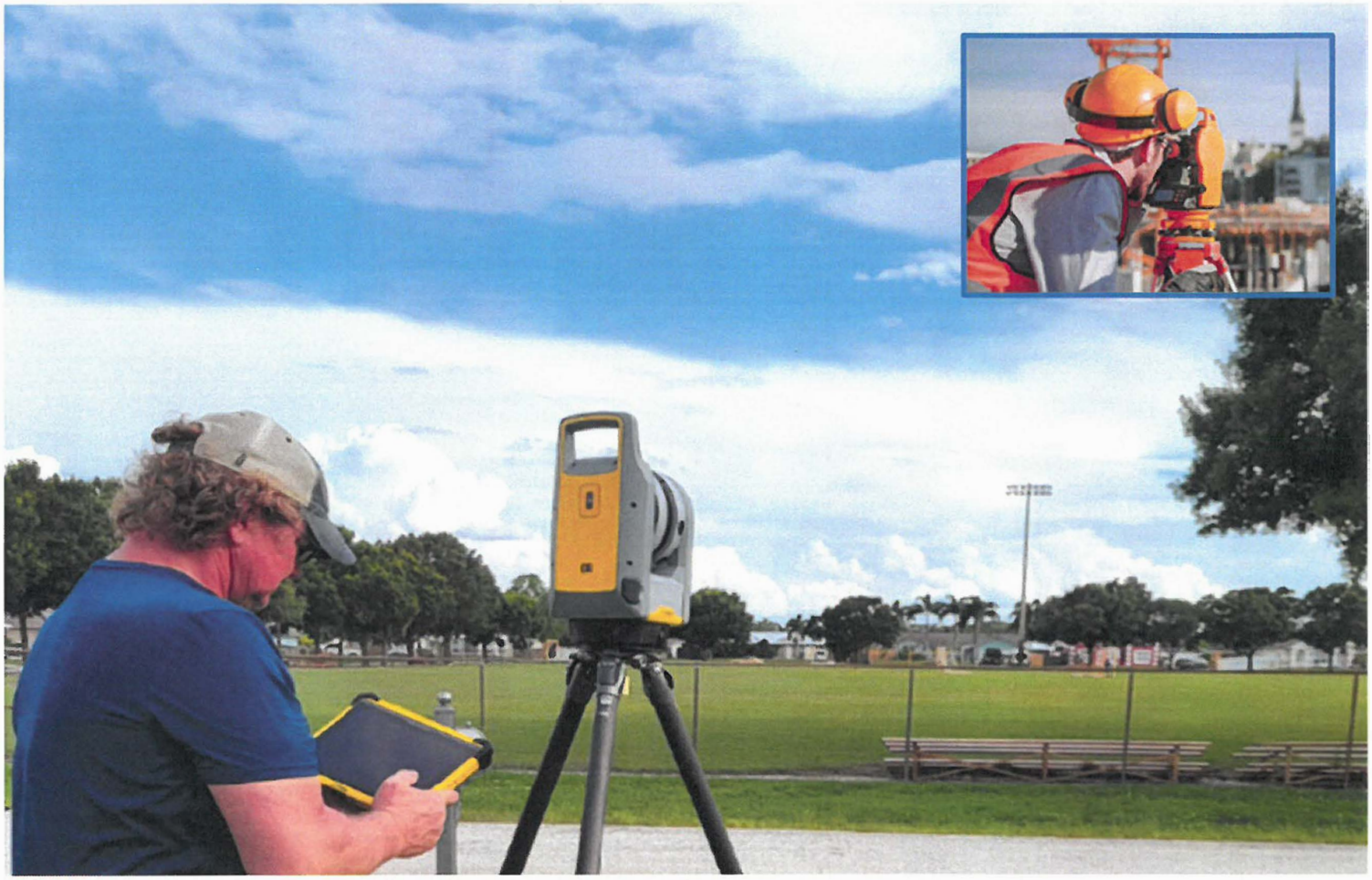
City of Port St. Lucie

REQUEST FOR QUALIFICATIONS – E-RFP 20230097



CONTINUING CONTRACTS FOR SURVEY & MAPPING SERVICES

SUBMITTED BY:

CRAIG A. SMITH & ASSOCIATES

4152 W. Blue Heron Blvd.
Riviera Beach, FL 33404
561 314 4445
ssmith@craigasmith.com
www.craigasmith.com

DUE: SEPTEMBER 22, 2023 @ 3:00 PM

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1a Firm Details

Craig A. Smith & Associates
Engineers • Surveyors • Subsurface Utility Engineering
3D Subsurface Imaging • Utility Coordination

TAB 1a
Letter of Interest/ CAS Firm Details

September 22, 2023

City of Port St. Lucie
ATT: Robyn Holder, CPPB, Procuring Agent
121 SW Port St. Lucie Blvd.
Port St. Lucie, FL 34984

RE: CONTINUING CONTRACTS FOR SURVEY & MAPPING SERVICES
E-RFP 20230097
SUBMITTAL OF QUALIFICATIONS

Dear Selection Committee,

We are responding to your Demandstar notice (E-RFP 20230097) seeking proposals for Continuing Contracts for Survey and Mapping Services. We are pleased to present our qualification package on behalf of our firm, Craig A. Smith & Associates, LLC (CAS), and express our keen interest in being considered for the aforementioned surveying and mapping services continuing contract, as advertised.

Firm Overview

CAS is a well-established local firm with 43 years of experience in surveying, engineering, and utility locates. We hold licenses in the State of Florida and operate from our headquarters at 4152 W. Blue Heron Blvd, Suite 116, Riviera Beach, Florida 33404, with a branch office at 1425 E. Newport Center Drive, Deerfield Beach, Florida 33442. CAS boasts a dedicated team of over 43 professionals, including registered surveyors and engineers, as well as skilled personnel in CADD, field representation, utility location, administration, clerical, and accounting. Our comprehensive staff ensures the provision of all essential professional services required for continuing survey and mapping services.

CAS's four-decade-long continuous practice underscores our commitment to excellence and staff satisfaction. With an average employee tenure exceeding 12 years, the City of Port St. Lucie can rely on our team's stability and expertise to provide consistent support, not just for the contract's duration but also beyond, contributing invaluable knowledge and experience to the city's interests.

Scope of Work

CAS is well-versed in the scope of work outlined by the city and holds extensive experience in carrying out such responsibilities. Over the past four decades, CAS has successfully executed numerous surveying projects for similar municipal clients. Our specialization lies in serving South Florida governments, equipping us with an in-depth understanding of their unique needs. Our client-centric approach prioritizes personalized service delivery. As a medium-sized firm, we are flexible and capable of tailoring our services to meet your evolving requirements. We are well-equipped to provide all the services listed in the scope of work, with survey and utility location departments collaborating seamlessly on a daily basis.

Our Team

Robert W. Keener, PSM, Vice President of Survey, will serve as the Project Manager and primary point of contact. Bob has resided in Port St. Lucie for 35 years, accumulating 45 years of surveying experience in South Florida, with 28 years at CAS. Assisting him are Bill Kalbach, PSM, David Lookabill, Survey Coordination Manager, and our survey crews. Subsurface engineering will fall under the supervision of Jim Driscoll, Vice President of Utility Locates. Stephen C. Smith, P.E., President, will act as the Project Director/Contract Manager, authorized to represent the firm and ensure adequate resources throughout the contract. This core CAS team guarantees timely and accurate project delivery, with all staff accessible via phone, email, or our office receptionist.

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Local Presence

Notably, three of our key survey staff reside in Port St. Lucie and operate from home offices as needed. Thus, we can genuinely claim to have local staff readily available for serving the city's surveying needs. Bob Keener, PSM, VP of Survey; David Lookabill, Survey Coordination Manager; and David Raines, Survey Crew Chief, are all residents of Port St. Lucie.

Certifications and In-House Services

CAS holds M/SBE certifications with Palm Beach County, South Florida Water Management District, and the Solid Waste Authority of Palm Beach County. Our ability to offer all services in-house ensures streamlined processes and procedures, resulting in accurate and timely project deliverables within established timelines and budgets.

Commitment to Excellence

In the realm of infrastructure projects, accurate and reliable surveys are paramount, and CAS is recognized as one of the most proficient companies in the field. With over 43 years of experience, we have built a reputation for delivering exceptional survey and utility locate services to diverse clients. Our team employs state-of-the-art equipment and cutting-edge technology to provide top-tier survey services for projects of any scale and complexity.

At CAS, we take pride in our responsive staff, extensive experience, and unwavering commitment to getting the job done. Our professionals understand the significance of delivering timely and accurate survey results, and they work diligently to ensure clients receive the information necessary to advance their projects.

Differentiators

What sets CAS apart from other surveying companies is our dedication to customer service and our team of highly experienced, tenured, and local staff in Port St. Lucie. We collaborate closely with clients to comprehend their unique needs and expectations, striving to deliver customized solutions that consistently meet or exceed them. Our local team remains readily available to address inquiries, provide updates, and ensure your satisfaction with our services, delivered in a timely and cost-effective manner.

Our local presence, coupled with our firm's stability and tenure, enables us to swiftly mobilize for your projects and offer tailored services as needed.

Partnering for Success

As the City of Port St. Lucie continues its expansion and infrastructure enhancement initiatives, CAS stands ready to be your trusted partner for surveying services. Our team's unwavering commitment to precision, efficiency, and client satisfaction is unrivaled, and we are confident in our ability to deliver outstanding service to your organization.

Craig A. Smith & Associates
Engineers • Surveyors • Subsurface Utility Engineering
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We appreciate your consideration of our proposal and invite you to reach out to us with any questions or to learn more about Craig A. Smith & Associates.

Thank you for your time and attention.

Yours Sincerely

Stephen C. Smith, P.E.
President

Tab 1 – FIRM QUALIFICATIONS

1b Firm History

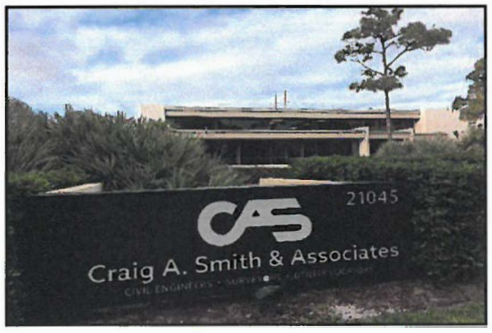
Craig A. Smith & Associates
Engineers • Surveyors • Subsurface Utility Engineering
3D Subsurface Imaging • Utility Coordination

TAB 1b
FIRM OVERVIEW/HISTORY

Craig A. Smith and Associates, LLC (CAS) is a Florida firm licensed for the practice of professional engineering, surveying, utility locates and construction management services. CAS has offices in Palm Beach County, Miami-Dade County and Broward County. All work orders/assignments will be primarily completed by CAS staff from the Broward County office.

Palm Beach County Office:
4152 W. Blue Heron Blvd, Suite 116
Riviera Beach, FL 33404
(561) 314 4445

Broward County Office:
1425 E. Newport Center Drive
Deerfield Beach, Florida 33442
(954) 782-8222



CAS was established in 1980. Since then, the firm expanded from its original, technical orientation in municipal engineering and surveying into a full-service civil engineering practice with specialized expertise in engineering, surveying & mapping, grants/loan assistance, construction management, utility locates and CAD design & development.

FIRM SIZE – CAS's professional, technical and administrative personnel numbering approximately 47+ people, represent professionals in the fields of civil engineering, water and wastewater engineering, storm water engineering, surveying, mechanical engineering, construction engineering, grant specialists, utility locating, computer sciences, and finance. More specifically, CAS staff members consist of registered professional engineers, surveyors, ADDA certified drafters, GIS specialists and the balance of staff including additional technical CADD drafting personnel, certified field inspectors and utility locators; as well as competent administrative, clerical and accounting personnel, to provide you with the expertise required to perform the duties requested under this contract.

ORGANIZATION - CAS is organized into five technical operating divisions each under the supervision of a Vice President or Director. These operating divisions are:

- **Civil Engineering**
- **CADD (Computer –Aided Design & Drafting)**
- **Construction Management**
- **Surveying**
- **Subsurface Utility Locates**

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FIRM OVERVIEW/HISTORY

FIRM PHILOSOPHY & EXPERIENCE - CAS is committed to providing its clients with cost-effective, timely, comprehensive, high-quality professional services in the practice of civil engineering, surveying, construction management, utility locating and grant/legislative services. This commitment to excellence is achieved through the development of a team spirit of service to clients. CAS has extensive local South Florida experience in engineering design, surveying, utility locates and construction management spanning over 40 years.

