

October 6, 2022

Mike Hawkins, Buyer  
Financial Services Department  
Purchasing Division  
2875 Browns Bridge Road, 4th Floor  
Gainesville, GA 30504

**RE: Task Order # 2023-005 Design Services for Pond Fork Basin Phase I Sewer Improvements**

Dear Mr. Hawkins,

On behalf of AECOM Technical Services, Inc. (AECOM), we would like to thank you for the opportunity to submit our estimate for the services requested in Task Order 2023-005, Design Services for Pond Fork Basin Phase I Sewer Improvements.

As the leading engineering firm in North America for design of water and wastewater treatment systems, AECOM has the resources to combine regional expertise with local awareness and commitment for this project. We are confident that we can provide the most qualified team to provide the design, permitting, bidding and construction phase services for the project for the Hall County Department of Water Resources.

With over 17 years of experience in planning and design of water and wastewater conveyance system and treatment facilities, our project manager, Mr. Vineeth Panicker will lead the efforts of our experienced local staff. His hands-on local and national technical experience coupled with his training as a certified AECOM project manager will be an asset in executing the scope of work within budget and schedule. Vineeth has worked closely with key members of our team providing similar services. He will be supported by committed, experienced local staff, and strengthened by experts across the region. His commitment to continuous improvement and client service positions him to be the best choice to work with you.

The AECOM team can meet the County's expectations better than any other firm. We understand the County's requirements for the project, and the importance of cost-efficient engineering services. Our team is ready and committed to deliver services that:

**Reflect the needs of Hall County:** Through our team's work in Hall County and the region, the AECOM team has an exceptional understanding of the unique setting and infrastructure needs of the County. AECOM's office is only 45 minutes from Hall County we will be responsive and flexible, accommodating Hall County meetings and service requests, as needed.

**Technical approach with opportunities for cost savings:** Our Team will look for value-added services for this project that provides a less costly, easier to build and operate option. We will present our findings to Hall County for approval.

**Are affordable and cost-effective:** AECOM has performed reliably and efficiently for Hall County since 2009. We understand the critical nature of the schedule and importance to the County that this project be completed on time as required in the scope of work.


We look forward to continuing our services for Hall County. If you have any questions regarding this solicitation, please feel free to contact me at (404) 965-9706.

Sincerely

**AECOM Technical Services, Inc.**



Tina S. Houston  
Vice President, GA Water  
404.295.6087 | Tina.Houston@aecom.com



Vineeth Panicker, PE  
Project Manager  
404.965.7046 | Vineeth.Panicker@aecom.com

# Table of Contents

---

## Cover Letter

### SECTION 1

Statement of Qualifications ..... 1

- AECOM'S History and Capabilities
- Related Experience
- Familiarity with Local Geography and Facilities
- Project Management Skills
- Design Approach and Methodology
- Technical Competence
- Commitment to the County's Interest and Reputation

### SECTION 2

Schedule of Work ..... 11

- Team Resources
- Schedule and Time Management

# Section 1 – Statement of Qualifications



## AECOM'S HISTORY AND CAPABILITIES

### AECOM

AECOM Technical Services, Inc. (AECOM) is a premier, fully integrated professional and technical services firm positioned to design, build, finance, and operate infrastructure assets around the world for public- and private-sector clients. We are a leader in wastewater engineering services and are one of the nation's leading providers of planning, engineering, and technical services. AECOM is ranked as the #1 Top Design Firm in Georgia and #2 Top Design Firm overall by Engineering News-Record (ENR) in 2022. AECOM is likewise highly ranked in both Sewer and Water, ranking #3 in both categories.

AECOM's resources are unmatched in the industry; with over 56,000 employees worldwide, including over 1,200 water team members in the East Region, we possess the staff resources, expertise, and equipment to support the Design Services for Pond Fork Basin Phase 1 Sewer Improvement Project.

Locally, AECOM has a rich heritage through its legacy companies as being an engineering consultant with extensive capabilities in wastewater collection engineering. AECOM

professionals have roots in Metcalf & Eddy, Earth Tech, HSMM, Boyle, Watershed Concepts, and URS Corporation. We have long been considered a leader in the design of water and sewer infrastructure.

AECOM has been providing professional technical services to public and private clients in Georgia for 50 years. AECOM first established operations in Atlanta in 1972 under one of its legacy companies. AECOM has combined our local staff of 420, including engineers, architects, planners, scientists, and management and construction services professionals.

AECOM has provided sewer system engineering demand service for Hall County since 2009. This has given us valuable insight into the County's standards, its priorities, and the way the county serves the community.

