

AMENDMENT NO. 1
On-Call Water/Wastewater Modeling - Immediate Needs
(COG Project No. 212237, Contract No. C22-0746)

This Amendment No. 1 (“Amendment”) to the Professional Services Agreement (“Agreement”) is made this _____ day of _____, 20____, (“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 Professional Services Agreement, Contract No. C22-0746, dated July 27, 2022 (“Agreement”); and
- B. Contractor shall continue to provide on-call Water and Wastewater Modeling services on an as requested basis to confirm and/or identify water distribution or collection system improvements needed to support intermediate and planned development. Findings will be incorporated into a letter memo to the City with recommendations for improvements.
- C. Contractor shall meet with the City annually to review and update both hydraulic models and provide the City with an update model for record.
- D. All annual updates shall coincide with the City's fiscal calendar year, which is July 1 to June 30 of the following year. All annual updates shall be delivered at the end of each fiscal year.
- E. 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 unchanged and shall expire on July 26, 2024.
- 3. **Scope of Work.** See attached exhibit.
- 4. **Compensation.** Including allowances, On-Call Water/Wastewater Modeling - Immediate Needs resulted in a previous compensation of \$44,900. Amendment 1

compensation will result in an additional increase in compensation of \$200,000 and as shown in the attached Exhibit D (for a total compensation including allowances, of \$244,900.

5. **Insurance Certificate.** Current certificate will expire on October 31, 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 – PROJECT SUMMARY

After the completion of the 2021 Integrated Water Master Plan (IWMP), the City of Glendale (City) has desires confirmation the water and wastewater hydraulic models will confirm existing infrastructure is adequate to support the new / proposed development plans throughout the City. In addition, the City desires the water and wastewater hydraulic models be updated annually to include changes made to the distribution and collections systems to incorporate on-going improvements throughout the system.

EXHIBIT B DESIGN SCOPE OF SERVICES

CITY OF GLENDALE – ON-CALL WATER AND WASTEWATER MODELING

BACKGROUND

The City of Glendale (City) has recently completed the 2021 Integrated Water Master Plan (IWMP) and is currently having Black & Veatch (Engineer) complete immediate updates to the water and wastewater hydraulic models to confirm that the 2021 IWMP Infrastructure is adequate to support immediate development plans associated with various developments.

The purpose of this project is for the Engineer to provide as-requested analysis is to identify any distribution system and/or collection system modifications which may be required due to the changes in development plans and include:

1. Review and revise demands and flows as necessary for the proposed development
2. Update the Water Distribution Model and analyze system hydraulics (2025 and 2055 Maximum Day and Fire Flow)
3. Update Collection System Model and evaluate system capacity (2025 and 2055)
4. Prepare brief letter memo with the results of the hydraulic analysis and infrastructure recommendations (if needed)

In addition, the Engineer will annually update each hydraulic model (water and wastewater) to incorporate additional projects undertaken by the City that may not have been incorporated.

The following work task are included in this scope of work.

SCOPE

PHASE 100 TASK: ON-CALL HYDRAULIC MODELING ANALYSIS

Engineer will be available to the City to provide on-call hydraulic modeling as requested. For each City request, Engineer will provide the following sub-tasks. Engineer will utilize the latest version of the InfoWater distribution and InfoSWMM collection models (initially will start from the 2021 IWMP models and then utilize updated models as City-identified developments are completed and included as part of Tasks 100 and 200).

Additionally, the hydraulic model could be used to analyze system operation alternatives, including, but not limited to, the following:

- Supply utilization – SRP/CAP supply balance (on/off project demands)
- Drought impacts – including well improvements, etc.
- Zone boundary valve operation / verification

SUBTASK A: DEMAND AND FLOW ANALYSIS

The City will provide Engineer with updated development plans (water and/or wastewater) for each development / redevelopment.

Engineer will review development plans and will develop the corresponding water demands and wastewater flow for the development using the unit rates from the 2021 IWMP. Wastewater flows will

be estimated based on projected water demands and a selected water to wastewater return factors from the 2021 IWMP. Engineer will compare the updated projected water demands / wastewater loadings to the values used in the IWMP and will tabulate the differences noted from the IWMP and developer values. Engineer will assess the impact of any changes on the water supply requirements and wastewater treatment and flow path requirements.

SUBTASK B: DISTRIBUTION HYDRAULICS

Using the current InfoWater distribution model as the starting basis, Engineer will:

1. Adjust demands in the model to reflect revised demands as determined in Subtask A.
2. Update hydraulic model to include and proposed water infrastructure to be completed as part of the development.
3. All other assumptions developed as part of the IWMP will be used (demands, controls, etc.).

