

City of Key West
Task Order No. 3 - Design Services - Phase I
Dennis Street Stormwater Improvements
Pump Station and Drainage Well

April 18, 2016

Work Breakdown Structure		Project Director	Senior Project Manager	Engineering Manager	Senior Technical Specialist - Hydrogeologist	Senior Technical Specialist - Geotechnical	Technical Specialist - Structural	Project Engineer - Structural	Staff Engineer III - Structural	Technical Specialist - Civil	Project Engineer - Civil	Staff Engineer III - Civil	Technical Specialist - Mech. Process	Project Engineer - Mech. Process	Staff Engineer III - Mech. Process	Technical Specialist - Electrical & I&C	Project Engineer - Electrical & I&C	Staff Engineer III - Electrical & I&C	Senior Engineer - Cost Estimating	Senior Engineering Technician	Senior Adminstrator	Total Hours	Labor Cost
Task Series 100 - Preliminary Investigation and Conceptual Design Report		2	4	10	4	2	1	2	4	2	12	16	2	8	10	0	4	8	0	0	2	93	\$13,800
Percent of Total - Task 100		2%	4%	11%	4%	2%	1%	2%	4%	2%	13%	17%	2%	9%	11%	0%	4%	9%	0%	0%	2%	100%	
101	Stormwater System Design Criteria and Site Selection Memorandum	2	4	10	4	2	1	2	4	2	12	16	2	8	10		4	8			2	93	\$13,800
Task Series 200 - Design Services		8	28	36	8	12	8	16	40	4	30	48	8	24	24	12	36	72	20	80	6	520	\$75,527
Percent of Total - Task 200		2%	5%	7%	2%	2%	2%	3%	8%	1%	6%	9%	2%	5%	5%	2%	7%	14%	4%	15%	1%	100%	
201	Project Coordination		12	12																	2	26	\$4,623
202	Preliminary Design - Basis of Design	8	16	24	8	12	8	16	40	4	30	48	8	24	24	12	36	72	20	80	4	494	\$70,905
Task 300 - Surveying Services		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$11,372
Percent of Total - Task 300																							
301	Surveying Services - Avirom																					0	\$11,372
Task 400 - Geotechnical Services		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$6,195
Percent of Total - Task 300																							
401	Geotechnical Services - Geosol																					0	\$6,195
		2%	5%	8%	2%	2%	1%	3%	7%	1%	7%	10%	2%	5%	6%	2%	7%	13%	3%	13%	1%	100%	
	Total Hours Estimated	10	32	46	12	14	9	18	44	6	42	64	10	32	34	12	40	80	20	80	8	613	
	Total Salary (Labor B&V)	\$2,609	\$6,344	\$7,920	\$2,692	\$3,141	\$1,831	\$2,536	\$5,280	\$1,221	\$5,917	\$7,680	\$2,035	\$4,508	\$4,080	\$2,442	\$5,635	\$9,600	\$3,130	\$10,018	\$710		\$89,327
Direct Costs																							\$7,140
	Mileage																						\$0
	Communications and Shipping																				\$250		\$250
	Printing and Reproduction Services																				\$1,250		\$1,250
	Travel Costs	\$1,380	\$1,380	\$1,380	\$1,500																		\$5,640
	TOTAL FEE																						\$114,034

NEGOTIATED RATES USED TO DEVELOP THIS FEE

\$260.87 \$198.26 \$172.17 \$224.35 \$224.35 \$203.48 \$140.87 \$120.00 \$203.48 \$140.87 \$120.00 \$203.48 \$140.87 \$120.00 \$203.48 \$140.87 \$120.00 \$156.52 \$125.22 \$88.70



AVIROM & ASSOCIATES, INC.

SURVEYING & MAPPING

April 15, 2016

Via E-Mail: MartinTM@BV.com

Ms. Tammy Martin, P.E.
Engineering Manager

B&V Water

2855 North University Drive, Suite 210
Coral Springs, FL 33065

Re. Key West High School-2100 Flagler Avenue, Key West, Monroe County, Florida.
Boundary Retracement Survey and Topographic Survey – Revised 1 Bid

Dear Tammy:

Subsequent to your request, we will provide surveying services at the above referenced site based on the scope you provided.