Our success can be exhibited by our tenure with our clients, many of which we have served for over 20 years. We put premium value on the opinions and input of the end users of our services, officials, staff and residents and strive to produce an end product that addresses their needs and expectations. CAS is committed to making clients successful by understanding their organization, methods of operation, challenges and achieving their objectives through a multi-discipline approach based on experience, innovation and teamwork. We pride ourselves in establishing long-term relationships with our clients by providing them with the ultimate in successful consulting engineering services. We believe in providing clear and concise face-to-face communication with clients. And any communication via phone, fax, email or other method shall be provided clearly and concisely. Response time to a client's request is usually within the hour if not by the close of the business day. CAS also strives to adopt platforms or software programs that clients require or utilize for project management in order to increase efficiency and flow of work.

CLIENTS - Our more than 40 years of experience gives us the perspective to provide services for large municipal projects (over $200,000) as well as smaller projects (under $200,000). More specifically, design and construction administration/management of water mains, stormwater and wastewater force mains, sanitary sewer gravity lines, inflow and infiltration studies/repairs, wastewater pump station rehabilitation, pump sizing/expansion improvements, water treatment plant design/processes including expansions and improvements, regulatory compliance, drainage outfalls, roadway design, stormwater management, swale, sidewalk and drainage improvements and other related services such as hydraulic modeling, master planning, permitting, bidding assistance, surveying and subsurface utility engineering (SUE), grant assistance, technical studies or reports as required. CAS has successfully completed countless engineering, surveying and utility locates projects during its 43 year history. We have current ongoing multi-year contracts with the following municipalities:

Town of Pembroke Park (since 1987)
City of Margate (since 1988)
Bal Harbour Village (1989-2017)
Glades County (since 1993)
CCPWA Utility Authority (since 1994)
City of Moore Haven (since 1995)
Town of Golden Beach (since 2000)
City of Sweetwater (since 2000)
Hardee County (since 2000)
Spring Lake Improvement District (since 2001)
Village of El Portal (since 2003)
City of Oakland Park (since 2004)
City of Lauderhill (since 2013)
City of Sunny Isles Beach (since 2013)
City of Pompano Beach (since 2015)
Sunshine Water Control District (since 2015)
City of Lake Worth Beach (since 2018)
City of Hallandale Beach (since 2020)
City of Deerfield Beach (since 2020)
Town of Davie (since 2020)
Hamal CDD (since 2021)
Coquina Water Control District (since 2022)

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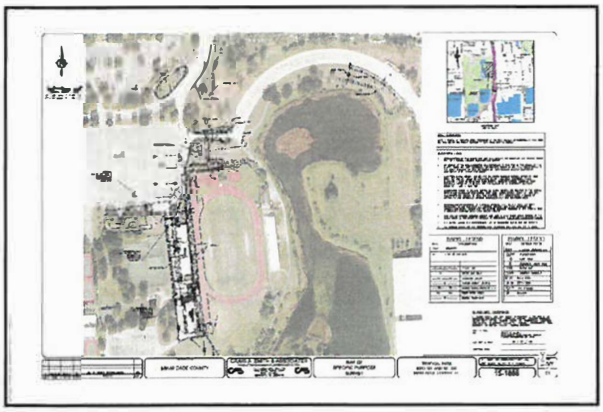
SURVEYING - CAS is one of South Florida most tenured and respected surveying firms providing complete land surveying services. Our surveying staff is comprised of licensed land surveyors who adhere to strict standards and give special attention to accuracy and detail. CAS utilizes the most up to-date electronic survey equipment such as Topcon and Trimble SC Robotic Total Stations, Trimble 5800 RTK Base/Rovers, Leica P 30 Laser Scanners, Recon 400 TDS, TSCE 2 and Ranger 500X Data Collectors along with Topcon ATC Levels and tablets. In addition, our survey crews have been trained based on engineering principles and implement daily quality control measures ensure that our clients receive the highest quality service and most accurate basemaps. CAS surveying services include:

- Mapping & Platting
- Boundary & Acreage Surveys
- Land Description Preparation
- Construction Surveys
- Subdivision Designs & Calculation
- GPS Mapping
- Route Surveys
- Canal Cross-Sections
- Parcel Description & Sketches
- Condemnation Surveys
- Highway Construction Surveys
- Quantity Surveys
- Accident Surveys
- As-Built Certifications
- Mean High Water Surveys
- Drone Aerial Imagery and Surveys

CAS' "in-house" surveying capabilities eliminates the need for an additional subconsultant for this service and thus allows for more cost-effective and faster response to revisions or modifications to basemaps or scope of work as required for the duration of a project.



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CIVIL ENGINEERING - CAS provides clients with a full range of engineering consulting services. Our engineers and trained specialists have extensive experience in assisting municipalities and utility departments with daily engineering needs such as planning, design, permitting and construction of cost-efficient operational utility systems. CAS engineering consulting services include:

- Storm Water Management
- Storm Water Utilities
- Water Treatment & Distribution Systems
- Wastewater Collection/Transmission & Treatment
- Potable Water Treatment Systems
- Wastewater Pump Station Design
- Stormwater Pump Station Design
- Canal Dredging and Sediment Removal
- Surface Water Management
- Utility Permitting
- Water/Wastewater Treatment Plant Design/Rehabilitation
- Utility Pipeline Design & Relocation (Water, Wastewater & Reclaimed Water)
- Utility Master Planning
- Grant Funding Assistance
- Facility Planning
- Solid Waste Studies
- Solid Waste Disposal and Leachate Treatment
- Development Permitting
- Feasibility Studies
- Inflow & Infiltration Studies
- Construction Cost Estimating
- Construction Management
- Construction Observation and Certification
- Contract Administration
- Effluent Reuse & Disposal
- Sludge Treatment & Disposal
- Roadway & Drainage Design

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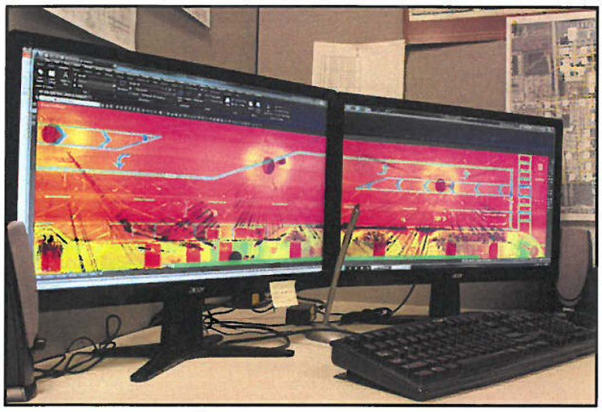
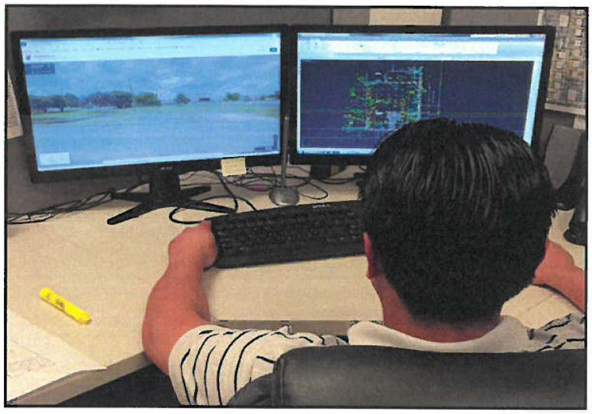
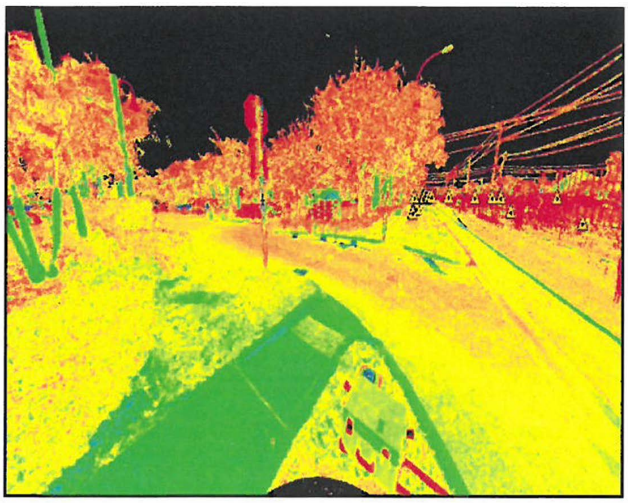




CADD (COMPUTER-AIDED DESIGN & DRAFTING) - CAS employs on-staff Florida Certified American Design & Drafting Association CADD operators and Autodesk Certified professionals. Our CADD technicians prepare detailed drawings, layouts, exhibits, topographical maps, and graphic representations of survey information & engineering designs. Designs relate to engineering projects such as water, sewer, reclaimed water, paving and drainage systems. Craig A. Smith & Associates prides itself on keeping its workforce educated and equipped to handle today's most challenging and rewarding tasks. CAS is utilizing the latest AutoCAD software (Civil3D), custom-built AutoCAD systems and functions, as well as some industry-first hardware including 3D laser scanning technologies. In summation, the CADD systems CAS uses are:

- AutoCAD
- Autodesk Civil 3D
- Autodesk Map 3D
- Navisworks

Clients benefit from CAS' experienced CADD staff who work closely with project managers and client staff on assigned utility projects and provide any technical support to client staff related to Autodesk Civil & Map 3D use.



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SUE (SUBSURFACE UTILITY ENGINEERING) - CAS provides complete subsurface utility engineering and location services utilizing the latest in electronic verification, ground penetrating radar, vacuum excavation and GPS survey equipment. CAS can provide utility location information in various formats from simplistic 2D (two dimensional) to comprehensive 3D (three dimensional) Radar Tomography coupled with advanced software platforms (AutoCAD Civil 3D). CAS performs subsurface utility engineering providing utility mapping, electromagnetic designating (EMD), 2D radar designating/ground penetrating radar (GPR), 3D radar tomography (RT), vacuum soft digs, and conventional and GPS utility surveys. CAS also provides utility coordination services, interfacing with utility owner/operators on behalf of engineers, planners and project designers. CAS provides comprehensive utility locating services for projects during the design phase and also during construction as needed. **CAS' extensive SUE experience coupled with its EMD, 2D GPR and unique 3D RT capabilities will provide you with accurate and comprehensive utility locates for complete survey basemaps irregardless of quality of existing record drawings and thus superior engineering design for your utility projects. This will translate also to time saving and minimization of change orders during construction by eliminating "unforeseen" field conditions.**

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CONSTRUCTION MANAGEMENT - The CAS construction management team has a combined total experience of nearly 80 years. CAS field representatives are qualified to perform a full-service program, assuring total monitoring on-site to protect the client's interest on their projects. The CAS construction management team will keep the client informed of all facets of construction including, but not limited to, weekly progress notices, advice on any change orders and monthly monitoring of project finances. The construction management team of professionals provides extra attention to detail to ensure that all projects are built to specifications and are fully operational to meet the needs of our client. CAS also has extensive experience in managing the required documents for
state or federal grant funded projects. CAS construction management services include:

- Value Engineering
- Design Document Review
- Contract Administration
- Contract Documents
- Construction Management
- Construction Document Management for Grant Funded Projects
- Construction Engineering & Inspection
- Cost & Payment Verification
- Bidding Coordination
- Contract Negotiation
- Residential/Commercial/Municipal Project Observations
- Inspections

We are currently providing construction inspection services for: Spring Lake Improvement District, City of Margate, Sunshine Water Control District, Town of Golden Beach, City of Belle Glade, Hardee County, City of Pompano Beach, Town of Pembroke Park, and City of Sunny Isles Beach.

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GRANT ASSISTANCE EXPERIENCE - Since the early 1990's CAS has assisted its clients with securing grant funding and financing for multiple infrastructure projects. We have assisted our clients (municipalities, counties, special districts and utility authorities) in obtaining grants and/or loans through multiple funding sources such as: USDA, SRF, FEMA (HMGP), State Legislative Appropriations, SFWMD Cooperative Agreement Program, EPA 319 Program, CDBG, etc.

CAS assists its clients with the preparation of grant applications, supporting documents, such as preliminary engineering reports, environmental assessments, preliminary designs, project scope development, cost estimating, present worth cost analysis, cost benefit analysis, project beneficial use, etc.

CAS continually provides many of these services to its clients annually for state appropriation requests or during grant funding cycles. CAS provides grant evaluation for competitive grants requiring scoring and consultation with respect to the need for phasing of projects to achieve a high success rate from funding institutions.

CAS is continually involved with infrastructure funding assistance and has a **high success rate** in securing funding. We understand the nuances of "grantsmanship." CAS is committed to providing these services to all of its clients, with an estimated 70-80% of our on-going projects being funded through our assistance. CAS is also aware of the deadlines required in achieving these grants/loans and delivers grant assistance services on time.

