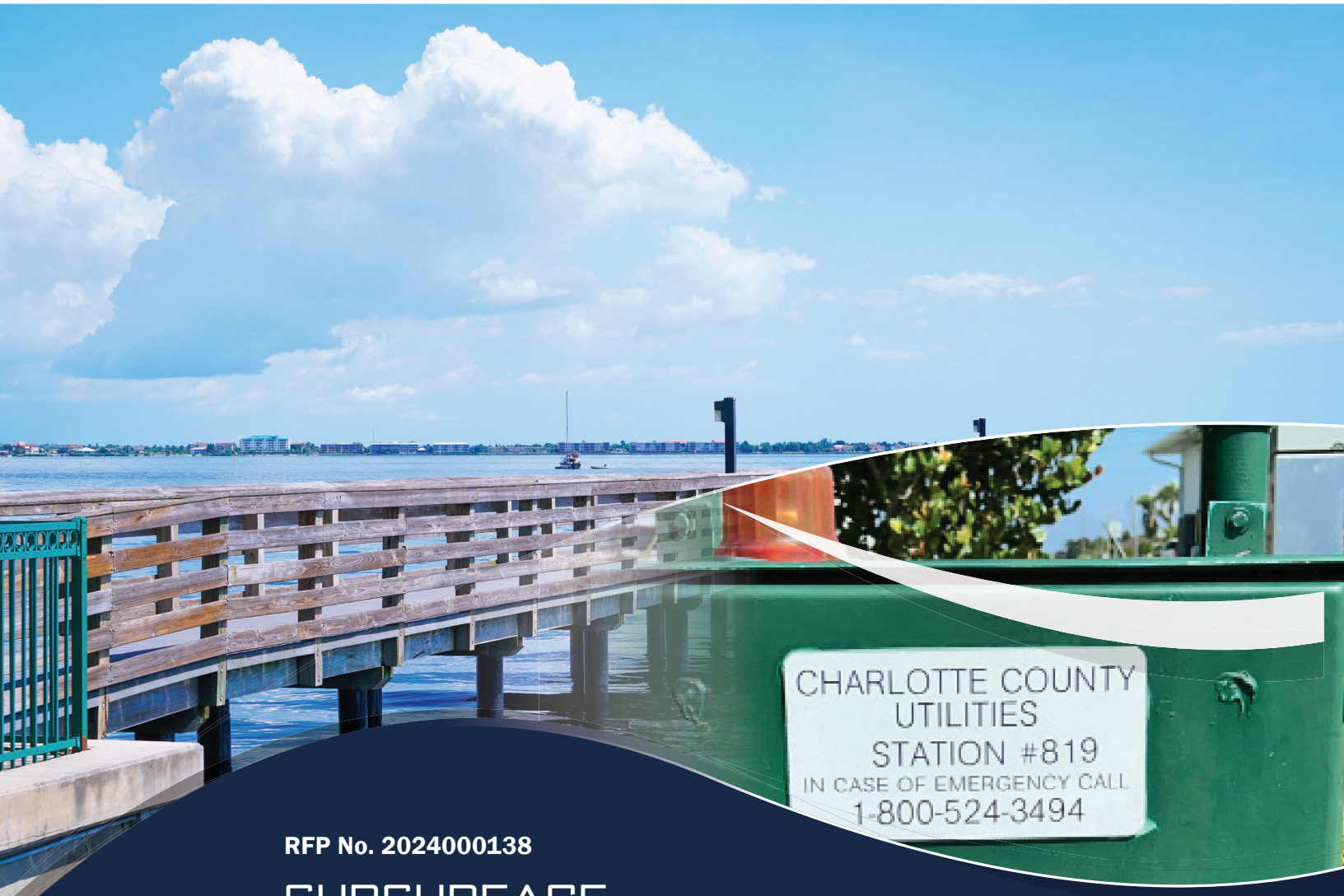

RFP No. 2024000138

SUBSURFACE UTILITY ENGINEERING VERIFICATION

For

Charlotte County

December 12, 2023

VEITH ENGINEERING
& BUSINESS SOLUTIONS

CONTACT: BRYAN T. VEITH, P.E., ASSOC. DBIA, F.ASCE BVEITH@VEITHSOLUTIONS.COM

2201 CANTU CT, SUITE 118 • SARASOTA, FL 34232 • 941-374-3422

CHARLOTTE COUNTY
FLORIDA

Cover Letter

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& BUSINESS SOLUTIONS

VEITH ENGINEERING & BUSINESS SOLUTIONS

Integrity. Innovation. Quality. Service.

Senior Division Manager- Purchasing
Charlotte County Administration Complex
18500 Murdock Circle, Suite 344
Port Charlotte, FL 33948-1094

December 12, 2023

RE: Response to RFP Solicitation 2024000138

Dear Member of the Selection Committee:

The Veith Engineering & Business Solutions (VEBS) Team is excited to respond to your request for a proposal (RFP) for your Subsurface Utility Engineering Verification contract. The entire VEBS team recognizes Charlotte County's desire for a highly qualified and experienced, local, and responsive team to provide professional engineering, survey, CCTV, and subsurface utility engineering (SUE) services to incorporate aboveground and subsurface utility asset data into the Charlotte County Utilities' (CCU) map book. CCU's project goal is to provide a more thorough and accurate inventory of your utility's assets. Accurate information and locations of all underground utility assets are critical for CCU's successful Asset Management as well as the day-to-day operation and maintenance of your utility systems.
The Subsurface Utility Engineering Verification project is a critical component to the success of Charlotte County's Asset Management Program and Capacity, Management, Operation, and Maintenance (CMOM) compliance initiatives for CCU. An effective Asset Management program relies on accurate and complete asset data. This project will ensure the County's CityWorks® integration is successfully implemented, which will enhance the County's operational reliability and service delivery to its utility customers. It will also enable various CMOM initiatives to be implemented more effectively by developing a complete and accurate inventory of all wastewater collection system assets.

Our familiar and knowledgeable professional team is uniquely qualified to deliver the high-quality and complete product CCU is seeking. This proposal provides you with a detailed overview of each of our firms' and individual team members' experience and qualifications, and our proven approach, equipment, tools, and resources. We are a multi-disciplined, local team with an excellent reputation in our local community and have a comprehensive understanding of CCU's needs. The same VEBS/HAZEN team that has been assisting the County in the development of your Capacity Assessment and Assurance (CAAP) and Pilot Flow Monitoring Program as part of its ongoing CMOM improvement strategy will leverage its familiarity with the County's GIS and asset inventory for this contract (program.) Hazen as well as our team member SAM have recently completed similar Tasks for the City of Fort Lauderdale. These tasks were critical to the City's Cityworks implementation. Both Hazen and SAM brought highly innovative and efficient approaches to achieving the target accuracy standards. Hazen led the development and implementation of GIS schema design for the sanitary and storm systems.

Our Programmatic, Technology Driven and Responsive Delivery Approach will lead the County to:

- Cost-effective and Timely Asset and Data Management
- Operational Reliability
- Regulatory Compliance

Our integrated, familiar, and local team's understanding of your system, its AM needs, and priorities will maximize the accuracy and efficiency of the resulting geodatabases which will serve as a foundational element for the ongoing operation and maintenance of this critical infrastructure within Cityworks.

Key benefits of our TEAM include:

- A highly integrated team with experience providing similar services for projects such as the Sarasota County CMOM / Asset Management Program Development and the City of Ft. Lauderdale Sewer Mapping Project,

which included the development of a GIS geodatabase for use in Cityworks. These projects are among a long list of other similar projects completed by our Team.

- Extensive experience with asset data collection and condition assessments using ArcGIS and the ERSI Water Utilities Data Model as well as converting field data into geodatabases utilizing the schema provided by the utility. Proper understanding of these schemas including handling Cityworks schemas with its use of feature, object, and relationship classes to provide the asset inventory and hierarchy in Cityworks. Through our current Charlotte County CAAP and Pilot Flow Monitoring project, our team has already reviewed the County's Cityworks schema and is, therefore, ready to hit the ground running on this project.
- Well-versed in the use of various field data collection applications such as Mobile and Aerial LiDAR, ArcGIS Pro, Field Maps, Collector, Survey 123, Workforce, Insights, Granite Net (CCTV), and others.
- An all-local management team with the support of technical experts who have extensive knowledge of challenges that are unique to our region.
- Many successful and relevant years of providing engineering services to Charlotte County

Our team greatly values the trusted business relationships we have built with Charlotte County and is committed to serving the County with **integrity, innovative solutions, quality deliverables,** and **responsive service**. As President and Principal Consultant of VEBS, I will dedicate my senior leadership, management, and technical expertise to this important project and will be responsible for representing VEBS in all matters of business until the successful completion of this contract. I will also serve as the primary point of contact and signature authority for any awards under this RFP.

Feel free to contact me via phone at 941-374-3422 or email BVeith@VeithSolutions.com if I can be of further assistance.

Regards,

Bryan T. Veith, PE, Assoc. DBIA, F. ASCE
President / Principal Consultant
Veith Engineering & Business Solutions

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Forms

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PART IV - SUBMITTAL FORMS
PROPOSAL SUBMITTAL SIGNATURE FORM

1. Project Team Name and Title	Years experience	City of office individual will work out of for this project	City individual's office is normally located	City of individual's residence
Bryan T. Veith, PE – Principal Consultant/POC	30	Sarasota	Sarasota	Bradenton
Karl Sieg, PE (PA) – Technical Advisor/Data QA/QC	42	Sarasota	Sarasota	Venice
Dave Cash – Data Collection Lead & Coordinator	35	Sarasota	Sarasota	Tennessee/Florida
Hana Florez Guimoye – Project Engineer for MOT, ROW permits, Field Data	1	Sarasota	Sarasota	Sarasota
Julie Karleskint, PE (Hazen) – Senior Project Manager	37	Sarasota	Sarasota	Lakewood Ranch
John Schroeder, PE (Hazen) – CCTV & Data QA/QC	31	Sarasota	Sarasota	Bradenton
Sean Fitzgerald, P.E., VP (Hazen) - Asset Hierarchy, Asset Management, Data and GIS QA/QC	30	Sarasota	Cincinnati	Cincinnati
Pamela A. Hyatt, PSM - Survey	32	Bradenton	Bradenton	Bradenton
Martin Friedrich (SAM) – SUE Services Manager	18	Tampa	Tampa	Pinellas Park
Michael L Gaeta (Envirowaste) – Operations Manager	41	Venice	Venice	Seffner
Neil Eppig, RLS (McKim & Creed) – SUE	40	Sarasota	Sarasota	Sarasota

2.	Magnitude of Company Operations	
	A) Total professional services fees received within last 24 months:	$1,785,145.10
	B) Number of similar projects started within last 24 months:	4
	C) Largest single project to date:	$993,866 w/pending year 5 amendment to increase to $1.5M

3.	Magnitude of Charlotte County Projects	
	A) Number of current or scheduled County Projects	One
	B) Payments received from the County over the past 24 months (based upon executed contracts with the County).	$575,511.37

4.	Sub-Consultant(s) (if applicable)	Location	% of Work to be Provided	Services to be Provided
	Hazen & Sawyer	Sarasota, Ft. Myers, and Tampa	20%	Field Data Collection Support, GIS Integration, CCTV data review
	Hyatt Survey	Bradenton	10%	Survey
	McKim & Creed	Sarasota	5%	SUE, CCTV
	Surveying And Mapping, LLC (SAM)	Tampa	20%	SUE, Surveying and Mobile/Aerial LiDAR
	Envirowaste	Venice	5%	CCTV

5.	**Disclosure of interest or involvement:** List below all private sector clients with whom you have an active pending contract and who have an interest within the areas affected by this project. Also, include any properties or interests held by your firm, or officers of your firm, within the areas affected by this project. **NONE**	
	Firm **N/A**	Address
	Phone #	Contact Name
	Start Date	Ending Date
	Project Name/Description	

NAME OF FIRM Veith Engineering & Business Solutions

(This form must be completed and returned)

6. Minority Business: The County will consider the firm's status as an MBE or a certified MBE, and also the status of any sub-contractors or sub-consultants proposed to be utilized by the firm, within the evaluation process.	Yes _____ No __X__
Comments or Additional Information:	
Veith Engineering & Business Solutions (VEBS) is locally owned and operated with offices in Sarasota and Manatee Counties.	
VEBS is a certified small business enterprise (SBE) with the City of Tampa, Pinellas County, and City of St. Petersburg	

The undersigned attests to his/her authority to submit this proposal and to bind the firm herein named to perform as per contract, if the firm is awarded the Contract by the County. The undersigned further certifies that he/she has read the Request for Proposal, Terms and Conditions, Insurance Requirements and any other documentation relating to this request and this proposal is submitted with full knowledge and understanding of the requirements and time constraints noted herein.

By signing this form, the proposer hereby declares that this proposal is made without collusion with any other person or entity submitting a proposal pursuant to this RFP.

In accordance with section 287.135, Florida Statutes, the undersigned certifies that the company is not on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List and does not have business operations in Cuba or Syria (if applicable) or the Scrutinized Companies that Boycott Israel List, or is not participating in a boycott of Israel.

As Addenda are considered binding as if contained in the original specifications, it is critical that the Consultant acknowledge receipt of same. The submittal may be considered void if receipt of an addendum is not acknowledged.

Addendum No.1 Dated 12/1/2023 Addendum No._____ Dated_____ Addendum No._____ Dated_____

Addendum No.2 Dated 12/4/2023 Addendum No._____ Dated_____ Addendum No._____ Dated_____

Type of Organization (please check one): INDIVIDUAL (X) PARTNERSHIP (_) CORPORATION (_) JOINT VENTURE (_)

Veith Engineering & Business Solutions, LLC
Firm Name

(941) 374-3422
Telephone

Veith Engineering & Business Solutions
Fictitious or d/b/a Name

83-3660700
Federal Employer Identification Number (FEIN)

2201 Cantu Ct, Ste 118
Home Office Address

Sarasota, FL, 34232
City, State, Zip

4 (will be 5 years Feb. 2024)
Number of Years in Business

Address: Office Servicing Charlotte County, other than above

Bryan T. Veith, P.E., F.ASCE, Assoc. DBIA
Name/Title of your Charlotte County Rep.

941-374-3422
Telephone

Bryan T. Veith, P.E., F.ASCE, Assoc. DBIA
Name/Title of Individual Binding Firm (Please Print)

Bryan T. Veith
Signature of Individual Binding Firm

12-10-2023
Date

Bveith@VeithSolutions.com
Email Address

(This form must be completed & returned)

DRUG FREE WORKPLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies that Veith Engineering & Business Solutions does:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Proposer's Signature

12-10-2023

Date

END OF PART IV

(This form must be completed & returned)

CHARLOTTE COUNTY
FLORIDA

I.

Team Proposed for this Project

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BACKGROUND OF OUR PERSONNEL

The VEBS/HAZEN team together with our LOCAL subconsultants Hyatt Survey (Hyatt), Survey and Mapping (SAM), McKim and Creed, and Envirowaste comprise a best-in-class team with the necessary combination of experience, innovation, system knowledge, and responsiveness necessary to cost-effectively provide an accurate and powerful asset inventory that will serve as the basis for effective Asset Management and operation and management supporting long-term benefits to Charlotte County Utilities. Our Principal Consultant, Bryan Veith, who will serve as our program manager on this important project, has in-depth local knowledge and has managed numerous large County and city-wide utility asset verification and condition assessments, asset management, CMOM, and regulatory compliance programs and projects throughout the state of Florida. Many of our other key team members have an established history working on your utility system through previously awarded contracts, including the recent **Charlotte County Capacity Assessment and Assurance and County-wide Flow Monitoring Program**, so we are confident that we can offer innovative solutions to the challenges we know you face.

Our key team members "live, work, and play" in Southwest Florida and its surrounding communities and are well-recognized by many local city and county professionals. Our senior-level professionals have over thirty years of experience working with Charlotte County and other municipalities throughout the state. Our principal and program manager and others on our team have a vested interest in this project's success as they too are local residents who live, work, and play in SW Florida and Suncoast areas. As long-time residents, our team will collaborate with you to develop cost-effective, sustainable, and timely solutions for our beautiful community and its vital resources.

VEBS' Project Manager

VEBS's proposed program manager (PM), **Bryan Veith, P.E., Assoc. DBIA, F.ASCE**, has been providing professional engineering and utility management consulting services along Florida's West Coast for over thirty years. Bryan's depth and breadth of relevant municipal utilities experience, his unmatched local knowledge dating back to 1993, and strong credibility with regulators will afford Charlotte County the confidence that his leadership and unmatched local expertise will provide the best solutions and responsive services for your program. Bryan has a deep understanding of all aspects of this critical project from challenges associated with field data collection coordination, efficient data management, and robust QA/QC, as well as how CCU will leverage this data to support its entire enterprise. The "holistic" view will ensure that CCU will cost-effectively achieve all its goals.

Bryan is widely recognized in the industry for his unwavering commitment to and close collaboration with his clients and for delivering high-quality, cost-effective work products. He is unique in his ability to offer both creative engineering solutions and develop the most effective use of resources in all aspects of

"Bryan is extremely passionate about developing innovative "1Water" solutions, being a steward of the environment, serving his clients with integrity, and giving back to the local community. I have personally observed this top-notch commitment to client service and delivering our projects with exceptional quality, professionalism and responsiveness." - George B. Cassady, P.E., Assistant County Administrator, Hillsborough County, July 2019

business operations for the County's highest return on investment. He has provided innovative and strategic business consulting to various public clients helping them improve customer service and project delivery, identify operational and resource efficiencies, and achieve higher returns on their investment. Recently awarded the distinguished honor of American Society of Civil Engineers (ASCE) Fellow (3% of Civil Engineers), Bryan has been actively involved in numerous professional societies throughout his career including DBIA, AWWA, and ASCE. https://www.yourobserver.com/news/2019/apr/24/side-of-ranch-jay-heater-0/.

Bryan Veith is a proven leader and manager who also rolls up his sleeves and engages with his teams to offer innovative and cost-effective engineering solutions. This program (project) is a perfect fit with Bryan's strong management and technical expertise in municipal potable water, reclaimed water, and wastewater systems. **Bryan Veith, the firm's principal and project manager, is firmly committed to this project and will not be substituted without the express permission of Charlotte County.**

VEBS' Key Personnel

Senior-level technical advisement to the project team and quality control review of all deliverables will be provided by VEBS's, **Karl Sieg, P.E.** Karl offers the team and Charlotte County the following expertise:

- Karl brings extensive experience in all facets of civil engineering to his role as VEBS Senior Technical Advisor. In addition to being a licensed professional engineer in Pennsylvania, Karl was also a certified operator for both water and wastewater systems well suited to troubleshooting operational issues.
- Throughout his career, Karl has expanded his practice of infrastructure engineering design to include the management, financing, construction, and operation of facilities. As previous owner and principal of his own firm in Pittsburgh for many years, Karl provided civil and environmental engineering, wastewater collection systems, treatment plant and pump station design and permitting, design and construction services, expert litigation support and testimony, and funding, financing, and financial consulting for countless utility and public works projects.
- Integrally involved in the Sarasota County CMOM / Asset Management Program Development & Implementation and the Charlotte County **Capacity Assessment and Assurance and County-wide Flow Monitoring Program**. The Sarasota County five-year program includes evaluation, documentation, and implementation of a best-in-class CMOM Program to achieve regulatory compliance.

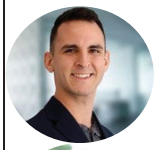
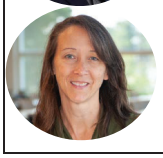
VEBS Key Personnel	Role	Benefits to You
 **Karl Sieg, P.E.**	Subject matter expert, Quality Control, and Data QA, QC	• He pioneered asset management in 1977. • He was the first to include construction projects on the critical path method (CPM) in 1968. His expertise was used by contractors and engineers. • Leveraging his MBA educational background coupled with his many years of successfully assisting with financing and funding public infrastructure projects.
 **Dave Cash**	Data Collection Lead and Delivery Teams' Oversight	• Lived in the Sarasota area since 1983 • Local municipal utility management and operations since 1986. • Flow Monitoring Lead on the Charlotte County CAAP Framework Development and Pilot Flow Monitoring Program • Former Sarasota County Director of Operations and Maintenance and Assistant Utilities Director.

VEBS' Subconsultants

HAZEN

The VEBS/HAZEN team has been working together on the Sarasota County Capacity, Management, Operation, and Management Development and Implementation Program since 2019 and the Charlotte County CAAP Framework Development and Pilot Flow Monitoring Program since 2022. The same team members have been organized to leverage that working relationship and technical expertise. Bryan Veith and **Julie Karleskint, P.E.**, have a strong working relationship on projects dating back over twenty years.

Sean FitzGerald, P.E. has over 30 years of experience and serves as Hazen and Sawyer's Corporate Conveyance Practice Leader. Sean has extensive experience in asset inventory and condition assessment along with supporting the development of GIS and integrations with utility CMMS systems to support Asset Management.

	HAZEN Key Personnel	Role	Benefits to You
	**Julie Karleskint, P.E**	Hazen's local leadership and providing support on resource allocation, County systems local knowledge, and QA/QC	• Lived in local area since 1989 • Worked on Charlotte County utility projects since 2003 • Assisted Sarasota County and the City of Arcadia with their CMOMs and SSES.
	**John Schroeder, P.E.**	CCTV coordination and Data QA/QC	• Task Manager for Sarasota County CMOM SSES, CCTV, and Flow Monitoring. • Nationally Recognized pipeline assessment/rehabilitation expert. • He has been a NASSCO PACP/MACP/LACP instructor for over 20 years and has been managing
	**Sean FitzGerald, P.E.**	GIS/Cityworks, Asset Hierarchy, Asset Management, and Data QA/QC	• Technical Advisor on Sarasota County CMOM Development & Implementation, Ft Lauderdale WW CO Compliance Program, and Charlotte County CAAP and Pilot Flow Monitoring Program • Development of asset hierarchies and geodatabase schemas for several Cityworks programs. • Led detailed mapping of 76 miles of force mains utilizing numerous techniques including GPR, Laser, Sondes, and induction.
 	**Boris Sladojevic & Elena Horvath**	GIS/Webmap Applications	• Boris GIS work for City of Clearwater CIP support including the development of powerful field data collection tools and mapping visualizations • Elena led the development of the Ft. Lauderdale collection and transmission GIS development including data QA/QC, geodatabase completion, use of as-builts

VEITH ENGINEERING & BUSINESS SOLUTIONS
2201 Cantu Court, Suite 118, Sarasota, FL 34232 (941) 374-3422

Hyatt Survey - Survey

Pamela A. Hyatt, PSM President, began her career in surveying and mapping in January 1991 in Sarasota, Florida. In August 2002, Pamela A. Hyatt, PSM, formed and incorporated (Sub-S Corporation) Hyatt Survey Services, Inc., a small, woman-owned surveying, and mapping business located in Bradenton in Manatee County, Florida. Mrs. Hyatt holds a bachelor's degree in surveying and mapping from the University of Florida and became a licensed Professional Surveyor and Mapper in 1995. Today, her company utilizes a professional staff of thirty employees with over 202 years of experience in the surveying and mapping field. Hyatt Survey is a full-service firm providing boundary, topographic, hydrographic, construction, and GPS surveying services throughout the state of Florida. Hyatt Survey is also a certified Minority Business with the State of Florida's Office of Supplier Diversity. In the Spring of 2009, Pamela went on to obtain FDOT DBE certification and pre-qualified Hyatt Survey to perform control, design, right of way, and construction surveying services to FDOT. Pam's duties include the direction of quality control and technical procedures as well as client relations and marketing and the production of boundary, right of way, and topographic surveys.

Russell P. Hyatt, PSM Vice President, is a highly experienced Professional Surveyor and Mapper with 35 years of expertise in surveying for utilities, transportation, and stormwater projects. He possesses a Bachelor of Science degree in Survey and Mapping from the University of Florida and holds the certification of Professional Surveyor and Mapper in Florida (LS#5303). Russell's notable achievements include serving as a past president of the Florida Surveying and Mapping Society and being affiliated with various professional organizations such as the National Society of Professional Surveyors and the American Society of Civil Engineers.

Russell is responsible for overseeing local, state, and federal contract administration and ensuring overall quality control. With his extensive experience, he excels in producing boundary, hydrographic, and topographic surveys. Russell has worked on a wide range of projects, including commercial and municipal development surveys, geodetic surveys, and beach/channel/port hydrographic surveys. He has provided survey services to numerous local, state, and federal agencies, including Pinellas, Hillsborough, Manatee, Sarasota, and Charlotte Counties, the Florida Department of Transportation, and the Florida Department of Environmental Protection,

SAM – SUE, Mobile, and Aerial LIDAR

Charles Heise, CPUL, SUE/Survey Project Manager, has over 30 years of project management experience in Subsurface Utility Engineering. This includes mapping and locating utilities for public and private clients. Charles's expertise is in advanced Multi-channel and High and Low frequency GPR designation as well as conventional Radio Frequency Devices. He has performed thousands of designating and locating projects for all SUE Quality Levels A through D as denoted by ASCE Standards. He has also helped advance GPR Technologies for the industry. His expertise also includes GIS adaptation of utility information into databases for several City, County, and State GIS Systems.

Martin Friedrich, CST III, Task Manager SUE, has over 18 years of experience in surveying and subsurface utility locations. He has a thorough knowledge of survey standards and procedures. He is also experienced in boundary, topographic, and construction layout surveys throughout Florida for both public and private sector clients. Mr. Friedrich has experience specializing in utilities and transportation projects for the Florida Department of Transportation, Veterans Administration, MacDill Air Force Base, and numerous Counties and Municipalities across South Central Florida. He also developed an application to automate the Vvh (Verified vertical and horizontal) SUE data report creation, making the process much more efficient, and minimizing human error and manual processes.

Luiz Cortes, SP, PLS, PPS, PSM, CP, Task Manager – Aerial Mapping Acquisition, has 33 years of experience in photogrammetric engineering and surveying. During his 25+ years in project management, he has supervised and managed hundreds of mapping projects, not only in the United States but also overseas. Mr. Cortes is well versed in all phases of photogrammetry, including aerial photography planning, photo control survey, digital orthophotography, planimetric, contour mapping, and GIS. Mr. Cortes is a hands-on professional; a business-driven manager, with

extensive experience in project design and project budget control, as well as aerial-triangulation planning, processing, and reporting. While working in photogrammetric surveying he has also supervised and managed survey tasks using high-density LiDAR datasets collected with manned aircraft, Mobile Scans, and/or Terrestrial Scan. He has been involved and kept current with all methods and techniques of surveying, including leveling, total stations, GPS (RTK, Static, and VRS), terrestrial scan, and Mobile LiDAR. Currently, Mr. Cortes is responsible for the operation of SAM's Aerial Mapping services, in support of all Aerial Mapping and GIS projects, and incorporating new technology.

Alfredo A. Bermudez, PSM, has 32 years of surveying and mapping experience in a wide variety of projects overseeing fieldwork and quality control. He is proficient in primary analysis of field data with a strong background in computers and surveying computations. He trains and directs office and field staff in all aspects of the project and field procedures including the use of AutoCAD Civil3D, Trimble Business Center (TBC), Carlson SurvCE, Trimble Access, and other survey-related software packages. Alfredo is trained in the use of Leica scanners and Leica Cyclone software, FARO scanners and Scene software, and GPS-related projects. Alfredo handles the extraction of mobile LiDAR data, drive planning, control layout, workflow, and standards development for mobile LiDAR acquisition.

Envirowaste - CCTV

Michael Gaeta, CCTV operations manager, is a highly motivated and resourceful management professional with a record of developing and supporting successful sales methods and procedures. Consistent ability to improve organizational efficiency through leadership that aligns the business processes with training and development, cost savings, loss prevention, leadership, and team building.

1. Always on schedule and under budget, able to prioritize and handle multiple tasks while effectively achieving and exceeding both regional and company goals. A leader of high-performance teams who thrives in environments requiring a high-level performance and a big-picture thinker.
2. Excellent interpersonal, team building, coaching, and influencing skills.
3. Demonstrated leadership and relationship-building skills

Michael Gaeta, Director of Construction, joined EWSG in September of 2008 and has worked on a number of complex public Right-of-Way projects involving sanitary and storm drainage pipe replacement. All of his projects have been delivered within the contract schedule. He oversees the overall horizontal construction end of the company as well as bidding for future job opportunities and meeting with public officials.

In addition to overseeing all horizontal and underground construction in South Florida, Mr. Garcia also handles all the cleaning and CCTV inspection work. With a local fleet of 10 jet/vacs and 4 CCTV inspection trucks, Mr. Garcia is directly responsible for roughly 1,000,000 linear feet of storm and sanitary sewer inspections yearly.

McKim and Creed – SUE and CCTV

Neil Eppig, RLS, SUE technical lead, is a SUE project manager located in McKim & Creed's Sarasota office. With over four decades of professional experience, he brings exceptional client and project management skills to McKim & Creed, along with technical expertise in land surveying and subsurface utility engineering (SUE).

Derek Holderman, CCTV, began his career in underground utilities in 2008. He has successfully led and managed projects across the United States with a focus on the assessment, data collection, and rehabilitation of water, wastewater, and stormwater systems. These projects included flow monitoring, manhole inspections, leak detection, CIPP, manhole rehabilitation, and trenchless lateral rehabilitation. Derek has also worked on development teams to create proprietary software and applications to enhance field data collection and delivery to internal and external clients. With his wide variety of experience, Derek is familiar with the various equipment, software, and techniques available which will help to ensure your unique challenges are being met with an appropriate solution.

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II.

Proposed Management Plan

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TEAM ORGANIZATION

VEBS HAS ASSEMBLED AND ORGANIZED the MOST FAMILIAR, EFFICIENT and EFFECTIVE TEAM

VEBS's principal and program manager (PM), **Bryan Veith, P.E., Assoc. DBIA, F.ASCE**, has been providing engineering services along Florida's West Coast for over 30 years. In his role as PM, Bryan will serve as VEBS's single point of contact with Charlotte County (County). Bryan, as PM, is ultimately responsible for the success of all work under this contract. He will work closely with our leadership, technical, and support personnel to ensure each aspect of the Scope of Services is being executed as the County expects. Bryan's depth and breadth of relevant technical expertise, his 30+ years of local knowledge, program development and implementation experience, and strong working relationships with our subconsultants provide an exceptional blend of experience enabling you to have confidence in receiving the best solutions and responsive services for this contract.

