ESTD 1946
THOMAS & HUTTON

682 JOHNNIE DODDS BOULEVARD, SUITE 100 | POST OFFICE BOX 1522
MT. PLEASANT, SC 29464 | 843.849.0200
THOMASANDHUTTON.COM

July 26, 2022

Mr. Jeffrey V. Lord, ICMA-CM
Town Administrator
Town of Moncks Corner
P.O. Box 700
118 Carolina Avenue
Moncks Corner, SC 29461

Re: Stormwater Program Assistance
Town of Moncks Corner, South Carolina
Letter of Agreement for Services
T&H Project No. 28078.0000
Additional Services – Comprehensive Stormwater Management Program – Year 2

Dear Mr. Lord:

Thank you for requesting additional consulting services related to the existing Stormwater Program Assistance Letter of Agreement for Services dated September 24, 2019 between the Town of Moncks Corner (Town) and Thomas & Hutton Engineering Co. (T&H). We understand that the Town wishes to establish a Comprehensive Stormwater Management Program (Program) within the limits of the Town to be able to proactively address stormwater management, drainage, and flooding issues within the Town.

As we understand it, the major goals of this Program are the following:

- Delineate the watershed, basins, sub-basins, and drainage systems within and around the Town.
- Conduct a field inventory and conditions assessment of the stormwater management infrastructure.
- Develop a Geographical Information System (GIS) database of the stormwater management infrastructure.
- Document existing drainage easements.
- Assess the Level of Service (LOS, i.e. storm event function) of the stormwater management infrastructure.
- Identify stormwater management infrastructure deficiencies.
- Study, assess, and propose Capital Improvement Projects (CIPs) to address the identified deficiencies.
- Develop a CIP implementation program (in cooperation with other agencies).
- Develop an inspection and Operations and Maintenance (O&M) program (in cooperation with other agencies).

Given municipal budget constraints and the amount of time and effort involved in developing the Program to accomplish the goals above, it is recognized that the development of such a Program cannot be accomplished in a single fiscal year. The Town has adopted a four (4) year development period for the program. This proposal for additional services addresses year 2 of this program.

To assist the Town in the development of your Comprehensive Stormwater Management Program, we have identified the following consulting phases for the year 2 period:

- Program management and coordination
- Data collection and assessment
- Stormwater infrastructure inventory
- Study and modeling
- Capital Improvement Program and Stormwater System O&M

Individual tasks have been proposed under each consulting phase. These tasks may be contained within a single (fiscal) year of the four-year development period, or the tasks may be broken up and conducted over multiple Program development years. Due to various uncertainties (initial findings, Town preferences, and capabilities, etc.), the exact extent (and thus fees) of tasks in Program years two (2) through four (4) cannot be fully established at this time. Therefore, we have provided a detailed Scope of Work and consulting fees for the tasks to be accomplished in year one (1) in the Program development and provide a general outline of tasks (and consulting fee range) to be accomplished in years two (2) through four (4).

This proposed Additional Services agreement only includes the services included in the attached Scope of Services for year one (1).

We understand that you will furnish us with full information as to your requirements, including any special or extraordinary considerations for the Program and will make pertinent existing data available to us.

Payment for our services will be as described in General Provisions. You will be billed monthly for our services rendered and for Reimbursable Expenses.

We propose that payment for our services will be as follows:

Phase	**Fee Structure**	**Fee or Time & Expense Budget**
Program Management:	Time & Expense – Budget	$ 7,000.00
Data Collection:	Lump Sum	$ 10,000.00
Delineations:	Lump Sum	$ n/a
Inventory:	Lump Sum	$ 35,000.00
Study and Modeling:	Lump Sum	$ 45,000.00
CIP / O&M Program:	Lump Sum	$ 5,000.00
Reimbursable Expenses:	Time & Expense – Budget	$ 3,500.00
Additional Services:	Time & Expense	$ See Rate Sheet
	TOTAL (Year 1)	**$ 105,500.00**

The above fee arrangements are based on prompt payment of our invoices and the orderly and continuous progress of the Project through construction.

