

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY

Meeting Date: October 20, 2015 Consent [X] Regular []
 Public Hearing []

Department: Water Utilities Department

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Consultant Services Authorization (CSA) No. 9 for the GL09 Glades Infiltration/Inflow Projects Phase 3 (Project) with Hazen and Sawyer, P.C. in the amount of \$161,820.

Summary: On June 3, 2014, the Board of County Commissioners (BCC) approved the Water Utilities Department (WUD) Engineering/Professional Services Contract with Hazen and Sawyer, P.C. (R2014-0821). CSA No. 9 provides for video inspections and rehabilitation recommendations for 30,000 linear feet of gravity sewer main lines in the City of Belle Glade. In addition, CSA No. 9 includes the finalization of a Sanitary Sewer Survey (Survey) for the Western Region of the County (Belle Glade, Pahokee and South Bay). The Small Business Enterprise (SBE) participation goal established by the SBE Ordinance (R2002-0064) is 15% overall. The contract with Hazen and Sawyer, P.C. provides for SBE participation of 22%. CSA No. 9 includes 25.52% overall participation. The cumulative SBE participation is 32.81% overall. Hazen and Sawyer, P.C. is a local Palm Beach County company. This project is included in the FY16 Capital Improvement Plan adopted by the BCC. (WUD Project No. 15-024) District 6 (MRE)

Background and Justification: WUD operates and maintains the wastewater collection system in the City of Belle Glade. The existing system has shown signs of infiltration and inflow. The scope of the Project is to complete a thorough video inspection of 30,000 linear feet of gravity sewer pipes, identification of specific defects, and development of recommendations to rehabilitate or repair severe defects identified during the inspection. CSA No. 9 also includes the finalization of the Survey report for the Western Region of the County. This work is needed to restore the service life, efficiency and effectiveness of the wastewater collection systems in the Cities of Belle Glade, Pahokee and South Bay.

Attachments:

- 1. Location Map
- 2. Two (2) Original Consultant Services Authorization No. 9

Recommended By: Jim Stiles 9-28-15
 Department Director Date

Approved By: Sharon G. B. 10/5/15
 Assistant County Administrator Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

| Fiscal Years | 2016 | 2017 | 2018 | 2019 | 2020 |
|-------------------------|------------------|-----------------|------------------|--------------------|----------|
| Capital Expenditures | <u>\$161,820</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| External Revenues | <u>\$0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Program Income (County) | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| In-Kind Match County | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| CCRT Funds | <u>0</u> | | | | |
| NET FISCAL IMPACT | <u>\$161,820</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| # ADDITIONAL FTE | | | | | |
| POSITIONS (Cumulative) | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Budget Account No.: | Fund <u>4011</u> | Dept <u>721</u> | Unit <u>W031</u> | Object <u>6547</u> | |

Is Item Included in Current Budget? Yes X No

Reporting Category **N/A**

B. Recommended Sources of Funds/Summary of Fiscal Impact:

One (1) time expenditure from user fees, connection fees, and balance brought forward.

C. Department Fiscal Review: Delia M. West

III. REVIEW COMMENTS


A. OFMB Fiscal and/or Contract Development and Control Comments:

Sherry Bm
9/1/18 OFMB

Dr. J. Jacob 9/29/15
Contract Development and Control
B. Wheeler 9-29-15

B. Legal Sufficiency:

Legal Sufficiency:

 9/30/15

Assistant County Attorney

C. Other Department Review:

Department Director

This summary is not to be used as a basis for payment.

ATTACHMENT 1 - LOCATION MAP

MARTIN COUNTY



PALM BEACH COUNTY
GIS Service Bureau May 07, 2015

0 0.75 1.5 3 4.5 6 Miles



LAKE OKEECHOBEE

PAHOKEE

BELLE GLADE

SOUTH BAY

PROJECT
LOCATION

LOXAHATCHEE GROVES

ROYAL PALM BEACH

WELLINGTON

WEST PALM BEACH

CLOUD LAKE
GREEN RIDGE

LAKE CLARKE SHORES

PALM SPRINGS

GREENACRES

LAKE WORTH

ATLANTIS

SOUTH PALM BEACH

LANTANA

HYPOLUXO

MANALAPAN

OCEAN RIDGE

BOYNTON BEACH

BRIAR CREEZES

GOLF

GULF STREAM

DELRAY BEACH

HIGHLAND BEACH

BOCA RATON

JUPITER

JUPITER INLET COLONY

TEQUESTA

OCEAN

ATLANTIC

HENDRY COUNTY

XIII

BROWARD COUNTY

CONSULTANT SERVICES AUTHORIZATION NO. 9

Project Title GL09 Glades Infiltration / Inflow Projects – Phase 3

Project No. WUD 15-024

Budget Line Item No. 4011-721-W031-6547

District No.: 6

THIS AUTHORIZATION No. 9 to the Contract for Consulting/Professional Services dated June 3, 2014 (R2014-0821), by and between Palm Beach County and the Consultant identified herein, is for the Consultant Services described in Item 3 of this Authorization. The Contract provides for 22.00% SBE participation overall. This Consultant Services Authorization includes 25.52% overall participation. The cumulative SBE participation, including this authorization is 32.81% overall. Additional authorizations will be utilized to meet or exceed the stated overall participation goal.