#### Point of Contact:

Tina S. Houston  
Vice President, Water, Georgia/Alabama  
D +1-404-965-9706  
M +1-404-295-6087  
[tina.houston@aecom.com](mailto:tina.houston@aecom.com)

AECOM  
One Midtown Plaza  
1360 Peachtree Street, NE, Suite 500  
Atlanta, Georgia 30309, USA  
T +1-404-965-9600

## WASTEWATER COLLECTION DESIGN CAPABILITIES

AECOM provides clients with expert engineering services for projects involving wastewater collection systems. Our line projects encompass a full range of sizes and lengths and have overcome design and permitting challenges such as bridge and wetlands crossings, subaqueous line construction, tunneling under rail line and roadways, horizontal directional drilling, crossing high-pressure gas mains, and crossing other public and private rights-of-way. Our wastewater collection experience includes:

- Large Regional Collection Systems
- Small Residential Collection Systems
- Industrial and Commercial Collection Systems
- Pump Stations
- Force Mains
- Gravity Sewers
- Rehabilitation

AECOM has extensive experience with wastewater pump stations of various types, including submersible, wet/dry pit flooded suction, suction lift, and pumps in series type stations. Pump station configuration is site specific and also heavily dependent on client input and preferences. AECOM recommendations on the pump station design and force main alignments are made based on our many years of experience and with owner input as part of the design team process.

AECOM also offers in-house experienced resources in multidisciplinary aspects of wastewater engineering, including comprehensive planning, condition assessment, asset management, SSES evaluation, electrical engineering, Instrumentation and control, structural engineering, surveying, permitting coordination, public outreach, construction management, and administration.

Our team of professionals have participated in the development of modeling and master planning for expansion of and rehabilitation to conveyance systems for various water services providers in Georgia. Evaluations of wastewater systems can include analyses of pump stations and associated force mains, and our efforts are focused on determining capacities for a range of possible operating conditions. In addition to pump stations and force mains, gravity sewers and their hydraulic capabilities are also factored into computer model development.

Perhaps the greatest asset that AECOM provides to our clients is our rapport with local, state, and federal permitting agencies. Through our history of work on thousands of engineering projects, we have gained extensive experience with all state and federal agencies that hold regulatory authority over our clients' projects.

Our permitting success results from proper initial permit preparation, relationships with regulatory personnel, and regular follow-ups to help ensure permits are issued within the time frames needed to meet our clients' schedules.

AECOM works regularly with the Georgia Environmental Protection Department (EPD) the United States Army Corps of Engineers (USACE), the Environmental Protection Agency (EPA), the Georgia Department of Transportation (GDOT), Railroads, as well as a variety of other agencies to obtain permits for Georgia counties and cities.

## SUBCONSULTANTS

AECOM proposes to use the specialist service Subconsultants for the following:

- Topographical Survey
- Geotechnical
- Subsurface Utility Engineering
- Wetland Delineation and Permitting

## WHY AECOM?




Any time AECOM works with a client to establish their goals for a project, we start with the "end-game" working back to develop a prioritized phased approach that is focused on all phases of the project and the critical success factors that need to be achieved to ensure a positive outcome for the entire project.

We believe AECOM provides the best team with the depth and breadth of resources, skills and capabilities necessary to fulfill the requirements as detailed in this project.

We believe that the success of this type of project is driven by collaboration and working with the County's technical and operational stakeholders, and project team members. We have a clear understanding of the overall project requirements and the importance of each component of the project, resulting in a positive outcome for the County.

## RELATED PROJECT EXPERIENCE

Provided in this section are a few pump station, force main and gravity sewer projects AECOM has completed in the past five years. They demonstrate our diverse experience with design, route selection, material types and permitting.

	<p>North Charleston Sewer District (NCSD) – Hillendale Pump Station Upgrade</p>	<p>Design, specifications, survey, permitting, bidding, and construction management services for a new pump station replacing two existing pump stations. The project includes installation of a new 320-GPM pump station, demolition of existing pump stations, installation of 2,021 LF of 8-inch gravity sewer, 13 LF of 10-inch gravity sewer, 735 LF of 6-inch force main, eight manholes and all associated appurtenances, electrical distribution for pump controls, standby generator, and interface with NCSD's SCADA system.</p>
	<p>North Charleston Sewer District – Lincolnville Pump Station Upgrade and New 14-inch Force Main</p>	<p>AECOM provided design, specifications, survey, permitting, bidding, and construction management services for the partial demolition of the existing pump station, the installation of a new 0.5 MGD submersible pump station, controls, generator, macerator, SCADA system, approximately 3,100 LF of new 14-inch force main, 126 LF of new 8-inch gravity sewer, 100 LF of new 10-inch force main, two (2) manholes, four (4) air release valve in manhole, and appurtenances. Bypass pumps were used to keep the pump station in service during the upgrade</p>
	<p>Hartsfield-Jackson Atlanta International Airport – South Deicing Facility</p>	<p>Deicing glycol storage and distribution system design, vehicle fuel storage and dispensing system design, hydrology and hydraulic (H&amp;H) modeling, permitting, spent deicing pump station and storage tank design, Phase I Environmental Site Assessment and project wide QA/QC. Detailed design was completed for the pump station, with a capacity of 12 cfs and two 1.25 MG above ground storage tanks.</p>
	<p>Hartsfield-Jackson Atlanta International Airport- Pump Station and Force Main</p>	<p>Design of a new sanitary pump station, 8-inch force main and sewer lines to convey flows the trunk sewer, and then through a series of pump stations and force mains, to the South River Water Reclamation Center. Work performed includes pump station step testing, hydraulic modeling, detail design of new pump station and improvements to an existing pump station. The flow of the new pump station is 360 gpm with a head of 35 feet.</p>
	<p>Charleston Water System (CWS) – Low Battery Restoration Project</p>	<p>Design, specifications, permitting, bidding, and construction management to relocate water and sewer utilities to accommodate roadway and storm drainage improvements. The project includes relocating 2,253 LF of 6-inch Ductile Iron Pipe waterline installed by Open-Cut, 3 LF of 4-inch DIP, 10 LF of 2.25-inch Copper pipe, 15 6-inch gate valves, 4 fire hydrant assemblies, 35 water services w/ new meter boxes and appurtenances, replacing 1,780 LF of 8-inch sewer main installed by Open-Cut, 11 manholes, 2 sewer shaft hatch replacements and 39 sewer laterals.</p>
	<p>Palmetto Railways – Relocation of Navy Pump Station North Charleston</p>	<p>Design, permitting, plans, specifications, construction administration and observation for the wastewater lines and pump station relocation to accommodate new Navy Base Intermodal Facility. The project includes demolition of the existing pump station and relocation of a new 4,000-GPM facility to include a new 18'x13' wet well, 3 submersible pumps, 577 LF of 30-inch gravity sewer installed on piles, 49 LF of 24-inch gravity sewer, 76 LF of 20-inch force main, five (5) manholes, macerator/grinder, flow meter, generator, and controls building.</p>
	<p>North Charleston Sewer District (NCSD) – 24-inch Sanitary Sewer Replacement</p>	<p>Design, specifications, survey, permitting, bidding, and construction management services to replace a failing section of 24-inch gravity sewer near the proposed Palmetto Railways Intermodal Facility. The project includes replacing approximately two hundred ten (210) linear feet of 24-inch PVC gravity sewer line with pile-supported 24-inch Ductile Iron Pipe (DIP) and all associated appurtenances.</p>