_____ **CLIENT'S INITIALS**

_____ **CONSULTANT'S INITIALS**

It is necessary that you advise us in writing at an early date if you have budgetary limitations for the overall Project Cost or Construction Cost. We will endeavor to work within those limitations. At appropriate times during the Design Phase, we can submit to you our opinions as to the probable construction cost of the Project. We do not guarantee that our opinions will not differ materially from bids or negotiated prices.

If acceptable, please indicate your authorization to proceed with these Additional Services by signing and initialing where designated below and returning a copy to us for our files. This Proposal will be open for acceptance until October 31, 2022, unless changed by us in writing. Please note that no work will be performed without prior written authorization to proceed. These Additional Services are subject to the terms and conditions of the contract executed for this Project dated September 24, 2019.

This Proposal between the Town of Moncks Corner (Owner) and Thomas & Hutton Engineering Co. (Consultant), consisting of the attached Scope of Services, Consulting Services on a Time & Expense Basis Rate Sheet, and this letter represent the entire understanding between you and us with respect to the Additional Services to be provided. This agreement may only be modified in writing if signed by both of us.

It is our understanding that no work will commence until written authorization is provided to the Consultant by the Owner for the Additional Services. We appreciate the opportunity to prepare this Proposal and look forward to working with you on the Project.

The parties agree and acknowledge that any of the parties hereto may execute this agreement by electronic signature, and the other party may rely upon such electronic signature as an original record of signature.

Very truly yours,

THOMAS & HUTTON ENGINEERING CO.

By _____
Tony M. Woody, P.E.
Vice President/Civil Manager

By _____
Richard Karkowski, PE, PH, CPSWQ, D.WRE
Principal/Water Resources Manager

RPK/ala

Enclosures: Scope of Services (Year 2)
Consulting Services Rate Sheet - 2022

TOWN OF MONCKS CORNER

ACCEPTED: _____, 2022

By _____

_____
TITLE

_____ **CLIENT'S INITIALS**

_____ **CONSULTANT'S INITIALS**

SCOPE OF SERVICES

The Scope of Services shall be as follows:

1. SCOPE OF SERVICES

A. Program Management and Coordination Phase

1. Meetings and Communications

The Consultant will schedule a kickoff meeting upon a Notice to Proceed (NTP) and conduct monthly progress meetings (at a minimum) through the duration of the Project to solicit input from the Town, collect relevant data and information, and provide the Town with updates to the progress and findings of the progress of the Project. These meetings may be held in person or via on-line conferencing, as necessary. The Consultant will also provide other communication (emails, telephone conversations, etc.) at appropriate times to coordinate with the Town (or other stakeholders) as necessary to provide for the progress of the Project.

2. Project Management

Project management services will include developing, managing, and updating the Project schedule; track and update budgets; coordinate with Town and others stakeholder; and develop miscellaneous exhibits and other information, as requested by the Town.

Due to the uncertainty for the need of various meetings and communications, this phase will be conducted on a Time & Expenses basis. Deliverables will include Coordination and attendance at scheduled meeting(s), meeting agendas (if needed), and meeting minutes.

B. Data Collection and Assessment Phase

1. General Data Collection

None.

2. SCDOT Plan Research

None.

3. Drainage Easement Research

The Consultant will conduct research through the Berkeley County Register of Deeds (and other departments as necessary) to identify and document drainage (or other similar easements) in targeted areas. Identified easements will be added (geographical extents) to the GIS database being developed for the Town. The information will potentially show existing easements (and possible maintenance responsibility for infrastructure within the easement) and demonstrate the need for easement acquisitions for existing and potential future and stormwater management infrastructure.

Deliverables will include a summary of collected information, electronic copies (PDF or other format) of the collected data, and a GIS database of identified drainage easements in the targeted areas.

Approximately 40 to 50 parcels will be researched as part of this work. The Consultant will coordinate with the Town of targeted parcels to research.

C. Watershed, Basin and System Delineations

1. Desktop System Mapping

None.

2. Watershed Delineations

None.

