

**AMENDMENT NUMBER 1 TO
AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN
LG Design, Inc.
AND
THE CITY OF ANN ARBOR**

The City of Ann Arbor, a Michigan municipal corporation, with offices at 301 E. Huron St. Ann Arbor, Michigan 48107-8647 ("City") and LG Design, Inc. (a wholly owned subsidiary of Jacobs Engineering Group ("Contractor")), having its offices at 200 Verdae Blvd., Greenville, SC 29607, agree to amend the professional services agreement for the project __WTP Interim UV Disinfection System executed by the parties dated November 28, 2018 ("Agreement") as follows:

- 1) Article III, SERVICES, is amended to read as follows:
 - A. The Contractor agrees to provide Professional Engineering Services
type of service
("Services") in connection with the Project as described in Exhibit A-1. The City retains the right to make changes to the quantities of service within the general scope of the Agreement at any time by a written order. If the changes add to or deduct from the extent of the services, the contract sum shall be adjusted accordingly. All such changes shall be executed under the conditions of the original Agreement.
 - B. Quality of Services under this Agreement shall be of the level of quality performed by persons regularly rendering this type of service. Determination of acceptable quality shall be made solely by the Contract Administrator.
 - C. The Contractor shall perform its Services for the Project in compliance with all statutory, regulatory, and contractual requirements now or hereafter in effect as may be applicable to the rights and obligations set forth in the Agreement.
 - D. The Contractor may rely upon the accuracy of reports and surveys provided to it by the City (if any) except when defects should have been apparent to a reasonably competent professional or when it has actual notice of any defects in the reports and surveys.
- 2) Article V, COMPENSATION OF CONTRACTOR is amended to read as follows:
 - A. The Contractor shall be paid in the manner set forth in Exhibit B-1. The total fee to be paid to the Contractor for the Services shall not exceed \$374,315.00. The original contract amount was \$140,060.00. The Amendment No. 1 amount is \$229,255.00. Payment shall be made monthly, unless another payment term is specified in Exhibit B-1, following receipt of invoices submitted by the Contractor, and approved by the Contract Administrator.
 - B. The Contractor will be compensated for Services performed in addition to the

Services described in Article III, only when the scope of and compensation for those additional Services have received prior written approval of the Contract Administrator.

- B. The Contractor shall keep complete records of work performed (e.g. tasks performed, hours allocated, etc.) so that the City may verify invoices submitted by the Contractor. Such records shall be made available to the City upon request and submitted in summary form with each invoice.

All terms, conditions, and provisions of the Agreement, unless specifically amended above, shall apply to this Amendment and are made a part of this Amendment as though expressly rewritten, incorporated, and included herein.

This Amendment to the Agreement shall be binding on the Parties' heirs, successors, and assigns.

For Contractor

By Mark A. Pochody
Mark A. Pochody

Its: Client Account Manager
Date: April 26, 2019

For City of Ann Arbor

By Christopher Taylor 05/08/2019
CHRISTOPHER TAYLOR, MAYOR

By Jacqueline Beaudry 05/09/2019
JACQUELINE BEAUDRY, CITY CLERK

Approved as to form and content

Stephen K. Postema 05/07/2019
STEPHEN POSTEMA, CITY ATTORNEY

Approved as to substance

Howard Lazarus 05/07/2019
HOWARD LAZARUS, CITY ADMINISTRATOR

Craig Hupy 04/29/2019
CRAIG HUPY, PUBLIC SERVICES AREA ADMINISTRATOR
Craig Hupy, Public Services Area Administrator

EXHIBIT A-1 SCOPE OF SERVICES

Construction phase assistance will be provided for the WTP UV Disinfection System project. LG Design, Inc. (JACOBS ENGINEERING) will provide construction phase assistance. The scope of JACOBS ENGINEERING's construction phase professional services is provided below.

Exhibit A – Scope of Services of the original professional services agreement is amended to add the following additional tasks.

Task 6 – DWRF Project Plan and Bid Documents

The City of Ann Arbor desires to apply for a low interest loan for this project through the Drinking Water Revolving Fund (DWRF) loan program managed by MDEQ. The purpose of this task is to prepare the Contract Documents in a format that is compliant with DWRF application requirements. The scope of services includes modifications to the Division 0 specifications and supplements (i.e. American Iron and Steel (AIS) documents, Davis-Bacon requirements, etc.).

