

AMENDMENT NO. 1
Oasis WTP Miscellaneous Minor Modifications
(Project #212219, Contract No. C22-0416)

This Amendment No. 1 (“Amendment”) to the Professional Services Agreement (“Agreement”) is made this _____ day of _____, 2022, (“Effective Date”), by and between the City of Glendale, an Arizona municipal corporation (“City”) and Black & Veatch Corporation, a Delaware Corporation authorized to do business in Arizona (“Contractor”).

RECITALS

- A. City and Black & Veatch Corporation (“Contractor”) previously entered into a Professional Services , Contract No. C22-0416, dated April 19, 2022 (“Agreement”); and
- B. Previously, Phase I included overall project evaluation & assessment and expedited design of rehabilitation/improvement of existing equipment. Phase II will provide detailed design of recommended improvements.
- C. Expanding the Scope of Work (attached under Exhibit B) under the original agreement will include a design finalization. The City is increasing the amount of compensation to be paid under this agreement by \$330,438.
- D. City and Contractor wish to modify and amend the Agreement subject to and strictly in accordance with the terms of this Amendment.

AGREEMENT

In consideration of the mutual promises set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the City and Contractor hereby agree as follows:

- 1. **Recitals.** The recitals set forth above are not merely recitals but form an integral part of this Amendment.
- 2. **Term.** The term of the Agreement is extended through December 22, 2023, unless otherwise terminated or canceled as provided by in the Agreement. All other provisions of the Agreement except as set forth in this Amendment shall remain in their entirety.
- 3. **Scope of Work.** The Scope of Work shall be revised to include detailed design of recommended improvements made in the previous phase of project assessment.
- 4. **Compensation.** The compensation shall be increased by an additional \$330,438 per the attached Exhibit D.

5. **Insurance Certificate.** Current certificate will expire on April 30, 2023 and a new certificate applying to the extended term must be provided prior to this date to Materials Management and the Contract Administrator.
6. **Non-discrimination.** Contractor must not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex, national origin, age, marital status, sexual orientation, gender identity or expression, genetic characteristics, familial status, U.S. military veteran status or any disability. Contractor will require any Sub-contractor to be bound to the same requirements as stated within this section. Contractor, and on behalf of any subcontractors, warrants compliance with this section.
7. **No Boycott of Israel.** To the extent A.R.S § 35-393 through § 35-393.03 are applicable, the parties hereby certify that they are not currently engaged in, and agree for the duration of the Agreement to not engage in, a boycott of goods or services from Israel, as that term is defined in A.R.S § 35-393.
8. **Attestation of PCI Compliance.** When applicable, the Contractor will provide the City annually with a Payment Card Industry Data Security Standard (PCI DSS) attestation of compliance certificate signed by an officer of Contractor with oversight responsibility.
9. **Ratification of Agreement.** City and Contractor hereby agree that except as expressly provided herein, the provisions of the Agreement shall be, and remain in full force and effect and that if any provision of this Amendment conflicts with the Agreement, then the provisions of this Amendment shall prevail.

[Signatures on the following page.]

CITY OF GLENDALE, an Arizona
municipal corporation

Kevin R. Phelps, City Manager

ATTEST:

Julie K. Bower, City Clerk (SEAL)

APPROVED AS TO FORM:

Michael D. Bailey, City Attorney

Black & Veatch Corporation,
a Delaware Corporation



By: Lisa Jackson, P.E.

Its: Vice President

EXHIBIT A - OASIS WTP MISCELLANEOUS MINOR MODIFICATIONS – PHASE II – PROJECT DESCRIPTION

Background & Purpose

The City of Glendale’s (CITY) Oasis Surface Water Treatment Plant (Oasis WTP) was completed in 2007. The City’s Oasis Groundwater Treatment Plant (Oasis GTP) was completed in 2012. Since then, minor maintenance / modification projects have been implemented and completed. Based on feedback from City operations and maintenance personnel, the City has requested Black & Veatch (CONSULTANT) to provide design and construction support for various improvements and rehabilitation.

