Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS™

Exhibit A - Scope of Work (SOW)

CLIENT: City of Hallandale Beach
400 South Federal Highway
Hallandale Beach, FL 33009

RE: FY 2013-2014-006 Continuing Professional Services

DISCIPLINE: Civil Engineering

CONSULTANT: Calvin, Giordano & Associates, Inc.

WORK AUTHORIZATION NO.:

PROJECT: Hallandale Beach Lift Station No. 12

CGA NO.: 21-5529

DATE: July 16, 2021

ATTENTION: Mr. Peter A. Kunen, P.E., CFM
Assistant Director of Public Works/City Engineer

In accordance with Resolution #2020-054, RFP# FY 2018-2019-012 Continuing Architectural and Engineering Services and Other Services, the following scope of services is provided by Calvin, Giordano & Associates, Inc. (hereinafter referred to as "Consultant", "We" or "CGA",) to the City of Hallandale Beach (hereinafter referred to as "CITY" or "Client") as requested to provide Water Resources/Stormwater Design/Wastewater Engineering Services associated with the Hallandale Beach Lift Station No. 12 project for the above reference project. This proposal, when executed, shall be incorporated in and become an integral part of the Agreement for Professional Services between the CITY and CGA, hereafter referred to as the Agreement.

Background and Scope of work

The CITY desires the design, permitting, and bidding documents for the conversion of the existing dry-pit lift station (a.k.a. 'can' lift station) into a submersible pump lift station utilizing the existing wet well, gravity main and force main connections. Sizing and design for a new permanent generator and slab are included. Design criteria for pump selection will be provided by the CITY's Sanitary Sewer Report consultant and it is assumed that no structural improvements are necessary to the existing lift station wet well, and no sewage grinder(s) with separate structures are included in this proposal. Surveying, Utility Coordination, Instrumentation & Controls, Electrical Engineering, Landscape Architecture, Geotechnical and Construction Services are also included in this proposal. The Engineer's rough order of magnitude opinion of probable construction costs for these improvements is $3,063,571.88. Our specific scope of services is detailed as follows:

Building Code Services
Civil Engineering / Roadway & Highway Design
Coastal Engineering
Code Enforcement
Construction Engineering & Inspection (CEI)
Construction Services
Data Technologies & Development
Electrical Engineering
Engineering
Environmental Services
Facilities Management
Geographic Information Systems (GIS)
Governmental Services
Indoor Air Quality
Landscape Architecture
Planning
Project Management
Redevelopment & Urban Design
Surveying & Mapping
Traffic Engineering
Transportation Planning
Water / Utilities Engineering
Website Development

1800 Eller Drive
Suite 600
Fort Lauderdale, FL
33316
954.921.7781 phone
954.921.8807 fax

www.cgasolutions.com

1) Task 1 – Project Management

a) CGA shall provide project management and project coordination services throughout the design, permitting, and construction process. This will include monthly updates to the CITY, coordination of the design team, permitting, design, schedule, and adherence of design to construction budget, adherence of design to the City of Hallandale Beach's goals and objectives, and interactions with City of Hallandale Beach Staff. This task will also include the prompt resolutions of any issues which may arise during the design and/or permitting process.

2) Task 2 – Utility Coordination and Geotechnical Investigation

a) Utility Coordination: A preliminary investigation of the utilities within the project area. This task shall provide information on the project conceptual plans meeting Subsurface Utility Engineering Quality Level A as described by ASCE "Standard Guidelines for Depiction and Collection of Existing Subsurface Utility Data". Data Acquisition is limited to available records and as-built information.

i) Create an 811 Design Ticket.

ii) Submit Initial Utility Request Letters to applicable utility owners.

iii) Create a utility matrix for tracking.

iv) Log and input utility information into AutoCAD.

v) Submit Confirmation Letters to applicable utility owners.

vi) Follow up responses and confirmation from the applicable utility owners.

b) Subsurface Utility Investigation (SUE) Services performed by sub-consultant

i) Utility Investigations using Ground Penetrating Radar (GPR), conventional electromagnetic (EM) pipe and cable locators, and air vacuum excavation (utility potholing) will be performed by sub-consultant in order to locate and confirm potential conflicts with the proposed project.

