#### TASK ORDER FORM

This is	Task Order No. 101418,
	consisting of 6 pages,
dated	

KSA Project Number: 101418

Owner Project (or Purchase Order) Number:

Project Name: New Development Water/Wastewater Impact Fee

In accordance with paragraph 1.01 of the Standard Form of Agreement Between Owner and Engineer for Professional Services – Task Order Edition, dated March 31, 2021 ("Agreement"), Owner and Engineer agree as follows:

### 1. Specific Project Data

A. Owner: City of Mount Vernon, Texas

B. Title: New Development Water/Wastewater Impact Fee Analysis

C. Description: Provide professional services for assessment of the impact from anticipated

developments on City of Mount Vernon's water and wastewater system.

### 2. Services of Engineer:

Engineer shall provide, or cause to be provided, the following services:

Provide analysis of impacts from anticipated developments on the City of Mount Vernon's existing water and wastewater system. Impacts shall be limited to two commercial sites and approximately 100 new residential sites in locations specified by the City of Mount Vernon. Evaluation will include analysis of the existing water and wastewater systems' ability to meet anticipated water and wastewater demands of the anticipated developments. Analysis will be performed using WaterCAD models and previous water and wastewater system studies. Results of the analysis will be presented in a summary letter report including recommendations for required improvements to the water and wastewater system, exhibits, and opinions of probable project costs for recommended improvements.

Associated with the impact fee analysis will be a hydraulic model of the City's water system which will include the following:

- 1. Collect and review existing documents pertaining to historical master planning of the City's water distribution system.
- 2. With assistance of the City's staff, use existing information to modify the Owner's existing CAD map showing all existing water lines 6-inches and larger in the system.
- 3. From the above map, identify "nodes" in the system where pipes intersect for use in system modeling. Pipes 6-inches and larger will be used in the computer model.
- 4. Utilizing the City's previous five years of meter book records, consumption records for the City's largest 10 water users and an outline map of the meter book areas, place average water demands at various "nodes" throughout the City.

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Provide analysis of impacts from anticipated developments on the City of Mount Vernon's existing water and wastewater system. Impacts shall be limited to two commercial sites and approximately 100 new residential sites in locations specified by the City of Mount Vernon. Evaluation will include analysis of the existing water and wastewater systems' ability to meet anticipated water and wastewater demands of the anticipated developments. Analysis will be performed using WaterCAD models and previous water and wastewater system studies. Results of the analysis will be presented in a summary letter report including recommendations for required improvements to the water and wastewater system, exhibits, and opinions of probable project costs for recommended improvements.

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- 3. From the above map, identify "nodes" in the system where pipes intersect for use in system modeling. Pipes 6-inches and larger will be used in the computer model.
- 4. Utilizing the City's previous five years of meter book records, consumption records for the City's largest 10 water users and an outline map of the meter book areas, place average water demands at various "nodes" throughout the City.

- 5. Prepare a computer model of the existing distribution system which will include all distribution mains 6-inches and larger and system demands distributed to the nodes throughout the City. This modeling will include four design conditions for existing demands:
  - · Average day demand plus elevated tank replenishment
  - · Maximum day demand
  - · Peak hour demand
  - · Maximum day demand plus fire flows at critical system locations
- 6. Any low pressure areas in the existing system under the above conditions will be noted for correction.
- 7. Prepare City-wide treated water demand projections for 5, 10 and 20 years.
- 8. Distribute future water demands for 5, 10 and 20 year design periods to various nodes throughout the City.
- 9. Model future water distribution system improvements which will meet TCEQ design criteria during each of the four design conditions for the 5, 10 and 20 year projections. The system elements to be investigated include the following:
  - · Distribution system piping
  - Elevated storage tanks
  - · Ground storage tanks and high service pumping equipment
  - Additional pressure planes (if needed to serve higher ground elevations)
- 10. Prepare a report which documents the procedures used in the analysis and the results obtained. The report will contain maps showing phased improvements to the distribution system for each design year along with estimates of capital costs.

Also Associated with the impact fee analysis will be a limited model of the City's wastewater collection and treatment system which will include the following:

- a. Collect and review existing documents pertaining to historical master planning of the Owner's wastewater collection system including but not limited to, historical flow and wastewater treatment plant influent and effluent records.
- b. With assistance of the Owner's staff, use existing information to modify the Owner's existing CAD map showing all existing gravity wastewater collection lines 6-inches and larger in the system, lift station locations, force main routes and diameters and other pertinent information needed for the system analysis
- c. Assign existing average and peak flows to the wastewater collection system using Owner provided historical flow data from the wastewater treatment plant and lift stations if available.