## FAMILIARITY WITH LOCAL GEOGRAPHY AND FACILITIES

AECOM has provided sewer system engineering demand service for North Hall County since 2009. A total of 17 task orders have been completed during this period under multiple terms of demand service contracts. Task orders have included sewer system design, studies, master planning, business case evaluations, design of the North Oconee Water Reclamation Facility, and permitting services.

AECOM worked with Hall County to develop a twenty-year action plan to improve planning, funding, and delivery of public sanitary sewer services in North and South Hall County. AECOM estimated future wastewater flows based on land use plan for the study areas and developed a capital improvement plan (CIP) with an implementation timeframe through 2040. AECOM worked closely with the County staff to develop financing alternatives to support the implementation of the CIP. Master planning efforts provided AECOM extensive knowledge of the County's system. These planning projects also involved close coordination with the County while familiarizing with the County's standards. AECOM understands the County's vision on how the new sewer project will improve service delivery and reduce risk will drive the decision-making process for the overall successful outcome of this project.

AECOM understands the critical nature of this project. Since it is in Phase I of the Sewer Master Plan, all sewer flows in the Pond Fork basin will go through this system for the next 15 years. It will need to be designed to meet both short term and long-term needs. If this system is designed incorrectly, it will be detrimental for future development in this basin. Commercial and industrial development is expected to increase in the coming years and having a properly designed sewer system will only lead to further development. The Georgia Department of Transportation (GDOT) has already invested in this area by widening Athens Hwy and so other critical infrastructure will need to follow in order to support growth. AECOM understands and acknowledges how important this project is for the County and will dedicate its resources to ensure a quality product is delivered.

## PROJECT MANAGEMENT SKILLS

### PROJECT MANAGEMENT APPROACH

The success of this contract starts with assigning the right people with the appropriate level of expertise and experience. We have

assembled a highly qualified leadership team for this contract, led by **Vineeth Panicker, PE as Project Manager**. He will be the primary contact responsible for all proposed communications with the owner and all proposed subconsultants. Vineeth was selected to serve as the project manager because:

- ☑ Extensive qualifications and direct experience working on similar type projects
- ☑ Ability to deliver on requested scope of work and achieve project goals
- ☑ Familiarity with the responsibilities expected in this role and his dedication and responsiveness to clients.

Vineeth will be supported by **Hennie van-Staden, AECOM's Client Service Manager**. Hennie will provide optimal, client-driven solutions to assist Vineeth, making him an invaluable resource to Hall County under this project. Hennie will ensure quality and tactful awareness of this contract, providing a commitment to Hall County's goals and expected deliverables.

Each key member on our team is supported by several local or regional members for the task/discipline; we know from our experiences that this will require meticulous inputs at the right time and with the necessary focus. To achieve this, team and support members will be assigned for their project roles and committed to the project for this duration.

In addition, a detailed schedule will be developed for project task management. Sub-tasks will be identified by our project manager and task leaders with input from our senior technical advisors to make sure we plan and execute the tasks with adequate resources and on time.

We will develop a project task breakdown structure to lay out the work tasks and schedule. In this way, we will make each of the project team members available to the project according to the task(s) and for better cost control, their participation will be as needed according to our project completion schedule. Our project manager will prepare internal deliverable schedules for team discussion and for internal checking and QAQC. The project manager also monitors hours spent by each team member on a regular basis so project and resource issues can be resolved in a timely manner.

Our project manager will hold a weekly status meeting with task leaders. In these meetings, we will discuss key project issues, resource (staff) availability, and task/deliverable goals for the week and upcoming month. The project status meeting will be held in person for our local staff, and with our remote staff participating via audio or video conference.

