

**AMENDMENT FOR**

<b>ENGINEERING SERVICES WITH</b>	<u>Jacobs Engineering Group Inc.</u>
<b>FUNDING SOURCE:</b>	<u>CWSRF</u>
<b>PROJECT NUMBER</b>	<u>RMUA ES 2020-11, Amendment 2</u>
<b>CONTRACT NO.</b>	<u>135959</u>

**DESCRIPTION OF WORK AND LOCATION:** Work performed as part of Amendment No. 2 will be to complete a NEPA environmental assessment and cultural survey and to provide design services related to (1) new blower building (2) rehab of the west sludge tank (3) yard piping from RDTs to holding tanks (4) removal of old piping and valves for sludge and scum tanks (5) new office building and (6) gravity thickener decommissioning. Amendment 2 also includes pilot studies for dewatering and composting.

Total Budget (Design)	\$	4,847,882.59
Original Construction Cost	\$	39,802,000.00
Original Design	\$	499,925.59
Additional Design Cost (Amendment No. 1)	\$	3,705,889.00
Additional Design Cost (Amendment No. 2)	\$	642,068.00
Total Design Cost	\$	4,847,882.59
Total Raw Labor Cost	\$	1,677,401.86
Overhead	%	172.50
Profit	%	10.00
Multiplier		3.00
Total Design Cost / Total Construction Cost	%	12.17
Advertising Date		April 2026
<b>Amendment No. 1</b>		
Jacobs Labor	\$	3,513,789.00
Subcontracts	\$	135,000.00
Subcontractor 5% Markup (administration and insurance)	\$	6,750.00
Expenses	\$	50,350.00
Amendment #1 Total Value	\$	3,705,889.00

**Amendment No. 2**

Jacobs Labor	\$	587,786.00
Subcontracts	\$	0.00
Subcontractor 5% Markup (administration and insurance)	\$	0.00
Expenses	\$	54,282.00
Amendment #2 Total Value	\$	642,068.00

**Total Contract Value**

Jacobs Labor	\$	4,587,100.59
Subcontracts	\$	135,000.00
Subcontractor 5% Markup (administration and insurance)	\$	6,750.00
Expenses	\$	119,032.00
Total Contract Value	\$	4,847,882.59

## ENGINEERING CONSULTING AMENDMENT CHECKLIST

Over all cover sheet (attached)

- Correct project number and contract number
- Correct account number
- New insurance information (Section 11)
- Summary of original agreement and execution date
- Summary of previous amendments and execution date
- Detailed description of the reason for the amendment
- Signature page separate sheet having "IN WITNESS WHEREOF..." paragraph and signatures
- New detailed man-hour / task breakdown
- New schedule
- Insurance cancellation clause correct (30 days)

Prepared By:



Consulting Engineer

Vibhuti Pandey  
Project Manager

Project Engineer

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Lead Engineer

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**AMENDMENT NO. 2**

**TO**

**THE AGREEMENT**

**FOR**

**PROFESSIONAL ENGINEERING SERVICES**

**THIS AMENDMENT NO. 2**, to the Agreement for Professional Engineering Services (Contract No. 135959), made between the Regional Metropolitan Utility Authority, a Public Trust of the State of Oklahoma, hereinafter referred to as **AUTHORITY**, and Jacobs Engineering Group Inc., a corporation organized under the laws of the state of Delaware, hereinafter referred to as **ENGINEER**;

**WITNESSETH**

**WHEREAS**, **AUTHORITY** intends to add biosolids improvements at the Haikey Creek Wastewater Treatment Plant, located throughout the City, hereinafter referred to as the **PROJECT**; and,

HAIKEY CREEK WASTEWATER TREATMENT PLANT BIOSOLIDS IMPROVEMENTS, CONCEPTUAL  
DESIGN  
RMUA ES 2020-11

**WHEREAS**, **AUTHORITY** and **ENGINEER** entered into an **AGREEMENT**, dated March 10, 2021, under which the **ENGINEER** was to provide professional services to the study and conceptual design of biosolids improvements at the Haikey Creek Wastewater Treatment Plant, hereinafter referred to as the **AGREEMENT**, and

**WHEREAS**, **AUTHORITY** and **ENGINEER** entered into an **AMENDMENT NO. 1**, dated June 14, 2023, under which the **ENGINEER** was to provide professional services to design of biosolids improvements at the Haikey Creek Wastewater Treatment Plant, hereinafter referred to as the **AGREEMENT**, and

**WHEREAS**, **AUTHORITY** requires certain additional professional services in connection with the **PROJECT**, hereinafter referred to as the **SERVICES**, thereby necessitating the amending of the **AGREEMENT**;

**WHEREAS**, **ENGINEER** is prepared to provide such **SERVICES**;

**NOW THEREFORE**, in consideration of the promises contained herein, the parties hereto agree as follows:

- 1.0 SCOPE OF PROJECT. The scope of this project is described in Attachment B, SCOPE OF PROJECT which is attached hereto and incorporated by reference as part of this **AMENDMENT NO. 2**.
- 2.0 SERVICES TO BE PERFORMED BY ENGINEER. **ENGINEER** shall perform the **SERVICES**, described in Attachment B, SCOPE OF SERVICES, which is attached hereto and incorporated by reference as part of this **AMENDMENT NO. 2**.

- 3.0 COMPENSATION. The AUTHORITY and the ENGINEER agree that the ENGINEER shall be compensated for these additional services on a salary multiplier basis in accordance with Attachment D, COMPENSATION FOR ADDITIONAL SERVICES, which is attached hereto and incorporated by reference as part of this AMENDMENT NO. 2
- 4.0 All other terms and conditions of the AGREEMENT dated, March 10, 2021 as amended, shall remain in full force and effect.


