final design in lieu of RCF treatment, while blending water from Wells 7, 10 and 15 had originally been considered during preliminary design. Evaluation of a new compliance approach for Well 19, located at the City's Corralitos Filter Plant, has been added to the current project scope (Optional Services) due to recently detected Cr6 levels.

The current project scope will be conducted through the tasks as summarized in Table 1 and detailed in the following task descriptions. The effort will be conducted by Carollo and Carollo's Subconsultants including Corona for process evaluation and Beecher Engineering, Inc. (BEI) for electrical, instrumentation and controls evaluation. Additional Subconsultants for geotechnical evaluation, surveying, CEQA analysis and environmental permitting, funding support, architecture, or public outreach support are not currently anticipated to be needed in Phase 1 but could be engaged later as Optional Services in Phase 1 or deferred to Phase 2 Final Design.

The primary objective of Phase 1 Preliminary Design Reevaluation services is to provide the City with an updated preliminary design construction cost estimate for budgeting and funding application support purposes. Additionally, the culmination of Phase 1 is to provide sufficient technical information within a collated project deliverable format, for e.g. State Water Boards Drinking Water State Revolving Fund (DWSRF) Technical Application's Engineering Report, for the City to pursue project funding for construction of Cr6 treatment facilities and related site improvements, blending facilities, and related pipeline infrastructure improvements such as new raw water supply pipelines, sewer upgrades, and/or distribution system pipeline upgrades.

Engineering services for the overall project are proposed to be executed in two phases. This scope of services is for Phase 1 of the project (preliminary design). A scope of work for the next phase of final design is anticipated to be prepared as requested by the City following completion of Phase 1 tasks.

Consultant/Subconsultant Services

Table 1. Summary of proposed Consultant services for Phase 1 Preliminary Design Reevaluation

Task No.	Task Name	Services by Consultant/Subconsultant
1	Project Administration	Carollo, Corona, BEI
2	Background Data Collection and Review	Carollo, Corona, BEI
3	Treatment Backwash Impacts Evaluation	Carollo, Corona
4	Blending Studies	Carollo, Corona
5	Update Design Criteria for Affected Wells	Carollo, Corona, BEI
6	Preliminary Design Report, Figures, and Cost Estimate	Carollo, Corona, BEI
7	Funding Application Report	Carollo

8	Optional Services	Carollo, As-Needed Subconsultants

TASK 1 – PROJECT ADMINISTRATION

Task 1.1 Project Coordination and Monitoring

This task provides project coordination and monitoring between City and Consultant team members, including Subconsultants over the anticipated project schedule duration of eight months from City Notice-to-Proceed. This task includes preparation of monthly progress reports, regular correspondence with project team members, and review of work progress for quality and completion. Monthly progress reports (submitted with monthly invoices) will include the following:

- Description of work completed in reporting period.
- Percentage complete to date by task.
- Project schedule and budget status.
- Deliverable status.
- Key decisions made and major upcoming action items.
- Potential project issues.

Task 1.2 Kickoff and Project Progress Meetings

This task includes the following project meetings:

- One Kickoff Meeting with Consultant and Subconsultants to introduce key project team members, review key City decisions during the 2015-2017 preliminary and early final design phases, review current project scope of work and milestones schedule, and discuss background information request (in Watsonville for up to four hours).
- One site visit with Consultant and Subconsultants (in Watsonville for up to four hours and may be combined with kickoff meeting).
- One follow-up site visit with Consultant and Subconsultants (in Watsonville for up to eight hours over two days).
- One findings and recommendations review meeting for the Well 19 site evaluation with relevant project team members (assumed virtual for two hours).
- Three findings and recommendations review meetings for each of the Treatment Backwash Capacity Evaluation, Treatment Residuals on WWTP Operations Evaluation, and Blending Studies Evaluation (with relevant project team members; assumed virtual for one hour each).
- One preliminary design alternatives and site plan review meeting with Consultant and relevant Subconsultants (in Watsonville for up to four hours).
- One findings and recommendations review meeting prior to submitting the Draft Preliminary Design Report with Consultant and relevant Subconsultants (assumed virtual for two hours).
- Four additional progress or coordination meetings with City staff and other project stakeholders as-needed (assumed virtual for one hour each).
- The final schedule for all meetings and project milestones will be established after Notice to Proceed (NTP) and presented at the Kickoff Meeting.

Task 1.1-1.2 Assumptions

- Task 1 meetings are in addition to any meetings and/or site visits described in later tasks of this scope.
- City staff will provide Project site access to the Consultant or Subconsultant for any site visits. Site access coordination should occur at least two weeks in advance of any planned field activities.
- This task does not include attendance at any public meetings nor preparation of public presentation slides, City staff reports, or other public outreach documents to support any public meetings such as updates to City Council. It is assumed that City staff will prepare these materials.
- Consultant will perform the base scope of services over an assumed eight-month duration upon Notice-to-Proceed (Phase 1 completion assumed by Spring 2025).

Task 1.1-1.2 Deliverables

- Monthly invoices, monthly progress reports, and schedule updates.
- Meeting agendas and minutes.
- Decision item, action item, and comment log updates.

TASK 2 – BACKGROUND DATA COLLECTION AND REVIEW

Task 2.1 Historical Data Collection and Review

This task provides for requesting, collecting, and reviewing relevant historical information from the City. Carollo will submit a list to the City requesting available relevant reports and other data and information to be provided by the City for use in this Project, including but not limited to:

- Water distribution system historical operational data and records from the last 15 years including water quality and water production data for all scoped wells
- 2015 and 2020 Urban Water Management Plan
- General Plan/Zoning information
- Information on recently added or planned developments
- Water distribution system and sewer system GIS database and other background GIS database shapefiles
- Improvement plans/as-built drawings for recently constructed/planned water or sewer facilities that are not reflected in the City's GIS database
- Design standards or design manuals
- Recent construction unit costs for pipelines, wells, tanks, and other relevant infrastructure
- Other relevant data and reports

Carollo and Subconsultants will develop a data collection table that will be discussed at or before the Kickoff Meeting. Carollo will update the data collection table as items are received and will update the City on outstanding items remaining for the project.

