



**Calvin, Giordano & Associates, Inc.**  
EXCEPTIONAL SOLUTIONS™

Building Code Services  
Civil Engineering / Roadway  
& Highway Design  
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Construction Engineering &  
Inspection (CEI)  
Construction Services  
Data Technologies &  
Development  
Electrical Engineering  
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Landscape Architecture  
Planning  
Project Management  
Redevelopment  
& Urban Design  
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1800 Eller Drive  
Suite 600  
Fort Lauderdale, FL  
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954.921.8807 fax

[www.cgasolutions.com](http://www.cgasolutions.com)

**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:** Raw Water Pipeline

**CGA NO.:** 16-8470

**DATE:** May 9, 2019

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

In accordance to resolution #2014-138, RFP# FY 2013-2014-006 Continuing Professional Services, the following scope of services is provided by Calvin, Giordano & Associates, Inc. (CGA) as requested by the City of Hallandale Beach (CITY) 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 CITY and CGA, the Continuing Contract, hereafter referred to as the Agreement.

**Background**

The CITY desires the design, permitting & bidding plans for approx. 3,000 LF of new 12" raw water pipeline from Production Well No. 9 (PW-9) (designed by others) to an interconnection with the existing 12" raw water pipeline at Production Well No. 8 (PW-8). Pigging, disinfecting and flushing of the new 12" raw water pipeline will be included in the plans & specifications. Surveying, Utility Coordination, limited Landscape Architecture, Geotechnical and Construction Services are also included in this proposal.

The engineer's opinion of probable cost for these improvements is \$1,107,670.00.  
See attached estimate for details.

**1) Task 1 – Project Management**

- A. CGA shall provide project management and project coordination services throughout the design, permitting, and construction process. These efforts are based on an average of 2 hours per week for the length of this project. This will include monthly status 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 – Data Collection, Utility Coordination and Subsurface Investigation**

- A. CGA, in conjunction with US Utility Potholing & Air Excavation, shall perform an investigation of the utilities within the project area and in locations determined to have a high probability of potential utility conflicts. This task shall provide information on the construction 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 the number of soft digs as noted below.

**B. Utility Coordination**

1. Create an 811 Design Ticket.
2. Submit Initial Utility Request Letters to applicable utility owners.
3. Create a utility matrix for tracking.
4. Log and input utility information into AutoCAD.
5. The CITY will provide water and sewer in pdf and AutoCAD.
6. Submit Confirmation Letters to applicable utility owners.
7. Follow up responses and confirmation from the applicable utility owners.

**C. Subsurface Utility Exploration (SUE)**

1. Utility Investigation of the proposed 12" raw water line from PW-9 to interconnect with existing raw water pipeline at PW-8. Ground Penetrating Radar (GPR), conventional electromagnetic (EM) pipe and cable locators, and air vacuum excavation (utility potholing) will be performed by US Utility Potholing & Air Excavation in order to locate and confirm potential conflicts with the new raw water pipeline.
2. 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.
3. 15 Utility Potholes 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.
4. Add and properly annotate field verified utility information into AutoCAD.
5. Perform a site visit to verify results of the utility subsurface investigation.



3) **Task 3 – Route Survey**

- A. This surveying task includes conducting a route survey for the 3000 (lf) pipeline work from Production Well 8 to Production Well 9. CGA to conduct a right-of-way design survey of the required corridor, review and quality control all survey data collection, and prepare a complete route survey in AutoCAD format. 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
  - 1. Review all City, County or other records as necessary to define survey limits for each right-of-way included in this task order.
  - 2. Review horizontal and vertical survey control near each right-of-way including bench marks and GPS control.
- C. Conduct Route Survey
  - 1. Identify all platted right-of-way lines, platted easements and adjacent adjoining recorded plats within the designated corridor including all interesting streets.
  - 2. Conduct route surveying using NAVD88 Vertical Datum and NAD83 (NSR07) State Plane East Zone Horizontal Datum at a maximum of fifty (50) foot intervals between longitudinal and cross sectional points together with any grade breaks, swales, mounds or other definitive elevation change within the roadway corridor.
  - 3. Locate all above ground improvements within the project limits, with horizontal locations and vertical elevations being provided for such items as edge-of-pavement, sidewalks, driveways, access points \ curb cuts, buildings and visible above ground utilities. Visible above ground utilities refer to the visible structures (e.g., manholes, valve boxes, inlets, risers, etc.), typically associated with storm drainage, sanitary sewer, potable water, electric, gas, telephone and cable television.
  - 4. As-built survey data for pipe sizes, type of material, direction of flow and invert elevations will be obtained for any accessible manholes of storm and sewer manholes\inlets within the project limits.
  - 5. Prepare a Map of Survey signed and sealed by a Professional Surveyor & Mapper registered in the State of Florida. The survey will be prepared in accordance with the standards as set forth by Chapter 5J-17 of the Florida Administrative Code, pursuant to Florida Statutes Chapter 472.027.