D. Stormwater Infrastructure Inventory

1. Stormwater Management System Inventory

The Consultant (in coordination with the Town) will prepare a phased Stormwater Management System inventory plan. We will meet with Town staff to review the plan and incorporate the Town's input. The inventory will consist of trained field personnel mobilized to the infrastructure (guided by the "desktop map" - see above), to collect location (horizontal only) and other data, inspect the infrastructure, and conduct a condition assessment to document the system.

In the future (if necessary), survey personnel can be mobilized to survey elevation data for all (or critical portions) of the infrastructure. No survey is included under this Scope. Survey can be completed for detailed modeling or Project designs at a future date.

Each structure (or asset location – such as a pipe end) will be visited and a map grade location established. At the location an asset inventory, inspection, and condition assessment will be made, collecting information such as pipe diameter, material, and material condition; pipe directions; structure condition; maintenance needs; etc. Data will be collected into a pre-formatted data field with established allowable entries. Generally, two (2) photographs will be collected and associated with the asset location - including an "inside" photograph showing the inside of the structure or pipe and an "outside" photograph showing the asset from an appropriate distance as it is situated in the landscape. In addition, "measure downs" will be taken at each structure (if appropriate). The "measure down" approach allows for survey personnel (in the future) to only have to establish the elevation of one point on the structure (without having to re-open the structure to get pipe inverts).

The stormwater inventory, inspection, and condition assessment of existing stormwater structures will be conducted for the target area(s) and all data will be stored in the GIS database format developed for the Project (as indicted, the database format will be based on that used by Berkeley County).

The data collection effort will be streamlined with the aid of mobile GIS devices, which will write directly to the Town's stormwater inventory database. Locations of existing stormwater structures will be collected. We will utilize the organized work plan approach created based upon known/suspected locations of existing stormwater structures within the Town. We will employ a data collection methodology where we will efficiently write to the geo-database via synchronization through a web mapping service. The data collected will be available for QA/QC review immediately.

This task generally assumes that all structures are readily accessible. We understand that Town personnel will be made available to help locate and access (i.e. clean out) structures as needed. Thomas & Hutton will make every effort to identify and inventory target structures; however, should conditions arise that make access to certain structures unsafe or infeasible, we reserve the right to omit inventory of dangerous or inaccessible structures.

For this phase of the Program (Year 2), approximately 30 days of inventory crew time has been budgeted for the field inventory. We anticipate that approximately 500 structures/locations will be inventoried. The Consultant will coordinate with the Town for areas and infrastructure to concentrate on for this phase of the program.

2. GIS Database / Integration

Consultant will utilize the information gathered from the stormwater system inventory to augment the Town's overall stormwater inventory (from Year 1). The inventory database will be consistent with the previous schema (consistent with the Berkeley County GIS database). The easement databases will also be updated.

Deliverables under this phase will include draft and final inventory plan and updated GIS databases (stormwater inventory and easements).

E. Study and Modeling

1. Data Assessment

None.

2. Existing Conditions System Modeling

Using the collected data, including the stormwater inventory, the Consultant will use ICPR Ver 4 to analyze the existing hydrology, storm drainage infrastructure, topography, drainage, and flooding conditions within targeted watershed(s). The larger, main systems (where detention and hydrograph timing may be important) will be analyzed using the dynamic model (ICPR4) applying SCS runoff methodologies.

Other models or calculation may be used to address smaller systems withing the targeted watershed(s). This will include the assessment of minor collection systems (closed pipe/inlet systems or open swale/driveway culvert) with a simpler rational method runoff and hydraulic grade line (HGL) calculation approach.

The existing condition stormwater model/calculations will be used to determine the existing Level-of-Service (LOS) within the targeted watershed(s). This LOS will be established by comparing the various runoff events (1-, 2-, 5-, 10-, 25- 50- and 100-yr) to the hydraulic capacity of the system. The LOS and model results will be assessed to confirm the results are consist with known drainage or flooding issues.

Working with the Town, appropriate design targets will be identified. A summary of the LOS and conditions of the drainage system within the targeted basin(s) will be developed.