General Project Scope

This Miscellaneous Minor Modifications Project will be performed by the Consultant in two phases:

- Phase I – overall project evaluation and assessment and expedited design of rehabilitation / improvement of existing equipment (PREVIOUS PROJECT)
- Phase II – detailed design of recommended improvements (THIS PROJECT)

The Phase II of this project includes the following scope of work tasks performed by the CONSULTANT as described herein:

- Detailed design of improvements identified herein
- Construction administration services for the improvements identified herein
- Construction administration services for the recommended improvements herein

Scope of Services

The Scope of Services for the overall Project is based on the following elements:

- **Task 100 – Facility Evaluation and Assessment of Existing Systems Services (Phase I – PREVIOUS PROJECT)**
- **Task 200 – Detailed Design Services (Phase II – THIS PROJECT AS NOTED)**
- **Task 300 – Construction Phase Services (CPS) (Phase II – THIS PROJECT)**
- **Task 400 – Resident Services during Construction (Phase II – THIS PROJECT)**
- **Task 500 - Project Management and Administration (Phase II – THIS PROJECT)**

Specific efforts to be completed for the tasks (and sub-tasks) and the associated deliverables are summarized below and defined further in Exhibit B.

- Design / CPS of relocation of Entry Point to Distribution System (EPDS)
- Evaluation / design / CPS of new and standby HVAC in Administration Building server room; rehabilitation / replacement of Finished Water Pump Station Electrical building HVAC
- Design / CPS for replacement of the Hydrofluorosilic, Alum and Caustic chemical feed pumps

EXHIBIT B - OASIS WTP MISCELLANEOUS MINOR MODIFICATIONS – PHASE II – SCOPE OF SERVICES

Task Group 100 – Facility Assessment of Existing Systems

Assessment of the Oasis Surface Water Treatment Plant (Oasis WTP) and Oasis Groundwater Treatment Plant (Oasis GTP) associated with this Miscellaneous Minor Modification project were included in Phase I of this project for: Finished water sampling building, finished water electrical building (HVAC), Administration Building (HVAC and laboratory), brine / chemical pumping and containment areas, chemical building electrical room, filter gallery, and lagoons.

Task 101: Review Available Documentation

Review of information and plant facility records was included in Phase I of this project.

Task 102: Site Investigations

Site investigation visits for systems identified in Phase II Task Group 200 were included in Phase I of this project.

Task Group 200 – Detailed Design Services

Tasks consisting of in-kind replacements were included with Phase I (Tasks 201-205). Three remaining activities identified under this project require investigation and detailed design (Tasks 206-208) and are included herein.

Task 206 - Relocating the EPDS

The CITY utilizes the existing mixing chamber upstream of the finished water reservoir and Zone 4 gravity pipeline to feed sodium hypochlorite and hydrofluorosilic acid to the filter effluent before it enters the Finished Water Reservoir. The entry point to the distribution system (EPDS) is located downstream of the finished water reservoir on the suction side of the Zone 1 and Zone 4 finished water pump stations. A sample pump is used to convey flow to analyzers in the finished water sample enclosure. The CITY recognizes it takes several hours after making any changes to the chlorine dosage to mixing chamber to observe changes in the chlorine residual at the EPDS. Therefore, the use of the trim chlorination point is often required for use. However, the trim feed is currently located downstream of the existing EPDS. With this project, the EPDS will be moved downstream of the trim feed point for both Zones 1 and 4 to more accurately reflect the true EPDS and chlorine residual leaving the facility. CONSULTANT will update the latest conformed to construction record set and create specifications to facilitate this change.

The following changes will be documented in the drawings and specifications:

- Route existing manual grab sample taps east of site perimeter wall to send a portion of the sample flows for Zones 1 and 4 back to the existing finished water sample enclosure to allow the use of the existing infrastructure to power and control the analyzers and provide feedback to SCADA for dosage; the remaining sample flow will be sent to the existing Administration

Building Operators Laboratory. The location of manual grab samples for Zone 1 and 4 will be identified to not affect flow to the new chlorine analyzers.

- New chlorine analyzers for Zones 1 and 4 will be added to the existing finished water sample enclosure. CONSULTANT will identify available conduits and provide direction to contractor for chlorine analyzer signal connection to the plant PLC and SCADA.

CONSULTANT will coordinate with Maricopa County Environmental Services Department (MCESD) for proposed EPDS change prior to submittal. CONSULTANT assumes only chlorine residual analyzers are required as existing instrumentation for other parameters are still valid. It is also assumed power for the analyzers will be provided from the power panel located in the enclosure. CONSULTANT will utilize two (2) of the existing spare spigots in the sample sinks in the Operators Laboratory.