2.1 SURVEYING SERVICES

- A. The proposed area(s) to be surveyed includes the full right-of-way of Dennis Street and Dancumbe Street, commencing at the centerline of Flagler Avenue to the northwest and proceeding southeasterly to the intersection with Venetia Street; the full right-of-way of Venetia Street, commencing at the centerline of Bertha Street and proceeding northeasterly to the intersection of the southeasterly extension of Dancumbe Street; and the southerly extension of Dennis Street from the intersection of Venetia Street to the westerly extension of the northern asphalt edge of the access road to the Key West High School, including the areas bounded by the westerly building face and walls of Key West High School to the east, as shown within the red shaded area in Exhibit A (below), incorporated herein for reference.
- B. Project Survey. Avirom & Associates, Inc. (AAI) shall prepare a survey drawing for the location to be surveyed. AAI shall perform the tasks and furnish the information described below within the Area of Survey for the Project:

- (1) Establish horizontal and vertical controls and ties as required to properly establish and verify the existing property lines, platted lot lines if applicable, easements if provided, rights-of-way, topographic data, and elevations.
- (2) Locate and identify all visible utilities, including utility types, sizes, materials, locations, direction, and elevations, particularly the utilities that are visible and that are accessible from manholes (sanitary and storm sewer lines, culverts, electrical lines and ducts, etc.). Due to the nature of obtaining the data where the structures are in use, the information obtained may be the best approximation of the true measurements. It is the responsibility of the end user to verify the diameter and material utilizing as-build drawings or other resources prior to construction.
- (3) Conduct topographic survey and identify, including type of materials where applicable, all visible improvements, natural and artificial site topography, contours, utilities, drainage courses, rock outcroppings, banks or slope lines, highways, streets, curb and gutters, signs, traffic control signs, fencing, gates, culverts, driveways, landscaping, structures, ponds, septic fields, and railroads on drawings. Locate and identify the type and size of all trees in landscaped, developed, and generally clear areas, and all trees 12 inches in diameter and larger in wooded areas. The species of trees will be identified to the best of knowledge and ability of the surveyor, without the benefit of an arborist or biologist. It is the responsibility of the end user to verify the identity of the species.
- (4) Research and identify the 100-year flood elevation within and immediately adjacent to the Area of Survey for the Project.
- (5) Conduct research at city and county offices for local survey control and street centerline information.

C. Property Owner Information. We shall provide a list of the parcel identification numbers and property owner name and addresses for the tract affected by the proposed project. We shall add the property owner name and site address to the survey base map.

- (1) This task order does not include obtaining a title report or researching the public records for easements and encumbrances. If easements and encumbrances created by instruments are provided to us, we shall delineate them on the survey if applicable.
- (2) Prepare legal temporary and permanent easement descriptions on each parcel or property on which easements are required for use in acquiring the easements. The legal description of each easement shall include a figure identifying and

dimensioning the easement to correspond with the written descriptions, and include the area in square feet and acres for each easement.

D. General Information for Surveying Services. Provide all labor, materials, equipment, transportation, and appurtenant work for performing the surveying services.

- (1) The existing property lines, platted lot lines if applicable, easements if provided, and rights-of-way; horizontal and vertical controls and ties; contours; utility locations; topographic locations; labeling and legends; any supplemental information; and date of survey shall be provided as a map on electronic drawing files and plotted on bond ANSI D (22"x34") and submitted to the CITY. All drawing file updates or changes shall be submitted on a separate layer to easily identify the changes from the previous submittal. All notes and callouts shall be positioned on the drawing files so that they are read from the same orientation and so as not to be superimposed on any other notes or critical features. The plots and drawing files shall be oriented so that north is toward the top, right or left of the sheet.
- (2) CAD requirements for preparation of the base map in AutoCAD shall comply with the drafting standards and requirements provided by the CITY. Client will provide CITY's CAD requirements prior to commencement of the project.
- (3) The horizontal and vertical controls and ties shall be located on the drawing files at their respective locations. Elevations shall be based upon NAVD 88 and referenced to a published benchmark network.
- (4) Surveys and legal easement descriptions shall be performed by and the plots and electronic drawing files prepared under the direction of a professional land surveyor registered in the State of Florida.
- (5) Obtain required permits, insurance and pay all fees, including flagmen fees, for working within highway, street, and railroad rights-of-way. AAI shall perform all work in conformity with the requirements of the authority owning, or having jurisdiction over and control of, the right-of-way in each case.
- (6) Attend a project initiation meeting with the CITY prior to performing Services to discuss, review and clarify coordination of work, schedule, understanding of Scope of Services, and deliverables.