Bryan is supported by our highly qualified **LOCAL VEBS** team and our local subconsultants. As long-time residents, our team members have a vested interest in understanding your key issues/project objectives. Our integrated, familiar, and local team's understanding of your system, its AM needs, and priorities will maximize the accuracy and efficiency of the resulting geodatabases which will serve as a foundational element for the ongoing operation and maintenance of this critical infrastructure within your Cityworks. Our well-seasoned core local leadership and technical team has over 180 collective years of experience and knowledge.

Key Local Team Member	Years of Experience
Bryan Veith, PE	30
Dave Cash	35
Karl Sieg, PE (PA)	50
Julie Karleskint, PE	35
John Schroeder, PE	30

The **VEBS| HAZEN** team has been working together on multiple local and relevant projects since 2019. Individual team members have been working together for over 30 years. There is no learning curve, our team is ready to hit the ground running on your project. Our approach to managing this team is further described in Section B, Team Approach.

A. Team Organization

Our team organizational chart is included later in this section. The org chart shows a strong management team with large program management experience, local subject matter experts, and local field resources positioned to plan, collect, review, and incorporate the County's potable water, reclaimed water, and wastewater asset data in a logical, programmatic, and cost-effective manner into your GIS and Utility Map book as well as Cityworks.

B. Team Approach

Working cooperatively with multiple clients and subconsultants on projects both small and large is our business. We have developed the tools, some of which are outlined in this submittal, that facilitate the communication and project execution required for managing a project with local subconsultants with special areas of expertise. More importantly, we understand that success lies in the people assigned to your project. Our project managers are given the resources, authority, data, and tools to effectively manage each project big or small.

Our team is comprised of senior project leadership, technical expertise, and key support staff. Senior project leadership is being provided by our local and experienced team members Bryan Veith, P.E. (VEBS) and **Julie Karleskint, PE (Hazen),** who each have over thirty years of managing Charlotte County and other similar municipal local, complex, and regulatory driven projects. Day-to-day local technical leadership and expertise will be provided by our team's two senior-level task managers, Dave Cash (VEBS Field Data Collection Lead) and **John Schroeder (Hazen CCTV and Data QA/QC).**

Our project development and delivery approach begins with our Project Manager Bryan Veith's clear understanding of your needs and leading the assembly of a well-qualified and committed team of supporting technical and administrative (**project scheduling and controls, field safety planning, information, and data management support, graphics**) resources from the onset of project identification. Our team is engaged from early scope development to the successful completion of the Scope of Services.

We employ a consistent team and client engagement approach to successful delivery of projects of this nature:

- Our VEBS Project Manager, Bryan Veith, will set up and conduct a pre-scoping meeting with the County team to listen and fully understand the goals and objectives, gain a better and more thorough understanding of the desired results, determine the key stakeholders, and what defines success for the finished project. Bryan will discuss the project drivers, desired budget, and schedule, and develop the success factors that are important to the County, stakeholders, County ratepayers, and regulatory/ funding agencies (if applicable).
- Once Bryan has the necessary information to assemble and engage our key team members, we will meet internally to collaborate and develop a well-defined scope of work to ensure we are aligned with, and committed to, meeting the County's contract and project requirements. Project deliverables and specific milestones will be identified to easily track the execution process.
- Bryan will lead the VEBS team with his proven track record of project delivery supported by our strong technical team and quality control reviewer(s) who will execute the project in accordance with the approved contract and VEBS Program Management Plan.
- Our team member Hazen will develop a powerful real-time web map application in ArcGIS Online that will provide real-time progress tracking, support near real-time QA/QC, and at-glance visualization of all field activities and data viewable by not only the VEBS team but also CCU. Hazen has done this for numerous projects including the recent ARV program for Sarasota County.

On every project, our team adheres to our project delivery approach, communication protocols, internal processes, management tools and systems, and internal reviews.

Due to the nature of this project with work touching every inch of the County's utility service area, we will take a programmatic approach to your project. One of the most important aspects of our programmatic approach is the development and adherence to our team's program management plan (PMP). Our PMP is tailored to your specific needs and our project manager will work closely with our multi-disciplined team to ensure that your program is implemented and executed in an effective and efficient manner consistent with your needs and goals for the completion of the work. PMP incorporates the following foundational and key elements:

PMP Foundational Elements	
Project description and goals	Project team and responsibilities
Project scope and budget	Schedule and Key Milestones
Team Communications Protocol	Quality Assurance/Control
Risk Management Plan	Change Management Process Flow
Project Filing Structure and Protocol	Field Health and Safety Plan

C. Resumes – The org chart and our key personnel's resumes are included in the pages that follow.

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Organizational Chart
RFP #: 2024000138

CHARLOTTE COUNTY FLORIDA

VEITH ENGINEERING & BUSINESS SOLUTIONS

ROLE: PM/EOR/POC
Name: Bryan Veith, P.E.

Benefits to CCU

- Proven Team and PM
- Unique Project Knowledge
- Relevant and Local Expertise
- Strong Program Management Experience

KEY DISCIPLINE LEADS

DATA QA/QC
Karl Sieg, P.E.

DATA Collection Lead and Coordinator
Dave Cash

QL-C and D Data Collection
Stela Hymeri & Hana Florez Guimoye

Asset Management
Bryan Veith, P.E.

GIS/CAD
Stela Hymeri & Armando Valdez

MOT, ROW Permits, Sunshine 811
Hana Florez Guimoye

Project Controls: Scheduling, Field Safety Plan, Sub Management
Lucie Blahackova

Budget Management & Controls
Logan Veith

SUBCONSULTANTS

Asset Hierarchy, Technical Advisor, Data QA/QC
Sean FitzGerald, P.E.

CCTV Coordination & Data QA/QC
John Schroeder, P.E.

Field Data Collection
Alicia Mata, P.E.

Sub PM & Local POC
Julie Karleskint, P.E.

GIS & Webmap Applications
Boris Sladojevic & Elena Horvath

SUE & Mobile LIDAR Asset Data Collection (QL-B & QL-A)
Survey and Mapping, INC , McKim and Creed

QL-B (Survey) Asset Data Collection
Hyatt Survey

CCTV Inspection & Data Collection
Envirowaste, McKim and Creed

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BRYAN T. VEITH, P.E., ASSOC. DBIA

Principal Consultant / Program Management

ABOUT ME

I have lived, been educated, worked, and played in Sarasota / Manatee County area since 1985. As a resident of the Suncoast, the County will have direct local access to my over 30 years of professional engineering and utility management consulting experience gained both locally and across the US. I have successfully completed programs similar to the County's all along the west coast of Florida. I have become known for developing innovative technical, operational, and utility management solutions and my leadership ability to manage large and complex projects.

EDUCATION

- M.Sc. – Civil Engineering
  University of South Florida, 1999
- B.Sc. – Civil Engineering
  Minor – Business
  University of Florida, 1993

LICENSES/CERTIFICATES

- Professional Engineer, FL (52791)
- Associate Design-Build Professional (Assoc. DBIA)
- American Society of Civil Engineers (ASCE) Fellow, awarded to top 3% of civil engineers in the nation

RELEVANT EXPERTISE

- Utility Management Consulting
- Asset Management
- CMOM / Regulatory Compliance
- Subsurface Utility Engineering
- Asset Inventory and Condition Assessments (Level 1 & 2)
- LIDAR
- SMART utility advisement
- Potable water, wastewater, stormwater, reclaimed water, and groundwater (OneWater)

AWARDS/RECOGNITION

- Awarded Top 40 Under 40 Gulf Coast Business Review
- Ranked No. 22 of the Fastest 56 growing USF lead firms in world.

RELEVANT PROJECT EXPERIENCE

CAAP Program Development and Flow Monitoring Program

Charlotte County, FL - Principal Consultant / PM

Electronic and field data collection, review, and analysis; asset inventory, GIS database, and hydraulic model analysis; gap assessments, capacity assurance (concurrency management) and assessment program development and implementation. Other services include developing guidance manuals, process, tool, and resource enhancements; SOPs, pilot project, infiltration and inflow modeling, groundwater level analysis, and training County staff.

CMOM Program Development & Implementation – Years 1-4

Sarasota County, FL - Principal Business Consultant / PM

This 5-year project included evaluation, plan, and implementation of a best-in-class CMOM and asset management program to achieve regulatory compliance. The scope included data collection, management, review & analysis of electronic and field data; asset hierarchy, inventory, and database management; creation of asset onboarding tool for inclusion of their new wastewater assets in County GIS and CMMS and conducting resource/process assessments and gap evaluations. Implementation improvements included organizational realignment and resource augmentation, O&M efficiency enhancements, updated information management systems (CMMS, GIS, SCADA) and data warehouse framework, CCTV and flow monitoring evaluation, development review/concurrency management, CIP prioritization and BCE evaluation tools, and emergency preparedness and response planning.

Development of Renewal and Replacement (R&R) Program, Tampa Bay Water

Tampa, FL - Project Manager

Developed a system-wide R&R Program to estimate annual R&R Program funding requirements and activities, estimate and justify R&R Program resource (staffing) needs, determine asset conditions, and prioritize and schedule the renewal and replacement of assets by assessing the vulnerability and criticality of assets. The project included field asset inventory and condition assessments of all their horizontal and vertical water infrastructure.

RESTORE ACT MHC WCS ASSESSMENT, SUE/SURVEY, DESIGN, AND PERMIT

Pinellas County, FL - Project Manager / EOR

Survey and subsurface utility engineering (SUE), data collection, management, review, and analysis; assessment, preliminary design, design, permit and bid phase services for new County wastewater collection systems for 5 manufactured home communities. The SUE work included potable water, reclaimed water, force main, wastewater, electric, telephone, and gas utilities.

ASSET MANAGEMENT PHASE 3, R&R PLANNING FOR ECRWRF AND LSS

City of West Palm Beach, FL - Project Manager

This project is a continuation of Phases 1 and II of the City's asset management implementation. Work under this phase included field asset inventory and condition assessments of the City's 11 most critical lift stations and all assets at the East Central Regional Water Reclamation Facility (ECRWF). Based on the condition assessments, a 10-year R/R plan was prepared that included providing opinion of probable costs and collaboratively working with the City to prioritize the R&R CIP.

INFRASTRUCTURE R&R IMPROVEMENTS AND ASSET MANAGEMENT PROGRAM

Orange County, FL - Technical Advisor/QA&QC/Principal

Two 5-year continuing services "program" contracts serving as an extension of County's staff to establish a R/R program strategy for wastewater collection, water distribution and reclaimed water infrastructure. Scope included evaluating the entire system and assisting the County to develop the strategy to make key decisions about which assets to rehab/replace and when and apply available funding to meet system needs. Services including strategic planning and utility performance consulting, resource assessments, evaluation, recommendations, infrastructure condition and risk assessments for improved processes and procedures, data management and tracking, R&R prioritization, and preliminary design. Saved the County over $100 million in funding by choosing projects at the right time, at the right place, and for right reason.

SANITARY SEWER MANAGEMENT SYSTEMS AND STRATEGIC ASSET MANAGEMENT PROGRAM EVALUATION

City of Largo, FL - Deputy Project Manager

During the El Nino storms approximately 30 million gallons of SSOs occurred within the City's wastewater service area. The City was issued a FDEP Consent Order. Bryan was instrumental in helping the city improve their sanitary sewer management systems such as their development review/concurrency management system; utilities management, operation, and maintenance (MOM), and Computerized Maintenance Management System (CMMS). He developed business process maps of City's critical processes as related to Development Review. A series of collaborative workshops were conducted to develop the Concurrency Management Program with City staff. An Asset Management Program Evaluation (AMPE) was conducted and Asset Management Plan developed.

ASSET MANAGEMENT PROGRAM EVALUATION AND DEVELOPMENT
PASCO COUNTY, FL - PROJECT DIRECTOR/TECHNICAL ADVISOR/QC

Under a continuing contract, we evaluated the current state of the County's Asset Management Program in 10+ program areas and compared them to industry best practices and other top tier utilities, developed a detailed and phased implementation plan to address gaps with a prioritized list of recommendations for this multi-year program. Services also included assisting PCU with the development of updated Level of Service (LOS), Goals, and Key Performance Indicators (KPIs) and a detailed 5-year program implementation schedule (roadmap) in Microsoft Project.

TAMPA BAY WATER REPLACEMENT PLANNING MODEL (RPM) AND MAXIMO ASSISTANCE

Clearwater, FL - CSM/MM/Quality Control

The projects' overall goal is to convert the Condition Assessment, the Renewal and Rehabilitation, and the RPM processes to use the Maximo asset data instead of TBW's EMS data. To accomplish that goal, the following objectives were accomplished: develop a process for creating the annual Condition Assessment database that uses Maximo asset information; update and convert the current R&R database to using Maximo equipment identifiers instead of the EMS identifiers; develop a process for updating the R&R database with the Condition Assessment data, develop a process for populating the RPM database with data from Maximo and the R&R database.

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DAVID CASH

Data Collection Lead and Coordinator

ABOUT ME

My career in the Public Utilities sector spanned 35 years with the Sarasota County government. Since then, I have been actively working in utility management consulting with Veith Engineering and Business Solutions as a Senior Operations and Business Consultant. I have significant management, administrative, and technical experience. My relevant expertise includes water and wastewater utilities operations, utilities long-range planning, and stormwater operations. Other operations experience includes street, parks, fleet, and facilities maintenance. Additional skills and experience include project management, strategic and operational planning, emergency operations, contingency planning, financial planning, budget management, facilities operations, and asset management.

EDUCATION

B. A – Business Administration, University of South Florida, 2007

LICENSES/CERTIFICATES

State of Florida Treatment Plant Operator Certification Level A, #DW6523

RELEVANT EXPERTISE

- Asset management / CMOM
- Water/wastewater/reclaimed water/stormwater utilities O&M
- Emergency operations
- Field Data Collection and Management
- Asset Inventory and Data Integration into GIS and CMMS
- Utility Management Consulting for public agencies
- Organizational assessments & implementation plans
- Strategic/operational planning

PROFESSIONAL AFFILIATIONS

- American Water Works Assoc.
- American Public Works Assoc.
- Water Environment Federation
- Suncoast Public Works Academy Advisory Committee Member

PROJECT EXPERIENCE

CMOM Program Development & Implementation – Years 1-4

Sarasota County, FL Task Lead for Assessments and ERP

This 5-year project included the evaluation, planning, and implementation of a best-in-class CMOM and asset management program to achieve regulatory compliance. The scope included conducting staff interviews; analyzing data, SOPs, and existing business processes; and conducting resource, process, and gap assessments. The report and 5-Year Implementation Plan were prepared in Year 1. Implementation improvements included organizational and resource realignment, O&M enhancements, updated information management systems, development and implementation of development review and asset management processes and resources, and performance metrics.

CAAP Program Development and Flow Monitoring Program

Charlotte County, FL

The CAAP Program deliverables include data review, stakeholder interviews, workflow and resource evaluations, development of goals, gap assessment, service and performance management, capacity assurance and assessment program development, pilot project, and implementation. Also developed guidance manuals, processes, tools, resource enhancements, SOPs, and training materials.

Sarasota County Government

Sarasota, FL - Assistant Director, Public Utilities Department

Provided senior leadership to the Public Utilities Department which included planning, implementing, directing, and managing all functions and resources of the Department, focusing on the Water/Wastewater and Solid Waste Divisions. Carried out strategic objectives efficiently and effectively. The annual dept operating budget exceeded $190M with a staff of 322.

LANDFILL GOVERNANCE AND STRUCTURE STUDY
Manatee County, FL – Technical Lead / Deputy Project Manager

Performed various tasks to collect, analyze, and summarize information and data through staff interviews, data collection and analysis from comparable counties, and field visits. The County's goal is to perform a comparison of its Solid Waste Organizational structure to other counties of comparable size and complexity. The high-level comparison will include resources, landfill and collections operations, annual operating and CIP budgets, facility processing capacity, key performance indicators, performance targets, and other related data pertinent to solid waste operations.

SARASOTA COUNTY GOVERNMENT
Sarasota, FL - Director of Operations and Maintenance

Led executive team of O&M Core Service with an annual operating budget of $60M. The Core Service provided a wide array of services including maintenance of road systems, stormwater conveyance, utility systems, parks, facilities, and fleet assets. The department was created to find significant efficiencies and cost savings through the consolidation of services as well as creating an asset management culture for Sarasota County. Responsibilities initially included serving as project manager in the development of the organizational model and subsequent organization of over 300 employees from conception to a fully functioning department. My role expanded to department director providing all maintenance services for the Sarasota County government. Responsibilities included the management and direction of the leadership team delivering the operations and maintenance functions of all public works-related activities as listed above as well as facilities space planning, capital funding planning, Sarasota County Government

SARASOTA COUNTY GOVERNMENT
Sarasota, FL - Water/Wastewater Division Manager

Provided overall management and leadership of Public Utilities' Water/Wastewater Division including direct supervision and management of the Division Leadership Team, comprised of 6 Section Managers. The division's annual operating budget exceeded $92M with 196 staff. Served as technical advisor for proposed division capital improvement projects (CIP) including initial project design, coordination, and review of draft for the scope of services to achieve a preliminary design report for proposed CIP, coordination of review of proposed construction plans (generally through 30% of project design), provision of fieldwork expertise as needed, and administration support of contracts for approved CIP associated with the Division. Other responsibilities included the development of an Asset Management team for the department and a second implementation of Maximo to coincide with an update to the County's Utility GIS schema and data model.

SARASOTA COUNTY GOVERNMENT
Sarasota, FL - Program Manager, Public Utilities Renewal & Replacement (R&R) Program

Managed the Renewal and Replacement (R&R) Program for the County's utilities and stormwater infrastructure worth over $1 billion, including nearly 3,000 miles of water and wastewater pipes and over 800 miles of stormwater pipes and open conveyance systems. Assessment of infrastructure condition to proactively identify R&R requirements and develop a prioritized program. Program development included the establishment of a five-year project plan based on prioritization criteria to minimize system failures and address system needs based on assessed failure risks. Supervised project managers in the development of project scopes, bid documents, and budgets for each R&R project to ensure projects were completed on time and under budget.

SARASOTA COUNTY GOVERNMENT
Sarasota, FL - General Manager, Water Core Service Operations

Provided leadership for the County's Utilities and Storm Water Operations Divisions with an annual operating budget of over $80M and 278 staff. Services provided included water and wastewater treatment, water distribution and wastewater collection, stormwater conveyance maintenance, customer account management, and warehouse operations. Conducted strategic and business planning, capital project development, long-range water supply planning, and budget planning and monitoring. Also served as Project Manager for the department's Enterprise Asset Management system, which included the development of various work and asset management processes and software implementations. The project included asset data collection and condition assessments and the development of asset hierarchies for the work and asset management system.

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KARL SIEG, P.E.

Data QA/QC

ABOUT ME

I serve as a Technical Advisor and Quality Control Manager. I'm a licensed P.E. and Water/Wastewater Treatment Plant Operator in Pennsylvania who brings 40 years of experience in civil engineering, infrastructure engineering, design, management, financing, construction, and facilities operation experience. I was formerly a Principal at Sieg & Associates (1993-2019). For the last 16 years, I have worked on a wide range of as-needed consulting service contracts for municipal, civil, and environmental engineering clients. My experience is in pipeline and pump station planning, design, permitting, construction services, asset management, CMOM, expert testimony, litigation support, and funding.

EDUCATION

- B.S. – Civil Engineering, Penn State, 1972
- M.S. – Business Administration, University of Pittsburgh, 1977

LICENSES/CERTIFICATES

- Professional Engineer, PA, #61579

RELEVANT EXPERTISE

- Wastewater collection systems and treatment plants
- Potable water & reclaimed water transmission/distribution systems, pumping stations, and treatment facility improvements
- Civil, environmental, process, and mechanical engineering design
- Operational troubleshooting

ACADEMIA

Point Park University, Pittsburgh Adjunct Instructor (Environmental Engineering)

PROJECT EXPERIENCE

RESTORE ACT MHC WCS ASSESSMENT, SUE/SURVEY, DESIGN, AND PERMIT

PINELLAS COUNTY, FL - Senior Technical Advisor and Quality Control

Survey and subsurface utility engineering (SUE), data collection, management, review, and analysis; assessment, preliminary design, design, permit, and bid phase services for new County wastewater collection systems for 5 manufactured home communities. The SUE work included potable water, reclaimed water, force main, wastewater, electric, telephone, and gas utilities.

CMOM PROGRAM DEVELOPMENT & IMPLEMENTATION – YEARS 1-4

SARASOTA COUNTY, FL - Senior Technical Advisor and Quality Control

This 5-year project included the evaluation, plan, and implementation of a best-in-class CMOM and asset management program to achieve regulatory compliance. The scope included data collection, management, review, and analysis of electronic and field data; asset hierarchy, inventory, and database management; creation of asset onboarding tool for inclusion of their new wastewater assets in County GIS and CMMS and conducting resource/process assessments and gap evaluations. Implementation improvements included organizational realignment and resource augmentation, O&M efficiency enhancements, updated information management systems (CMMS, GIS, SCADA), data warehouse framework, CCTV and flow monitoring evaluation, development review/concurrency management, CIP prioritization and BCE evaluation tools, and emergency preparedness and response planning.

CAAP Program Development and Flow Monitoring Program

Charlotte County, FL - Senior Technical Advisor and Quality Control

Electronic and field data collection, review, and analysis; asset inventory, GIS database, and hydraulic model analysis; gap assessments, capacity assurance (concurrency management), and assessment program development and implementation. Other services include developing guidance manuals, process, tool, and resource enhancements, SOPs, pilot projects, infiltration and inflow modeling, groundwater level analysis, and training County staff.

Home Depot Master Lift Station and Force Main

Sarasota County, FL - Technical Advisor and Quality Control

This project consists of a new ~4,000 LF 16-inch force main to be constructed via open-cut, jack and bore, and horizontal directional drill and upgrades to the County's existing Home Depot Master Lift Station. The proposed force main route traverses across commercial property, under I-75 and Philippi Creek Branch AA, and within the County public right-of-way to the connection point at Bee Ridge Rd. VEBS' professional services included leading the route analysis, risk management plan, preliminary design report, easement coordination, engineering calculations, design, technical specifications, permitting, stakeholder engagement, bid phase support, and CEI for the master lift station process-mechanical and 16-inch force main design.

Unity Township Sewer System

Unity Township Municipal Authority, Westmoreland County, PA Construction Phase Engineer

The project included miles of collector and interceptor sanitary sewers and force mains, one advanced secondary wastewater treatment plant, and three pump stations over severe terrain with multiple geologic conditions.

Ongoing Annual Services

Peters Township, PA Engineer of Record, Project Manager

This project encompassed a wide variety of activities including engineer's annual reports to bondholders, reporting the operational condition of the system of sewers and advanced secondary treatment plants, utility rate analysis annual grant applications for operating subsidies. It also included review and then inspection of land developer sewer extensions, construction inspection of upgrades and expansion of a wastewater treatment plant, trenchless rehabilitation of sewers, among other things.

AWIA Risk Assessment and Emergency Response Plan

City of North Port, FL Senior Technical Advisor/Quality Control

Performed Risk and Resilience Assessment first, followed by preparing the Emergency Response Plan. The City's goals were to improve resilience including physical and cyber security, resources for plans, procedures, and equipment to lessen the impact of malevolent acts or natural disasters, strategies to detect malevolent acts or natural hazards and meet regulatory compliance. Services included: risk and resilience assessment (data collection/review; asset inventory, asset categorization, and assignment; threat categorization, assessment, assignment, and likelihood; site tour; evaluate likelihood and consequence of threat occurring, financial risk assessment, and Emergency Response Planning.

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HANA FLOREZ GUIMOYE

Project Engineer I

ABOUT ME

Hana is a passionate, dedicated, and hard-working engineer who has a variety of business optimization, engineering, and computer software skills to help clients and their customers gain efficiency and save time and money. She is also bilingual and is fluent in both English and Spanish. She is proficient in the full Microsoft Office 365 suite as well as Visio. She has experience with SQL Server management, Excel VBA, SolidWorks, Intermediate Skills, and RStudio.

EDUCATION

- BS Industrial Engineering, University of South Florida, May 2023

CERTIFICATES

- Microsoft Office
- Excel VBA

RELEVANT EXPERTISE

- Business consulting assistance for public agencies
- Organizational assessments
- Asset management/CMOM
- Business process assessments and mapping
- Research and document support
- Data analysis
- Information management

ACADEMIA PROJECTS

- Developed a new product that will assist patients who require posture and balance assistance
- Statistical quality control to optimize hospital admissions. Developed a process to reduce admission waiting times in hospitals based on the level of emergency.

PROJECT EXPERIENCE

RESTORE ACT MHC WCS ASSESSMENT, SUE/SURVEY, DESIGN, & PERMIT
Pinellas County, FL – Project Engineer

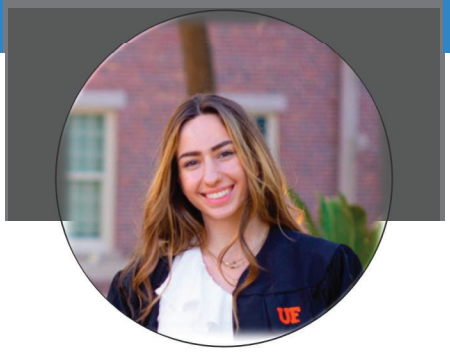
Survey and subsurface utility engineering (SUE), data collection, management, review, and analysis; assessment, preliminary design, design, permit, and bid phase services for new County wastewater collection systems for 5 manufactured home communities. The SUE work included potable water, reclaimed water, force main, wastewater, electric, telephone, and gas utilities.

CAAP PROGRAM DEVELOPMENT AND FLOW MONITORING PROGRAM
Charlotte County, FL – Project Engineer

Data review; client and stakeholder interviews; workflow and resource evaluations; vision and goal definition; gap assessment; level of service and performance management; and capacity assurance (concurrency management) and assessment program development, pilot study, and implementation. Other services included developing guidance manuals, processes, and tools, resource enhancements, developing SOPs, and training.

CMOM PROGRAM DEVELOPMENT & IMPLEMENTATION
Sarasota County, FL – Project Engineer/Data Analytics

This 5-year project included the evaluation, plan, and implementation of a best-in-class CMOM and asset management program to achieve regulatory compliance. The scope included data collection, management, review & analysis of electronic and field data; asset hierarchy, inventory, and database management; creation of asset onboarding tool for inclusion of their new wastewater assets in County GIS and CMMS and conducting resource/process assessments and gap evaluations. Implementation improvements included organizational realignment and resource augmentation, O&M efficiency enhancements, updated information management systems (CMMS, GIS, SCADA) and data warehouse framework, CCTV and flow monitoring evaluation, development review/concurrency management, CIP prioritization and BCE evaluation tools, and emergency preparedness and response planning.



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STELA HYMERI

Staff Engineer

ABOUT ME

I graduated with a Bachelor of Science in Civil Engineering from the University of Florida in 2023. I aided in the design of a variety of major transportation infrastructure and utilities projects. In addition, I have led crews during the construction of a 135 MW PV plant. My educational background coupled with my unique set of experiences has shaped a strong foundation that fuels my drive for innovation and problem-solving.

EDUCATION

- B.S. Civil Engineering, University of Florida
- A.A. Engineering, Santa Fe College

RELEVANT EXPERTISE

- GIS
- AutoCAD
- Hydraulic Analysis
- Field Investigations and Testing
- Flow Monitoring
- Groundwater analysis
- SUE
- Level A, B, C, and D asset data collection
- Data Collection and Analysis

PROFESSIONAL AFFILIATIONS

- ASCE

PROJECT EXPERIENCE

RESTORE ACT MHC WCS ASSESSMENT, SUE/SURVEY, DESIGN, AND PERMIT

Pinellas County, FL - Staff Engineer

Survey and subsurface utility engineering (SUE), data collection, management, review, and analysis; assessment, preliminary design, design, permit, and bid phase services for new County wastewater collection systems for 5 manufactured home communities. The SUE work included potable water, reclaimed water, force main, wastewater, electric, telephone, and gas utilities.

CAAP PROGRAM DEVELOPMENT AND FLOW MONITORING PROGRAM

Charlotte County, FL - Staff and Field Engineer

Electronic and field data collection, review, and analysis; asset inventory, GIS database, and hydraulic model analysis; gap assessments, capacity assurance (concurrency management) and assessment program development and implementation. Other services include developing guidance manuals, process, tool, and resource enhancements; SOPs, pilot projects, infiltration and inflow modeling, groundwater level analysis, and training County staff.

CMOM PROGRAM DEVELOPMENT & IMPLEMENTATION – YEARS 1-4

Sarasota County, FL - Principal Business Consultant / PM

This 5-year project included the evaluation, plan, and implementation of a best-in-class CMOM and asset management program to achieve regulatory compliance. The scope included data collection, management, review & analysis of electronic and field data; asset hierarchy, inventory, and database management; creation of asset onboarding tool for inclusion of their new wastewater assets in County GIS and CMMS and conducting resource/process assessments and gap evaluations. Implementation improvements included organizational realignment and resource augmentation, O&M efficiency enhancements, updated information management systems (CMMS, GIS, SCADA) and data warehouse framework, CCTV and flow monitoring evaluation, development review/concurrency management, CIP prioritization and BCE evaluation tools, and emergency preparedness and response planning.

John Schroeder, PE

CCTV Coordination; Data QA/QC

Mr. Schroeder specializes in underground municipal pipelines. As Hazen's Florida Conveyance Practice Group Leader, he is leading numerous challenging pipeline planning and design projects for gravity and pressure pipelines with respect to assessments, operations, asset management, funding, and client staff training.