- 1. **CONSULTANT:** Hazen and Sawyer, P.C.
- 2. **ADDRESS:** 2101 N.W. Corporate Boulevard, Suite 301, Boca Raton, FL 33431
- 3. **Description of Services to be provided by the Consultant:**
Gravity sewer lines in Belle Glade will be inspected with video cameras to assess pipe conditions.
Videos will be reviewed and a description of observations prepared including, list of problem
areas such as cracks, root damage, separated joints and other pipe defects.
Recommendations for corrective measures will be developed with planning level
cost estimates and a report summarizing the videos performed to date.

See ATTACHMENT A.

- 4. **Services completed by the Consultant to date (Summary and Status of Authorizations):**

See ATTACHMENT E.

- 5. **Consultant shall begin work promptly on the requested services.**
- 6. **The compensation to be paid to the Consultant for providing the requested services shall be:**
 - A. **Computation of time charges plus expenses, not to exceed \$161,820**
 - B. **Fixed price of \$ n / a**
- 7. **This Authorization may be terminated by the County without cause or prior notice. In the event of termination not the fault of the Consultant, the Consultant shall be compensated for all services performed through the date of termination, together with reimbursable expenses (if applicable) then due.**

Project Title GL09 Glades Infiltration / Inflow Projects – Phase 3

8. SBE participation is included in Attachment D under this Authorization. The attached Schedule 1 defines the SBE applied to this Authorization and Schedule 2 establishes the SBE contribution from each sub-consultant (Letter of Intent to perform as an SBE).
9. EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, conditions and obligations of the Contract dated June 3, 2014 remain in full force and effect.

IN WITNESS WHEREOF, this Authorization is accepted, subject to the terms, conditions and obligations of the aforementioned Contract.

PALM BEACH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA

Sharon R. Bock, Clerk & Comptroller,
Palm Beach County

Palm Beach County,
Board of County Commissioners

ATTEST:

Signed: _____

Signed: _____
Shelley Vana, Mayor

Typed Name: _____
Deputy Clerk

Date

JCS

Approved as to Form and Legal
Sufficiency

Signed: _____

Typed Name: _____
County Attorney

CONSULTANT: Hazen and Sawyer, P.C.

ATTEST:

Kurt A. Pfeffer
Witness

Albert Muniz
(Signature)

Kurt A. Pfeffer, Senior Associate
(Name and Title)

Albert Muniz, Vice President
(Name and Title)

August 19, 2015
Date

LIST OF ATTACHMENTS

Project No. WUD 15-024 **Consultant Services Authorization No.** 9

Project Title GL09 Glades Infiltration / Inflow Projects – Phase 3

| | |
|----------------|--|
| ATTACHMENT – A | Scope of Work |
| ATTACHMENT – B | Budget Summary |
| ATTACHMENT – C | Project Schedule |
| ATTACHMENT – D | SBE Schedule 1, 2, 3a, and 4 |
| ATTACHMENT – E | Authorization Status Report – Summary and Status of Authorizations |
| ATTACHMENT – F | Authorization Status Report – Summary of SBE Tracking |
| ATTACHMENT – G | Location Map |

ATTACHMENT – A
CONSULTANT SERVICES AUTHORIZATION NO. 9
PALM BEACH COUNTY WATER UTILITIES DEPARTMENT
ENGINEERING/PROFESSIONAL SERVICES
SCOPE OF WORK
FOR

INTRODUCTION

Palm Beach County (COUNTY) entered into an agreement entitled Contract for Engineering/ Professional Services - Palm Beach County Water Utilities Department Project Number WUD 14-002 (CONTRACT) with Hazen and Sawyer, P.C. (CONSULTANT) to provide engineering services for various general activities on June 3, 2014 with an effective date of June 4, 2014 (Reference Document R2014-0821). This Consultant Service Authorization will be performed under that CONTRACT.

This Consultant Services Authorization encompasses providing services related to the video inspection and review with recommendations for corrective actions within the Western Region wastewater service area.

BACKGROUND

The Palm Beach County Water Utilities Department (PBCWUD) presently owns and operates the Western Region Wastewater Treatment Facility which provides wastewater collection for the Glades area. This area commonly known as the Glades Region encompasses the Cities of Belle Glade, Pahokee, and South Bay. A Wastewater Master Plan was recently completed (September 2014) for this area which identified infiltration and inflow (I&I) concerns. This project has been established to address excess flows from I&I in critical areas as defined by the County and identified in the Master Plan.

- I-I Analysis – Analysis of dry and wet weather flows both for the overall system and for individual pump station collection areas (basins). System-level analysis allows an overall characterization of the system to illustrate the approximate proportions of infiltration, inflow, and wastewater. Basin-level analysis allows the prioritization of individual pump station collection areas by I-I severity so that follow-up inspection work can be focused on those areas where the greatest I-I reduction potential exists.
- Sanitary Sewer Evaluation Survey (SSES) – Detailed investigation to develop a gravity sewer rehabilitation plan. Such investigation is designed to permit the identification of specific system defects to be repaired and typically involves such activities as night flow isolation, closed-circuit television inspection of sewer mains and laterals, manhole inspection, and smoke testing to identify sources of inflow.