ii) The location of underground utilities discovered shall be indicated on the ground surface using spray paint or other methods as specified by the design engineer. CGA Surveying services will locate all utility markings for incorporation into AutoCAD.

i) Eight (8) potholes with temporary asphalt patching, basic traffic control and a utility report are included. Surveying services will identify and stake proposed soft dig locations and as-built soft dig locations with measure down distances and other pertinent as-built utility information as identified by subsurface utility locations.

c) Geotechnical Engineering Services performed by sub-consultant

i) Three (3) Standard Penetration Test (SPT) borings to a depth of 15 feet at the location of the proposed Lift Station #12 valve vault and generator.

ii) Prepare a Geotechnical Report including a description of the findings, general site preparation, and proposed structural criteria recommendations.

3) Task 3 – Topographic Survey

a) This surveying task includes conducting a topographic survey of all above ground improvements within the right-of-way corridor of SW 4th Avenue from SW 5th Street to SW 6th Street. The deliverables shall be in adequate format, so they can be used for preparing engineering design plans and construction specifications. All survey point data shall be collected and reported in NAVD88 datum at a maximum of fifty (50) feet intervals to allow engineers to design the scope of work.

b) Data Gathering

i) Horizontal locations and vertical elevations will be provided for asphalt pavement, sidewalks, curb, trees, driveways, fences, and visible above-ground utilities.

(1) Visible above ground utilities refer to the visible structures (e.g., manholes, valve boxes, inlets, etc.) typically associated with storm drainage, sanitary sewer, potable water, electric, gas, telephone and cable television.

ii) Cross sections at 50-foot intervals to include elevations at the centerline, edge of pavement, sidewalk, low and high points and lane line whenever applicable within each cross section.

iii) Recover sufficient right-of-way and property corners along the route survey to establish right-of-way and property lines.

iv) Obtain rim, size of pipe, type of material and invert elevations of sanitary sewer manholes, storm manholes and catch basins\inlets.

v) Locate any paint markings, by others, identifying underground utility demarcation and any soft-dig exploratory excavation locations.

vi) Locate pump station compound, including walls, fences, wet well and electrical controls; obtain as much as-built survey information within the wet well as possible under safe conditions.

vii) Locate canal edge-of-water, rip-rap limits and any outfall as-built information.

viii) Horizontal control will be referenced to the State Plane Coordinate System, Florida East Zone North American Datum NAD83/90 and elevations referenced to North American Vertical Datum 1988 (NAVD88).

ix) Survey work will comply with the Standards and Practice requirements for Surveying and Mapping, according to Chapter 51-17.052 of Florida Administrative Code, as adopted by the Board of Professional Surveyors, Chapter 472, Florida Statutes.

4) Task 4 – Structural Engineering Services

a) Structural Engineering Services performed by sub-consultant includes design and construction drawings for the wet well top slab structure, valve vault and generator pad structural components.

i) Per the CITY's wastewater master plan, the existing wet well concrete structure shall remain; therefore no structural modifications, besides the new top slab, are included for the submersible pump conversion.

ii) The valve vault is to be a precast structure with poured in place concrete leveling foundation.

iii) Generator Pad is to be a poured in place concrete slab meeting finished floor requirements for an emergency facility per FEMA flood map.

iv) Design of the adjacent canal embankment structure and canal bank revetment is not included in the scope.

v) Structural Engineering Construction Services and Inspection included in Task 9.

5) <u>Task 5 – Preliminary Investigation and 60% Design Plans</u>

a) Existing conditions review and conceptual layout

i) Site visit

ii) Evaluate existing conditions

iii) Meet with the CITY and wastewater consultant to select and confirm the proposed improvements that will be consistent with the recommendations outlined in the 2018 Wastewater Master Plan.

iv) Provide the CITY with a conceptual layout of the pump station improvements for confirmation prior to producing 60% Design Plans.

b) 60% Design Submission for the CITY selected improvements.

i) Prepare 60% plans

ii) Prepare 60% Opinion of Probable Construction Cost,

iii) Prepare 60% Technical Specifications.

iv) CGA shall submit 60% design plans to the City of Hallandale Beach Staff for review. The submittal will include two (2) 24" x 36" sets of plans, AutoCAD file, one (1) Opinion of Probable Construction Cost and one (1) Draft Technical Specifications Documents, as well as pdf's of the above items.

v) Meet with the CITY to discuss and coordinate 60% Submission comments. Review, respond and address comments from the CITY.

vi) This task includes Electrical Engineering to provide new meter, electrical service and permanent generator for the upgraded lift station.

