RESOLUTION 24-93

A RESOLUTION TO AUTHORIZE MAYOR TO EXECUTE A TASK ORDER FOR DESIGN MODIFICATIONS AND BIDDING SERVICES TO THE WWTP PROPOSED HEADWORKS AND EQUALIZATION BASIN

WHEREAS, the City of Spring Hill authorized Thomas & Hutton to prepare plans and specifications in early 2021; and

WHEREAS, the location of the equalization basin was modified in a manner inconsistent with the facilities plan completed in 2019; and

WHEREAS, the location of the equalization basin was modified in a manner inconsistent with the wastewater treatment plant facilities plan completed in 2019, and the plans need to be modified to locate the facility in the original location; and

WHEREAS, staff proposes to start the project with unused funds available in 410-52503-59121 to accommodate the request of an additional $380,000, with the intent to budget the remainder to complete in FY 24-25; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Mayor and Aldermen of the City of Spring Hill authorizes the following action:

1. Approval of the Professional Services Task Order Extension with Thomas and Hutton for a lump sum fee of $380,000.00.
2. To authorize the Mayor to execute the agreement with Thomas and Hutton.

Passed and adopted by the Board of Mayor and Aldermen of the City of Spring Hill, Tennessee on this 6th day of May, 2024.

Jim Hagaman, Mayor

ATTEST:

April Goad, City Recorder

LEGAL FORM APPROVED:

Patrick Carter, City Attorney

THOMAS & HUTTON 502 Hazelwood Drive Smyrna, TN 37167 | 615-220-5800 www.thomasandhutton.com	**Spring Hill, TN** **WWTP Proposed Headworks Expansion and Equalization Basin** **Task Order Contract**	
	Task Order No:	**28298.0064**
	Date:	**01-04-2024**

The Professional Service Agreement – Task Order Contract between the City of Spring Hill and Thomas & Hutton for General Professional Engineering Consultant Services for completion of the design of the WWTP headworks expansion and Equalization Basin in the original location, which requires demolition of the Public Works building. The Professional Services Agreement is hereby amended to include the following Task Order:

Task Description: Prepare engineering bid documents (plans and specifications), hydraulic calculations, Design Development Report (DDR), submittal to TDEC for approval and bidding services.

Contact: Dan Allen, P.E., Assistant City Administrator

Scope of Services:

Engineering Design and Bidding Services

Engineering services will be provided for design and development of construction bid documents (plans and specifications), consisting of decommissioning and removal of the existing Public Works and Maintenance buildings. Design of the EQ Basin to be completed in the original location, as approximately shown in the WWTP Facilities Plan (2019), including structural design, site design, geotechnical exploration and recommendations for the proposed location, additional surveying, and electrical design. Engineering Design and Bidding Services will include:

- TDEC Pre-Design Re-Kickoff Meeting (initial meeting held 05/27/21)
- Site Design based on revised location of EQ Basin, including demolition plan and SWPPP.
- Revised structural design for proposed location based on revised geotechnical report from site exploration.
- Revised Electrical plan,
- Design Development Report with Hydraulic Analysis,
- Construction and Bidding Documents development,
- Bidding Assistance during advertisement

As part of Thomas & Hutton's above referenced efforts, the following tasks and engineering services will be provided:

1. Field Measurements and Survey
2. Civil Engineering Design,
3. Geotechnical Engineering,
4. Structural Engineering Design
5. Electrical Engineering Design,
6. Design Development Report with Hydraulic Analysis,
7. Plans and Specifications Development,
8. Submittal to TDEC,
9. Opinion of Probable Construction Cost,
10. Bidding Assistance.

EXCLUSIONS: Opinion of Probable Construction Cost will be based on similar projects of scope and size with similar components. Construction costs will be based on current market values and pricing. Due to recent price escalations in materials and labor, a contingency value will be included.

Deliverables:

1. Design Development/Hydraulic Calculations Report
2. Bidding Documents (Plans and Specifications)

Engineering Fee:	Lump Sum	$380,000.00
Additional Services	Time & Expense	See Consulting Services Rate Sheet
Total Task Order Amount:	$ 380,000.00	

This Agreement hereby amends the above referenced Professional Services Agreement between Thomas & Hutton and the City of Spring Hill and supersedes all prior written or oral understandings. This Agreement of Services may only be amended, supplemented, modified, or cancelled by a duly executed written instrument. IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day written below.