E. SUBMITTALS. CONSULTANT shall submit to the CITY the following:

- (1) Signed and sealed reproducible AutoCAD drawing(s) of survey no larger than ANSI D (22"x34") on bond.
- (2) Electronic drawing files in AutoCAD ".DWG" file format.

AVIROM & ASSOCIATES, INC.

- (3) ASCII text files of site survey data. Points shall be comma delimited and shall include point number, northing, easting, and description code. Consultant shall provide a list of all point codes used and a full description.
- (4) Copy of survey field book, including detailed hand sketches, describing the area of survey and information collected.
- (5) Title reports, including encumbrances, on each parcel or property on which easements are required will be provided to AAI.
- (6) Signed and sealed legal easement descriptions, including figures, on each parcel or property on which easements are required.

F. SCHEDULE. Time is an essential condition of the Agreement. The CONSULTANT's work will consist of two components. The first component relates to the initial survey work and includes the scope listed above in paragraph 2.1 B. This work shall be completed and submitted to the CITY within four weeks of Notice to Proceed. The second component shall consist of preparation of easement descriptions for temporary and permanent easements at the pump station and well site(s). The scope for this second component described in paragraph 2.1 C above shall be completed and submitted within four weeks of receipt of the necessary information and design criteria from the client for the preparation of the easements.

Fee

The fee to provide the above surveying services shall be a lump sum amount of \$ 11,372.00.

The fee to provide sketch and descriptions shall be \$500.00 each.

We are recognized by the State of Florida Board of Land Surveyor's and have registered under the provisions of Chapter 472. All services will be in accord with the standards set forth by the Florida Board of Land Surveyors.

All work shall be completed under the direction of a Professional Land Surveyor registered in the State of Florida. All work shall be conducted using equipment, personnel, and procedures that will insure compliance with the accuracy standards as defined by Standards of Practice in 5J-17, Florida Administrative Code. All documents submitted shall bear the Surveyor's seal, signature, and a certificate that all work was done under the Surveyor's supervision and that all information contained in the document is true and is accurately shown. The Surveyor is responsible for quality assurance for the survey work performed on this project.

Our firm carries Professional Liability, Errors and Omissions Insurance and Workers' Compensation. Certificates of Insurance are available upon request. Client will be responsible for paying additional charges for special insurance requirements (i.e., additional insured endorsement forms other than the standard certificate, waiver of subrogation etc.).

We thank you for the opportunity to submit this proposal and we look forward to working with you on this project.

Should you have any questions or comments, please do not hesitate to contact me.