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C. Description: Provide professional services for assessment of the impact from anticipated

developments on City of Mount Vernon's water and wastewater system.

## 2. Services of Engineer:

Engineer shall provide, or cause to be provided, the following services:

Provide analysis of impacts from anticipated developments on the City of Mount Vernon's existing water and wastewater system. Impacts shall be limited to two commercial sites and approximately 100 new residential sites in locations specified by the City of Mount Vernon. Evaluation will include analysis of the existing water and wastewater systems' ability to meet anticipated water and wastewater demands of the anticipated developments. Analysis will be performed using WaterCAD models and previous water and wastewater system studies. Results of the analysis will be presented in a summary letter report including recommendations for required improvements to the water and wastewater system, exhibits, and opinions of probable project costs for recommended improvements.

Associated with the impact fee analysis will be a hydraulic model of the City's water system which will include the following:

- 1. Collect and review existing documents pertaining to historical master planning of the City's water distribution system.
- 2. With assistance of the City's staff, use existing information to modify the Owner's existing CAD map showing all existing water lines 6-inches and larger in the system.
- 3. From the above map, identify "nodes" in the system where pipes intersect for use in system modeling. Pipes 6-inches and larger will be used in the computer model.
- 4. Utilizing the City's previous five years of meter book records, consumption records for the City's largest 10 water users and an outline map of the meter book areas, place average water demands at various "nodes" throughout the City.

- 5. Prepare a computer model of the existing distribution system which will include all distribution mains 6-inches and larger and system demands distributed to the nodes throughout the City. This modeling will include four design conditions for existing demands:
  - Average day demand plus elevated tank replenishment
  - · Maximum day demand
  - · Peak hour demand
  - Maximum day demand plus fire flows at critical system locations
- 6. Any low pressure areas in the existing system under the above conditions will be noted for correction.
- 7. Prepare City-wide treated water demand projections for 5, 10 and 20 years.
- 8. Distribute future water demands for 5, 10 and 20 year design periods to various nodes throughout the City.
- 9. Model future water distribution system improvements which will meet TCEQ design criteria during each of the four design conditions for the 5, 10 and 20 year projections. The system elements to be investigated include the following:
  - Distribution system piping
  - Elevated storage tanks
  - Ground storage tanks and high service pumping equipment
  - Additional pressure planes (if needed to serve higher ground elevations)
- 10. Prepare a report which documents the procedures used in the analysis and the results obtained. The report will contain maps showing phased improvements to the distribution system for each design year along with estimates of capital costs.

Also Associated with the impact fee analysis will be a limited model of the City's wastewater collection and treatment system which will include the following:

- a. Collect and review existing documents pertaining to historical master planning of the Owner's wastewater collection system including but not limited to, historical flow and wastewater treatment plant influent and effluent records.
- b. With assistance of the Owner's staff, use existing information to modify the Owner's existing CAD map showing all existing gravity wastewater collection lines 6-inches and larger in the system, lift station locations, force main routes and diameters and other pertinent information needed for the system analysis
- c. Assign existing average and peak flows to the wastewater collection system using Owner provided historical flow data from the wastewater treatment plant and lift stations if available.

- d. Prepare a computer model with the assistance of an excel spreadsheet of the existing collection system which will include all gravity trunk collection mains 6-inches and larger, lift stations and force mains. Computer modeling of only trunk mains of the gravity collection system will assume minimum slopes for pipe capacity modeling. This modeling will include three design conditions for existing wastewater flows:
  - · Average daily flows
  - Maximum daily flow
  - Peak 2-hour flows
- e. Any trunk lines in the existing system above capacity for the above conditions will be noted for correction.
- f. Prepare City-wide flow projections for 5 and 20 years.
- g. Distribute future flow projections for 5 and 20 year design periods to various areas the City.
- h. Model future collection system improvements for a maximum of two growth areas which will meet TCEQ design criteria during each of the three design conditions for the 5 and 20 year projections. The system elements to be investigated include the gravity collection system.
  - Wastewater Treatment Influent Capacity (Analysis of WWTP excluded). KSA has recently modeled the wastewater treatment plant and will update flow projections to verify future flows noted in this model can be handled with proposed improvements from the previous study. Capital Improvement Costs from the previous study will be utilized in the overall impact fee analysis.
- 11. Prepare a report which documents the procedures used in the analysis and the results obtained. The report will contain maps showing phased improvements required as to the collection system for each design year and limited growth in two areas along with estimates of capital costs.