Some of the capital improvement projects for which CAS has acquired granting funding (indicating dollar amount secured and funding source) are:

- **Spring Lake Improvement District (SLID):** Design & Construction of a 70 Acres Stormwater Treatment Area (STA) – $1,666,000 (25% SRF / 75% FDEP 319 Funded)
- **Spring Lake Improvement District (SLID):** Design and Construction of an 80,000 GPD Wastewater Treatment Plant – $3,300,000 (SRF Funded)
- **City of Moore Haven:** Design and Construction of a 500,000 GPD ultrafiltration (Zenon) system to expand an existing 750,000 GPD Lime Softening Water Treatment Plant – $3,663,800 (USDA Funded)
- **Town of Pembroke Park:** Wastewater Master Plan for the rehabilitation of 22 Wastewater Lift Stations – $100,000 (FDEP Legislative Funded)
- **City of South Bay:** Water Treatment Plant and Water Distribution Improvements – $1,200,000 (USDA Funded)
- **Port Labelle:** Design and Construction of a 900,000 GPD Reverse Osmosis Water Treatment Plant (ROWTP) – $5,500,000 (USDA Funded)
- **City-County Public Works Authority (Glades County):** Gravity Sewer Expansion and Lift Station No. 5 Installation - $620,000 (State Legislative Appropriation)
- **City-County Public Works Authority (Glades County):** Gravity Sewer Expansion N, O, S Avenue and 4th Street - $900,000 (State Legislative Appropriation)
- **City-County Public Works Authority (Glades County):** Gravity Sewer and Lift Station Improvements Avenue L, M, N & 4th Street - $1,340,000 (State Legislative Appropriation)
- **Hardee County:** Wauchula Hills Wastewater Service Area Expansion – Phase II - $1,300,000 (FDEP Legislative Funded)

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FIRM OVERVIEW/HISTORY

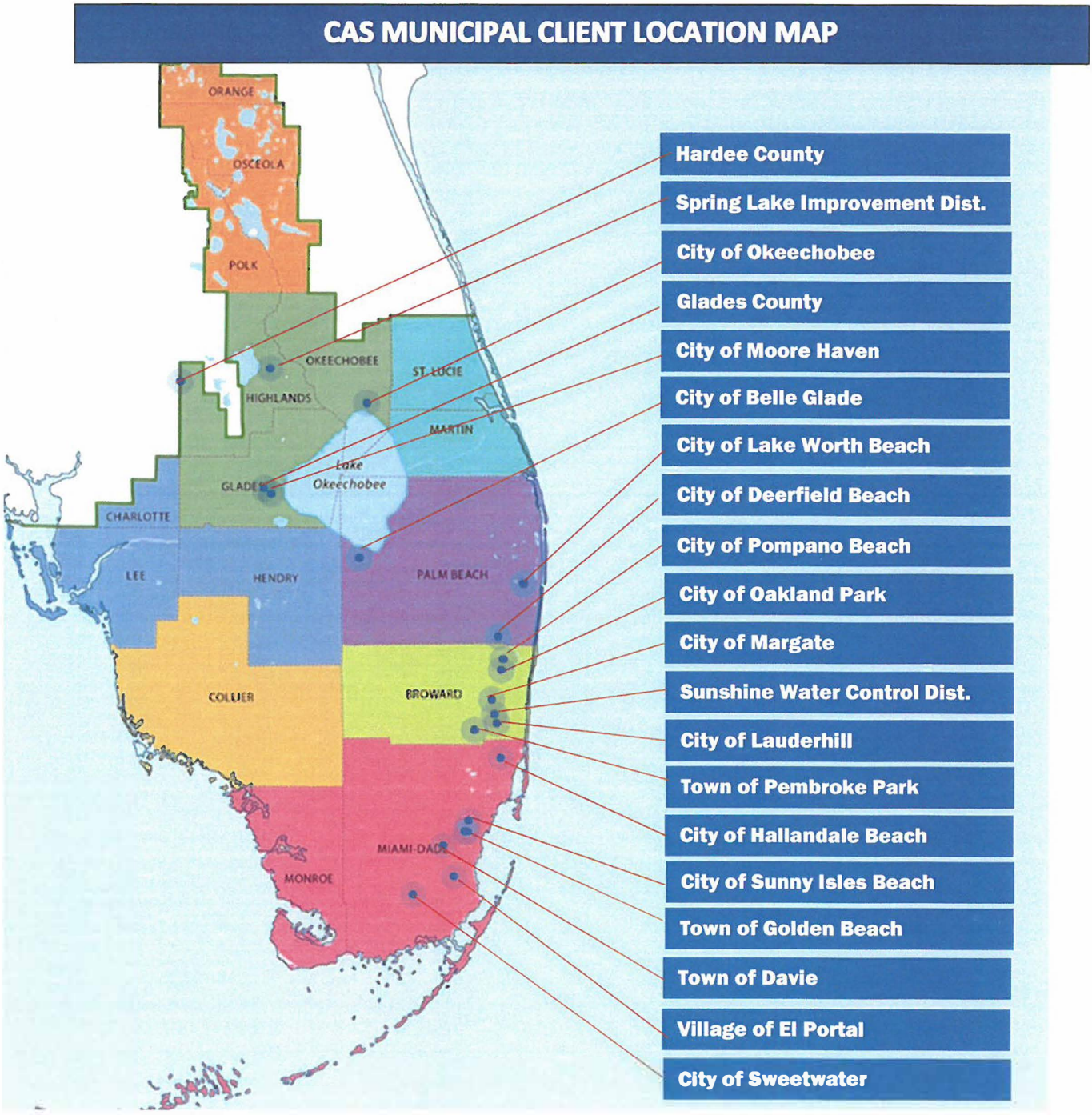
A major portion of CAS projects involve grant funding. Grant funded projects are restricted to finite budgeted amounts for both professional and construction dollars. Grant projects also have strict schedules that must be met. If these parameters are not met, the grant funds would be lost. Our grant funded project experience demonstrates our staff's expertise in meeting budgets and schedules.

WATER & SEWER STUDIES/MASTER PLANNING - CAS has extensive experience in providing technical engineering studies for existing utility systems and developing comprehensive utility master plans for municipal clients, providing condition assessment, hydraulic modeling, life-cycle analysis, identifying system components for replacement/rehabilitation, prioritizing projects based on level of criticality/level of service and providing cost estimating for budgeting purposes. Below are some examples of completed and/or on-going projects with associated completion dates and costs:

- **Indian Trail Improvement District:** Comprehensive Water & Sewer Master Plan (Completed 2004) - $183,480
- **City of North Miami Beach:** Water Distribution Analysis (Completed 2004) - $50,000
- **Town of Pembroke Park:** Sanitary Sewer Master Plan (Completed 2000) - $155,000
- **Bal Harbour Village:** Comprehensive Water & Sewer Master Plan (Completed 2015) - $136,675
- **Village of El Portal:** Sanitary Sewer Master Plan (Completed 2017) - $75,000
- **City of Pompano Beach:** Non-Sewer Area C Sanitary Sewer Study (Completed 2019) - $44,540
- **Town of Pembroke Park:** Sanitary Sewer Master Plan Update (On-Going) - $372,490

UNMANNED AERIAL VEHICLE OR DRONE - Unmanned Aerial Vehicles (UAV's) are now being employed by CAS as another tool which can be utilized to enhance or even eliminate the need for certain field exercises. Some of the uses the UAV is most suitable for are as follows: Site inventory in which the UAV is deployed over a site that is under construction, to determine monthly construction progress easily and accurately. It can also be used for reconnaissance to determine the complexity of an upcoming project and the "lay of the land". More technical uses are providing LIDAR data which can be utilized for topographic data acquisition, highway striping configurations in a safe manner and can be used for survey control data to be shown on high resolution aerial maps, etc. UAV's are governed by the Federal Aviation Administration (FAA) and must be operated by a licensed drone pilot. Flight Plans must be submitted in advance in restricted areas and approved prior to flight. Normal flight elevations range from 100 to 250 feet (depending on the desired accuracies of the data) and can be no higher than 400 feet per the FAA regulations. Some of the advantages of using UAV's is quick and cost-effective data collection, aerial imagery capture and monitoring of construction project progress. The images obtained by the UAV display clear and accurate detail of current conditions at project sites. Applications are ideal for the following:

- Hard-to-Access Areas (Water/Sewer Treatment Plant Facility Inspections, Confined Space Assessments)
- Site-Specific Aerial Mapping
- Utility Corridor Survey
- Supplemental Topographic Survey
- Environmental Data Collection
- High Resolution Images and Video



Location of CAS Current Clients For Multi-Year Professional Engineering and Surveying Services

Tab 1 – FIRM QUALIFICATIONS

1c Form SF330

CRAIG A. SMITH & ASSOCIATES
CIVIL ENGINEERS · SURVEYORS · UTILITY LOCATORS

ARCHITECT - ENGINEER QUALIFICATIONS

PART I - CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*
Continuing Contracts for Surveying and Mapping Services

2. PUBLIC NOTICE DATE
Demandstar – August 30 2023

3. SOLICITATION OR PROJECT NUMBER
E-RFP 20230097

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE
Stephen C. Smith, P.E., President

5. NAME OF FIRM
Craig A. Smith & Associates, LLC.

6. TELEPHONE NUMBER
561 314 4445

7. FAX NUMBER
561 314 4458

8. E-MAIL ADDRESS
ssmith@craigasmith.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

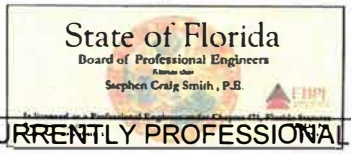
	(Check) PRIME	(Check) J-V PARTNER	(Check) SUBCON-TRACTOR	9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
a	X			Craig A. Smith & Associates, LLC ☐ CHECK IF BRANCH OFFICE	4152 W. Blue Heron Blvd. Suite 116 Riviera Beach, FL 33404	Surveying & Mapping
b				☐ CHECK IF BRANCH OFFICE		
c				☐ CHECK IF BRANCH OFFICE		
d				☐ CHECK IF BRANCH OFFICE		
e				☐ CHECK IF BRANCH OFFICE		
f				☐ CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

XX *(Attached) Section 1f*

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Stephen C. Smith, P.E. 	Project Director/Contract Manager	a. TOTAL 37	b. WITH CURRENT FIRM 34

15. FIRM NAME AND LOCATION (City and State)	
Craig A. Smith and Associates Boca Raton, Florida	

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENTLY PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Bachelor of Science, Civil Engineering, 1988 Auburn University, Auburn, Alabama Bachelor of Science, Building Construction, 1986 Auburn University, Auburn Alabama	Professional Engineering State of Florida License No. 48914

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organization, Training, Awards, etc.)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Consulting Engineer, Town of Pembroke Park **Pembroke Park, Florida**	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
	Ongoing	Ongoing

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Consulting Engineer as it relates to all water, wastewater, road and bridge issues, NPDES projects, site plan, design, survey review and agency coordination (FDOT, SFWMD, FDEP, etc.).
Annual budget for these services range from $15,000 to & $300,000.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Consulting Engineer, City of Pompano Beach **Pompano Beach, Florida**	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
	Ongoing	Ongoing

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Consulting Engineer as it relates to all water distribution, wastewater collection and conveyance, drainage and roadway improvements, site plan review, design, survey and agency coordination (FDOT, SFWMD, FDEP, etc.).
Annual budget for these services range from $200,000 to $500,000.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Town of Golden Beach, Consulting Engineer **Golden Beach, Florida**	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
	Ongoing	N/A

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Consulting Engineer as it relates to all water, stormwater, roadway engineering including beautification design and survey.
Annual budget for these services range from $100,000 to $200,000.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
City of Oakland Park, Consulting Engineer **Oakland Park, Florida**	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
	Ongoing	N/A

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Consulting Engineer as it relates to all water distribution, wastewater collection and conveyance, drainage and roadway improvements, design and survey site plan review and agency coordination (FDOT, SFWMD, FDEP, etc.).
Annual budget for these services range from $200,000 to $500,000.