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IN WITNESS WHEREOF, the parties have executed this AMENDMENT NO. 2 to the AGREEMENT in multiple copies on the respective dates herein below reflected to be effective on the date executed by the Chairman of the Regional Metropolitan Utility Authority.

(SEAL)  
ATTEST:



Jacobs Engineering Group Inc. (ENGINEER)

  
Justin Johnson, Secretary

  
Jennifer Kassa, Vice President & Designated Manager

Date November 25, 2024

(SEAL)  
APPROVED:

REGIONAL METROPOLITAN UTILITY AUTHORITY

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

Date \_\_\_\_\_

APPROVED AS TO FORM:

RECOMMENDED:

\_\_\_\_\_  
Attorney for Regional Metropolitan  
Utility Authority

  
\_\_\_\_\_  
Director of Water and Sewer

RECOMMENDED:

\_\_\_\_\_  
Broken Arrow Municipal Authority, Chairperson

\_\_\_\_\_  
Broken Arrow Municipal Authority, General Manager

ATTEST:

\_\_\_\_\_  
(SEAL) Secretary

\_\_\_\_\_  
Broken Arrow Municipal Authority, Assistant City Attorney

**SCOPE OF SERVICES**

**ATTACHMENT B**

**B. SCOPE OF SERVICES.** The Scope of Services should be amended as set forth in this AMENDMENT NO.2:

**B.1 Phase No. 1. PRELIMINARY DESIGN.**

B.1.1 Chartering - No change.

B.1.2 Facility Plan Update – No change.

B.1.3 Conceptual (5%) Design – No change.

B.1.4 Project Management

B.1.4.1 Amend the existing task to include additional meetings with City, internal meetings, contract administration, and project coordination.

B.1.5 65% Preliminary Design

Prepare a preliminary plan which includes an initial design report; functional plans; preliminary cost estimates; and recommendations and submit the preliminary plan to the AUTHORITY per EXHIBIT 2 – Project Schedule. Preliminary Design is anticipated to include the elements contained in Table 1 – Anticipated Design for Biosolids Management Facilities.

**Table 1.** Anticipated Design for Biosolids Management Facilities

<b>Facility/Item</b>	<b>Design Concept</b>	<b>65% Submittal (includes previous)</b>
New Blower Building	Approximately 24'x24' new building located north of the existing Sludge Holding Tanks. The building will house two blowers (1 new + 1 future) and two sludge recirculation pumps (1 duty + 1 standby). The new blower will provide aeration to the rehabbed west storage tank and the future blower will provide aeration to a future primary sludge holding tank. The sludge recirculation pumps will provide continuous mixing of the TWAS since sludge %TS has reached a plastic flow state. New electrical and controls will also be housed inside the building as well. Site civil will provide addition access required for operations and maintenance.	Plan Sheets Elevations
Rehab of West Sludge Storage Tank	Rehab design would include provisions for concrete crack injection, concrete resurfacing, patching exposed rebar, grouting old pipe penetrations, possibly a tank coating system.	Plan Sheets Demo Sheets



	<p>The tank will be required to be drained and analysed by the engineer to provide the extents of rehab required where the provisions provide bid items for the contractor to execute the work.</p> <p>Demo includes removal of the existing aeration piping inside of the tank and exposed on the exterior (see Item 4 of this table for demo continuation).</p> <p>Demo of the existing blowers and sludge recirculation pump room shall also be included in this work. This is only demolition of the mechanical equipment, piping, valves, pumps, and does not include any electrical or structural modifications.</p> <p>New electrical and process controls will be provided for the rehabilitated tank per Item 1 of this table.</p>	
<p>Yard Piping from RAS Pump Station to RDTs and From RDTs to Holding Tanks</p>	<p>Previously contracted scope included getting a WAS flow stream to the Gravity Thickeners and get flow from the Gravity Thickeners to sludge holding and dewatering (this is the yard piping shown in the 35% deliverable). Revise scope will alleviate clogging issues by designing:</p> <p><u>(1) Yard piping for WAS pump station and tie-ins from RAS screw pumps to RDTs</u></p> <p>This will include an evaluation of hydraulic capacity to deliver enough head to the RDTs or it will require a small WAS pump station.</p> <p>Additionally, two WAS feed lines will be routed to the RDT building so that each feed line runs to one RDT. There will be provisions in the yard for cross over connections to send either WAS feed to either RDTs. (Normal operations for one feed line to one RDT).</p> <p>A modification to the single vertical WAS influent line inside the RDT will also be required to facility the 'normal operations' mentioned above.</p> <p><u>(2) Yard piping from the RDTs to the holding tanks</u></p> <p>Replace existing piping known to clog and does not have provisions for cleaning.</p> <p>New buried piping from the RDT building to the new rehabbed west storage tank will convey TWAS up to and potentially above 5% TS. This viscous flow requires smooth, clean, and full diameter pipes to minimize</p>	<p>Plan Sheets Elevations</p>

