

May 11, 2023

Wade Wilson, PE, CFM
Public Works Director
City of Cartersville
PO Box 1390/330 S. Erwin Street
Cartersville, GA 30120

RE: Downtown Flood Study

Dear Wade:

Per your request, we have prepared the attached Professional Services Agreement and proposal for the survey and professional services for the referenced project based on our understanding of the project requirements.

Attached to this letter are:

- Professional Services Agreement
- Attachment A – Scope of Services

Please let me know if you have any questions. Thank you for the continued privilege to serve the City of Cartersville.

Sincerely,

Barge Design Solutions, Inc.



David King, PE, CFM
Senior Project Manager

cc: Project File – 37697GN

Enclosures

BARGE DESIGN SOLUTIONS, INC.

PROFESSIONAL SERVICES AGREEMENT

This agreement is made as of May 11, 2023 by and between City of Cartersville (**Client**) and Barge Design Solutions, Inc. (**BARGE**) for professional services for the assignment described as follows:

Project: Downtown Flood Study

Location: Cartersville, Georgia

Description of Project:

The purpose of this project is to update a previous flood study that did not consider the existence of a large-diameter box culvert near the intersection of Tennessee Street and Leake Street. Details of the project are included in Attachment A.

I. PROFESSIONAL SERVICES: **BARGE** agrees to perform the following Basic Services under this contract:

See Attachment A

II. COMPENSATION: **Client** shall compensate **BARGE** for the Basic Services as follows:

See Attachment A

III. PAYMENTS: Invoices for services rendered will be issued monthly, and payment is due upon receipt of each invoice. Unless special arrangements are made, a finance charge of 1.5% per month will be added to unpaid balances more than thirty (30) days old. In the event legal action is necessary to enforce the payment terms of this agreement, **BARGE** shall be entitled to a judgment for its attorneys' fees, court costs, and other collection expenses.

IV. TIME: Unless agreed otherwise in writing, **BARGE** will commence its services within a reasonable time after receipt of an executed copy of this Agreement. **BARGE** will perform its services in a timely manner commensurate with the exercise of due professional care. Time for performance shall be extended as necessary for delays or suspensions due to circumstances beyond **BARGE**'s control. If such delay or suspension extends more than six months (cumulatively), **BARGE**'s compensation shall be equitably adjusted.

V. SUSPENSION OF SERVICES: If **Client** fails to pay any invoice when due or otherwise is in material breach of this Agreement, **BARGE** may at its sole discretion suspend performance of services upon five (5) days' written notice to **Client**. **BARGE** shall have no liability to **Client**, and **Client** agrees to make no claim for any delay or damage as a result of such suspension. Upon cure of the cause of the suspension, **BARGE** shall resume services within a reasonable time, and there shall be an equitable adjustment of the project schedule and fees to reflect the effects of such suspension.

VI. STANDARD OF CARE: Notwithstanding any other provision of this Agreement or any other document describing the services, **BARGE** shall perform its services in accordance with the standard of professional care ordinarily exercised under similar circumstances by reputable members of its profession in the same locality at the time the services are provided. No warranty, expressed or implied, is made or intended by **BARGE**. The parties further agree that **BARGE** is not a fiduciary of **Client**.

VII. TERMINATION: The obligation to provide further services under this Agreement may be terminated without cause by either party upon ten (10) days' written notice to the other party. On termination by either the **Client** or **BARGE**, **Client** shall pay **BARGE** all amounts due for any services performed to the date of termination (plus all reimbursable expenses incurred). Upon such termination by **Client**, it shall immediately return to **BARGE** all drawings, reports, documents, and other instruments of professional services prepared by **BARGE**, and **Client** shall make no further use thereof.

VIII. OWNERSHIP AND REUSE OF DOCUMENTS: All documents, including without limitation, drawings, specifications, and reports prepared by **BARGE** pursuant to this Agreement are instruments of professional service. **BARGE** shall own all legal and equitable rights therein, including copyrights. Such instruments are not intended or represented to be suitable for reuse by **Client** or others for additions or modifications of the Project or on any other project. Any reuse without written consent of **BARGE** shall be at **Client's** sole risk and without liability to **BARGE**.