Client:	**CITY OF SPRING HILL**	Engineer:	**THOMAS & HUTTON**
Signed:		Signed:	
Name:	Jim Hagaman	Name:	Trent V. Thompson, P.E.
Title:	Mayor	Title:	Vice President of Infrastructure
Date:	5-6-2024	Date:	01/04/2024

Exhibit A

SCOPE OF SERVICES

Thomas & Hutton will provide engineering consulting services to include the design and development of bid documents (plans and specifications), consisting of expansion of the existing headworks and the proposed equalization basin. The design services includes demolition plans for decommissioning and removal of the existing Public Works and Maintenance buildings, design of the EQ Basin to be completed in the original location, as approximately shown in the WWTP Facilities Plan (2019), including structural design, site design, geotechnical exploration and recommendations for the proposed location, additional surveying, and electrical design.

1. **SCOPE OF SERVICES**

A. **Survey Phases**

A Consultant's subconsultant will perform the following Survey Phase tasks:

1. ***Topographic Survey Phase***

The surveying subconsultant will prepare a topographic survey of the portion of the existing WWTP site, which will contain the proposed EQ basin, in the area that was not included in the previous survey. The survey shall obtain contour elevations, existing structures, and components location, within the general area of the proposed structures, existing piping invert elevations, and underground utilities based on as-built drawings and field located valving. The survey data shall be integrated with the survey data previously collected at the site.

B. **Geotechnical Phases**

1. **Field Exploration**

The purpose of the geotechnical exploration is to collect information about subsurface conditions and develop geotechnical recommendations for design and construction of the proposed structure. The exploration and testing will be performed by borings drilled by an auger drill rig.

Exploration of the site will be performed by conducting site reconnaissance to observe and document the surface conditions and topographic features on the site; mark planned boring locations by pacing distances and estimating right angles from exiting site landmarks or by using a hand-held Global Positions System (GPS) unit; and adjust the test locations as needed to avoid overhead or identified underground utilities, identified or suspected reinforcing steel, or other surface obstructions.

The previous geotechnical field exploration performed on the site included two (2) borings in the location of the proposed headworks expansion and seven (7) borings in the location of the 2021 equalization basin structure. It is not proposed to perform any additional borings for the headworks structure. Up to an additional seven (7) borings are proposed for the equalization basin structure in the location as described in the 2019 Facilities Plan.

Field Exploration will include:

- Soil test boring by conventional auger drilling.
- Split-barrel testing and sampling of soil in general accordance with ASTM D1586 (SPT sampling) while drilling above bedrock, with at least four samples in the upper 10 feet and a 5-foot interval thereafter until boring termination.
- Attempting up to four Shelby tube samples (ASTM D1587) to obtain relatively undisturbed soil sampled for laboratory testing.
- Rock coring in general accordance with ASTM D2113 to a depth of at least feet below auger refusal, depending on rock quality.
- Check borings for the presence of groundwater upon completion of auger drilling and rock coring.
- Backfilling the boreholes with auger cuttings and performing surface restoration as needed.

2. **Laboratory Testing**

Returned samples to the laboratory will be visually classified samples according to the Unified Soil Classification System. Selected soil samples will be tested for moisture contents, Atterberg Limits or percent fines and Shelby tube samples for one-dimensional consolidation and unconfined compression. Rock cores will be visually described and measured for Rock Quality Designation.

3. **Engineering Analysis and Report**

An engineering analysis necessary to assist with the development of geotechnical recommendations for the project will be submitted in PDF format. The report will include general information regarding the site and subsurface conditions, results of laboratory tests performed, recommendation for site preparation, recommendation for design and construction of foundations, below grade walls, underground utilities, ground supported concrete slabs, seismic classification, groundwater control and general comments and recommendations regarding geologic hazards and karst conditions.

4. **Seismic Refraction**

Due to known variable bedrock encountered during construction of the previous plant expansion, the seismic refraction method will be used, which is a noninvasive means of gathering information about the depth of soil overburden and the relative competency of the underlying rock. It can often locate large subsurface anomalies such as zones of deep weathering in the bedrock that may be indicative of incipient sinkholes and occurrence of an irregular bedrock surface. The seismic survey results will be included in the geotechnical report.

C. Design Phases

1. Civil engineering task shall consist of developing the preliminary site layout, site and grading plans, hydraulic calculations, headworks equipment review and recommendations, headworks structure design, and EQ basin design.

2. Structural engineering shall perform sizing of footers, floor slab, walls, partitions, walkways, handrailing and pipe penetrations. Construction joints, expansion joints, reinforcement steel sizing, and reinforcement steel layouts shall also be included within this project task. A concrete design mix, testing parameters, and concrete placement specifications shall also be developed.

3. Electrical engineering shall consist of designing and specifying all electrical components/power supply requirements for the headworks screens and grit removal systems as well as any required electric actuated valves for the EQ basin. The electrical work will evaluate existing electrical components and integrate the proposed required components accordingly.