(1) Coordination with FPL for required electrical service improvements from closest adjacent power pole and verification of necessary electrical improvements.

(2) New site lighting (anticipated one pole) is included in the electrical engineer services.

(3) Sizing for new permanent generator and source of power for back-up system.

vii) This task includes Instrumentation & Controls design for new Control Panel for the upgraded lift station.

(1) Coordination with CITY's consultant for CITY-wide Instrumentation & Controls update and for relocation of existing water level monitoring station's control panel is included in the Instrumentation & Controls Engineer services.

viii) This task includes Landscape Architectural services to provide a tree disposition plans, planting plan, irrigation plan and associated notes, details and specifications for minor landscaping required around the upgraded lift station.

(1) Coordination with the survey department for the identification of existing trees and palms, providing the Scientific and Common names of the existing trees and palms, the Diameter at Breast Height, estimated height and spread and condition of specimens. The Disposition of the existing trees and palms shall be included in this assessment.

- Note that no color renderings are included for any Public meetings for this project, but may be provided on an hourly basis if needed.

6) <u>Task 6 – Final Plans</u>

a) 100% Design Submission

i) Prepare 100% plans.

ii) Prepare 100% Opinion of Probable Construction Cost.

iii) Prepare 100% Technical Specifications. CITY will provide the Front End Specifications.

iv) Constructability Review.

v) CGA shall submit 100% design plans to the City of Hallandale Beach Staff for review. The submittal will include two (2) 24" x 36" sets of plans, one (1) Opinion of Probable Construction Cost and one (1) Technical Specifications Documents, as well as AutoCAD files and pdf's of the above items.

vi) Bid item list

7) <u>Task 7 – Permitting</u>

a) Prepare and process permit applications through the following entities:

i) Broward County Environmental Protection and Growth Management Department (EPGMD) for Wastewater (WW) Collection/Transmission System License

ii) City of Hallandale Beach Preliminary Tree Permit Application.

b) Attend pre-application meetings with each agency prior to 60% plans.

c) Digital copies of any packages submitted for permitting will be provided to the CITY.

8) <u>Task 8 – Bidding Services</u>

a) Submit a bid package to the City of Hallandale Beach Staff. Three (3) 24" x 36" set of plans signed and sealed, one (1) Technical Specification Document and one (1) CD containing AutoCAD and pdf's of the bid plans and technical specifications.

b) Attend pre-bid meeting.

c) Provide responses to Contractor's RFI questions during bidding.

d) Assist procurement in review of minimum qualifications required.

9) <u>Task 9 – Services during Construction</u>

a) The proposed effort shall include providing Construction Engineering Services including limited Construction Administration and Inspection / Observation services for the Hallandale Beach Lift Station No. 12 Project. The following scope is based on pre-construction activities, and 214 calendar days (seven (7) months) of Construction / Contract

Time, and on total hours specified within. Any additional time beyond this will require an approved agreement. The anticipated scope of services includes limited pre-construction activities and coordination; and Construction Engineering and Observation services, including:

i) Attend one (1) pre-construction meeting, conducted and recorded by the CITY.

ii) Receive, review and respond to Shop Drawings, samples and other data which the Contractor is required to submit.

iii) Receive, review and respond to interpretations and clarifications of the Contract Documents (RFI responses, plan revisions, and Work (Change) Directives). In connection therewith, assist in the review and processing of any Work Change Directives or change orders requested by the CITY. All instructions to the Contractor will be issued through the CITY's Project Administrator or Inspector, in writing on an as-needed basis.

iv) Attend monthly construction progress meetings at Municipality location for the duration of the construction project (assumed effort at six (6) meetings @ 3 hours per meeting). The CITY will prepare and distribute meeting minutes.

v) Attend and participate in field reviews/meetings with the CITY, Contractor and appropriate regulatory agencies when requested by the CITY and necessary for consultation and conferences in regards to construction of the project (includes 15 hours each for the EOR and Field / Resident Project Representative). This task does not include conducting or distributing minutes.