IX. ACCESS TO THE SITE/JOBSITE SAFETY: Unless otherwise stated, **BARGE** will have access to the site for activities necessary for the performance of its services. **Client** agrees that **BARGE** shall have no responsibility for the means, methods, sequences, procedures, techniques, and scheduling of construction, as these decisions are solely the responsibility of the contractors. **BARGE** further shall have no authority or duty to supervise the construction workforce and shall not be responsible for jobsite safety or for any losses or injuries that occur at the Project site.

X. INSURANCE: **BARGE** shall provide evidence of insurance coverage in the following minimum amounts:

- | | |
|--|---|
| 1. Worker's Compensation | Statutory |
| 2. Employer's Liability | \$500,000 |
| 3. Commercial General Liability | \$1,000,000 per incident and in the aggregate |
| 4. Automobile Liability | \$1,000,000 per incident and in the aggregate |
| 5. Professional Liability | \$1,000,000 per incident and in the aggregate |
| 6. Cyber and/or Network Privacy Security | \$1,000,000 per incident and in the aggregate |

XI. RISK ALLOCATION: In recognition of the relative risks, rewards, and benefits of the Project to both **Client** and **BARGE**, to the fullest extent permitted by law, the parties agree to allocate the risks such that **BARGE's** total liability to **Client** for any and all injuries, claims, losses, expenses, damages, and/or claim expenses arising out of **BARGE's** services under this Agreement from any cause or causes shall not exceed the amount of **BARGE's** fee or **Two Hundred Fifty Thousand Dollars (\$250,000)**, whichever is greater. This limitation shall apply regardless of the cause of action or legal theory pled or asserted.

XII. DISPUTE RESOLUTION: It is agreed that all claims, disputes, or other matters in question arising out of or related to this Agreement shall be submitted to nonbinding mediation before any legal proceeding is commenced. The parties shall equally bear the fees and expenses charged by the mediator.

XIII. OPINIONS OF CONSTRUCTION COST: Any opinion of probable construction cost prepared by **BARGE** represents the judgment of one or more **BARGE** design professionals and is supplied for general guidance of **Client**. Since **BARGE** has no control over the construction marketplace and does not use the same pricing methods used by contractors, **BARGE** does not guarantee the accuracy of such opinions.

XIV. Illegal Immigration Reform and Enforcement Act Compliance:

- a. E-Verify Program: The City will not enter into a contract for the “physical performance of services” (as defined in O.C.G.A. § 13-10-90) unless **BARGE** registers and participates in a federal work authorization program (E-Verify). The E-Verify affidavit or the secure identifiable document submitted by **BARGE** will become part of the Contract Documents.
- b. Requirement to Participate in a Federal Work Authorization Program (E-Verify): Pursuant to O.C.G.A. § 13-10-91, **BARGE** represents, warrants, acknowledges, and/or agrees that:
 1. **BARGE** has registered and participates in a federal work authorization program to verify the employment eligibility of all newly hired employees;
 2. Subcontractors will not enter into any contract with **BARGE** for the physical performance of services within the State of Georgia unless such subcontractor registers and participates in a federal work authorization program to verify the employment eligibility of all newly hired employees; and
 3. Sub-subcontractors will not enter into any contract with a subcontractor or sub-subcontractor for the physical performance of services within the State of Georgia unless such sub-subcontractor registers and participates in a federal work authorization program to verify the employment eligibility of all newly hired employees.

XV. GOVERNING LAW: Unless otherwise specified within this Agreement, this Agreement shall be governed by the laws of the State of Georgia.

City of Cartersville	Barge Design Solutions, Inc.
By:	By:
Printed Name:	Printed Name:
Title:	Title:
Address:	Address: 6525 The Corners Pkwy, Suite 450 Peachtree Corners, GA 30092
Date Signed:	Date Signed:
Attested by City Clerk	
Signed:	
Date Signed:	

Seal (if applicable):

Barge Design Solutions, Inc. (Barge) will provide the following scope of services for the City of Cartersville, Georgia (City) for a Downtown Flood Study, in accordance with the Professional Services Agreement (Agreement) dated May 9, 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 City of Cartersville has a downtown area near the intersection of Tennessee Street and Leake Street that was part of a recent City-wide flood study. The previous study may be overpredicting flooding due to the omission of a large box culvert's impacts to the storm system. The goal of the project is to update the study to include the contribution of the box culvert to the conveyance system and estimate updated flood extents for planning purposes.