Task 2.2 Water Quality Sampling and Analysis

Subconsultant (Corona) will compile and review all available water quality data for up to ten groundwater wells: Wells 2, 3, 4 (Roache Road), 7, 10, 14, 15, 17, 18 and 19. Previously in Corona's Cr6 treatment evaluation with the City, Wells 3, 14, 17, and 18 were identified for reduction coagulation filtration treatment, while an existing manganese filtration system was proposed to be retrofitted at Well 2. Blending strategies were previously recommended as the Cr6 compliance approach for Wells 7, 10, and 15.

This task will include a review of water quality parameters that may impact the performance of the selected treatment process, as well as a review of co-occurring contaminants that may be impacted by future regulations (e.g. arsenic, manganese, PFAS, strontium, vanadium). Data gaps discovered during the review process will be communicated to the City and a sampling plan will be developed to address these gaps in information. Results from this task will be used to validate the previously developed treatment alternatives evaluations. If the presence of additional contaminants (such as PFAS) will impact the previously developed treatment alternatives, additional evaluations of alternatives may be required which are not currently scoped but could be completed through Optional Services.

To better understand the seasonal variability and bolster the water quality data for each well, it is recommended that, in the interim, each impacted well is sampled monthly at a minimum for water quality parameters that may impact the selected treatment technology's efficacy.

Task 2.3 Water Production Review

Consultant with support from Subconsultant (Corona) will review current and historical (last 15 years) water production data for each scoped well including minimum and maximum well capacity (based on manufacturer's pump curves or similar data), average utilization history, and Average Day and Maximum Day Demands. Current data will be compared with the previously determined existing and future system demand projections and system improvement recommendations as evaluated in the August 2019 and November 2020 water system evaluation reports (by Carollo) to develop or confirm anticipated water production needs for each scoped well by 2025 and 2035. Considerations such as seasonal variations in water system demands, drought years, and significant future system demand changes anticipated (such as with the PV Water College Lake Project) will be included if sufficient background information is available. At a minimum, new project facilities will be sized for existing Maximum Day Demands to meet the DWSRF project eligibility requirements.

Task 2.1-2.3 Assumptions

- City staff will provide Project site access to the Consultant or Subconsultant for any site visits and sampling activities. Site access coordination should occur at least two weeks in advance of any planned field activities.
- City staff will provide Consultant or Subconsultant with documentation of right-of-entry, facility operator notifications, and facility operator contact information at least one week in advance of any planned field activities.
- Subconsultant will provide City staff with a Final Water Quality Sampling Plan within one month from NTP and water quality analysis results will be provided to Consultant and Subconsultant within two weeks of each sampling period. Water quality sampling and analysis costs will be paid by the City.

- Subconsultant will maintain a Health and Safety Plan for the field activities which will be discussed with each person entering the site during field activities.
- Relevant data and future system demand assumptions from the August 2019 and November 2020 water system evaluation reports will be carried through to this project. New planning assumptions for City growth and development will not be updated in the water distribution system model to be used for this task or Task 4 – Blending Studies.
- In addition to water production review of each scoped well, water production for Zones 2 and 3 may need to be evaluated holistically to understand the system demands for future tasks such as blending studies. If additional wells beyond those currently scoped are impacted, their evaluation may be completed through Optional Services.
- Hydrogeological considerations will not be evaluated in Phase 1 services.

Task 2.1-2.3 Deliverables

- Water Quality Sampling Plan, Draft and Final, in PDF.

TASK 3 – TREATMENT BACKWASH IMPACTS EVALUATION

Task 3.1 Revise Sewer Discharge Analysis Technical Memorandum

This task provides for analysis of adequate sewer capacity for discharge of RCF treatment process backwash flows at relevant well sites. The Draft Sewer Discharge Analysis Technical Memorandum (October 2015) summarized the findings of the analysis at Wells 3, 14, and 17. For the 2015 project, Carollo used the City's sewer hydraulic model, which had previously not been updated since 2007, and performed localized updates near relevant well sites. Currently, the City is in the process of updating the System Evaluation and Capacity Assurance Plan (SECAP) including creating a new sewer hydraulic model. This task includes coordination with the City's SECAP project consultant, VW Housen, assuming that both project schedules will be implemented in parallel.

For this project, the following effort is anticipated:

- Request and review background information provided by City and VW Housen. VW Housen will perform a high-level preliminary review of flow data to identify any modeled flow changes in the vicinities of scoped wells from the 2007 SECAP study to present day.
- Coordinate with City and VW Housen to understand updated SECAP details related with any flow changes, sewer system infrastructure changes, available sewer system capacity at specific locations, etc.
- Once the treatment process backwash flows for scoped wells are determined by Corona and Carollo, Carollo will provide the information to VW Housen to run in the new sewer hydraulic model. VW Housen will confirm available instantaneous sewer capacity at or near Wells 3, 7, 14, 17 and 18 and make preliminary design recommendations for any City sewer improvements beyond the well site property boundaries (tie-in locations, sizing, length, and alignments) using the new sewer hydraulic model.
- Carollo will review and update the 2015 TM recommendations for any as-needed sewer improvements (tie-in locations, sizing, length, and alignments), using the modeling analysis and sewer improvement recommendations provided by VW Housen.
- If the delivery of the SECAP modeling analysis results and sewer improvement recommendations by VW Housen cannot align with Carollo's Sewer Discharge Analysis TM task schedule (currently anticipated to be received by July 31, 2024), and preliminary sewer capacity

appears to be insufficient at scoped well sites, the City will be asked to decide whether placeholder assumptions for sewer improvements or backwash holding tanks should be included on a site-by-site basis, with considerations for site constraints, site impacts (electrical loads, geotechnical and O&M considerations) and economic impacts. Alternatively, the City could request that Carollo update portions of the City's 2007 sewer model based on known major changes to the system as part of Optional Services or else defer this task until the City's new sewer hydraulic model is available and fully calibrated for Carollo's use; both of these alternative scenarios could require a change in scope, budget and/or schedule.