	<p>potential clogs. The existing pipe is assumed to have lost interior diameter along the pipe walls. Design includes dual cleanouts in the yard shall for regular O&amp;M.</p> <p>Additionally, the engineer will backcheck current rotary lobe pumps to analysis other potential reasons for pumps operating above recommended RPMs.</p>	
<p>Yard Piping Design, removal of old piping and valves for sludge tanks</p>	<p>This includes removal of old piping and valves that currently service the sludge and scum holding tanks. In past these tanks have been used for aeration, clarification, digestion, chlorine contact, and sludge holding. Existing yard piping and valving have been reused, or repurposed and some are abandoned. Existing piping within the sludge holding tank area will be removed and new yard piping installed for all new treatment processes.</p> <p>Existing yard piping at the sludge drying beds is not included in this area, but yard piping feeding the old sludge lagoons (west of holding tanks) is included in this removal. This also includes demo of an existing outlet structure at the current existing lagoon.</p>	<p>Plan Sheets Demo Sheets</p>
<p>New Office Building</p>	<p>Approximately 1,400 SF building for 5 staff. One (1) private office, One (1) open office with four (4) workstations, conference room, break room, men's and women's restrooms and lockers. Building will also include an electrical room to serve composting equipment.</p>	<p>Plan Sheets</p>
<p>Gravity Thickener Decommissioning</p>	<p>This scope includes decommissioning the tanks to take them out of the process flow.</p>	<p>Plan Sheets Demo Sheets</p>

### Assumptions

- (i) There will be 1 preliminary design submittal, consisting of a 65% design package. Similarly, there will be 1 preliminary design review meeting, with up to 6 of ENGINEER's staff attending in person and the remainder of the staff attending via teleconference. In person attendance at meeting will be combined with an engineering site visit to the facility. If it is determined during the course of execution that the site visits should occur at a separate time, then those persons will attend the design review meeting remotely.
- (ii) 10 sets of plans will be printed in half-size for each submittal and delivered electronically. The preliminary design report and the draft specifications will only be delivered electronically.

#### B.1.5.5 Deliverables

- (i) 65% Design Submittal. Electronically submitted revisions to preliminary design report, Class 3 cost estimate, draft specifications, and approximately 50 drawing sheets, to include plan and profile drawings of major facilities.
- (ii) 65% Submittal. 10 sets of plans to be printed in half-size.
- (iii) 3-D rendered model, in a format viewable by City Staff without additional software, of the facility site, including foundations, piping, equipment, electrical, HVAC and other components, both above and below ground.

#### **B.1.6 PHASE NO. 2. FINAL DESIGN.**

Final design shall include the preparation of final plans for the PROJECT together with all specifications and related contract documents required for the construction of the PROJECT by the AUTHORITY'S construction contractor; Final Design shall be in accordance with AUTHORITY'S Standards, detailed specifications, and approved Preliminary Plans prepared in Phase No.1, and shall be submitted to the AUTHORITY within the approved schedule after the date specified in the Notice to Proceed for Phase No. 2. ENGINEER shall provide the AUTHORITY a set of mylars of final plans for signature purposes. The 95% and 100% submittals will be combined with the rest of project drawings and submitted as single packages. The Final design tasks shall include the following:

B.2.1 No change

B.2.2 No change

B.2.3 No change

B.2.4 Deliverables

B.2.4.1 95% Design. Final drawings and specification delivered electronically. 12 sets of half-size drawings printed and bound. 3 sets of specifications printed and bound. Class 2 Cost Estimate delivered electronically.

B.2.4.2 95% Design review meeting. ENGINEER will publish agenda, attend with up to 6 of ENGINEER'S staff in person, and publish draft and final meeting notes. In person attendance at meeting will be combined with an engineering site visit to the facility. If it is determined during the course of execution that the site visits should occur at a separate time, then those persons will attend the design review meeting remotely.

B.2.4.3 100% Design. Signed/sealed plans and specifications, delivered electronically. Specifications printed and bound. Drawing printed full-size (22x34) on Mylar for final city review and signature. Updated Class 2 Cost Estimate based on any modification from the 95% Design Submittal. There will not be a 100% Design review meeting.

B.2.4.4 Permitting. ENGINEER shall coordinate deliverables directly with ODEQ and OWRB, to include plans, specifications, and Engineering Report.

B.2.4.5 3-D rendered model, in a format viewable by City Staff without additional software, of the facility site, including foundations, piping, equipment, electrical, HVAC and other components, both above and below ground.

B.2.4.6 Anticipated deliverables based on design concepts:

**Table 2: Anticipated Design at 95% and 100% Biosolids Management Facilities**

<b>Facility/Item</b>	<b>95% Submittal (includes 65% drawings)</b>	<b>100% Submittal (includes 95% drawings)</b>
New Blower Building	Architectural Floor Plan	Final Sheets and Specifications
	Architectural Roof Plan	Final Sheets and Specifications
	Architectural Elevations	Final Sheets and Specifications
	Architectural Building Sections	Final Sheets and Specifications
	Architectural Schedules & Details	Final Sheets and Specifications
	Structural Foundation Plan	Final Sheets and Specifications
	Structural Sections	Final Sheets and Specifications
	Structural Details	Final Sheets and Specifications
	Process Mechanical Plan	Final Sheets and Specifications
	Process Mechanical Sections	Final Sheets and Specifications
	Process Mechanical Details	Final Sheets and Specifications
	HVAC Plan	Final Sheets and Specifications
	HVAC Schedules and Details	Final Sheets and Specifications
	Plumbing Plan	Final Sheets and Specifications
	Plumbing Details	Final Sheets and Specifications
	Electrical Plan	Final Sheets and Specifications
	Electrical One Line Diagram	Final Sheets and Specifications
	Electrical Schedules	Final Sheets and Specifications
Rehab West Sludge Storage Tank:		
	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Sections, Details	Final Sheets and Specifications
	Sections, Details	Final Sheets and Specifications
	Demo, Details	Final Sheets and Specifications
	Demo, Details	Final Sheets and Specifications
	Demo, Details	Final Sheets and Specifications
	Demo, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications

<u>Yard Piping from RAS Pump Station to RDTs and from RDTs to Holding Tanks:</u>	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
<u>Yard Piping, removal of old piping &amp; valves for sludge &amp; scum tanks</u>	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
	Profile, Details	Final Sheets and Specifications
<u>New Office Building</u>	Architectural Floor Plan	Final Sheets and Specifications
	Architectural Roof Plan	Final Sheets and Specifications
	Architectural Elevations	Final Sheets and Specifications
	Architectural Building Sections	Final Sheets and Specifications
	Architectural Wall Sections	Final Sheets and Specifications
	Architectural Schedules & Details	Final Sheets and Specifications
	Structural Foundation Plan	Final Sheets and Specifications
	Structural Roof Plan	Final Sheets and Specifications
	Structural Sections	Final Sheets and Specifications
	Structural Details	Final Sheets and Specifications
	HVAC Plan	Final Sheets and Specifications
	HVAC Schedules and Details	Final Sheets and Specifications
	Plumbing Plan	Final Sheets and Specifications
	Plumbing Isometrics & Schedules	Final Sheets and Specifications
	Plumbing Details	Final Sheets and Specifications
	Electrical Plan	Final Sheets and Specifications
	Electrical Room Enlarged Plan	Final Sheets and Specifications
	Electrical One Line Diagram	Final Sheets and Specifications
	Electrical Schedules	Final Sheets and Specifications
	Panel Schedules	Final Sheets and Specifications
	Wiring Diagrams	Final Sheets and Specifications
	Architectural Floor Plan	Final Sheets and Specifications
	Architectural Roof Plan	Final Sheets and Specifications
	Architectural Elevations	Final Sheets and Specifications
	Architectural Building Sections	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications

<u>Gravity Thickener Decommissioning</u>	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Layouts, Details	Final Sheets and Specifications
	Demo, Details	Final Sheets and Specifications
	Demo, Details	Final Sheets and Specifications
	Demo, Details	Final Sheets and Specifications

**B.3 PHASE NO. 3. GENERAL SERVICES DURING CONSTRUCTION.** No change

**B.4 SPECIAL SERVICES.** Amend the task to include the following services:

B.4.1 GRANT SUPPORT SERVICES. No change.

B.4.2 FERTILIZER MARKET STUDY. No change.

B.4.3 NEPA SUPPORT. Amend the task to include following services:

Conduct NEPA Environmental Assessment which will include a report to USDA. As part of the NEPA assessment, ENGINEER will conduct background archeological research, one (1) cultural resource field survey, one (1) cultural resources report, issue letters to State Historic Preservation Office (SHPO) and tribal nations, and, if needed, prepare an inadvertent discovery plan.

B.4.4 PILOT STUDY. Amend the task to include following services:

Conduct pilot studies for dewatering and composting. The dewatering pilot will produce a sludge cake, that will be conveyed to the composting pilot area. At the composting pilot location, sludge cake and woodchips will be mixed then placed on top of aeration piping to perform an aerated static pile compost pilot. Scope also includes: coordinating with dewatering vendors, testing protocols, assisting HCWWTP staff in setup, monitoring and sampling, permitting coordination, and equipment procurement.

**B.5 RESIDENT PROJECT REPRESENTATIVE SERVICES.** Not included, No change

**SCHEDULE.** ENGINEER agrees to complete all work described above within the timeframes outlined in this AMENDMENT NO. 2. (See EXHIBIT 2, PROJECT SCHEDULE.)

**EXHIBIT 2**  
**PROJECT SCHEDULE**

EXHIBIT 2 - Project Schedule

HAIKEY CREEK BIOSOLIDS COMPOST FERTILIZER PROJECT					
Today's Date :		15-Nov-24			
Activity	Days	Milestone	Start	Finish	Status
Notice to Proceed	0	M	7/13/2023	7/13/2023	Completed
Project Kickoff	0		8/10/2023	8/10/2023	Completed
35% Design	172	M	8/10/2023	1/29/2024	Completed
<b>USDA NEPA Process</b>					
Tulsa Notified of USDA Grant Award	0		10/8/2023	10/8/2023	Completed
Tulsa Accepts USDA Grant	0		10/10/2023	10/10/2023	Completed
Jacobs Kickoff Mtg w/ Tulsa for NEPA	0		11/7/2023	11/7/2023	Completed
USDA Notice: Shovel Testing Osage Nation	0		1/30/2024	1/30/2024	Completed
Field Survey & Shovel Testing	21		4/17/2024	5/8/2024	Completed
Submit of Shovel Testing to Osage Nation	0		5/8/2024	5/8/2024	Completed
USDA & Osage Nation Review	14		5/8/2024	5/22/2024	Completed
Floodplain Analysis	131		5/22/2024	9/30/2024	Completed
Finalize & Submit NEPA Report to USDA	168	M	5/22/2024	11/6/2024	Completed
<b>65% Design</b>					
Site Visit	2		2/21/2024	2/22/2024	Completed
Finalize New Facilities Scope Items	52	M	2/22/2024	4/14/2024	Completed
Negotiate New Facilities LOE	14		4/14/2024	4/28/2024	Completed
<b>Market Study</b>					
Site Tour	2		4/22/2024	4/24/2024	Completed
Draft Report	0		5/31/2024	5/31/2024	Completed
Final Report	0	M	6/28/2024	6/28/2024	Completed
Final Decision by RMUA on Site Layout	7	M	6/28/2024	7/5/2024	Completed
<b>Pilot Testing</b>					
Present Benefits of Pilot Testing			7/12/2024	7/12/2024	Completed
Scope Fee Pilot Testing	45		7/12/2024	8/26/2024	Completed
Dewatering & Compost Pilot Testing	157		8/27/2024	1/31/2025	In Progress
65% Plans/Specs	180	M	4/28/2024	10/25/2024	Completed
RMUA Review & Review Meeting	26		10/25/2024	11/20/2024	In Progress
<b>95% Design</b>					
95% Plans/Specs	100		11/20/2024	2/28/2025	Not Started
Submit Plans/Specs	0	M	2/28/2025	2/28/2025	Not Started
<b>ODEQ Permitting</b>					
ODEQ Submit Engr. Design Report	0		2/28/2025	2/28/2025	Not Started
ODEQ Review	28		2/28/2025	3/28/2025	Not Started
Address ODEQ Comments	21		3/28/2025	4/18/2025	Not Started
Permit to Construct	0	M	4/18/2025	4/18/2025	Not Started
RMUA Review & Review Meeting	14		2/28/2025	3/14/2025	Not Started
<b>100% Design</b>					
Submit Signed-Sealed Plans/Specs	124	M	3/14/2025	7/16/2025	Not Started
<b>TMUA/BAMA/RMUA Loan Funding &amp; Bidding</b>					
CWSRF Loan Preparation	150		11/1/2025	3/31/2026	Not Started
CWSRF Loan Closing	0		4/1/2026	4/1/2026	Not Started
Funds Available	29	M	4/1/2026	4/30/2026	Not Started
Advertise Project	28	M	4/30/2026	5/28/2026	Not Started
Bid Opening	0		6/5/2026	6/5/2026	Not Started
Board Approval Construction Contract	132		6/5/2026	10/15/2026	Not Started
<b>Construction</b>					
Pre-Construction Meeting	0		11/5/2026	11/5/2026	Not Started
Construction	913		11/5/2026	5/6/2029	Not Started
Fertilizer Production	650	M	11/5/2026	8/16/2028	Not Started