- Rehabilitation – Implementation of the rehabilitation plan. This phase typically includes procurement and oversight of specialty sewer contractors to perform repair of mains, laterals, and manholes. Repairs would include traditional excavated repairs as well as “trenchless” repairs such as lining and chemical grouting where warranted. Rehabilitation may also include post-rehabilitation flow monitoring to document the flow reductions achieved.

At this time, the PBCWUD has elected to initiate SSES activities in those pump station collection areas (basins) identified as priorities in the Master Plan. To facilitate implementation of the work, SSES work will be divided into multiple Consultant Services Authorizations (CSAs). The scope of work for this CSA will consist of video inspection and video review of priority areas within Belle Glade. Due to the amount of area to be inspected, inspection of lines have been divided into two geographical areas. Part 1, which was included in a previous authorization, includes a total of approximately 70,000 linear feet with focus in the Pahokee and South Bay area. The second part of this evaluation addresses gravity lines within the Belle Glade service area and is the focus of this authorization. Gravity line inspections will be prioritized based on discussions with COUNTY staff for the areas of Belle Glade and South Bay.

The scope of work outlined herein allows for the performance of the following tasks:

- Task 1. Video inspection and survey of gravity sewer mains
- Task 2. Video review and development of recommendations
- Task 3. Final report with rehabilitation plan

SCOPE OF SERVICES

CONSULTANT shall provide engineering services to conduct a phased SSES as described herein. In an effort to minimize the total cost of the work, CONSULTANT has developed a collaborative approach that relies on the performance of some subtasks by COUNTY staff.

Task 1 – Video inspection and survey of gravity sewer mains

CONSULTANT shall coordinate and schedule video inspection activities to be performed by a subcontractor. The subcontractor will perform the following sub-task:

- Cleaning and video inspection of up to 30,000 linear feet of gravity sewer mains. Mains are mostly 8-inch, but there may be a limited number of larger diameter mains, up to 30-inches.

The following sub-tasks will be performed by PBCWUD:

- Appoint one contact person, and one backup person, for coordination of activities and for specific assistance as may be required to CONSULTANT including:
 - ✓ Identify areas to be inspected and provide a sewer atlas showing manhole numbers.
 - ✓ Notify and coordinate with local police and traffic authorities as required.
 - ✓ Assist with providing access to the work site and all right-of-ways with sufficient area for the placement of personnel and equipment, including resident coordination for access to rear-yard easements where required.

- ✓ Locate and expose any manhole.
- ✓ Relieve system surcharging, if required, in advance of inspection activities.
- Assist in coordinating the export of the Pipeline Assessment Certification Program (PACP) compliant database to the PBCWUD software.

Deliverable(s):

1.1 – Video inspection logs and CDs, as well as a PACP compliant electronic deliverable capable of performing the National Association of Sewer Service Companies (NASSCO) export option for uploading to the PBCWUD’s GraniteNet software.

Schedule:

Field work will be completed and deliverables submitted within 210 calendar days from Notice to Proceed.

Assumptions:

The following assumptions were used in development of this scope of services:

- The Video inspection subcontractor will be compensated on a unit cost basis using the pay items typically shown on I/I work. The technical specifications will identify a list of items on a unit price basis, and where necessary, on an individual basis (e.g., for bypass pumping). Measurement and payment considerations for the overall subcontractor budget as well as individual pay items will be listed in detail in the technical specifications as typically done for I/I work.
- The video sub-contractor will clean sewer lines to remove roots, grease and / or tuberculation as needed to obtain a clear visual. Pipe sections will be visually surveyed by means of closed circuit television. In general, the survey will be performed from manhole to manhole section at a time when flow can be controlled. Digital photographs will be taken as requested by COUNTY / CONSULTANT. The sub-contractor television equipment operator shall be certified under the NASSCO PACP. The data collected will be a software that uses the NASSCO PACP Protocol and can perform a “PACP Export” (in the inspection software program) to provide a PACP Export File with associated videos.
- In addition to required PACP fields, the video inspection subcontractor will collect the following additional fields characterized under PACP as “optional” –

| | |
|---------------------------|----------------------|
| ✓ Field 2 – Owner | ✓ Field 34 – Purpose |
| ✓ Field 4 – Drainage Area | ✓ Field 37 – Weather |
| ✓ Field 9 – Time | ✓ Field 41 – Project |
| ✓ Field 29 – Total Length | |

Task 2 – Video review and development of recommendations

The following sub-tasks will be performed by the CONSULTANT:

- View and analyze videotapes provided by the video inspection subcontractor.
- Record and document the location and nature of obstructions such as roots, dropped joints, and protruding service connections; as well as broken pipe, cracks, separated joints, and other pipe defects that may permit groundwater infiltration. Record observations on evaluation forms.
- Identify “suspect” laterals to be inspected at a later time using specialized equipment. During inspection of the mains the camera will stop and pan the laterals to look for steady, clear flow indicative of infiltration. Actual television inspection internal to the laterals will not be performed at this time. Based on the results of this inspection of the mains, a more informed decision can be made concerning the need for a focused lateral inspection program.
- Develop summary tables to record the results of the video review along with prioritized rehabilitation recommendations and planning level cost estimates where warranted.

Deliverable(s):

2.1 – Summary recording the results of video review

Schedule:

Video review will be completed and deliverables submitted within 60 calendar days following completion of the video inspection described under Task 1.