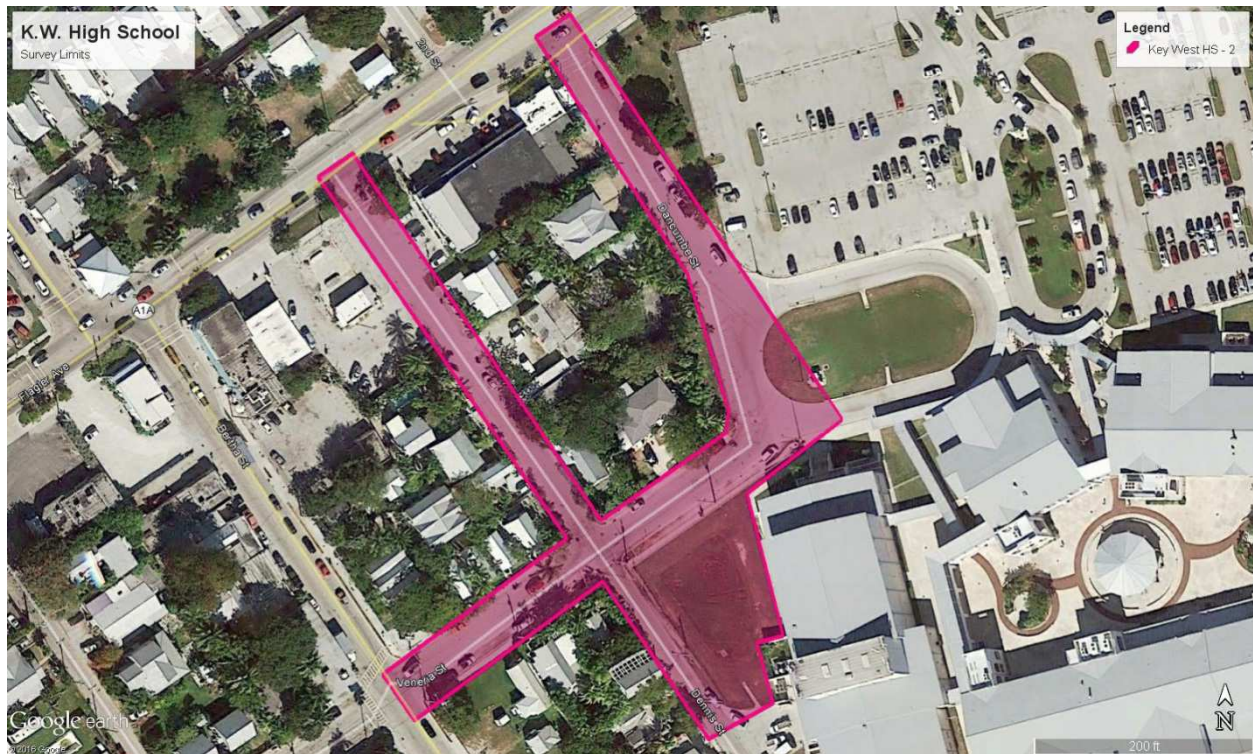
Respectfully,



Keith M. Chee-A-Tow, P.L.S.
Project Manager
AVIROM & ASSOCIATES, INC.

Documents\Proposals\Black & Veatch\Key West HS\Key West High School-Revision 1.docx

EXHIBIT A



February 29, 2016

Black & Veatch Corporation
1300 Concord Terrace, Suite 120
Sunrise, Florida 33323

Attention: Ms. Tammy Martin, PE – Engineering Manager

Re: **Proposal for Geotechnical Services**
Stormwater Pump Station and Drainage Well Project
City of Key West, Florida
GEOSOL Proposal No. P-216113

Dear Ms. Martin:

In accordance with your request on February 24, 2016, Geosol, Inc. (GEOSOL) is pleased to submit this proposal pertaining to geotechnical services for the above-referenced project. Included herein is an estimate of the work effort and our anticipated approach, based on our understanding of the project.

1. INTRODUCTION

Based on information you provided to us, we understand that the City of Key West intends to provide Stormwater improvement. As we understand it, the proposed improvements will include the design and construction of a pump station and drainage well in the City of Key West, Florida.

2. SCOPE OF WORK

The scope of our work under this proposal for the project, as requested, will be limited to the performance of soil borings, laboratory testing, data evaluation, engineering analysis, construction suggestions and considerations for the proposed pump station and drainage well. The findings will be presented in our Geotechnical Report for the project. The sections, below, provide a detailed description of our scope of services.

Field Exploration

As we understand it, geotechnical services consisting of one (1) Standard Penetration Test (SPT) boring to a depth of 30 feet below existing grades will be required for the proposed pump station and drainage well. The SPT borings will be performed in general conformance with ASTM D-1586.



5795-A NW 151st Street
Miami Lakes, FL 33014
Phone (305) 828-4367; Fax (305) 828-4235
E-mail: geosolusa@bellsouth.net

Laboratory Testing Program

Representative samples collected from the test borings will be visually reviewed and classified using the Unified Soil Classification System (USCS) in the laboratory by a Geotechnical Engineer in general accordance with the American Society of Testing and Materials (ASTM) test designation D-2488 and ASTM D-2487. Additionally, laboratory testing program will be required to confirm visual classifications of soil samples recovered from the field exploration program. The laboratory testing program will include the performance of grain-size analysis, percent passing the No. 200 sieve, natural moisture content, organic content and resistivity testing. All testing will be performed in accordance with applicable ASTM standards.

Geotechnical Engineering Evaluation and Reporting

Using the results of the field exploration, we will assess the geotechnical engineering impact of the subsurface conditions on the planned construction and provide recommendations for foundation design and related construction. A geotechnical engineering report of our findings and recommendations will be prepared and submitted at the conclusion of the study. The report will be prepared, signed and sealed by a professional engineer registered in the State of Florida. The report will specifically contain the following information:

- A plan of the site showing the location of the test locations.
- A brief review of our test procedures and the results of the testing conducted.
- Estimated subsurface profiles as necessary to illustrate subsurface conditions including standard penetration resistance test data and groundwater levels.
- A review of surface features and site conditions that could affect construction and site preparation.
- General evaluation of the site considering the proposed project and estimated subsurface conditions.
- Recommendations for site preparation and construction of compacted fills or backfills.
- Results of laboratory testing.
- Anticipation of groundwater levels and methods for handling it during construction.
- Foundation analysis and recommendations for the proposed pump station improvements.
- Construction considerations.
- Four (4) copies signed and sealed geotechnical-engineering reports.



