

**ADDITIONAL SERVICES AMENDMENT NUMBER 1**

This amendment to the Professional Services Agreement dated 11/15/23, between Town of Thompson’s Station (Client) and Barge Design Solutions, Inc. (Barge) is for additional services described as follows:

Project: Highway 31 Gravity Sewer Design

Project Description: The project consists of the design of a gravity trunk sewer that will generally be located along/near Highway 31 between Interstate 840 and Thompson’s Station Road in Thompson’s Station.

- I. **PROFESSIONAL SERVICES:** Barge agrees to perform the additional services under this Amendment as described in Exhibit A.
- II. **COMPENSATION:** The compensation to be paid to Barge for providing the requested additional services shall be paid in accordance with Exhibit A.
- III. **TERMS AND CONDITIONS:** Services performed under this amendment are subject to the same terms and conditions described in the Professional Services Agreement as referenced above.

Town of Thompson’s Station		Barge Design Solutions, Inc.	
By:		By:	
Printed Name:	Brian Stover	Printed Name:	Jonathan Childs, P.E.
Title:	Mayor	Title:	Senior Vice President
Address:	1110 Fountain View Blvd Thompson’s Station, TN 37179	Address:	615 Third Ave S., Suite 700 Nashville, TN 37210

Barge Design Solutions, Inc. (Barge) will provide the following scope of services for Town of Thompson's Station (Client) including design and bid phase services for the Highway 31 Gravity Sewer, in accordance with the Professional Services Agreement (Agreement) dated November 15, 2023. The scope of work is presented in the following elements:

- I. Project Description
- II. Scope of Services
- III. Project Schedule
- IV. Compensation

## **I. Project Description**

The Town of Thompson's Station (Client) has requested Barge Design Solutions, Inc. (Engineer) to prepare detailed design documents and provide other professional engineering support services related to the Highway 31 Gravity Sewer project. The Town is experiencing increased development along Highway 31 between Interstate 840 and Thompson's Station Road. The majority of this area is currently not served by the Town's wastewater collection system. A gravity trunk sewer will expand sewer service in this area and limit the need for multiple pump stations.

Based on preliminary design evaluation from January 2024, the project will consist of approximately 11,000 linear feet (LF) of a combination of 18-inch ductile iron pipe (DIP) and 18-inch polyvinyl chloride pipe (PVC) plus associated appurtenances.

## **II. Scope of Services**

The scope of services is summarized into the following major tasks:

- Task 1 – Project Management
- Task 2 – Detailed Design
  - 30% Design Documents
  - 90% Design Documents
  - Final Construction Documents
- Task 3 – Easement Documents
- Task 4 – Permitting
- Task 5 – Bid Phase Services

The following sections provide a description of the purpose, activities, deliverables, and assumptions anticipated for each of the tasks.

### **Task 1 – Project Management**

Barge will plan, manage, and execute the work in accordance with the schedule and budget established herein. The project management task will generally include the following activities:

- Facilitate project initiation meeting with Client to identify key project stakeholders for distribution of project information, discuss pertinent data, project staffing and organization, and present project work plan and initial schedule.
- Perform general project management duties including supervising and coordinating the project team and monitoring of project progress, costs, schedule, and work to complete.
- Coordinate regular status meetings with Client staff, prepare meeting agenda, and prepare meeting summaries with action items and decisions. These meetings will occur as part of each project task.
- Prepare and submit monthly invoices and project status reports. Communicate potential scope changes, schedule impacts, and cost risks to allow for timely guidance from Client staff to manage change.
- Coordinate with developers that are affected by pipeline. Up to 20 hours of coordination are included in this scope.

#### **Deliverables:**

The following deliverables will be provided as part of this task:

- Project Initiation Meeting Agenda and Summary
- Meeting Agenda and Summaries
- Monthly Progress Reports and Invoices

#### **Assumptions:**

The following assumptions are applicable to the above scope of services:

- The project is assumed to include a 7-month design and permitting period and a 3-month bidding/award period.
- Project progress meetings can be combined with workshops where feasible to make efficient use of project resources.

## **Task 2 - Detailed Design**

The detailed design task will include development of 30% and 90% design deliverables based on the design decisions made during the preliminary design task. Following is a list of activities anticipated during this task.