e.	(1) TITLE AND LOCATION (City and State) **City of Pompano Beach Non-Sewer Area C: Sanitary Sewer Improvement** **Pompano Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES Ongoing	 CONSTRUCTION (if applicable) Pending
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Director: The project consisted of the installation of a new wastewater collection system for 38 commercial/light industrial properties which are currently on septic tanks. CAS conducted a Sanitary Sewer Service Study for the city to identify design solutions. The recommendations from the study determined that the new system shall consist of one wastewater lift station along with associated gravity sewer and force main lines and include connections to two (2) existing city wastewater lift stations. Design fees for this project are $198,803. The construction cost estimate: $1,800,000.		
f.	(1) TITLE AND LOCATION (City and State) **Bal Harbour Village Sanitary Sewer Improvements – Phase I** **Bal Harbour, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2015	 CONSTRUCTION (if applicable) 2017
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Director: Design and survey for the Wastewater Pump Station No. 3 and Gravity Sewer Improvements (Sanitary Sewer Improvements Phase I) project for Bal Harbour Village included the installation of a new triplex submersible pump station with a 12-foot diameter wet well, control panel, automatic transfer switch receptacle, emergency generator, and all associated appurtenances, in addition to approximately 1,350 linear feet of 18" gravity sewer lines to the pump station. The project design cost was $182,804. The construction cost was $2,970,000.		
g.	(1) TITLE AND LOCATION (City and State) **Village of El Portal Sanitary Sewer Master Plan** **El Portal, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2016-2017	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Director: The Sanitary Sewer Master Plan is a comprehensive report to define priority areas and determined corrective actions required to convert from a decentralized wastewater treatment system (septic system) to a new sanitary sewer gravity collection system with lift stations. The Master Plan also included a comprehensive survey base map for the entire village, hydraulic sewer modeling and the overall design of eighteen phases of construction. The sanitary sewer systems were developed using best management practices, current levels of service, and to investigate various funding sources. Total cost for the project was $75,000. The estimated total costs of the village's sanitary sewer improvements were $23.84 Million.		
h.	(1) TITLE AND LOCATION (City and State) **Town of Golden Beach – Water Distribution System Improvements** **Golden Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2008	 CONSTRUCTION (if applicable) 2011
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Director: The Water Distribution System Improvements project for the Town of Golden Beach was an integral part of the town's Capital Improvements Plan. Work included the installation of approximately 1,215 linear feet of 12-inch water main, 13,850 linear feet of 8-inch water main and 1,050 linear feet of 6-inch water main, 37 fire hydrant assemblies, and the transfer of 370 new water meters for a complete retrofit of the town's water main infrastructure. This project was funded through FDEP's State Revolving Fund Program. Total design cost including construction management for the project was $317,441. Total construction cost was $2,200,000.		
i.	(1) TITLE AND LOCATION (City and State) **Bal Harbour Village Watermain Replacement** **Bal Harbour, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2011	 CONSTRUCTION (if applicable) 2013
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Director: The Bal Harbour Village Water Main Replacement Project consisted of the installation of a 12-inch water main along the east side of Collins Avenue intended to augment the existing water main system to boost existing pressures and flows to the village's high rise district. Construction included the installation of 1,800 linear feet of 12-inch directionally drilled water main, 680 LF of 12-inch DIP water main, fire hydrant assemblies and connection to nine (9) existing mains. Total design costs including construction management for the project were $123,970. Total construction costs were $558,590.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Robert D. Keener, PSM	Vice President - Survey	a. TOTAL 45	b. WITH CURRENT FIRM 28

15. FIRM NAME AND LOCATION (City and State)	
Craig A. Smith and Associates Boca Raton, Florida	

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENTLY PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
Associate of Arts Degree Continuing Education in Land Surveying	Florida Land Surveyor Registration No, 4846

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organization, Training, Awards, etc.)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
City of Lake Worth Beach **Lake Osborne Estates Water Main Replacement and Expansion Phase 1 - Survey** **Lake Worth Beach, Florida**	2018 & 2020	2019 - 2021

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Route survey along residential streets throughout community for 228 properties, including all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas 10 feet outside right of way, property lines, utility easements and subsurface utility engineering (utility locates). Owner initiated change order in the amount of $17,990 for additional scope of work to include surveying and utility locates for approximately 40 additional properties as part of the Phase 1 expansion.
Survey cost: $127,153.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Hardee County Wauchula Hills Water and Sanitary Sewer Improvements: Phase V - Survey **Wauchula, Florida**	2017	2021

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Route survey for the installation of approximately 6,885 linear feet of 8" water main including fire hydrants, one duplex submersible wastewater lift station, approximately 1,500 linear feet of 4" force main and approximately 6,750 linear feet of 8" gravity sanitary sewer. This project is funded through a multi-year special legislative appropriation. The project design costs, including construction management, are $121,453. The project construction cost was $2,068,956.
Survey cost: $21,000.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Seacoast Utility Authority – Northlake Boulevard/US1 Water and Sewer Force Main Replacement - Survey **Jupiter, Florida**	2018	N/A

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Route survey along Northlake Boulevard and US-1 (approx. 2.8 miles) including identification of right-or-way, property lines, above ground improvements, utility easements, tree survey, cross sections and subsurface utility engineering (utility locates).
Survey cost $203,325.

d.	(1) TITLE AND LOCATION (City and State) **Palm Beach County Water Utilities Department** **Lyons Road Forcemain Replacement Phase II - Survey**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2018	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey and utility locates within existing right-of-way. Survey cost: $12,750.		
e.	(1) TITLE AND LOCATION (City and State) **City of Margate 2018 Water Main Improvements - Survey** **Margate, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2016	 CONSTRUCTION (if applicable) 2020
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey including location of all above ground features and visible improvements within the existing right-of-way. Establish survey baseline, cross sections and vacuum excavation test holes to verify location of buried utilities. Survey cost: $46,250.		
f.	(1) TITLE AND LOCATION (City and State) **City of Delray Beach** **Lowson Boulevard Improvements - Survey** **Delray Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2019	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	CAS performed survey and subsurface utility engineering as a subconsultant to Kimley-Horn & Associates, Inc. for the City of Delray Beach. The scope of work included a survey of all above ground visible improvements and utilities within the right-of-way of Lowson Boulevard (SW 10th Street) and 10 feet beyond the right-of-way line from the east right-of-way of Congress Avenue to the intersection of SE 6th Avenue. In addition, rims, pipe invert elevations, sizes and pipe materials were acquired for all existing drainage structures within the project limits. Subsurface utility engineering included soft digs at fifty (50) designated locations to verify depths, sizes and materials of conflicting buried utilities. Survey cost $58,550.		
g.	(1) TITLE AND LOCATION (City and State) **City of Pompano Beach** **SW 2nd Street Drainage Improvements - Survey** **Pompano Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2018	 CONSTRUCTION (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey including all above ground features within existing right-of-way and off-site surveying of critical drainage structures. Scope of work includes 2D GPR utility locates within the project corridor (SW 2nd street between dixie highway and cypress road, SW 1st Avenue between SW 2nd street and Atlantic Boulevard, and SW 1st terrace & court between SW 2nd street and south cypress road). Survey cost: $22,300.		
h.	(1) TITLE AND LOCATION (City and State) **City of Fort Pierce Boundary and Topographic Survey for 251 Acres PUD** Fort Pierce, Florida	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2005	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	CAS prepared certified survey drawings, to scale, showing property boundary and acreage, in accordance with Chapter 61G17-6 F.A.C. (Standards of Practice for Surveying in Florida) for approximately 251 Acres located at the northeast intersection of Shinn Road and Okeechobee Road in St. Lucie County, Florida. Property corners were re-set or located in the field. Plottable and non-plottable matters were shown based on a review to address Schedule B-II of the Title Commitment prepared for the project. Survey data showed property elevations, roads, buildings, above ground and visible utilities. Elevations were shown relative to National Geodetic Vertical Datum of 1929 (NGVD '29). In addition, rims, inverts, pipe sizes and material were gathered for existing utilities and shown to the base maps. Deliverables included survey base maps in hardcopy and electronic CAD file format. The project began on February, 2005 and was completed by December, 2005. Survey cost: $22,130.		

i.	(1) TITLE AND LOCATION (City and State) **Monroe County – Specific Purpose Survey for Curry Hammock State Park Tidal Connection Restoration** **Marathon, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	CAS provided a map of topographic survey showing above ground visible improvements for (2) approximately 700 linear foot areas, transecting the Overseas Highway (State Road 5) including the Florida Keys Overseas Heritage Trail from vegetation line to vegetation line. The survey included above and below grade utilities within the accessible areas of the project. The information was shown horizontally relative to the North American Datum of 1983 with the 1990 or newer adjustment (NAD '83/90). Additionally, the FDOT baseline was established along the Overseas Highway at one hundred-foot intervals and cross-sections were recorded at fifty-foot intervals between the edges of vegetation on each side of the road. Said vegetation/tree lines were also shown. The project began on April 20, 2021 and was completed by May 28, 2021. Survey cost: $13,889.15.		
j.	(1) TITLE AND LOCATION (City and State) **Miami-Dade County: Topographic survey for Tropical Park Improvements – Phase II** **Miami-Dade County, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2015	CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Performed survey and subsurface utility engineering for 7 identified areas within Tropical Park south of Bird Road comprising of approximately 2.9 total acres. The scope of work included establishing horizontal control based on the Florida State Plane Coordinate grid system and vertical elevations were shown relative to the NAVD of 1988. Physical improvements such as parking edges and walks within the project area were identified and shown. Based on survey points provided by the client, the locations of over 100 trees were field staked and identified on plans. Subsurface utility engineering (SUE) was provided utilizing 2-D ground penetrating radar (GPR) and electromagnetic induction (EM) to locate and verify buried utilities. Location of identified buried utilities were incorporate in final survey deliverable. The Map of Topographic Survey adhered to Florida Statutes Chapter 472.027, Florida Administrative Code 5J-17 (Minimum Technical Standards for Surveying in the State of Florida). Total project cost was $7,406. The project was completed in less than 30 days in October 2015. Survey cost: 7,406.		
k.	(1) TITLE AND LOCATION (City and State) **City of Fernandina Beach: Boundary of Specific Survey for Fernandez Park** **Fernandina Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2020	CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	CAS performed a boundary map survey for Fernandez Park and prepared a certified drawing, to scale, showing property boundary and acreage, in accordance with Chapter 61G17-6 F.A.C. (Standards of Practice for Surveying in Florida). Property corners were set or found as a prerequisite to the map of specific survey that followed which included location, recovery, confirmation and occupation of existing network points and placement of necessary tomographic control points, baseline points and sighting points for CAS's robotic total station system utilized for tracking the geospatial location of the radar array while scanning. CAS Surveying established horizontal control relative to North American Datum of 1983 (NAD '83) with the 1990 (2011) adjustment. Horizontal control points were established or recovered for reference and orientation. Baselines were established relative to well defined land lines or physical features. Benchmarks relative to North American Vertical Datum of 1988 (NAVD '88) were also established or recovered and marked in the field. CAS Surveying also field located pertinent above ground visible improvements or features within said park site for scan comparisons. Elevations were gathered on key points and a Map of Specific Purpose Survey adhering to Florida Statutes Chapter 472.027, Florida Administrative Code 5J-17 (Standards of Practice for Surveying in the State of Florida) was created. The project began in August, 2020, and was completed by September, 2020. Project cost was $7,130. Survey cost: $7,130.		

l.	(1) TITLE AND LOCATION (City and State) **Village of Bal Harbour – Surveying Services** **Bal Harbour, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2016 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Various survey mapping and construction projects for the expansion and/ or rehabilitation of utilities, acting as the village engineers. Projects include Collins Ave. (SR A-1-A) from 73rd street to 96th street and 96th street to the Haulover cut (approximately three (3) miles). Also included is ongoing surveying as needed and a major route survey for the rehabilitation of the Village of Bal Harbour utility system and roadways. (approximately three (3) miles). Survey cost: $22,000.		
m.	(1) TITLE AND LOCATION (City and State) **Hardee County Wauchula Hills** **Water and Sanitary Sewer Improvements: Phase IV - Survey** **Wauchula, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2016 CONSTRUCTION (if applicable): 2017	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Route survey for the installation of the water and sanitary sewer improvements which included approximately 6,125 linear feet of 8" water main and 5,277 linear feet of 8" gravity sanitary sewer including connection to 51 private residences and the decommissioning of septic tanks and potable water wells. This project was funded through a multi-year special legislative appropriation. Survey cost: $29,000.		
n.	(1) TITLE AND LOCATION (City and State) **Palm Beach Water Utilities Department** **Lake Region WTP No. 11 Utility Locates - Survey** **Palm Beach County, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2015 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Survey and subsurface utility engineering to locate existing utilities at water treatment plant for record drawing update. Utility locates included establishing benchmarks, horizontal control, depth, size, material and utility type. Survey cost: $74,928.		
o.	(1) TITLE AND LOCATION (City and State) **Brickell Citi Center - Survey** **Miami Dade County, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2012 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Surveying mapped above and below ground utilities based on radar tomography and traditional SUE methods on site and off site. The project is in downtown Miami between Miami Ave. And 1st on 6th, 7th and 8th streets. Survey cost: $110,000.		
p.	(1) TITLE AND LOCATION (City and State) **Town of Golden Beach – Surveying Services** **Golden Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2012 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Surveying within the rights of ways of golden beach drive, out to the three islands and along Collins Ave. (SR A-1-A) for drainage improvements due to major flooding issues; total roadway reconstruction; undergrounding of all utilities; water main replacement and miscellaneous surveys, as needed. Route spanned approximately three (3) miles. Cost: $1,000,000.		
q.	(1) TITLE AND LOCATION (City and State) **Interstate I595 Roadway Reconstruction - Survey** **Broward County, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2011 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Surveying mapped above and below ground utilities based on radar tomography and traditional SUE methods on site and off site. Specific areas totaling 1 million square feet were requested by the project engineer based on anticipated utility conflicts. Cost: $1,100,000.		

r.	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	Town of Golden Beach Boundary Survey **Golden Beach, Florida**	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		2011	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	CAS Survey was tasked with providing the Map of Topographic Survey/Route Surveys within the corridors specified. All visible improvements, as well as above and below ground utilities and drainage were identified. Additionally, all trees (4" or greater) and landscaped areas to 10 feet outside each right of way line were located and shown. Utility test hole locations were included. Survey cost: $8,180.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
David Lookabill 	Survey Coordination Manager	a. TOTAL 39	b. WITH CURRENT FIRM 9

15. FIRM NAME AND LOCATION (City and State)	
Craig A. Smith and Associates Boca Raton, Florida	
16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENTLY PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organization, Training, Awards, etc.)