- Carollo will prepare a new technical memorandum summarizing the alternatives, recommendations or placeholder recommendations, and updated figures (sewer alignments or backwash tank site layouts).
- Carollo will prepare planning-level cost estimates for sewer improvement or backwash tank recommendations and/or placeholder recommendations.
- Carollo will support up to five Teams meeting with VW Housen staff (estimated one hour each).
- Carollo will support up to two Teams meeting with City staff (estimated up to two hours each).

Task 3.1 Assumptions

- Sewer discharge analysis and updating of recommendations for Wells 4, 10, 15 and 19 by Carollo is not included but could be added with Optional Services. Blending for Wells 10 and 15 was previously recommended over onsite Cr6 treatment. However, water quality changes such as presence of PFAS (Well 10) and higher levels of Cr6 (Well 15) may warrant another mitigation approach to be determined during the concurrent Blending Studies task. If onsite treatment is proposed, Wells 4, 10, 15 and/or 19 may also require additional instantaneous sewer capacity model analysis and updating of recommendations.
- An evaluation of a backwash tank at Well 19 is not currently included but could be added with Optional Services, pending City's authorization of Optional Services Task 8.4 Well 19 Site Evaluation. Adding a backwash tank evaluation at Well 19 could require a change in scope, budget and/or schedule.
- Since the City continues to discharge existing iron and manganese treatment backwash into the sewer at Well 2, sewer capacity evaluation is not anticipated to be needed there.
- VW Housen will conduct two modeling runs per well site (Average Dry Weather Flow and Peak Wet Weather Flow).
- If the City decides to include placeholder assumptions for sewer improvements or backwash holding tanks with the Sewer Discharge Analysis TM, these assumptions will need to be revisited during Final Design using the fully calibrated and latest SECAP model. This would add design effort as well as potentially increase or decrease subsequent project cost estimates.
- All data, modeling analysis findings, and sewer improvement recommendations provided by VW Housen will be packaged as a deliverable to the City for incorporation into the Sewer Discharge Analysis TM. Carollo will not provide QA/QC review or oversight of any services provided by VW Housen.
- Any sewer hydraulic modeling runs by Carollo whether in the 2007 model or the latest SECAP model are not currently included but could be added as Optional Services.

Task 3.1 Deliverables

- Sewer Discharge Analysis Technical Memorandum, Draft and Final, in PDF.

Task 3.2 Revise Evaluation of Treatment Residuals Technical Memorandum

This task provides for analysis of the impact of RCF and/or SBA-IX treatment residuals on operations at the City's Wastewater Treatment Plant (WWTP) and the City/PV Water's downstream Recycled Water Facility (RWF). Both processes would produce residuals that might adversely impact the downstream wastewater treatment process, treated effluent quality, and/or disposal of wastewater treatment residuals. The purpose of this task is to update a paper-evaluation of the potential impact of specific RCF and/or IX treatment residuals (iron, chromium, sodium, and chloride) on WWTP and RWF operations. The previous Project Memorandum, "Evaluation of Impact of Treatment Residuals on WWTP Operations (June 2015)," concluded that RCF backwash discharged to sewers would approximately double the mass of iron loading to the WWTP. That evaluation concluded that iron remaining in the secondary effluent could cause increased scaling of the RWF disk filters and on the quartz sleeves of the UV disinfection system.

Recently, the City/PV Water's RWF Reliability Improvements Project included an operational assessment of the treatment processes at the RWF including the disk filters and the UV disinfection system. The assessment indicated ongoing concerns of rapid disk filter fouling and UV disinfection quartz sleeve fouling, potentially due to iron levels added at the WWTP.

This evaluation will update the anticipated additional iron levels discharged to the WWTP from the revised RCF treatment discharge recommendations. If SBA-IX is also a recommended treatment alternative after evaluation in earlier tasks, the anticipated impacts of its treatment residuals on the WWTP and RWF will also be evaluated. For residuals that are determined to have a potential adverse impact, options to mitigate the impact will be reviewed. If mitigation is not feasible, alternative disposal methods for treatment residuals will be outlined. For example, operational and maintenance considerations for mitigating iron loading to downstream processes, including reducing WWTP ferric chloride dosage and increased frequency of maintenance, could be discussed.

For this project, the following effort is anticipated:

- Review data from Corona regarding the quantity and chemical composition (iron, chromium, sodium, and chloride) of the RCF and SBA-IX (if applicable) treatment residuals that are planned to be discharged to the sanitary sewer system.
- Request and review operational information and data provided by the City related with WWTP effluent discharge, WWTP biosolids disposal, and RWF operations.
- Evaluate the anticipated impacts of treatment residuals on the WWTP and RWF.
- Meet with wastewater treatment plant and recycled water staff to review treatment residual concentrations, flows, and potential impacts (assumed virtually, 2 hours).
- Review the options to mitigate any adverse impact.
- Prepare a technical memorandum that summarizes the findings of this evaluation.

Task 3.2 Assumptions

- The City will provide the information needed for this analysis – no additional laboratory analysis is included in this scope of work.

Task 3.2 Deliverables

- Evaluation of Impact of Treatment Residuals on WWTP and RWF Operations Technical Memorandum, Draft and Final, in PDF.