Education

BS, Civil and Environmental Engineering, University of Cincinnati, 1992

Certification/License

Professional Engineer: FL, OH, NY

Areas of Expertise

- Asset Management
- Pipeline Surveying
- Assessment and Rehabilitation
- NASSCO PACP Trainer
- Trenchless Technologies
- Flow Monitoring
- Construction Management

Experience

- 31 total years
- 5 years with Hazen

Professional Activities

Water Environment Federation

FWRC

National Association of Sewer Service Companies

North American Society of Trenchless Technologies

Capacity Assessment and Assurance Project, Charlotte County, FL

Technical Specialist. For Charlotte County FL Capacity Assessment and Assurance Project, Mr. Schroeder has been providing senior technical expertise, development of technical memorandums, field assessments and technical reviews for a variety of tasks including: Wastewater Capacity Assessment program development; Gap Assessment of County's existing collection system data and operations; Flow Monitoring pilot program development, implementation, and quality review; Groundwater Monitoring program, site selection, installation and data review; Sewer and Manhole Assessment and Rehabilitation Alternative summaries

CMOM and SSES Program, Sarasota County, FL

Technical Specialist. For Sarasota County FL, Mr. Schroeder has been helping lead the technical aspects of a 5-Year consent-order driven CMOM and SSES program for the entire county that includes over 12 different departments that are involved in managing, operating, and maintaining over 770 miles of gravity sewers, 730 lift stations, 530 miles of pressurized force mains and 1000 air release valves (force main). He has been working a team of engineers with assessment, management, operations, and rehabilitation of their sanitary collection system. The team oversees subconsultants and contractors to perform flow monitoring, smoke testing, lift station inspections, manhole inspections, sewer CCTV inspections and forcemain air release valve inspections/replacement. The constant flow of data from the field specialists is then reviewed by a team of engineers led by Mr. Schroeder to develop recommendations, summaries, improvements, training programs, and construction projects. This complex program is enhanced with sophisticated GIS Tools and dashboards to collect and manage all data and recommendations. The CMOM and SSES programs must be integrated with numerous County departments to improve all aspects of their collection system including: capacity management, training, resiliency, spill response, operations, system maintenance, and software integration (GIS, CMMS, CCTV, SCADA). The program is helping to create a best-in-class utility for upgrading their wastewater collection system, reduce inflow and infiltration, summarize and reduce SSOs, and meet the requirements of the regulatory consent orders.

Wastewater Program Management, City of Clearwater, FL

Technical Specialist. For the City of Clearwater FL, Mr. Schroeder has been assisting with assessing, rehabilitation and replacement of their sanitary sewers, manholes and service laterals. Mr. Schroeder has been leading a team to develop work orders to perform collection system assessments and turn-key construction. The team oversees contractors to perform smoke testing, manhole inspections, sewer CCTV inspections and forcemain air release valve inspections. The constant flow of data from the field specialists is reviewed by a team of engineers led by Mr. Schroeder to develop turn-key construction work orders for sewer and lateral rehabilitation, manhole rehabilitation, sewer and lateral point repairs, sewer replacement, and ARV replacement. This complex program is enhanced with sophisticated GIS Tools and dashboards to track all work performed, money spent with the overarching goal of upgrading their wastewater collection system, prevent SSOs, and reduce inflow and infiltration.

Comprehensive Infrastructure for Tampa's Neighborhoods Design Build Project, City of Tampa, FL

Senior Design Engineer. For the City of Tampa FL, Mr. Schroeder was the Pipeline Design Engineering Manager for the Comprehensive Infrastructure for Tampa's Neighborhoods Design Build Project which consisted of the assessment, design and construction of over 60 miles water, wastewater, stormwater infrastructure improvements, performed simultaneously in four neighborhoods. This progressive design-build project was able to efficiently assess, design, and rehabilitate and replace these pipelines. The construction methodology maximized the use of trenchless technologies including cured-in-place pipe (CIPP) for mainline sewers and laterals and pipe bursting of water mains which minimized disruption in these established four neighborhoods. As many of these neighborhoods had significant historical drainage problems, the basins were modeled and stormwater improvements were implemented including numerous new inlets, new storm sewers and upsizing of storm sewers.

Fort Lauderdale Force Main Condition Assessment/Rehabilitation, City of Fort Lauderdale, FL

Technical Advisor. For the City of Ft. Lauderdale FL, Mr. Schroeder has been assisting with assessing, rehabilitation and replacement of their sanitary sewers, manholes and service laterals. Mr. Schroeder has been leading a team to review CCTV videos and data to develop prioritized sewer improvements for structural longevity and infiltration reduction.

Water and Force Main Risk Assessment and Asset Mgt. Program, City of Sunrise, FL

Task Leader. For the City of Sunrise FL, Mr. Schroeder is leading the water main and force main asset management project. Using a variety of tools including Model Builder, Power BI, ARCMAP and more, the team developed a complete risk assessment and budget forecast for inspection and replacement of all of the city forcemains and watermains with a detailed phased, geographical approach that guides spending of approximately 2% of the value of their pipeline assets per year.

120-inch Scioto Main Sanitary Sewer Assessment and Rehabilitation Design, Columbus Ohio Division of Sewers and Drainage, Columbus, OH

Mr. Schroeder managed a local team of sewer experts to evaluate and design a long-term rehabilitation of 7,700 linear feet of 120-inch Scioto Sewer Main that enters the Jackson Pike WWTP. The project also included performing manholes inspection using tablets, MACP software and a pole-mounted GoPro Camera. Mr. Schroeder procured and managed Multi-Sensor Inspection (MSI) inspection equipment (Sonar) to gather digital video, and debris locations and quantities in the sewers. A diving company was procured to remove a PVC lining blockage in the pipe and to perform Schmidt Hammer testing of the exposed bare concrete to document the estimated compressive strength of the 120-inch RCP. These inspections provide high-definition video with NASSCO PACP coding and assessments of debris levels and H2S concentration levels at several manholes.

Sean FitzGerald, PE

Asset Hierarchy; Technical Advisor; Data QA/QC; Cityworks

Mr. FitzGerald has extensive experience in conveyance asset management helping numerous utilities develop and implement programs to proactively plan for operations, assessment and renewal. He has helped lead the development of key software tools on projects to help ensure efficiency and support their asset management efforts.

Education

MS, Environmental Engineering, University of Cincinnati, 1994

BS, Civil Engineering, University of Cincinnati, 1992

Certification/License

Professional Engineer: FL, OH, NY, KY, TX, MN, Washington DC

Areas of Expertise

- Sewer and water master planning
- Sewer and force main assessment and rehabilitation
- Hydraulic analysis
- Pipe and pump station design

Experience

- 34 total years
- 17 years with Hazen

Professional Activities

Water Environment Federation

Ohio Water Environment Association

American Water Works Association

Kentucky-Tennessee Water Environment Association

Sewer Mapping Program, City of Fort Lauderdale, FL

Project Manager for the development and implementation of the full mapping of the City's collection and transmission system. The initial plan includes the development and use of machine learning automated imagery analysis to locate manholes, reducing the survey costs dramatically. Managed the development of the full sewer geodatabase schema and population of the data from field surveys and as-built data.

Capacity, Management, Operations & Maintenance (CMOM) Program Development and Implementation, Sarasota County, FL, Sarasota County, FL

Task Lead for the development and implementation of the Sarasota County (CMOM program. This 5-year program began with the Year 1 development of the CMOM program and is in year 2 of the 4-year implementation. The CMOM program involves evaluation and improvement all aspects of their sewer collection system assets including gravity sewers, force mains and lift stations. The first year included a gap analysis and CMOM program development that includes a series of action items to fully implement the CMOM Program. Subsequent activities include the development of the Collection System Asset Management Program, operations training, performance management, as well as SSES support to reduce I/I and reduce system overflows. The County has over 12 different departments that are involved in managing, operating, and maintaining over 770 miles of gravity sewers, 730 lift stations and 530 miles of pressurized force mains. Hazen will help the County become a "Best in Class" Utility with an outstanding CMOM program that is highly effective in resource allocation to protect the public health & environment and promote financial stewardship & sustainable growth.

Cityworks Implementation, City of Fort Lauderdale, FL

Senior Project Manager on behalf of the City of Ft. Lauderdale for the implementation of Cityworks CMMS software for the Public Works Department and includes all assets for the wastewater, stormwater, and drinking water divisions. Providing technical assistance with development of workflows, business processes, and geodatabase design for implementation.

Charlotte County Flow Monitoring Program, Charlotte County, FL

Technical lead for the development of a flow monitoring program for Charlotte County Utilities. The program included the development of Standard Operating Procedures (SOPs) for the selection and installation of flowmeters. The program also included detailed QA/QC procedures and how to diagnose data issues.

Force Main and Air Release Valve Program, SD1 of Northern Kentucky, Fort Wright, KY

Project Manager for the development of Sanitation District No. 1's force main, pump station, and air release valve preventative maintenance program (PMP) aimed at reducing force main failures within the District's service area from about 129 pump stations. The project also included the field location of over 72 miles of force main as well as 180 air release valves. Another key feature of the program was the detailed criticality assessment and scoring for all force mains. This criticality was used to develop PMP activities for the force mains. A perpetual PMP was also developed for the air release valves which included an ongoing algorithm to determine the frequency of inspection and the trigger for valve replacement. A preliminary risk assessment was also conducted on targeted force mains which included detailed hydraulic and surge modeling as well as a review of the piping profile to look for corrosion potential.

Vertical Asset Inventory, Cleveland Water, Cleveland OH

Technical Advisor for the development of the vertical geodatabase schema and asset inventory of all Cleveland Water's vertical assets. Collection includes over 60 asset classes located across four Water Treatment Plants, and 22 additional sites in the distribution system including booster stations and finished water storage, for a total of approximately 15,000 assets. Supported the prime and client regarding the suitability of the schema to support vertical asset inventory and application in Cityworks.

Sanitary Sewer Master Plan, Pinallas County, FL

Hazen lead for the development of an integrated wastewater master plan for Pinellas County Utilities. Tasks include lead support for the development of private sewer lateral policies, private sewer system policy, detailed hydraulic analysis of over 150 flowmeter locations, SCADA data from over 170 lift stations, development and calibration of a detailed collection system model, and development of an integrated sewer system master plan including hydraulic improvements to address SSOs, asset management improvements, and a prioritize septic to sewer program. Also includes comprehensive rehabilitation program to address private and public sources of I/I.

Pressure Pipe Assessment and Rehabilitation Program, Boca Raton, FL

Technical lead for the program to develop and implement a prioritized water distribution and force main assessment and rehabilitation/replacement program for the entire City. The program includes the development of a refined risk model resulting in the use of remaining useful life and consequence of failure to support condition assessment and asset renewal funding planning resulting in a living Master Plan.

Consent Order Program Management Services, City of Fort Lauderdale, FL

Technical support for the City of Ft. Lauderdale Consent Order Program Management. Key activities include acting as Senior Project Manager for the City for its Cityworks implementation Phase 1 and Phase II as well as the technical support for the development of the AM/CMOM Program as required in the Consent Order.

Comprehensive Asset Master Plan, City of Sunrise, FL

Technical Support for the comprehensive asset master plan for Sunrise FI. The project included the development of a risk model and Power BI asset renewal tool that allows users to adjust funding and easily visualize impacts on risk profile. The output was an optimized CIP based on maximizing risk reduction for each dollar spend and funding available.

Vertical Asset Inventory, Cleveland Water, Cleveland, OH

Technical Advisor for the development of the vertical geodatabase schema and asset inventory of all Cleveland Water's vertical assets. Collection includes over 60 asset classes located across four Water Treatment Plants, and 22 additional sites in the distribution system including booster stations and finished water storage, for a total of approximately 15,000 assets. Supported the prime and client regarding the suitability of the schema to support vertical asset inventory and application in Cityworks.

CMOM Implementation, Lexington Fayette Urban County Government (LFUCG), Lexington, KY

Assisting LFUCG with the implementation of their comprehensive CMOM program. The CMOM implementation includes developing SOPs, training, and overall program implementation based on their approved CMOM Program.

Julie Karlinskint, PE

Hazen Project Manager; Local Point of Contact

Ms. Karlinskint brings an understanding of utility management gained from her past experience of managing the operations of a large private utility. This has enabled her to understand the specific issues facing utilities and assist them in providing utility service to meet the growing demands of their customers.

Education

MS, Bioenvironmental Engineering, University of Oklahoma, 1984

BS, Civil Engineering, University of Kansas, 1988

BS, Environmental Science, University of Oklahoma, 1982

Certification/License

Professional Engineer: FL

Areas of Expertise

- Wastewater Collection System Evaluations
- Utility Master Planning
- Planning, Design, and Management
- Regulatory and Permitting Assistance

Experience

- 39 total years
- 17 years with Hazen

Professional Activities

Water Environment Federation

American Water Works Association

American Society of Civil Engineers

General Consulting Services, Charlotte County, FL

Ms. Karleskint has worked with Charlotte County Utilities for the past 20 years providing regulatory and operational assistance, funding, planning and engineering design for various projects. She is currently providing funding assistance to Charlotte County on various projects, in addition to preparing a Reclaimed Water Distribution O&M Manual and providing assistance with updating their Wastewater Ordinance. Other projects include regulatory and permitting assistance for all the water and wastewater facilities and overseeing the preliminary and final design for the Rotonda WRF.

Evaluation of Water and Sewer Feasibility Study, Barrier Islands, Charlotte County, FL

Oversaw the evaluation of a Water and Sewer Feasibility Study for Barrier Islands, for Charlotte County Utilities. This included a detailed evaluation of necessary improvements and estimated cost for providing water and sewer service from Charlotte County Utilities to Little Gasparilla, Bocilla and Don Pedro Island which were being served by private utilities and isolated from the mainland with only ferry service.

US 41 Utility Improvements, Charlotte County Utilities, FL

Ms. Karleskint oversaw the design and evaluation of water, wastewater and reclaimed water main improvements along the US 41 corridor as part of the FDOT road widening. This includes preparation of conceptual design report for water, wastewater and reclaimed water which recommended line sizing based on evaluation of demands and hydraulic analysis

Project Management and Permitting, Charlotte County, FL

Oversaw the permitting and design coordination of the water, wastewater and reclaimed water transmission improvements for the FDOT US 41 project from Enterprise to Dahlgren. Ms. Karleskint assisted CCU with the 2008 permit renewal for East Port WRF including the phased upgrading of the plant from 6 to 9 mgd. She also prepared the permit renewal applications for the East Port DIW-2 and West Port DIW-1 in 2009, and assisted CCU on closure of East Port and Rotunda Consent Orders.

Capacity, Management, Operation and Maintenance Program, Sarasota County, FL

Project Manager. Development of a CMOM program as required by a FDEP Consent Order associated with unplanned wastewater discharges for Sarasota County Utilities

Department. Currently working with Sarasota County staff to develop a framework to significantly reduce sanitary sewer overflows associated with their collection system. As part of this project, Hazen is working closely with staff to understand their system operations so that protocols and procedures can be developed and implemented to more effectively and efficiently allow the County to meet their desired level of Service and Performance goals. As a result, a CMOM program plan will be developed that will document the current state of all CMOM related programs and provide a timeline for implementing each component of the program. In addition, Hazen is providing regulatory assistance to County in meeting the requirements of the Consent Order.

General Consulting Services, Sarasota County, FL

Project Manager. Ms. Karleskint has provided planning, regulatory and permitting assistance in addition to modeling and design. Projects include relocation of utilities required for FDOT, performing a detailed environmental assessment of the County's three water and four wastewater treatment plants, development of lift station protocols, force main evaluation, EPA Groundwater Rule Assessment, development of Stormwater Infrastructure Rehabilitation Program Manual and updating the Phillippi Creek Septic Tank Replacement Program Master Plan and evaluating options for funding.

Philippi Creek Septic System Replacement Program Master Plan Update and Facilities Plan Development, Sarasota County, FL

Project Manager for updates to the Philippi Creek Replacement Program Master Plan and preparation of Facilities Planning Document for SRF funding for three of the remaining areas.

Wastewater Collection System Evaluation and Implementation, City of Arcadia, FL

Project Manager for development of City-wide collection system evaluation and implementation program including recommendations for multi-phase approach for improvements that are being funded with a combination of FDEP SRF grants and loans, totaling over $22 million.

Facilities Plan for Potable Water, Wastewater and Stormwater Improvements, City of Venice, FL

Ms. Karleskint served as Project Manager responsible for preparing a facilities plan for potable water, wastewater and stormwater improvements to assist the City in obtaining low interest SRF loans for implementing the City's five-year Capital Improvement Program. Using the City's Water and Wastewater Master Plan, two separate facilities planning documents were prepared that included all necessary required information and developed so that document can be easily amended to incorporate additional projects as final plans and specifications are developed for future years.

Braden River Utilities Non Potable Water Master Plan, Lakewood Ranch, FL

Project Manager for preparation of reuse master plan and hydraulic modeling of reclaimed water system for the Lakewood Ranch development. As part of this master plan, a hydraulic model of the reclaimed water was constructed, evaluation of the developments storage facilities were provided, evaluation of irrigation water quality was performed since customer complaints regarding slime layer and detailed irrigation schedule developed to balance reclaimed water for existing customer base to assure a continued irrigation water supply. It also included public education component and meeting with community development districts regarding revised schedule.

Boris Sladojevic

GIS and Webmap Applications

Mr. Sladojevic is experienced in working in the public and private sector using GIS for environmental restoration and assessment purposes. He has experience with ArcGIS Pro using advanced GIS tools for vector and raster data analysis, collection, and data management as well as ArcGIS Online for web-based application development.

Education

BS, Environmental Science, University of South Florida, 2020

Areas of Expertise

- GIS
- Map Analysis
- Database Management
- WepApp/Dashboard Development
- Coastal Assessment and Restoration
- Hydrographic Data Maintenance

Experience

- 3 total years
- 1 year with Hazen

Wastewater Collection System Program Management, City of Clearwater, FL

GIS asset management for City of Clearwater sewer system. ArcGIS Pro and ArcGIS Online for geoprocessing, database management, program tracking, rehabilitation efforts, and map creation. ArcGIS Online group management, ESRI Dashboard, Field Map (mobile), web application development for collection system rehabilitation and work order tracking.

Capacity, Management, Operations, and Maintenance (CMOM) Program Development, Sarasota County, FL

Use of ArcGIS Pro, ArcGIS Online, and ESRI Dashboards for geoprocessing, map creation, and application development for asset management. GIS for smoke testing, manhole inspections, sewer asset condition, lift station runtime analysis, I/I, and flow monitoring data.

Sewer Rehabilitation, City of Arcadia, FL

Asset tracking, management, and rehabilitation status updates for sewer assets in the City of Arcadia. Integration of data from geodatabases in ArcGIS Pro to client asset management system, DiamondMaps.

Hollywood Southern Regional WWTP, City of Hollywood, FL

Survey123 form and report template development to record vertical asset conditions within WTP process areas and disciplines.

Septic to Sewer Conversion, Pinellas County, FL

Map and model builder development for septic to sewer cost estimating.

SSES-CSAP Development, City of Fort Lauderdale, FL

Risk model framework development. Generating asset-level risk scores from Likelihood of Failure (LOF) and Consequence of Failure (COF) criteria using model builder, python, and SQL expressions.

City of Tallahassee Lead and Copper Rule Revisions – Compliance Assistance, Tallahassee, FL

Development of a Lead and Copper Rule GIS inventory using existing city water service data. Use of Model Builder and Python scripting to give structure to the analysis and produce comprehensive, repeatable workflows. Further analysis includes identifying prioritization areas for service lines classified as unknowns for additional field work.

Elena Horvath

GIS

As a Principal Scientist in Hazen and Sawyer's Asset Management Service Group, Ms. Horvath is a technical contributor to full-scale asset management and optimization programs. Her experience includes GIS workflow setup and implementation, data modeling and workflow automation, and data and dashboard integration.

Education

MGIS, Geographical Information Systems, 2011

BBA, Accounting with Information Systems, James Madison University, 1991

Areas of Expertise

- GIS (ArcGIS Pro, ArcMap, Survey123, ArcGIS Portal, ArcGIS Online, ArcGIS Operations Dashboards)
- Asset Management

Experience

- 28 total years
- 5 years with Hazen

CMOM Development, Sarasota County, FL

GIS Analyst. Assisted with mapping and condition assessment modeling efforts in the development and mobilization of the County's Capacity, Management, Operation, and Maintenance (CMOM) program.

City of Tampa PIPES (Neighborhood Infrastructure Design Build), City of Tampa, FL

GIS Analyst. Assisted with collaborative mapping efforts between multiple subcontractors as part of a project to complete water, sewer, stormwater, and transportation infrastructure improvements in four neighborhoods.

Sewer Mapping Phase II, City of Ft Lauderdale, FL

GIS Analyst. Assisted with the sewer database schema redesign and integration of field collection data, as-builts, and network integrity corrections.

Septic to Sewer Project, Pasco County, FL

Assisted with data review, parcel analysis, and mapping as part of an effort to identify, group, prioritize, and develop alternative collection and treatment system options for conversion to sewer.

Water Distribution System Master Plan, City of Hallandale Beach, FL

GIS Analyst. Assisted with the GIS data review, management, and mapping associated with the development of a Water Distribution System Master Plan to include updating and calibrating the existing hydraulic model, identifying capacity and potential improvements, and developing a 20-year capital improvement plan

JEA Innovative Wastewater Treatment Program, Jacksonville, FL

Assisted with parcel analysis and mapping during methodology development phase as part of an effort to identify wastewater management solutions through innovative technologies and approaches that can be applied to failing septic systems. The Master Plan document developed by the program will identify alternative collection system designs, advanced on-site wastewater treatment systems, decentralized treatment technologies, institutional frameworks, and other innovative approaches to upgrade approximately 65,000 septic systems that remain in Duval County.

Kylee Kavanaugh, EI

Field Data Collection

Ms. Kavanagh recently joined Hazen as a graduate from the University of Florida. During her time in school, she focused on stormwater design projects where she served as the team leader of a beneficial reuse project. She is currently involved in a pump station project and various sanitary sewer evaluation projects across the state of Florida.

Education

BS, Environmental Engineering, University of Florida, 2023

Certification/License

Engineering Intern: FL *(Application In Process)*

Areas of Expertise

- 1 total year
- <1 year with Hazen

Experience

- 28 total years
- 5 years with Hazen

Professional Activities

Florida Water Environment Federation

Capacity, Management, Operations & Maintenance (CMOM) Program Development and Implementation, Sarasota County FL

Assistant Engineer. The CMOM program involves evaluation and improvement all aspects of the sewer collection system assets including gravity sewers, force mains and lift stations. The County has over 12 different departments that are involved in managing, operating, and maintaining over 770 miles of gravity sewers, 730 lift stations and 530 miles of pressurized force main.

S-8 Pump Station Rehabilitation, South Florida Water Management District, Broward County, FL

Assistant Engineer. Preliminary and detailed design for rehabilitation of an existing stormwater pump station to provide for 20 years of additional useful life. This included complete multi-disciplinary overhaul of the facility, including site layout changes, replacement of major electrical and mechanical equipment, and structural/architectural updates to comply with current standards and codes.

Fiesta Village WWTP RM Upgrade and Deep Injection Well and Fort Myers Beach WWTP Deep Injection Well #2, Lee County, FL

Assistant Engineer. Construction administration of surface facility improvements at both the Fiesta Village and Fort Myers Beach WRFs associated with the 14-mgd, 3,000-foot deep injection well (DIW) and five-mile long 24-inch-diameter reuse transmission main project. Elements of construction included new vertical turbine effluent transfer pump stations at both sites as well as extensive large-diameter on-site piping and valving and electrical facilities.

Fort Myers Beach WWTP Belt Filter Press Replacement Project, Lee County, FL

Assistant Engineer. Design and construction services for dewatering system improvements with the installation of two new belt filter presses, associated sludge feed pumps, polymer system, dewatering building improvements, dewatered cake conveyance and associated electrical and instrumentation improvements.

Alicia Mata, PE

GIS

Ms. Mata has served as Project Engineer in water and wastewater projects in North and South America. She has 9 years of experience and has been involved in construction management, master planning and feasibility analysis.

Education

BS, Environmental Engineering, University of Florida

Certification/License

Professional Engineer: FL

Areas of Expertise

- Wastewater master planning
- ArcGIS database creation and analysis
- Flow measurements and wastewater sampling
- Feasibility analysis

Experience

- 9 total years
- 9 years with Hazen

Capacity, Management, Maintenance and Operation Program, Sarasota County, FL

The overall CMOM development and implementation will be conducted as a multi-phase, multi-authorization six-year (2020-2025) project. A current major focus is the implementation of a Capacity, Management, Operations, and Maintenance (CMOM) Program to ensure the sustained performance of the wastewater collection/transmission system over time.

Development and Calibration of the Wastewater Transmission System Hydraulic Model for Big Coppitt, Florida Keys Aquaduct Authority, FL

Hazen was tasked by the Florida Keys Aquaduct Authority (FKAA) to develop a Wastewater Transmission System Hydraulic Model for the Big Coppitt service area. The system included 20 lift stations, approximately 37,939 linear feet of force mains, and 71,437 linear feet of gravity mains from which approximately 8,880 linear feet are part of the transmission system. The model was developed in InfoWorks, calibrated with field data, and used to identify potential improvements to the system based on existing configuration and scenarios that considered additional flows. As a Project Engineer, Mrs. Mata prepared a report and maps based on ArcGIS to compile the model development and calibration methodology, results and recommended improvements to the system.

Upgrade of Lift Station 54 and Lift Station 78 at the Miami International Airport, Miami-Dade County, FL

LS 54 (3 hp) and LS 78 (7.5 hp) are part of a system of more than 20 lift stations that compose a manifolded force main system. Both stations had experienced pumping issues related to maximum operating range and discharge velocity, requiring maintenance resources on a constant basis. As a Project Engineer, Mrs. Mata worked on the hydraulic analysis of the existing pumps, the selection of new pumps, and documenting the impact of the upgrades in the system. These tasks required using a calibrated hydraulic model in SewerCAD. Results were compiled on separate basis of design report (BODR) for each station.

Luiz Cortes, SP, PLS, PPS, PSM, CP | Aerial Mapping Operations Manager

Mr. Cortes has 33 years of experience in photogrammetric engineering and surveying. During his 25+ years in project management, he has supervised and managed hundreds of mapping projects, not only in the United States, but also overseas. Mr. Cortes is well versed in all phases of photogrammetry, including aerial photography planning, photo control survey, digital orthophotography, planimetric, contour mapping, and GIS. Mr. Cortes is a hands-on professional; business driven manager, with extensive experience in project design and project budget control, as well as aerial-triangulation planning, processing, and reporting. While working in photogrammetric surveying he has also supervised and managed survey tasks using high density LiDAR dataset collected with manned aircraft, Mobile Scan and/or Terrestrial Scan. He has been involved and kept current with all methods and techniques of surveying, including leveling, total stations, GPS (RTK, Static, and VRS), terrestrial scan, and Mobile LiDAR. Currently, Mr. Cortes is responsible for the operation of SAM's Aerial Mapping services, in support of all Aerial Mapping and GIS project, incorporating new technology, and providing quality deliverables to our clients.

Education:
University of State of Rio de Janeiro, Rio de Janeiro, RJ – Brazil, Cartographer Engineer

License:
Certified Photogrammetrist with American Society of Photogrammetry and Remote Sensing: No.1546
Surveyor Photogrammetrist, VA – No. 0408000145
Professional License Surveyor, NC- L5077
Photogrammetric Surveyor, SC - 23654
Professional Surveyor and Mapper, FL LS7197

Years of Experience with SAM:
5

RELEVANT EXPERIENCE

Multi-service Data Collection for Ft. Lauderdale, Florida (ongoing)

- Operations Manager: SAM was selected, and is in the middle of providing the following services for Ft. Lauderdale, Florida. SAM is providing Mobile Mapping LiDAR Acquisition, Aerial Orthophotography, Utility GPS Mapping and Verification, and SUE QL-B services to the city of Ft. Lauderdale to enable the city to have asset management capabilities across a multitude of utilities and city-owned infrastructure. The data collected will support regulatory compliances at the local, state and federal level, and enable city staff to operate from the most up-to-date infrastructure information.

North Carolina Statewide Orthoimagery Program, NC (2021-Present & 2014-2017)

- Mr. Cortes has managed, supervised and had been the NCPLS in charge for acquisition, processing and delivery of 26 counties, in the North Carolina Orthoimagery programs. All these projects required acquisition of 4-band aerial digital image for process of 6-in digital orthophoto covering:
  - 1,529 sqmi in 2022 (NPM22 for 3 counties: Caswell, Rockingham and Stokes = 1705 tiles)
  - 3,653 sqmi in 2017 (EP17 for 7 counties: Edgecombe, Franklin, Halifax, Nash, Northampton, Vance & Warren = 4074 tiles)
  - 4,110 sqmi in 2016 (CO16 for 7 counties: Greene, Lenoir, Jones, Craven, Pamlico, Onslow & Carteret = 4583 tiles)
  - 2,315 sqmi in 2015 (SPM15 for 5 counties: Cherokee, Clay, Graham, Macon and Swain = 2582 tiles)
  - 1,465 sqmi in 2014 (NPM14 for 4 counties: Madison, Yancey, Mitchel and Avery = 1634 tiles)

  Mr. Cortes also planned acquisition and control for the NPM18 program.

Barton County Orthophotos - MO (May 2021)

- Project Manager for a 596 square mile countywide orthophoto job for Barton County, Missouri. The project consisted of production of 6-inch GSD orthophotos for the county in early 2021. With SAM's new Riegl 1560II LiDAR system flown inside our fixed-wing Grand Caravan EX, the team acquired over 1,800 images and LiDAR concurrently for the entire county in a single day. The project was flown in March, during leaf-off conditions and delivered to the client in just over two months from acquisition. Deliverables included creation of final Tiff and ECW orthophoto tiles as well as a combined single SID deliverable image.

Charles Heise | SUE Manager

Mr. Heise has over 30 years of project management experience in Subsurface Utility Engineering. This includes mapping and locating Utilities for several Energy clients as well as Private Sector Industries. Charles expertise are in advanced Multi-channel and High and Low frequency GPR designation as well as conventional Radio Frequency Devices. Throughout his career he has performed hundreds of designating and Locating projects for all Quality Levels A through D of SUE as denoted by ASCE Standards. He has also worked with Industry leaders in advancing GPR Technologies for SUE Advancement. His expertise also include GIS adaptation of Utility information into databases for several City, County, and State GIS Systems.

Professional Licenses/Associations:
- CPUL
- Multi-channel GPR Innovation, Louisiana Tech

Certifications:
- OSHA 40-HR Certification
- ASCE Standards Committee

Years of Experience with SAM:
3

RELEVANT EXPERIENCE

City of Jacksonville
- Emerald Trial This project primarily consisted of 3 miles of QL-B Designation of all utilities within the Proposed Emerald Trail extension through downtown Jacksonville. An extensive QLB designation along with sign and pole clearing and over 100 QLA test holes were performed.

I-10 Intersection Improvements at SR 61 (Thomasville Road) in Leon County, Florida (FP 222593-6)
- This project includes full Quality Level-B designation along with over twenty Quality Level-A test holes to support a major design survey.