Our team is accustomed to working with project team members from multiple locations and time zones. AECOM has equipped each employee with Microsoft Teams, a communication platform that provides real-time presence information, including staff location and availability. This program also allows us to start or join an audio or web conference among employees without going through an external process; we can share our computer screen with remote members of the team instantly and easily. Modern technology has enabled management of a team with remote members efficiently and effectively.

This project will be supported from two of our offices; Atlanta, Georgia and Charleston South Carolina. Members from these offices have worked together in the past and are excited to collaborate again to bring our combined strengths for this project.

## INTEGRATED MANAGEMENT AND QUALITY ASSURANCE

Our integrated management approach is used by all AECOM project staff for professional technical services. It is well tested, integral to our project delivery system, and will provide positive results for the County.

We will provide a Work Plan that will include a detailed schedule and work breakdown structure at the Project Kick-Off Meeting. This schedule will be updated monthly and discussed with the County's Project Manager. Our team will:

- Monitor, evaluate and report on the overall progress of the design project including forecasts for completion and milestones.
- Forecast schedule impacts associated with changes and accurately evaluate and make recommendations to the Project Manager, delays or unforeseen conditions.
- Develop, evaluate and recommend alternatives for mitigating delays.
- Accurately track progress of the work and anticipate where additional coordination and adjustments to contract must be made to optimize performance.
- Track schedule based on construction milestones or installed quantity measurement during construction phase.

### Quality Control and Assurance Process

AECOM's ISO 9001-certified Americas Quality Management System (QMS) together with risk management and project delivery processes, require that we consistently plan, do, and check our work. Our project management and QMS approach assures the client of a cost effective and project

appropriate delivery that is well documented and delivered on time and on budget.

AECOM's approach to quality control and project execution is simple:

- Plan the work to respond to the County's expectations
- Work the plan with constant internal and external communication
- Regularly verify with the County that expectations are being met consistently
- Close out the project with a client debriefing

To further enhance this strategy, AECOM has recently built into its project management system a mandatory Technical Approach Verification process. An experienced senior technical advisor will review the project approach during the early stage of the project to verify that adequate approach and resources are planned for the execution of the project. This early approach verification process facilitates early communication of the project team to ensure an adequate plan is in place for the project. This approach would benefit the County as it is designed to avoid having costly "redo" of any element of the project. In addition, a detailed review will be performed by qualified reviewer prior to all draft and final submittals.

### Risk Mitigation

Many of the Critical Success Factors we comment on in our response could be standalone risks; however, a collaborative approach to identify and mitigate overall risk is important to a successful project. We will proactively identify risk issues and their causes, document what will be affected by the maturation of those risks, and clearly assign an "owner" to each risk item. The probability of occurrence and the severity of the impact will each be analyzed in determining the item's risk value or impact. Mitigation measures will then be identified and implemented as needed.

## AECOM'S DESIGN APPROACH AND METHODOLOGY

AECOM has assembled a team of dedicated and experienced professionals for this project, combining regional expertise with local awareness and commitment.

We will work with Hall County to develop a thorough project execution plan and schedule for **meeting or exceeding the County's expectations** for a successful project.



## PROJECT OVERVIEW

As described in the Request for Proposals (RFP), the Pond Fork Basin Phase I Sewer Project improvements include approximately 5,600 feet of new 8" diameter gravity sewer, a new sanitary sewer pump station (1.65 mgd with approximately 250 feet Total Dynamic Head), along with new 10" diameter force main of approximately 12,500 feet length. The proposed pump station will be located on property to be acquired along a drainage way between Dorsey Creek Road and Pennington Trail, which leads to Pond Fork Creek. The force main will discharge into a new pump station currently under construction by the City of Gainesville in the Gainesville 85 Business Park. These improvements will allow development of public sewer along the employment corridor fronting Athens Highway (GA 11/US 129).

At the start of every project undertaken by AECOM, key elements are identified as critical components vital to the successful execution of a project. By building from experience on similar projects the following items will warrant detailed focus throughout the duration of the project.

- Communication between Hall County, AECOM, and other Stakeholders.
- Safety
- Project Schedule
- Permitting
- Easements
- Constructability
  - Public impacts/relations
  - Proximity to Residential Homes
  - Proximity to overhead power lines
  - Proximity to Roadways
  - Soil Conditions
  - Wetlands impacts
- Opinion of probable construction costs, and
- Construction administration

## TECHNICAL APPROACH

### Kick-Off Meeting

AECOM will request a project kick-off meeting upon receipt of the Notice to Proceed (NTP). The intent of the kickoff meeting is to finalize the project goals, determine requirements and constraints, and review available documents. Prior to the kickoff meeting, we will prepare an agenda and request for information.

### Route Selection

AECOM's experience dictates that time spent on the route selection on the front end of the design will pay dividends during the design and construction of the projects through less re-design work and lower construction costs.

For example, during our field review of the conceptual alignment for pipelines, we usually note several areas where the routing should be "fine-tuned" to avoid apparent conflicts. On a previously completed project, our team noted that the roadway was recently resurfaced. The public will not view the disruption and repaving this road in a few years favorably, so a different route was considered. AECOM will coordinate the County's Street Resurfacing List with the identified routes along with any anticipated streetscape projects contemplated by the County.