vi) Perform initial and final reviews of as-builts supplied by the Contractor, prepare and submit permit close-out documents and certification(s).

vii) It is our understanding that the CITY's Project Manager will be onsite daily to provide daily inspections, and will provide observation reports and photos to CGA.

viii) Perform limited and scheduled observations (estimated at two hundred and fifty (250) hours of effort) of Field / Resident Project Representative services for compliance with plans and specifications, and provide copies of observation reports to the CITY on a weekly basis. Make interim inspections for Substantial and Final completion(s) to determine, in general, if the work has been completed in conformance with the intent of the Contract Documents. Additionally, the CITY shall furnish and assign a Construction Project Administrator and / or Project Inspector(s) during the course of the project construction activities to supplement CGA's efforts, as noted in #vii above.

ix) Perform observations and recording of required testing (pump station start-up, pressure, density, etc.), and connection(s) to the sanitary sewer gravity / force main(s).

x) Attend close-out inspections with CITY, Contractor and permitting agencies; prepare and distribute punch-list(s).

xi) The LA scope shall include limited final inspections (estimated at thirty-eight (38) hours of effort) for Landscape Inspector services for compliance with plans and specifications.

10) Exclusions

a) This proposal does not include any Site Plan processing or submittal to the City of Hallandale Beach.

b) No public meeting presentations and/or attendance has been included in these services.

c) No Building Department Permit dry-run submittal is included in this proposal.

d) Broward County Hazardous Materials License (if required) will be submitted by the Contractor during construction.

e) Canal surface water or revetment improvements, modifications, and associated permitting are excluded from this proposal.

f) Design for a new wet well structure is not included and utilization of the existing structure is based on the CITY's 2018 Wastewater Master Plan recommendations.

g) These fees and scope exclude the Design and Coordination of any Generator wrap graphic, as this would be considered an additional service to this contract.

h) If any additional services are required, additional scope and budget will be required.

Professional Fees:

The table below gives the budget breakdown by task for the subject professional services. Please contact me if you need any additional information.

Staff-Hours by Classification & Hourly Rate for Services							
Task	Engineering Department		Landscape Architecture / Environmental Department	Survey Department	Construction Department	Sub-Consultants	Task Subtotal
	Civil Engineering Services	Electrical Engineering Services	Landscape Architecture Services	Survey Services	Construction Services		
	Task Subtotal	Task Subtotal	Task Subtotal	Task Subtotal	Task Subtotal	Task Subtotal	
1 - PM	$17,550.00	$900.00	$0.00	$0.00	$0.00	$0.00	$18,450.00
2a - Utility Coord.	$5,470.00	$0.00	$0.00	$0.00	$0.00	$0.00	$5,470.00
2b - SUE	$0.00	$0.00	$0.00	$0.00	$0.00	$4,680.00	$4,680.00
2c - Geotech	$0.00	$0.00	$0.00	$0.00	$0.00	$2,675.00	$2,675.00
3 - Survey	$0.00	$0.00	$0.00	$5,920.00	$0.00	$0.00	$5,920.00
4 Structural					$0.00	$15,818.00	$15,818.00
5 - Prelim & 60%	$24,100.00	$24,050.00	$4,080.00	$0.00	$1,980.00	$0.00	$54,210.00
6 - Final Plans	$15,420.00	$6,485.00	$3,320.00	$0.00	$1,980.00	$0.00	$27,205.00
7 - Permitting	$7,780.00	$1,825.00	$3,575.00	$0.00	$0.00	$0.00	$13,180.00
8 - Bidding	$6,210.00	$845.00	$1,060.00	$0.00	$990.00	$3,758.00	$12,863.00
9 - Const Servs	$31,270.00	$13,880.00	$4,490.00	$0.00	$78,125.00	$8,866.00	$136,631.00
Total Amount	$156,128.00	$47,985.00	$16,525.00	$5,920.00	$83,075.00	$35,797.00	$297,102.00

AUTHORIZATION

By: *Chris Giordano* Date: 7/22/21

Chris Giordano, MSC, CCM
President

By: _____ Date: _____

Dr. Jeremy Earle
City Manager

Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS™
1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316
Phone: 954.921.7781 • Fax: 954.921.8807