City of Ft. Lauderdale - GIS Water line Mapping
- This project consisted of over 240 miles of City owned water line recovery and mapping within GIS software. The project employed several SUE QL-B crews and mapped all exiting Water Lines for the City larger than 8 inches to be added to the overall City GIS platform.

District Wide SUE Designate, Locate and Coordination, FDOT District 1, Districtwide, FL
- Managed task work orders for the duration of the District wide Contract to provide Quality Level A and B subsurface utility investigations. Performing and managing SUE surveys at the District's request throughout FDOT District 1. Managed several work task orders for SUE investigation on several roadways and State-owned properties.

U.S Coast Guard Bases Utility GIS Mapping and Condition assessment, U.S Coast Guard, Nationwide
- Managed several US Coast Guard Base Utility Assessment Surveys. The scope of the project was to map in GIS the existing utility systems at 3 Bases in Florida and 5 other bases across the country and add utility condition assessment within the internal GIS database.

Orange County Public Schools Utility Location Continuing Services Contract, Orlando FL
- Managed a continuing service contract for Orange County Florida Public Schools to provide QL-D, QL-B and QL-A Services in conjunction with new construction, expansion, and improvements for the Orange County School Board. Deliverable were entered directly into the OCPS GIS system and maintained through the duration of the contract.

Martin Friedrich, CST III | SUE Services Manager

Mr. Friedrich has over 18 years of extensive experience in surveying and subsurface utility location. He has a thorough knowledge of survey standards and procedures, and his surveying career has focused on surveys for the Florida Department of Transportation including design, control right-of-way mapping, and SUE surveys. He is also experienced in boundary, topographic, and construction layout surveys throughout Florida for both public and private sector clients. Mr. Friedrich has experience specializing in utilities and transportation projects for the Florida Department of Transportation, Veterans Administration, MacDill Air Force Base, and numerous Counties and Municipalities across South Central Florida. He also developed an application to automate the Vvh (Verified vertical and horizontal) SUE data report creation, making the process much more efficient, minimizing human error and manual processes.

Certifications:
- Certified Survey Technician (CST) Level 3

Years of Experience with SAM:
1

RELEVANT EXPERIENCE

City of Ft. Lauderdale - GIS Water line Mapping

- Aided in field collection and processing and QA/QC for over 240 miles of City owned water line recovery and mapping within GIS software. The project employed several SUE QL-B crews and mapped all exiting Water Lines for the City larger than 8 inches to be added to the overall City GIS platform.

Hillsborough County, Fawn Ridge WTP Electrical Feeder Route

- Provided Quality Level A and B subsurface utility investigations along the proposed route of a new electrical connection between two county treatment Plants. Quality Level A involves the use of nondestructive digging equipment at critical points to allow for survey of the horizontal and vertical position of underground utilities, as well as the type, size, condition, material, and other characteristics. Quality Level B involves the use of surface geophysical techniques to determine the existence and horizontal position of underground utilities.

Florida Department of Transportation, US 41 from Aqui Esta Drive to Carmalita Street, for Subsurface Utility Engineering (SUE), Charlotte County, FL

- Provided Quality B subsurface utility investigations. Quality Level B involves the use of surface geophysical techniques to determine the existence and horizontal position of underground utilities.

City Of Tampa, Mabel Street and Henry Stormwater Drainage Improvements, Hillsborough County, FL

- Provided Quality Level A and B subsurface utility investigations at service connections to determine line elevations and sizes for the construction of a new stormwater pipeline. Quality Level A involves the use of nondestructive digging equipment at critical points to allow for survey of the horizontal and vertical position of underground utilities, as well as the type, size, condition, material, and other characteristics. Quality Level B involves the use of surface geophysical techniques to determine the existence and horizontal position of underground utilities.

District Wide SUE Designate, Locate and Coordination, FDOT District 1, Districtwide, FL

- Managed task work orders 7 and 8 to provide Quality Level A and B subsurface utility investigations. Quality Level A involves the use of the use of nondestructive digging equipment at critical points to determine the precise horizontal and vertical position of underground utilities, as well as the type, size, condition, material, and other characteristics. Quality Level B involves the use of surface geophysical techniques to determine the existence and horizontal position of underground utilities.

Pamela Hyatt, PSM

Principal Surveyor

Hyatt Survey Services, Inc.

Years of Experience: 32

Education:

Bachelor of Science,
Survey and Mapping, University of Florida, 1990

Distinguishing Attributes:

- Mrs. Hyatt has 32 years of professional surveying and mapping experience relating to transportation planning, construction and engineering.

Certifications/Registrations:

- Professional Surveyor and Mappers, State of Florida, #5550

Affiliations:

- Florida Surveying and Mapping Society
- Manasota Chapter of the Florida Surveying and Mapping Society
- National Society of Professional Surveyors.
- National Association of Woman in Construction
- National Association of Professional Women

EXPERTISE:

As President of Hyatt Survey Services, Inc., Pamela's duties include the direction of quality control and technical procedures as well as client relations and marketing. In addition to her administrative duties, Mrs. Hyatt is also responsible for the production of boundary, right-of-way and topographic surveys. Mrs. Hyatt couples over thirty years of surveying experience with a four-year degree in Surveying and Mapping. Her project experience has included residential, commercial and municipal development surveys.

Availability: 40%

KEY RELEVANT PROJECTS:

82nd Street Water Main Upgrades, Pinellas Co., FL
Client: McKim & Creed
Contact: David Wehner, P.E.
1365 Hamlet Ave., Clearwater, FL 33756 Ph: (727) 442-7196 email: dwehner@mckimcreed.com
SCOPE OF WORK PERFORMED:
Hyatt Survey prepared a Boundary/Topographic Survey for 1,500 lf of proposed water main to Hillsborough Co. specifications. Legal Descriptions & Sketches were prepared for three (3) utility easements.
Completed: June 2014 Contract: $11,155

Venice Eastside WRF, Sarasota County, FL
Client: McKim & Creed
Contact: Matthew Love, P.E.
3903 Northdale Blvd., Tampa, FL 33624
Ph: (813) 549-3740 email: mlove@mckimcreed.com
SCOPE OF WORK PERFORMED:
Hyatt Survey prepared a Topographic Survey of a portion of the Venice Eastside WRF. The survey included location of all visible site improvements and utility appurtenances for design of new improvements.
Completed: Nov. 2011 Contract: $5,110

CITYWIDE GRAVITY SEWER SURVEY, SARASOTA, FL
Client: STANTEC : Contact: James Hale
Ph: 239-284-6485
Email: Jamison.Tondreault@kimley-horn.com
SCOPE OF WORK PERFORMED:
Hyatt Survey determined the horizontal and vertical location of approximately 700 gravity sewer manholes throughout the City of Sarasota. The horizontal and vertical location of each manhole was determined. Elevations were determined on all manhole rims and "accessible" inverts. In addition, pipe size, material and cardinal direction were determined and indicated within written field notes.
Completed: June 2017

Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500
800HELPFLA(435-7352) or (850) 488-2221

February 9, 2023

PAMELA ANN HYATT
319 41ST ST NE
BRADENTON, FL 34208-8436

Detach Here

SUBJECT: Professional Surveyor and Mapper License # LS5550

Your application / renewal as a professional surveyor and mapper as required by Chapter 472, Florida Statutes, has been received and processed.

The license appears below and is valid through February 28, 2025.

You are required to keep your information with the Board current. Please visit our website at www.800helpfla.com/psm to create your online account. If you have already created your online account, you can use the website to maintain your license. You can also find other valuable information on the website.

If you have any questions, please do not hesitate to call the Division of Consumer Services, Board of Professional Surveyors and Mappers at 800-435-7352 or 850-488-2221.

Florida Department of Agriculture and Consumer Services
Board of Professional Surveyors and Mappers

LS5550

Professional Surveyor and Mapper
PAMELA ANN HYATT

IS LICENSED under the provisions of Ch. 472 FS
Expiration date: February 28, 2025

Detach Here

Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LS5550**
Expiration Date February 28, 2025

Professional Surveyor and Mapper License

Under the provisions of Chapter 472, Florida Statutes

PAMELA ANN HYATT
319 41ST ST NE
BRADENTON, FL 34208-8436

WILTON SIMPSON
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

Russell Hyatt, PSM

Lead Principal Surveyor
Hyatt Survey Services, Inc.
Years of Experience: 35

Education:

Bachelor of Science,
Survey and Mapping, University of Florida, 1990

Distinguishing Attributes:

- Mr. Hyatt has 35 years of professional surveying and mapping experience relating to transportation planning, construction and engineering.

Certifications/Registrations:

- Professional Surveyor and Mapper, FL. LS#5303

Affiliations:

- Florida Surveying and Mapping Society (Past-President)
- Manasota Chapter of the Florida Surveying and Mapping Society
- Tampa Bay Chapter of the Florida Surveying and Mapping Society (Past President)
- University of Florida Surveying and Mapping Advisory Committee
- The Hydrographic Society of America
- National Society of Professional Surveyors (FL Representative)
- American Society of Civil Engineers

EXPERTISE:

As Vice President of Hyatt Survey Services, Inc., Russell's duties include local, state and federal contract administration and overall quality control. In addition to his administrative duties, Russell is also responsible for the production of boundary, hydrographic and topographic surveys. He couples over 34 years of surveying experience with a four-year degree in Surveying and Mapping. His project experience has included commercial / municipal development surveys and geodetic surveys and beach/channel/port hydrographic surveys.

Availability: 60%

Russell has extensive experience providing survey services to local, state and federal agencies such as the Pinellas, Hillsborough, Manatee, Sarasota, and Charlotte Counties, Florida Department of Transportation, Florida Department of Environmental Protection and the U.S. Army Corps of Engineers-Jacksonville District.

KEY RELEVANT PROJECTS:

CITYWIDE GRAVITY SEWER SURVEY, SARASOTA, FL
Client: STANTEC
Contact: James Hale
Ph: 239-284-6485
Email: Jamison.Tondreault@kimley-horn.com
SCOPE OF WORK PERFORMED:
Hyatt Survey determined the horizontal and vertical location of approximately 700 gravity sewer manholes throughout the City of Sarasota. The horizontal and vertical location of each manhole was determined. Elevations were determined on all manhole rims and "accessible" inverts. In addition, pipe size, material and cardinal direction were determined and indicated within written field notes.
Completed: June 2017

Lake Manatee TP Waterline Rd., Manatee Co., FL
Client: Mc Kim & Creed
Contact: Phillip LLocke, P.E.
1365 Hamlet Ave., Clearwater, FL 33756
Ph: (727) 442-7196 email:
plocke@mckimcreed.com
SCOPE OF WORKK PERFORMED:
Hyatt Survey prepared a Hydrographic/Topographic survey of a 14,000 lf utility corridor. The survey included the location of all visible site improvements and utility appurtenances for design of a new water main.
Completed: October 2015 Contract:
$63,570

Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500
800HELPFLA(435-7352) or (850) 488-2221

February 9, 2023

RUSSELL PERRY HYATT
319 41ST ST NE
BRADENTON, FL 34208-8436

SUBJECT: Professional Surveyor and Mapper License # LS5303

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You are required to keep your information with the Board current. Please visit our website at www.800helpfla.com/psm to create your online account. If you have already created your online account, you can use the website to maintain your license. You can also find other valuable information on the website.

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Detach Here

Florida Department of Agriculture and Consumer Services
Board of Professional Surveyors and Mappers

LS5303

Professional Surveyor and Mapper
RUSSELL PERRY HYATT

IS LICENSED under the provisions of Ch. 472 FS
Expiration date: February 28, 2025

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Board of Professional Surveyors and Mappers
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License No.: **LS5303**
Expiration Date February 28, 2025

Professional Surveyor and Mapper License

Under the provisions of Chapter 472, Florida Statutes

RUSSELL PERRY HYATT
319 41ST ST NE
BRADENTON, FL 34208-8436

WILTON SIMPSON
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

David L. Orr, P.E., MBA

davidorr@ewg.com

Core Competencies:

- Engineering (civil / water resources)
- Capital program management
- Environmental / regulatory compliance
- Process improvement
- Utility operations / management
- Complex problem solving
- Strategic analysis / planning
- Alternative project procurement (P3)
- Large scale project management
- Utility management
- Due diligence
- National conference presentations
- Financial analysis
- Municipal procurement
- NewCo acquisition
- Sales and marketing
- Business development
- Business planning

Professional Experience:

Envirowaste Services Group, Inc. • Miami, Florida
Senior Vice President for Envirowaste Services Group, Inc (EWSG). EWSG is the premier provider of infrastructure investigation, preventive maintenance, and rehabilitation services in the Southeastern US. With locations from North Carolina to Miami, EWSG has one of the largest fleets in the industry. We stand ready to service all of your needs including: pipeline inspection, point repair, trenchless rehabilitation, smoke testing, inflow and infiltration studies, manhole rehabilitation, pipeline repair, emergency response, tank cleaning, pond/sediment removal, and industrial vacuuming services.

JACOBS – CH2M • Dallas, Texas / Orlando, Florida
Vice President of Business Development for CH2M and subsequently with Jacobs. Both CH2M and Jacobs are nationally recognized consulting, engineering, and infrastructure delivery firms providing technical, professional and construction services, as well as scientific and specialty consulting for a broad range of clients globally including companies, organizations, and government agencies including environmental consulting, water resources engineering, construction management, and utility operations. Headquartered in Dallas, TX, Jacobs operates internationally with over 52,000 employees. Jacobs is ranked the #1 Most Admired Company in the World in the Engineering, Construction category by Fortune Magazine. Engineering News-Record has ranked Jacobs #1 in its list of Top 500 Design Firms in its annual rankings of both publicly and privately held U.S. companies.

INTERTEK – PROFESSIONAL SERVICE INDUSTRIES, INC. • Oakbrook Terrace, Illinois
Senior Vice President of National Sales for Professional Service Industries, Inc. (PSI). PSI is a nationally recognized consulting, engineering, and testing firm providing integrated services in several disciplines, including environmental consulting, geotechnical engineering, construction materials testing and engineering, industrial hygiene services, facilities and roof consulting, nondestructive evaluation, specialty engineering, and testing services. Headquartered in Oakbrook Terrace, IL, PSI operates from approximately 100 offices with approximately 2,300 employees. Intertek acquired PSI in December 2015, becoming a wholly owned subsidiary with over 38,000 people in 1,000 locations in over 100 countries.

AMERICAN WATER • Voorhees, New Jersey
Director of Corporate Business Development for American Water, the largest publicly traded U.S. water and wastewater utility company with $2.9 billion in annual revenue. Responsible for implementing the corporate business development plan as well as growth efforts for American Water's regulated and competitive operations businesses within the eastern United States.

GOVERNMENT SERVICES GROUP, INC. • Longwood, Florida
Government Services Group, Inc. (GSG), is a Florida-based consulting firm specializing in local, state, and federal government water, storm water / wastewater, grants management, community development, fire services, revenue enhancement and program administration. GSG has served as the Florida Governmental Utility Authority's (FGUA's) System Manager since April 1999.

Accountable for the overall management, administration, capital planning, and construction contract supervision for the FGUA as Operations Manager. The FGUA consisted of four separate water and wastewater systems located within five counties in central and southwest Florida serving over 84,000 water and wastewater connections. During 2005, net assets of the systems increased $25 million through project delivery while the systems experienced a 12% increase in customers.

UTILITIES, INC. • Altamonte Springs, Florida
Utilities, Inc. is a privately owned, water and wastewater utility company serving 300,000 primarily residential customers across 15 states.Responsible for the overall management, administration, capital planning, operations and construction contract supervision for seven affiliated corporations including the largest single operating subsidiary within the organization as Regional Manager.

PUBLIC RESOURCES MANAGEMENT GROUP (**PRMG)** • Maitland, Florida
PRMG is a financial and management-consulting firm whose clients primarily include water, wastewater, electric, natural gas, storm water, and solid waste enterprise systems specializing in strategic, financial, economic, and business planning services, with a focus on the public enterprise sector. Instrumental in providing financial, rate and management consulting services to municipal, private, and semi-private clients as a Senior Financial Consultant.

Education:

1999-2001 **Crummer Graduate School of Business, Rollins College** • Winter Park, Florida
Master of Business Administration (with honors)
Specialization: Finance

1992-1996 **University of Central Florida** • Orlando, Florida
Bachelor of Science in Environmental Engineering

1989-1992 **Polk Community College** • Winter Haven, Florida
Associate of Arts in Biological Sciences

Professional Affiliations:

- Member American Water Works Association
- Member Water Environment Federation
- Registered Professional Engineer Licensed in Florida #60207

References Available Upon Request

MICHAEL GAETA

1123 Fennel Green Dr, Seffner, FL 33584
cellular (813) 326-8712
mgaeta1@gmail.com

DISTRICT MANAGER/OPERATIONS MANAGER

Highly motivated and resourceful management professional with a record of developing and supporting successful sales methods and procedures. Consistent ability to improve organizational efficiency through leadership that aligns the business processes with training and development, cost savings, loss prevention, leadership and team building.

Able to focus and work well in high-pressure situations, constantly seeking new challenges, a professional and driven individual with both a strong work ethic, and the desire to exceed expectations in all aspects of professional endeavor.

- Always on schedule and under budget, able to prioritize and handle multiple tasks while effectively achieving and exceeding both regional and company goals. A leader of high-performance teams who thrives in environments requiring a high-level performance and a big-picture thinker.
- Able to quickly assess and utilize the appropriate architecture to meet the specific needs of the business requirement at hand.
- Excellent interpersonal, team building, coaching and influencing skills Demonstrated leadership and relationship-building skills Ability to handle highly confidential and sensitive information in a professional manner Proven ability to create effective partnerships with employees at all levels within the organization

CORE COMPETENCIES

Team Leadership
Multi-Unit Retail Management
Customer Relationship Management
Change Management • Operations Management

PROFESSIONAL EXPERIENCE

Envirowaste Services Group Operations Manager
Tampa, FL 2018-Present

- Managed the Broward location to bring a new region to 2.2 Million a year.
- Was transferred to the Tampa location and bring to Revenue to a 5.6 Million a year
- Was the Operations Manager, Supervisor & Administrator for entire region.
- Trained staff on operations and business management to teach how to run a business not just do the work.
- Hired staff with & with-out experience to build the region to double its size.
- Build client relations & develop customer service policies throughout the entire region.
- Managed the A/R so we never lost any money or were behind in collections of clients' moneys.
- Developed systems to always have the client's deliverables on time and correct.

Alfred Angelo Bridal, Regional Manager
Tampa, FL 2012 – 2017

- Managed 13 stores in 6 states. FL, Ga, La, MS, Tn and Al
- Took southeast region that had 5 consecutive years of 20-20% negative growth, in 1st year-2013-2% growth to LY. 2nd year-2014 6% growth to Ly. 3rd year-2015 11.7% growth and #1 district in the country. 4th year-2016 4.3% growth to Ly.
- Developed Accounts payable invoicing for nationwide use for Alterations charges and Seamstress payments.
- Developed all District Manager reporting Excel spreadsheets to Corporate Office for
    - District and Store Monthly Goals
    - Weekly payroll reporting to Vp Retail Operations
    - Store staff monthly work and payroll schedule for managers to monitor payroll and have working schedules.
- Developed store tracking spreadsheets to show real time performance for Store, Managers and staff.
    - Store reporting daily numbers in format that showed daily, weekly and monthly tracking. Sent to DM's nightly. Other data in sheet store specific.
    - Weekly store Dashboard to show individual employees key indicator sales and stats, with coaching tabs so weekly 10min touch bases with individual staff members are done by store managers for performance enhancement or sometimes the necessary tool to performance out.

- Set up many operational procedures for better inventory tracking
    - Customer inventory to track balances owed and paid in full orders

For Eyes Optical, District Manager
Tampa, FL 1982 – 2011

- Over 30 years management experience in multi-unit retail operations, managing and leading strong performance teams, achieving corporate sales and profit goals.
- Proven success in the recruitment, hiring, customer service/ selling culture for over 7 stores in Northern Florida with annual sales of over $5 million.
- Acting District Manager for Atlanta district for 3 years from 2003 till 2006 in addition to North Florida District untill Local District Manager was hired.
- Successfully penetrated Florida vision retail market with an estimated 10% + market share gain per location in less than one year; 46% of customers are first-time buyers reacting to the innovative product and the ease of the retail presentation.
- Managed opening of approximately 20 retail stores in Chicago, Atlanta and Northern Florida. Identified start-up markets negotiated and directed real estate, build-out, technology, inventory, recruited and trained professional staff.
- Designed and developed a Managed Care Insurance billing and tracking system used by all retail associates in 110 stores nationwide.

- Accountable for all operations, staffing and merchandising, brand marketing, and P&L management of retail stores. Reduced and maintained total district accounts receivables at under 5%.
- Ensuring maximum profitability through sales training and staff development. Retained single digit turnover of staff.
- Responsible for hiring and oversight of all Doctors and technicians. Maintained metric performance indicators of Doctor exam goals, patient satisfaction, and partnership with retail. Both Retail and Doctor Customer service surveys average score at 95% annually.
- Administerd and maintained $2 million contracts with Veterans Administration. Full oversight in filing and drafting of all government RFP's.

- **MANAGEMENT TRAINING**
- Supply Chain and Operations Mangement
- Improving Your Managerial Effectiveness
- Advanced Critical Thinking Applications Workshop

Neil Eppig, RLS

SUE SUPPORT

Mr. Eppig is a SUE project manager located in McKim & Creed's Sarasota office. With over four decades of professional experience, he brings exceptional client and project management skills to McKim & Creed, along with technical expertise in land surveying and subsurface utility engineering (SUE).

QUALIFICATIONS

- Experience working in Charlotte County
- SUE
- Surveying

EDUCATION

Diploma, Calvert High School

Attended, Storm Drain Design, Catonsville Community College

LICENSURE

Professional Land Surveyor, DE #S6-0000659

Professional Land Surveyor, MD #21210

Project Experience

Legacy Trail Extension; Kimley-Horn and Associates, Inc. | Sarasota, FL: McKim & Creed performed Quality Level A & B SUE services at major intersections of the Legacy Trail extension in Sarasota, FL. The Legacy Trail, which opened in 2008, provides a safe, recreational trail for walking, bicycling and running. The purpose of this project was to extend the trail and enhance connectivity from the City of North Port through Venice to downtown Sarasota. Next steps included creating nearly 30 miles of continuous non-motorized paved multi-use trail, which could become a regional connection between Manatee, Sarasota, DeSoto and Charlotte counties, providing access to local neighborhoods and place 48 schools within two linear miles of the Legacy Trail and enhancing connectivity from the City of North Port through Venice to downtown Sarasota. loading with the addition of the septage and grease receiving facility, increases in leachate volumes from the adjacent Lena Road Landfill, and the operation of the biosolids dryer at the site.

Burnt Store Water Reclamation Facility; Charlotte County, FL | Punta Gorda, FL: Charlotte County has retained McKim & Creed to provide master planning, preliminary engineering, design and construction phase services in three distinct, overlapping and integrated phases to replace the existing 0.5 mgd Burnt Store Water Reclamation Facility (WRF) with a new 2.5 mgd facility with the capability to expand to 7.5 mgd. The existing WRF will be decommissioned and demolished upon completion and successful start-up of the new WRF.

FDOT D-1, SR 31 From SR 78 to Horseshoe Rd Progressive Design Build; Kimley-Horn and Associates, Inc.| Fort Myers, FL: Mr. Eppig was the SUE project manager. McKim & Creed completed progressive design build services for the Widening Improvements of SR-31 in Fort Meyers, FL as a subconsultant for Kimley-Horn & Associates. The team completed design surveys, right-of-way control surveys, right-of-way mapping, and SUE services for the project. The facility will consist of an urban 4 lane section with a variable median width from 22 feet to 44 feet. The project limits are from south of SR-78 to approximately 1000 feet north of Lake Babcock Drive with an overall project length of approximately 5.5 miles. The project will leave the existing SR-31 roadway and right of way in place from SR-78 to the Charlotte County line and will remove the existing SR-31 and expand the right of way north of the Charlotte County line.

FDOT D-1, SR 789 From: E. of Sunset Dr To: W of Bird Key Dr; Kimley-Horn and Associates, Inc. | Sarasota, FL: Mr. Eppig was the SUE project manager. McKim & Creed provided survey support services as a subconsultant to Kimley-Horn for the FDOT project on SR 789 from Sunset Drive to West of Bird Key Drive, Sarasota County, FL. The team performed a design, right of way, and construction survey along with photogrammetric mapping and right of way mapping for the project development and environmental study of US 41 (SR 45) at Gulfstream Ave (MP 18.559 to MP 18.745).

Derek Holderman

CCTV SUPPORT

Mr. Holderman began his career in the underground utilities market in 2008. He has successfully led and managed projects and operations across the United Sates with a focus on the assessment, data collection, and rehabilitation of water, wastewater, stormwater, and natural gas distribution systems. These projects included flow monitoring, smoke testing, manhole inspections, cross bore investigation, leak detection, CIPP, pipe bursting, manhole rehabilitation, and trenchless lateral rehabilitation. Derek has also worked on development teams to create proprietary software and applications to enhance field data collections and delivery to internal and external clients. With his wide variety of experience, Derek is familiar with the various equipment, software, and techniques available within the industry which will help to ensure the unique challenges faced are being met with an appropriate solution.

QUALIFICATIONS

- Pipeline Assessment Wastewater Rehabilitation Program Management
- Sewer Modeling Rehabilitation & Replacement
- Condition Assessment

EDUCATION

B.S., Organizational Leadership & Learning, University of Louisville

CERTIFICATIONS

Pipeline Assessment Certification Program (PACP)

Manhole Assessment Certification Program (MACP)

Lateral Assessment Certification Program (LACP)

Project Experience

Hurricane Hermine Sanitary Sewer Collection System Engineering Evaluations (City of Largo, FL): Project Manager. McKim & Creed performed assessments of the City of Largo's sanitary sewer system to evaluate the impact on the system of Hurricane Hermine, and establish and implement a plan to prevent sanitary system overflows (SSOs) from occurring during future wet seasons. Tasks included hydraulic modeling, flow and rainfall monitoring, smoke testing, manhole inspections, CCTV inspections, I/I quantification and abatement, dry and wet weather calibration of the City's InfoWorks model, alternative software evaluation, and identification of system defects and hydraulic deficiencies with recommendations for improvements.

Comprehensive Infrastructure for Tampa's Neighborhoods Stormwater System Condition Assessment (Tampa, FL): Operations Manager. Inspection of stormwater structures, including culverts, discharge points, manholes, and inlets. All inspected assets were located with submeter coordinates using Trimble GPS receiver. The inspections were performed using the CleverScan inspection system by EnviroSight. Prior to any CCTV inspection, the pipes were cleaned using a VacTruck capable of delivering a minimum of 12 gallons per minute at 3,000 psi. All debris were extracted from the pipe at the downstream manhole and were disposed at an authorized disposal location. Performing closed circuit television (CCTV) inspection of the pipes, adhering to the Pipe Assessment Certification Program (PACP) protocol. McKim & Creed used CUES high resolution digital camera with panning capabilities, designed for detailed condition assessment of sanitary and stormwater pipes. Providing maintenance of traffic (MOT) as necessary and required by local agencies. Developing recommendations for any necessary rehabilitation or repairs.

Falkenburg Sewer Service Area I&I Abatement Phase I (Hillsborough County, FL): Operations Manager. McKim & Creed is providing sanitary sewer evaluation services to Hillsborough County Public Utilities to investigate and resolve inflow and infiltration into the County's Falkenburg basin area wastewater collection system. The project entails mapping of the services area that includes 162 pump stations that pump into the Falkenburg AWTF. The work is being conducted in two phases. Phase 1 consists of flow and rainfall monitoring and analysis; and phase 2 consists of smoke/dye testing, closed-circuit television (CCTV) inspection, manhole inspections and night flow isolations to identify storm water inflow and groundwater infiltration sources.

North County Flow Monitoring Study (Pinellas County, Clearwater, FL): Operations Manager. McKim & Creed developed a flow monitoring plan to define and differentiate eleven (11) sewer zones within the North County Wastewater Collection System. Each zone was divided into approximately nine (9) flow monitoring sub-basins for the purpose of recording and reporting wastewater flows. Our team is currently collecting data using a combination of 40 open channel flow meters and pump run times; plus 10 rain gauges and 10 groundwater monitoring wells dispersed throughout the service area. Data collected will be used to prepare a Sewer Flow Monitoring Study Report which will document the infiltration & inflow characterization and sewer zone prioritization analysis along with recommendations for further investigation and system improvements within each sewer zone and the North County Wastewater Collection System as a whole.

ENVIRO
WASTE SERVICES GROUP

MIKE GARCIA
Director of Construction - EnviroWaste Services Group, Inc.

PROFESSIONAL PROFILE

Mr. Garcia joined EWSG as Director of Construction in September of 2008 and has worked in a number of complex public Right-of-Way projects involving sanitary and storm drain pipe replacement. All of his projects have been delivered within contract schedule. He oversees the overall horizontal construction end of the company as well as bidding for future job opportunities and meeting with public officials.

In addition to being in charge of all horizontal and underground construction in South Florida, Mr. Garcia also handles all of cleaning and cctv inspection work based out of our Miami office. With a local fleet of 10 jet/vacs and 4 cctv inspection trucks, Mr. Garcia is directly responsible for roughly 1,000,000 linear feet of storm and sanitary sewers inspections yearly.

EWSG has the ability to self perform all of the open cut pipe replacement work, and generally subcontracts asphalt paving. Concrete paving is self performed.