Included in our scope and fee, a survey crew will conduct required fieldwork under the guidance of the project manager. Upon acceptance of the proposed force main and gravity sewer alignments and pump station site, and receipt of survey permission from Hall County, AECOM surveyors will begin the field survey process. The project right-of-way and/or private easement alignments will be surveyed to locate and collect information on all significant structures, utilities that can be located by reasonable means, wetlands, and additional data points will also be collected to prepare the easement plats following Hall County's approval of the force main and gravity sewer routes.

### Lift/Pump Station Engineering

Pump station configuration is site specific and heavily dependent on client input and preferences. AECOM recommendations on the pump station design and force main alignments are made based on our many years of experience and with owner input as part of the design team process.

AECOM will evaluate the need for a grinder, odor control and a wet well sediment agitation system in consultation with the County.

AECOM's electrical and I&C engineers will design the required electrical infrastructure and controls in accordance with the state and county requirements. If not yet available, AECOM will prepare the requirements for the power connection from the power utility company enabling the County to engage in the necessary negotiations.

### Permitting, Environmental Considerations and Public Outreach.

Projects within urban areas pose a different challenge than those traversing cross country or along a rural highway. The primary consideration is route selection. These projects are more visible and subject to increased public scrutiny. For such projects, we have developed specific public engagement plans that inform the public early and regularly about their services, access, and travel. There are also engineering and construction considerations for these projects in urban areas, including material delivery, staging,

and stringing; working hours; noise management; and prevention of infrastructure cracking claims. AECOM has successfully implemented and navigated these potential considerations.

Our team will work with Hall County early on to provide project and construction information. Coordinating the construction schedule with stakeholders well in advance will be pivotal to identifying appropriate communications channels and tactics and avoiding delays in construction.

### **Easement and Right of Entry Acquisition**

For most alignments that will be considered on the Pond Fork Basin Phase I Sewer Improvements Project, individual easements and right of entry across private properties may be anticipated. Our staff is also experienced in meeting individual homeowners to resolve easement restoration in their backyards.

### **Utility Coordination and SUE**

Limiting disruption to County's operations and neighboring utilities is not only a critical success factor but is key to risk mitigation for this project. AECOM will provide topographic surveying (as required). Prior to surveying properties and selected alignment, our team will call in tickets to Georgia 811 to locate existing underground utilities along the projected alignments. We have found it to be essential to have existing underground utilities marked and surveyed for damage prevention. More times than not, Georgia One-Call does not sufficiently perform locates for "pre-design" surveys. Performing Level B SUE services mitigates this challenge by working through the issues that would keep Georgia One-Call from performing locates such as reducing the project into multiple locates or "locate tickets."

### **River Crossings**

AECOM's trenchless practice encompasses over 200 practitioners across North America with relevant project experience in applicable technology (i.e., HDD, Subaqueous and Micro-tunneling). Successfully navigating the permitting process is a strength of our team and will be critical to maintaining an aggressive design and construction schedule.

### **Subsurface Conditions**

AECOM's geotechnical team has many years of experience in similar conditions and will work closely with our subconsultants and laboratories to ensure the correct tests are conducted for the pipe material to be selected and for special crossings (road and creek) field work.

### **Environmental**

Our environmental and permitting team will perform the required needs assessment of the potential permit/delineation based on the preliminary pipeline routes and the potential water crossings.

AECOM will work closely with the County and all the relevant authorities to streamline the application and approval process, enabling the timeous commencement of construction.

### **Health & Safety**

If the design and construction are great, but someone is injured, then the project is not a success. AECOM's Safety Program is based on prevention and efforts to protect our employees, property, the public, and the environment. This is demonstrated by the application of Global and Geography procedures, but most apparently through the implementation of our Safety, Health and Environment (SH&E) Manual and more than 90 individual Standard Operating Procedures.

**30% Design** – During this design phase we will begin survey efforts as described above and initiate SUE, wetland delineations, and geotechnical services. This submittal will document any soil and groundwater challenges, easement issues, permitting challenges, stakeholder concerns, etc. This submittal provides an opportunity to identify potential reductions in cost and to improve the project schedule. We will request a review meeting within 2-weeks following the submittal.

**75% Design** – 75% plans, specifications and opinion of probable cost will be delivered electronically in PDF format. We will request a review meeting within 2-weeks following the submittal. Upon completion of the review, AECOM will provide permit applications for Owner signature and application fees.

**100% Design** – 100% plans, specifications and opinion of probable cost will be provided electronically in PDF format. Again, we recommend a review meeting within 2-weeks following the submittal. Upon completion of the review, AECOM will make appropriate modifications to develop the final construction bid documents.

### **Bidding**

AECOM will assist the County with bid notification in addition to the following:

- Distribute bid documents
- Conduct pre-bid meeting and site visit
- Receive, assess, and answer bidder's questions

- Issue addendums - prepare response to questions received from bidders
- Attend and assist with bid opening
- Issue certified bid tabulation
- Make recommendation of award

Cost for advertisement publishing shall be paid directly by the County.