This scope of services also includes development of a Project Plan which complements the Contract Documents and is submitted along with the DWRF loan application. Jacobs also will develop a project presentation and host a public meeting with the City of Ann Arbor to discuss the project and address questions/concerns from the public, which is required as part of the DWRF loan application process.

Task 7- Services During Construction

This scope of services includes engineering services during construction for the City of Ann Arbor WTP UV Disinfection System project. This scope of engineering services is based on the concepts presented in the JACOBS ENGINEERING contract documents dated February 2019.

Field Services

The Engineer shall provide a part-time Field Inspector (FI) for a period beginning with the pre-construction meeting and for a duration of 12 months. The FI will reside in Engineer's local offices, but the Owner will provide space on-site at the water treatment plant for local file storage, phone, and internet connection. The estimated level of effort is 10 hours total per week, on average, including 1 to 2 visits to the water plant.

The FI shall support administration of the construction contract and observation of the contractor's work at the direction of the Owner. The FI will provide on-site inspection services, oversight of progress, and will be available to respond to issues or questions from the Owner, Engineer or Contractor. The FI shall consult with and advise the Owner and act as the Owner's representative as provided in the General Conditions of the Construction Contract.

The following field-related services during the construction will be performed and are the duties and responsibilities of the Engineer:

Pre-Construction Conference: The FI shall attend one pre-construction conference with the Owner, Engineer and Contractor to review the project communication, coordination and other procedures and discuss the Contractor's general workplan and requirements for the project. The pre-construction conference will be scheduled by the FI. The FI will prepare pre-

conference agenda, summary meeting notes and distribute to the Owner, Engineer and Contractor.

Communications: The FI shall communicate and report progress to the Owner and Engineer. The FI shall implement and maintain regular communications with the Contractor during the construction. The FI shall receive and log communications from the Contractor and coordinate communications between the Owner, Engineer and Contractor. The FI shall deliver written responses to Contractor's Requests for Information, said responses shall be provided by the Engineer. Each visit shall include preparation of an Inspector's Daily Report (IDR) and photos to document progress and issues.

Project Site Meetings: The FI shall attend periodic meetings with the Owner, Engineer and Contractor, estimated at a frequency of twice per month for a 6-month construction duration and once per month for a 6-month construction duration (12 months total). Contractor shall schedule the meetings, set agenda, and lead the meetings. Engineer Project Manager shall attend the site meeting via conference call.

Field Orders: The FI shall issue field orders, instructions or similar documents to the Contractor. Field orders shall not involve changes in project cost or schedule. The FI shall consult with the Owner and Engineer in the preparation of these field orders, instructions, or similar documents before issuing to the Contractor.

Change Orders: The FI shall coordinate the issuance of change orders. The Engineer shall review and evaluate proposed changes (Owner, Engineer or Contractor initiated) and make recommendations regarding the acceptability, including cost and/or schedule impacts. The FI shall lead all change order negotiations. Upon approval of the Owner, FI shall issue change order documents for execution by the Owner and Contractor. The Contractor shall maintain the change order log and provide status updates at the project site meetings. Change orders shall involve changes in project cost and/or schedule. Approximately 5 change orders are assumed in the level of effort.

Payments to Contractor: The FI shall receive and review the Contractor's requests for payment. The FI will determine whether the amount requested reasonably reflects the progress of the Contractor's work and is in accordance with the contract for construction. The FI will consider and recommend to the Owner withholding partial payment for any excessive shop drawing review provided by the Engineer as defined in the contract for construction. The FI shall provide recommendations to the Owner as to the acceptability of the requests and will advise the Owner as to the status of the total amounts requested, paid, and remaining to be paid under the terms of the contract for construction. The FI will review pay requests for wage rates and consistency with DWRF requirements.

Claims and Disputes: The FI shall receive, log, and notify the Owner and Engineer about all notices from the Contractor concerning claims or disputes between the Contractor and Owner pertaining to the acceptability of the work or the interpretation of the requirements of the contract for construction. The Engineer shall assist the Owner and FI in discussions with the Contractor to facilitate discussions and resolution of Contractor claims and disputes, when necessary. The Engineer will provide recommendations for Contractor claims or disputes. Approximately 2 claims are assumed in the level of effort.