- City of Miami Beach Horizontal JOC – Sanitary Sewer Pipe replacement and Point Repairs - $ 150,000
- Town of Miami Lakes – Paving Drainage - $ 206,000
- North Bay Village – Drainage and Paving - & 164,000
- Tamayo Engineering – FDOT Emergency Response – Sanitary Sewer Pipe Replacement - $ 115,000
- City of Miami Beach JOC Contract- Cleaning, Lining, Point Repairs $1,500,000
- City of Miramar – Cleaning, Inspection and Repair of Sanitary Sewer $185,000
- Miami International Airport – Cleaning, Inspection and Repair of Sanitary Sewer - $ 71,000
- Homestead Air Reserve Base - Sanitary Sewer Evaluation Study and Repairs – $ 126,000
- City of Punta Gorda – Annual Grouting Contract - $ 60,000
- City of Orlando Smoke Testing, and Sectional Point Repair - $ 400,000 Annual
- FDOT – District 5 E5J21 Storm Sewer Inspection and Repair - $ 670,000
- Indian Creek Village Storm Sewer Inspection and Rehabilitation - $ 390,000
- InsituformTechnologies, Inc. – CCTV Inspection subcontracting: City of Miami Storm Capital Improvements, Pompano Beach Storm Sewer, City of Fort Lauderdale, City of North Miami , City of Clearwater, City of Tampa $800,000
- Miami Dade WASD S-793 Countywide One-Year Contract Removal/Replacement and Rehabilitation of Sanitary Sewer Laterals - $450,000
- City of Coral Gables Sanitary Sewer Rehabilitation Evaluation Assessment - $1,200,000.00
- City of Miami C.I.P. Department Storm Drainage Improvements - $790,000.00
- City of Miami C.I.P. Department concrete speed table installations City wide- $100,000.00
- Town of Cutler Bay Concrete and Roadway Resurfacing - $3,000.000.00

- City of Ft. Lauderdale Sanitary Sewer Rehabilitation Evaluation Assessment - $325,000.00
- City of Homestead Sanitary Sewer Rehabilitation Evaluation Assessment - $725,000.00
- City of Hollywood Sanitary Sewer Rehabilitation Evaluation Assessment - $5,525,000.00
- City of Sunrise Sanitary Sewer Rehabilitation Evaluation Assessment - $225,000.00
- City of Boca Raton Sanitary Sewer Rehabilitation Evaluation Assessment - $1,285,000.00
- Broward County Sanitary Sewer Rehabilitation Evaluation Assessment - $1,000,000.00
- City of Weston Sanitary Sewer Rehabilitation Evaluation Assessment - $185,000.00
- Town of Davie Sanitary Sewer manhole removal/point repair - $37,000.00
- City of North Miami Beach Sanitary Sewer Rehabilitation Evaluation Assessment - $625,000.00
- City of North Miami Beach 18" water main replacement - $125,000.00
- Village of Bal Harbour Sanitary Sewer Rehabilitation Evaluation Assessment - $300,000.00
- Village of Pinecrest Storm Water Drainage Improvements - $50,000.00
- Village of Pinecrest Sidewalk Improvements - $90,000.00
- Collier County Storm Water Pipe Replacement - $48,000.00
-

PREVIOUS EXPERIENCE

Mr. Garcia has been in the construction arena for over 26 years. Throughout his years in the industry, he has been involved in some of the largest homebuilding and land development jobs throughout South Florida.

He has also been involved in three opportunities to participate in Habitat for Humanity offering his help and experience during the development of new homes.

EDUCATION

Florida International University	-	1998
Miami Dade Community College	-	1996

SPECIAL QUALIFICATIONS

OSHA certified
First Aid certified

JOHN RINEHART

JOHNRINEHART@EWSG.COM

EDUCATION & LICENSES:

- B.S., Construction Management, Florida International University
- Underground Utility Contractor #CUC-C056867, Florida
- General Contactor #CGC-C058031, Florida
- Underground Utility #B-100125(not active), South Carolina
- Underground Utility #45989(not active), North Carolina
- Competent Person Training (NUCA)
- OSHA 10 Hour / 40 Hour
- Registered Florida Notary

INDUSTRY LEADERSHIP:

- Over 30 years managing pipe inspection, analysis, and repair. Experienced with CIPP, grout applications, smoke testing, manhole coating, and excavated repairs in both gravity sewers and storm pipe.
- UCA Underground Contractors Association of South Florida Board Member, 2003 – 2005
- High customer satisfaction leading to repeat business.

EXPERIENCE:

- ESTIMATOR, EnviroWaste Services Group, Inc.
  May 2023 – Present
  - Maintain bid & renewal opportunities on collaborative spreadsheets. Research and obtain bid documents, distribute opportunity information to management as needed. Schedule go-no-go meetings with management.
  - Duties include bid document preparation, submittal, and follow up on bid results. Prepare & track successful project document preparation with owners. Maintain bid files that transition into project files.

- AREA MANAGER / PROJECT MANAGER, Granite Inliner, LLC, Gravity and Storm CIPP rehabilitation projects.
  February 2018 – September 2021
  - CIPP pipe rehabilitation projects, Gravity and Storm pipe.
  - Clean & CCTV, Gravity and Storm

- OWNER & VICE PRESIDENT / OPERATIONS MANAGER, small diameter CIPP rehabilitation company.
  January 2006 - November 2017
  - Grew the company as a startup to operating an owned facility with 4 office staff and 27 field staff.
  - Duties included estimating, preparing bids and proposal documents, qualification documents, presentations, and product installation quality control.
  - Functioned as property and equipment manager for all rehabilitation activities.
  - Managed in house accounting, A/R, A/P, Payroll, and P&L reporting.
  - Responsible for processes to review, tally and organize thousands of video reviews.
  - Arranged presentations and field demonstrations to educate customers on various products.
  - Assisted owners, engineers, and consultants with bid specifications.

- VICE PRESIDENT / BUSINESS UNIT DIRECTOR / PROJECT MANAGER, South Florida area.
  May 1990 - January 2006 Known today as (IPR) Inland Pipe Rehabilitation
  - Held multiple positions with the various companies through 6 acquisitions of the original Madsen/Barr Corp.
  - All the positions were in a PM role, performing pipe inspection and rehabilitation.

- OWNERS REPRESENTATIVE, Private Hotel and Restaurant Construction
  January 1984 - April 1990

CHARLOTTE COUNTY
FLORIDA

III.

Previous Experience of Team Proposed for this Project

INTEGRITY.
INNOVATION.
QUALITY.
SERVICE.

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& BUSINESS SOLUTIONS

VEBS TEAM'S RELEVANT AND RECENT EXPERIENCE

Founded in 2019 by **Bryan T. Veith**, PE, Assoc. DBIA, F-ASCE, we are Veith Engineering & Business Solutions (VEBS), a local SBE. Established to provide not just **professional engineering** but also **smart business and utility management solutions**. VEBS is a civil and environmental engineering firm that assists public and private clients by offering a breadth of services in all phases of project delivery from our two offices in Sarasota and Manatee Counties. Our staff of Professional Engineers, project managers, business consultants, and project delivery technical support have over 200 years of engineering and business consulting experience. Our 100% locally based multi-disciplinary team is excited and eager to collaborate with you to solve your challenges.

VEBS' core mission is to successfully deliver professional engineering and utility management consulting solutions with Integrity, Innovation, Quality, and Responsive Service to local government clients such as Charlotte County (County). The County's varying and complex utility infrastructure needs align well with our firm's expertise which spans all aspects of water (potable, wastewater, reclaimed water) and civil/environmental engineering. We provide a full range of engineering and utility management consulting services including **field investigations, asset inventory and condition assessments**, asset management, data and information management, feasibility and pilot studies, master plans, modeling, Capacity Management Maintenance & Operation (CMOM) programs, **program management**, capacity assessments and assurance programs, as well as design, permitting/regulatory compliance assistance, public presentations, stakeholder engagement, bid phase support, CEI, and alternative project delivery assistance.

Our team is led by our project manager Bryan Veith, a professional engineer recognized in the local area for both his management and technical capabilities. References for our project manager are summarized below:

Client	Project	Contact Name	Email	Phone
Sarasota County	CMOM Program Implementation	Gregory Rouse	grouse@scgov.net	(941) 587-1147
Pinellas County	Restore Act WCS	Tom Menke	tmenke@pinellas.gov	(727) 453-3611

OUR TEAM'S EXPERIENCE CLOSELY ALIGNS WITH CHARLOTTE COUNTY'S PROJECT AND ASSET MANAGEMENT NEEDS

At VEBS, we work as a well-integrated team and have fun doing it! We have entered a new age of solving our challenges through a combination of innovative engineering and smart business solutions. We cost-effectively and holistically consider every aspect of "water" to innovatively bring the most practical and timely engineering, regulatory compliance, and business solutions to address our client's key issues, protect public health, preserve the environment, and promote financial stewardship.

Our team's areas of special expertise exactly match what the County desires on this important regulatory-driven project:

- Asset, Data, and Information Management
- Subsurface Utility Engineering, Aerial and Mobile LIDAR, and Level QL A, B, C, and D utility asset infrastructure data
- Geographic Information Systems (GIS)
- Program Management

The following subsections further describe in detail our team's experience with services that are similar to the tasks required for your County project.

VEBS has added **HAZEN & SAWYER** (HAZEN) as a key engineering subconsultant with key technical and field resources out of their local Sarasota and Ft Myers offices. VEBS and HAZEN have been performing as a well-integrated team delivering innovative engineering solutions and timely solutions since 2019 for the Sarasota County regulatory driven (Consent Order) **CMOM and Asset Management Program**. We will leverage this experience working together and apply our best practices to your project. WE HAVE NO LEARNING CURVE.

The table below shows our team's extensive experience in the required services for the County's project.

Leadership	Field	Information and Data Management

• Program Management
• Certified Project Managers
• Nationally Recognized Subject Matter Experts
• Budget and Schedule Management and Controls
• Stakeholder Engagement and Public Involvement
• Utility and Asset Management Consulting
	• Subsurface Utility Engineering
	  ○ QL-D
	  ○ QL-C
	  ○ QL-B
	  ○ QL-A
	• Survey
	• SSES / CCTV – MACP and PACP
	• Aerial and Mobile LIDAR
		• Dashboards (i.e., ESRI, Power BI)
		• GIS
		• 3D CAD
		• Granite Net (CCTV)
		• CMMS (Cityworks and Maximo)
		• FIS
		• CIS
		• SCADA

1. Utilization of QL-C and QL-D level data

VEBS in partnership with **Hazen** is providing innovative engineering, asset management, and utility management services to aid public utilities with their buried infrastructure engineering, operation and maintenance, information management, construction, and financial challenges. A few recent examples of our team's experience with SUE QL-C and QL-C level data utilization are summarized below:

- For **Sarasota County**, the VEBS | Hazen team conducted a detailed evaluation of the GIS to identify gaps in the ARV layer and then conducted field surveys gathering locational and attribute information data for the ARVs that will then support SUE QL-A and QL-B efforts. Additionally, VEBS assessed the County's record drawing and asset onboarding process and developed enhanced process and resource improvements, SOP guidance document, and a **new database tool for seamless integration of utility asset record drawing information into the County's CMMS and GIS**.

- For the SD1 FM mapping project **Hazen** utilized as-built drawings and GIS and walked in the field to identify aboveground assets that would indicate the location of the force main. This included ARVs, vaults, discharge manholes, and other appurtenances. These locations were marked and GPS was located every 100' prior to more detailed potholing and geophysical SUE surveys.

- For the **City of Ft. Lauderdale** mapping project, Hazen started with a detailed desktop analysis to identify gaps in the current data and then identified the level of accuracy required for each location, which depended on the intended immediate use of the data. All force main alignments were walked and ARVs were located with GPS coordinates. A highly innovative approach was used to locate manholes using aerial imagery, which resulted in a sub-meter accuracy location of over half of the manholes in the entire collection system. This data was then used to support further mapping and surveys. System valves were then located to further refine force main locations. As-builts were also used that met stringent as-built requirements, which provided detailed survey locations of new assets.

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2. Methodology for Collection of QL-B and QL-A data

Our team has a proven methodology using a combination of industry national standards, our own best practices and lessons learned from many years of subsurface utility engineering, and our client's information, asset, and data management processes, tools, and systems. For each project, we use that experience and knowledge to prepare a customized solution to meet the project's needs.

A few recent examples of our team's experience with the collection of QL-B and QL-A level data are summarized below:

For **Pinellas County**, the VEBS team is providing QL-D, C, B, and A utility asset data integration for the County's Restore Act project in the Lake Seminole area. Utility field data collection and asset integration includes potable water, wastewater, gas, power, cable, and telephone buried infrastructure.

City of Fort Lauderdale Water System Mapping. The project's purpose was the assessment and mapping of 100 miles of pipe. The city was interested in an asset inventory of the entire water network in order to have a complete data set for public works to operate from moving forward. The city required a quick timeline for the project, to meet compliance requirements so it could begin some utility rehabilitation and replacement projects. **SAM** was selected on the team to provide aerial LiDAR, color orthophoto imagery, mobile mapping, Subsurface Utility Engineering (SUE), and GPS location surveys to generate accurate spatial data which will integrate seamlessly into the city's GIS. This suite of data is to be used for asset management to support budgeting and scheduling future projects related to the water distribution system. This project consists of over 240 miles of city-owned water line recovery and mapping within GIS software. The project involves several SUE QL-B crews and the mapping of all existing water lines larger than eight inches throughout the city. *Reference: Richard Pryce, Craven Thompson, Senior Project Manager, (954) 739-6400*

SR 45 (US41) from Conway Blvd. to Midway Blvd., Charlotte County. Our team is currently providing SUE QLB Designation utilizing ground penetrating radar, for 15.26 Utility miles of Charlotte County Utilities, TECO gas, F.O., communications, and 7900' of water and force main. 221 QLA Excavation test holes are being performed at 15 drainage structures, 15 pipe runs, 5 multi-post sign foundations, 38 light pole foundations, 7 mast arm foundations, 10 contingency test holes, and 4250' of Charlotte County right of way. The subsurface utilities and facilities identified by our SUE personnel are surveyed and located by **SAM** survey crews and are incorporated into the Topographic and utility CAD drawings. *FDOT District 1 reference: Mr. Mark Peronto, PE, District 1 Structures Design Engineer, (863) 519-2426*

McKim & Creed has become a leader in the geospatial industry because of its expertise, dedication to work, innovative solutions, and investment and application of innovative technologies. These technologies include airborne, mobile, and terrestrial LiDAR/scanning; UAS (drones); subsurface utility engineering; and hydrographic and conventional surveying services for the municipal, energy, transportation, federal, oil, gas, land development, water, and building markets. McKim & Creed also provides industry-leading back-end GIS or BIM solutions using the comprehensive data we collect ourselves or data provided to us by our clients.

McKim & Creed understands that using a specific technology or a combination of technologies best suited for the project can often result in savings to the client in terms of both time and money as well as a comprehensive, accurate product that greatly contributes to the ultimate success of the project. We strive to utilize the latest in surveying and utility location equipment. Placing that equipment into the hands of well-trained and experienced crews sets it in motion.

The Subsurface Utility Engineering (SUE) Coring Process is safer, cleaner, and more efficient than conventional digging methods for utilities and is a vital tool for McKim & Creed's Quality Level A SUE Service. Crews using the core rig can occupy a single lane of traffic, minimizing disruption to communities. The Core saw allows crews to uncover and confirm the location of underground utility infrastructure (SUE Quality Level A). Upon project completion, the core is

replaced into the ground and filled with an epoxy proven to last. In as little as 30 minutes, the core is safe to drive over, and roads can reopen.

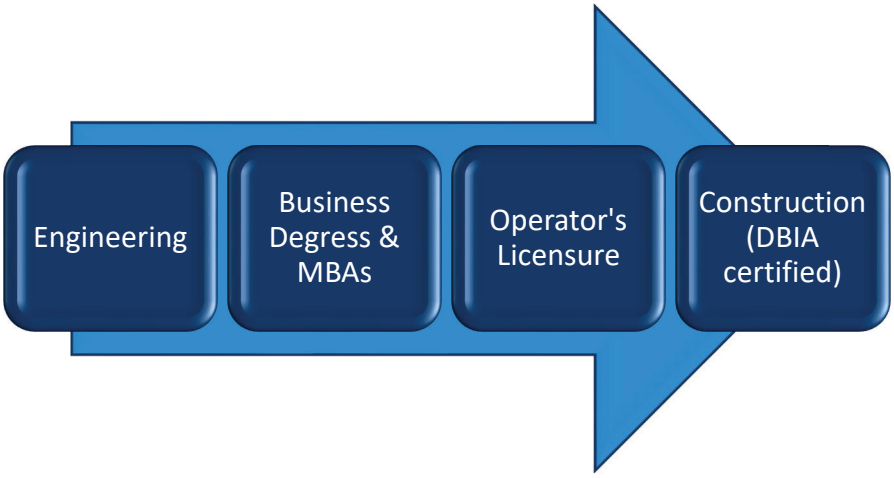
SR 776 from Sunnybrook to Coliseum| Port Charlotte, FL: McKim & Creed provided land surveying and SUE survey services for a corridor planning study of SR 776 from Sunnybrook to Coliseum. The purpose of this study was to improve safety, mobility, connectivity, and reliability for people who drive, walk, bike, and use transit.

3. Asset / Data management

Asset Management

The **VEBS | TEAM** brings national, state, local, and Charlotte County (County) relevant asset management planning, development, and implementation project experience of similar size and complexity. Both firms have corporate memberships in the internally recognized The Institute of Asset Management (IAM), have published, and presented papers on the subject at the local, state, and national levels, and are recognized as Utility Management Consultant subject matter experts.

Asset Management (AM) / CMOM / Utility Management Consulting is one of VEBS' areas of special expertise. VEBS' unique AM approach and blend of diverse staff skill sets of business, economics, engineering, operations, and maintenance helps our clients work smarter, not harder to achieve the desired level of return on investment (ROI). Our staff has advanced degrees and certifications in:



The VEBS key personnel have a long history of providing assessment management program assessments, development, and implementation. VEBS's Karl Sieg was a recognized pioneer in the early development of asset management in the late 70s.

VEBS's Bryan Veith was instrumental in developing both the CMOM and Asset Management Programs for the City of Largo (City) between 2006 to 2010. The City's project called the Sanitary Sewer Management Systems was driven by the City's Florida Department of Environmental Protection (FDEP) wastewater consent order related to sanitary sewer overflows (SSOs). These SSOs were being caused by capacity constraints in the City's wastewater collection system. Relevant tasks on that project included:

- Evaluated the City's existing information management systems (work order and asset management system, concurrency management, and GIS). The goal was to develop a centralized information management system that would seamlessly tie their wastewater O&M, engineering, planning, and concurrency processes together.

- Asset Hierarchy, Inventory, Condition Assessment, and Plan development.
- GIS and hydraulic model calibration and simulations for existing and future scenarios related to 10-year 24-hour design storm events.

Bryan also led the **Asset Management Program Evaluation Project (AMPE)** for Pasco County Utilities and was a technical advisor / principal consultant on the Orange County Utilities (OCU) **Asset Management and R&R Program Development and Implementation**. OCU was also under a consent order regarding SSOs.

Our team's unique approach combines our own best practices and practical experiences with the industry practices from the International Infrastructure Management Manual (IIMM), American Water Works Association, and Environmental Protection Agency. The IIMM as well as the ISO 55000 asset management standard defines asset management as a collaborative, coordinated, and cohesive life-cycle approach that enables an organization "to meet a required level of service, in the most cost-effective manner, through the management of assets for present and future customers." Our asset management approach directly aligns with the IIMM and the ISO 55000 international standards. As documented in both standards, we commence each of our asset management engagements with the development or review of an overarching strategy that aligns with the organization's mission, vision, goals, and objectives taking a long-term asset management view.

Hazen has experience and is well versed in asset management industry standards and frameworks

VEBS will be supported by **HAZEN's** Asset Management Services Group which combines top technical knowledge with innovative, informed, and responsive solutions that have resulted in immediate and long-term cost savings to clients nationwide.

Data Management

Charlotte County operates using several data and software platforms, which contain critical data related to operating and maintaining its infrastructure. Access and analysis of data across these platforms is crucial to the County's decision-making processes and optimized operations. However, accessing and analyzing this data can be extremely challenging.

One element that sets us apart is our experience with developing and using an integrated data platform to provide powerful data capture, management, analytics, and data visualization capabilities. Our team's powerful combination of subject matter expertise using a variety of software platforms, coupled with innovative analysis tools, software development experience, and a proven collaborative planning approach, will be applied to the challenging future issues facing the County and its stakeholders.

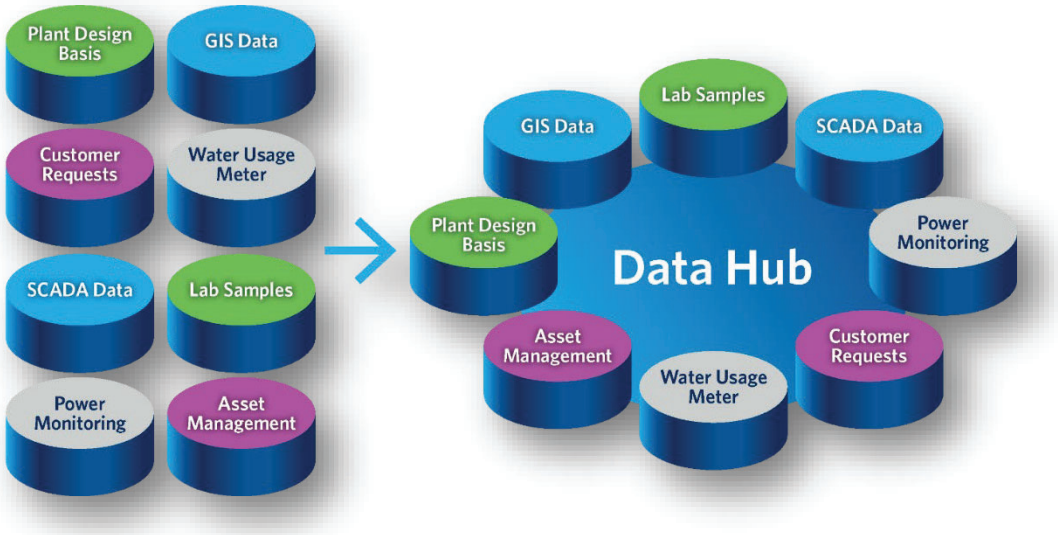


Figure 3: Data locked in Silos collected in a central data hub creates big data and enables sharing and analytics.

Our approach to information management implementation follows several basic principles:

- **Aligning solutions with business processes** to be sure that any proposed solution, whether an Enterprise GIS or a web-based portal, is consistent with an organization's workflows.
- **Iterative development techniques** that facilitate frequent input from clients during the development cycle.
- **User-centered designs** that reduce the risk of traditional software design and implementation projects
- **Develop flexible solutions** that can adjust to changing business practices and organizational IT strategies.

CCTV Sewer Inspection for Sanitary Sewers and Laterals

CCTV Sewer inspections are an invaluable, inexpensive, essential, and efficient process of performing sanitary sewer assessments, **locating laterals**, identifying, and quantifying defects, and developing asset management programs and sewer rehabilitation programs.

Below are some recent photos from the **VEBS | TEAM** and **Envirowaste** who have been working closely together on the Sarasota County CMOM program for the past 3 years. Hazen is providing training for PACP to the County and Envirowaste to properly collect and manage CCTV in NASSCO PACP Standards. Hazen has created numerous tools to map all of the CCTV inspection information including the locations of active, defective, capped, and intruding laterals. The PACP data also helps to feed accurate condition (Likelihood of failure) information in the County CSAMP (collections sewer asset management plan).

Field crews can also locate aboveground locations of CCTV cameras with a SONDE unit which is crucial for precisely locating defects in the mainline or at the lateral. This also complements the various SSES inspections such as smoke testing to find sources of I/I.

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CHARLOTTE COUNTY
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IV.

Project Control

INTEGRITY.
INNOVATION.
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SERVICE.

VEITH ENGINEERING
& BUSINESS SOLUTIONS

VEBS MANAGEMENT TECHNIQUES, CONTROLS, AND TECHNOLOGIES TO ENSURE YOUR SCHEDULE AND BUDGET ARE MET

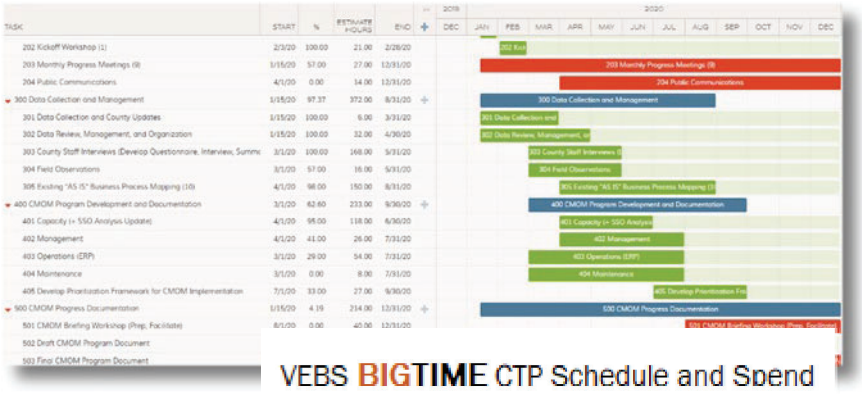
VEBS maintains an outstanding record of delivering high-quality projects on or ahead of schedule and within budget. We accomplish this by following a proven approach that includes:

- Trained and highly qualified technical and support staff
- Advanced real-time budget and schedule tracking tools
- Control processes
- Proactive risk mitigation
- Critical path schedule development and monitoring
  - Flagging highly critical items and monitoring them closely
  - Contingency plans for addressing unexpected events
- Budget control
  - Total budget monitoring
  - Design to budget
  - Monitoring VEBS' fee budgets

Our proven **project control systems** are uniform, scalable, repeatable, and integrated, providing a well-documented method of producing and controlling information for progress reporting, scheduling, budgeting, and other project management, and delivery functions.

A. SCHEDULE CONTROL

TECHNIQUES AND TOOLS TO ENSURE SCHEDULE COMPLIANCE



VEBS BIGTIME CTP Schedule and Spend

At VEBS, we firmly believe in the commitment to innovation and the use of technology and tools to gain efficiency and accuracy in the services and the work products we deliver to our clients. In addition to professional engineering consulting, VEBS always provides utility management consulting to both private and public clients. We have a strong reputation for establishing the necessary key business foundational elements integrated with effective and efficient business processes for high productivity and greater return on investment. This philosophy is applied to internal processes but also to clients' programs, operations, and projects through business case evaluations where risk, benefits, and costs are fully vetted and analyzed to find the optimum engineering and business solutions. Our internal business processes are supported by standard operating procedures, clear yet concise guidance documents, and technology to make our team highly effective in serving our clients.

We utilize the latest advanced software and tools in the development of client deliverables and the daily operation of our firm. We use the FULL suite of Microsoft Office products for collaboration, brainstorming, effective and seamless serve sharing/transfer of data including Microsoft Team Collaboration and Video Conferencing, Visio, SharePoint, One Drive, PowerBI (Dashboard), Project (schedule), Stream, Forms, and Whiteboard. The above shows our Project Management Tool, BIGTIME, which guides our project managers and project manager assistants to keep projects on schedule and within budget.

We invested in high-performing project management software systems for real-time project analytics, reporting, and trend analysis. Reports are easily customizable for internal and external use and viewing.

Proven Scheduling Techniques:

1. Critical Path Schedule Development and Monitoring
2. Flagging highly critical items and monitoring closely
3. Contingency for unexpected events that could occur

Based on our "listen first" philosophy, we ensure that the project meets the County's goals and objectives.

Our project development and delivery approach begin with our Project Manager Bryan Veith's clear understanding of your needs and leading the assembly of a well-qualified and committed team of supporting technical, information management, and administrative resources (technical writers, data researchers, graphic designers) from the onset of project identification. Our LOCALLY BASED MANAGEMENT TEAM is backed by additional specialty resources and is engaged from early scope development to the successful completion of the Scope of Services. Bryan will be assisted by Lucie Blahackova (Project and Schedule Control). Bryan and Lucie meet at least once a week to discuss the projects, review the reports and data, and do a more comprehensive review at month's end.

On every project and contract our team adheres to our project delivery approach, internal processes, management tools and systems, and internal reviews. Examples of these important guiding documents such as the Project Management Plan and Risk Management Plan.

Charlotte County is a priority client for VEBS. We are committed to proactive collaboration with the County. As such, we affirm that work under this Contract will be a top priority for each member of our team. As your business partner, we remain committed to your success and look forward to working with County staff under this contract to provide cost-effective delivery for your contract needs. As a smaller locally based company, VEBS has no "red tape". We are flexible, nimble, and as always, will be very responsive to your every need.

B. BUDGET (COST) CONTROL

TECHNIQUES AND TOOLS TO ENSURE SCHEDULE COMPLIANCE

VEBS maintains an outstanding record of delivering our projects within the budget. We accomplish this by following a proven approach that utilizes:

- Well-trained project manager with the tools and resources needed to make informed decisions on budget management and control
- Advanced real-time and accurate data tracking tools and dashboards to monitor and control project costs
- Employ our best practices and innovative solutions to provide cost-effective results for our clients
- Deliverables and work products align with project goals and objectives
- Anticipate risks during implementation and have a proactive plan to mitigate them

- Weekly 15-min team meetings to review work progress, effort, and budget
- Monitoring VEBS weekly project reports, especially for time and materials compensation projects

Our experience has consistently shown that the key to meeting budgets is careful planning combined with closely monitoring execution and making timely adjustments when necessary. Our team also recognizes the importance and value of problem prevention. VEBS has successfully integrated several internal systems into our firm's culture that simplify, automate, and coordinate the project delivery process to reduce risks associated with our projects. The team's successful system usage has proven to result in fewer mistakes and less manual, time-consuming reviews, and build quality into the project.

Bryan will be assisted by **Logan Veith (Budget Management and Controls).** Our project management team meets at least once a week to discuss the project financials, review the reports and data, and do a more comprehensive budget review at month-end closeout and invoicing.

C. WORKLOAD

While busy, our firm's workload is such that we are meeting all our project deadlines ahead of schedule and can easily take on the anticipated work through your multi-year program. We have a backlog, but the timing is right with the required technical resources and commitment to meet your project goals and schedule requirements. Please see our VEBS Current/Projected Workload summary at the end of this section.

Our team is wrapping up our work commitments on two large local utility programs, the Sarasota County CMOM Development and Implementation and Charlotte County CAAP Framework Development and Pilot Flow Monitoring Program.

VEBS will not pursue a professional services contract or project RFP/assignment unless we are confident in our ability to deliver quality and responsive service.

VEBS has a strong reputation for "doing what we say we will do." Additionally, should the County require the project to be delivered on a more accelerated schedule we will work overtime, or shift/reprioritize resources based on project needs. We encourage you to check all our references for confirmation that VEBS is delivering on its commitments. We do not live by the clock; we do whatever it takes to provide the highest quality timely service.

Our recent, current, and project workload is summarized in the table on the following page. Many of these projects will be completed by the anticipated start of your project.