**COMPENSATION****ATTACHMENT D****D. COMPENSATION.**

ENGINEER shall be paid as compensation for the professional services set forth in this AMENDMENT NO. 2 and itemized in (see EXHIBIT 3, FEE SCHEDULE), an amount not to exceed Six Hundred Forty-Two Thousand, and Sixty-Eight and 00/100 Dollars (\$ 642,068.00).

The ENGINEER acknowledges the following summary of modifications to the Fee Schedule as stated in the original Contract and modified by AMENDMENT NO. 2:

D.4. Travel and Subsistence Reimbursement. Travel and subsistence from outside the Tulsa Metropolitan Area shall be reimbursed at actual costs and not exceed current GSA Rates. Local travel will not be reimbursed.

D.7 Special Services Allowance. At the sole discretion of AUTHORITY, a Special Services Allowance for geotechnical, potholing, abstract (real estate) research, and/or permit/review fees may be provided by AUTHORITY. Any such allowance will be for the direct cost of the Special Services, not to exceed Zero Dollars and Zero Cents (\$0.00) and will not include payment of any markup, profit or overhead to ENGINEER. Use of the Special Services Allowance must be authorized, in writing, by the AUTHORITY.

Original Contract Amount	\$ 499,925.59
AMENDMENT NO. 1	<u>\$ 3,705,889.00</u>
AMENDMENT NO. 2	<u>\$ 642,068.00</u>
Total Amended Contract Amount	<u>\$ 4,847,882.59</u>

**Exhibit 3**  
**RMUA ES 2020-11**  
**HAIKEY CREEK WASTEWATER TREATMENT PLANT BIOSOLIDS IMPROVEMENTS**  
**Fee Schedule - Amendment 2**

Role	PRINCIPAL	PROJECT MANAGER	DESIGN MANAGER	QC/SME	SENIOR ENGINEER	STAFF ENGINEER	SR. DESIGN TECH	GID ENGINEER	PUBS/SPECS /ADMIN	Total	Notes
Avg. Raw Rate	\$120	\$92	\$87	\$90	\$80	\$45	\$50	\$33	\$40		
<b>B.1.4 Project Management</b>											
Bi-Weekly Meetings with City Staff	2	14	14		14	14				14	4 mon schedule, 16 weekly mtgs, 4 monthly mtgs
Weekly Internal Meetings		15	14							59	16 weeks, 16 meetings
Contract Administrator and Invoicing		4				4			5	13	
Subconsultant Management										0	
Project Coordination	2	27	27			27				83	
<b>Summary - Project Management/Coord.</b>											
Hours	4	60	41	0	14	45	0	0	5	169	
Raw Cost	\$480	\$5,520	\$3,567	\$0	\$1,120	\$2,025	\$0	\$0	\$200	\$12,912	
Billing Cost	\$1,440	\$16,560	\$10,701	\$0	\$3,360	\$6,075	\$0	\$0	\$600	\$38,736	
<b>B.1.5 Preliminary Design (35%)</b>											
<b>Disciplines:</b>											
Architecture											
Civil										0	
Electrical										0	
Plumbing										0	
HVAC										0	
Process Mechanical										0	
Structural										0	
I&C										0	
Corrosion										0	
Cost Estimation										0	
Specification										0	
Permitting										0	
Internal Review:										0	
QA/QC										0	
Fixup										0	
Client Review:										0	
Review Mtg										0	
<b>Summary - Preliminary Design (35%)</b>											
Hours	0	0	0	0	0	0	0	0	0	0	
Raw Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Billing Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

Exhibit 3  
**RMUA ES 2020-11**  
**HAIKEY CREEK WASTEWATER TREATMENT PLANT BIOSOLIDS IMPROVEMENTS**  
**Fee Schedule - Amendment 2**