### Construction Administration

AECOM will assist the County during the construction phase of the Project by providing various office management services as follows:

- Provide Issued for Construction plans and specifications
- Process contract documents
- Attend and administer pre-construction conference meeting. Lines of communication will be established for the construction period
- AECOM will review all submittals and respond
- Review Request for Information and respond
- Change orders will be reviewed, and recommendations made to the County
- AECOM will perform two field inspections per month and issue field reports
- AECOM will assist the County in additional construction observation, if requested. Full time construction observation is recommended
- Conduct up to twelve (12) monthly progress meetings
- Review contractor’s periodic requests for payment and make recommendations to County
- Record drawings developed from field records kept by the contractor and their surveyor will be drafted in state plane coordinates and reviewed by AECOM prior to delivering to the County at the completion of construction
- Compile contract closeout package
- Assist with obtaining SCDHEC permit to operate and close out of other permits

### Construction Observation

AECOM will provide a Project Representative to provide support to the County to oversee construction activities and to monitor compliance with the project requirements. The Project Representatives duties will begin at the preconstruction meeting and run through final project

acceptance. He will be the project manager’s representative in the field to identify potential issues which could adversely impact the project. Detailed daily inspection logs, submitted to the County following each site visit, will be prepared to summarize construction activities. Photographs will accompany the daily logs documenting construction milestones or issues. The Project Representative will attend all pipeline testing and pump station startup and will provide documentation for these activities. We anticipate providing 224 hours of Construction Observation during the active construction period.

## AECOM’S TECHNICAL COMPETENCE

Hall County will benefit from AECOM’s best practices gained from delivering some of the largest water and wastewater utility projects in the world to deliver faster with higher quality, greater reliability, meeting the highest safety standards.

Drawing from a vast network, AECOM is prepared to leverage innovation and technology to meet the specific needs of each work authorization using best practices and tools in project execution.

While the range of tools used on AECOM projects is vast, rest assured that we follow our philosophy of The Right Tool, at the Right Time, for the Right Job. This means that the County benefits from the many tools that have been rigorously vetted by the AECOM validation process and are already being used by AECOM employees. The County benefits when new tools are determined to be a better fit for a project.

Our validation process is not simply checking the accuracy of software. The validation process ensures tools are adequately selected, users are trained, revisions are validated, and data are managed with appropriate security. It certifies current equipment calibration, and it tracks ownership of equipment, confirming that rented or loaned items are returned. Our goal is always to use the practices and tools that align with a specific project’s need.

AECOM is versed in the following software related to this project:

Design	Drafting	Mapping and GIS
Hydraulic Modeling: EPANET; FLOW3D; Bentley Hammer;	Civil 3D; AutoCAD; Revit;	Autodesk ReCap (for

InfoWater; InfoWorks ICM; PC SWMM; SewerGEMS; Visual Hydraulics; WaterGEMS, HEC-RAS	Plant 3D (incorporating P&IDs) Bentley MicroStation	as-built mapping) ArcGIS
---	--	--------------------------------

In addition to the above we also have various software applications for project management and construction administration.

AECOM is proud to have developed many of our own libraries for equipment and pipe specials for the design of linear and vertical infrastructure in accordance with global standards. These have been extended to 3D CAD applications like Civil 3D, Revit and Plant 3D. These applications have become very popular with clients as they can be used to visualize the completed design for non-technical and technical people to appreciate the interfaces between the different components and the allowed working space for operational and maintenance personnel. We also have the capabilities to do a walk thru simulation of a plant design as part of the design process.

AECOM has also developed cost saving ways to capture existing infrastructure in the field by means of using photographs or laser scans and then converting them into 3D drawings. We either use mobile ground or drone operated LiDAR scanners which generate point clouds which we then convert to drawings using a software application called ReCap. This does not only save time but enhances the accuracy of the data when used with the necessary ground controls.

AECOM has developed its own drawing standards over the years and as part of a project startup, a base drawing is developed with the title block, fonts and text sizes, numbering conventions, paper sizes, standard scales, etc. However, in all cases, client requirements shall be complied with. In the absence of client specific requirements, the standard AECOM drawing layouts shall be used. Drawings will always indicate the drawing status, revision number, and staff responsible for checking and approval of drawings in accordance with our quality assurance protocols. All data and drawings files can either be stored on our server or by using of Cloud Sharing with BIM360.

We apply our own proprietary digital tools, like our virtual consultation platform that allows external stakeholders a virtual reality experience that places them inside a town hall-type meeting. Virtually exploring the room allows for watching videos, reading information panels, viewing maps and plans, listening to audio tracks, linking to outside websites, and providing comments and feedback. By

providing a more resilient approach to community engagement, the tool allows clients to engage with a broader audience who cannot attend in-person meetings.

AECOM's Technical Practice Network identifies potential solutions to address challenges as they arise. The Technical Practice Network harnesses the intellectual power and experiences of AECOM's 45,000 employees world-wide. These networks hold routine webinars to share project experiences around the globe. The site also includes discussion forums that allow any staff to present a challenge or suggest a response to a posted challenge. There are 43 Technical Practice Networks related to water, each focusing on a different specialty area.