TASK 4 – BLENDING STUDIES

Task 4.1 Evaluation of Blending Options

This task provides for analysis of blending options at relevant well sites. The Draft Preliminary Design Report (June 2016) considered both raw water and finished water blending options, and ultimately recommended finished water blending of Wells 7, 10, and 15 to lower the Cr6 concentration below the MCL. In addition, new water transmission mains were proposed from Wells 10 and 15 to Well 7, where finished water would be blended and piped into the distribution system. During final design by May 2017, the blending approach was updated to blend finished water from Well 7 and Well 15 (without Well 10) prior to entry into the distribution system.

Additionally, during Preliminary Design, RCF treatment was proposed at Well 14 (either at a remote location or at the existing well site), Well 17, and Well 18. During final design by May 2017, blending of Wells 14 and 18 in lieu of RCF treatment at Well 17 was also being considered but not finalized.

Since 2017, the City has developed a new water distribution system hydraulic model as summarized in the Draft Hydraulic Model Development, Calibration, and System Analysis Report (August 2019) and has used the new model for further analysis associated with existing and future demands. The City has continued with infrastructure improvements including system-wide upgrades and proposed upgrades to wells, distribution system piping and finished water storage reservoirs.

For this project, the following effort is anticipated:

- Request and review background information provided by City.
- Update the water distribution system hydraulic model based on system changes that have occurred since 2019 or are expected to occur in the near term.
- Establish blending option criteria with City staff including blending target concentration goal, raw water bypass versus finished water blending options, operational and maintenance considerations, and risks in the future should Cr6 concentrations increase.
- Evaluate blending options for Cr6 compliance at Well 7 (with or without Wells 10 and/or 15). Confirm whether blending or Well 7 treatment is recommended.
- Evaluate blending options for Zone 2 (Wells 14, 17, 18 in conjunction with the City's new Well 4 at Roache Road and in conjunction with the existing Airport Reservoir and proposed 2.0 MG Zone 2 Reservoir B). Confirm whether RCF treatment will be required at Wells 14, 17, and/or 18.
- Evaluate blending options for Zone 3 (Well 19). Confirm whether treatment (RCF or other technology) will be required at Well 19.
- Update the planning-level design criteria of the recommended improvements.
- Prepare planning-level site layout and/or pipeline alignment figures.
- Prepare a new technical memorandum summarizing the alternatives, recommendations, and updated figures.
- Prepare planning-level cost estimates for the recommended alternatives.
- Support up to two Teams meeting with City staff (estimated up to two hours each).

Task 4.1 Assumptions

- Up to three modeling runs per well site (Average Day Demand, Peak Hour Demand, and Source Trace)

- Additional hydraulic model analysis to support preliminary design could be completed through the Optional Services task.

Task 4.1 Deliverables

- Blending Options Analysis Technical Memorandum, Draft and Final, in PDF.
- Updated hydraulic model files of the water distribution system.

TASK 5 – UPDATE DESIGN CRITERIA AT AFFECTED WELLS

Task 5.1 Confirm Cr6 Mitigation Strategy at Affected Wells

This task combines the results and conclusions developed from Tasks 1-4 to confirm the recommended well locations for individual well treatment, centralized treatment, and/or blending options. Well sites requiring pipeline improvements will include alignment alternatives. The considered and recommended project alternatives previously developed in the June 2016 Preliminary Design Report and/or carried through early final design (April 2017) will be compared with the most currently viable mitigation options at the well sites in order to confirm and/or update the recommended Cr6 mitigation strategy at each affected well.

Task 5.2 Incorporate Relevant Site-Specific Recommendations

After Task 5.1 is complete and the City has selected the appropriate mitigation strategy at each affected well site, additional site improvements relevant to each affected well site will be considered for incorporation. For example, additional site-specific recommendations from the Water Master Plan or project needs identified by City staff such as upgrades to obsolete electrical and instrumentation equipment or flood proofing at high flood-risk sites can be identified and prioritized with input by City staff for incorporation into the improvements scope.

Task 5.3 Confirm Design Criteria Assumptions

After Task 5.2 is complete, design criteria developed for treatment and site improvements will be confirmed and documented. Categories of design criteria to be developed for each well include:

- Treatment and blending goal
- Type and rating for outdoor vs indoor equipment
- Operational redundancy required
- Equipment design useful life or remaining useful life (for existing equipment)
- Operational flexibility and contingency planning
- Chemical consumption, storage and delivery
- Treatment backwash sizing criteria
- Chlorine gas safety

Task 5.1-5.3 Assumptions

- Level of design criteria to be developed for each site is intended to provide sufficient level of detail for the City to decide on the recommended alternative, final facility configuration, and major components for improvements. Once the City has reviewed and made these decisions, the basis of design will be documented in two deliverables to avoid changes in concept, configuration, and design criteria during Phase 2 Final Design.

Task 5.1-5.3 Deliverables

- Basis of Design Report for Cr6 Mitigation, Draft and Final, in PDF.
- Basis of Design Report for Site Improvements, Draft and Final, in PDF.

TASK 6 – PRELIMINARY DESIGN REPORT, FIGURES AND COST ESTIMATE

Task 6.1 Preliminary Design Report

This task is to prepare a new, updated Preliminary Design Report (PDR) following the general outline of the June 2016 Draft PDR. For each affected well site, the following discussions and recommendations will be summarized:

- Existing facilities on site
- Conceptual treatment and/or blending facilities layout alternatives with figures and a description of recommended equipment and facility upgrades
- Recommended design criteria
- Discussion of facility hydraulics
- Discussion of backwash waste system alternatives and recommendations, if applicable
- Summary of power supply and control recommendations for new equipment
- Preliminary construction cost estimate summary tables (in conjunction with Task 6.3)

The report will also include sections to address:

- Project implementation schedule
- Basis of construction cost estimate
- Initial consideration of construction sequencing, staging, access, and temporary facility requirements during construction. Planning-level considerations for maintaining acceptable levels of water service throughout construction duration including providing water service from upper pressure zones will be developed with City staff.
- Initial consideration of schedule constraints such as funding deadlines (provided by the City), long lead-time permit requirements, and long lead-time equipment delivery requirements.