4) **Task 4 - Geotechnical Engineering Services (performed by Nutting Engineers)**

- A. Perform ten (10) Standard Penetration Test (SPT) borings to a depth of 10 feet every 300 feet along the alignment of the new 12" raw water pipeline from PW-9 to PW-8.
- B. Prepare a Geotechnical Report including a description of the findings, general site preparation, and pipeline design bedding criteria recommendations.

**5) Task 5 – Design Submission**

**A. 30% Design Submission**

1. Prepare 30% plans based on the conceptual layout provided and described in the Hazen and Sawyer Technical Memorandum dated January 28, 2016.
2. Coordinate with Hazen and Sawyer design plans regarding PW-9 and connection information.
3. Prepare Table of Contents of Technical Specifications.

**B. 60% Design Submission.**

1. Prepare 60% plans.
2. Prepare 60% Opinion of Probable Construction Cost, Class 2 (as defined by Association for the Advancement of Cost Engineering International).
3. Prepare 60% Technical Specifications.
4. CGA shall submit 60% design plans to the City of Hallandale Beach Staff for review. The submittal will include one (1) 24" x 36" set of plans, one (1) Opinion of Probable Construction Cost and one (1) Draft Technical Specifications Documents, as well as pdf's of the above items.
5. Attend one (1) meeting with the CITY to discuss and coordinate 60% Submission comments. Review, respond and address comments from the CITY.

**C. 90% Design Submission**

1. Prepare 90% plans.
2. Prepare 90% Opinion of Probable Construction Cost, Class 1 (as defined by Association for the Advancement of Cost Engineering International).
3. Prepare 90% Technical Specifications.
4. CGA shall submit 90% design plans to the City of Hallandale Beach Staff for review. The submittal will include one (1) 24" x 36" set of plans, one (1) Opinion of Probable Construction Cost and one (1) Technical Specifications Documents, as well as pdf's of the above items.
5. Attend one (1) meeting with the CITY to discuss and coordinate 90% Submission comments. Review, respond and address comments from the CITY.

**D. 100% Design Submission**

1. Prepare 100% plans.
2. Prepare 100% Opinion of Probable Construction Cost, Class 1 (as defined by Association for the Advancement of Cost Engineering International).
3. Prepare 100% Technical Specifications. CITY will provide the Front End Specifications.
4. CGA shall submit 100% design plans to the City of Hallandale Beach Staff for review. The submittal will include one (1) 24" x 36" set of plans, one (1) Opinion of Probable



Construction Cost and one (1) Technical Specifications Documents, as well as pdf's of the above items.

6) **Task 6 – Landscape Architecture Services**

- A. Provide assistance to the Surveying and Civil Engineering department to identify any existing trees/palms within the right of way which may be impacted by the new raw water pipeline from proposed well PW-9. The landscape architectural staff shall provide the required notes to address tree protection, tree removal or tree relocation as deemed appropriate by City staff.
- B. No tree disposition plan is to be included; however, the LA staff shall provide markups on the Civil demolition plans to address the existing trees/palms.

7) **Task 7 – Permitting**

- A. Prepare and process permit applications through the following entities:
  - 1. Florida Department of Environmental Protection Agency - Southeast District West Palm Offices (Water Permit)
- B. Digital copies of any packages submitted for permitting will be provided to the CITY.