DELIVERABLE:

- CONSULTANT will attend up to three (3) meetings (in-person or virtual) to discuss design progress. Consultant will provide handouts including preliminary design recommendations based on mark ups on available record drawings.
- CONSULTANT's engineering manager and civil engineer will attend up to two (2) one-hour meetings with Agencies (MCESD / City Building Safety)
- CONSULTANT will provide one (1) electronic pdf copy of the 60% Design drawings and specifications for City / JOC review
- CONSULTANT will provide one (1) electronic pdf copy of the Agency Review Design drawings and specifications for City / JOC / Agency (MCESD and City Building Safety)

Task 207 – Evaluation and Replacement of HVAC Systems

The Administrative Building server room currently is cooled from a roof-mounted package air conditioner (PAC-101). PAC-101 will be replaced in kind as part of this project; however, the CITY would also like to install a 50-60% rated split-system to act as a back-up should the existing unit require maintenance or experience a failure in addition to replacing the existing package air conditioner. The CONSULTANT will provide the design and coordinate permitting required to install a split-system within the room.

In addition, the CITY desires to replace the existing split system HVAC unit with internal redundancy at the Main (Finished Water) Electrical Building based on recent increased maintenance. The existing unit (AHU-401/CU-401) will be evaluated to confirm sizing and potential simplification of the current sequence of operations for more straight forward operations and maintenance while maintaining protection from failure of critical systems and provide up to two (2) options (replacement of the internally redundant 40 ton condensing unit or installation of two independent 20 ton units and associated existing ductwork modification).

CONSULTANT will meet with CITY Facilities and Water Services Departments after concepts are created prior to finalizing details.

CONSULTANT assumes no modifications are required to the existing plumbing systems at either location. Admin Building split system condensing unit assumed to be installed in landscaped area north of the building (no roof penetrations required). Main Electrical Building existing air handling unit (AHU-401) will be maintained.

DELIVERABLE:

- CONSULTANT will evaluate the feasibility and provide technical construction documents for the installation of the new HVAC units and make recommendations during up to two progress meetings (virtual or in-person).
- CONSULTANT will provide one (1) electronic pdf copy of the 60% Design drawings and specifications for City / JOC review
CONSULTANT will provide one (1) electronic pdf copy of the Agency Review Design drawings and specifications for City / JOC / Agency (City Building Safety only)

Task 208 – Chemical Metering Pumps Replacement

The CITY would like to replace the current hydrofluorosilic (fluoride), aluminum sulfate (alum) and sodium hydroxide (caustic) metering pumps in the Chemical room with peristaltic pumps that are similar to the pumps installed in other Glendale facilities.

Existing metering pumps will be removed, and demolition drawing will be provided for MCC-2 circuits removal. New 120V power source for peristaltic pumps will be identified and drawings will be provided for the pump installation.

Existing SCADA signal(s) for pump start/stop, change in speed, etc. will be maintained for the new pumps. Turndown of peristaltic pumps is assumed to be similar enough to the existing that quantity and pump sizing will remain the same. No additional pumps are required to maintain high or low feed rates.

DELIVERABLE: The CONSULTANT will provide detailed technical drawings and specifications towards this effort.

- CONSULTANT will attend one (1) meeting/site visit to evaluate power supply and monitoring and controls circuits of the existing equipment. Consultant will provide handouts including preliminary design recommendations based on mark ups on the latest record drawings.
- CONSULTANT will provide one (1) electronic pdf copy of the 60% Design drawings and specifications for City / JOC review.
- CONSULTANT will provide one (1) electronic pdf copy of the Agency Review Design drawings and specifications for City / JOC / Agency (MCESD and City Building Safety)

The following drawings and specifications are anticipated:

- COVER - Cover sheet / vicinity map / sheet list
- G-3 - Legends and Symbols
- G-6 - Process Schematic