The targeted basin(s) for this phase (Year 2) will be selected in consultation with the Town. The selected targeted basin(s) will be partly guided and/or limited by the availability of this phase funding (Year 2).

3. Alternatives Analysis and Recommended Improvement

After completing the existing conditions hydrologic and hydraulic stormwater modeling and/or calculations, parts of the stormwater system with sub-standard LOS or other hydraulic deficiencies will be identified.

Additionally, any specific areas known to have problems by the Town or other stakeholders will be a focus for potential projects. Based on the findings of the existing conditions modeling, the location(s) to which the proposed projects could be applied will be identified and reviewed with the Town (and possibly and other stakeholders). We will also incorporate in the analysis any potential projects or project sites identified by the Town or other stakeholders in the analysis.

During a meeting or other format, each potential project or mitigation measure will be discussed in a workshop-type setting with the Town (and potentially other stakeholders). Based on the Town's input and other factors, preferred alternative projects will be selected for further assessment. The proposed improvement alternatives will be developed considering the following (and possibly other factors):

- Feasibility
- Effectiveness
- Community acceptance
- Right-of-way and easement requirements
- Operations and maintenance
- Constructability
- Environmental impact/Permit-ability
- Cost
- Intangibles

4. Post-Project Condition System Modeling

Once the list of potential projects has been finalized, the alternative project(s) will be incorporated in the model and their effects simulated. The alternative project(s) will be eliminated, augmented, or refined as necessary to attain the design criteria identified. Using the developed model(s), The Consultant will create a post-project conditions model to evaluate the flood reduction and improved drainage benefits for the final list of potential projects. The model will be completed to assess the cumulative impact of all the recommended improvements, if necessary. There is the potential that some upstream drainage improvements may have an unintended consequence on downstream systems. These potential unintended consequences, as well as the overall improved conditions, will be assessed. Appropriate refinements to the potential projects may be made based on the results of this modeling.

5. Recommended Improvements and Cost Estimates

Based on the findings of the modeling and other factors, the Consultant will develop the recommended project(s) for the targeted basin(s). The projects will be further assessed for cost, project feasibility, environmental impacts, permitting, and design constraints. Based on the recommended project(s), conceptual implementation cost estimates will be developed. The implementation cost estimates will include costs for planning, management, design, and permitting; property and/or easement costs; and construction costs. The construction costs will be based on recent bids and contracts for similar work in the area. Other costs (such as additional maintenance costs, if any) will also be incorporated in the implementation costs of the project.

F. Capital Improvement Program / Stormwater System Operations and Maintenance

1. Identify Low Cost / High Value Projects

None.

2. Deferred Maintenance Projects

None.

3. Capital Improvement plan

A capital improvement plan including the projects developed (as described above for the targeted basin(s)), will be established (it is anticipated that the plan would be updated and refined in Year 3 based on additional modeling and information). The capital improvement program will include a description of each project (including a conceptual exhibit, if appropriate), the proposed phasing of the identified project(s), documentation as to the projects costs and other information (property requirements, permitting, etc.). The capital improvement program will also identify potential teaming partners (County,

SCDOT, etc.) and potential funding sources (FEMA, State of South Carolina, SCDOT, stormwater utility, etc.).

G. Exclusions

Items **not** included in the Scope of Services are as follows:

- GIS database schema development
- Access to sealed, clogged, or otherwise inaccessible structures
- Confined space entry
- Traffic control
- Property research beyond forty (40) years
- Archaeological survey and report
- Wetland delineation, surveys, or permits
- Geotechnical investigation or report
- Phase One or Phase Two environmental assessments
- Endangered species survey and report
- Interior courtyard design
- Off–site work unless specifically covered in the Scope of Services
- Approvals or permits other than those related to the Scope of Work covered by this contract
- Act as an expert witness for legal activities
- SC Department of Transportation permits or approvals
- Telephones, cable television, gas, and power distribution systems

These items can be coordinated or provided, if requested by the Owner in writing.

2. SCHEDULE

Thomas & Hutton will complete the proposed work as described in this Scope within twelve (12) months from the Notice to Proceed (NTP).