8) **Task 8 – Bidding Services**

- A. Submit Bid Package to the City of Hallandale Beach Staff. One (1) CD or thumb drive containing pdf's of the plans and Technical Specifications will be provided.
- B. Attend one (1) pre-bid meeting for the project, respond to prospective bidder RFI(s), assist with addenda as needed during the bid process.
- C. CITY will run and record minutes for the pre-bid meeting.
- D. CITY will perform bid evaluation.

9) **Task 9 – Construction Services**

- A. The proposed effort shall include providing Construction Engineering Services including limited Construction Administration and Inspection / Observation services for the Hallandale Beach Raw Water Pipeline project. The following scope is based on pre-construction activities, and 150 calendar days of Construction Time / Contract Time (five (5) months), and on total hours specified within. Any additional time beyond this will require an approved agreement. The anticipated scope of services include limited pre-construction activities and coordination; and Construction Engineering and Observation services.
  - 1. Attend one (1) pre-construction meeting, conducted and recorded by the CITY.
  - 2. Receive, review and respond to Shop Drawings, samples and other data which the Contractor is required to submit.
  - 3. 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.

4. Attend monthly construction progress meetings at Municipality location for the duration of the construction project (assumed effort at 5 meetings @ 3 hours per meeting). The CITY will prepare minutes.
5. Attend and participate in field reviews/meeting with the CITY, Contractor and appropriate regulatory agencies when requested by the CITY and necessary for consultation and conferences in regard 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.
6. Perform initial and final reviews of as-builts supplied by the Contractor, prepare and submit permit close-out documents and certification(s).
7. It is our understanding that the CITY's Project Manager will be onsite once a day to provide daily inspections, and will provide observation reports and photos to CGA.
8. Perform limited and scheduled observations (estimated at one hundred eighty (180) hours of effort) of Field / Resident Project Representative services for compliance with plans and specifications; provide copies of observation reports to the EOR and 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 #7 above.
9. Perform observations and recording of required testing (pressure, density, chlorination, etc.), and connection(s) to the existing water main(s).
10. Attend close-out inspections with CITY, Contractor and permitting agencies; prepare and distribute punch-list(s).

#### **10) Other Services**

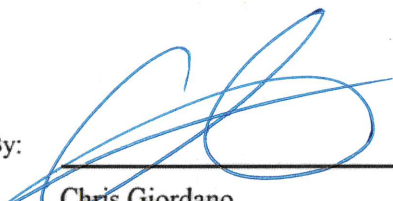
- A. The only services included in this contract are those identified above. No other Services are included in this contract.
- B. The existing 10-inch clay sanitary sewer in Ansin Road will be replaced by others with 150 psi pressure-rated and pressure-tested pipe. The design, permitting, and construction services for this work is not included as part of this contract.
- C. The existing communication conduit and natural gas pipeline near PW-9 will be relocated as part of the PW-9 Construction Drawings. The design, permitting, and construction services for this work is not included as part of this contract.
- D. Building Department Permit is not required and not included in this Contract.
- E. Engineering Permit is not required and not included in this Contract.

The table below gives the budget breakdown by task for the subject professional services; lump sum totals given below. The attached table provides the staff hour estimates by task.

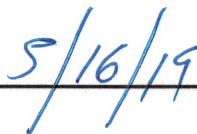
Task	Task Subtotal
1 – Project Management	\$21,000.00
2 – Utility Coordination and Subsurface Investigation	\$8,780.00
Subsurface Utility Exploration Services (performed by US Utility)	\$14,250.00
3 – Route Survey	\$11,820.00
4 – Geotechnical Engineering Services (performed by Nutting Engineers)	\$3,113.25
5 – Design Submission	\$41,030.00
6 – Landscape Architecture Services	\$5,400.00
7 – Permitting	\$7,680.00
8 – Bidding Services	\$4,830.00
9 – Construction Services	\$57,670.00
<b>Total Amount</b>	<b>\$175,573.25</b>

**AUTHORIZATION**

By:

  
Chris Giordano  
Senior Vice President,  
Calvin, Giordano & Associates, Inc.