Role	PRINCIPAL	PROJECT MANAGER	DESIGN MANAGER	QC/ SME	SENIOR ENGINEER	STAFF ENGINEER	SR. DESIGN TECH	GID ENGINEER	PURS/SPECS /ADMIN	Total	Notes
Avg Raw Rate	\$120	\$92	\$87	\$90	\$80	\$45	\$50	\$33	\$40		
<b>B.1.5 Preliminary Design (65%)</b>											
Disciplines:											
Architecture	3	8	3	3	14	20	24			72	
Civil	3	12	3	3	14	20	24			76	
Electrical	3	8	3	3	14	20	24			72	
Plumbing	3	8	3	3	14	20	24			72	
HVAC	3	8	3	3	14	20	24			70	
Process Mechanical	3	12	5	5	14	20	24			78	
Structural	3	9	3	3	14	20	24			73	
I&C	3	9	3	3	14	20	22			71	
Corrosion		4	4	4	12	6	6			32	
Cost Estimation	2	4	3	3	6	6	6			28	
Specification	2	8	3	3	9	14	14			75	
Permitting	2	5							25	6	
Internal Review:											
QA/QC	2	9	6	3	3	3				26	
Fixup	3	3	3	3	3	9	8			29	
Client Review:											
Review Mtg	6	6	6	6	6				3	27	
<b>Summary - Preliminary Design (65%)</b>											
Hours	2	49	110	48	151	198	222	0	34	814	
Raw Cost	\$4,508	\$9,570	\$9,570	\$4,320	\$12,080	\$8,910	\$11,100	\$0	\$1,560	\$52,088	
Billing Cost	\$720	\$13,524	\$28,710	\$12,960	\$36,240	\$26,790	\$33,300	\$0	\$4,080	\$156,264	
<b>B.2.4 Final Design (95%)</b>											
Disciplines:											
Architecture	2	6	6	3	10	14	14			49	
Civil	2	6	6	3	9	12	12			44	
Electrical	2	6	6	3	9	12	12			44	
Plumbing	2	6	6	3	9	12	12			44	
HVAC	2	6	6	3	8	8	10			37	
Process Mechanical	2	9	6	3	14	12	21			61	
Structural	2	6	6	3	10	12	14			47	
I&C	2	6	6	3	9	10	14			44	
Corrosion	2	6	6	3	6	6	6			29	
Cost Estimation	2	6	6	3	3	3	3			20	
Specification	2	6	6	3	6	6	6		14	43	
Permitting	2	6	6						3	11	
Internal Review:											
QA/QC	3	6	6	2	2	2				21	
Fixup	3	3	3	3	4	8	6			27	
Client Review:											
Review Mtg	6	6	6	6	6				3	27	
<b>Summary - Final Design (95%)</b>											
Hours	3	39	90	44	105	117	130	0	19,996,667	548.0	
Raw Cost	\$360	\$3,588	\$7,830	\$3,960	\$8,400	\$5,265	\$6,500	\$0	\$800	\$36,703	
Billing Cost	\$1,080	\$10,764	\$23,490	\$11,880	\$23,200	\$15,795	\$19,500	\$0	\$2,400	\$110,109	

**Exhibit 3**  
**RMUA ES 2020-11**  
**HAIKEY CREEK WASTEWATER TREATMENT PLANT BIOSOLIDS IMPROVEMENTS**  
**Fee Schedule - Amendment 2**

Disciplines:	Role	PRINCIPAL	PROJECT MANAGER	DESIGN MANAGER	QC/ S/ME	SENIOR ENGINEER	STAFF ENGINEER	SR. DESIGN TECH	GID ENGINEER	PUBS/SPECS /ADMIN	Total	Notes
Avg. Raw Rate	\$120	\$92	\$87	\$90	\$80	\$45	\$50	\$33	\$40			
B.2.4 Final Design (100%)												
Architecture		2	5	3	8	8	9				35	
Civil		2	5	3	8	8	9				35	
Electrical		2	5	3	8	8	9				35	
Plumbing		2	5	3	8	8	9				35	
HVAC		2	5	3	6	5	10				31	
Process Mechanical		2	6	3	8	8	9				36	
Structural		2	5	3	8	8	9				36	
I&C		2	5	3	8	8	8				34	
Corrosion		2	5	3	3	3	3				19	
Cost Estimation		2	5	3	3	3	2				18	
Specification		2	5	3	3	6	6			10	38	
Permitting		2	5							3	10	
Internal Review:												
QA/QC	3	3	3	4	3	3	3	3			24	
Fixup	3	3	5	3	3	3	3	3			20	
Client Review:												
Review Mtg		6	6	3	6	6	6	6		3	36	
Fixup		6	6	3	8	8	8	8			39	
Bid Documents:												
Sign/Seal Bid Set		9	6			6		6		3	30	
Summary - Final Design (100%)		3	87	46	100	94	109	0	19		511	
Hours	\$360	\$4,876	\$7,569	\$4,140	\$8,000	\$4,230	\$5,450	\$0	\$760		\$35,385	
Raw Cost	\$1,080	\$14,628	\$22,707	\$12,420	\$24,000	\$12,690	\$16,350	\$0	\$2,280		\$106,155	
Billing Cost												
B.2.5 Bid Phase Services												
Bid Phase Kick-off											0	
Verify/validate any code changes											0	
Sign-Seal (if needed)											0	
Pre-Bid Meeting		3	3	3	3	3	3	3			21	
Requests for Information		3	3	3	3	3	3	3			27	
Addenda											0	
Engineer's Estimate		2	2	2	2	8	20	20		5	77	
Engineer's Bid Recommendation		4	5	3	20	20	20	20			141	
Preparation of Conformed Documents											0	
Summary - Final Design (100%)		0	13	11	28	34	26	6	11		141	
Hours	\$0	\$1,104	\$1,131	\$990	\$2,240	\$1,530	\$1,300	\$1,980	\$440		\$8,933	
Raw Cost	\$0	\$3,312	\$3,393	\$2,970	\$6,720	\$4,590	\$3,900	\$5,594	\$1,320		\$26,799	
Billing Cost												
B.3 General Services During Construction												
Allowance											0	
B.3 Summary - General Services During Construction												
Hours	0	0	0	0	0	0	0	0	0	0	0	
Raw Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Billing Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3												