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Seacoast Utility Authority – Northlake Boulevard/US1 Water and Sewer Forcemain Replacement - Survey **Jupiter, Florida**	2018	N/A

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Route survey along Northlake Boulevard and US-1 (approximately 2.8 miles) including identification of right-of-way, property lines, above ground improvements, utility easements, tree survey, cross sections and subsurface utility engineering (utility locates).
Survey cost: $203,325.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
City of Margate WWTP Triplex Lift Station Rehabilitation - Survey **Margate, Florida**	2018	TBD

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Survey and utility locates of existing buried utilities, including recovery of horizontal and vertical control relative to project datum as previously established.
Survey cost: $8,008.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
City of Lake Worth Beach Lake Osborne Estates Watermain Replacement Phase I - Survey **Lake Worth, Florida**	2018	2020

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Route survey along residential streets throughout community, including all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas 10 feet outside right of way, property lines, utility easements and subsurface utility engineering (utility locates).
Survey cost: $109,963.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
City of Delray Beach – NW Neighborhood Improvements - Survey **Delray Beach, Florida**	2020	N/A

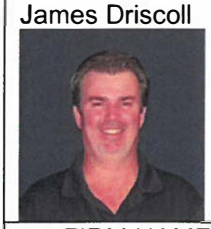
(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Route survey along residential streets and alleyways throughout a residential area, including all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas, right-of-way, property lines, easements and subsurface utility engineering.
Survey cost: $330,000.

e.	(1) TITLE AND LOCATION (City and State) **City of West Palm Beach East Central Regional (ECR) water Reclamation Facility Subsurface Utility Engineering and Utility Mapping - Survey** **West Palm Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2019 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Surveying including establishing benchmarks, horizontal control and baselines relative to well defined land lines or physical features. Scope of work also includes utility locates using 2d gpr and 3d radar tomography scanning along with ten (10) excavated test boring holes for identification of onsite buried utilities for updating existing facility record drawings. Survey cost: $36,330.		
f.	(1) TITLE AND LOCATION (City and State) **City of Delray Beach – Lowson Boulevard Improvements – Survey and SUE** **Delray Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2019 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	The scope of work included survey and subsurface utility engineering as a subconsultant to Kimley-Horn & Associates, Inc. for the City of Delray Beach. The scope of work included a survey of all above ground visible improvements and utilities within the right-of-way of Lowson Boulevard (SW 10th Street) and 10 feet beyond the right-of-way line from the east right-of-way of Congress Avenue to the intersection of SE 6th Avenue. In addition, rims, pipe invert elevations, sizes and pipe materials were acquired for all existing drainage structures within the project limits. Subsurface utility engineering included soft digs at fifty (50) designated locations to verify depths, sizes and materials of conflicting buried utilities. Survey cost: $58,550.		
g.	(1) TITLE AND LOCATION (City and State) **City of Pompano Beach SW 2nd Street Drainage - Survey** **Pompano Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2018 CONSTRUCTION (if applicable): TBD	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey including all above ground features within existing right-of-way and off-site surveying of critical drainage structures. Scope of work includes 2D GRP utility locates within the project corridor (SW 2nd street between Dixie Highway and Cypress Road, SW 1st Avenue between SW 2nd Street and Atlantic Boulevard, and SW 1st Terrace & Court between SW 2nd Street and South Cypress Road). Survey cost: $22,300.		
h.	(1) TITLE AND LOCATION (City and State) **Town of Golden Beach – Town Hall Improvements Boundary Survey** **Golden Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2018 CONSTRUCTION (if applicable): N/A	
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Prepared certified drawings, to scale, showing property boundary and acreage, in accordance with Chapter 5J-17 F.A.C. (Standards of Practice for Surveying in Florida) for the property east and south of Tweddle Park and the existing tennis courts. in the Town of Golden Beach. Property corners were set or found as pertinent. Above ground, visible improvements were located and shown together with utility surface markings provided by the CAS Utility Locates Department indicating the locations of sub-surface utilities. Surveys were provided in both the PDF and Cad file formats. Survey cost: $8,180.		

i.	(1) TITLE AND LOCATION (City and State) **City of Miami Beach Light Rail/Modern Streetcar Project - Survey** **Miami Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2016	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Map of topographic survey/route surveys adhering to the Miami Beach public works manual – section 1a – surveying standards and requirements along the corridors. All visible improvements were located and shown. Above and below ground utilities and drainage were identified as well as trees and landscaped areas to 25 feet outside each right of way line. Cross-sections were taken at 50-foot intervals. Elevations at entry thresholds of structures were also provided. Survey cost: $300,000(+).		
j.	(1) TITLE AND LOCATION (City and State) **City of Margate 2018 Watermain Improvements - Survey** **Margate, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2016	 CONSTRUCTION (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey including location of all above ground features and visible improvements within the existing right-of-way. Establish survey baseline, cross sections and vacuum excavation test holes to verify location of buried utilities. Survey cost: $46,250.		
k.	(1) TITLE AND LOCATION (City and State) **City of Miami Beach Palm and Hibiscus Island Stormwater and Roadway Improvements - Survey** **Miami Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2015	 CONSTRUCTION (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Map of topographic survey/route survey adhering to the Miami Beach public works manual – section 1a – surveying standards and requirements. Cross-sections were taken at 25 to 50 foot intervals due to the restrictive environment. Elevations at entry thresholds of structures were also provided. Survey cost: $105,798.		
l.	(1) TITLE AND LOCATION (City and State) Curry Hammock Park Monroe County, Florida Keys, FL	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey along the Overseas Highway (US Highway 1) in two areas for the design of box culvert/bridge upgrades to improve water flow. The Survey included the locations of all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas to the edge of heavy vegetation and subsurface utility engineering (utility locates).		
m.	(1) TITLE AND LOCATION (City and State) Bahia Honda State Park Monroe County, Florida Keys, FL	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey along the entry road from the Overseas Highway (US Highway 1) to the park employee lodging area for the design of drainage improvements due to frequent flooding. The Survey included the locations of all visible improvements.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
James Driscoll 	Director of Subsurface Utility Engineering (SUE)	a. TOTAL 32	b. WITH CURRENT FIRM 29
15. FIRM NAME AND LOCATION (City and State) Craig A. Smith and Associates Boca Raton, Florida			
16. EDUCATION (DEGREE AND SPECIALIZATION)		17. CURRENTLY PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organization, Training, Awards, etc.)
CADD Centers of Florida – CADD Technician; Traffic Safety in the Workplace, FDOT;
Metro Tech – 9890 XT Operator; MALA Geosciences – Ground Penetrating Radar Theory;
MALA Geosciences – GPR Scanning Techniques; MALA Geosciences – Easy Locator & RAMAC X3M Operator;
National Utility Locating Contractors Association (NUCLA)

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
a.	**General Subsurface Utility Engineering Services** **City of West Palm Beach, Florida**	Ongoing	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Continuing contract for utility locating services for the City's service area on an as-needed basis.		
b.	**General Subsurface Utility Engineering Services** **Town of Jupiter, Florida**	Ongoing	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Continuing contract for utility locating services for the Town's service area on an as-needed basis.		
c.	**General Subsurface Utility Engineering Services** **Town of Davie, Florida**	Ongoing	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Currently contracted with Town of Davie to perform complete subsurface utility services of the town's existing water, sanitary sewer, force main, reclaimed water and street lighting infrastructure. Provides Town with project specific locates and soft dig information since 2003. Average annual fee of $90,500.		
d.	**General Subsurface Utility Engineering Services** **City of Coconut Creek, Florida**	Ongoing	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Continuing contract for utility locating services for the City's service area on an as- needed basis.		
e.	**General Subsurface Utility Engineering Services** **Martin County, Florida**	2015-2019	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Continuing contract for utility locating services for the County's service area on an as- needed basis.		

f.	(1) TITLE AND LOCATION (City and State) **General Subsurface Utility Engineering Services** **City of Hollywood, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		Ongoing	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Continuing contract for utility locating services for the County's service area on an as- needed basis.		
g	(1) TITLE AND LOCATION (City and State) **General Subsurface Utility Engineering Services** **City of Cooper City, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		2008-2019	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Continuing contract for utility locating services for the County's service area on an as- needed basis.		
h.	(1) TITLE AND LOCATION (City and State) **Bal Harbour Village** **Bal Harbour Village, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		2014	2016
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Various survey mapping and utility locates for construction projects for the expansion and/or rehabilitation of utilities (pipelines and wastewater lift stations), acting as the Village Engineers, projects include Collins Avenue (SR A1A) from 73rd Street to 96th Street and 96th Street to the Haulover cut (approximately 3 miles) and rehabilitation of Lift Station No. 1 and installation of Lift Station No. 3. Also included is ongoing surveying and utility locates as needed and a major route survey for the rehabilitation of the Village utility system and roadways (approximately 3 miles lineally).		
i.	(1) TITLE AND LOCATION (City and State) **AECOM/DRAGADOS I-595 Roadway Reconstruction** **Fort Lauderdale, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		2010	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Specific purpose survey and subsurface utility engineering services enhanced with 3D Radar Tomography in advance of construction activities. Performed over 1M square feet of 3D, RT, GPR, EM locating and 750 vacuum excavation soft digs to assist in identifying potential conflicts between existing subsurface systems and numerous proposed bridge column and sign foundations.		
j.	(1) TITLE AND LOCATION (City and State) **Palm Beach County Water Utilities Regional Water Reclamation Facility** **West Palm Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		2019	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	CAS performed Subsurface Utility Engineering services as a subconsultant to Hazen & Sawyer, Inc. for the City of West Palm Beach East Central Regional Water Reclamation Facility. The scope of work included survey to establish horizontal control, benchmarks and locating all pertinent above ground visible improvements and utilities within the project area. Utility surface designation and mapping was performed utilizing 2D Ground Penetrating Radar, 3D Radar Tomography scanning and calibration soft digs for approximately 260,000 ft^2 of the facility to identify types, sizes and locations of buried utilities. Deliverables included full electronic files containing CAD, survey data and imagery collected and scanning performed for this project. All files were compatible with the Civil 3D CADD platform. Total project cost was $36,330.		
k.	(1) TITLE AND LOCATION (City and State) **Palm Beach County Water Utilities Seminole Pratt-Whitney Road/Northlake Water and Force Main Improvements** **Palm Beach County, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		2019	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	CAS performed subsurface utility engineering as a subconsultant to Chen Moore & Associates, Inc. for the Palm Beach County Water Utilities Department. The scope of work included soft digs at forty (40) designated locations to verify depths, sizes and materials of conflicting buried utilities for the design of a water main replacement along Seminole Pratt-Whitney Road between Orange Boulevard and 88th Street. Total project cost was $24,875.		

I.	(1) TITLE AND LOCATION (City and State) **General Subsurface Utility Services** **Town of Pembroke Park, Florida**	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
		Ongoing	N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Continuing contract for utility locating services for the County's service area on an as- needed basis.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Donald Drake 	Survey Crew Leader	a. TOTAL 39	b. WITH CURRENT FIRM 5

15. FIRM NAME AND LOCATION (City and State)	
Craig A. Smith and Associates Boca Raton, Florida	
16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENTLY PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organization, Training, Awards, etc.)