Task 6.2 Preliminary Design Figures

This task is to prepare a new, updated set of Preliminary Design Figures for affected well sites following the Drawing List of the June 2016 Draft Preliminary Design Figures. The following figures are anticipated to be updated (Wells 2, 3, 14, 17, and 18) and/or newly prepared (Well 19):

- Cover sheet
- Site overview sheets: 3D rendering of recommended facilities using SketchUp
- Site plan of recommended facilities using Computer Aided Design and Drafting (CADD)
- Mechanical plan and sections of recommended facilities (approximately 30% design) using CADD
- Electrical single-line diagram of recommended facilities using CADD
- Process flow diagram of recommended facilities and mechanical appurtenances using CADD

Task 6.3 Preliminary Design Construction Cost Estimate

This task is to prepare a new, updated set of Preliminary Design Construction Cost Estimate sheets for the recommended alternative at each affected well site, following a similar level of detail and basis of

construction cost estimate prepared for the June 2016 Draft version (AACE Class 3). The costs for each well site will be included with the Task 6.1 deliverable.

Task 6.1-6.3 Assumptions

- Draft versions of the deliverables will be electronically submitted to the City for review and comment.
- Once collated City comments are received, Final versions of the deliverables will be electronically submitted to the City within approximately 30 days.
- Assistance with property acquisition, if needed, is not included with this scope.

Task 6.1-6.3 Deliverables

- Preliminary Design Report with Preliminary Design Construction Cost Estimate, Draft and Final, in PDF.
- Preliminary Design Figures, Draft and Final, in PDF.

TASK 7 – FUNDING APPLICATION REPORT

Task 7.1 Funding Opportunities Identification and Preliminary Approach

This task provides for initial discussions with City staff on funding support need and identifying available and relevant local, state, and/or federal funding opportunities for the proposed project. This effort will begin with a virtual Funding Opportunities Kickoff Meeting to discuss current funding options available and funding program requirements (at a high-level), application processes and timelines, past City and Consultant experiences, and proposed funding options for further consideration.

Based on input and direction from the City, the Consultant will develop a summary table of relevant funding opportunities and their timing and schedule considerations, eligibility and application considerations, and the advantages and disadvantages.

The direction of the environmental constraints analysis provided by the City including considerations for CEQA, CEQA-Plus and/or NEPA documents may also dictate the funding options for the project. If needed, services can be provided by an environmental permitting Subconsultant through Optional Services for input on considerations related with specific funding options. One Funding Opportunities Findings Meeting will be conducted with the City to review the funding options and discuss next steps for implementation.

Once the City has decided on a funding strategy, a preliminary approach including funding milestones schedule can be developed in conjunction with the overall project implementation schedule.

Task 7.2 Funding Application Report Development

Once Task 7.1 and Task 6 – Preliminary Design are complete, this task provides for completing a project report that could support a technical package of a funding application.

Task 7.1-7.2 Assumptions

- For Task 7.1 scoping purposes, 40 hours have been included for an assumption of four monthly meetings (virtual, 1 hour each), 20 hours of funding eligibility research, and 12 hours for

development of a funding milestones schedule for one selected funding opportunity. Additional support can be provided through Optional Services.

- For Task 7.2 scoping purposes, 40 hours have been included assuming the selected report format will follow the latest (Oct 2020) DWSRF Technical Package Engineering Report guidelines, using deliverables already developed through other tasks as an update to the previously prepared Engineering Report (Nov 2016). The 2016 Engineering Report excluded consolidation analysis, a comprehensive response to climate change, and other updated requirements. Since it is anticipated that some of these new requirements will be prepared in close coordination with the City, any newly required sections are currently excluded from this scope but may be provided through Optional Services.
- This task excludes preparation of other documents to support funding applications.
- This task excludes input from an environmental permitting Subconsultant.
- Draft versions of the deliverables will be electronically submitted to the City for review and comment.
- Once collated City comments are received, Final versions of the deliverables will be electronically submitted to the City within approximately 30 days.

Task 7.1-7.2 Deliverables

- Funding Milestones Schedule, Draft and Final, in PDF.
- Funding Application Report, Draft and Final, in PDF.

TASK 8 – OPTIONAL SERVICES

This task provides for additional, as-needed services that could be included to supplement the base scope described above.

Optional Task 8.1 Preliminary DDW Regulatory and Permitting Assistance

This optional task provides a placeholder budget allowance for support with the DDW regulatory and permitting efforts for implementing Cr6 treatment facilities. These efforts may include meetings and presentations with DDW staff or supporting the development of the DDW Compliance Plan and would commence upon approval and direction by the City on an as-needed basis during the progression of the Project.

Optional Task 8.2 Additional Testing

This optional task provides for additional testing by Subconsultant (Corona) that may be required for well sites with significant changes to water quality, production, or site constraints since the initial evaluation in 2015-2017. This may include additional water quality sampling, bench-scale studies, or pilot testing if a new treatment technology is selected. A placeholder budget allowance is currently assumed with this scope.

Additionally, on-site pilot testing of the selected treatment technology for Well 19 may be required if the available water quality determines that Well 19 is significantly different from the previously studied City wells, if there are significant constraints where issues such as waste disposal cannot be resolved, or if a technology not currently listed as a Best Available Technology (BAT) is the preferred treatment approach. Budget for comprehensive pilot testing at Well 19 is not currently included in this scope.

If additional testing is recommended, Corona will develop comprehensive test plans to address the identified gaps in knowledge and submit them to the City for comment and approval. Upon notice to proceed, Corona will complete the recommended testing with City staff support and will summarize the results and recommendations in a technical memorandum.