Assumptions:

The following assumptions were used in development of this scope of services:

- Fee and schedule are based on the review of video for up to 30,000 linear feet of gravity sewer mains.
- PACP-certified personnel will perform quality assurance review of video.

Task 3 – Final report with rehabilitation plan

The following sub-tasks will be performed by the CONSULTANT:

- Develop a report to document data collection and analysis tasks completed throughout the project including flow monitoring, manhole inspection, smoke testing, and video inspection and review. Estimate flow rates associated with I-I sources, confirm preliminary repair recommendations, and present recommendations and a planning level repair cost estimate.
- Prioritize the recommended rehabilitation work based on cost-effectiveness and other factors. Rehabilitation of a collection system main line, manhole or service line is typically termed "cost-effective" when the cost of rehabilitation to remove a given amount of extraneous flow is less than the cost of continuing to transport, treat, and dispose of that same amount of extraneous flow over a selected time period. The cost-effectiveness analysis involves the following steps –
 - ✓ Estimate the cost of rehabilitation of each main line, manhole, or service line defect.
 - ✓ Calculate the approximate cost to transport, treat, and dispose of the extraneous flow associated with that defect.

- ✓ Compare the costs developed in the previous two steps and determine the “payback period” of the repair (the number of years to recover the repair cost).

Other factors are considered in addition to cost-effectiveness. Factors such as structural condition, public nuisance, health hazards, system hydraulics, and operation and maintenance demand may become the determining factor as to whether a given repair is assigned a higher priority for rehabilitation.

- Generate rehabilitation summary tables that identify each defect and provide the following associated information.
 - ✓ Collection basin number.
 - ✓ Upstream and downstream manhole number.
 - ✓ Pipe length, diameter, depth and material.
 - ✓ Defect description, I-I quantification, recommended repair method, estimated repair cost, and estimated payback period.
- Sort and organize the rehabilitation summary tables by drainage area, repair category, and payback period. Rehabilitation summary tables can be used to develop contractor task assignments to be awarded in the rehabilitation program.
- Provide 6 copies of draft report for review by PBCWUD.
- Meet with PBCWUD to review draft report.
- Provide 10 bound copies and one electronic copy (PDF format) of the final report.

The following sub-tasks will be performed by PBCWUD:

- Respond to information requests by CONSULTANT as required.
- Review CONSULTANT’s draft report and provide written comments.
- Meet with CONSULTANT to review comments on draft report.
- It is assumed that the COUNTY will provide a single consolidated set of review comments on the draft report.

Deliverable(s):

- 1.1 Six (6) bound, printed copies of the draft report. Ten (10) bound, printed copies and one (1) CD containing an electronic copy (PDF format) of the final report.

COMPENSATION

Compensation will be on a time charges plus expenses for a not to exceed amount of \$161,820.00 (See Attachment B) and billed on a percent complete basis. It should be noted that \$65,250.00 of the total fee are related to non-S/MBE video sub-consultant as shown below:

| <i>Firm</i> | <i>Fee</i> | <i>Percentage</i> |
|--|---------------------|-------------------|
| Prime consultant – Hazen and Sawyer | \$55,260.00 | 34.15% |
| Sub-consultant – Non S/MBE – Layne In-liner, LLC | \$65,250.00 | 40.33% |
| S/MBE – C Solutions, Inc. | \$41,310.00 | 25.52% |
| <i>Totals</i> | <i>\$161,820.00</i> | <i>100.00%</i> |

** Sub-consultant quotes are included in attachment B***

SBE PARTICIPATION

1. SCHEDULE 3(A) – Professional Services Activity Report

This form shall be submitted by the prime contractor with each payment application when SBE and/or M/WBE sub-consultants are utilized in the performance of the contract. This form shall contain the names of all SBE and M/WBE sub-consultants, specify the sub-consultants dollar amount for each sub-consultants and show amount drawn and payments to date issued to sub-consultants.

2. SCHEDULE 4 – SBE-M/WBE Payment Certification

A schedule 4 for each SBE and/or M/WBE sub-consultant shall be completed and signed by the proposed SBE and/or M/WBE after receipt of payment from the prime. When applicable, the prime shall submit this form with each application submitted to the county for payment to document payment issued to a sub-consultant in the performance of the contract.

SBE participation is included in the **ATTACHMENT F** under this authorization. The attached Schedule 1 defines the SBE applied to this CSA/Contract and Schedule 2 establishes the SBE contribution from each subcontractor (Letter of Intent to perform as an SBE).