Date:



By:

Peter A. Kunen, P.E.  
Assistant Director of Public Works/  
City Engineer  
City of Hallandale Beach

Date:



Hallandale Beach Raw Water Pipeline

Staff Hours by Classification & Hourly Rate for Services																																		
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								
Director	Project Manager	Engineer III	Engineer II	Sr. CADD Technician	Clerical	Task Subtotal	Project Manager	Sr. CADD Technician	Task Subtotal	Landscape Architect	Task Subtotal	Sr. Registered Surveyor	Survey Crew	Survey CADD Technician	Task Subtotal	Director	Associate Construction	Construction Management Director	Sr. Inspector	Inspector	Clerical	Task Subtotal	Geospatial Initial	SUE	Task Subtotal									
\$165.00	\$1,500.00	\$1,300.00	\$1,100.00	\$115.00	\$75.00	\$21,000.00	\$130.00	\$100.00	\$0.00	\$135.00	\$0.00	\$145.00	\$135.00	\$95.00	\$0.00	\$165.00	\$165.00	\$135.00	\$100.00	\$90.00	\$75.00	\$0.00	LS	LS	\$0.00									
1						\$6,400.00			\$0.00		\$0.00				\$2,300.00							\$0.00			1	\$14,250.00								
2	5		30	1	8	\$0.00			\$0.00		\$0.00		12	8		\$0.00						\$0.00				\$0.00								
3						\$0.00			\$0.00		\$0.00		8	48	44	\$11,820.00						\$0.00				\$0.00								
4						\$0.00			\$0.00		\$0.00					\$0.00						\$0.00			1	\$5,113.25								
5	10		132	202		\$41,030.00			\$0.00		\$0.00					\$0.00						\$0.00				\$0.00								
6						\$0.00			\$0.00	40	\$5,400.00					\$0.00						\$0.00				\$0.00								
7			32	32		\$7,680.00			\$0.00		\$0.00					\$0.00						\$0.00				\$0.00								
8			16	16		\$3,840.00			\$0.00		\$0.00					\$0.00		4			6	\$990.00				\$0.00								
9			72	56		\$15,520.00			\$0.00		\$0.00					\$0.00	23	125	153	12	68	\$42,150.00				\$0.00								
																										\$0.00								
																										\$0.00								
																										\$0.00								
Total Amount						\$95,470.00			\$0.00		\$5,400.00					\$14,200.00										\$17,565.25								
																										\$43,140.00								
																										\$175,573.25								





# Calvin, Giordano & Associates, Inc.

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## PROFESSIONAL FEE SCHEDULE

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  
Landscape Architecture  
Planning  
Project Management  
Redevelopment  
& Urban Design  
Surveying & Mapping  
Traffic Engineering  
Transportation Planning  
Water / Utilities Engineering  
Website Development

Principal	215.00
Contract Administrator	190.00
Project Administrator	165.00
Executive Assistant / Clerical	75.00

### ENGINEERING

Associate, Engineering (VI)	190.00
Director, Engineering (V)	175.00
Project Manager (IV)	150.00
Project Engineer (III)	130.00
Engineer (II)	110.00
Jr. Engineer (I)	100.00
Senior CADD Tech Manager	115.00
CADD Technician	95.00
Permit Administrator	90.00

### DATA TECH DEVELOPMENT

Associate, Data Tech Dev.	165.00
GIS Coordinator	145.00
GIS Specialist	125.00
Multi-Media 3D Developer	115.00
GIS Technician	100.00
Sr. Applications Developer	165.00
Applications Developer	135.00
Network Administrator	155.00
System Support Specialist	115.00
IT Support Specialist	85.00

### GOVERNMENTAL SERVICES

Associate, VP	190.00
Director of Code Enforcement	145.00
Director of Building Code	145.00
Project Manager	145.00
Grants Administrator	125.00
Code Enforcement Field Supervisor	110.00
Code Enforcement Field Inspector	90.00
Building Official	115.00
Building Plans Reviewer	90.00
Building Inspector	90.00
Permit Processor	75.00

### SURVEYING

Associate, Surveying	165.00
Senior Registered Surveyor	145.00
Survey Crew	135.00
Registered Surveyor	130.00
Survey Coordinator	105.00
CADD Technician	95.00
3D Laser Scanner	355.00
Hydrographic Survey Crew	330.00
G.P.S. Survey Crew	155.00
Sub-meter G.P.S	75.00
Soft Dig (per hole)	480.00
Utility Locates (per hour)	205.00