19. RELEVANT PROJECTS BLUE: WATER/WASTEWATER GREEN: STORMWATER/ROADWAY

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
City of Delray Beach NW Neighborhood Improvements **Delray Beach, Florida**	2018	N/A

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

The work under this contract was within the limits of the NW Neighborhood area located immediately east of 1-95, bordered by Atlantic Avenue to the south; 1-95 to the west; Lake Ida Road on the north and Swinton Avenue on the east.
The scope of work included determination of existing right-of-way widths, topographic survey, title search, geotechnical investigations, subsurface utility engineering (utility locates) for roads and alley way restoration, pavement assessment, analysis of existing drainage and sanitary sewer systems, reclaimed water main extension, driveway/pedestrian ramp upgrades/restoration, signage, pavement markings, sidewalk improvements, drainage improvements (swales and piping), water main improvements, traffic calming, parallel parking, where required, landscaping, irrigation and street lighting enhancements.
Survey cost: $275,000.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
City of Boynton Beach Silverwood (Hypoluxo Road) Force Main Installation **Boynton Beach, Florida**	2020	N/A

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

Specific purpose survey locating all above ground visible improvements, including utilities within the project area. The scope of work included picking up surface marks from subsurface utility engineering which included data for 20 vacuum excavation test holes.
Survey cost: $45,375.

c.	(1) TITLE AND LOCATION (City and State) **City of West Palm Beach East Central Regional (ECR) Water Reclamation Facility Subsurface Utility Engineering and Mapping** **West Palm Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2019	CONSTRUCTION (if applicable): N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Surveying including establishing benchmarks, horizonal control and baselines relative to well defined land lines or physical features. Scope of work also included utility locates using 2D GPR and 3D radar tomography scanning along with ten (1) excavated test boring holes for identification of on-site buried utilities for updating existing facility record drawings. Survey cost: $36,330.		
d.	(1) TITLE AND LOCATION (City and State) **Seacoast Utility Authority – Northlake Boulevard/US-1 Water and Sewer Force Main Replacement** **Jupiter, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2018	CONSTRUCTION (if applicable): N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Route survey along Northlake Boulevard and US-1 (approximately 2.8 miles) including identification of right-of-way, property lines, above ground improvements, utility easements, tree survey, cross sections and subsurface utility engineering (utility locates). Survey cost: $203,325.		
e.	(1) TITLE AND LOCATION (City and State) **City of Boynton Beach City-Wide Force Main Valve Installation Project** **Boynton Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2019	CONSTRUCTION (if applicable): N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	CAS performed surveying and subsurface utility engineering as a subconsultant to Carollo Engineers, Inc. for the City of Boynton Beach Utilities Department. The scope of work included survey and utility locations in eight (8) areas along N. Congress Ave. and W. Ocean Drive for the design of valves on existing trunkline force mains. Mr. Drake performed a map of specific purpose survey, locating all above ground, visible improvements and utilities within the existing right of way corridor as well as utility surface markings performed by utility locating crews. Thirty (30) vacuum test holes and utility locates were performed and information was collected and shown on the survey basemap such as rim elevations, pipe inverts, sizes and material. A base line was established and cross sections taken every 100 feet. All elevations were shown relative to the North American Vertical Datum of 1988 (NAVD '88). Survey provided base maps for each area showing limited topographic features, utility locates, mark ups and soft dig information as required by the client. CAS responsibilities included survey, utility locates utilizing soft digs and 2D ground penetrating radar to identify/verify buried utilities and utility conflicts within the project corridor for the development of basemaps for engineering design. Survey cost: $33,660.		
f.	(1) TITLE AND LOCATION (City and State) **City of Lake Worth Beach** **Lake Osborne Estates Water Main Replacement – Phase 1** **Lake Worth Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2018	CONSTRUCTION (if applicable): 2021
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm		
	Route survey along residential streets throughout community, including all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas 10 feet outside right-of-way, property lines, utility easements and subsurface utility engineering (utility locates). Survey Cost: $109,963.		

g.	(1) TITLE AND LOCATION (City and State) **CCPWA – City of Moore Haven** **Avenue N, O, S & 4th Sanitary Sewer Expansion** **Moore Haven, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2018	CONSTRUCTION (if applicable) 2020
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Survey/engineering for the latest phase of construction for the sanitary sewer expansion in the City of Moore Haven. The project included approximately 0.8 miles of route survey. Survey was tasked with providing the map of topographic survey/route surveys within the corridors specified. All visible improvements, as well as above and below ground utilities and drainage were identified. Additionally, all trees (3" or greater) and landscaped areas to 10 feet outside each right of way line were located and shown. Additional roadway legal descriptions and easements were required. Cost: $19,525.		
h.	(1) TITLE AND LOCATION (City and State) **Deerfield Beach (Old Saybrook Golf)** **Fairway Memorial Garden Cemetery** **Deerfield Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES Ongoing	CONSTRUCTION (if applicable) Ongoing
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Surveying including boundary, topographic and tree survey. Laying out all proposed improvements Survey cost: $300,000 (to-date).		
i.	(1) TITLE AND LOCATION (City and State) **City of Hallandale Beach NE 7th Street Force Main Improvements** **Hallandale Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2022	CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Services included providing a specific purpose survey physically locating all above ground, visible improvements within the existing rights of way within the following streets: NE 7th Street from North Dixie Highway to NE 12th Avenue. A survey baseline was established at 100-foot intervals and cross sections taken to ten (10) feet beyond each right of way at fifty-foot intervals. Plan view elevations were shown as relative to North American Vertical Datum of 1988 at each section and at pertinent points for facilitation of Engineering Design. All visible, above ground improvements and utilities were located and shown together with utilities as marked on the surface by CAS utility locating crews. Sanitary sewer and drainage structures were located and inverts, pipe sizes, materials and rim elevations were shown as available. The locations of Forty (40) utility test holes were shown with utility data, (i.e., type, size, material, inv., etc., for each based on reports provided to the Surveyor). Trees 3" or greater were shown with diameter at breast height (DBH) and common name if known. A base map was created in current software parameters and provided to the Engineering Department as well as a Certified Map of Specific Purpose Survey adhering to the Standards of Practice for Surveying, (Chapter 5J – 17) of the Florida Administrative Code, for submittal to entities of interest. Utility location and verification services were performed within the project area using AWPA standards for marking. A subsurface ground penetrating radar (GPR) unit were used in addition to electromagnetic induction (EM) to perform/verify horizontal locations of existing utility lines. Lines were painted on the ground or pin flags set to show said lines on the surface. Survey cost: $61,150		
j.	(1) TITLE AND LOCATION (City and State) **City of Pompano Beach Non Sewer Area C Sanitary Sewer Improvements** **Pompano Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2019	CONSTRUCTION (if applicable) TBD
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	CAS provided surveying services for the engineering design and installation of a new wastewater collection system to provide sanitary sewer service to the city's Non-Sewer Area C service area. The project area consisted of 38 commercial/light industrial properties which are currently on septic tanks. Mr. Drake provided a specific purpose survey within the project area between N. Powerline Road to approximately 1,400 linear feet east and between NW 15th Court and NW 18th Street. GPS equipment was utilized for data collection in both the horizontal and vertical planes and limited to the accuracies required for a Map of Specific Purpose Survey adhering to the Florida Standards of Practice for Surveying. A base map of the project area was generated, which included all building finished floors, road and parking elevations. Also any visible sewer tie-ins for Pump Station 101 and 104 were gathered along with nine (9) associated sanitary sewer manholes. Rim invert, pipe size and materials were identified in the field and in the base map. Survey cost: $8,700		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
David Raines 	Survey Crew Leader	a. TOTAL 9	b. WITH CURRENT FIRM 9

15. FIRM NAME AND LOCATION (City and State)	
Craig A. Smith and Associates Boca Raton, Florida	
16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENTLY PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)'

18. OTHER PROFESSIONAL QUALIFICATIONS (Publication; Organization, Training, Awards, etc.)
Land Surveying; Boundary / Topographic Surveys; Lot Surveys; Control Surveys; Utility Surveys; 3D Radar Tomography; GPS; Route Surveys; Crew Supervision; Construction Layout; Quantity Surveys and Calculations

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Hardee County: Wauchula Hills Water and Sanitary Sewer Improvements – Phase 7 Hardee County, Florida	2022	Ongoing

(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE — X Check if project performed with current firm

The scope of work includes the installation of approximately 3,915 linear feet of 8-inch gravity sanitary sewer and associated manholes, a duplex wastewater lift station with a 6-foot diameter by 16-foot deep wetwell, 380 linear feet of 4-inch force main and 2,080 linear feet of 8-inch force main extending along US Route-17. The project includes abandonment and removal of existing septic tanks and connection of all residence to the new sanitary sewer collection system via sanitary sewer lateral installations. Restoration will entail complete road replacement within the construction limits along with restoration of driveway aprons and sod with right-of-way. Surveying for the project is 100% complete. The engineering design fee including construction management is $321,710. The construction cost estimate is $2,480,000. Mr. Raines performed a specific purpose survey partially within an FDOT corridor which entailed physically locating all above ground, visible improvements within the existing right-of-way for the easterly portion of U.S Route-17 from the South Florida State College Campus North to the property at #3430. The westerly portion of U.S. Route-17 from the north end of Torrey Trails RV to the property at #3440; West along Old Dixie Highway to Ridge Street, north along Ridge Street from Old Dixie Highway to Hill Street continuing along Ridge Street from Hill Street north to the north plat boundary then along said north line offset said line 20 feet north and south continuing east through the Real-Life Church to the West right-of-way of U.S. Route-17. Then continuing survey South and West along Hanusch Road from Old Dixie Highway to approximately 1,205 linear feet from the intersection. A Survey baseline was established at 100-foot intervals and cross sections taken to ten (10) feet beyond each right-of-way at 50-foot intervals. Plan view elevations were shown as relative to the National Geodetic Vertical Datum of 1929 at each section and at pertinent points for facilitation of engineering design. All visible, above-ground improvements were located and shown together with trees with a caliper of 3-inches or greater which was depicted at breast height (DBH) and by common name or species. A base map was developed digitally in CADD. The Map of Specific Purpose Survey adhered to the Standards of Practice for Surveying Chapter 5J 17 of the Florida Administrative Code. In addition, a sketch and legal description was prepared for the necessary utility easement required for the installation of the lift station which ran from the end of Ridge Street east to the west right-of-way of U.S. Route-17. CAS Responsibilities include survey, design, cost estimates, permitting, utility easement acquisition, preparation of construction plans, contract documents, and bidding assistance, construction management and observation through project closeout.
Survey cost: $31,600

b.	(1) TITLE AND LOCATION (City and State) **City of Fort Lauderdale Design-Build Force Main Bypass Line Installation**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2020	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	CAS provided surveying and subsurface utility engineering (SUE) as a subconsultant to A&P Consulting Engineers, Inc. within an approximate 3.2-mile corridor for the design-build installation of a force main bypass line. The corridor included SE 10th Ave. from SE 18th St. to SE 12th St.; SE 9th St. from SE 12th St. to SE 2nd Ct.; SE 2nd Ct. from SE 9th St to SE 10th St. and across the Himmarshee Canal; NE 11th Ave.; and NE 6th St. east to NE 15th St. and north to Sunrise Blvd. A specific purpose survey was conducted by Mr. Raines within the right-of-way identifying all above grade utilities and improvements of each corridor along with incorporating utility locate surface markings. 2D ground penetrating radar, electromagnetic designating and vacuum soft digs were utilized to locate all existing buried utilities. The final deliverable was a CAD file base map. CAS responsibilities included field survey, utility locates utilizing 2D ground penetrating radar, electromagnetic designation and utility excavation test holes to identify all buried utilities in project area and develop complete survey/utility base map. Survey cost: $125,000		
c.	(1) TITLE AND LOCATION (City and State) **Spring Lake Improvement District: Water Main Extension – Madrid Drive US98**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2018	 CONSTRUCTION (if applicable) 2018
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	The scope of work for this project entailed the installation of approximately 500 linear feet of a 10" water main and 50 linear feet of 8" water main with all appurtenances along Madrid Drive. The project included a connection to an existing 6" water main at the intersection of Madrid Drive and Holly Lane and approximately 200 linear feet of 10" HDPE horizontal directional drill under the south right-of-way line of US 98 at the intersection of Revson Avenue. Mr. Raines performed a specific purpose survey within an FDOT and SLID corridor which entailed physically locating all above ground, visible improvements. A base map was developed digitally in CADD. Map of survey adhered to the Standards of Practice for Surveying Chapter 5J 17 of the Florida Administrative Code. Total design cost was $12,450 and total construction cost was $76,238.		
d.	(1) TITLE AND LOCATION (City and State) **City of West Palm Beach – East Central Regional Water Reclamation Facility – Headworks Bypass Project West Palm Beach, Florida**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE X Check if project performed with current firm		
	Performed topographic surveying and subsurface utility engineering services as a subconsultant to Hazen & Sawyer, Inc. for the City of West Palm Beach East Central Regional Water Reclamation Facility headworks bypass project. Mr. Raines performed a field survey to establish horizontal control, benchmarks and locate all pertinent above ground visible improvements, utilities as filed marked within the project area. Elevations were gathered on key points. Utility surface designation and mapping was performed utilizing 2D Ground Penetrating Radar, and ten (10) soft digs were performed to identify types, sizes and locations of buried utilities including configuration of duct banks and non-encased multi-conduit systems. Deliverables included full electronic files containing CAD, survey data and imagery collected. All files were compatible with Civil 3D CADD Platform. The Project cost: $18,195.		