Additional Services of Engineer: The Engineer is hereby authorized to perform the following additional services:

a. Perform topographic surveys as directed by the Owner to establish actual slopes of gravity sewer lines shown to be at/over capacity based on existing system modeling

#### 3. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 and in Exhibit B, except as modified by this Task Order.

### 4. Times for Rendering Services

Engineer shall complete its services in accordance with the following schedule:

Impact Assessment Study and Report will be competed in 120 calendar days from the Owner's Notice to Proceed.

# 5. Payments to Engineer

Owner shall pay Engineer for services rendered as follows:

The breakdown of fees and services to be provided by the Engineer are as follows:

Water Distribution System Study and Report \$37,000.00 (Lump Sum)

Wastewater Treatment System Evaluation \$17,000.00 (Lump Sum)

Impact Feè Analysis Study and Report \$25,000.00 (Lump Sum)

Topographic Survey \$5,000.00 (Estimated-Hourly and

Reimbusable)

Reimbursable Expenses \$2,500.00 (Estimated-Hourly and

Reimbursable)

Total \$86,500.00

# 6. Hourly Rates and Reimbursable Expenses Schedule

Rates for hourly work and reimbursable expenses effective on the date of this Agreement are:

Principal	\$270.00/hour
Senior Environmental Planner	\$220.00/hour
Environmental Planner	\$175.00/hour
Senior Aviation Planner	\$220,00/hour
Aviation Planner	\$180.00/hour
Senior Urban Design Planner	\$215.00/hour
Urban Design Planner	\$185.00/hour
Development Services Manager	\$195.00/hour
Electrical Engineer	\$175.00/hour
Electrical Design Engineer	\$145,00/hour
	\$185.00/hour
Mechanical Engineer	\$230,00/hour
Senior Project Manager	\$175,00/hour
Project Manager	•
Senior Project Engineer	\$170.00/hour
Project Engineer	\$150.00/hour
Senior Design Engineer	\$130.00/hour
Design Engineer	\$115.00/hour
Senior Project Architect	\$215.00/hour
Project Architect	\$145.00/hour
Design Architect	\$105.00/hour
GIS Specialist	\$180.00/hour
Senior Engineering Technician	\$195.00/hour
Engineering Technician	\$105.00/hour
Senior Design Technician	\$125.00/hour
Design Technician	\$ 90.00/hour
Safety Manager	\$135.00/hour
Safety Specialist	\$100.00/hour
TCEQ Instructor	\$100.00/hour
Regulation Compliance Specialist	\$100.00/hour
Project Assistant	\$ 90.00/hour
Senior CAD Technician	\$ 90.00/hour
	\$ 85.00/hour
CAD Technician	\$110.00/hour
Senior Project Representative	•
Senior Project Representative - After Hours	\$130.00/hour
Project Representative	\$ 95.00/hour
Project Representative - After Hours	\$115.00/hour
Graphic Designer	\$ 75.00/hour
Administrative Assistant	\$ 75.00/hour
Secretary	\$ 55.00/hour
Three-Man Survey Crew	\$195.00/hour
Two-Man Survey Crew	\$165,00/hour
Senior Registered Surveyor	\$175,00/hour
Registered Surveyor	\$140.00/hour
Senior Survey Technician	\$120.00/hour
Survey Technician	\$100.00/hour
Mileage	\$ 0.56/mile
ATV (4-Wheeler)	\$100.00/day
GPS	\$100.00/day
3. 0	,,
Reimbursable Expenses (Travel, Lodging, Copies, Printing)	Actual Cost
Outside Consultants	Cost + 15%
Outside Consultants	COSt : 13/0

NOTE: The Standard Hourly Rates and Reimbursable Expenses Schedule shall be adjusted annually as of January to reflect equitable changes in the compensation payable to Engineer.

reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner. The Effective Date of this Task Order is **ENGINEER:** KSA Engineers, Inc. OWNER: City of Mount Vernon, Texas By: By: Joncie H. Young, P.E. Name: Brad Hyman Name: Title: Director of Client Services Title: Mayor 9/16/2022 Date Signed: Date Signed: Engineer License or Firm's Certificate No. F-1356 State of: Texas DESIGNATED REPRESENTATIVE FOR TASK DESIGNATED REPRESENTATIVE FOR ORDER: TASK ORDER: Name: Tina Rose Name: Brittney Smith, P.E. Title: City Administrator Title: Project Manager P.O. Box 597 Address: 140 E. Tyler Street, Suite 600 Address: Mount Vernon, TX Longview, TX 75457 75601 E-Mail Address: bsmith@ksaeng.com E-Mail Address: cityadm@comvtx.com 903.537.2252 903.236.7700 Phone: Phone: Fax: Fax: 888.224.9418

Terms and Conditions: Execution of this Task Order by Owner and Engineer shall make it subject

to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this

7.