Project Schedule: The FI and Engineer shall review the Contractor's construction schedule to verify that it is consistent with the requirements of the contract for construction. FI will provide schedule comments to the Owner and contractor as the work progresses.

Review of Work: The FI shall conduct on-site observations of the Contractor's work for the purpose of determining if the work conforms to the contract for construction and that the integrity of the design concept has been implemented and preserved by the Contractor. The anticipated frequency is 1 site visit per week for 6 months and 2 site visits per week for 6 months. Should the FI discover that any work by the Contractor is not in accordance with the contract for construction, the FI shall notify the Contractor, Engineer and the Owner and monitor the Contractor's corrective actions.

Inspections: DIXON ENGINEERING (MI) will perform inspections of painting and coatings systems applied to new piping/valves and concrete walls/ceilings for confirmation of compliance to the Contract Documents. An estimated 5 inspections will be required (5 days/5 trips).

JACOBS ENGINEERING will perform special inspections as required by the Contract Documents. The estimated level of effort for conducting special inspections is 3 days in 3 trips, plus additional time in the office for building permit reviews.

Substantial and Final Completion: The FI shall perform inspections at substantial and final completion and will prepare punch lists of items requiring completion or correction, as needed, to share with Owner, Engineer, and Contractor. The Engineer shall submit to the Owner a statement of substantial completion and a statement of final completion.

Authority of FI: The authority of the FI is limited. In addition to the limitations provided for in this Contract's terms and conditions, the FI shall not:

- Have authority to authorize any deviation from the construction Contract Documents or substitution of materials or equipment, unless authorized by the Engineer with consent of the Owner.
- Undertake any of the responsibilities of the Contractor, Subcontractors, Suppliers, or Contractor's superintendent.
- Accept shop drawings, submittals, or samples from anyone other than the Contractor.

Safety

JACOBS ENGINEERING will manage the health, safety and environmental activities of its staff and the staff of its subcontractors to achieve compliance with applicable health and safety laws and regulations.

JACOBS ENGINEERING will coordinate its health, safety and environmental program with the responsibilities for health, safety and environmental compliance specified in the contract for construction. JACOBS ENGINEERING will coordinate with responsible parties to correct conditions that do not meet applicable federal, state and local occupational safety and health laws and regulations, when such conditions expose JACOBS ENGINEERING staff, or staff of JACOBS ENGINEERING subcontractors, to unsafe conditions.

JACOBS ENGINEERING will notify affected personnel of any site conditions posing an imminent danger to them which JACOBS ENGINEERING observes.

JACOBS ENGINEERING is not responsible for health or safety precautions of construction workers. JACOBS ENGINEERING is not responsible for the Contractor's compliance with the health and safety requirements in the contract for construction, or with federal, state, and local occupational safety and health laws and regulations.

Engineer's Office Based Services

The Engineer shall provide the following services during the construction of the Project:

- **Document Management System:** The Engineer shall establish and implement a system for managing, tracking and storing all relevant documents between the Contractor, Engineer and Owner produced during construction. The Engineer shall maintain electronic records on a SharePoint site, suitably organized, of all relevant documentation. The Engineer shall turnover one complete electronic set of project approved submittals and other related construction documents on a CD to the Owner.
- **Interpretations of Contract Documents:** The Engineer shall provide technical interpretations of the Contract Documents and provide written responses to the Contractor's request for information, interpretation, or clarification of the Contract Documents. Evaluate requested deviations from the approved design or specifications. Approximately 25 requests for information are assumed in the level of effort.
- **Change Orders:** The Engineer shall review the Contractor's cost estimates as necessary for Contract change orders.
- **Shop Drawings, Samples and Submittals:** The Engineer shall log, track, and review the Contractor's shop drawings, samples, test results, and other data which the Contractor is required to submit. The Engineer's review of shop drawings, samples and submittals shall be for conformance with the design concept and compliance with the requirements of the contract for construction. Approximately 40 submittals are assumed in the level of effort. JACOBS ENGINEERING's scope shall be based upon the scope of work in the contract for construction and shall include a maximum of two submissions by the Contractor for each shop drawing, sample or submission. Should there be additional reviews required of JACOBS ENGINEERING and design team, JACOBS ENGINEERING shall be entitled to additional compensation.
- **Regulatory Coordination:** Meet with representatives of the Owner and appropriate regulatory agencies when requested via conference call as necessary regarding construction of the Project. These meetings shall be scheduled for the same time as the design team site visits or construction progress meetings, if possible. Engineer will review Contractor's requirements for compliance with the DWRP loan and note areas of non-compliance.
- **Field Functional Performance Testing:** The Engineer shall witness field performance tests for major equipment as specified in the contract for construction and the Engineer's contract scope. Anticipated equipment to be tested includes UV disinfection equipment and water quality analyzers. Four days in two trips are anticipated.
- **Owner Training:** The Engineer shall provide overall system training for major equipment and processes. Anticipated training sessions includes how UV disinfection is integrated with clearwell and transfer pumping operations, , process control, and monitoring/reporting. Four days in two trips are anticipated. As part of the training program, a standard operating manual will be developed in Word® to complement the training sessions. Training will be delivered via PowerPoint® and hand-on (where applicable).