**Exhibit 3  
RMUA ES 2020-11  
HAIKEY CREEK WASTEWATER TREATMENT PLANT BIOSOLIDS IMPROVEMENTS  
Fee Schedule - Amendment 2**

Role	PRINCIPAL	PROJECT MANAGER	DESIGN MANAGER	QC/ SIME	SENIOR ENGINEER	STAFF ENGINEER	SR. DESIGN TECH	GID ENGINEER	PUBS/SPECS /ADMIN	Total	Notes
B.4 Special Services	\$120	\$92	\$87	\$90	\$80	\$45	\$50	\$33	\$40		
B.4.1 USDA Federal Grant Writing										0	
Coordination											
Financial Projections											
Grant Forms/Narrative											
Subtotal Hours	0	0	0	0	0	0	0	0	0	0	
Subtotal Raw Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Subtotal Billing Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
B.4.2 Marketing Plan										0	
Coordination										0	
Distribution/Access Plan										0	
Subtotal	0	0	0	0	0	0	0	0	0	0	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
B.4.3 NEPA Support	2	28	0	6	20	235	190	0	36	517	
Subtotal Hours	2	28	0	6	20	235	190	0	36	517	
Subtotal Raw Cost	\$240	\$2,576	\$0	\$540	\$1,572	\$10,574	\$9,500	\$0	\$1,440	\$26,442	
Subtotal Billing Cost	\$720	\$7,728	\$0	\$1,620	\$4,716	\$31,723	\$28,500	\$0	\$4,320	\$79,327	
B.4.4 Pilot Study										325	
Subtotal Hours	0	16	0	70	141	98	0	0	0	325	
Subtotal Raw Cost	\$0	\$1,472	\$0	\$6,300	\$11,283	\$4,410	\$0	\$0	\$0	\$23,465	
Subtotal Billing Cost	\$0	\$4,416	\$0	\$18,900	\$39,850	\$13,230	\$0	\$0	\$0	\$70,396	
B.4 Summary - Special Services											
Hours	2	44	0	76	161	332,985	190	0	36	842	
Raw Cost	\$240	\$4,048	\$0	\$6,840	\$12,855	\$14,984	\$9,500	\$0	\$1,440	\$49,908	
Billing Cost	\$720	\$12,144	\$0	\$20,520	\$39,566	\$44,953	\$28,500	\$0	\$4,320	\$149,723	
B.5 Resident Project Representative Services											
Net In Scope											

DESIGN EXPENSES	Quantity	Qty Unit	Cost Rate	Cost Unit	# of Documents	Total
Roundtrip Airfare (CLT to TUL)	2 trips	2 trips	\$ 550.00	ea		\$ 1,100.00
Roundtrip Airfare (POX to TUL)	2 trips	2 trips	\$ 650.00	ea		\$ 1,300.00
Auto Rental	6 days	6 days	\$ 60.00	day		\$ 360.00
Hotel	6 nights	6 nights	\$ 175.00	night		\$ 1,050.00
Meals & Incidentals	8 days	8 days	\$ 65.00	day		\$ 520.00
Mileage (DPW to TUL for Mtgs. Project Coord.)	4 trips	4 trips	\$ 0.670	mile	480 miles/trip	\$ 2,866.40
Specifications and Design Report Reproduction	100 pages	100 pages	\$0.30	page	30	\$ 900.00
Half-size Drawings - Reproduction - 11x17	60 sheets	60 sheets	\$0.50	sheet	30	\$ 1,080.00
Full size drawings - 22x34 (30 sets)	60 sheets	60 sheets	\$3.50	sheet	6	\$ 1,260.00
M/jar Printing (including reprints)	60 sheets	60 sheets	\$18.00	sheet	1.25	\$ 1,350.00
Color Reports - 8.5 x 11	20 pages	20 pages	\$0.75	page	30	\$ 450.00
Color Reports - 11 x 17	10 sheets	10 sheets	\$2.00	sheet	30	\$ 600.00
Shipping and Postage (FEDEX)	6 each	6 each	\$ 25.00	shipment		\$ 150.00
<b>TOTAL Expenses</b>						<b>\$ 11,406.40</b>

**Exhibit 3**  
**RMUA ES 2020-11**  
**HAIKEY CREEK WASTEWATER TREATMENT PLANT BIOSOLIDS IMPROVEMENTS**  
**Fee Schedule - Amendment 2**

Role	PRINCIPAL	PROJECT MANAGER	DESIGN MANAGER	QC/ S/ME	SENIOR ENGINEER	STAFF ENGINEER	GID ENGINEER	PUBS/SPECS /ADMIN	Notes
Avg Raw Rate	\$120	\$92	\$87	\$90	\$80	\$45	\$33	\$40	Total