ATTACHMENT – B

Budget Summary

| Task No. | Description | BUDGET SUMMARY for CSA-9 | | | | | | | | | |
|----------|--|--------------------------|------------------|-----------|---------------------------|--------------------|-------------------|----------|----------------|-------------|----------------|
| | | VP | Senior Associate | Associate | Senior Principal Engineer | Principal Engineer | Field Coordinator | Designer | Office Support | Total Labor | Sub-Consultant |
| 1.0 | Video inspection and survey of gravity sewer mains | 4 | 8 | 0 | 0 | 8 | 8 | 0 | 4 | 32 | |
| | C Solutions, Inc. – Task 1 | | | | | | | | | | \$3,250.00 |
| | Layne In-Liner, LLC – Task 1 | | | | | | | | | | \$65,250.00 |
| 2.0 | Video review and development of recommendations | 4 | 20 | 0 | 0 | 16 | 20 | 0 | 12 | 72 | |
| | C Solutions, Inc. – Task 2 | | | | | | | | | | \$13,600 |
| 3.0 | Final report with rehabilitation plan | 64 | 100 | 0 | 0 | 40 | 8 | 0 | 40 | 252 | |
| | C Solutions, Inc. – Task 3 | | | | | | | | | | \$24,460.00 |
| | SUB-TOTAL Hours | 72 | 128 | 0 | 0 | 64 | 36 | 0 | 56 | 356 | \$106,560.00 |
| | | | | | | | | | | | |
| | Labor Raw Costs | \$70 | \$63 | \$54 | \$50 | \$43 | \$37 | \$30 | \$22 | | |
| | Labor Multiplier | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| | Labor Sub-Total | \$15,120 | \$24,192 | \$0 | \$0 | \$8,256 | \$3,996 | \$0 | \$3,696 | | |
| | Labor Total | | | | | | | | | \$55,260 | |
| | | | | | | | | | | | |
| | Sub-consultant Labor Total | | | | | | | | | | \$106,560 |
| | Sub-consultant Multiplier | | | | | | | | | | 1.0 |
| | Sub-consultant Total | | | | | | | | | | \$106,560 |
| | | | | | | | | | | | |
| | Reimbursable Expenses | | | | | | | | | | \$0 |
| | | | | | | | | | | | |
| | Project Total | | | | | | | | | | \$161,820 |

C Solutions Scope of Services
Hazen and Sawyer, P.C.
Palm Beach County Utilities Department (H&S CSA9)
Glades Infiltration / Inflow Projects – Phase 3

Scope of Services

I. BACKGROUND

Palm Beach County (COUNTY) entered into an agreement entitled Contract for Engineering/ Professional Services - Palm Beach County Utilities Department Project No.: WUD 14-002 (CONTRACT) with Hazen and Sawyer, P.C. (CONSULTANT) to provide engineering services for various general activities on June 3, 2014 with an effective date of June 4, 2014 (Reference Document R2014-0821). This Consultant Service Authorization will be performed under that CONTRACT.

This Consultant Services Authorization encompasses providing services related to Glades Sanitary Sewer Evaluation Survey (SSES) – video inspection and review with recommendations for corrective actions within the Western Region wastewater service area. C Solutions, Inc. will assist the CONSULTANT in the providing the following services for Consultant Services Authorization NO. 9 (CSA No. 9).

II. SCOPE OF SERVICES

C Solutions will perform the scope of services as described herein.

Task 1 Video inspection of gravity sewer mains

The CONSULTANT shall coordinate and schedule video inspection activities including the cleaning and video inspection of up to 30,000 linear feet of gravity sewer mains. C Solutions will provide assistance to the CONSULTANT in the planning and scheduling video inspection sections, coordination of the video inspection services and coordination with the export of data into the required format.

Task 2 Video review and development of recommendations

C Solutions will assist the CONSULTANT in the following tasks:

- View and analyze videotapes provided by the video inspection subcontractor.
- Record and document the location and nature of obstructions such as roots, dropped joints, and protruding service connections; as well as broken pipe, cracks, separated joints, and other pipe defects that may permit groundwater infiltration. Record observations on evaluation forms.

- Identify “suspect” laterals to be inspected at a later time using specialized equipment. During inspection of the mains the camera will stop and pan the laterals to look for steady, clear flow indicative of infiltration. Actual television inspection internal to the laterals will not be performed at this time. Based on the results of this inspection of the mains, a more informed decision can be made concerning the need for a focused lateral inspection program.
- Develop summary tables to record the results of the video review along with rehabilitation recommendations and planning level cost estimates where warranted.

Task 3 Final report with rehabilitation plan

C Solutions will assist the CONSULTANT with the following tasks for the preparation of the final report and rehabilitation plan:

- Assist in the development of a report to document data collection and analysis tasks completed throughout the project including flow monitoring, manhole inspection, smoke testing, and video inspection and review. Estimate flow rates associated with I-I sources, confirm preliminary repair recommendations, and present recommendations and a planning level repair cost estimate.
- Assist with prioritizing the recommended rehabilitation work based on cost-effectiveness and other factors. Rehabilitation of a collection system main line, manhole or service line is typically termed “cost-effective” when the cost of rehabilitation to remove a given amount of extraneous flow is less than the cost of continuing to transport, treat, and dispose of that same amount of extraneous flow over a selected time period. The cost-effectiveness analysis involves the following steps:
 - Estimate the cost of rehabilitation of each main line, manhole, or service line defect.
 - Calculate the approximate cost to transport, treat, and dispose of the extraneous flow associated with that defect.
 - Compare the costs developed in the previous two steps and determine the “payback period” of the repair (the number of years to recover the repair cost).

Other factors are considered in addition to cost-effectiveness. Factors such as structural condition, public nuisance, health hazards, system hydraulics, and operation and maintenance demand may become the determining factor as to whether a given repair is assigned a higher priority for rehabilitation.

- Assist in the preparation of rehabilitation summary tables that identify each defect and provide the following associated information.
 - Collection basin number.
 - Upstream and downstream manhole number.
 - Pipe length, diameter, depth and material.
 - Defect description, I-I quantification, recommended repair method, estimated repair cost, and estimated payback period.