ENGINEER'S OPINION
OF PROBABLE COST
WORKSHEET

DATE
7/16/2021

PROJECT TITLE				CG&A PROJECT NO.	
	Hallandale - Lift Station #12			21-5529	
	Rough Order of Magnitude Estimate				
LOCATION					
	Hallandale, FL				
OWNER					
	City of Hallandale				
ESTIMATED BY	MJI	CHECKED BY	JDM	APPROVED BY	JRM

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE MAT. & LAB	ESTIMATED AMOUNT
Bid Item Number	**CONTRACT ITEMS**				
1	General Conditions	1	LS	$224,437.50	$224,437.50
2	Mobilization and Demobilization	1	LS	$112,218.75	$112,218.75
3	Stormwater Pollution Prevention	1	LS	$67,331.25	$67,331.25
4	Maintenance of Traffic	1	LS	$89,775.00	$89,775.00
5	Contractor Permit Fee (Allowance)	1	LS	$134,662.50	$134,662.50
6	Testing	1	LS	$44,887.50	$44,887.50
				SUBTOTAL	**$673,312.50**
	LIFT STATION CONVERSION				
7	Ex. Dry Pit Equipment Removal	1	LS	$22,500.00	$22,500.00
8	Ex. Wet Well Prep Work	1	LS	$75,000.00	$75,000.00
9	Duplex (2-45HP) Submersible Pumps	2	EA	$225,000.00	$450,000.00
10	Valve vault pipe, valves, fittings, etc.	1	LS	$63,750.00	$63,750.00
11	Connection to Existing Force Main	1	LS	$5,000.00	$5,000.00
12	Temporary Bypass Pumping	120	DAY	$1,000.00	$120,000.00
13	Cofferdam and Dewatering	1	LS	$75,000.00	$75,000.00
14	Pavement and Surface Restoration	1	LS	$35,000.00	$35,000.00
15	General Site Work	1	LS	$65,000.00	$65,000.00
				SUBTOTAL	**$911,250.00**
	ELECTRICAL AND I&C COMPONENTS				
16	Electrical Demolition	1	LS	$15,000.00	$15,000.00
17	Electrical Service	1	LS	$45,000.00	$45,000.00
18	Control Panel and Instrumentation Devices Work	1	LS	$215,000.00	$215,000.00
19	Instrumentation and Controls	1	LS	$65,000.00	$65,000.00
20	Water Level Monitor Relocation	1	LS	$20,000.00	$20,000.00
				SUBTOTAL	**$360,000.00**
	STRUCTURES				
21	Demolition Ex. Wet Well Top Slab	1	LS	$45,000.00	$45,000.00
22	Demolition Ex. Dry Pit Structure	1	LS	$27,500.00	$27,500.00
23	Wet Well Top Slab	1	LS	$55,000.00	$55,000.00
24	Valve Vault	1	LS	$40,000.00	$40,000.00
25	Generator Pad	1	LS	$8,000.00	$8,000.00
				SUBTOTAL	**$175,500.00**
	LANDSCAPING				
26	Tree Relocation and trimming	1	LS	$13,500.00	$13,500.00
27	New Landscaping	1	LS	$15,000.00	$15,000.00
28	6 ft Chain Link Fence	1	LS	$8,500.00	$8,500.00
29	Irrigation Improvements	1	LS	$12,500.00	$12,500.00
				SUBTOTAL	**$49,500.00**
				TRADES SUBTOTAL =	**$1,496,250.00**
				CONTINGENCY[1] 50%	**$748,125.00**
				SUBTOTAL FOR THE WORK INCLUDING FINAL CONTINGENCY	**$2,244,375.00**
				TOTAL COST INCLUDING CONTRACT ITEMS	**$2,917,687.50**
				Contractor Fee @ 5% =	**$145,884.38**
				TOTAL BID PRICE =	**$3,063,571.88**

Notes:
1. This estimate was prepared in accordance with the Class 4 Cost Estimate Classification System as recommended by AACE International. An AACE Class 4 Cost Estimate has an expected accuracy range of -30% to +50%.
2. This estimate is based on the draft project scope provided by the City on 6/17/2021. Plans have not been produced yet.