- CY-5 – Yard Piping – West
- CP-1 – Finished Water Pump Station Plan
- CC-3 – Chemical Building Piping Plan
- CC-4 – Chemical Building Piping Sections
- MA-4 – Plumbing Admin Building Floor Plan No. 4
- HA-4 – HVAC Admin Building Floor Plan No. 4
- HE-1 – HVAC Electrical Building Floor Plan
- HZ-1 – HVAC Details (for reference)
- HZ-2 – HVAC Details
- HZ-3 – HVAC Schedules
- HZ-4 – HVAC Sequence of Operations
- PI-01 – P&ID Legend & Abbreviations 1 of 2
- PI-02 – P&ID Legend & Abbreviations 2 of 2
- PI-15 – P&ID – Finished Water Reservoir
- PI-16 – P&ID – Zone 1 Distribution Pumping
- PI-17 – P&ID – Zone 4 Distribution Pumping
- PI-25 – Aluminum Sulfate Metering Pumps
- PI-31 – Sodium Hydroxide Metering Pumps
- EC-1 – Chemical Building Power Plan 1
- EC-2 – Chemical Building Power Plan 2
- EC-5 – Chemical Storage Power & Lighting Plan 1
- EC-6 – Chemical Storage Power & Lighting Plan 2
- EE-1 – Legend and Abbreviations
- EE-8 – MCC-1 & EPP-C-2 One Line Diagram
- EE-12 – MCC-2 One Line Diagram Demolition
- EE-14 – Power Panel PP-A-1 One Line Diagram
- EE-15 – Power Panel PP-A-2 One Line Diagram
- EE-19 - PLC One Line Diagram 2 Demolition
- EE-20 – PLC One Line Diagram 3
- EE-23 – PLC One Line Diagram 6
- EE-24 - Miscellaneous One Line Diagram 1
- EE-28 – Miscellaneous One Line Diagram 5 (Admin Building HVAC interlock with FACP)
- EE-29 – Miscellaneous One Line Diagram 6 (Main Elec. Building HVAC interlock with FACP)
- EY-2 – Site Power Plan 2
- EY-12 – Main Electrical Yard Power Plan
- EZ-4 – Chemical/Main Electrical Building Lighting Panel Schedules 2
- EZ-7 - Details
- EA-10 – Administration Building Power Plan 4

- EA-12 - Administration Building Power Plan 6
- EA-13 - Administration Building Roof Power Plan 1

CONSULTANT assumes bid phase services will be provided by City but can be provided as a supplemental service.

Task Group 300 – Construction Administration and Inspection Services

CONSULTANT will perform services during the construction phase of the project. By performing these services, CONSULTANT shall not have authority or responsibility to supervise, direct, or control the Contractor's work or the Contractor's means, methods, techniques, or procedures of construction. CONSULTANT shall not have authority or responsibility for safety precautions and programs incident to the Contractor's work or for any failure of the Contractor to comply with laws, regulations, rules, ordinances, codes, or orders applicable to the Contractor furnishing and performing the work. Specific services to be performed by CONSULTANT are as follows:

Task 301 – Payment Application & Schedule Reviews

Review the Contractor's schedule of values as well as Contractor's initial construction schedule and updated schedules monthly (assumed 4 month construction duration) and advise the City whether they are consistent with the construction to date, construction contract documents with emphasis on milestone dates, construction sequencing constraints, and operation of existing plant during construction. Review and process the Contractor's monthly payment requests. CONSULTANT's review shall be for the purpose of making a full independent mathematical check of the Contractor's payment request. CONSULTANT, with its Resident Project Representative (RPR), will verify the quantities of work completed and materials on hand with proper storage which are the basis of the payment requests.

Task 302 – Submittal Review

CONSULTANT will review the schedule of shop drawings submissions, drawings, submittal documents, equipment operation and maintenance manuals, Contractor's quality control documentation and other data submitted by the Contractor as required by the construction contract documents. The CONSULTANT will receive, review, evaluate, and distribute shop drawings, samples, test results, and other data which Contractor is required to submit.

The CONSULTANT will maintain a submittal log showing dates of submittal, transmittal action to other subconsultants, dates of return and review action. Copies of the log shall be furnished to City and the Contractor monthly.

The CONSULTANT's review shall be for general conformity to the construction contract documents and shall not relieve the Contractor of any contractual responsibilities. Such reviews shall not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto.

The CONSULTANT will not approve any proposed substitution unless such substitution conforms to the Project design concept and the Construction Contract Documents including the Contract Price. Final approval of substitutions shall be at the discretion of the City’s Project Manager.

The final Manufacturer’s O&M manuals received from the Contractor will be provided to the City in pdf format to be uploaded by the City to their server. It is assumed the Contractor will provide the specified hardcopies and bookmarked pdf format “character recognition” (OCR scanning) copies of approved O&M manuals per specification section 01300. Bookmarks shall be provided for each tab in the hardcopy.

Submittal and substitution reviews efforts are based upon a maximum of two (2) reviews per submittal and that no more than fifty percent (50%) of the total number of first submittals will require two (2) reviews. Effort is based on reviewing fifteen (15) submittals, including preliminary and final vendor O&Ms and JOC MOPOs. If additional shop drawings are received beyond the assumed number of submittals, they will be reviewed as a supplemental service.