**PROJECT SUMMARY**

Project Management	Hours	Raw Cost	Billing Cost (3.0 Multiplier)	Subcontracts	Expenses	Total
<b>A.1. Project Management</b>						
Total Phase A.1	169	\$12,912	\$38,736		\$2,500	\$41,236
<b>B.1 Preliminary Design 35%, 65%</b>						
35% Design	0	\$0	\$0	\$0	\$0	\$0
65% Design	814	\$52,088	\$156,264		\$2,000	\$158,264
Total Phase B.1	814	\$52,088	\$156,264	\$0	\$2,000	\$158,264
<b>B.2 Final Design 95%, 100%</b>						
95% Design	548	\$36,703	\$110,109		\$1,906	\$112,015
100% Design	511	\$35,385	\$106,155		\$5,000	\$111,155
Subtotal	1,059	\$72,088	\$216,264	\$0	\$6,906	\$223,170
Bid Phase	141	\$8,933	\$26,799			\$26,799
Subtotal	141	\$8,933	\$26,799			\$26,799
Total Phase B.2	1,200	\$81,021	\$243,063	0	6,906	\$249,969
<b>B.3 General Services During Construction</b>						
Allowance - Phase B.3	0	\$0	\$0			\$0
<b>B.4 Special Services</b>						
USDA Grant Writing	0	\$0	\$0	\$0	\$0	\$0
Marketing Plan	0	\$0	\$0	\$0	\$0	\$0
NEPA Support	517	\$26,442	\$79,327	\$0	\$5,426	\$84,753
Pilot Study	325	\$23,465	\$70,396	\$0	\$37,450	\$107,846
Total Phase B.4	517	\$49,908	\$149,723	\$0	\$42,876	\$192,599
<b>PROJECT TOTAL</b>	<b>2,700</b>	<b>\$195,928</b>	<b>\$587,785</b>	<b>\$0</b>	<b>\$54,282</b>	<b>\$642,068</b>

<b>JACOBS LABOR</b>	Fee
Raw Labor Cost	\$195,928
Labor with 3.0 Multiplier	\$587,785
<b>(a) TOTAL JACOBS LABOR</b>	<b>\$587,785</b>

<b>SUBCONTRACTS</b>	Fee
Survey and GIS: Meshke & Associates	\$0
Geotech	\$0
Marketing Plan	\$0
5% Mark-up (administration and insurance)	\$0
<b>(b) TOTAL SUBCONTRACT INCL. MARK-UP</b>	<b>\$0</b>
<b>EXPENSES</b>	Fee
Subtotal Expenses	\$54,282
<b>(c) TOTAL EXPENSES</b>	<b>\$54,282</b>
<b>Total Fee (a) + (b) + (c)</b>	<b>\$642,068</b>

**AFFIDAVIT OF CLAIMANT**

STATE OF Oklahoma

COUNTY OF Tulsa

The undersigned, of lawful age, being first duly sworn, on oath says that this contract is true and correct. Affiant further states that the work, services or materials will be completed or supplied in accordance with the contract, plans, specifications, orders or requests furnished the affiant. Affiant further states that (s)he has made no payment directly or indirectly of money or any other thing of value to any elected official, officer or employee of the City of Tulsa or any public trust of which the City is a beneficiary to obtain or procure the contract or purchase order.

By: *Jennifer Kassa*  
Signature

Name: Jennifer Kassa

Company: Jacobs Engineering Group Inc.

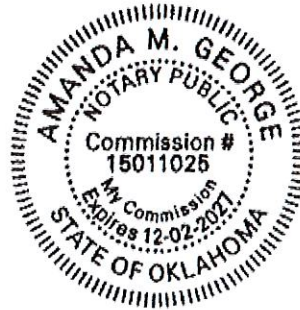
Title: Vice President and Designated Manager

Subscribed and sworn to before me this 25th day of November, 20 24.

*Amanda M. George*  
Notary Public

My Commission Expires: 12-02-2027

Notary Commission Number: 15011025



INTEREST AFFIDAVIT

STATE OF Oklahoma )  
 ) ss.  
COUNTY OF Tulsa )

I, Jennifer Kassa, of lawful age, being first duly sworn, state that I am the agent authorized by Contractor, Engineer, Architect or provider of professional service ["Services Provider"] to submit the attached Agreement. Affiant further states that no officer or employee of the City of Tulsa either directly or indirectly owns a five percent (5%) interest or more in the Services Provider's business or such a percentage that constitutes a controlling interest. Affiant further states that the following officers and/or employees of the City of Tulsa own an interest in the Services Provider's business which is less than a controlling interest, either direct or indirect.

\* See Note Below

By Jennifer Kassa  
Signature

Title Business Vice President & Designated Manager

Subscribed and sworn to before me this 16th day of December, 2024

Amanda M. George  
Notary Public

My Commission Expires: 12-02-2027

Notary Commission Number: 15011025

County & State Where Notarized: Tulsa, Oklahoma



**The Affidavit must be signed by an authorized agent and notarized.**

\* Note: Jacobs Engineering Group Inc. (JEG) is a wholly owned subsidiary of Jacobs Solutions Inc. As Jacobs Solutions Inc. is publicly traded on the NYSE, with its stock being publicly traded on a daily basis by the general public and/or corporations, JEG is unable to verify whether any officer or employee of the City of Tulsa directly or indirectly owns 5% or more interest, or a controlling interest in Jacobs Solutions Inc. JEG is also unable to verify whether any officer or employee of the City of Tulsa owns an interest in Jacobs Solutions Inc. which is less than a controlling interest, either direct or indirect.







# SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE  
11/15/2024

NAME OF INSURED: Jacobs Engineering Group Inc.

Additional Description of Operations/Remarks from Page 1:

Additional Information:

\*\$2,000,000 SIR FOR STATE OF: OHIO