II. Scope of Services

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

- Task 1 – Survey
- Task 2 – Flood Study Update

The following sections provide a description of the purpose, activities, and deliverables anticipated for each of the tasks. Throughout the following tasks, Barge will manage the activities of our staff, coordinate progress updates with the City, and submit monthly invoices with updated schedules and budgets as applicable.

Task 1 – Survey

Barge will perform a storm infrastructure survey along E. Church Street, S. Tennessee Street and Leake Street near downtown Cartersville. The approximate survey limits are along the pink line as seen on Figure 1 below.

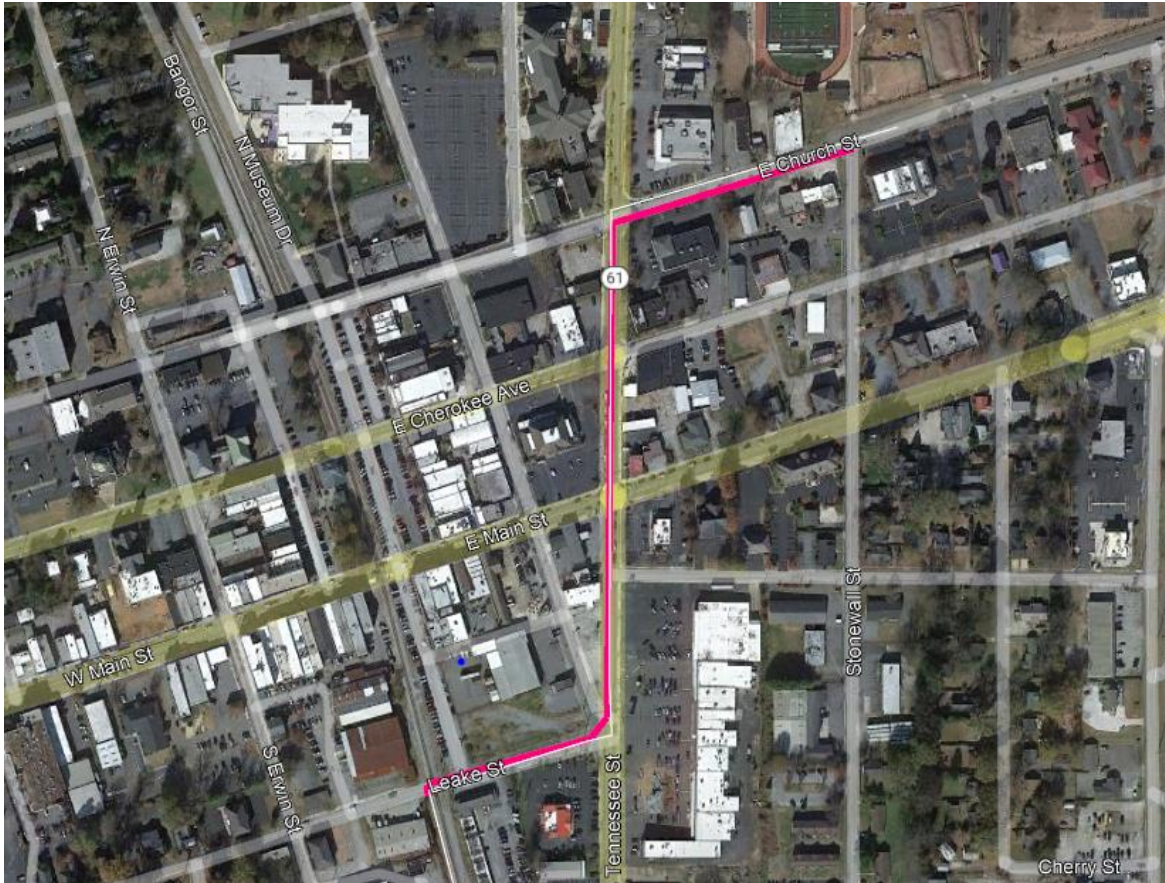


Figure 1: Approximate Project Survey Limits

The specific survey tasks for the project limits include:

