WORK ASSIGNMENT NO. 2016-07 PURSUANT TO

THE JUNE 28, 2016 AGREEMENT BETWEEN THE

CITY OF VENICE, FLORIDA AND HAZEN AND SAWYER

WHEREAS, on June 28, 2016, the City of Venice, Florida ("OWNER") and Hazen and Sawyer ("CONSULTANT"), entered into an Agreement whereby the CONSULTANT would perform professional services for the OWNER pursuant to an executed Work Assignment; and

WHEREAS, the OWNER wishes to authorize the CONSULTANT to perform professional services associated with the preliminary design of the "Second Force Main Under I-75 CIP" as more particularly described in the Scope of Services herein; and

WHEREAS, the CONSULTANT wishes to perform such professional services,

NOW THEREFORE, in consideration of the premises and mutual covenants contained in the June 28, 2016, Agreement and this Work Assignment, the parties agree as follows:

1. General description of the project: Site evaluation, preliminary design of a new force main under I-75, and evaluation of the connection with the force main and lift station from the Sarasota Memorial Hospital.
2. Scope of services to be performed. CONSULTANT shall perform the services described in the Scope of Services attached hereto as Attachment "A".
3. Compensation to be paid. OWNER shall pay the CONSULTANT the sum of One Hundred Ninety-Five Thousand, Three Hundred Fifteen Dollars (***$195,315.00***) for performance of the professional services specified in this work assignment.
4. Time for completion. CONSULTANT shall complete the preliminary design services specified in this work assignment within one hundred sixty-five (***165)*** days from the date of this Work Assignment unless otherwise extended with the written consent of OWNER.
5. The terms and conditions of the June 28, 2016 Agreement shall remain in full force and effect until the completion of this Work Assignment; and

IN WITNESS WHEREOF, the parties have executed this Work Assignment on the ___ day of _____, 2019.

HAZEN and SAWYER

5/8/19

CITY OF VENICE, FLORIDA

By: _____

John Holic, Mayor

ATTEST:

_____

ATTACHMENT "A"
SCOPE OF SERVICES

Hazen and Sawyer Work Assignment No. 2016-07

Second Force Main Under I-75 CIP,
Preliminary Design Phase and Site Evaluation Services

BACKGROUND

The City of Venice (OWNER) desires to construct a new wastewater force main under I-75 (Estimated 2,500 linear feet of piping). OWNER currently utilizes a single 20-inch force main crossing I-75 to transfer wastewater flow to the Eastside Water Reclamation Facility (EWRF). As stated in the OWNER's Wastewater Master Plan, if there is an issue with the existing force main with respect to a failure or the need to take the force main out of service for maintenance, the wastewater flow to EWRF will be cut off. In addition to the need for redundancy, there is additional planned development, including Sarasota Memorial Hospital (Hospital), on the west side of I-75 that will have significant additional wastewater flows. This new development requires the construction of a force main to convey flows to the EWRF, which may provide an opportunity to share costs with the hospital. The OWNER is currently updating the Wastewater Master Plan, which includes identifying new developments, which may impact the sizing of the proposed force main. In general, the proposed force main will be routed across I-75, North of the existing force main that conveys wastewater to the EWRF headworks.

This work assignment will include an assessment of one alternative (Discussed in Task 2.D) with respect to the pipe route for crossing I-75 and will identify up to three alternatives for connecting to the headworks at the EWRF. Site evaluation (Task 3) will be performed based on the pipe route and will include survey, subsurface utility engineering, ecological assessment, and geotechnical assessment. A Preliminary Design Memorandum (PDM) will be developed in Task 4 for the design of the proposed force main.

The PDM will recommend an approach for installing the new force main, which will be the basis of the following separate work assignments:

- Detailed design, permitting, and bidding effort

Engineering effort during the construction phase of the project will also be performed under a separate Work Assignment.

CONSULTANT will furnish professional services to the OWNER in accordance with the following Tasks:

TASKS

Task 1 – Project Management and Kickoff Meeting

A. CONSULTANT will prepare an agenda for, and facilitate, a kickoff meeting with the OWNER staff, establish lines of communication, and review the scope of services and project schedule.

B. CONSULTANT will provide ongoing project management services over the duration of the project for an initial period not to exceed 165 calendar days. This will include providing monthly status reports, sub-consultant administration and coordination, and overall project coordination for the duration of the project.