Task 303 – Issue Interpretations and Clarifications

The CONSULTANT will issue necessary interpretations and clarifications of the Construction Contract Documents; act as initial interpreter of the requirements of the Construction Contract Documents and make decisions on City and the Contractor questions relating to the acceptability of the work or the interpretation of the requirements of the Construction Contract Documents pertaining to the execution and progress of the work.

The CONSULTANT will respond in writing to City’s representative and/or the Contractor to clarify and/or interpret technical or design related questions. Routine technical interpretations shall be responded to by the CONSULTANT’s RPR. The CONSULTANT will respond to issues raised during construction regarding interpretation and clarification of the contractual administrative and technical requirements of the Construction Contract Documents. The CONSULTANT will serve as City’s advisor in resolution of these issues.

A total of up to eight (8) RFIs are estimated. If additional RFIs are received, they will be reviewed as a supplemental service.

Task 304 – Allowance / Change Order Reviews

Review the Contractor’s documentation and assist the Resident Project Representative with administering the processing of allowances requests and change orders, including applications for extension of construction time. CONSULTANT together with its Resident Project Representative will:

- Review documentation
- Prepare any additional documentation required
- Administer the processing of change orders
- Review applications for extension of construction time
- Evaluate the costs and schedule impacts
- Submit recommendations to City’s Project Manager for concurrence

- Assist City in negotiations with Contractor to obtain a fair price for the work

Work related to unusually complex or unreasonably out of scope or numerous change orders are considered a Supplemental Service. A total of up to four (4) allowance / change order requests have been assumed. If additional allowance / change orders are identified, they will be reviewed as a supplemental service.

Task 305 – Representation on Behalf of City

The CONSULTANT will consult with and advise City and act as its representative during construction. All City instructions to Contractor will be issued through CONSULTANT and its Resident Project Representative who will have authority to act on behalf of City to the extent provided in this Scope of Services except as otherwise provided in writing. CONSULTANT's team will participate in bi-weekly construction progress meetings (assumed to be 30-45 minutes and attended by combination of PM, EM, Civil or discipline engineer as required by topic) virtually or at the Project Site to observe, as an experienced and qualified professional, the progress and quality of the executed work of the Contractor and to determine if such work is proceeding in accordance with the Contract Documents. The site visits and construction progress meetings are anticipated to be approximately weekly through final completion.

The CONSULTANT will coordinate with regulatory and approving agencies and utilities having jurisdiction at the conclusion of construction to close out obtained permits as included herein. Any fees associated with City permits will be paid directly by the City.

Task 306 – Conformed to Construction Record Drawings

At the completion of construction, the CONSULTANT will review and incorporate construction as-built redline drawings as provided by the Contractor into Conformed to Construction Record drawings. Contractor will provide an electronic pdf copy of their construction as-built redline drawings and specifications. Upon completion of the construction, CONSULTANT will finalize transfer of Contractor mark-ups to permanent record digital files, including the sketches / mark-ups provided in Task Group 200. Conformed to Construction Record documents will be prepared based upon the information compiled and furnished by the Contractor. The Resident Project Representative(s) will review Conformed to Construction Drawings prior to submission to City.

The CONSULTANT will submit one half-size bond hard copy of the Conformed to Construction Record drawings, one pdf copy and one copy of the 2D Auto-Cad, version 2018 or later, Conformed to Construction drawings in native file and PDF format on thumb drive to City. Contractor redlined specifications will be provided for record. Fifty-three (53) drawings are anticipated to be updated.

In addition, one electronic copy of project documents (submittals, JOC pay applications, etc.) will also be provided to City's representative upon completion of the construction contract and coordinated with the RPR.

Task 307 – Asset Management System Updates

CONSULTANT will update the new asset information for this project for the City’s updated Enterprise Asset Management System (EAMS). The CONSULTANT will use the latest City asset tagging standard (dated June 19, 2020) includes a significant amount of desired detailed asset attribute information. Typical asset attribute information identified includes 20 common attribute data and on average up to four (4) asset specific attribute data, including recommended preventative maintenance procedures. If some of the identified fields are not be readily available, they will be noted as not applicable (“n/a”). The level of effort is based on twenty (20) new/replaced assets using a combination of field investigation and/or submittal or O&M information.

Additional attribute information may be added to the spreadsheet as a supplemental service. City will load the CONSULTANT-provided Excel file into the EAMS environment after review and acceptance.