4. The Design Development Report (DDR) shall be written and submitted to the Tennessee Department of Environment and Conservation (TDEC). The DDR shall compile all design assumptions, basis, parameters and calculations for the headworks upgrade and EQ basin design. The DDR will contain the hydraulic analysis for the existing average daily flows (ADF) and peak daily flows (PDF) to determine the required sizing of both the headworks upgrades, EQ basin, pump size and line sizes.

5. Plans and Specifications shall be developed as to allow the City to publish an advertisement for bidding solicitations purposes. Plans and specifications will be a complete set of construction drawings as well as front end bid documents and technical specifications.

6. Plans and Specifications with hydraulic calculations will be submitted to TDEC for review and approval for construction.

7. Opinion of Probable Construction Cost will be developed to allow the Client to review and perform budgetary planning.

D. Permit Phases

1. *Permit Phase*

Consultant will assist Client with the preparation of submittal packages for the National Pollutant Discharge Elimination System (NPDES) General Permit for discharges of stormwater associated with construction activities, Construction General Permit (CGP). The payment of fees associated with the application process is the responsibility of Client. The Consultant will submit the application and required documents to TDEC.

Submittal fees are not included in our fee schedule and must be provided by Client at the time of submittal.

The submittal shall include the following:

- Submit Notice of Intent (NOI) on behalf of Client (as a Primary Permittee). This will include a certification that the Erosion, Prevention and Sediment Control (EPSC) plan has been prepared in accordance with the General Permit.
- Prepare and submit the Storm Water Pollution Prevention Plan (SWPPP).
- Develop the SWPPP narrative including requirements, site descriptions, soil property descriptions, runoff coefficient pre- and post-calculations, descriptions of anticipated activities, outfall and stream information, EPSC measures and BMPs and all information for a complete narrative submittal.
- Development of maps, exhibits, and details.
- Provide descriptions and recommendations for implementation of Best Management Practices (BMPs) to be implemented during construction of the project.

Consultant's services **do not** include:

- Qualified personnel to monitor maintenance of EPSC measures.
- Continuous monitoring of maintenance of EPSC measures.
- Monitoring of NTU's at outfalls or receiving streams.
- Submittal of monthly reports to appropriate governing regulatory agency.

E. Bidding Services Phase

Consultant will provide the following services for the Bidding Phase:

1. *Bidding Phase*

Bidding Assistance will be provided to answer all contractor questions and develop addendums, as necessary. Bidding documents will be distributed to plan rooms to help broaden the availability for interested and qualified contractors to review and request official bid sets. The Consultant will distribute both hardcopy and digital bidding documents to contractors that have purchased documents and maintain an official plan holders list. The Consultant will attend and facilitate the pre-bid meeting and bid opening to record bids and will conduct a thorough review of submitted bids and front-end documents. The Consultant will provide an award recommendation letter to the City upon completion of the reviews and reference confirmations.

F. Exclusions

Unless a specific scope is included in this Agreement, these items are **not** included in the Scope of Services:

- Accessibility construction compliance verification

- Archaeological survey and report, unless specific scope is included in the Agreement.
- Wetland delineation, surveys, or permits.
- Phase One or Phase Two Environmental Assessments
- Endangered species survey and report
- Off-site work unless specifically covered in the Scope of Services
- Approvals or permits other than those related to the Scope of Services covered by this Agreement.
- Act as an expert witness for legal activities
- Tennessee Department of Transportation (TDOT) permits or approvals.
- U.S. Army Core or Federal permitting
- Telephones, cable television, gas, and power distribution systems

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

2. **PERIODS OF SERVICE**

A. **Survey Phase**

After Client approval the Consultant's subconsultant will commence work within thirty (30) calendar days after receipt and complete work described in this phase within thirty (30) calendar days.

B. **Geotechnical Phase**

After Client approval, the Consultant's subconsultant will commence work within thirty (30) calendar days and complete work described in this phase within thirty (30) calendar days.

C. **Design Phase**

After the Survey Phase and Geotechnical Phase required for design is complete, Consultant will commence work within ten (10) calendar days and complete work described in this phase within one-hundred and eighty (180) calendar days.

D. **Permit Phase**

After receipt of a written notice to proceed from Client, Consultant will commence work within ten (10) calendar days after receipt and complete work described in this phase within one hundred and eighty (180) calendar days.

E. **Bidding Phase**

After receival of approved plans, specifications and permits, bidding dates will be determined, and biding documents completed within ten (10) business days and ready for distribution to contractors.