- Assist in the sorting and organization of rehabilitation summary tables by drainage area, repair category, and payback period. Rehabilitation summary tables can be used to develop contractor task assignments to be awarded in the rehabilitation program under a subsequent phase of work.

III. ASSUMPTIONS

The Scope of Work described herein is based upon the following assumptions:

- The assumptions listed in the CONSULTANT's scope of services for CSA No. 9.

IV. TIME OF COMPLETION

The Notice to Proceed (NTP) defines the official commencement of the C Solutions' contract. The CONSULTANT's NTP from CLIENT will define the date of Notice to Proceed (NTP). The following schedule is based on the notice to proceed (NTP). All days are defined as calendar days.

| Task Description | Completion (Days from NTP) |
|--|-------------------------------|
| Task 1 – Video Inspection ¹ | 100 |
| Task 2 – Video Review and Recommendations Assistance | 160 |
| Task 3 – Final report Assistance | 210 |

¹ The days for Task 1 are estimated and may vary depending on weather and receipt of data requests..

IV. PROPOSED COMPENSATION

C Solutions shall perform the services defined in this scope of work for a lump sum fee of \$41,310. Invoices will be submitted to the CONSULTANT monthly and define the percent complete with each of the below tasks.

| Task Description | Not to Exceed Amount |
|--|----------------------|
| Task 1 – Video Inspection ¹ | \$3,250 |
| Task 2 – Video Review and Recommendations Assistance | \$13,600 |
| Task 3 – Final report Assistance | \$24,460 |
| TOTAL | \$41,310 |

**BID FORM
LAYNE INLINER, LLC**

LAYNE Cost Estimate - Phase 3

| Item No. | Description | Estimated Quantity | Units | Layne Unit Bid Price | Layne Total |
|---|---|--------------------|-------|----------------------|-------------|
| 1 | Sewer main cleaning and TV inspection (8-inch through 12-inch) | 28,000 | L.F. | \$1.53 | \$42,840.00 |
| 2 | Sewer main cleaning and TV inspection (15-inch through 21-inch) | 1,500 | L.F. | \$2.00 | \$3,000.00 |
| 3 | Sewer main cleaning and TV inspection (24-inch through 30-inch) | 500 | L.F. | \$5.00 | \$2,500.00 |
| 4 | Mechanical root or grease removal (12-inch and smaller) | 500 | L.F. | \$0.50 | \$250.00 |
| 5 | Mechanical root or grease removal (15-inch through 21-inch) | 250 | L.F. | \$0.50 | \$125.00 |
| 6 | Mechanical root or grease removal (24-inch through 30-inch) | 250 | L.F. | \$0.50 | \$125.00 |
| 7 | Mechanical tuberculation/concrete removal (12-inch and smaller) | 200 | L.F. | \$20.00 | \$4,000.00 |
| 8 | Mechanical tuberculation/concrete removal (15-inch through 21-inch) | 200 | L.F. | \$20.00 | \$4,000.00 |
| 9 | Mechanical tuberculation/concrete removal (24-inch through 30-inch) | 200 | L.F. | \$20.00 | \$4,000.00 |
| 10 | Bypass pumping (6-inch through 10-inch sewer) | 3 | EA | \$50.00 | \$150.00 |
| 11 | Bypass pumping (12-inch and 15-inch sewer) | 2 | EA | \$75.00 | \$150.00 |
| 12 | Bypass pumping (18-inch through 21-inch sewer) | 2 | EA | \$75.00 | \$150.00 |
| 13 | Bypass pumping (24-inch through 30-inch sewer) | 1 | EA | \$100.00 | \$110.00 |
| 14 | Maintenance of traffic - residential street | 60 | EA | \$50.00 | \$3,000.00 |
| 15 | Maintenance of traffic - FDOT or City arterial roadway | 5 | EA | \$50.00 | \$250.00 |
| 16 | Work in rear-yard easement (items 1 through 3) | 2 | EA | \$300.00 | \$600.00 |
| TOTAL BID FOR ITEMS 1 THROUGH 16 INCLUSIVE: | | | | | \$65,250.00 |

ATTACHMENT – C

PROJECT SCHEDULE

The completion dates for this work will be as follows (starting from CONSULTANT'S receipt of Notice-to-Proceed).

| <u>Engineering Services</u> | <u>Estimated Calendar Days to Complete</u> |
|--|--|
| Task 1 – Video Inspection / Survey | 100 days ^A |
| Task 2 – Video review | 160 days |
| Task 3 – Final report | ~ 210 days |
| <i>Draft report 190 days from notice to proceed</i> | |
| <i>Final report 21 days from receipt of written comments</i> | |
| Total Time (with task overlap) | 210 days |

A – Days are estimated and may vary depending on weather and receipt of data requests.