Task Group 400 – Resident Services During Construction

CONSULTANT will furnish a part-time Resident Project Representative (RPR) to observe the Contractor's work and perform the services described herein. The Contractor shall have responsibility for the superintendence of construction site conditions, safety, safe practices or unsafe practices or conditions, operation, equipment, and personnel other than employees of the CONSULTANT and the City. This service will in no way relieve the Contractor of complete supervision and inspection of the work or the Contractor's obligation for complete compliance with the drawings and specifications. The Contractor shall have sole responsibility for safety and for maintaining safe practices and avoiding unsafe practices or conditions.

Earthwork is not anticipated with this project and minimal concrete is planned to be poured; therefore materials testing is not included. If quality control is required, it will be provided by the Contractor and reviewed by the CONSULTANT.

Specific services performed by the RPR, Electrical, Instrumentation and Control Project Representative (EICPR), and others and durations of their services are as follows:

- a. Resident Project Representative 16 weeks @ 1 day / week
- b. Electrical, Instrumentation & Control Project Representative 80 hours

Task 401 – Site Observations and Liaison with City and Contractor

The RPR / EICPR will coordinate with Contractor to witness key tasks; duties and responsibilities include the following:

- a. Conduct onsite observations of the general progress of the work to assist CONSULTANT in determining if the work is proceeding in accordance with the Construction Contract Documents.
- b. Serve as CONSULTANT's liaison with the Contractor, working principally through the Contractor's superintendent, and assist CONSULTANT in providing interpretation of the construction contract documents. Transmit CONSULTANT's clarifications and interpretations of the construction contract documents to the Contractor.

- c. Assist CONSULTANT in serving as City's liaison with the Contractor when the Contractor's operations affect City's onsite operation.
- d. Communicating to the Contractor and documenting observed defects or deficiencies in the Contractor's work relating to compliance with the contract drawings, specifications, and design intent.
- e. Advise CONSULTANT and the Contractor / superintendent of the commencement of any work requiring a shop drawing or sample submission if the submission has not been accepted by CONSULTANT.
- f. Monitor changes of apparent integrity of the site, such as differing subsurface (although not anticipated as part of this project) and physical conditions, existing structures, and site-related utilities when such utilities are exposed.
- g. Observe pertinent site conditions when the Contractor maintains that differing subsurface and physical conditions have been encountered, and document actual site conditions. Review and analyze the Contractor's claims for differing subsurface and physical conditions are supplemental services.
- h. Review of Contractor construction schedules.
- i. Review and provide suggestions to the Contractors' construction sequence plans for all construction work undertaken simultaneously.
- j. Visually inspect materials, equipment, and supplies delivered to the worksite. Reject materials, equipment, and supplies that do not conform to the construction contract documents. These inspections are exclusive of special inspection activities performed by others.
- k. Observe field tests of equipment, structures, and piping, and review the resulting reports, commenting to CONSULTANT, as appropriate.
- l. Initiate appropriate communication(s) regarding matters relating to Contractor's failure to address contractual requirements.
- m. Provide on-site observations of instrumentation, remote I/O panels, and control panels including installation, operation and documentation prior to on-site start-up services. Note, factory acceptance testing (FAT) for the HVAC equipment system control system is not anticipated.
- n. Review Contractor written verification that equipment installation and manufacturer startup services have been provided prior to testing and start-up (manufacturer's certificates of proper installation and operation). The Contractor is responsible for providing all documentation required for start-up, performance testing, commissioning and field testing as specified in the Contractor Documents and Specifications.
- o. Review Contractor's red-line contract drawings, submittals, point-to-point wiring interconnect drawings, loop diagrams, equipment field wiring diagrams, panel schematics, and calibration reports prior to start-up, commissioning and field testing.