Optional Task 8.3 Additional Support Services

This optional task provides a placeholder budget allowance for additional work that may be required during this phase that is not otherwise explicitly identified herein but could include tasks such as geotechnical evaluation of the backfilled retaining wall at Well 3 site which was observed to have issues in 2016, early CEQA environmental permitting support, high hazard flood mitigation support, additional funding support, permit coordination, additional sewer or distribution system hydraulic modeling and/or other additional support services. Consultant will use the allowance only with approval from and as directed by the City on an as-needed basis during the progression of work.

Task 8.1-8.3 Assumptions

- To be determined when specific tasks are directed and approved by the City.
- Where optional tasks may be warranted but not approved by the City for Phase 1 services, placeholder recommendations and conservative budgetary cost estimates may be recommended for inclusion with Phase 1 deliverables.

Task 8.1-8.3 Deliverables

- To be determined when specific tasks are directed and approved by the City.

Optional Task 8.4 Well 19 Site Evaluation

This optional task provides for a detailed evaluation of the Well 19 site and related Well 19 facilities (including mechanical, electrical and instrumentation assets, chlorine gas system, standby generator, site utilities, etc.) newly added to the project scope. This task would commence only upon approval from the City. The goal of this task is to develop an understanding of the Well 19 site and prepare recommendations to match the level of understanding previously developed during preliminary design for the other well sites.

Task 8.4.1 Well 19 Site Condition Evaluation

This task provides for understanding the existing site layout, components, usage and condition of the existing facility. Consultant will interview City staff to understand Well 19 and overall Zone 3 operational and maintenance considerations and any known site constraints. As part of the background information review and site visits, Consultant will document relevant site-specific information such as available space for improvements, note the mechanical, electrical and instrumentation equipment age and any deficiencies observed at the facility, observe the visual condition of the existing building, note civil site features including site access, note if sensitive receptors are nearby and any potential for environmental impacts, etc. These features will be incorporated into other project deliverables.

Task 8.4.2 Well 19 Early Permitting Considerations

This task identifies any early permitting considerations that may be required for Well 19, especially any long lead-time permits requiring early stakeholder engagement. Types of permits that could be

considered include CEQA, environmental, State Division of Drinking Water, high-hazard flood zone development, PG&E, Federal Aviation Administration, etc. Any identified early permitting considerations will be discussed with the City and incorporated into the project implementation strategy and schedule.

Task 8.4.3 Well 19 Treatment Alternatives Evaluation

This task provides for developing alternatives for a Cr6 compliance strategy and approach for Well 19. The goal of this task is to conceptually evaluate treatment options to determine the most feasible MCL compliance alternatives to further consider. Conceptual-level site layout and/or pipeline alignment figures will be prepared and conceptual-level estimates of capital and operations and maintenance costs will be prepared for all viable alternatives to be used for subsequent decision-making by the City.

It is anticipated that the technologies listed below will be assessed by Subconsultant (Corona):

- Blending of water sources to reduce Cr6 to below the MCL
- Reduction-coagulation-filtration (RCF)
- Strong base anion exchange (SBA-IX), with regenerable or non-regenerable resin
- Weak base anion exchange
- Reverse osmosis
- Stannous chloride ($SnCl_2$) reduction without filtration
- Others as appropriate

This evaluation will detail non-cost considerations for each treatment technology such as expected treated water quality, treatment residuals, distribution system water quality concerns, site constraints, bypass limitations, permitting requirements, etc., which may eliminate some treatment technologies without the need for further evaluation. Detailed evaluations for the preferred treatment alternatives will then be developed and presented to the City to discuss the preferred treatment technology for design at Well 19.

Task 8.4 Assumptions

- Topographic and property boundary survey will not be provided for Well 19 with this task but could be considered as Phase 1 Optional Services or be deferred to Phase 2 Final Design. If topographic survey will not be completed, City-provided property site plans and/or publically available site photography and topographic will be used.
- Geotechnical investigation (soil borings) will not be provided for Well 19 with this task but could be considered as additional Phase 1 Optional Services or be deferred to Phase 2 Final Design. If geotechnical investigation will not be completed, placeholders from previous project geotechnical recommendations at other nearby City facilities and/or conservative assumptions will be used for Phase 1 purposes only. During early Final Design, geotechnical investigation and design-level geotechnical recommendations will likely be required.
- Structural and seismic assessment of the existing building adjacent to Well 19 was not previously scoped with the 2020 Water Master Plan Project and hence only high-level observations about the building were previously included. This task will continue to include high-level observations about the building unless additional analysis is authorized by the City as part of the Optional Task.
- Well 19 early permitting considerations exclude any CEQA analysis or preparation of any permit applications.

- Conceptual-level site layout and/or pipeline alignment figures will be prepared to a similar level of detail as included with the June 2016 Preliminary Design Report.
- Capital and O&M cost estimates prepared for this task will be high-level (Class 5 AACE) for Well 19 alternative comparison and decision-making purposes only.

Task 8.4 Deliverables

- Technical Memorandum summarizing the Well 19 treatment alternatives evaluation including detailed evaluations of the feasible treatment alternatives and the recommended alternative (by Corona; Draft and Final, in PDF).

TIME OF PERFORMANCE

Consultant and Subconsultants will perform the scope of services over an assumed 8-month base scope duration upon Notice-to-Proceed. If any Optional Services are authorized, the project implementation schedule and any impacts to schedule-based task budgets (including Task 1 services) will need to be reevaluated.

PAYMENT

Payment to the Consultant for services performed under this Agreement shall be based on the attached fee proposal (EXHIBIT C) on a time and materials basis, at a not-to-exceed cost limit of the total base scope with the optional task if selected by the City. If Phase 1 services extend by amendment beyond March 31, 2025, rates may be subject to adjustment based on the Consultant and Subconsultants' fee schedules for California as of January 1, 2025.