### **30% Design**

The following tasks will be completed during the 30% design phase:

- Barge will conduct land surveying to locate marked utilities, topographic features, the edge of pavement, tree lines, and other above-ground features along the identified route. The survey will extend 50-feet either side of the proposed pipeline alignment. At a minimum, the items located will include those necessary for design and land disturbance permitting. Barge will contact Tennessee 811 and other marked utilities to request additional information about the utility within the project area. The topographic survey will be prepared relative to NAVD 88 elevations consistent with Federal Emergency Management Agency (FEMA) mapping.
- Perform a geotechnical investigation, including subsurface exploratory work (drilling), laboratory and field testing, and engineering recommendations. Up to fifteen borings along the pipeline route are included. Borings may be continued into rock for at least one location to determine rock hardness, as deemed necessary.
- Perform a constructability review.
- Update preliminary OPCC based on 30% design documents.
- Review work products and obtain quality control reviewer approvals.
- Facilitate informal workshop with the Client to review 30% design drawings and details as well as receive and discuss comments and resolution for incorporation into detailed design.
- Prepare meeting summary and comment responses.

### **90% Design**

- Address and incorporate Client's 30% review comments from the workshop.
- Finalize design drawings to include standard details and notes.
- Prepare technical specifications.
- Complete final checking and coordination review.

- Finalize construction drawings, specifications, and preliminary schedules for bidding.
- Finalize specification front-end documents, including General Conditions, Supplemental Conditions, bid form, and instructions to bidders.
- Update OPCC based on the 90% design documents.
- Submit 90% design package for Client's review and comment.
- Facilitate a design review meeting to receive Client's comments.
- Prepare meeting summary and comment responses. Finalize documents for bid advertisement.

**Final Bid Documents:**

- Address and incorporate 90% review comments.
- Deliver Professional Engineer stamped bid-ready contract documents to Client.
- Coordinate with Client on bidding process and schedule.

**Deliverables:**

The following deliverables will be provided as part of this task:

- 30% and 90% submittal packages including OPCC (PDF version)
- 30% and 90% design review meeting summaries, responses to Client's comments, and revisions to final design documents.
- Bid-ready contract documents package (PDF version), including:
  - Design drawings (estimated 25 drawings)
  - Project technical specifications, bid form, and Barge standard front-end documents

**Assumptions:**

The following assumptions are applicable to the above scope of services:

- Barge standard front-end documents (Division 0) will be used; Divisions 01 through 49 will be Barge standards.
- Barge standard design procedures, drafting standards, and typical drawing details will be used in the development of the construction documents. The drawings will be 22x34 sheet size.

- Barge standard master specifications will be utilized to prepare the project technical specifications. The masters generally conform to 49 Division CSI Master Format.
- The Client understands that Barge has no control over the cost or availability of labor, equipment materials, over-market conditions, or the Contractor's method of pricing, and that Barge's OPCC is made on the basis of Barge's professional judgment and experience. Barge makes no warranty, express or implied, that the bids or the negotiated cost of the work will not vary from Barge's OPCC.
- Any abatement and/or remediation work associated with presence of hazardous materials in any of the existing facilities such as asbestos or lead paint is not included as a part of this scope of services.
- Subsurface Utility Engineering (SUE) is not included in the basic services.
- Design will be based upon federal, state, and local codes in effect on the date of the Notice to Proceed.
- Bid-ready contract documents are prepared for a single bid and single construction contract with fixed price.

### **Task 3 – Easement Documents**

In this task, Barge will develop easement exhibits and legal descriptions for easements along the proposed pipeline route.

- Field location of property boundaries to produce legal easement drawings and descriptions.
- Barge will provide temporary and permanent easement descriptions on up to sixteen parcels on which easements are required for the trunk sewer alignment for the Client's use in acquiring the easements. The legal description of each easement will include a figure identifying and dimensioning the easement to correspond with the written descriptions and will include the area in square feet and acres for each easement.

#### **Deliverables:**

The following deliverables will be provided as part of this task:

- Easement exhibits and legal descriptions

#### **Task 4 - Permitting**

In this task, Barge will provide assistance to the Client in obtaining permits by providing supporting documentation and filling out permit application forms. The following permits are anticipated:

- Tennessee Department of Conservation (TDEC) Plans and Specifications Review
- General Aquatic Resource Alteration Permit (ARAP)
- NPDES Stormwater Construction Permit
- Tennessee Department of Transportation (TDOT) Utility Encroachment Permit

#### **Deliverables:**

The following deliverables will be provided as part of this task:

- Permit applications and documentation of permit approvals

#### **Task 5 – Bid Phase Services**

The bid phase services anticipated include providing bid documents for advertisement, responses to bidder inquiries, preparation of addenda, and review of bids as summarized below:

- Prepare Advertisement for Bids.
- Attend pre-bid meeting, including site-walk, with the Client and prospective bidders.
- Assist the Client with responses to bidder questions and the preparation of addenda. If needed, issue addenda to prospective bidders after approval by Client Purchasing.
- Participate in Bid Opening and prepare Bid Tabulation.
- Assist the Client with review of contractor bid packages for responsiveness and qualification, contact references of apparent low bidder, and provide recommendation for award.
- Following award of construction contract, prepare an electronic (PDF) set of conformed documents for execution and use during construction. This consists of incorporating all addenda issued on the project into the drawings and specifications, as well as incorporating all information submitted with the bid by the successful bidder.