Task 402 – Meetings, Reporting, Construction Documents Management

- a. Prepare a preconstruction conference agenda including a discussion of the Contractor's schedules, configuration services schedule coordination and responsibilities, procedures for transmittal and review of the Contractor's submittals, electrical special inspections, processing payment applications, quality control and QC verification, critical work sequencing, change orders, record documents, and the Contractor's responsibilities for safety and first aid.
- b. Attend weekly construction meetings with Contractor's field personnel, City and CONSULTANT. The Contractor shall be responsible for meeting minutes. Construction meeting with City and the Contractor will include review of construction procedures, progress scheduling, and other matters concerning the project.
- c. Provide weekly construction progress reports containing a summary of the Contractor's progress, QC testing results, changed conditions, project schedule review comments status, general condition of the work, problems, and resolutions or proposed resolutions to problems. Special inspections and associated reports, as described in herein, will be submitted by others per schedule and procedures established in the special inspections program.
- d. Review the progress schedule, schedule of shop drawings submissions, and schedule of values prepared by the Contractor, and consult with CONSULTANT concerning their acceptability.
- e. Report to CONSULTANT regarding work which is known to be defective, or which fails any required inspections, tests, or approvals, or has been damaged prior to final payment; and advise CONSULTANT whether the work should be corrected or rejected, or should be uncovered for observation, or requires additional testing, inspection, or approval. The responsibilities of any special inspector or agent to report deficiencies in accordance with the program of special inspections is not to be amended or altered.
- f. Review applications for payment with the Contractor for compliance with the established procedure for their submission and forward them with recommendations to CONSULTANT, noting particularly their relation to the schedule of values, work completed, and materials and equipment delivered at the site, but not incorporated into the work.
- g. Record date of receipt of shop drawings and samples. Receive samples that are furnished at the site by the Contractor and distribute shop drawings and samples to the CONSULTANT and City reviewers. Track review status and deliver submittal review comments to the Contractor.
- h. Review Contractor's training plan and instruction materials for compliance with Construction Contract Documents. The Contractor will coordinate, schedule, and monitor manufacturer training presentations with City personnel to confirm it meets City requirements and is consistent with approved submittals. Discuss the preliminary course and lesson plan development with the Contractor.
- i. During the course of the work, verify that O&M manuals and other data required to be assembled and furnished by the Contractor are applicable to the items actually installed; and deliver this material to CONSULTANT for review and forwarding to City prior to final acceptance of the work. This is exclusive of any verifications contained as part of the special inspections program.
- j. Maintain a marked set of drawings and specifications at the jobsite based on data provided by the Contractor. This information will be combined with information from the record documents

maintained by the Contractor to produce the final Conformed to Construction Records set that will be produced.

- k. Review certificates of inspections, tests, and related approvals submitted by the Contractor as required by laws, rules, regulations, ordinances, codes, orders, or the Contract Documents (but only to verify that their content complies with the requirements of, and the results certified indicate compliance with, the construction contract documents). This service is limited to a review of items submitted by the Contractor and does not extend to a determination of whether the Contractor has complied with all legal requirements. This is exclusive of items contained in the program of special inspections reviewed or verified by others.
- l. Maintain project records in CONSULTANT's electronic database including:
 - 1) Correspondence files / clarifications
 - 2) Reports of jobsite conferences, meetings, and discussions among the CONSULTANT, City, and Contractor
 - 3) Submittals of shop drawings, schedules
 - 4) Updates of original construction contract documents / specifications and control system documentation
 - 5) Addenda
 - 6) Change / Field orders
 - 7) Payments
 - 8) Additional drawings issued subsequent to execution of the construction contract documents
 - 9) Test and project data
 - 10) Meeting minutes / progress reports
 - 11) Maintain special inspections records at the site for examination by City Inspectors, Contractor and CONSULTANT including date(s) of special inspections, of receipt of special inspection reports and test reports.
 - 12) Compile limited digital photographic records showing progress of construction (for CONSULTANT's documentation/use; not the same as the Contractor's photographic requirements)

Task 403 – Field Calibration & Loop Checkout

CONSULTANT will verify the Contractor's field calibrations are coordinated with control system programming. CONSULTANT will witness loop checkout testing to verify successful completion by the Contractor. CONSULTANT will assist Contractor and City with loop checkout associated with the new EPDS. CONSULTANT will coordinate with the City to support any additional programming associated with the EPDS or other tasks; PLC and HMI programming shall be by the City but can be provided as a supplemental service.

Task 404 – Substantial Completion

The RPR in conjunction with City will prepare a punch list of work items that need to be completed. At the end of the successful Process Checkout, provided that all of the other contractual and permitting requirements have been met, the Contractor will be given a letter of Conditional Substantial Completion by the CONSULTANT.

Task 405 – Final Construction Completion

Upon completion or correction of the items of work on the work list, the RPR will conduct a final inspection to determine if the work is completed. The CONSULTANT, with input from the RPR, will provide written recommendations to City concerning final payment to the Contractor, including a list of items, if any, to be completed prior to making such payment.