C. CONSULTANT will provide QA/QC by engineer experienced with pipeline systems on the Preliminary Design Memorandum.

Task 2 – Data Gathering and Preliminary Activities

A. CONSULTANT will request existing information, drawings, and operational information during the kickoff meeting. This data will be reviewed and utilized, as needed, to complete the scope of work items described herein.
   - Drawings showing the headworks structure and the connection location of the existing force main, along with applicable high and low water level elevations for the headworks. (CONSULTANT has record drawing information and will verify with the OWNER if there is any additional information available).
   - Drawings showing routing, size, and pipe material of existing 20-inch and 24-inch force mains on the east side of I-75, the west side of I-75 and on the EWRF site. (CONSULTANT has record drawing information and will verify with the OWNER if there is any additional information available).
   - Copies of easement agreements that the OWNER has on the EAST and WEST sides of I-75 that could impact potential pipe routing/location.
   - Previous geotechnical reports/borings from the installation of the existing 20-inch force main crossing I-75.
   - Population projections related to future developments near the proposed Hospital based on the OWNER's comprehensive plan.
     1. Nearby development areas include a mixed-use area south of the proposed hospital and an apartment complex west of the Publix shopping center that will have 276 units.
     2. OWNER will identify areas/populations that will be contributing to the Hospital development.
     3. CONSULTANT will use future development and population projection information provided by the OWNER to estimate flows. The flow estimate will be based on either the estimated Equivalent Residential Unit (ERU) value for

each development and the estimated flow per ERU as seen previously for the OWNER or based on population projections and estimated per capita wastewater use.

B. CONSULTANT will perform a site visit to review areas on East and West sides of I-75 near the EWRF and the EWRF to assess potential pipe routing conditions.

C. CONSULTANT will perform a permit/easement assessment between the existing 20-inch FM crossing and the proposed new FM crossing. This effort will include identifying the easements/property ownership along I-75. This effort will include coordination with the Florida Department of Transportation (FDOT) and a search of the OWNER's property appraiser GIS files to identify right of ways, easement and property ownership.

   This effort will also include coordination with the FDOT and one preliminary meeting with FDOT to identify if there are any limitations on pipe routing or required installation methods along/under I-75 due to the assumed required FDOT permit.

D. CONSULTANT will review a single route with respect to the information gathered during Tasks 2.A – 2.C. The route is generally described below and it will be assumed that the force main diameter is 30-inches:

   - Alternative 1 – Route new force main under I-75 south of the pond in the I-75 median, but north of the existing 20-inch force main and tie-in to the existing 24-inch force main coming from the north on the East side of I-75.

   This effort will include one review meeting with the OWNER to discuss the results of the force main routing assessment and verify the approach moving forward. The CONSULTANT will present information for the one alternative in a Powerpoint presentation and provide meeting minutes after the meeting to document the approach moving forward.

E. CONSULTANT will review information submitted to OWNER by the Consultant performing design services for the Hospital development for three different lift station and force main designs:

   - Design 1 – The force main from the Hospital development will be routed across I-75 and connect to existing OWNER force main on the East side of I-75.
   - Design 2 – The force main from the Hospital development will be routed to connect to the force main alternative from Task 2.D on the West side of I-75.
   - Design 3 – The force main and lift station from the Hospital will reflect the up-sized approach, based on guidance from the CONSULTANT, to receive and convey additional flows (as projected by CONSULTANT in Task 2.A) with the force main routed to connect to the force main alternative from Task 2.D on the West side of I-75.

This effort will consist of a desktop review of the design drawings to confirm the lift station and force main designs will be functional with respect to the hydraulic connection into the OWNER's wastewater system (This effort will only look at the hydraulics of the new force main up to the connection point with the OWNER's force main. This effort will not look at impacts downstream of this connection point and will not perform any hydraulic modeling. However, the CONSULTANT will review the Hospital Development consultant's hydraulic calculations (Excel document or Hydraulic model software data inputs and maps), and assumptions related to their designs for the lift station and force main (It is assumed that the Consultant for the Hospital development will have a design pressure at the connection point that their hydraulic calculations are based on). The CONSULTANT will provide design requirements for the required upsizing of the lift station wetwell, pumps, and force main to accommodate the OWNER's desired flows to be conveyed by the lift station for Design 3. CONSULTANT will also review the cost estimate for the three design options to be provided by the Hospital's Consultant. The CONSULTANT will provide comments on the cost estimate for the OWNER's use. It is assumed that the cost estimate material from the Consultant performing design services for the Hospital development is provided in bid level detail with adequate breakdown of cost components.