Recent, Current, and Projected Workload and Our Team's Dedication to Responsive Delivery

Current and Relevant VEBS Projects					
Project Name	**Project Size**	**Staff Assigned**	**Stage of Completion**	**Completion Status**	**Expected Conclusion Date**
Sarasota County CMOM Implementation Plan	$376,000	7	Year 4 almost complete	Years 1, 2, and 3 were completed on time.	September 30, 2024
Charlotte County CAAP & Flow Monitoring Program	$834,000	7	Task Groups 1 – 5 completed.	The final Task Group is being worked on	February 2024
Pinellas County Restore Act WCS Survey/SUE, Design, Permit	$456,000	5	90% Design	100% and permit to start January 2024	June 2024
Sarasota County Home Depot MLS and FM	$175,985	6	100% Design	Bid Phase to start after easements acquired	Construction 2024
Sozo Missions Multi-Purpose Bldg. & Site Improvements GDP and Rezone	$29,317	4	Completed.	Rezone and PSP approved	Completed Oct 2023
FOCCS Pavilion and Site Improvements	$90,625	3	Engineering Design	Final Design and Permitting	March 2024
Manatee County Landfill Governance & Structure Study	$47,750	3	Study	Just started study	March 2024
Town of Longboat Key Continuing Services	TBD	TBD	N/A	N/A	3-year contract
City of Tampa Continuing Services	TBD	TBD	N/A	N/A	3-year contract
Manatee County Continuing Services	TBD	TBD	N/A	N/A	5-year contract
Sanibel Island Hurricane Ian Utility Infrastructure Restoration Continuing Contract	TBD	TBD	N/A	N/A	3-year contract
Sarasota County CEI Continuing Services	TBD	TBD	N/A	N/A	3-year contract
Sarasota County CMOM Year 5	$600,000	5	Amendment to be approved in January 2024	Not Started	Last year of 5-year program
City of Bradenton Continuing Services	TBD	TBD	Contract up for approval	The contract is expected to be executed by January 2024	3-year contract
Pinellas County SBE CCNA Continuing Services	TBD	TBD	N/A	N/A	As-needed contract

CHARLOTTE COUNTY
FLORIDA

V.

Present Proposed Design Approach for this Project

INTEGRITY.
INNOVATION.
QUALITY.
SERVICE.

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PROPOSED PROJECT APPROACH

A. PROPOSED TASK PHILOSOPHY AND SEQUENCING

This section addresses the County's requirements in RFP sections RP-19 Background, RP-20 Project Intent, RP-21 Scope of Services, and RP 24 Work Plan. Based on our team's past and current project experience with Charlotte County Utilities we have firsthand and comprehensive knowledge of your utility assets, processes, procedures, systems, and resource limitations. This includes recent work on the County's GIS, Utility Map Book, coordination with your CCTV crews, wastewater hydraulic model, as-builts and record drawings, and your information management systems.

Similar to the approach the VEBS | HAZEN has applied to the **Charlotte County CAAP Framework and Pilot Flow Monitoring Project (in the Rotonda area)**, we recommend starting this project with a **pilot area** first guided by a program management plan/team methodology guidance document, note lessons learned and best practices, and then apply County wide for the remainder of the contract. (like the successful approach to the Charlotte County CAAP project).

With our working relationship with the County and understanding of the issues you are facing operationally and with your FDEP consent order (CMOM program), we have a comprehensive understanding of your project goals and needs.

1. Current challenges with your O&M staff locating CCU underground assets when line breaks occur, for utility locates, and predictive and corrective maintenance
2. Much of your existing records (some obtained from general development) are inaccurate records, or there are no records at all of utility infrastructure
3. Desire to have a complete and accurate record of all utility (potable water, sanitary sewer, and reclaimed water), both above and below ground, to be integrated into the County's GIS and CMMs
4. For each utility asset, accurately capture the material, size, and geospatial (x,y,z) attributed.

Task 1 - Program Management

As discussed in **Tab II and Tab IV** of our proposal, your project is more than field activities and GIS office work, it will take a team with strong program management experience and skill sets to conduct your project successfully County-wide.

Key parts of our program management approach include preparing and adhering to the following:

- Program Management Plan
  - Goals, Objectives, and Critical Success Factors
  - Communication Plan and Protocols
  - Project Scope of Work (SOW)
  - Project Schedule with Key Milestones and Critical Path Defined
  - List of Deliverables
  - Quality Assurance and Control Plan
- Risk Management Plan
- Project Controls
- Data Management Plan

Task 2 - Data Management

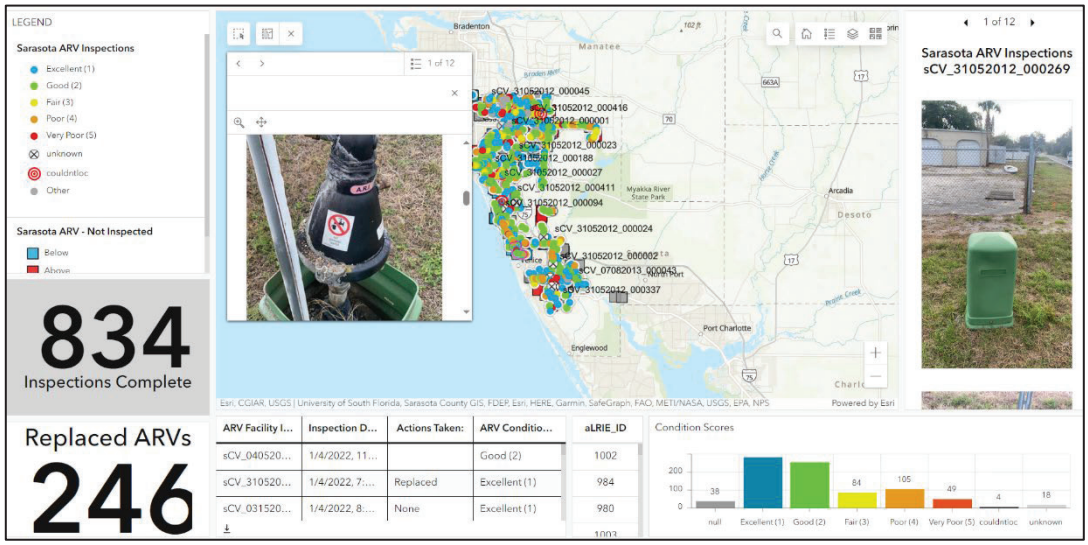
Our team will leverage its extensive experience in managing large field data collection efforts to gather, manage, and QA/QC the vast amounts of data gathered as part of this project. This data includes:

- Record Drawings
- GIS files
- Survey 123 information
- Photos

- Survey and SUE data
- Asset attribute data
- CCTV videos
- Geodatabase schema

Our team will develop and manage a collaborative project SharePoint site to serve as a depot for most of the project data, which will be tracked in a master data tracking sheet with links to the information. The entire team will have access to the site as well. The County will also have access for transmitting and receiving data,

Geospatial data will be stored in a special cloud server, which will also be used to support a powerful near real-time ArcGIS online web application that will serve as a near real-time tool for project progress tracking, RFIs, and data QA/QC. Hazen has developed many of these applications using a combination of maps and dashboards for many projects. The entire team and the County will have access to this application, which will support critical communication and rapidly address any field issues. Users will be able to see any pertinent data at a glance. Below is an example of one developed for the Sarasota County CMOM ARV asset inventory and inspection.



SC ARV Inventory and Inspection Dashboard

Task 3 - MOT and ROW Permitting

Our team has direct experience working on Charlotte County projects on many of the tasks that are required in support of this program including acquiring and documenting all of the project-related information from Sunshine 811 tickets; applying for, obtaining, and complying with the conditions of County and FDOT Right of Way (ROW) permits; and preparing Maintenance of Traffic (MOT) plans in support of conducting fieldwork within the right-of-way of any County Road or FDOT for work within the right-of-way of any State Road.

To streamline efforts on the permitting process and County/FDOT review time, we plan to kick off the project with a pre-application project permitting meeting with County Public Works and FDOT to collaboratively develop a structured and streamlined application and permitting approval process to standardize the typical permit application and MOT plan packages and then discussing additional information required for those atypical situations of work in highly traffic and congested roadway corridors. We will also present the master program schedule to County Public Works and FDOT to ensure that planned activities over the life of the program don't conflict with any major roadway and stormwater projects planned in the right-of-way.

Task 4 – Stakeholder Engagement

We highly recommend that a stakeholder (internal and external) plan be developed to keep all interested parties well-informed as to the project scope, schedule, and who to contact if there are project challenges or issues encountered.

Task 5 - Subsurface Utility Engineering (SUE)

Our strategic and highly specialized subconsultant SAM will implement its proven project management approach when performing each of the activities contained in the scope of this contract. Leveraging the knowledge gained and the lessons learned from providing SUE services for over 25,000 projects (of every scope and scale) nationwide, they will work in partnership with the VEBS team and Charlotte County to expertly meet all your project needs.

- The SUE Task Lead in collaboration with VEBS PM will meet with project stakeholders to understand any specific project needs so that our team can ensure all requirements will be correctly addressed. Our team will also typically perform site visits, preliminary research, and review of available recorded information to gain a more complete understanding of the project working area.
- Our team will make recommendations in regard to options available for the most efficient project approach and any tools that could be implemented in order to provide the optimum schedule and budget, while also considering the accuracy requirements.
- Our project manager and the SUE Task lead will evaluate any project-specific safety concerns, including confined space entry, traffic control, and Charlotte County escorts, which may need to be addressed.
- SAM and McKim and Creed's key personnel will attend the team's kickoff meeting at the start of the project to ensure their entire team understands the project goals, communication protocols, constraints, risk management plan, and schedule. Many of the field services are dependent on the weather and it is important to allow and plan for possible inclement weather challenges and try to increase production. Unanticipated and/or excessively inclement weather may require adjusting our team's planned schedule and personnel needs in order to avoid delays.
- Our team will be organized into specific teams led by our program manager and Technical Leads. The SUE team will include a SUE project coordinator who will be supported by one or more additional technicians, depending on the project's needs, schedule, and budget. The SUE team will also include dedicated field crews, driven by the demands of the project.
- The Project team will develop weekly project delay reports and track progress against schedule and budget. They will also communicate any future fieldwork with Charlotte County representatives in accordance with the SOW.
- For the SUE QA/QC, our SUE team will follow a Quality Management Plan (QMP) that uses a two-tiered approach that includes the Project Design Team (PDT) and an Independent Technical Review Team (ITRT), which is comprised of individuals that have not been involved in the daily work.
- Final Delivery: Upon completion of the SUE work, our SUE teams will deliver the following information to the VEBS QA/QC team and confirm if there are any questions or special requests post-delivery.

Records Research - Quality Level D

Investigating to estimate the position of underground utilities through utility records, information from others, or visual clues such as pavement cuts, obvious trenches, or visual existence of the service.

Applicable utility records will be collected. Our designated staff will review records for indications of additional available records and may need clarifications by utility owners. Aerial records and/or visual inspection will be utilized for surface evidence of pavement cuts, trenches, and similar signs of utility burial.

Incorporate aboveground features - Quality Level C

Identifying surface features associated with a Utility Segment not visible at the ground surface whose estimated position is judged through correlating Utility records or similar evidence to Utility Features, visible aboveground and/or underground. The Utility Anchor Point on the Utility Features is tied to Florida State Plane Coordinate, Zone West accurate to 0.2 ft horizontal. Work will incorporate Quality Level D findings.

Designating and Marking - Quality Level B

Identifying a Utility Segment or subsurface Utility Feature whose existence and horizontal position are based on Geophysical Methods combined with professional judgment and whose location is tied to Florida State Plane Coordinate, Zone West, accurate to 0.2 ft horizontal.

- Obtaining permits from Charlotte County, as required, to allow our field staff to work in streets, roads, rights-of-way, or other locations.

- Utilizing normal traffic control, including standard placement of traffic cones, freestanding warning signage, and vehicle-mounted traffic directional signs, consistent with MUTCD standards. Designating and marking underground utilities within the project limits using an appropriate suite of surface geophysical methods. Typical equipment utilized includes:
  - Pipe and Cable Locator
  - Acoustic Pipe Locator
  - Ground Penetrating Radar (GPR)
  - Magnetic locators
  - Rodders, Sondes (transmitters), and Receivers for non-conductive utility detection
  - Marking the utilities at maximum 50-foot intervals and identifying changes in direction.
- Locating water lines, force mains, and other non-tunable utilities using ground penetrating radar.
- Marking each utility run with the appropriate surveying code and number for each mark. This will be noted on the field sketch for use by the surveyor and our quality control staff.
- Recording approximate depths of each utility run based on information provided by designating equipment.
- Surveying in the markings that indicate the presence of a utility. Horizontal data will be held to the accuracy and precision dictated by the project's survey control and Standard 38-22.
- Plotting survey data on base map for QA/QC.

Locating - Quality Level A

Identifying the horizontal and vertical location of a subsurface utility segment or feature that is exposed, measured, and location and dimensions tied to the North American Vertical Datum 1988 to 0.1 ft vertical and Florida State Plane, Zone West to 0.2 ft horizontal.

Our team will use minimally intrusive excavation techniques that protect the integrity of the utilities in question, and that of other lines that may be encountered. The test hole will be excavated using air and/or water-assisted vacuum excavation equipment intended for this purpose.

The excavation procedure will include:

- Clearing the Test Hole area of surface debris.
- In paved areas, neatly cutting and removing existing pavement. The cut is typically approximately 9 inches in diameter.
- Excavating the Test Hole utilizing the above-described equipment. The nominal diameter typically does not exceed 15 inches. Care will be taken to avoid damaging lines, wrappings, coatings, cathodic protection, or other protective coverings and features. Hand digging will be conducted to the extent necessary to supplement the vacuum excavation process.
- Exposing the utility only to the extent required for identification and data collection purposes.
- Storing excavated material for re-use or disposal at an approved location near the project, as appropriate.

Data collected from the Test Hole will be recorded on a standard Test Hole Data Sheet. The location will be shown in the drawing. Data will include:

- Test Hole Number
- Type of Main
- Material Classification
- Date
- Diameter
- Latitude and Longitude
- Existing ground elevation
- Top of the main elevation
- Note

Site restoration will include:

- Replacing bedding material around exposed utility lines.

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- Backfilling and compacting the excavation using a steel tamper bar in one-foot lifts.
- As applicable, providing permanent pavement restoration within the limits of the original cut using materials, compaction, and pavement thickness similar or equal to that found.
- For excavations in unpaved areas, restoring disturbed areas, to the extent practical, to reflect pre-existing conditions.
- Furnishing and installing marker balls in each pothole.
- Surveying the test hole marker.

Multi-Channel GPR

Utilizing the Raptor system, which is a multi-channel GPR array designed for utility locating and mapping. The Raptor utilizes an 18 450 MHz GPR antenna to cover wide surfaces in a single path. Data is spatially identified using GPS surveying technology. The unit is capable of detecting additional features such as voids, trench sizes, differing backfill, abandoned underground structures, and other irregularities not identifiable by other means. Using this technology allows us to clarify the horizontal and vertical position of the utilities while modeling other features identified during the scan.

Task 6 – Survey and Engineer Field Data Collection

Our field engineers and survey teams will collect asset data QL-C and QL-A (sanitary sewer manholes) using GPS and other field equipment that is preloaded with the desired asset hierarchy (County schema).

For your project, it is anticipated that traditional survey crews will determine the horizontal and vertical location of the gravity sewer manholes throughout the County. Elevations in NAVD88 will be determined on all manhole rims and "accessible" inverts. In addition, pipe size, material, and cardinal direction will be determined and recorded in the field instruments. Third Order Digital Leveling procedures will be used to establish the elevation (NAVD88) of each manhole rim relative to published County/NGS benchmarks and RTK GPS was utilized to determine the horizontal location (Florida State Plane Coordinates) of each structure.

Our subconsultant Hyatt survey just completed a relevant project for the City of Sarasota in assent inventorying 700 sanitary sewer manholes. Due to traffic considerations and structure locations within the roadways, much of this work for the City of Sarasota project was completed during nighttime operations. Proper FDOT Maintenance of Traffic and other safety procedures were followed during the performance of this work to ensure the safety of all field crews and the public. The deliverable was a comma-delimited ASCII file containing the following data for each manhole: Point number, Northing, Easting, Rim and Invert Elevations, and Description.

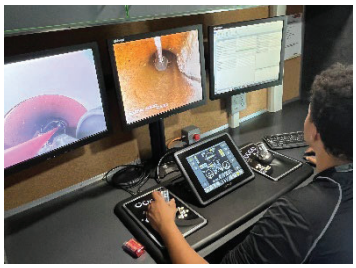
The pictures to the right show aboveground **Charlotte County Utilities (CCU)** potable water and reclaimed water aboveground assets located in the Rotonda area. These are examples of CCU assets that will be field located by either our engineer field team or our surveyors.

Task 7 - CCTV Sewer Inspection Approach

CCTV Sewer inspections are an invaluable, inexpensive, essential, and efficient process of performing sewer assessments, locating laterals, identifying and quantifying defects, and developing asset management programs and sewer rehabilitation programs.

Below are some recent photos from Hazen and Envirowaste who have been working closely together on the Sarasota County CMOM program for the past 3 years. Hazen is providing training for PACP to the County and Envirowaste to properly collect and manage CCTV in NASSCO PACP Standards. Hazen has created numerous tools to map all of the CCTV inspection information including the location of active, defective, capped, and intruding laterals. The PACP data also helps to feed accurate condition (Likelihood of failure) information in the County CSAMP (collections sewer asset management plan).

Field crews can also locate aboveground locations of CCTV cameras with a SONDE unit which is crucial for precisely locating defects in the mainline or at the lateral. This also compliments the various SSES inspections such as smoke testing to find sources of I&I.



Collecting precise and useful CCTV Inspection data starts with knowing the goals of the sewer utility and developing a detailed plan along with overseeing the CCTV contractors and/or the utility's own CCTV and Cleaning crews to gather consistent, useful data.

PROJECT PLANNING:

- Obtain GIS data from clients' GIS systems. Maps should include, at a minimum, all project pipelines, and manholes with the PSR numbers and manhole numbers listed, street names, and street and property boundaries.
- Determine all file naming conventions

PROJECT DEPLOYMENT:

- After the project planning phase, and a start date is set, the crew will mobilize to the site and begin inspection operations. The following QA/QC guidelines should be followed:
- Enter correct Upstream and Downstream MH IDs and Pipe Segment Reference.
- Properly clean pipeline before CCTV and bypass flows if necessary
- Field logs will be maintained, and all completed inspections recorded as the work progresses. Accurate field records at this point will help the final QA/QC process before delivery.

PROJECT DELIVERY:

- Export the PACP Project Summary Report for the entire project.
- Compare and ensure that all information from the PACP Project Summary Report matches the Field Log Spreadsheet, and that all inspections in the scope of work have been completed.
- Deliver to Owner one complete PACP database of all inspections, all videos, and snapshots, the PACP Scoring Report, the PACP Pipe Graph Report, the Field Log Spreadsheet, and the Final Discrepancy Report.

Task 8 - GIS

The goal of this project is to develop GIS geodatabases in accordance with the most current schema provided by the County to support County mapping as well as the Cityworks EAMS. Our sub, Hazen, has extensive experience in developing GIS geodatabases for clients all over the Country including geodatabases consumed by Cityworks.

At the beginning of the project, the VEBS Team will work with the County staff to outline and document the entire flow of data. It should include items such as:

- Identifying all asset attributes that will be expected to be populated.
- Defining the delivery frequency, as well as the QA/QC review and acceptance process. Hazen's GIS professionals will start by providing the survey team with Excel templates to match the schema to facilitate efficient data collection and transfer.

To complete the project within schedule, it will be imperative to have a very defined workflow, QA/QC review process, and acceptance plan. Prior to processing any field data, the VEBS Team will develop a detailed 'Office Processing Plan'

that will outline the specific data processing guidelines. This is necessary to ensure that all office technicians process the field data consistently according to County-approved rules. This becomes critical with this type of mass field data collection project because various situations will be encountered that will require a defined processing approach. For example:

- **Newly discovered assets**: When new assets are found, like water valves, what's the exact procedure to follow for splitting a water line? How should the attribution be populated on the newly created waterline? How will the asset Facility ID be maintained?
- **Assets Not Found**: How will the technicians process assets that are identified as 'Not Found'? Will the asset be left within the database and simply marked as 'Not Found,' or will the asset be moved to a different layer? If an asset like a water valve is removed, how will the two water mains be joined?

Many such situations will exist requiring discussion and a documented approach to ensure that the GIS data processing is done consistently, and according to directions approved by the City. field data collection and verification can be performed in the native GIS geodatabase format, or in a format that is directly compatible with the GIS schema. This will eliminate the need for any complex data conversion process, as well as reduce the effort in processing the field data. Once field data collection is complete for a specific area, office technicians will review the information and make comparisons to available as-builts as well as to the provided source GIS geodatabase. Office technicians will use the 'Office Processing Plan' to make the required data edits, as well as to complete the final review and QA/QC. Prior to delivery, the VEBS Team will QA/QC each deliverable according to a documented process. QA/QC will not only include visual inspections but will also include running automated scripts to check attribute completeness.

Deliverables: The deliverables from this task will be draft and final geodatabases ready for deployment by the County into its enterprise GIS system and Cityworks.

Project Schedule

It is extremely difficult at this point to confidently provide a schedule to achieve this extremely ambitious project, which is to obtain and map, to Quality Level A all water sewer, and reclaimed water assets in the entire County. A typical schedule for reaching QL C for all and targeted QL C for critical mains for a similar-sized distribution system alone would be approximately 24 months. For a similar-sized sewer system, it would take another 24 months. Given that the goal is QL A, and the fact that a segment is defined as 100' in length per Addendum No. 2, there will need to be almost 100,000 potholes excavated and surveyed (not considering valve boxes and vaults that can be used as anchor point). There will need to be at least another 24 months. However, with our deep resources, we can work somewhat concurrently on the water and sewer as it will be efficient to pick these up together while in the same location. Additionally, there will need to be 365 miles of gravity sewer inspected via CCTV, which could be performed concurrently. Assuming budget is not a constraint, typical weather delays, and significant cooperation with permitting agencies, this project could take approximately 5 years to complete with a final geodatabase. There are many factors to consider and doing an initial pilot project would help address potential inefficiencies and optimize workflows.

B. POTENTIAL PROBLEMS AND OUR SOLUTIONS

Based on our team's vast local and national experience with similar types of large, complex, regulatory-driven utility services area-wide projects, the following section provides examples of lessons learned and our best practices to address those potential problems before they become a reality.

- Management of Complete, Accurate, and Timely Data Collection
- Your County staff are busy with day-to-day system operations and resource-limited so our team will be proactive in our project and risk management planning, and respond quickly to address unanticipated events that are the highest priority.
- Keeping CCU's existing potable water, wastewater, and reclaimed water systems in continuous operation (no interruption of service) and minimizing impacts to the environment, public, and commercial businesses.

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- This section is divided up to cover the key areas of work on the program.

Data Acquisition and Review: The VEBS Team will:

- Prepare structured data requests with SPECIFITY prior to the Kickoff Workshop. Review with County staff at the workshop. Address any County questions.
- Identify the timing of data needs (i.e., critical data needed as soon as possible versus data that can be supplied later in the project)
- Group into data categories and identify County point person/department
- Collect client data from other reliable sources (i.e., FDEP, County website, and other stakeholder) to limit the time needed by County staff to gather and transmit the data
- Setup up streamlined protocol for data transfer and sharing

Obtaining Key Input from County Staff

- Conduct timely and well-prepared workshops to overview key deliverables and gain critical feedback and input from County staff. (**This was very successful on the Charlotte County CAAP Framework Development and Pilot Flow Monitoring Program Project**)
- Document key decisions via detailed meeting summaries with action items or project memorandums at key milestones

Identify items on a critical path such as long-lead items that could negatively impact the schedule

- Maintenance of Traffic Permits
- Right-of-way Use Permits
- Equipment and tools purchase and installation should be coordinated with County Utilities and Procurement as early as possible within the project schedule

SUE Risk Management

As a long-time service provider of SUE services, our team has a thorough understanding of the scope and specifications that this contract requires. By applying our expertise and proven processes in the delivery of the SUE services required for this contract, major project risks would be minimal. Some of the most common risks associated with performing this scope and the mitigation measures our team would implement to avoid or reduce the impacts of those risks are summarized below.

SUE Safety Issues

Our SUE subconsultant's Regional Safety Coordinator, Nate DuPaul, will be consulted on all projects prior to commencing our work. In conjunction with SAM's internal safety department, Nate will ensure that:

- ☑ All of SAM's stringent internal safety procedures have been reviewed by the team
- ☑ Safety training has been completed for those assigned to the project
- ☑ The team knows the name and location of the nearest medical facility to the project

SUE Project Delays Caused by Not Having Site Access

Our SUE team will mitigate this risk by including the dates of expected fieldwork in the SOW and accompanying schedule. Our team also notified all interested parties at Charlotte County of our planned field activities, both via email and with a follow-up phone call within the specified time frame (generally 5-7 business days ahead of time) to allow for the proper planning of resources. In addition, we will call ahead or e-mail the day before or morning of field activities to confirm access.

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SUE Encountering Unhappy Property Owners

Our team can mitigate this risk by proactively working closely with Charlotte County's key staff. Proper notification and communication beforehand, and while on site will be critical to project success. **We plan to have a master schedule for the whole program so that the public, businesses, residential property owners, other key stakeholders, and County staff are well-informed about the areas we plan to work in and when. We will consider key County operational activities and special community events in building our master schedule.**

Oftentimes property owners have special requests for access to their property and our field personnel need to be aware of those requests/restrictions. Additionally, if there are questions or concerns from the property owner or business while our field crews are on site, our crews will make sure to direct those questions/concerns toward a County representative. Lastly, our field crews are trained to be conscious of their surroundings and leave the property as they found it or in better condition. If something looks off, they will take a picture of it and notify the designated County representative for documentation purposes.

CCTV

The County wishes to locate all active sanitary laterals. The best approach for this depends on whether there is a cleanout on each individual property that can be located. Previous experience has taught us that the actual location of the lateral from the cleanout to the main, may take numerous turns and bends, and sometimes 2 houses are connected to one lateral prior to connecting to the main. A standard CCTV Camera on a crawler may be outfitted with a SONDE unit that can be picked up with an electronic locator and that point could be surveyed with the survey crew.

However, the County has approximately 40,000 sewer customers and 365 miles of sanitary sewer. The time and cost to perform this task will be expensive and performing this in a prioritized fashion and combined with full CCTV, Cleaning and PACP Coding may be a much more efficient, effective, and useful process. Many sewers will require cleaning prior to any CCTV camera navigating through the main. In addition, the County is to fully inspect all of its gravity sewers and get the video and data into one GIS-linked geodatabase for future asset management and rehabilitation programs. The VEBS | HAZEN experts have performed these types of projects across the county and can properly guide Charlotte County with the best, most efficient, and cost-effective long-term program. In the long term, this would likely cost in excess of $6,000,000 but should be prioritized with a well-thought-out asset management mindset utilizing the likelihood and consequence of failure of every sewer segment and basin.

GIS

Many of the challenges associated with developing the final GIS development are covered under Task 8. Communication and coordination are absolutely critical and have been discussed in other parts of this section. Additionally, in order to minimize any rework, it will be critical to provide early geodatabase submittals from the pilot areas to ensure that the processes, procedures, controls, and formats are efficient and effective. The proposed web mapping and dashboard application will also ensure that data is QA QC'd in near real-time and that field issues are tracked, addressed, and recorded in the database.

C. COORDINATION / INVOLVEMENT METHODS WITH COUNTY UTILITIES STAFF

Our PM and task leaders will maintain clear channels of communication with the County PM and other key representatives in person, by phone, and by email. With a County-wide programmatic project of this magnitude, our team understands that providing updates on progress is essential for project success. Our PM will immediately notify Charlotte County PM upon discovery of any item that may affect the project scope. Schedule, and budget. VEBS and our subconsultants will work with Charlotte County to evaluate and address the issue in a timely fashion and provide any recommendations. In addition, in the event of unscheduled delays due to weather or other unforeseen factors, our team has the depth and breadth of resources to work overtime or on the weekends to get your project back on schedule.

CHARLOTTE COUNTY
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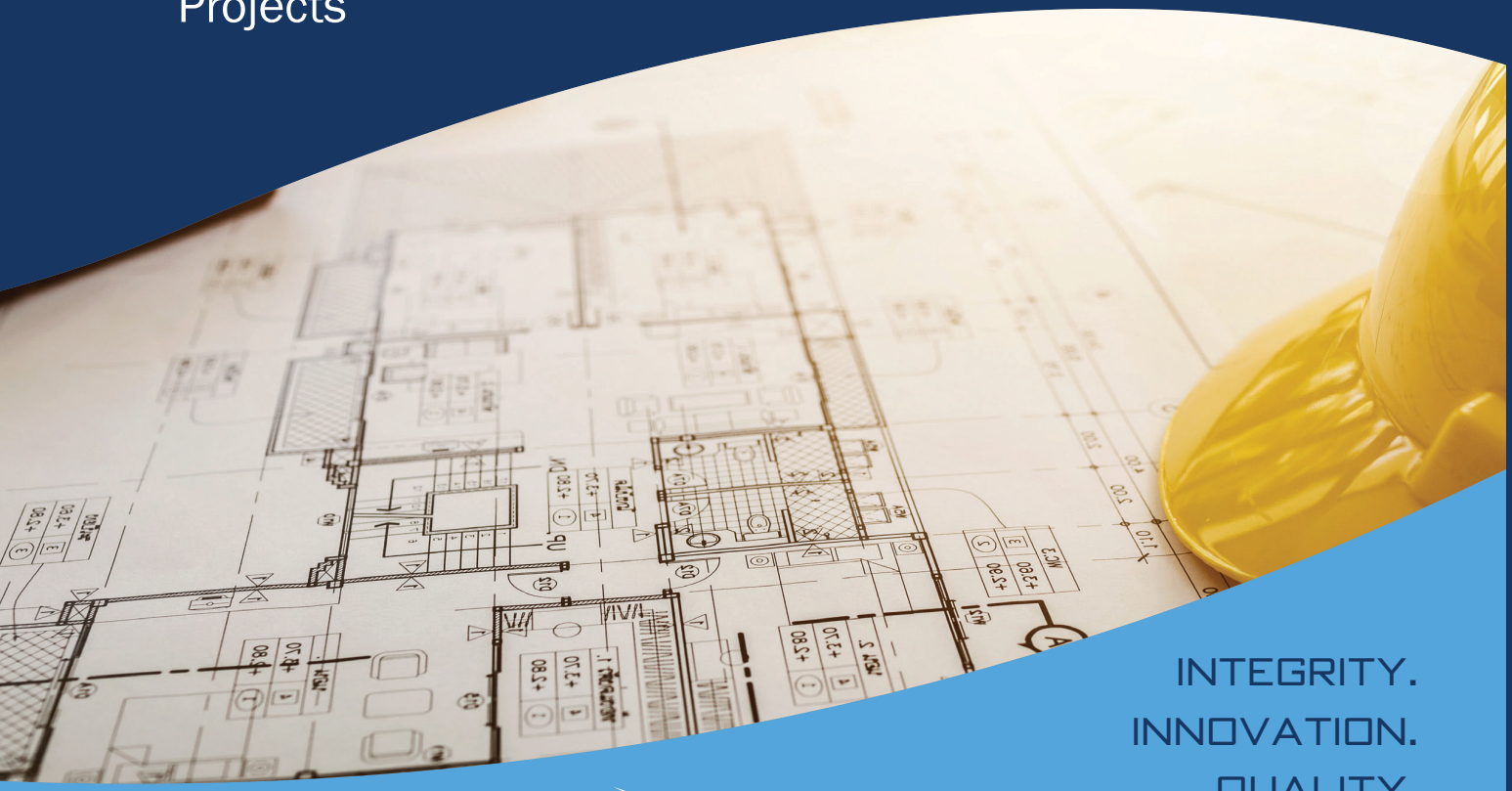
VI.