#### **Deliverables:**

- Responses to bidder questions, addenda, and bid review summary and recommendation as required.

- Recommendation to award letter.
- Conformed contract documents – four full-size hard-copy plan sets; two half-size hard-copy plan sets; six hard-copy specifications; and one electronic copy of plans and specs in PDF format.

**Assumptions:**

- The bid phase is assumed to be three months.
- Pre-qualification of contractors is not required.
- One bid package and one bid opening are included.

**III. Project Schedule**

The preliminary project schedule is shown in the table below.

Total duration to completion for the design and bid phase scope of services is anticipated to be eleven months. See estimated schedule breakdown below. Duration includes design deliverable review time and assumes two weeks per review period. The project management task will run concurrent with all tasks below. The easement documents task will run concurrent with the final month of the detailed design task.

Tasks	Duration
1. Detailed Design	7 months
2. Easement Documents	1 month
3. Permitting	1 month
4. Bid Phase Services	3 months

Barge and Client are aware that many factors outside Barge's control may affect Barge's ability to complete the services to be provided under this Scope of Services. Barge will perform these services with reasonable diligence and expediency, consistent with sound professional practices.

**IV. Compensation**

Client agrees to pay Barge for time worked on the project by various personnel plus applicable outside services and other expenses properly charged to the project in accordance with the Schedule of Standard Charges included in Exhibit B of the Agreement. The Not to Exceed cost to complete the scope of work as defined in the tasks above is estimated to be \$287,100, a breakdown



of this budget by task is included in the table below. The budget status will be summarized monthly in our progress report and invoice submittal.

**Fee Summary Table**

Items	Fee Type	Fee Amount
Task 1 – Project Management	Hourly	\$37,100
Task 2 – Detailed Design	Hourly	\$191,700
Task 3 – Easement Documents	Hourly	\$23,300
Task 4 – Permitting	Hourly	\$18,100
Task 5 – Bid Phase Services	Hourly	\$16,900
TOTAL		\$287,100

**Design Bid Fee Table**

Staff	Sr. Project Manager	Principal-In-Charge/Technical Advisor	Engineering Manager I	Sr. Professional Engineer III	Staff Engineer II	Staff Engineer I	Designer II	Sr. Technical Specialist	Surveyor	Survey Tech	Sr. Registered Land Surveyor	Project Administrator	Total
<b>Rate</b>	\$ 220.00	\$ 225.00	\$ 185.00	\$ 190.00	\$ 130.00	\$ 115.00	\$ 125.00	\$ 215.00	\$ 110.00	\$ 90.00	\$ 170.00	\$ 110.00	
<b>Task</b>													
<b>1. Project Management</b>	159		2		3	2	2					8	<b>\$ 37,100.00</b>
<b>2. Detailed Design</b>													
Survey	12						225		120	280	120	10	\$ 90,665.00
*Geotechnical Investigation													\$ 12,650.00
Bi-Weekly Progress Meetings			22		22	22							\$ 9,460.00
30% Design Plans			20		40	60	45						\$ 21,425.00
30% Design Review Workshop	3		3		3								\$ 1,605.00
90% Design Plans			20		40	60	45						\$ 21,425.00
Specifications	4		8		24							16	\$ 7,240.00
90% Design Review Workshop	3		3		3								\$ 1,605.00
Final Design	2		6		18	24	18						\$ 8,900.00
Final Specifications	2		6		4								\$ 2,070.00
QC/QC		20											\$ 4,500.00
Capacity/Hydraulics Review				4									\$ 760.00
Cost Estimate								16					\$ 3,440.00
Development Coordination	8				14								\$ 3,580.00
Utility Coordination					5	15							\$ 2,375.00
<b>Detailed Design Sub-Total</b>													<b>\$ 191,700.00</b>
<b>3. Easement Documentation</b>	3						62				85	4	<b>\$ 23,300.00</b>
<b>4. Permitting</b>	8		6	12	55	36	8					6	<b>\$ 18,100.00</b>
<b>5. Bidding</b>													
Addenda	6		8		18	12						4	\$ 6,960.00
Bid Opening/Bid Review/Council Award	10		4		16	16						2	\$ 7,080.00
Conformed Documents	1		2		7	8						4	\$ 2,860.00
<b>Bidding Sub-Total</b>													<b>\$ 16,900.00</b>

\*Sub-Consultant Task

**PROJECT TOTAL \$ 287,100.00**