ASSUMPTIONS AND CLARIFICATIONS

- DELIVERABLE USE AND REUSE. Any reuse of completed documents or use of partially completed documents without written verification or concurrence by Consultant for the specific purposes intended will be at the City's sole risk and without liability or legal exposure to Consultant. Consultant's instruments of service hereunder are the printed hard copy of technical memorandums and reports issued for the Project, whereas electronic media, including Computer Aided Design and Drafting (CADD) or modeling files, are tools for their preparation. As a convenience to the City, Consultant shall furnish to the City both printed hard copies and electronic media (where scoped). In the event of a conflict in their content, the printed hard copies shall take precedence over the electronic media. Because data stored in electronic media form can be altered, inadvertently, it is agreed that the City shall hold Consultant harmless from liability arising out of changes or modifications to Consultant's data in electronic media form in the City's possession or released to others by the City.
- STANDARD OF CARE. Consultant shall perform the services required hereunder in accordance with the prevailing engineering standard of care by exercising the skill and ability ordinarily required of engineers performing the same or similar services, under the same or similar circumstances, in the State of California. Additionally, Consultant shall not be responsible for acts and decisions of third parties, including governmental agencies, other than Consultant's Subconsultants, that impact project completion and/or success.
- CITY-PROVIDED INFORMATION AND SERVICES. The City shall furnish Consultant available studies, reports and other data pertinent to Consultant's services; obtain or authorize Consultant to obtain or provide additional reports and data as required; furnish to Consultant services of others required for the performance of Consultant's services hereunder, and

Consultant shall be entitled to use and rely upon all such information and services provided by the City or others in performing Consultant's services under this Agreement.

- ACCESS. The City shall arrange for access to and make all provisions for Consultant to enter upon public and private property as required for Consultant to perform services hereunder.
- ESTIMATES AND PROJECTIONS. In providing opinions of cost, financial analyses, economic feasibility projections, schedules, and quantity and/or quality estimates for potential projects, Consultant has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; the way the City's plant(s) and/or associated processes are operated and/or maintained; and other economic and operational factors that may materially affect the ultimate project elements, including, but not limited to, cost or schedule. Therefore, Consultant makes no warranty that the City's actual project costs, financial aspects, economic feasibility, schedules, and/or quantities or quality realized will not vary from Consultant's opinions, analyses, projections, or estimates.
- THIRD PARTIES. The services to be performed by Consultant are intended solely for the benefit of the City. No person or entity not a signatory to this Agreement shall be entitled to rely on Consultant's performance of its services hereunder, and no right to assert a claim against Consultant by assignment of indemnity rights or otherwise shall accrue to a third party as a result of this Agreement of the performance of Consultant's services hereunder.

EXHIBIT C
CITY OF WATSONVILLE
HEXAVALENT CHROMIUM WELL TREATMENT IMPROVEMENTS PROJECT
PHASE 1 - PRELIMINARY DESIGN REEVALUATION
FEE PROPOSAL