- **Record Drawings and Project Closeout:** Prepare a set of record drawings showing record information which the Engineer considers significant based on the drawings, shop drawings, and other record documents furnished by the Contractor to the Engineer which were annotated by the Contractor to show all changes made during construction. The Engineer will not be responsible for any errors or omissions in the information provided by the Contractor that is incorporated in the record drawings or other record documents. These documents shall be provided in the following quantities and media: one set digitized CADD drawings (AutoCAD), two full-size sets, and three one-half size sets and one PDF set.

Additional professional services will be provided at the direction of the Owner. The scope of these services will be determined by the Owner and agreed upon in a separate contract amendment.

**EXHIBIT B-1
COMPENSATION**

General
Contractor shall be paid for those Services performed pursuant to this Agreement in accordance with the terms and conditions herein. The Compensation Table below states nature and amount of compensation the Contractor may charge the City:

Team Member	Senior Project Manager		Senior Engineer		Project Engineers		Staff Engineer		Administrative, CAD		Total Labor By Task	Total Hours by Task	Total Expense	Total by Task
	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees				
Billing Rate		\$250.00		\$190.00		\$175.00		\$120.00		\$100.00				
Task # - Description	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees				
6 – DWRP Project Plan, Revised Bid Documents, Public Meeting	40	\$10,000	48	\$9,120	8	\$1,400	24	\$2,880	40	\$4,000	\$27,400	160	\$500	\$27,900
7 – Services During Construction														
On-site Services (incl. meetings/calls)			520	\$98,800			40	\$4,800	24	\$2,400	\$106,000	584	\$5,200	\$111,200
3rd Party Paint Inspections(5); Special Inspections (3)					32	\$5,600			16	\$1,600	\$7,200	48	\$6,000	\$13,200
Meetings/Status Calls (2/mth x 6 mths; 1/mth x 6 mths); Pre-Con (1)	44	\$11,000	8	\$1,520	16	\$2,800					\$15,320	68	\$1,000	\$16,320
RFIs/Cos (25)	4		4		25	\$4,375			12.5	\$1,250	\$5,625	46		\$5,625
Submittals (40)	4		24	\$4,560	60	\$10,500			40	\$4,000	\$19,060	128		\$19,060
UV Equipment Functional/Performance Test Witness			32	\$6,080			16	\$1,920			\$8,000	48	\$1,000	\$9,000
City Training	16	\$4,000	16	\$3,040	16	\$2,800					\$9,840	48	\$2,000	\$11,840
Operations Manual	8	\$2,000	8	\$1,520	8	\$1,400	16	\$1,920	16	\$1,600	\$8,440	56	\$250	\$8,690
Conformed Set/As-Builts; Project Close Out	8	\$2,000	8	\$1,520					24	\$2,400	\$5,920	40	\$500	\$6,420
TASK 7 Subtotal	84	\$19,000	620	\$117,040	157	\$27,475	72	\$8,640	133	\$13,250	\$185,405	1,066	\$15,950	\$201,355
Amendment 1 Total													\$229,255.00	