CONSULTANT will perform a permit/easement assessment between the proposed force main location and the Hospital's property for each of the three force main designs.

This above effort assumes up to two conference calls with the Consultant performing the design services for the Hospital development to get clarification on the documents that are provided. This task assumes that there will be three cost estimate reviews and will be limited to 98 hours of effort. The Consultant performing the design services for the Hospital development shall provide the following background information with respect to their efforts

- Geotechnical reports/borings from the Hospital development project, if available.
- FDOT meeting minutes from 1/10/2019 meeting with the Hospital development, along with any other available FDOT or permit agency meeting summaries.

Task 3 – Site Evaluation

For the site evaluation effort discussed below, it is assumed the proposed force main will be 30-inch diameter and the force main route will be per Task 2.D. If the resulting approach developed during Tasks 2 deviates from this assumption, the CONSULTANT will identify scope and fee impacts to the OWNER. The CONSULTANT will perform the investigations and evaluations to determine existing site conditions, which will include the following:

A. Geotechnical investigation to determine groundwater levels and subsurface soils conditions in the vicinity of the proposed force main. Material collected from the borings will undergo laboratory testing and available soil data will be assessed and summarized with recommendations provided related to the proposed pipe installation method in a geotechnical report. The geotechnical scope of work will be broken up into three phases:
    - Desktop geotechnical study (performed prior to route analysis, Task 2.D)

- Geotechnical investigation with 5 SPT borings (3 borings at 40-foot depth and 2 borings at 15-foot depth). (Performed after initial route analysis, Task 2.D)
- Follow up geotechnical investigation based on results from initial borings (includes up to 3 additional borings at 40-foot depth)

B. OWNER survey and easements: Surveying the proposed pipe route that was determined in Task 2. This is estimated to include areas on the East and West sides of I-75, including the required easement areas, and the corridor crossing I-75. The survey effort will establish current topography and elevations, locations of structures, pipes, utilities, swales and stormwater conveyance systems, edge of pavement, curbs, right of way, trees greater than 4-inch diameter, property boundaries, easements, and rights-of-way. The survey effort will include a title search and the development of an official survey and legal description for up to two (2) new easement areas to be provided to the OWNER for their use.

C. Hospital survey and easement North: Surveying the proposed easement area on the Hospital property (approximately 480 feet long). The survey effort will establish current topography and elevations, locations of structures, pipes, utilities, swales and stormwater conveyance systems, edge of pavement, curbs, right of way, trees greater than 4-inch diameter, property boundaries, easements, and rights-of-way. The survey effort will include a title search and the development of an official survey and legal description for up to one (1) new easement area to be provided to the OWNER for their use.

D. Hospital survey and easement South: Surveying the proposed easement area on the West side of I-75, along the golf course (approximately 1,235 feet long). The survey effort will establish current topography and elevations, locations of structures, pipes, utilities, swales and stormwater conveyance systems, edge of pavement, curbs, right of way, trees greater than 4-inch diameter, property boundaries, easements, and rights-of-way. The survey effort will include a title search and the development of an official survey and legal description for up to one (1) new easement area to be provided to the OWNER for their use.

E. Subsurface Utility Engineering (SUE): Use of ground penetrating radar technology to identify the location and extent of buried utilities within the proposed force main corridor that is going to be surveyed. This effort will also include up to 10 vacuum excavations to verify the top of pipe elevations for buried utilities.

F. Wetland and Ecological Assessment: Wetland assessment and endangered species survey of the area surveyed under Task 3.B that will include potential improvements.