Attachment – D

Schedule 1

LIST OF PROPOSED SBE-M/WBE CONSULTANT/SUB-CONSULTANTS

PROJECT NAME:GL09 Glades Infiltration / Inflow Projects – Phase 3PROJECT NO.:WUD 15-024

NAME OF PRIME CONSULTANT:Hazen and Sawyer, P.C.ADDRESS:2101 NW Corporate Blvd., Suite 301, Boca Raton, FL 33431

CONTACT PERSON:Albert Muniz, P.E. / Vice PresidentPhone No:(561) 997-8070Fax No.:(561) 997-8129

DESCRIPTION OF SERVICES:Video survey, video review and report preparation

PLEASE LIST THE DOLLAR AMOUNT AND PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME ON THIS PROJECT.
PLEASE ALSO LIST THE DOLLAR AMOUNT AND PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUB-CONSULTANTS ON THIS PROJECT. IDENTIFY ALL APPLICABLE CATEGORIES OF CONSULTANT/SUBCONSULTANTS

| Name, Address and Phone Number | (Check one or both Categories) | | Consultant / Sub-consultant Dollar Amount and Percentage of Services | | | | |
|---|-------------------------------------|--------------------------|--|----------|-------|-----------|---------------------------|
| | <u>M/WBE</u> | <u>SBE</u> | Black | Hispanic | Women | Caucasian | Other (Please Specify) |
| | Minority Business | Small Business | | | | | |
| 1. C Solutions, Inc. (954) 599-6331 1201 Tangelo Isle, Fort Lauderdale, FL 33315 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | \$41,310 | | | | |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | | | | | |

(Please use additional sheets if necessary)

Total\$41,310

Total SBE-M/WBE Participation25.52%

NOTE: 1. The percentages listed on this form must be supported by the sub-consultant included on Schedule 2 in order to be counted toward goal attainment.
2. Firms may be certified by Palm Beach County as an SBE and/or M/WBE

OSBA SCHEDULE 2
LETTER OF INTENT TO PERFORM AS AN SBE-M/WBE CONSULTANT/SUBCONSULTANT

This document must be completed by ALL SBE-M/WBE's and submitted with this CSA. Specify in detail, the particular consulting services to be performed and the dollar amount and/or percentage for each services. SBE credit will only be given for services which the SBE-M/WBE's is certified to perform. Failure to properly complete Schedule 2 will result in your SBE participation not being counted.

PROJECT NUMBER: WUD 15-024 PROJECT NAME: GL09 Glades I / I Projects – Phase 3
TO: Hazen and Sawyer, P.C.
(Name of Prime Consultant)

The undersigned is certified by Palm Beach County as a - (check one or more, as applicable):

Small Business Enterprise _____ Minority Business Enterprise X

Black X Hispanic _____ Women _____ Caucasian _____ Other (Please Specify) _____

Date of Palm Beach County Certification: MARCH 3, 2014

The undersigned is prepared to perform the following described consulting services in connection with the above project and will enter into a formal agreement for work with you, conditioned upon execution of a contract with Palm Beach County.

Additional Sheets May Be Used As Necessary

(Specify in detail the particular consulting services thereof to be performed)

C Solutions will assist with video inspection services and with review of video surveys and assistance with preparation of recommendations and final report

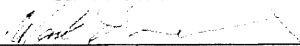
Total SBE-M/WBE Participation 25.52%

If undersigned intends to sub-subcontract any portion of this job to a certified SBE-M/WBE or a non-SBE sub-consultant, please list the name of that sub-consultant and the amount below.

Price or Percentage \$41,310.00 C Solutions, Inc.
(Name of Sub-consultant)

The Prime Consultant affirms that it will monitor the **SBE-M/WBE** listed to ensure the **SBE-M/WBE** perform the services with their own work force. The undersigned **SBE-M/WBE** Prime or **SBE-M/WBE** sub-consultant affirms that it has the resources necessary to perform the work listed without subcontracting to a non-certified SBE or any other certified SBE sub-consultants except as noted above.

The undersigned sub-consultant understands that the provision of this form to the Prime Consultant does not prevent sub-consultant from providing quotations to other.

Mark Drummond, P.E. / President
Print name of
SBE-M/WBE Sub-consultant
By: 
(Signature)
Date: August 19, 2015

OSBA Schedule 3(A)
PROFESSIONAL SERVICES ACTIVITY REPORT

Project No.: WUD 15-024
Task Authorization No.: 9

REPORTING PERIOD: _____

Prime Consultant Address: _____
City / State _____ Zip _____
Contact Person: _____ Phone # _____
Contract Name: _____
Contract Term: _____ Contract Amount: _____
Total Percentage performed by Prime's Firm: _____ SBE-M/WBE Firm: _____
Service Type: Architectural _____ Engineering _____ Surveying _____
Other (Specify) _____
Have Sub-Consultants completed work with its own workforce for this application?
Yes _____ No _____

Note: If yes, complete below:

SUB-CONSULTANTS

1.

Firm's Name: _____

Address / Tel: _____

Estimated Start Date: _____ Contract Amount: _____

SCOPE OF WORK: _____

Percentage / Hrs Completed: _____ Amount Paid to Date: _____
2.

Firm's Name: _____

Address / Tel: _____

Estimated Start Date: _____ Contract Amount: _____

SCOPE OF WORK: _____

Percentage / Hrs Completed: _____ Amount Paid to Date: _____ \$
3.

Firm's Name: _____

Address / Tel: _____

Estimated Start Date: _____ Contract Amount: _____

SCOPE OF WORK: _____

Percentage / Hrs Completed: _____ Amount Paid to Date: _____ \$

I certify that the above is true to the best of my knowledge

Signature / Title

OSBA SCHEDULE 4 – SBE-M/WBE PAYMENT CERTIFICATION

The Prime Contractor is to submit Schedule 4 with its Monthly Payment Request to Palm Beach County to reflect actual payments made to the SBE-M/WBE Sub-contractor. The Prime Contractor is not to request signature from an SBE-M/WBE Sub-contractor unless it has made a payment to the SBE-M/WBE Sub-contractor. The SBE-M/WBE Sub-contractor is not to complete and sign this form unless it has received a payment from the Prime Contractor for services actually performed by the SBE-M/WBE Sub-contractor. A separate Schedule 4 is required for each SBE-M/WBE Sub-contractor payment.