3. SCHEDULE

Our study can begin within one (1) day upon receiving your formal notice to proceed. We will begin by calling SunShine One Call Services to have underground utilities marked and cleared. This task typically takes up to five (5) days. Given the scope described herein, we can complete the field studies within one (1) working day, depending on weather conditions. The laboratory testing program will take an additional five (5) working days to complete. We will then submit a written engineering report within five (5) working days following the completion of the laboratory testing. Assuming that we will be allowed to perform the study as a fairly continuous effort, we suggest assuming a four (4)-week period for our work; however, we will expedite our work as much as possible.

4. COMPENSATION

Based on our interpretation of your requirements, we are willing to complete the geotechnical services for this project for a lump sum of **\$6,194.38**. We have attached a detailed breakdown of the fee proposal for your review.

GEOSOL appreciates your consideration of our firm to undertake this project. To formally authorize us kindly indicate so by signing and returning the Acceptance Sheet of Geotechnical Services section on the following page.

We are pleased to be a part of your team for this interesting and important project. If you have any questions, please do not hesitate to contact us.

Sincerely,
GEOSOL, INC.



Oracio Riccobono, P.E.
Senior Geotechnical Engineer
President

Attachments: 1) Fee Proposal



ACCEPTANCE SHEET OF GEOTECHNICAL SERVICES

AGREED TO THIS _____ DAY OF _____, 2016

BY: _____

PLEASE PRINT NAME: _____

TITLE: _____

FIRM: _____



ATTACHMENT

FEE PROPOSAL



GEOSOL, INC.
GEOTECHNICAL FEE PROPOSAL
Stormwater Pump Station and Drainage Well Project
City of Key West, Florida

GEOSOL PROPOSAL No.: P-216113

DESCRIPTION	UNITS	# OF UNITS	UNIT RATE (\$)	TOTAL \$
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A. FIELD SERVICES

1. MOBILIZATION/DEMOBILIZATION

Mobilize Equipment - Mob/Demob of Truck Mounted Drill Rig	Each	1.0	\$700.00	\$700.00
Mobilize Equipment - (>50 Miles) - Truck	Mile	350.0	\$2.25	\$787.50
Cones, Sign, Flags, Barricades, Arrow Board	Day	1.0	\$210.00	\$210.00
Traffic Control - Off Duty Policeman - 1 days at 8 hrs/day	Hour	8.0	\$55.00	\$360.00
Support Truck	Day	1.0	\$100.00	\$100.00

SUB-TOTAL

\$2,157.50

2. Field Exploration

1 SPT Boring on land to 30 feet in depth	feet	30.0	\$13.00	\$390.00
Grout Seal Boreholes (3-inch diameter) - Land	feet	30.0	\$4.25	\$127.50
Casing Allowance (3-inch diameter) - Land	feet	30.0	\$6.50	\$195.00
Senior Geotechnical Technician	hours	8	\$86.32	\$690.56

SUB-TOTAL

\$1,403.06

TOTAL FIELD INVESTIGATION (A)

\$3,560.56

B. LABORATORY PROGRAM

Natural Moisture Test	each	2	\$9.50	\$19.00
Grain Size Analysis (Full Gradation - w/o -200 Sieve)	each	2	\$45.00	\$90.00
Fine Content Determination - Single Sieve (-200 Sieve)	each	2	\$26.00	\$52.00
Fine Content Determination	each	1	\$32.00	\$32.00
Corrosion Series (pH, Chloride, Sulfate & Resist.)	each	1	\$125.00	\$125.00

SUB-TOTAL LABORATORY TESTING

\$318.00

TOTAL FIELD AND LABORATORY PROGRAM (A & B)

\$3,878.56

UMMARY OF ENGINEERING AND TECHNICAL SERVICES

Senior Geotechnical Engineer	hours	4	\$171.16	\$684.64
Project Geotechnical Engineer	hours	6	\$132.44	\$794.64
Geotechnical Engineering Intern	hours	6	\$87.41	\$524.46
CADD Technician	hours	4	\$78.02	\$312.08

$\Sigma = 20$

SUB-TOTAL ENGINEERING SERVICES

\$2,315.82

TOTAL GEOTECHNICAL FEES FOR PROJECT (A, B & C)

\$6,194.38