### LANDSCAPE ARCHITECT

Associate, Landscape Architect	165.00
Senior Landscape Architect	135.00
Environmental Administrator	125.00
Landscape Architect	120.00
Environmental Specialist	105.00
Landscape CADD Technician	95.00
Environmental Assistant	90.00
Landscape Inspector/Arborist	105.00
Landscape Designer	120.00
Landscape Site Plan Reviewer	135.00

### INDOOR AIR QUALITY SERVICES

Sr. Environmental Scientist	125.00
Environmental Scientist	100.00

### CONSTRUCTION

Associate, Construction	165.00
Construction Management Director	135.00
Construction Manager	125.00
Senior Inspector	100.00
Inspector	90.00
Construction Coordinator	90.00

### EMERGENCY MANAGEMENT

Director	145.00
Planner	105.00
Assistant Planner	90.00

### PLANNING

Associate, Planning	175.00
Director of Planning	150.00
Planning Administrator	150.00
Planning Manager	145.00
Senior Planner	125.00
Assistant Planner	90.00

### EXPERT WITNESS

Principal/Associate	330.00
Registered Engineer/Surveyor	280.00
Project Engineer	230.00

*In addition to the hourly rates listed above, charges will include direct out-of-pocket expenses such as reproduction, overnight mail, and other reimbursables billed at a multiplier of 1.25.*

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Effective October 1, 2014

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**EXCEPTIONAL SOLUTIONS™**  
 1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316  
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ENGINEER'S OPINION  
 OF PROBABLE COST  
 WORKSHEET

					DATE 5/8/2019	
<b>PROJECT TITLE</b>				<b>CG&amp;A PROJECT NO.</b>		
Hallandale - Raw Water Pipeline				16-8350		
Rough Order of Magnitude Estimate						
<b>LOCATION</b>						
Hallandale, FL						
<b>OWNER</b>						
City of Hallandale						
<b>ESTIMATED BY</b>		<b>CHECKED BY</b>		<b>APPROVED BY</b>		
MJJ		JDM		JRM		
<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT PRICE MAT. &amp; LAB</b>	<b>ESTIMATED AMOUNT</b>	
<b>Bid Item Number</b>	<b>CONTRACT ITEMS</b>					
1	General Conditions	1	LS	\$84,870.00	\$84,870.00	
2	Mobilization and Demobilization	1	LS	\$42,435.00	\$42,435.00	
3	Stormwater Pollution Prevention	1	LS	\$8,487.00	\$8,487.00	
4	Maintenance of Traffic	1	LS	\$25,461.00	\$25,461.00	
5	Contractor Permit Fee (Allowance)	1	LS	\$36,494.10	\$36,494.10	
6	Testing	1	LS	\$8,487.00	\$8,487.00	
				<b>SUBTOTAL</b>	<b>\$206,234.10</b>	
<b>REUSE WATER MAIN</b>						
7	12" DIP Reuse Water Main (including surface restoration)	3,000	LF	\$205.00	\$615,000.00	
1	12" DIP Fittings	1	LS	\$92,250.00	\$92,250.00	
				<b>SUBTOTAL</b>	<b>\$707,250.00</b>	
<b>TRADES SUBTOTAL =</b>				<b>\$707,250.00</b>		
<b>CONTINGENCY 20%</b>				<b>\$141,450.00</b>		
<b>SUBTOTAL FOR THE WORK INCLUDING FINAL CONTINGENCY</b>				<b>\$848,700.00</b>		
<b>TOTAL COST INCLUDING CONTRACT ITEMS</b>				<b>\$1,054,934.10</b>		
<b>Contractor Fee @ 5% =</b>				<b>\$52,746.71</b>		
<b>TOTAL BID PRICE =</b>				<b>\$1,107,680.81</b>		
<p>* Cost estimate excludes design &amp; construction administration fees, construction of asphalt pavement overlay, and potential relocation of any existing utilities.          This estimate should be re-evaluated throughout the iterated design process with the preparation of construction documents.</p>						