Task 4 – Preliminary Design Memorandum

A. CONSULTANT will prepare a preliminary design memorandum (PDM) to summarize the assessments performed in Task 2 and the site evaluation effort from Task 3 and will include:

- Pipe materials
- Pipe installation methods (open cut, several trenchless methods)
- Force main sizing and pressures
- Estimated construction costs along with potential cost sharing with Hospital development
- Permit/easement requirements
- Alternative force main junction and headworks tie-in configurations (Up to three) shown in plan view figure for each alternative.
- Future maintenance
- Maintenance of operations during construction
- Operational approach for maintaining velocities in the parallel force mains
- Estimated Construction Schedule
- Aerial showing force main routing

The PDM will include a recommended approach for the proposed force main. CONSULTANT will submit a Draft PDM to OWNER for review.

B. The CONSULTANT will perform a review of the potential for cost sharing between the OWNER and the Hospital Development based on the cost estimates provided by the Consultant for the Hospital Development in Task 2.E. The summary of the findings for the review and assessments of the Hospital cost sharing will be included in the PDM.

C. CONSULTANT will attend one review meeting with the OWNER to obtain comments on the PDM. Meeting will be held after OWNER has been provided 2 weeks to review submission. CONSULTANT will prepare meeting minutes within seven (7) days following the meeting.

D. Subsequent to the review meeting, CONSULTANT will incorporate relevant comments and submit a final PDM to the OWNER.

DELIVERABLES

CONSULTANT will provide the following information, data, and documents to the OWNER:

- Task 4.A and 4.D
  - PDM - Four (4) hard copies and one (1) copy in electronic .pdf format for the draft and final submittals.
- Electronic PDF copies of meeting summaries will be forwarded to all attendees.

OWNER REQUIREMENTS

During the duration of the above scope, the OWNER will provide the following, if available:

1. OWNER data as identified in Task 1 and that which may be identified after the project has begun.

2. Access to utility and property appraiser GIS systems.
3. Access to the EWRF site for site visit.
4. Review and comments on interim deliverables within 2 weeks of each submittal.

ASSUMPTIONS

In order to provide the above engineering services per the described scope, the following assumptions were made:

1. The CONSULTANT will not provide any design documents (specifications and/or drawings) related to the design requirements discussed in Task 2.E.
2. This project will not include design of modifications to the headworks and/or structures at the EWRF site.
3. Adequate information regarding easement and property ownership can be obtained through FDOT and search of OWNER utility and property appraiser GIS systems for the preliminary design effort.
4. This project will not include any property acquisition effort. The OWNER will be responsible for property acquisition, assuming it is required based on the chosen force main routing.

COMPENSATION

CONSULTANT proposes to undertake this work on a Standard Hourly Rate "Not to Exceed" fee basis with a fee of $195,315 as shown in the following **Fee Breakdown**. Rates will include all expenses. Monthly invoices will be issued for work completed in the previous month.

An OWNER's allowance of $10,000 for unforeseen task(s) that may be required for this project, which will be used only with the written approval by the OWNER.

Fee Breakdown

Task No.	Description	Estimated Fee
1	Project Management and Kickoff Meeting	$17,150
2	Data Gathering and Preliminary Activities	$39,590
3	Site Evaluation	$89,775
4	Preliminary Design Memorandum	$38,800
	OWNER's Allowance	$10,000
Total		**$195,315**

SCHEDULE

Notice to proceed (NTP) will be the date Work Assignment receives approval.

The schedule for these services will be as follows:

Task/Activity	Completion from Kickoff Meeting (calendar days)
1. Project Management and Kickoff Meeting	**165 days**
2. Data Gathering and Preliminary Activities	**90 days**
2.A Force Main Routing Review Meeting	35 days
2.D Desktop Review of Hospital Development Design and Cost Estimate	90 days
3. Site Evaluation	**105**
4. Preliminary Design Memorandum (PDM)	**165**
4.A Draft PDM	135 (115 days[2])
4.D. Final PDM	165[3]

The above schedule assumes the following:

1. Information from the Consultant performing design services for the Hospital development related to this work assignment, including, estimated costs, and the flows they are anticipating and the lift station and force main design drawings for their system for Design 1 - 3, will be available within 30 days after the Force Main Route Review Meeting.
2. The reduced timeframe assumes that the geotechnical desktop study provides adequate information and shows consistency in the geology such that the draft PDM can be based on this information for assessing and costing alternative force main installation methods.
3. The Final PDM will include the geotechnical data gathered from borings performed during the site evaluation task.

The schedule will be adjusted based on delays to receiving the above information.