- Top rim elevations
- Inverts of main storm system (no side system inverts)
- Estimated geometry of the box culvert from the top of each structure
- Connectivity from structure to structure

Deliverables:

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

- AutoCAD Civil 3D .dwg file showing point locations, any line work associated with features collected in the field (i.e. structures, inverts, and will be combined with client-provided CAD files (if applicable). The drawing will be created in accordance with the A/E/C CAD Standard.

Assumptions:

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

- In accordance with the Rules and Code of the State of Georgia, our services are regulated under the Georgia Board of Professional Engineers and Land Surveyors, Chapter 180. Mr. Robert Lux, PLS will be in responsible charge of the surveying services for compliance with said Rules and Code under this agreement.
- This survey will be referenced to the Horizontal Project Datum NAD83 (2011), Geoid 18 projected to the Georgia State Plane Coordinate System, West Zone, US Survey Feet and the Vertical Datum of NAVD 88, Geoid 18, US Survey Feet.
- If required, the City will provide security and escorts.
- There is no anticipated project specific special training required to perform this work.
- The City will provide right-of-entry for any areas requiring access to perform and complete surveying and mapping efforts, prior to deployment of Barge field crew(s).
- Right-of-entry letters, including railroad right-of-way, will be the responsibility of the City and made available to Barge.
- Barge field crews will not move any stockpiled material or debris to accomplish the survey.
- Barge is not required to provide any permitting, negotiations or any other service other than those listed in this proposal.
- Survey field staff will be able to perform weekend work, if necessary.
- Site conditions, trees, vegetation and clearings are substantially the same as shown on aerial photograph in Figure 1.
- Minimal, if any, traffic control is anticipated. It is assumed that the use of standard cones and signs would be considered sufficient.
- Topographic, Boundary or Wetlands delineation/surveys are not included in this proposal.

Task 2 – Flood Study Update

The findings of the stormwater infrastructure survey (Task 1) will be incorporated into a hydrologic and hydraulic analysis to complete an updated flood study for the area indicated in Figure 1 that will include the following tasks:

- Review of previous hydrologic and hydraulic models (developed by others) to use as the foundation for an updated stormwater model of the system.
- Develop a stormwater model using survey, previous models, available GIS data provided by the City.
- Perform hydrology and hydraulic analysis of the existing stormwater system for the 2-, 5-, 10-, 25-, and 100-year, 24-hour design storm events.
- Perform hydrology and hydraulic analysis for the future 100-year, 24-hour design storm event using a consistent increase in hydrologic parameters as the previous flood study.
- Evaluate the specific hydrology and hydraulics at the intersection near 12 Leake Street.
- Estimate the updated flood extents for the existing and future 100-year design storm event and create GIS figures and electronic deliverable for the City's planning purposes.

Deliverables:

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

- Technical memorandum documenting the approach and assumptions included in the flood study, including flood extent figures
- Updated electronic stormwater models (EPA SWMM or PCSWMM format)
- Electronic GIS deliverables of estimated flood extents

Assumptions:

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

- Available GIS data from the City includes terrain data that is detailed enough to estimate drainage extents for the study area.
- PCSWMM will be used for the stormwater modeling analysis.
- No FEMA coordination or regulatory coordination is included in the task.

III. Project Schedule

The preliminary project schedule is shown in the table below.

Tasks	Duration
1. Survey	8 weeks
2. Flood Study Update	16 weeks

IV. Compensation

The City agrees to pay Barge a Lump Sum as listed in the table below to complete the scope of work as defined in the tasks above. Barge will submit monthly invoices based on percent of work completed to date. The project status will be summarized monthly in our progress report and invoice submittal.

Fee Summary Table

Items	Fee Amount
1. Survey	\$22,800
2. Flood Study Update	\$28,500
TOTAL	\$51,300