Present Examples of Recently Accomplished Similar Projects



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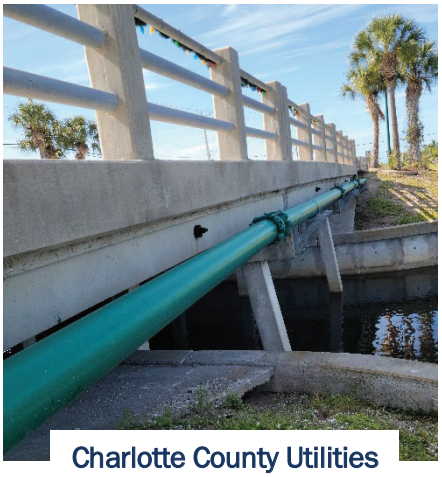
OUR SIMILAR RECENT ACCOMPLISHED PROJECTS

Veith Engineering & Business Solutions (VEBS) is a strong, local professional engineering and consulting firm with offices in Sarasota and Manatee counties. Our multi-disciplined staff has an impressive breadth of local, state, and national experience dating back nearly 50 years. VEBS supported by our strong subconsultants have a unique blend of local and national project experience enabling our team to offer innovative, cost-effective, high-quality, and responsive services to address our clients' varying utility needs.



Charlotte County Utilities force main in Rotonda

Our team's vast expertise enables us to assist the County in achieving its goal of having an accurate asset inventory and resulting GIS that will serve as the basis for all utility Asset Management and ongoing Operation and Maintenance. Our array of services on similar projects includes program and project management, asset, data, and information management; asset inventory and condition assessments, field investigations and pilot studies, utility management consulting, subsurface utility engineering, design, cost estimating, permitting, public/stakeholder engagement, alternative project delivery advisement, and

Our team's strongest benefit to the Charlotte County Utilities is our ability to leverage both our 50+ years of local and national buried utility infrastructure experience and knowledge to provide you the professional services required to meet your potable water, wastewater, and reclaimed water subsurface utility engineering verification needs. Our similar projects will demonstrate our depth and breadth of recent and relevant system-wide asset field data collection/verification and data integration into GIS and CMMS experience.

Qualification Area	Similar Projects	Benefits to You
Asset, Data, and Geodatabase (GIS) Management	✓ Charlotte County CAAP and Pilot Flow Monitoring Program ✓ Sarasota County CMOM ✓ Pinellas County Restore Act ✓ Ft Lauderdale Sewer Consent Order Design and Implementation Program – AMCMOM, Cityworks and Collection and Transmission System Mapping ✓ City of Fort Lauderdale Water System Mapping	• We have worked with each of our team members on similar projects • We are currently performing similar services on projects for Charlotte County Utilities. We will apply our knowledge, best practices, and lessons learned to your project.
Asset Field Inventory (Level's A, B, C, and D) and CCTV	✓ Sarasota County CMOM ✓ Pinellas County Restore Act ✓ Ft. Lauderdale Collection and Transmission System Mapping ✓ City of Fort Lauderdale Water System Mapping ✓ SR 45 (US41) from Conway Blvd. to Midway Blvd., Charlotte County	• We have worked with each of our team members on similar projects • We have experience in Charlotte County
Program Management	✓ Sarasota County CMOM Program ✓ Charlotte County CAAP and Pilot Flow Monitoring Program ✓ City of Largo Sanitary Sewer Management Systems	• Management of large, complex County/Citywide programs within budget and schedule. Will apply best practices and lessons learned to your project.

Examples of our team's depth and breadth of experience on similar projects are shown in the project descriptions on the following pages.

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CHARLOTTE COUNTY CAAP DEVELOPMENT & PILOT FLOW MONITORING PROGRAM

PROJECT OWNER REPRESENTATIVE:

Bryan Hatfield
Charlotte County Utilities
25550 Harborview Road
Port Charlotte, FL 33980
941-769-4054
bryan.hatfield@charlottecountyfl.gov

PROJECT COST AND SCHEDULE:

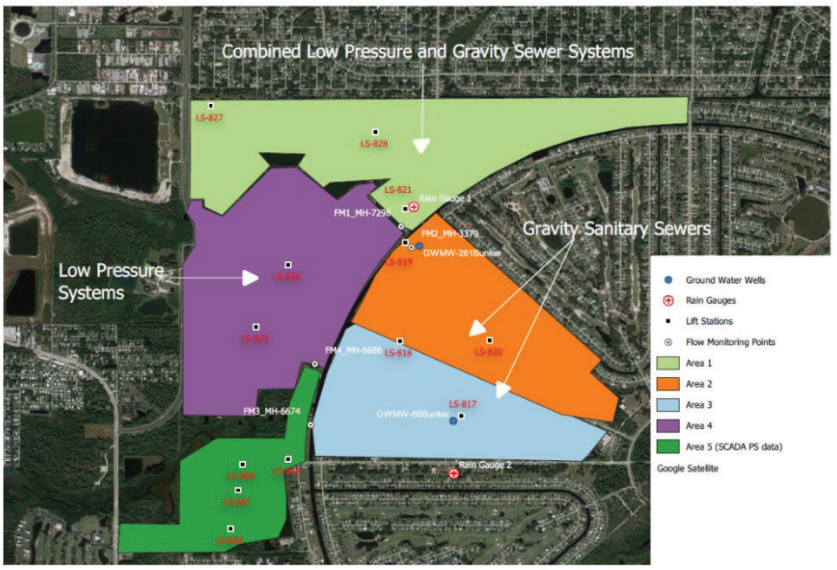
Start Date: April 2022
End Date: February 2024
VEBS' Project Fee: $834,187
Construction: N/A (Study)
VEBS – Prime Consultant, HAZEN - Subconsultant

KEY PROJECT COMPONENTS:

- Asset management and CMOM program implementation.
- Electronic and field data collection, management, review, and analysis.
- Asset hierarchy/inventory, GIS database, CMMS, and hydraulic model analysis.
- Wastewater collection system planning, evaluation, assessment, and modeling
- Regulatory compliance (FDEP Consent Order)
- Capacity assessment and assurance framework development and implementation
- Infiltration and inflow (I&I) abatement and flow monitoring analysis
- Capacity assurance (concurrency management) and assessment program development and implementation.

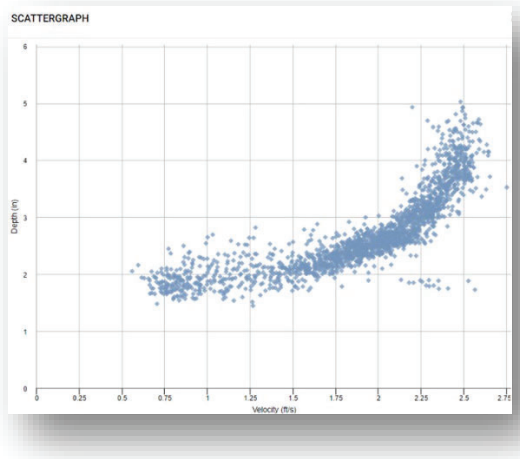
PROJECT AND SCOPE OVERVIEW:

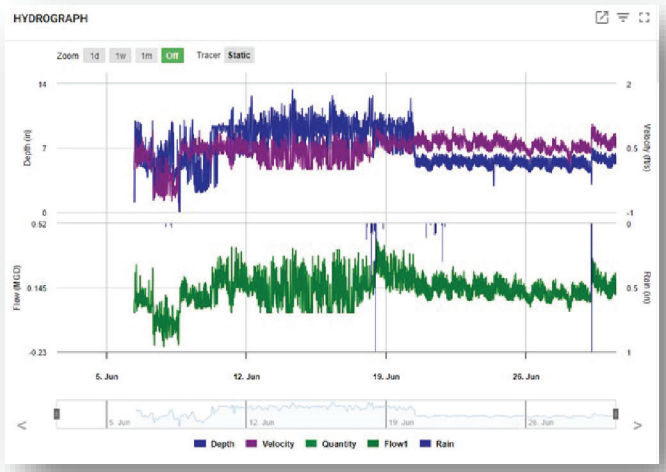
Charlotte County (County) selected the Veith Engineering & Business Solutions (VEBS) and Hazen and Sawyer team (VEBS/Hazen TEAM) to provide engineering and professional consulting services for their Capacity Assessment and Assurance Program (CAAP) Framework Development & Flow Monitoring Pilot Program (RFP NO. 2021000573).



The Charlotte County Utilities Department owns, operates, and maintains a wastewater collection system (WCS) consisting of lift stations, vacuum sewer pumping stations, force mains, gravity sanitary sewers, manholes, sanitary sewer laterals in public rights-of-way, low-pressure mains (LPS), vacuum sewer mains, air release valves, and other items for collecting and conveying raw wastewater to the County's wastewater reclamation facility (WRF). This WCS services over 39,000 sanitary sewer connections within Charlotte County and a small portion of Lee County.

The County is under a Florida Department of Environmental Protection (FDEP) consent order that required them to develop and submit a capacity, management, operations, and maintenance program (CMOM) before December 31, 2021. The County submitted their CMOM plan to FDEP in December 2021. This project serves as the capacity component of their CMOM program (C – Capacity) and adheres to Environmental Protection Agency (EPA) guidelines and industry best practices.





The purpose of this project is to develop an initial desktop WCS CAAP and Flow Monitoring Framework that outlines the processes, tools, and resources used to evaluate the WCS and determines the most effective way to address its gaps and deficiencies. The project will also involve the development of a framework for a flow monitoring program and conducting a flow monitoring pilot test in the Rotonda West area. These test results will then be used to refine and finalize the flow monitoring program. The scope of services will be completed in two phases:

Phase I: CAAP and Flow Monitoring Framework Development

Phase II: Flow Monitoring Pilot Program Plan and Program Documentation

SCHEDULE AND COST CONTROL:

To ensure compliance with firm regulatory deadlines, the VEBS/HAZEN Team identified potential risks to the schedule and developed appropriate mitigation plans. These are then added to a detailed project schedule that VEBS' staff reviews and updates each week. This project is currently on schedule and within budget.

During these internal team meetings, project schedules and progression of deliverables are discussed, and key action items are assigned. VEBS/HAZEN Team also conducts monthly coordination meetings with the County to discuss and review the status of tasks and activities related to the project's schedule and budget.

EXAMPLE OF UNFORESEEN CIRCUMSTANCES AND ACTIONS TAKEN TO MITIGATE OR CORRECT:

Challenges: Slow delivery of data. This puts a strain on the project's schedule and could result in not having the flow monitoring equipment installed before the onset of the wet weather season.

Solutions: The VEBS/HAZEN Team quickly and cost-effectively obtained rainfall, groundwater level, and other critical data from alternate sources such as SWFWMD, FDEP, and USGS. The data was then stored and analyzed in a manner that was very beneficial for this project and that benefits the future needs of the County. Having this data in the early stages of the project drove the schedule forward and minimized costs to the County.

SARASOTA COUNTY CMOM DEVELOPMENT & IMPLEMENTATION PROGRAM

PROJECT OWNER REPRESENTATIVE:

Gregory Rouse
Sarasota County
1001 Sarasota Center Blvd.
Sarasota, FL 34240
941-861-0548
grouse@scgov.net

PROJECT COST AND SCHEDULE:

Start Date: January 2020
End Date: September 2024
VEBS' Project Fee: $993,866 (Years 1 – 4)
Hazen Project Fee: $3,720,000 (Years 1 - 4)
Construction: N/A (Study)
HAZEN – Prime Consultant, VEBS - Subconsultant

KEY PROJECT COMPONENTS:

- Asset management and CMOM program implementation.
- Electronic and field asset data location, management, and inspection.
- Data and Information Management including GIS, CCTV, and CMMS
- New database tool for seamless integration of utility asset record drawing information into the County's CMMS and GIS.
- GIS/CMMS integration support
- Mapping tools and dashboard to support progress

PROJECT AND SCOPE OVERVIEW:

Hazen | VEBS team is working with the County to implement a Capacity, Management, Operations, and Maintenance (CMOM) Program. This five-year program began with the Year 1 development of the CMOM program in 2021 and is now in the fourth year of implementation of this program.

The County manages, operates, and maintains over 770 miles of gravity sewers, 750 lift stations, 530 miles of pressurized force mains, and approximately 1,000 force main air release valves (ARVs). The CMOM program involves a significant amount of asset inventory, mapping, GIS analysis, and location along with a robust Asset Management Program.

This program involves the following key activities:

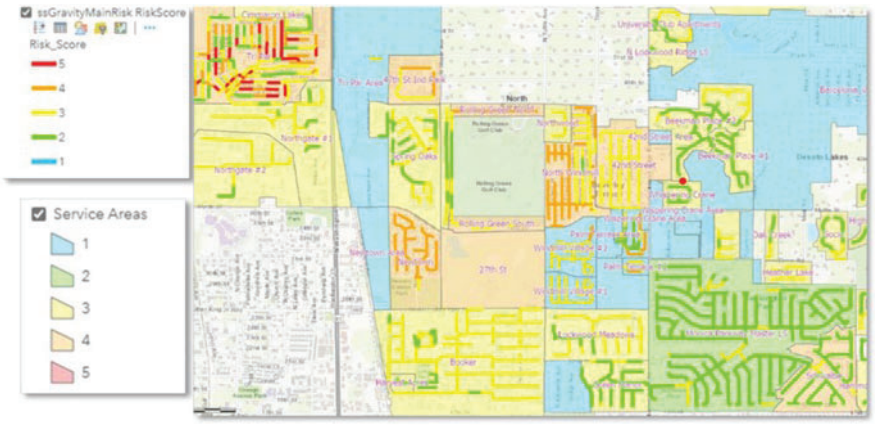
- Inventory and location of collection and transmission system assets including manhole GPS surveys and pump station location and inspection/assessment of all collection system assets (sewers, manholes, laterals, force mains, and lift stations)
- Asset Management Plan for all gravity sewers, force mains, and Lift Stations
- Extensive CCTV, MH inspections, flow monitoring, and smoke testing including the use of PACP coding to map sewer laterals using geospatial techniques.
- Air release valve (ARV) locating, asset inventory, inspections, evaluation, maintenance, and replacements, and GIS Live Dashboards
- Information management and software integration (GIS, CMMS, SCADA, field investigations)

- CMMS (Maximo) work order and data schema improvements
- Capacity assessment and assurance for the collection system

Our team is helping the County become a "Best-In-Class" utility that is highly effective in resource allocation to protect the public health and environment and promote financial stewardship and sustainable growth.

This program has utilized many sophisticated software and data integration innovative initiatives to facilitate this program. The use of GIS and Microsoft Power BI dashboards have been an overwhelming efficient means of graphically portraying complex data summaries, statistics, maps, and much more to help with managing pipeline assets, field inspections, asset management, pipe condition, pipe age, SSOs, funding needs and construction status.

The **Figure** to the right illustrates some examples from Sarasota County where a sophisticated asset management program was developed to create the likelihood and consequence of failure for every gravity sewer and force main in the County. This data was then utilized to help prioritize every sub-basin in the County for implementing inspection pro- grams such as CCTV, smoke testing, manhole inspections, and flow monitoring.



The team performed a detailed evaluation of the GIS to identify gaps in the ARV layer and then conducted field surveys gathering locational and attribute information data for the ARVs that will then support SUE QL-A and QL-B efforts. Additionally, VEBS assessed the County's record drawing and asset onboarding process and developed enhanced process and resource improvements, an SOP guidance document, and a new database tool for seamless integration of utility asset record drawing information into the County's CMMS and GIS.

SCHEDULE AND COST CONTROL

To ensure compliance with firm regulatory deadlines, the VEBS/HAZEN Team identified potential risks to the schedule and developed appropriate mitigation plans. These are then added to a detailed project schedule that VEBS' staff reviews and updates each week. This project is currently on schedule and within budget.

Given the fact that this was a Consent Order project, maintaining a schedule for milestones was absolutely critical. The team maintained a database of action item due dates and convened weekly meetings to ensure completion and established tools with automated workflows. No milestones have been missed on this critical program.

EXAMPLE OF UNFORESEEN CIRCUMSTANCES AND ACTIONS TAKEN TO MITIGATE OR CORRECT:

Challenges: Access to timely and institutional data, fast-track schedule, and limited County resources.

Solutions: Through proven processes techniques, data collection, and consistent tracking, we were able to streamline a solution to the County's CMOM issues and provided the County with access to VEBS' engineering experts who are specifically trained in utility engineering, planning, modeling, regulatory issues, operations and maintenance, and best management practices. We also developed a clear communication plan and routinely reported on the project's performance to ensure that the County would be able to monitor/control progression and achieve its goals.

VEITH ENGINEERING & BUSINESS SOLUTIONS
2201 Cantu Court, Suite 118, Sarasota, FL 34232 (941) 374-3422

PINELLAS COUNTY RESTORE ACT WW COLLECTION SYSTEM IMPLEMENTATION & DESIGN

PROJECT OWNER REPRESENTATIVE:

Dan Glasser, PE / Tom Meinke, PE
Pinellas County
14 S. Ft. Harrison Ave.
Clearwater, FL 33756
727-464-4000
dglaser@pinellascounty.org or
tmeinke@pinellascounty.org

PROJECT COST AND SCHEDULE:

Start Date: September 2022
End Date: March 2024
VEBS' Project Fee: $455,775
Construction: TBD

KEY PROJECT COMPONENTS:

- Subsurface Utility Engineering (QL-A to QL-D) and Survey, Mobile LIDAR
- Asset data collection, management, review, and analysis
- Planning, evaluation, assessment, modeling, design, permitting, and bid phase
- Gravity sanitary sewers, lift stations, force main, pipe lining
- GIS database review
- Restore Act Program Implementation
- Maintenance of Traffic (MOT) and Right-of-way use permitting

PROJECT AND SCOPE OVERVIEW:

Pinellas County (County) selected the Halff Team to provide engineering and professional consulting services for their Restore Act Wastewater Collection System Improvements (Project). Veith Engineering & Business Solutions (Subconsultant) is a key member of the Halff Team and subconsultant to Halff who is the prime engineer. The project consists of field investigations, subsurface utility engineering (SUE), data collection, management, and analysis; preliminary and final engineering design, FDOT right-of-way (ROW) and FDEP permitting assistance and bid phase support services for the replacement of private wastewater collection systems within up to 14 private manufactured home communities (MHCs) in the County. The Table below includes the names of the MHCs for which VEBS is the engineer of record (EOR).

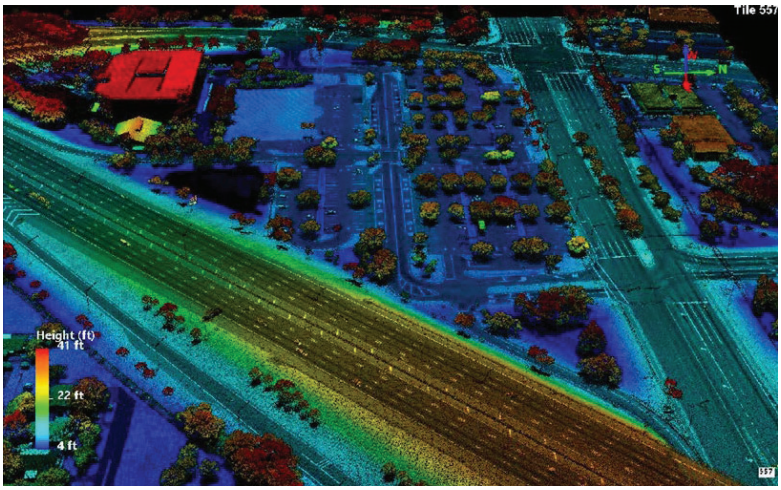
No.	MHC Name	Approx. Distance Along Street Centerline	Approximate Lot/Unit Count
1	**Bel-Aire Mobile Home Owners**	5,505	166
9	**Lake Seminole Resort**	8,312	246
10	**Majestic Park Homes**	6,534	161
11	**Midway Am-Can Home Park**	4,067	106
12	**Oasis Mobile Home Park**	4,180	117

The five MHCs noted above will require the design of new gravity sanitary sewers to replace the existing private sanitary sewers. For Bel-Aire and Lake Seminole Resort MHCs, the scope also includes the design of a new on-site pump station and force main in accordance with County standards to replace the existing pump stations and force mains. VEBS design innovation was applied to unique site and project features.

SEWER CONSENT ORDER DESIGN AND IMPLEMENTATION PROGRAM – AMCMOM, CITYWORKS, AND SEWER MAPPING

FT. LAUDERDALE

The City of Fort Lauderdale's sanitary sewer system is a regional system that serves the City as well as four large users. It consists of 186 City-operated pump stations, five regional repump stations, 113 miles of force main, and 500 miles of gravity sewer.



Hazen serves as Program Manager for this effort and is responsible for the implementation and coordination of projects to satisfy 40 Consent Order deadlines.

The project includes conducting a risk-based prioritization and condition assessment of the City's wastewater force mains

Hazen has conducted numerous tasks under this program with the following activities comprising key activities :

Managed the implementation of Cityworks EAMS for the City including geodatabase design support and QA/QC as well as business processes

- Developed and implemented a cost-effective and robust, phased Mapping Plan to design and develop a detailed GIS of the entire collection and transmission system. And mapping of the City's sanitary sewer collection system.
- Developed a highly effective image recognition ML tool using aerial photography to identify locations of collection system manholes saving thousands of hours.
- Conducted detailed survey and utilized detailed and highly accurate Lidar including QL-A, B, and C of all system valves, pump station as well as manholes and sewers included in the collection system model.
- Develop a complete and accurate geodatabase of the entire collection and transmission system in GIS for Cityworks.
- Developed an Asset Management, Capacity Management, Operation, and Maintenance (AM-CMOM) Program for the City's wastewater collection and treatment systems. AM- CMOM efforts include condition assessment, risk analysis, and prioritization of assets for rehabilitation and/or replacement.

Schedule control

A master program schedule was maintained, and weekly calls were conducted to ensure project progress and all Consent Order milestones were completed within schedule.

Cost control

Project costs were closely monitored for each Task Order. Any out-of-scope work was addressed via formal amendments. The mapping task included a significant addition of scope with no need for a fee increase.

Construction problems and means taken to solve them

Any construction challenges were met with close coordination with the City and the Contractors.

Reference

Christopher R. Bennett, P.E. Assistant Director – Strategic Planning & Support

Public Works Department | City of Fort Lauderdale

101 NE 3 AVE, Suite 1420 |

Fort Lauderdale FL 33301

954-828-5609

cbennett@fortlauderdale.gov

Project Relevance

- Asset location and inventory of entire collection and transmission system
- Surveyed locations of all system valves and manholes not already located
- Detailed survey of all pump stations
- Design and implementation of sewer geodatabase for Cityworks
- Managed Cityworks implementation for City-
- Utilized machine learning image recognition for manhole location

CITYWIDE GRAVITY SEWER SURVEY - CITY OF SARASOTA, DEPT. OF PUBLIC WORKS

PROJECT OWNER REPRESENTATIVE

Mr. James Hale

STANTEC, Inc

239-284-6485

PROJECT COST AND SCHEDULE

2015 - 2017

Total Fees: $ 109,405.00

PROJECT INFORMATION

Description: Hyatt Survey, as a subconsultant to Stantec, Inc., performed an As-built Survey of portions of the gravity sewer system within the City of Sarasota.

Size and Scope: The scope of work required the Hyatt Survey to determine the horizontal and vertical location of approximately 700 gravity sewer manholes throughout the City. The horizontal and vertical location of each manhole was determined. Elevations were determined on all manhole rims and "accessible" inverts. In addition, pipe size, material, and cardinal direction were determined and indicated within written field notes. Third Order Digital Leveling procedures were utilized to establish the elevation (NAVD88) of each manhole rim relative to published County/NGS benchmarks and RTK GPS was utilized to determine the horizontal location (Florida State Plane Coordinates) of each structure. All horizontal locations were referenced to the Florida State Plane Coordinate System, NAD 1983 Datum, Florida West Zone in US Survey feet. All vertical data was referenced to the NAVD 1988 datum. Due to traffic considerations and structure locations within the roadways, much of this work was completed during nighttime operations. Proper FDOT Maintenance of Traffic and other safety procedures were followed during the performance of this work to ensure the safety of all field crews and the public.

Deliverable: Hyatt Survey delivered a comma-delimited ASCII file containing the following data for each manhole: Point number, Northing, Easting, Elevation, and Description. For clarity, Hyatt Survey supplied a CAD file containing all structures and details that assisted the City in the interpretation of the field data collected.

Hyatt Personnel Involved:

Russell Hyatt, PSM, Project Manager
Chris Whightsel, CST III, Project Surveyor Taylor Gay, Crew Chief
Deric Rimes, CST IV, Crew Chief Steven Long, Crew Chief
Brian Hooks, Crew Chief

CITY OF FORT LAUDERDALE WATER MAPPING

Ft. Lauderdale, Broward County

Purpose: Assessment Mapping100 miles
Owner: City of Fort Lauderdale
Prime: Craven Thompson and Associates Inc.
Craven Thompson Reference: Mr. Richard Pryce, PSM, Senior Project Manager, (954) 739-6400

The city was interested in an asset inventory of the entire water network in order to have a complete data set for public works to operate from, moving forward. The city required a quick timeline for the project, to meet compliance requirements so it could begin some utility rehabilitation and replacement projects. SAM was selected on the team to provide aerial LiDAR, color orthophoto imagery, mobile mapping, Subsurface Utility Engineering (SUE), and GPS location surveys to generate accurate spatial data which will integrate seamlessly into the city's GIS. This suite of data is to be used for asset management to support budgeting and scheduling future projects related to the water distribution system. This project consists of over 240 miles of city-owned water line recovery and mapping within GIS software. The project involves several SUE QL-B crews and the mapping of all existing water lines larger than eight inches throughout the city.

GEORGIA POWER GRID PROGRAM – MID-2020 TO END OF 2023

Purpose: Utility Mapping
Owner: Georgia Power Company
Prime: Pike Engineering, LLC.
Reference: Mr. Justin Simmons, Vice President, Engineering, (770) 984-6810

Surveying and Mapping, LLC (SAM) has provided subsurface utility engineering services to support Georgia Power's Grid Program which is relocating overhead distribution electric underground. Working with prime design leads Pike Engineering and Overland Construction SAM has been providing designation of utilities along proposed bore paths for new underground facilities and excavating test holes at all crossings between existing utilities and the proposed bore path. SAM has excavated approximately 5,000 test holes on 28 projects.

SR 45 (US41) FROM SOUTH OF AQUI ESTA DR. TO SOUTH OF CARMALITA ST., CHARLOTTE COUNTY

Purpose: Resurfacing
FPN: 451101-1, 1.43 miles
Owner: FDOT District 1
Prime: Comprehensive Engineering Services, Inc.
FDOT District 1 reference: Mr. Mark Peronto, PE, District 1 Structures Design Engineer, (863) 519-2426

SAM is currently providing SUE QLB Designation utilizing ground penetrating radar, for 14 Utility miles of 8 UAOs, including but not limited to TECO gas, F.O., communications, water, electric, and street lighting. QLA Excavation test holes are being performed at 11 drainage structures, 800 LF of pipe, 12 multi-post sign foundations, and 16 pedestrian signage poles. The subsurface utilities and facilities identified by our SUE personnel are surveyed and located by SAM survey crews and are incorporated into the Topographic and utility CAD drawings.

SR (US41) FROM CONWAY BLVD. TO MIDWAY BLVD., CHARLOTTE COUNTY

Purpose: Sidewalks design
FPN: 438262-1, 2.13 miles
Owner: FDOT District 1
Prime: Landis Evans + Partners, Inc.
FDOT District 1 reference: Mr. Mark Peronto, PE, District 1 Structures Design Engineer, (863) 519-2426

SAM is currently providing SUE QLB Designation utilizing ground penetrating radar, for 15.26 Utility miles of Charlotte County Utilities, TECO gas, F.O., communications, and 7900’ of water and force main. 221 QLA Excavation test holes are being performed at 15 drainage structures, 15 pipe runs, 5 multi-post sign foundations, 38 light pole foundations, 7 mast arm foundations, 10 contingency test holes, and 4250’ of Charlotte County right of way. The subsurface utilities and facilities identified by our SUE personnel are surveyed and located by SAM survey crews and are incorporated into the Topographic and utility CAD drawings.

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2201 Cantu Court, Suite 118, Sarasota, FL 34232 (941) 374-3422

Mckim and Creed (SUE)

FDOT D-1 - I-75 South of Jones Loop to North of US 17; Reynolds, Smith and Hills, Inc. (RS&H) | Charlotte County, FL: McKim & Creed completed professional SUE services for I-75 South of Jones Loop. The purpose of this project was to enhance the accuracy and efficiency of underground utility mapping and identification for this stretch of road.