e.	(1) TITLE AND LOCATION (City and State) **Central Island Drainage Improvements** **Sunny Isles Beach, FL**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2020	 CONSTRUCTION (if applicable) 2021
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey including all above ground features within and extending ten feet beyond existing rights-of-ways and off-site surveying for proposed stormwater pumping stations and associated outfalls. Scope of work included 2D GPR utility locates within the project corridor for all streets between North Bay Road east to A-1-A (Collins Avenue) and 174th Street North to 183rd Street and sketch and legal descriptions for utility easements. Project cost: $106,965		
f.	(1) TITLE AND LOCATION (City and State) **Sanitary Sewer Pumping Station No. 1 (Egret) Rehabilitation** **Hallandale Beach, FL**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Surveying included establishing benchmarks and horizontal control for future survey work. All above ground, visible utilities, as well as physical features, including the existing exterior pump station and interior floor data were located and included in the Topographic Survey. Scope of work also included the locations of utility locates using 2D GPR surface marks of onsite buried utilities for updating existing facility record drawings and design of improvements. Project cost: $7,880		
g.	(1) TITLE AND LOCATION (City and State) **25th Street Drainage Improvements Phase 2** **Town of Pembroke Park, FL**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	 CONSTRUCTION (if applicable) 2021
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey included all above ground features within and extending ten feet beyond existing rights-of-ways and off-site surveying for the proposed stormwater pumping station and associated outfall. Scope of work included 2D GPR utility locates and the locations of utility test holes within the project corridor, which included all streets between SW 25th Street south to SW 27th Street and the entrance to Patrick Beehan Park east to Park/Bryan Rd. Project cost: $25,000		
h.	(1) TITLE AND LOCATION (City and State) **Curry Hammock Park** **Monroe County, Florida Keys, FL**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey along the Overseas Highway (US Highway 1) in two areas for the design of box culvert/bridge upgrades to improve water flow. The Survey included the locations of all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas to the edge of heavy vegetation and subsurface utility engineering (utility locates). Project cost: $15,585		
i.	(1) TITLE AND LOCATION (City and State) **Bahia Honda State Park** **Monroe County, Florida Keys, FL**	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	 CONSTRUCTION (if applicable) N/A
	(3) BRIEF DESCRIPTION (scope, size, cost, etc.) and SPECIFIC ROLE	X Check if project performed with current firm	
	Route survey along the entry road from the Overseas Highway (US Highway 1) to the park employee lodging area for the design of drainage improvements due to frequent flooding. The Survey included the locations of all visible improvements. Project cost:$20,936		

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 1

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
PBCWUD State Road 7 Force Main Interconnection Project – Survey & SUE Palm Beach County, Florida	2020	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County Water Utilities	John Cairnes, P.E. (Mock Roos & Associates)	(561) 371 5695

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

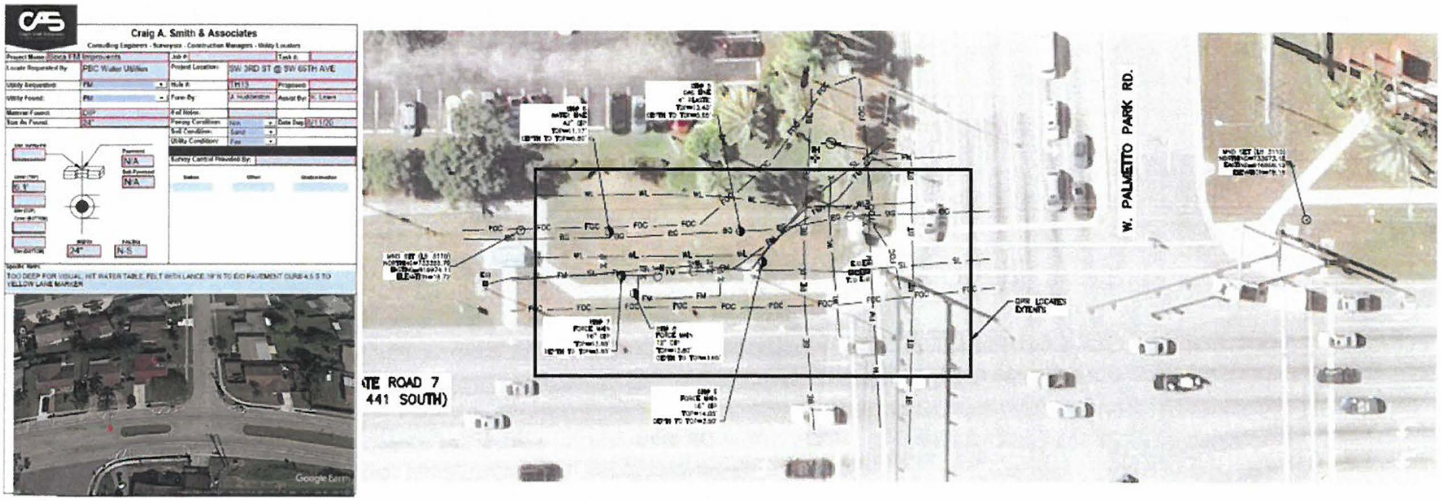
CAS performed surveying and subsurface utility engineering as a subconsultant to Mock Roos & Associates, Inc. for Palm Beach County Water Utilities Department. The scope of work included survey and utility locations along State Road 7 for the design of interconnections to the existing trunkline force mains in order to increase system reliability. Survey provided GPS at softdig locations and mapping for designated subsurface utility locations. Utility locates included thirteen (13) softdigs and 2D ground penetrating radar. Project cost was $7,835.

Responsibilities:

Survey, utility locates utilizing soft digs and 2D ground penetrating radar to identify/verify buried utilities and utility conflicts within the project corridor for the development of basemaps for engineering design.

Key Personnel:

Stephen C. Smith, P.E. – President; James F. Driscoll – Director of SUE, Robert D. Keener, P.S.M. – Vice President of Survey; David Lookabill – Survey Coordination Manager



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Mock Roos
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 2

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Palm Beach County Water Utilities - Rehabilitation of Wastewater Lift Station # 393, 1023 & 5133 Palm Beach County, Florida	2018	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County Water Utilities	Rebecca Travis, P.E. (Baxter & Woodman Inc.)	(561) 425 7715

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

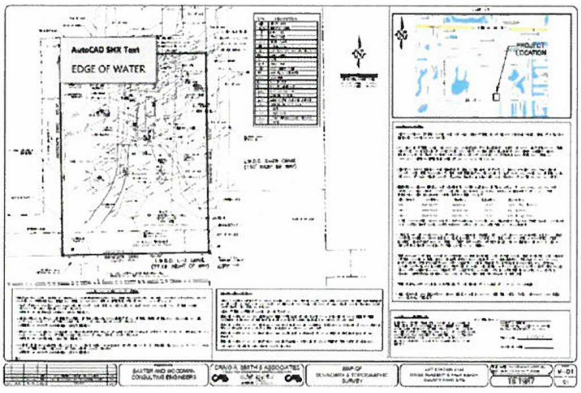
CAS performed surveying services as a subconsultant to Baxter & Woodman, Inc. for the rehabilitation of three (3) county wastewater lift stations. The scope of work included producing a map of boundary/topographic survey for each lift station site including a title search to verify existence of utility easements and a sketch and legal description for an easement required for the relocation of Lift Station No. 393. Utility surface designation, soft digs and 2D ground penetrating radar were performed at each facility to identify types, sizes and locations of buried utilities. Deliverables included Civil 3D CAD files, survey data and imagery. Project cost $33,145

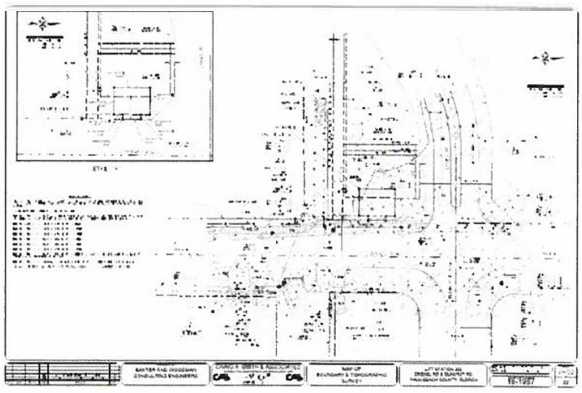
Responsibilities:

Topographic/boundary survey, title search, easement sketch and legal description, soft digs, utility surface designation and 2D ground penetrating radar to locate all buried utilities at each project site for the design and construction of wastewater lift station improvements.

Key Personnel:

Stephen C. Smith, P.E. – President; James F. Driscoll - Director of SUE; Robert D. Keener, P.S.M. – Vice President of Survey





25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Baxter Woodman
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 3

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Palm Beach County Water Utilities – South Bay Regional WWTP Repump Station #8310 Improvements - Survey Palm Beach County, Florida	2020	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County Water Utilities	Rebecca Travis, P.E. (Baxter & Woodman Inc.)	(561) 425 7715

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

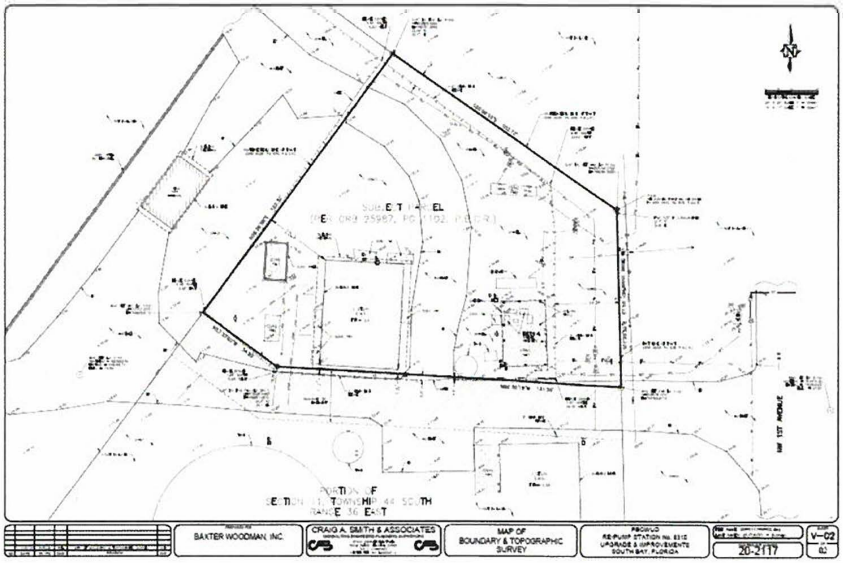
CAS performed surveying services as a subconsultant to Baxter & Woodman, Inc. for Palm Beach County Water Utilities Department. The scope of work included topographic survey and 2D GPR utility locates associated with the South Bay WWTP Repump Station improvements. Project cost $18,170

Responsibilities:

Survey, title search, sketch and legal description for easement acquisition and the development of basemaps for engineering design.

Key Personnel:

Stephen C. Smith, P.E. –President; Robert D. Keener, PSM – Vice President of Survey; David Lookabill – Survey Coordination Manager



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Prime
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 4

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
9 North Regional Pumping Facility- Survey & Subsurface Utility Engineering Palm Beach County, Florida	2012	

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County	Henry Melendez, P.E.	(561) 493 6120

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

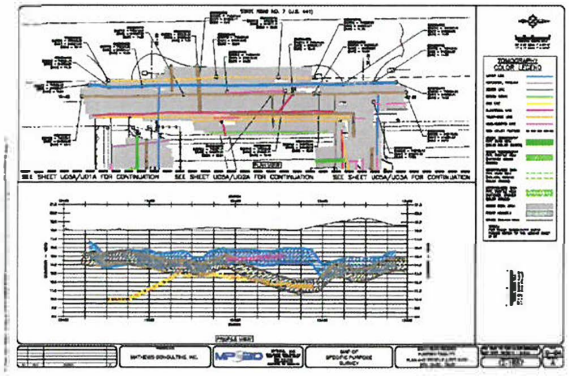
The scope of services for the Regional Pumping Facility (Former Treatment Plant Site 9 North) project included survey and subsurface utility engineering (SUE) to locate all existing buried utilities in order to update existing record drawings. Utility locates included establishing benchmarks, horizontal control and identifying utility depth, size, material and type. Total project cost was $21,602. The project began in July 2012 and was completed in November 2012.

Responsibilities:

Survey and comprehensive utility locates utilizing 3D Radar Tomography, 2D Ground Penetrating Radar and Soft Digs.