This is to certify that _____ received
(SBE or M/WBE Sub-contractor Name)

(Monthly) or (Final) payment of \$0.00

On _____ - _____ - 2015 from _____
MM DD YYYY (Prime Contractor Name)

For labor and/or material used on _____ / _____
(Project Name) (Work Order)

DEPT.: WUD PROJECT NO.: _____

PRIME CONTRACTOR VENDOR CODE: _____

SBE OR M/WBE SUB-CONTRACTOR VENDOR CODE: _____

If the SBE Sub-contractor intends to disburse any funds associated with this payment to any Sub-contractor for labor provided on this project, please provide the following information:

*Sub-contractor Name: _____ Amount to be paid: _____

*Note: If the sub-contractor listed in this section is an SBE or M/WBE a separate Schedule 4 is required to verify payment.

By: _____
(Signature of Sub-contractor) (Print Name & Title of Person executing on behalf of Subcontractor)

STATE OF FLORIDA
COUNTY OF

Sworn to and subscribed before me this _____ day of _____ 2015

By: _____

Notary Public, State of Florida

Print, Type or Stamp Commissioned Name of Notary

Personally Known _____ OR Produced Identification _____ Type of Identification _____

ATTACHMENT – E

AUTHORIZATION STATUS REPORT

SUMMARY AND STATUS OF REQUESTS FOR AUTHORIZATIONS

| Auth. No. | Description | Status | Project Total Amount | SBE Total Amount | SBE Participation % | Approved By | Date Approved | WUD No. Assigned | Consultant's Project No. |
|--------------|---|----------|-------------------------|---------------------|------------------------|----------------|------------------|---------------------|-----------------------------|
| 1 | SRWRF Pretreatment Screenings | Approved | \$98,418.00 | \$27,500.00 | 27.94% | PBCWUD | 07/23/14 | 14-036 | 45008-001 |
| 2 | Western Region WWTF Clarifier PDR | Approved | \$97,782.00 | \$48,394.60 | 49.49% | PBCWUD | 07/23/14 | 14-060 | 45008-002 |
| 3 | Challenge Grant Application | Approved | \$19,600.00 | \$0.00 | 0.00% | PBCWUD | 09/05/14 | 14-101 | 45008-003 |
| 4 | Digester Biogas | Approved | \$19,810.00 | \$0.00 | 0.00% | PBCWUD | 12/18/14 | 14-030 | 45008-004 |
| 5 | Western Region Flow Monitoring | Approved | \$60,404.00 | \$39,266.00 | 65.00% | PBCWUD | 05/13/15 | 15-024 | 45008-005 |
| 6 | Glades Master Plan Cont'd. Assist. | Approved | \$19,045.00 | \$0.00 | 0.00% | PBCWUD | 05/21/15 | 14-101 | 45008-006 |
| 7 | GL09 Glades Infiltration / Inflow Projects – Phase 1 | Pending | \$180,800.00 | \$68,100.00 | 37.66% | | | 15-024 | 45008-007 |
| 8 | GL09 Glades Infiltration / Inflow Projects – Phase 2 | Pending | \$197,300.00 | \$18,480.00 | 9.36% | | | 15-024 | 45008-008 |
| 9 | GL09 Glades Infiltration / Inflow Projects – Phase 3 | Pending | \$161,820.00 | \$41,310.00 | 25.52% | | | 15-024 | 45008-009 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Total | | | \$854,979.00 | \$243,050.60 | 28.42% | | | | |

ATTACHMENT – F

AUTHORIZATION STATUS REPORT

SUMMARY OF STATUS OF

SMALL BUSINESS TRACKING SYSTEM

| | Total | SBE |
|--|--------------|--------------|
| Current Proposal | | |
| Value of this Authorization | \$161,820.00 | \$41,310.00 |
| Value of SBE Letters of Intent | \$41,310.00 | \$41,310.00 |
| Actual Percentage | 25.52% | 100.00% |
| Signed Authorizations | | |
| Total Value of Authorizations | \$315,059.00 | \$201,740.60 |
| Total Value of SBE Signed Subcontracts | \$115,160.60 | \$201,740.60 |
| Actual Percentages | 36.55% | 100.00% |
| Signed Authorizations Plus Current Proposals | | |
| Total Value of Authorizations | \$476,879.00 | \$243,050.60 |
| Total Value of SBE Signed Subcontracts & Letters of Intent | \$156,470.60 | \$243,050.60 |
| Actual Percentages | 32.81% | 100.00% |
| Goal | 22.00% | 22.00% |

ATTACHMENT G – Location Map



**Palm Beach County
Water Utilities
Department
Service Area (SA) and
Major Facilities**

Legend

- ★ Administration
- WTP Water Treatment Plant
- Reclamation Facility
- Wastewater Reclamation Facility
- Wastewater Treatment Plant
- Mandatory Reclaimed SA
- Palm Beach County Limits
- P.B.C.W.U.D. Service Area