The model will be run under 2025 and 2055 demands to determine if adequate service (pressure and flow) can be provided to the development and adjacent areas under maximum day (MD) and fire flow conditions. Engineer will determine the extent (diameter and configuration) to which infrastructure must be revised, if at all, to accommodate the revised demands. Engineer will incorporate distribution system improvements if deficiencies are found in either MD or fire flow performance and re-run the model to ensure that adequate performance has been achieved. Engineer will prepare focused output plots and tables showing the MD pressure and available fire flow.

SUBTASK C: COLLECTION SYSTEM HYDRAULICS

Using the current InfoSWMM collection system model as the starting basis, Engineer will:

1. Adjust loadings in the model to reflect revised demands as determined in Subtask A.
2. Update hydraulic model to include any proposed wastewater infrastructure to be completed as part of the development.
3. All other assumptions developed as part of the IWMP will be used (loadings, controls, etc.).

The model will be run under 2025 and 2055 flows to determine if adequate capacity exists to serve the development and adjacent areas under peak wet weather flows. Engineer will assess the performance of the collection system considering the new loads developed in Subtask A. Engineer will determine the adequacy of the current master plan collection system and modifications, if any, which would be recommended for sewer diameter, slope, and or configuration to accommodate the planned development. Engineer will prepare focused model output showing the flow path and d/D loading of the related sewer lines.

SUBTASK D: DEVELOPMENT CONCLUSION AND RECOMMENDATIONS

Engineer will provide initial model results and draft of the letter memo with recommended improvements to the City for review and comment. Letter memo / email will include model plots and tables to provide the City and Developers with pertinent information. Following discussions, Engineer will revise and re-run the model set-up if necessary, to incorporate City comments and produce a final letter memo / email with modeling results and recommendations.

PHASE 200 – ANNUAL HYDRAULIC MODEL UPDATES

While it is anticipated each hydraulic model will be regularly updated as a result of City requested inquiries in Phase 100, annual hydraulic model updates are still anticipated. Annually, City and Engineer will meet to identify linear infrastructure and other projects / improvements that have been or will soon be completed to update each hydraulic model (water and wastewater). After the meeting, the Engineer will update the hydraulic model to include the identified infrastructure projects. Upon completion, Engineer will provide the City with a copy of each updated model for record. Effort associated with each annual update will be dependent upon the amount of construction completed during the fiscal year.

Following submittal of the updated annual model task, Engineer will utilize that version of the model as basis for subsequent Phase 100 requests.

PHASE 300 – PROJECT MANAGEMENT

Engineer will provide overall contract administration for the project services presented herein. Monthly invoices will be prepared and submitted to the City’s project manager. Status reports will be prepared and submitted along with each monthly invoice. The status reports will identify what work has been performed during the billing period and the completion status of major tasks.

SUPPLEMENTAL SERVICES

Owner’s Allowance (A-1) – If additional work requested by City to conduct hydraulic or flow analysis using either the water or wastewater model that extends beyond the contract value, the work will be completed under the Allowance or project amendment. Engineer will not move forward with any additional work until receipt from the City in writing to perform the work.

EXHIBIT C - SCHEDULE

Engineer will confirm the City with the anticipated schedule to complete each requested Task 100 at the time of the request, but tasks are anticipated to take two (2) to four (4) weeks after receipt of requested information.

Task 200 will be completed annually to correspond with the end of the City’s fiscal year; work anticipated to start 8-12 weeks prior to end of the fiscal year to provide adequate time for City review and comment.

Task 300 is concurrent for the duration of the project.

EXHIBIT D - BUDGET

See attached Level of Effort in Exhibit D; original agreement method (time and materials, not-to-exceed basis) for contract C-22-0746 remains in place.

EXHIBIT D

Owner: City of Glendale

Project: On-Call Water & Wastewater Modeling - Amendment #1

PHASE/Task		SUBTOTAL,	SUBTOTAL,	SUBTOTAL,	TOTAL Billings
		Billings \$	EXPENSES	SUBS	
(Billing Rate, \$\$,Hr.)					
WORK BREAKDOWN STRUCTURE	PHASE				
On-Call Hydraulic Modeling	0100	\$ 108,180	\$ 1,176	\$ -	\$ 109,356
Annual Hydraulic Model Updates	0200	\$ 32,994	\$ 366	\$ -	\$ 33,360
Project Management	0300	\$ 7,180	\$ 104	\$ -	\$ 7,284
Total, Hours					
Total, Billings		\$ 148,354	\$ 1,646	\$ -	\$ 150,000
Owner's Allowance					\$ 50,000
Total, Billings Amendment #1 with Owner's Allowance					\$ 200,000
Original Contact Amount (C-22-0746) for Immediate Needs					\$ 44,900
Total, Contract Amount (Original Contact + Amendment #1 + Owner's Allowance)					\$ 244,900