## COMMITMENT TO THE COUNTY'S INTEREST AND REPUTATION

AECOM has intimate knowledge of the County's needs within the Pond Fork basin through our work on the Sewer Master Plan. We understand the future growth potential of the Athens Hwy corridor for both commercial and industrial development. We also recognize the infancy of the County's sewer system and why every pipe and pump station are critical to sustaining the County's future success. The Pond Fork basin will help grow the County's customer base and expand its service area. This project is the most critical part of the proposed Pond Fork sewer network over the next 15 years. A proper design will protect the County's reputation and help facilitate further growth for years to come.

AECOM will develop a Project Work Plan that will identify communication protocol and plans to provide information and project updates with all key County staff. The Work Plan will include:

1. Project description, goals, and objectives
2. Deliverables and project milestones, with detailed scope and schedule in the appendices
3. Contact information for the project team members
4. Communication plan (including communication protocol and anticipated meetings)
5. Key information or data to be discussed in the project kick-off meeting
6. QA/QC plan
7. Health and safety plan

We will discuss the meetings anticipated by the County and include in the Work Plan:

1. Monthly invoice and written progress report to be submitted to the Authority's project manager monthly.
2. Project kick-off meeting to introduce key team members, review project goals and objectives, scope of work, schedule, project communication protocols, responsibility of each party (both Authority and AECOM team members), and data needs, etc.
3. Bi-weekly project progress conference calls. In-person progress meetings may be added based on project need and discussion with the Authority's project manager.
4. 30%, 75%, 100% progress review meetings (In-person). These meetings will be combined with the progress meetings as appropriate.

On past projects, we have done this effectively with scheduled progress reports/meetings including power point presentations on the progress of the project, along with project needs for the next few weeks until the next meeting. This will serve well to keep the County project team staff and management informed and to ensure the progress is within the scope and on time.

AECOM will facilitate all meetings, prepare a draft agenda, prepare meeting materials, and distribute meeting minutes/summary for review by the attendees. Generally, the in-person meetings will be conducted in the County administrative offices unless requested otherwise.

The key project staff members will present their findings at the appropriate time in the progress of the project. Only the essential AECOM project team members will be involved to control costs with the level of participation.

To document and resolve issues raised by various internal stakeholders, AECOM proposes to gather input from the County staff and we will work with you to establish a matrix and a ranking/weighting methodology for decision making and prioritization.

## Section 2 – Schedule of Work

### TEAM RESOURCES

We have assembled a team of dedicated professionals to partner with Hall County to deliver this project within time, budget and the scope provided. The AECOM team proposed for this contract has experience working on numerous similar water and wastewater on-call contracts throughout Georgia. Our familiarity and vast relevant experience result in a seasoned team with a proven history of executing these type projects in a timely and successful manner.

Our professional design lead will be David Hunt, PE with Georgia registration number, PE043546 with 36 years of experience. He will be supported by Vineeth Panicker, PE from Atlanta Georgia.

Key professionals assigned to this project include:

Name	Role	Years of Experience
Tina Houston	Principal-In-Charge, Client Services Manager	37
Hennie van Staden, PE	Client Service Manager and QA/QC	32
Vineeth Panicker, PE	Project Manger	17
David Hunt	Design Lead	36
John Weldon, PE	Pump Station & Force main Design, Utility Relocation	23
Hennie van Staden, PE	Hydraulics and QA/QC	32
Malavika Tripathi, PE	Permitting	15
Abhi Gupta, PE	Surge Analysis	20
David Wilcox, PE	Trenchless-Microdrilling/HDD	40
Kevin Krick, PE	Civil, Erosion and Sediment Control	12
Lee Davis	Health and Safety	30
Khalid Motiwala, PE	Structural Engineer	26

Name	Role	Years of Experience
Marty Ollinger, PE	Electrical Engineer	42
William Overbeeck, PE	I&C / SCADA Engineer	36
Chet Dicke, PE	Geotechnical	14
Mark Frank	Senior Designer	27
Corey Diamond	Communication /Public Involvement	8

In addition to the professional Engineers listed above we have more than fifty Professional Engineers available in the southeast region to assist on this project as needed.

We also have more than hundred other technical staff available in the southeast region to support this project.

### SCHEDULE AND TIME MANAGEMENT

Based on our understanding of the project and our experience with executing similar type projects, a preliminary project schedule has been developed and is included in this section. This schedule is preliminary and only includes the major tasks that need to be completed. It does however provide good insight to our approach to the project and the timeframe needed to complete the work. A more detailed schedule will be prepared if AECOM is selected for this project.

Two aspects of the project that are not within our control are easement acquisition and permitting approval. Based on our review of the pipeline routes, it is our opinion that both permits, and temporary construction easements will need to be acquired to facilitate installation of the new sanitary sewer and force main. Our experience has been that acquiring these types of permits and easements can be time consuming and may require acquisition through eminent domain which can take up to 12 months.

For the sake of the community, the County and businesses, the disruptions caused by the construction activities need to be limited to the minimum. Therefore, the shortest potential schedule for construction will be the goal.

We do not foresee constrains with lead times as the pipe materials and valves for the anticipated pipe sizes should be readily available, especially if HDPE pipes are used. Some delays with ductile iron fittings are however expected.