CONSULTANT'S INITIALS

CLIENT'S INITIALS

THOMAS & HUTTON

2022 CONSULTING SERVICES RATE SHEET

Thomas & Hutton provides services on a time and expense basis as follows:

1. This basis includes allowance for direct salary expenses and for direct non–salary expenses. It also provides for services we may subcontract to others.
2. Direct salary expenses are generally based upon our payroll costs. The payroll costs include the cost of salaries and wages (including sick leave, vacation, and holiday pay) for time directly chargeable to the project; plus, unemployment, excise, payroll taxes, and contributions for social security, employment compensation insurance, retirement benefits, and medical and insurance benefits.

   The current hourly rate charges for each skill position for 2022 are as follows:

Hourly Rate	Engineer	Survey	Landscape	GIS	Quality Control	Business/ Administrative
$ 265.00	Consultant	Consultant	Consultant	Consultant	Consultant	
$ 240.00	Senior Manager	Senior Manager Survey Party (3–Men)	Senior Manager	Senior Manager	Senior Manager	Senior Manager
$ 215.00	Project Manager V Project Engineer V	Survey Manager V Project Surveyor V	Landscape Architect V LA Project Manager V	GIS Manager V		
$ 200.00	Project Manager IV Project Engineer IV	Survey Manager IV Project Surveyor IV	Landscape Architect IV LA Project Manager IV	GIS Manager IV		Senior Application Developer IV, Software/Computer Consultant IV
$ 185.00	Project Manager III Project Engineer III	Survey Manager III Project Surveyor III	Landscape Architect III LA Project Manager III	GIS Manager III		Senior Application Developer III, Software/Computer Consultant III
$ 175.00	Project Manager II Project Engineer II	Survey Manager II Project Surveyor II Survey Party (2–Men)	Landscape Architect II LA Project Manager II	GIS Manager II	Construction Administrator II	Senior Application Developer II, Software/Computer Consultant II
$ 160.00	Project Manager I Project Engineer I	Survey Manager I Staff Surveyor V Project Surveyor I	Landscape Architect I LA Project Manager I	GIS Manager I	Construction Administrator I	Grant Administrator, Senior Application Developer I, Software/Computer Consultant I
$ 150.00	Designer IV Engineering Technician IV	Survey Field Supervisor	Landscape Designer IV	GIS Analyst IV	Field Representative V	Application Developer IV
$ 140.00	Designer III Engineering Technician III	Staff Surveyor IV	Landscape Designer III	GIS Analyst III	Field Representative IV	Application Developer III
$ 125.00	Designer II Engineering Technician II	Staff Surveyor III Survey Party (1–Man)	Landscape Designer II	GIS Analyst II		Permit Coordinator III Application Developer II
$ 115.00	Designer I Engineering Technician I	Staff Surveyor II	Landscape Designer I	GIS Analyst I	Field Representative III	Application Developer I, Permit Coordinator II, Admin IV
$ 105.00	CADD Technician III	Staff Surveyor I Survey Technician III	Landscape Technician III	GIS Technician III	Field Representative II	Permit Coordinator I
$ 95.00	CADD Technician II	Survey Technician II	Landscape Technician II	GIS Technician II		
$ 90.00	CADD Technician I	Survey Technician I	Landscape Technician I	GIS Technician I	Field Representative I	Admin III
$ 85.00						Admin II
$ 80.00						Admin I
$ 420.00	Expert Witness					

3. When warranted, overtime will be charged for any non–salary employees. Overtime hours will be billed at 1.5 times the individual's charge rate.
4. Direct non–salary (reimbursable) expenses, including printing, reproduction, air travel, lodging, and meals are billed at cost. Travel in company or private vehicles will be billed at the 2022 IRS Standard Mileage Rate and may be revised based on fuel pricing. Outside consultant fees will be billed at 1.15 times the cost.
5. All rates and charges are effective through January 1, 2023, including printing, reproductions, materials, and travel and are subject to change at that time. New rates and costs will become immediately effective to contracts in effect at the time of rate changes.