Watsonville — Public Works & Utilities

carollo — Engineers...Working Wonders With Water®

Task	Task Description	Carollo Engineers, Inc. [1]																	Corona	BEI	Kleinfelder	PROJECT TOTAL [3]
		Principal-In-Charge	QA/QC	Project Manager	Assistant Project Manager	Project Engineer	Staff Engineer	Cost Estimator	Lead Structural	Lead Mechanical	Hydraulic Model QA/QC	Hydraulic Modeler	Funding Specialist	CAD/ Graphics Tech.	Doc. Process/ Clerical	Total Hours	Labor Cost	Expenses [2]	Process Engineer	Electrical & Intstr.	Geotech. Services	
		Senior Professional	Senior Professional	Senior Professional	Lead Project Professional	Professional	Assistant Professional	Project Professional	Lead Project Professional	Lead Project Professional	Lead Project Professional	Assistant Professional	Professional									
		$335	$335	$335	$312	$264	$218	$292	$312	$312	$312	$218	$264	$223	$147							
1	**Project Administration**																					
	1.1 Project Coordination and Monitoring	12	-	32		64	-	-	-	-		-	-	-	32	140	$ 36,328	$ -	$ 13,320	$ 2,760	$ -	$ 54,016
	1.2 Kickoff and Project Progress Meetings	-	-	45	24	45	-	-	-	-	-	-	-	-	-	114	$ 34,434	$ 2,503	$ 31,690	$ 4,880	$ -	$ 77,164
	TASK 1 TOTAL	**12**	**-**	**77**	**24**	**109**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**32**	**254**	**$ 70,763**	**$ 2,503**	**$ 45,010**	**$ 7,640**	**$ -**	**$ 131,181**
2	**Background Data Collection and Review**																					
	2.1 Historical Data Collection and Review	-	-	16	16	24	4	-	-	-	-	-	-	-	-	60	$ 17,560	$ -	$ -	$ 3,680	$ -	$ 21,608
	2.2 Water Quality Sampling and Analysis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$ -	$ -	$ 11,140	$ -	$ -	$ 12,254
	2.3 Water Production Review	-	-	8	8	16	4	-	-	-	-	-	-	-	-	36	$ 10,273	$ -	$ -	$ -	$ -	$ 10,273
	TASK 2 TOTAL	**-**	**-**	**24**	**24**	**40**	**8**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**96**	**$ 27,834**	**$ -**	**$ 11,140**	**$ 3,680**	**$ -**	**$ 44,136**
3	**Treatment Backwash Impacts Evaluation**																					
	3.1 Revise Sewer Discharge Analysis Technical Memorandum	-	2	8	-	24	8	16	-	-	24	16	-	28	12	138	$ 35,100	$ -	$ 4,400	$ -	$ -	$ 39,940
	3.2 Revise Treatment Residuals Evaluation Technical Memorandum	-	16	8	8	36	8	16	-	-			-		4	96	$ 27,038	$ -	$ 1,480	$ -	$ -	$ 28,666
	TASK 3 TOTAL	**-**	**18**	**16**	**8**	**60**	**16**	**32**	**-**	**-**	**24**	**16**	**-**	**28**	**16**	**234**	**$ 62,138**	**$ -**	**$ 5,880**	**$ -**	**$ -**	**$ 68,606**
4	**Blending Studies**																					
	4.1 Evaluation of Blending Options	-	2	8	-	16	8	16	-	-	34	92		24	12	212	$ 51,804	$ -	$ 2,920	$ -	$ -	$ 55,016
	TASK 4 TOTAL	**-**	**2**	**8**	**-**	**16**	**8**	**16**	**-**	**-**	**34**	**92**	**-**	**24**	**12**	**212**	**$ 51,804**	$ -	**$ 2,920**	$ -	$ -	**$ 55,016**
5	**Update Design Criteria at Affected Wells**																					
	5.1 Confirm Cr6 Mitigation Strategy at Affected Wells	2	-	12	2	24	8	-	2	4		-	-	-	-	54	$ 15,267	$ 150	$ 5,000		$ -	$ 20,917
	5.2 Incorporate Relevant Site-Specific Recommendations	-	-	2	16	24	8	-	2	4	-	-	-	-	-	56	$ 15,622	$ -	$ -	$ 9,200	$ -	$ 25,742
	5.3 Confirm Design Criteria Assumptions	-	4	8	8	24	8	-	2	4	2	4	-	-	8	72	$ 19,143	$ -	$ -	$ 5,520	$ -	$ 25,215
	TASK 5 TOTAL	**2**	**4**	**22**	**26**	**72**	**24**	**-**	**6**	**12**	**2**	**4**	**-**	**-**	**8**	**182**	**$ 50,033**	**$ 150**	**$ 5,000**	**$ 14,720**	**$ -**	**$ 71,875**
6	**Preliminary Design Report, Figures and Cost Estimate**																					
	6.1 Preliminary Design Report	4	8	16	4	40	-	-	2	2	2	2	-	-	-	80	$ 23,493	$ -	$ 38,840	$ 11,360	$ -	$ 78,713
	6.2 Preliminary Design Figures	4	8	8	4	100	44	-	-	-	-	-	-	144	-	312	$ 76,129	$ -	$ 7,800	$ 5,520	$ -	$ 90,781
	6.3 Preliminary Design Construction Cost Estimate	4	8	8	-	8	-	40	-	-	-	-	-	-	-	68	$ 20,473	$ -	$ 10,000	$ 3,680	$ -	$ 35,521
	TASK 6 TOTAL	**12**	**24**	**32**	**8**	**148**	**44**	**40**	**2**	**2**	**2**	**2**	**-**	**144**	**-**	**460**	**$ 120,095**	**$ -**	**$ 56,640**	$ 20,560	**$ -**	**$ 205,015**
7	**Funding Application Report**																					
	7.1 Funding Opportunities Identification and Preliminary Approach	-	-	-	8	8	-	-	-	-		-	24	-	-	40	$ 10,951	$ -	$ -	$ -	$ -	$ 10,951
	7.2 Funding Application Report Development	-	-	-	8	24	-	-	-	-		-	-	-	8	40	$ 10,012	$ -	$ -	$ -	$ -	$ 10,012
	TASK 7 TOTAL	**-**	**-**	**-**	**16**	**32**	**-**	**-**	**-**	**-**	**-**	**-**	**24**	**-**	**8**	**80**	**$ 20,963**	**$ -**	**$ -**	$ -	**$ -**	**$ 20,963**
8	**Optional Services**																					
	8.1 Preliminary DDW Regulatory and Permitting Assistance	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2	$ 669	$ -	$ 20,000	$ -		$ 22,669
	8.2 Additional Testing	-	-	-	-	2	-	-	-	-		-	-	-	-	2	$ 528	$ -	$ 13,000	$ -	$ -	$ 14,828
	8.3 Additional Support Services	-	-	8	8	8	-	-	-	-		-	16	-	-	40	$ 11,514	$ -		$ 1,000	$ -	$ 12,614
	8.4.1 Well 19 Site Condition Evaluation	-	2	4	16	24	4	-	8	8	-	-	-	-	-	66	$ 19,209	$ -	$ -	$ 9,200	$ -	$ 29,329
	8.4.2 Well 19 Early Permitting Considerations	-	-	2	8	16	-	-	-	-	-	-	-	-	-	26	$ 7,393	$ -	$ 2,920	$ 920	$ -	$ 11,617
	8.4.3 Well 19 Treatment Alternatives Evaluation	2	2	2	-	16	4	-	2	4	-	-	-	16	-	48	$ 12,554	$ -	$ 32,440	$ 9,520	$ -	$ 58,710
	OPTIONAL TASK 8 TOTAL	**2**	**4**	**18**	**32**	**66**	**8**	**-**	**10**	**12**	**-**	**-**	**16**	**16**	**-**	**184**	**$ 51,867**	**$ -**	**$ 68,360**	**$ 20,640**	**$ -**	**$ 149,767**
Total (Base Scope)		**26**	**48**	**179**	**106**	**477**	**100**	**88**	**8**	**14**	**62**	**114**	**24**	**196**	**76**	**1,518**	**$ 403,629**	**$ 2,653**	**$ 126,590**	**$ 46,600**	**$ -**	**$ 596,791**
Total (with Optional Tasks)		**28**	**52**	**197**	**138**	**543**	**108**	**88**	**18**	**26**	**62**	**114**	**40**	**212**	**76**	**1,702**	**$ 455,496**	**$ 2,653**	**$ 194,950**	**$ 67,240**	**$ -**	**$ 746,558**

Notes:

[1] Rates are based on Carollo Engineers, Inc., Fee Schedule in the Submittal of Qualifications Statement for Periodic and On-Call Water and Wastewater Professional Design Services, August 9, 2023 with 2% adjustment for 2024.

[2] Other direct expenses include mileage traveling to/from meetings at IRS Federal Rate, travel at cost.

[3] Includes Subconsultant markup of 10%.