SR776 from Sunnybrook to Coliseum - AIM Engineering & Surveying, Inc | Port Charlotte, FL: McKim & Creed provided land surveying and SUE survey services for a corridor planning study of SR 776 from Sunnybrook to Coliseum. The purpose of this study was to improve safety, mobility, connectivity, and reliability for people who drive, walk, bike, and use transit.

EWSG (CCTV)

City of Sarasota, FL -City-wide Sanitary Sewer Cleaning and Inspection (ITB#22-14JS) – EWSG continues to assist the City of Sarasota in its efforts to assess the condition of the City's wastewater conveyance infrastructure. This project is a City-wide effort involving the heavy cleaning of the sanitary system, maintenance of the existing wastewater flows, inspection and reporting of the conditions to NASSCO standards, and includes the necessary maintenance of traffic.

JEA - Sewer Main Cleaning and CCTV Inspection (Solicitation Number 1410343850) – EWSG continues to be engaged by JEA in the cleaning and assessment of the JEA sewer system. The Scope of Work for this project consists of the cleaning of JEA sanitary sewer mains in various locations throughout the JEA service territory and assisting JEA Sewer maintenance and construction crews with jet-vac combo truck assistance, as directed by the Water and Sewer Preventative Maintenance Manager. The work also includes the removal and disposal of solids, sludge, grit, grease, sand, pieces of broken pipe, and any other debris from the sanitary sewer lines and sanitary manholes.

Sarasota County, FL - Cleaning, Televising, and Assessment of Sanitary Infrastructure (IFB #201908LT) – EWSG partnered with Sarasota County for the cleaning, CCTV inspection, and assessment of the County's sanitary sewer system infrastructure. This project also includes maintaining wastewater flows, bypass pumping, manhole cleaning and inspection, and maintenance of traffic.

Dekalb County, GA - Small Diameter Sewer Cleaning (ITB) NO. 21-101411 - DeKalb County Department of Watershed Management's (DWM) Wastewater Collection and Transmission System (WCTS) includes an estimated 2,700 miles of sanitary sewer lines, 66 lift stations, and 70,000 manholes. Per the Consent Decree (CD) entered with the United States Environmental Protection Agency, the County established a gravity line preventative maintenance program as part of the Maintenance Management System (MMS) Program. A routine mechanical cleaning program is established based on mechanical cleaning needs in coordination with the hydraulic cleaning program. The County utilizes Cityworks, a computerized maintenance management system (CMMS), to track its maintenance data. EWSG provides sanitary cleaning, CCTV Inspection, manhole location and uncovering, data collection, QA/QC, and reporting in accordance with the Cityworks and Consent Decree requirements.

EWSG Project References

Dekalb County - Julio Trinidad 678-237-3812 Jtrinidad@dekalbcountyga.gov

City of Sarasota – Carlos Marmolejos 941-954-4151 Carlos.Marmolejos@sarasotaFL.gov

JEA – Bryan Spell, 904-665-4643 spelbc@jea.com

Sarasota County - Jason Brown 941-861-0757 jkbrown@scgov.net

CHARLOTTE COUNTY
FLORIDA

VII.

Describe Your Experience and Capabilities

INTEGRITY.
INNOVATION.
QUALITY.
SERVICE.

VEITH ENGINEERING
& BUSINESS SOLUTIONS

OUR EXPERIENCE AND CAPABILITIES ADDRESS YOUR CRITICAL NEEDS

Our team's experience and capabilities exactly match what the County desires and is required on this important County-wide project. Our team's areas of special expertise and focus include the following key project components:

A. Horizontal and Vertical Asset Data Collection for Subterranean Assets
B. Incorporating collected data into a GIS database
C. Critical Path Method
D. Specialized Experience

The following subsections further describe our team's special areas of capabilities and experience for your project.

A. Horizontal and Vertical Asset Data Collection for Subterranean Assets

Records Research - Quality Level D

Our team has the necessary experience in conducting desktop and field investigations to estimate the position of underground utilities through utility records (as-builts and record drawings), information from others such as aerial photography, or visual clues such as pavement cuts, obvious trenches, private locate markings, or visual existence of the service. Our team has recent and relevant experience with reviewing Charlotte County data on our current project. Aerial records and/or visual inspection will be utilized for surface evidence of pavement cuts, trenches, and similar signs of utility burial. Sewer CCTV data can be used to locate laterals at the main to Quality Level D. In order to meet Quality Level C, the CCTV camera's horizontal accuracy would need to be within 0.2,' which is not typically feasible with traditional CCTV cameras.

Incorporate aboveground features – Quality Level C

Our team has the required expertise, experience, and tools to identify the surface features associated with a utility segment not visible at the ground surface whose estimated position is judged through correlating utility records or similar evidence to utility features, visible aboveground and/or underground such as valve boxes, manhole covers, hydrants, meter boxes. Such aboveground anchor points will be within 0.2 ft horizontally. Tools including high-resolution aerial imagery and LiDAR, and traditional GPS equipment will be used. We have developed innovative tools and methods to achieve Quality Level C very cost-effectively such as image recognition and machine learning. Work will incorporate Quality Level D findings.

Designating and Marking - Quality Level B

Our team has the relevant expertise, experience, and equipment to identify a Utility Segment or subsurface Utility Feature whose existence and horizontal position are based on appropriate Geophysical Methods combined with professional judgment and where the source designation location is tied to Florida State Plane Coordinate, Zone West, accurate to 0.2 ft horizontal. We have the relevant expertise and experience, to obtain the right-of-way use permits and develop the maintenance of traffic control plan. The methods used for Level B include Pipe and Cable Locators, Acoustic Pipe Locator, Ground Penetrating Radar (GPR), Magnetic locators, Rodders, Sondes (transmitters)

Locating - Quality Level A

Quality Level A accuracy for features requires it to be exposed and surveyed with an accuracy of 0.1' vertical and 0.2' horizontal. Segments must be tied to two exposed anchor points whose accuracy meets the same level of accuracy

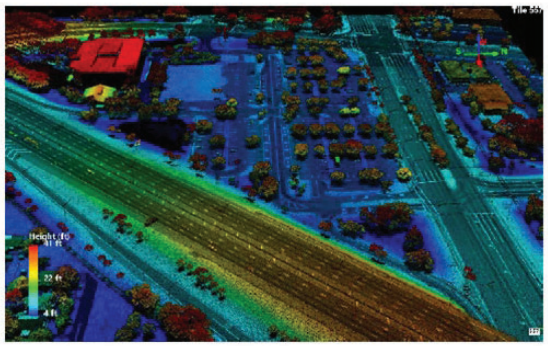
and the segment is reasonably judged to have a straight alignment and gradient between anchor points. Our specialty SUE subconsultants will use minimally intrusive excavation techniques that protect the integrity of the utilities in question, and that of other lines that may be encountered. The test holes will be excavated using air and/or water-assisted vacuum excavation equipment intended for this purpose. Data collected from the Test Hole will be recorded on a standard Test Hole Data Sheet. The location will be shown in the drawing. Utilizing the Raptor system, which is a multi-channel GPR array designed for utility locating and mapping, The unit is capable of detecting additional features such as voids, trench sizes, differing backfill, abandoned underground structures, and other irregularities not identifiable by other means. Using this technology allows us to clarify the horizontal and vertical position of the utilities while modeling other features identified during the scan.

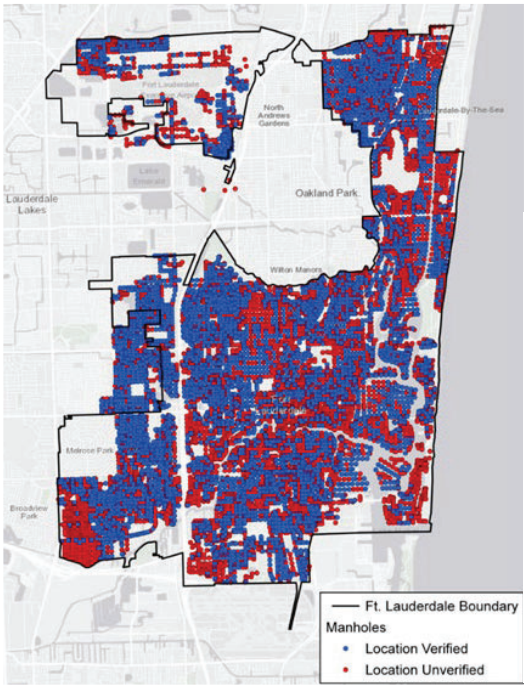
B. Incorporating Collected Data into a GIS database

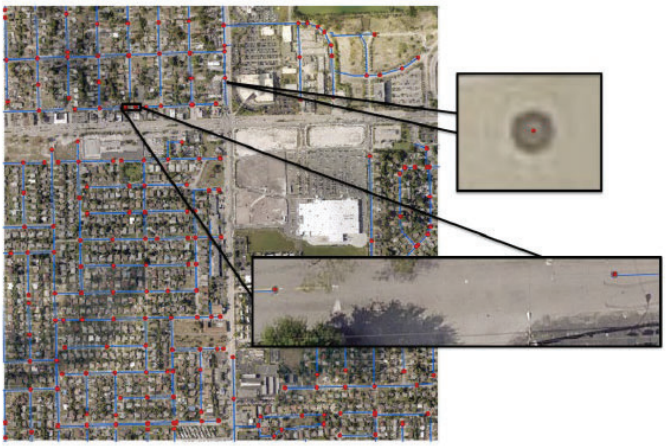
The **VEBS | Hazen** team has an extensive and highly innovative GIS team comprising numerous GIS and data analysis professionals. Hazen is an ESRI Silver Partner. Through this partnership, Hazen has direct access to Esri product managers and roadmaps for future integrations which allow us to identify the best GIS solution for a project.

Our team supports clients by helping them design their database schemas following industry best practices as well as developing GIS geodatabases and networks for other utilities utilizing a vast array of available data such as as-built drawings, survey data, LiDAR, and aerial imagery. Our team is proficient in all of the critical software programs such as ArcGIS Pro, Field Maps, Survey 123, Experience Builder, Dashboards, Workforce, Insights, Infomaster, Granite Net, and others.

Our Team has highly efficient workflows developed for converting geospatial data into robust GIS for utility management. Our subconsultant Hazen has developed innovative tools for automation such as utilizing aerial imagery and machine learning models for automating identification of sewer manholes for the City of Fort Lauderdale. **This process located almost 50% of all manholes in the collection system saving thousands of hours.** Highly accurate LiDAR was then used to obtain rim elevations. The Figures below show the aerial imagery correlation that was utilized along with the results. Also shown is the LiDAR data used to obtain elevations. Powerful automated QA/QC tools were also developed in Python to ensure accuracy.

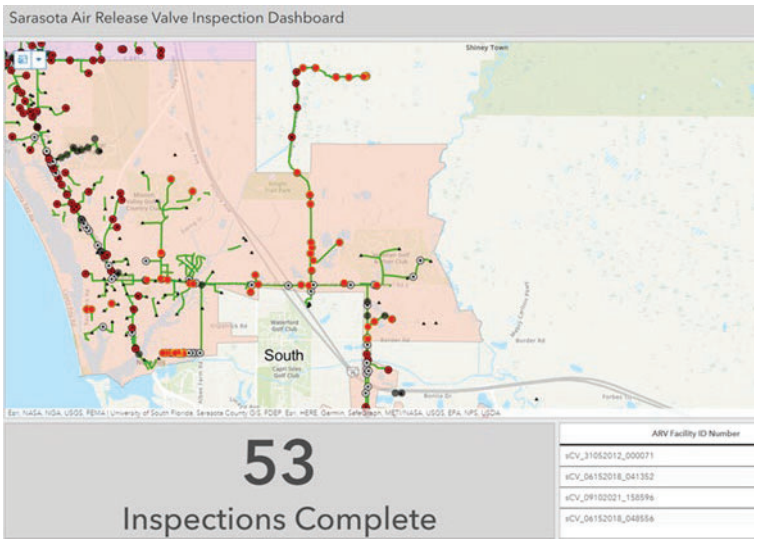




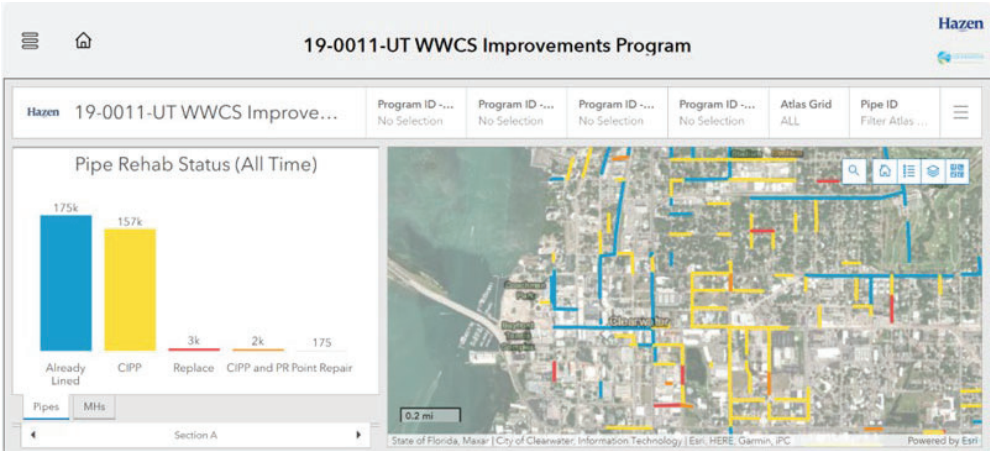


Hazen designs and develops such decision support and utility management tools including process and system modeling, data modeling and database design, geographic information systems, and application design and development. Our team's combined expertise enables us to develop innovative solutions to complex problems. Below is a figure showing a **live field inspection GIS cloud application utilizing Survey 123 and Collector to locate and assess air release valves for Sarasota County**.

Hazen is experienced with the use of Esri's Water Utilities Data Model and their own Hazen Water Data Model (Data Model) for the creation of draft asset registers. This Data Model is already preconfigured with standard options lists and subtypes which can be configured to fit the organization's unique needs. CCTV Databases, As-Built information, Excel tables, Shapefiles, NASSCO defect scoring and photos, and other sources of data can be loaded directly into this Data Model. In an Enterprise environment, the Data Model also allows for simple business intelligence software such as Microsoft PowerBI.



Using the ArcGIS Online platform has reduced our clients' need for paper workflows and improved the operational efficiency of fieldwork. Asset data (e.g., sewer pipes and manholes GIS, outfall locations GIS, or list of facility assets in Excel) are uploaded to ArcGIS Online, and Esri native apps such as Field Maps and Survey123 are used to collect data in the field and allow for real-time progress tracking and QA/QC. Experience Builder templates are then used to share data online with tools for searching, analyzing, and even editing GIS data.



Hazen has extensively utilized Model Builder to import CCTV inspections, verify sewer manhole, and pipe rehab methods and actions, verify their consequence and likelihood of failure criteria, and determine a pipe and manhole rehabilitation plan with associated costs. To help monitor and verify the condition of assets, Hazen has incorporated ESRI's web GIS platforms, ArcGIS Online or Enterprise Portal, directly into water and wastewater data collection and analysis workflows. The newest GIS technology focuses on data modeling and analysis and the Esri solutions are now robust online tools connected to cloud-based data and analysis services. The map above is an example.

C. CRITICAL PATH METHOD

Development of Critical Path Method (CPM) Schedule

One of the most important aspects of our project delivery approach will be the development and adherence to our Program Management Plan (PMP) which will be implemented in this County-wide project. The PMP incorporates key project elements such as project goals and objectives, key personnel contact information, scope, budget, schedule and key milestones, communication protocols, Quality Assurance and Control, **field health and safety plan, and risk register**. The project schedule is developed using the Critical Path Method (CPM) to determine the critical path by identifying the longest stretch of dependent activities and measuring the time required to complete them from start to finish.

Our technique defines critical and non-critical tasks (aka, activities) in VEBS standardized and proven work breakdown structure format, their durations to complete, any dependencies between the activities, and logical completion points such as milestones and client deliverables. The goal is to prevent schedule problems and process bottlenecks before they happen.

The CPM is utilized to determine the expected completion and execution time for each task. This provides a detailed critical path analysis, which focuses on identifying tasks that are dependent on other tasks for their timely completion. This understanding is key to setting team priorities on those tasks on the critical path and establishing realistic milestones and deadlines for project completion.

- Our experience with similar assignments shows that our clients benefit from our whole team focusing on these several key objectives.
- Clear, effective, and timely communications
- Identify/anticipate project risks during project start-up and have a proactive plan to address or mitigate them
- Focus on those activities that are on the scheduled critical path.
- Critical Path Schedule Development and Monitoring
    - Flagging critical items and monitoring closely
    - Contingency for unanticipated and out-of-our-control events

Our experience has consistently shown that the key to meeting schedules and budgets is careful planning combined with closely monitoring execution and making timely adjustments when necessary. Our team also recognizes the importance and value of problem prevention. VEBS has successfully integrated several internal systems into our firm's culture that simplify, automate, and coordinate the project delivery process to reduce risks associated with our projects.

Development of Risk Management Plan / Risk Register

Throughout project delivery, the VEBS team will closely collaborate with the County's project team to proactively mitigate risks that might adversely impact the schedule, budget, key stakeholders, and quality of projects or the operation of the County's facilities. The key to this activity is the early development of a Risk Management Plan and Risk Register. The Risk Register is a living document that is continually reviewed and updated to reduce the risks for the County, stakeholders, community, and the environment throughout the project's life cycle. The Risk Register is a unique document in that it creates an opportunity to discuss potentially adverse situations before they occur and/or minimizes the impact. For example, a pipeline route could potentially impact a school zone. A mitigation strategy would include identifying a period that poses little or minimal impact such as during a holiday or certain times of the day.

The Risk Register will be updated as the project progresses. The risks pertaining to the study/design phase will not be the same as the risks associated with implementation/construction. Key components of a Risk Register include:

- Risk Identification
  - Collaboratively identify potential risks and impacts throughout your project
  - Mitigation measures
  - Define the VEBS team's strategy for mitigating the risks
- Risk Register Maintenance
  - Update and maintain the Risk Register throughout all phases of your project
  - Clearly identify which VEBS, County, or other key parties will be accountable for each risk

Risk management discussions will be included in the kickoff workshop and key meetings to identify risks early. The VEBS team will help reduce risks during project delivery, drawing on our past work with the County as well as our experience with similar projects.

VEBS has proven that the benefits of developing and updating a Risk Register throughout the project include:

- Aid in anticipating possible project hurdles and challenges ahead of them occurring and having a contingency plan.
- Identify schedule and budget risks, assign the risk, and strategies in place to mitigate schedule and budget creep.
- Increase collaboration amongst the County, design team, and construction team.

The greatest benefit of being proactive through the development of a project-specific Risk Register is that this process helps avoid unwanted cost surprises and delays in project delivery.

VEITH ENGINEERING & BUSINESS SOLUTIONS
2201 Cantu Court, Suite 118, Sarasota, FL 34232 (941) 374-3422

D. SPECIALIZED AREAS OF EXPERTISE

We have assembled a proven locally based team that is well-qualified and dedicated to developing innovative engineering and "smart business" solutions to protect public health and the environment while promoting financial stewardship and sustainable growth.

In addition to directly providing professional services to our clients, we also educate the public and our client's customers regarding our environmental challenges and how the public can become part of sustainable solutions. The East County Observer article (Side of the Ranch by Jay Heater) published on April 24, 2019, shows one example of our firm's president Bryan Veith providing water quality tips to the public. (Link to the article included below.)

https://www.yourobserver.com/news/2019/apr/24/side-of-ranch-jay-heater-0/


SNN NEWS
SUNCOAST NEWS NETWORK
HOME NEWS WEATHER SPORTS

How we can help keep Suncoast waters clean

Monday, June 24th 2019, 4:27 PM EDT
Updated: Monday, June 24th 2019, 7:25 PM EDT
By Hallie Peilet

SARASOTA - Bryan Veith has spent 26 years as a civil engineer specializing in water.

"..whether we convey it, whether we treat it, helping ecosystems," Veith said.

He says there's a problem with our buried infrastructure.

https://vimeo.com/395840491

Click the link above for Bryan's Water Quality Tips Interview to help educate the Sarasota County residents and ratepayers.

WE ARE NIMBLE AND ADAPTABLE TO YOUR NEEDS

Our breadth and depth of technical resources can cover all of the County's needs. We are a strong local professional engineering firm that specializes in municipal utility work. Being close by affords us the ability to be flexible, and respond to unexpected, immediate, or impromptu facility visits or meeting requests. We are here now and will always be local and accessible to Charlotte County, not shipped in at your expense from an out-of-state corporate office.

This table provides a summary of our team's relevant experience with local Florida and state projects that have related challenges and similar scopes of services to this County project.

Project Components	Asset Management	Asset Inventory and Location	CCTV Inspection	Data Management	GIS, CMMS, SCADA	Lidar – Aerial and Mobile	QL-C and D Level Data	QL B and A Level Data	Subsurface Utility Engineering	Utility Management Consulting	Utilities
Charlotte County Utilities CAAP Development and Pilot Flow Monitoring	✓		✓	✓	✓		✓			✓	✓
Sarasota County CMOM Implementation: Years 1-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
City of West Palm Beach Asset Inventory & Condition Assessments	✓	✓		✓			✓		✓	✓	✓
Pinellas County Restore Act	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Tampa Bay Water Asset Location and Condition Assessment / Development of R&R Program	✓	✓	✓	✓	✓		✓			✓	✓
City of Largo Sanitary Sewer Management Systems & Strategic Asset Management Plan	✓	✓	✓	✓	✓	✓	✓			✓	✓
Orange County Infrastructure R&R Improvements & Asset Mgmt. Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
City of Ft. Lauderdale Water Mapping	✓	✓		✓	✓	✓	✓	✓	✓		✓
City of Ft. Lauderdale Sewer CO Program – AMCMOM, Cityworks, and Sewer mapping	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

CHARLOTTE COUNTY
FLORIDA

VIII.

Volume of Work- Total of Payments Received from County within the Past 24 Months

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VOLUME OF WORK – TOTAL OF PAYMENTS RECEIVED FROM COUNTY WITHIN THE PAST 24 MONTHS

VEBS has been awarded one contract, the Charlotte County CAAP Framework Development and Pilot Flow Monitoring Program, in the past 4 years.

Charlotte County authorized VEBS's current contract in April 2022.

As of December 9, 2023, the total payments received from the County in the last two years is $575,511.37.

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CHARLOTTE COUNTY
FLORIDA

IX.

Location

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VEITH ENGINEERING
& BUSINESS SOLUTIONS

RESPONSIVENESS TO COUNTY'S PROJECT NEEDS

The VEBS/HAZEN team together with our highly qualified and familiar LOCAL subconsultants **Hyatt Survey (Hyatt), Survey and Mapping (SAM), McKim and Creed**, and **Envirowaste** will provide cost-effective and responsive services to Charlotte County Utilities to meet all the needs of your project needs.

VEBS Principal Consultant, Bryan Veith, PE, F.ASCE, Assoc. DBIA, who will serve as our program manager on this important project, has **lived, been educated, worked, and played in the Suncoast area since 1985**. He has a vested interest in providing the highest level of service to our local community. Bryan is located in the VEBS Sarasota County office and is a short 30-minute drive to the County facilities. He has over 30 years of in-depth local knowledge and has managed numerous large County and city-wide utility asset verification and condition assessments, asset management, CMOM, and regulatory compliance programs and projects throughout the state of Florida.

The VEBS key resources assigned to your program all work out of our local Sarasota office. See more details below.

Firm (Prime)	Assigned Local Personnel	Location	Benefits to You
Veith Engineering & Business Solutions	• Bryan Veith, • Karl Sieg • Dave Cash • Hana Florez Guimoye • Stela Hymeri • Lucie Blahackova • Alexandria Thomas • Logan Veith	Sarasota, Florida	• Key staff have lived in the local area since 1985 • Been providing engineering services since 1993 to the local area • The same team will leverage its knowledge and experience on CCU's Charlotte County CAAP Framework Development and Pilot Flow Monitoring Program

Many of our other local key team members have an established history working on your utility system through previously awarded general engineering and project contracts, including the recent **Charlotte County Capacity Assessment and Assurance and County-wide Flow Monitoring Program**, so we are confident that we can offer innovative, cost-effective, and responsive solutions to the challenges we know you face.

Subconsultant	Key Local Personnel	Locations	Benefits to You
Hazen and Sawyer	✓ Julie Karleskint ✓ John Schroeder ✓ Alicia Mata ✓ Boris Sladojevic	Sarasota Ft Myers, Tampa	• Key staff have lived in the Sarasota area since 1989 • Been providing engineering services to CCU since 2004 • National firm with vast depth and breadth of resources
Hyatt	✓ Russell Hyatt ✓ Pam Hyatt	Bradenton	• Over 30 local field and CADD/GIS resources
McKim and Creed	✓ All field personnel	Sarasota and Ft. Myers	• Over 20 local survey, CCTV, and SUE resources
Survey and Mapping (SAM)	✓ Martin Friedrich	Multiple Florida offices can support the project	• National resource with a large number of SUE and Mobile LIDAR resources across the state of Florida • Large depth and breadth of resources
Envirowaste	✓ Michael Gaeta	Multiple Florida offices can support the project	• Leverage the same teams' experience for Sarasota County

CHARLOTTE COUNTY
FLORIDA

X.

Litigation

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& BUSINESS SOLUTIONS

LITIGATION – HAVE YOU BEEN NAMED AS A DEFENDANT OR CO-DEFENDANT IN A LAWSUIT IN THE LAST FIVE YEARS?

VEBS has **not** been named as a defendant or co-defendant in a lawsuit in the last five years.

VEITH ENGINEERING & BUSINESS SOLUTIONS
2201 Cantu Court, Suite 118, Sarasota, FL 34232 (941) 374-3422

CHARLOTTE COUNTY
FLORIDA

XI.

Minority Business

INTEGRITY.
INNOVATION.
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& BUSINESS SOLUTIONS

CERTIFIED MBE

Veith Engineering and Business Solutions (VEBS) is a local certified small business enterprise (SBE) and is registered in the State of Florida as an individually owned limited liability company that provides professional engineering and business solutions to both public and private clients throughout southwest and central Florida.

VEITH ENGINEERING & BUSINESS SOLUTIONS

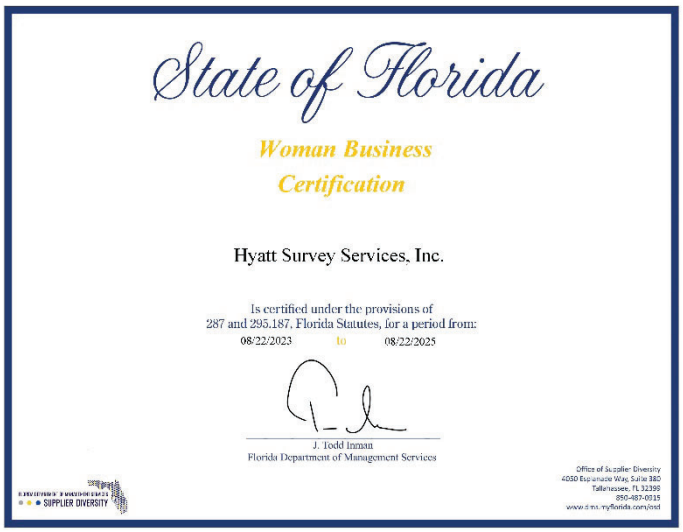
- Florida registered LLC
- EIN: 83-3660700
- SBE Certified
- Two Florida office locations

  2201 Cantu Court, Suite 118
  Sarasota, FL 34232

  9040 Town Center Pkwy
  Lakewood Ranch, FL 34202

- Bryan Veith, P.E.,
  Owner/President
  941-374-3422
  bveith@veithsolutions.com

Subconsultants M/WBE



State of Florida

Woman Business Certification

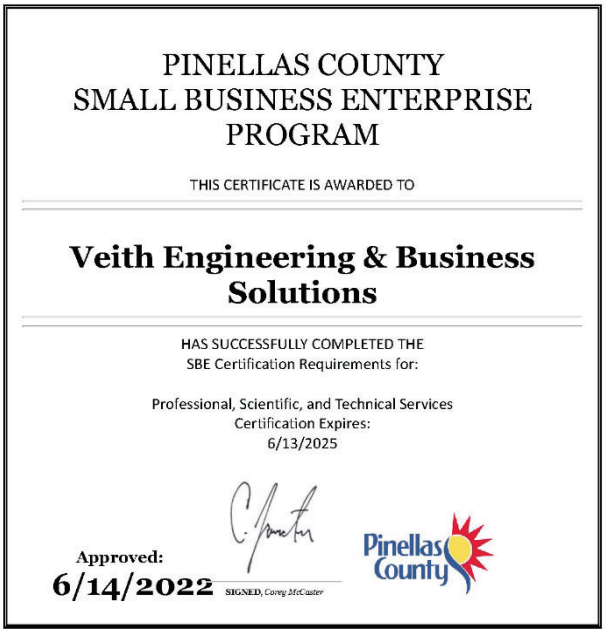
Hyatt Survey Services, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:
08/22/2023 to 08/22/2025

J. Todd Inman
Florida Department of Management Services

SUPPLIER DIVERSITY

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915



PINELLAS COUNTY
SMALL BUSINESS ENTERPRISE
PROGRAM

THIS CERTIFICATE IS AWARDED TO

Veith Engineering & Business Solutions

HAS SUCCESSFULLY COMPLETED THE
SBE Certification Requirements for:

Professional, Scientific, and Technical Services
Certification Expires:
6/13/2025

Approved:
6/14/2022
SIGNED, Corey McCaster

Pinellas County

City of Tampa Florida

Minority and Small Business Development

Certification Program
This is to certify that in accordance with City of Tampa Ordinance 2008-89
Veith Engineering & Business Solutions, LLC DBA Veith Engineering & Business Solutions

is hereby certified as a

Small Local Business Enterprise (SLBE)

In the following specialty(ies)

Engineering Services, Professional

The certification is valid from June 24, 2022 to June 25, 2024

Updates for recertification are required prior to the expiration date listed above. If at any time changes are made in the firm that are not in concert with our eligibility requirements, you agree to report those changes to us for evaluation. The City of Tampa reserves the right to terminate this certification at anytime it determines eligibility requirements are not being met.

Gregory K. Hart, Manager
Minority and Small Business Manager

VEITH ENGINEERING & BUSINESS SOLUTIONS

INTEGRITY. INNOVATION. QUALITY. SERVICE.

Our goal is to effectively and creatively turn your vision into a real success story!