Task Group 500 – Project Management

Task 501: General Management and Administration

The CONSULTANT will provide general coordination of the project with the CITY staff including Water Services, Engineering, Plant Operations and other departments / groups as necessary to facilitate the project. CONSULTANT will develop and maintain the Phase I project schedule and perform other administrative functions including maintaining project data files, tracking project progress and invoicing.

Phase I project management documentation will consist of monthly progress reports and schedule updates. The monthly project reports will summarize the work progress, project issues, and project schedule status. CONSULTANT will also submit a cash flow schedule with each invoice regarding future funds needed to complete the project.

Task 502: Conduct Project Kickoff Meeting and Monthly Progress Meetings

At the project kickoff meeting, CONSULTANT will present the scope of the initial assessment planning and the preliminary schedule. The meeting will include CONSULTANT and CITY Water Services and Engineering staff and is intended to develop a common understanding of the background, issues affecting the plant's operations, lines of communication, and issues that may affect execution including coordination with CITY operations to facilitate the assessments. Kickoff meeting topics will include the following:

- Confirmation of existing data and information
- Confirmation of project components
- Coordination with ongoing work by the CITY at the Oasis WTP
- Short and long-term needs
- Budget constraints

For the design phase progress meetings, the CONSULTANT will prepare meeting documentation and conduct meetings to discuss the progress, direction and technical aspects of the project. Project documentation will consist of preparing and distributing meeting agendas and minutes. Meeting minutes will summarize key discussions, comments, decisions, and any action items required. Six (6) other progress project meetings are anticipated with other workshops being anticipated as part of the work scope tasks. CONSULTANT will provide draft meeting minutes to the CITY for review and final minutes incorporating comments from the CITY on the draft minutes, as required.

Group 500 Deliverables:

- Project Schedule
- Meeting Agenda and Minutes, with Action Items
- Document and Data Request Log
- Action Items and Decision Log

- Monthly Invoices, Progress Reports, and Schedule Updates
- Monthly cash flow projections

Owner's Supplemental Services Allowance

The Owner's supplemental services allowance can be utilized for additional tasks at the CITY's discretion that may include, but not be limited to, the following tasks. Additional tasks may only be performed after receipt of written authorization by the CITY.

- A. Construction administrations and inspection services for the following:
 1. Return Water Pump Station sewer discharge modulating valve
 2. Filter Surveillance and Performance Evaluation
 3. Evaluation of Filter Backwash Strategy
 4. Ion Exchange Operational Training Refresher
 5. Feasibility of alternative chemical feeds (chlorine dioxide, etc.)
 6. Jib cranes for equalization basin pump removal
 7. Guide replacement in the sedimentation basin
- B. Detailed design based on recommendations identified from the various feasibility analysis conducted within this project. This would only apply to the items identified that need immediate resolution.
- C. Bid phase services
- D. Additional construction phase services (additional submittal reviews, RFIs, etc.)

SCHEDULE

See attached *Schedule Exhibit C*.

BUDGET

See attached *Level of Effort Exhibit D*.



BLACK & VEATCH

**Exhibit D Level of Effort
City of Glendale
Oasis WTP Minor Miscellaneous Modifications - 2022
Phase II**

Phase	Description	<i>Total Fee</i>
100	Facility Evaluation and Assessment of Existing Systems Services	\$0
200	Detailed Design Services	\$124,074
300	Construction Administration and Inspection Services	\$94,596
400	Resident Services During Construction	\$57,560
500	Project Management	\$21,372
	REIMBURSIBLE EXPENSES	\$7,836
	BLACK & VEATCH SUBTOTAL w/o ALLOWANCES	\$305,438
	SUPPLEMENTAL SERVICES ALLOWANCES	
	Owner's Allowance	\$25,000
	Subtotal	\$25,000
	BLACK & VEATCH TOTAL w/ ALLOWANCES	\$330,438
	Additional level of effort associated with Task Group 200 design, 300 CA&I, 400 RPR, and 500 PM will be included at a later date.	
Notes:		
<ol style="list-style-type: none"> Expenses include delivery such as Courier, Fed Exp and UPS, travel costs, including meals, lodging, and travel mileage at IRS approved rates, for any required subconsultants or reproduction (printing, reproduction of deliverable). The level of effort estimate is based on data currently provided by the City. Unforeseen conditions which require additional Engineer and subconsultant services will be considered as supplemental services that will be performed following scopes of services and level of effort negotiations as required and approval by the City. 		