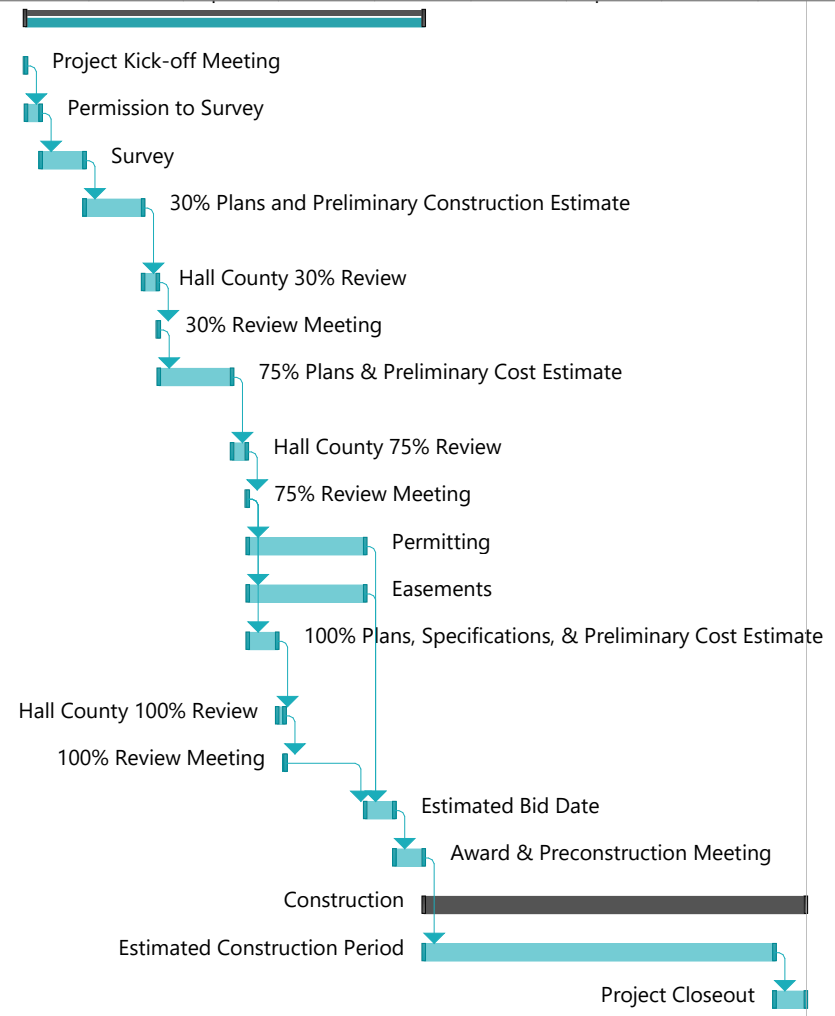
### Timeframes

Notice to proceed to 30% drawings: 127 calendar days

30% drawings to 75% plan 85 calendar days

75% plans to 100% plans 36 calendar days

ID	Task Name	Duration	Start	Finish	Jul '22	Oct '22	Jan '23	Apr '23	Jul '23	Oct '23	Jan '24	Apr '24	Jul '24	Oct '24	Jan '25
1	Project Design & Bid	273 days	Tue 11/1/22	Thu 11/16/23											
2	Project Kick-off Meeting	1 day	Tue 11/1/22	Tue 11/1/22											
3	Permission to Survey	2 wks	Wed 11/2/22	Tue 11/15/22											
4	Survey	6 wks	Wed 11/16/22	Tue 12/27/22											
5	30% Plans and Preliminary Construction Estimate	8 wks	Wed 12/28/22	Tue 2/21/23											
6	Hall County 30% Review	2 wks	Wed 2/22/23	Tue 3/7/23											
7	30% Review Meeting	1 day	Wed 3/8/23	Wed 3/8/23											
8	75% Plans & Preliminary Cost Estimate	10 wks	Thu 3/9/23	Wed 5/17/23											
9	Hall County 75% Review	2 wks	Thu 5/18/23	Wed 5/31/23											
10	75% Review Meeting	1 day	Thu 6/1/23	Thu 6/1/23											
11	Permitting	4 mons	Fri 6/2/23	Thu 9/21/23											
12	Easements	4 mons	Fri 6/2/23	Thu 9/21/23											
13	100% Plans, Specifications, & Preliminary Cost Estimate	4 wks	Fri 6/2/23	Thu 6/29/23											
14	Hall County 100% Review	1 wk	Fri 6/30/23	Thu 7/6/23											
15	100% Review Meeting	1 day	Fri 7/7/23	Fri 7/7/23											
16	Estimated Bid Date	4 wks	Fri 9/22/23	Thu 10/19/23											
17	Award & Preconstruction Meeting	4 wks	Fri 10/20/23	Thu 11/16/23											
18	Construction	365 days	Fri 11/17/23	Fri 11/15/24											
19	Estimated Construction Period	335 days	Fri 11/17/23	Wed 10/16/24											
20	Project Closeout	30 days	Thu 10/17/24	Fri 11/15/24											



Project: Pond Fork Schedule.mp Date: Thu 10/6/22	Task		Inactive Summary		External Tasks	
	Split		Manual Task		External Milestone	
	Milestone		Duration-only		Deadline	
	Summary		Manual Summary Rollup		Progress	
	Project Summary		Manual Summary		Manual Progress	
	Inactive Task		Start-only			
	Inactive Milestone		Finish-only			