Key Personnel:

Stephen C. Smith, P.E. – President; Robert D. Keener, P.S.M. – Vice President-Survey; James F. Driscoll – Vice President - Utility Locates



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Baxter & Woodman, Inc.
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 5

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
City of Belle Glade Runyon Village Water Main – Survey & Subsurface Utility Engineering Belle Glade, Florida	2014	

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County	Henry Melendez, P.E.	(561) 493 6120

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:
The scope of services included survey and subsurface utility engineering (SUE) to locate approximately 3,300 linear feet of existing water main within a residential area. The project included establishing bench marks, horizontal control, pipe depths, pipe size, material and development of utility base maps. Total project cost was $39,698. The project began in May 2014 and was completed in July 2014.

Responsibilities:
Survey, utility locates, base map development.

Key Personnel:
Stephen C. Smith, P.E. – President; James F. Driscoll – Vice President - Utility Locates; Robert D. Keener, P.S.M. – Vice President-Survey

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Baxter & Woodman, Inc.
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 6

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Lake Regional Water Treatment Plant Record Drawing Updates – Survey & Subsurface Utility Engineering Palm Beach County, Florida	2015	

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County	Henry Melendez, P.E.	(561) 493-6120

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

Topographic survey and subsurface utility engineering of approximately a 22-acre water treatment plant site to locate existing buried utilities for record drawing updates. Utility locates included establishing benchmarks, horizontal control, depth, size, material and utility type for complete and updated utility record drawings. Total project cost was $74,928. The project began in October 2014 and was completed in May 2015.

Responsibilities:

Survey, utility locates and updated utility record drawings.

Key Personnel:

Stephen C. Smith, P.E., - President, Robert D. Keener, P.S.M. – Vice President-Survey; James Driscoll – Vice President Utility Locates

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Baxter & Woodman, Inc.
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 7

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Wastewater Master Re-pump Station No. 5 – Survey & Subsurface Utility Engineering Palm Beach County, Florida	2014	

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County	Henry Melendez, P.E.	(954) 493 6120

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

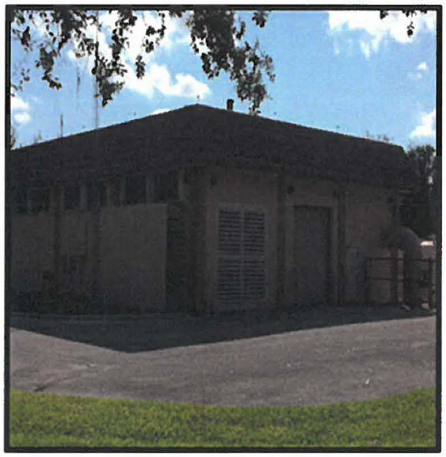
The scope of services included topographic survey and subsurface utility engineering (SUE) to locate existing water mains, force mains and buried electrical/cable lines within the Wastewater Master Repump Station No. 5 facility in order to update existing record drawings. Total project cost was $30,959. The project began in November 2014 and was completed in December 2014.

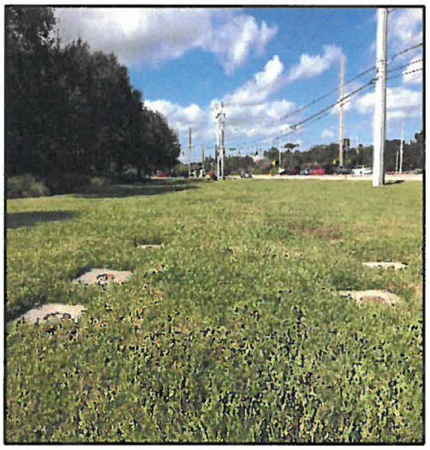
Responsibilities:

Survey, utility locates, record drawing updates.

Key Personnel:

Stephen C. Smith, P.E. – President; James F. Driscoll – Vice President- Utility Locates; Robert D. Keener, P.S.M. – Vice President-Survey





25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Baxter & Woodman, Inc.
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 8

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Fort Lauderdale Water Distribution System Mapping Update Zone CASmith – Survey & SUE Palm Beach County, Florida	2023	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
City of Fort Lauderdale Public Works	Richard Pryce (Craven & Thompson, Inc.)	(954) 739 6400

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

CAS has been tasked to provide surveying and subsurface utility engineering as a subconsultant to Craven Thompson & Associates, Inc. for the water utility system mapping updates delineated within the CA Smith Zone located within the City's northeast service area. The project area contains approximately 168,960 linear feet or 32 miles of existing 8" water pipelines. The scope of work included soft digs at up to three hundred seventy-two (372) designated locations, including 2D ground penetrating radar to verify depths, sizes and materials of the existing water mains within the prescribed right-of-way corridor including identify/verifying location of existing isolation valves, air-release valves, fire hydrants and approximately 12,000 associated water meters. Survey will physically locate the utility surface marks for existing water mains provided by the CAS Utility Locates Department and above ground valves, fire hydrants, air release valves, etc. relative to the defined scope. Missing and/or unknown pipes based on the GIS data supplied by the client will be mapped as applicable. The Certified Surveyors Report will adhere to the Standards of Practice for Surveying, (Chapter 5J – 17) of the Florida Administrative Code. The project is currently on-going. Total project cost was $291.234.

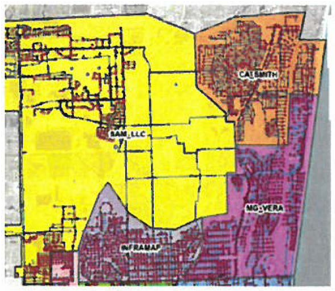
Responsibilities:

Utility locates utilizing soft digs and 2D ground penetrating radar to identify/verify existing water main system and all associated appurtenances within the project corridor for the updating of the City's GIS Water Utility System maps. A Certified Surveyor's Report will be provided with pertinent information included, together with a cad base file for the project.

Key Personnel:

Stephen C. Smith, P.E. – President; James F. Driscoll – Vice President of SUE, Alan Lopez – SUE Manager/ Field Supervisor, Robert D. Keener – Vice President of Survey; Bill Kalbach – Survey Manager; Donald Drake – Crew Chief

CITY OF FORT LAUDERDALE



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Craven Thompson & Associates, Inc.
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 9

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
City of Boynton Beach Wastewater Lift Station #317 Rehabilitation Project – Survey & SUE Boynton Beach, Florida	2023	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
City of Boynton Beach	Brian LaMay, P.E. (Carollo Engineers, Inc.)	(954) 414 8654

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

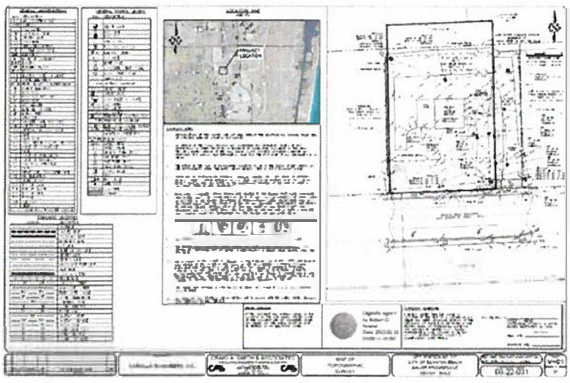
CAS performed a topographic and boundary survey along with subsurface utility engineering as a subconsultant to Carollo Engineers, Inc. for the City of Boynton Beach Utilities Department for a 0.5-acre site entailing Wastewater Lift Station No 317. The scope of work included specific purpose survey and utility locates involving 2D ground penetrating radar, electromagnetic designations and soft digs at eight (8) locations within the project area to identify and verify the force main discharge tie-in location, force main trunk line and water service line to the Lift Station. Survey provided base maps for the area showing limited topographic features, utility locates, mark ups and soft dig information as required by the client along with individual soft dig reports. The project began on February 7, 2023 and was completed on February 22, 2023. The project was completed on time and within budget. The total project cost was $13,460.

Responsibilities:

Survey, utility locates utilizing soft digs and 2D ground penetrating radar to identify/verify buried utilities and utility conflicts within the project area for the development of basemaps for engineering design of a wastewater lift station rehabilitation.

Key Personnel:

Stephen C. Smith, P.E. –President; James F. Driscoll – Vice President of SUE, Robert D. Keener, PSM – Vice President of Survey; David Lookabill – Survey Coordination Manager; David Raines – Crew Chief; Donald Drake – Crew Chief



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Carollo Engineers
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 10

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Seacoast Utility Authority Northlake Boulevard/US1 Water & Sewer Force Main Replacement – Phases 1-3 – Survey & Subsurface Utility Engineering Jupiter, Florida	2018	

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Hazen and Sawyer	Taylor J. Bomarito, P.E. (Hazen & Sawyer, Inc.)	(904) 760 3064

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

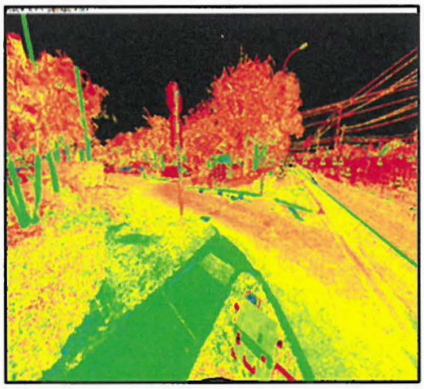
Surveying for the Seacoast Utility Authority phases I through III of construction for water and sewer pipeline replacements in the cities of North Palm Beach and Palm Beach Gardens, Florida. CAS performed complete right of way survey including: manholes, pipe inverts, utility poles, utility boxes, fire hydrants, traffic signs, underground and overhead utilities, trees, fences, hedges, existing pavement markings and signal equipment. Total survey and SUE costs for the project was $61,125.

Responsibilities:

CAS Survey was tasked with providing the Map of Topographic Survey/Route Surveys within the corridors specified. All visible improvements, as well as above and below ground utilities and drainage were identified. Additionally, all trees (4" or greater) and landscaped areas to 10 feet outside each right of way line were located and shown. Utility test hole locations included.

Key Personnel:

Stephen C. Smith, P.E., President; Robert D. Keener, P.S.M. – Vice President – Survey; James F. Driscoll – Vice President Utility Locates; David Lookabill – Survey Crew Leader; Donald Drake – Survey Crew Leader



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Hazen & Sawyer, Inc.
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 11

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Neighborhood Water Main Improvements – Phase II – Survey & SUE Margate, Florida	2019	2020

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
City of Margate	Pedro Stiassni, Utilities Project Mgr	(954) 972 0828

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

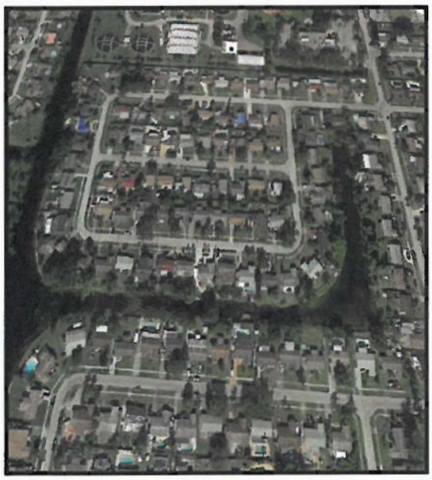
The Phase II Water Main Improvement Project consisted of survey, design and construction management for the replacement of 2-inch galvanized steel WM with 6-inch DIP at 15 different locations throughout the City including a total replacement of approximately 12,000 linear feet of water main infrastructure. CAS survey was tasked with providing the Map of topographic Survey/Route Surveys within the corridors specified. CAS performed complete right of way survey including: manholes, pipe inverts, utility poles, utility boxes, fire hydrants, traffic signs, underground and overhead utilities, trees, fences, hedges, existing pavement markings and signal equipment. Additionally, all trees (4" or greater) and landscaped areas to 10" outside each right of way line were locates and shown. Utility test hole locations were included. Duration of professional surveying services and utility locates was February 2016 to August 2016. Total survey and SUE costs for the project was $57,060.

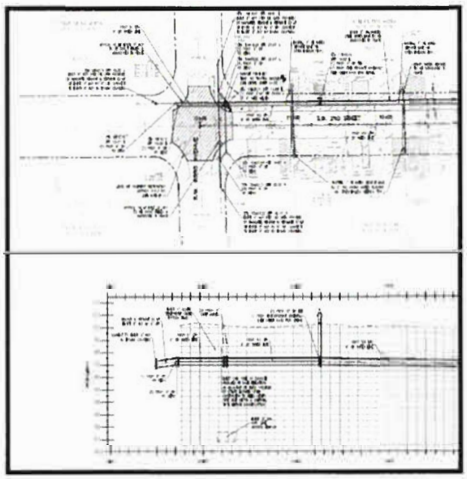
Responsibilities:

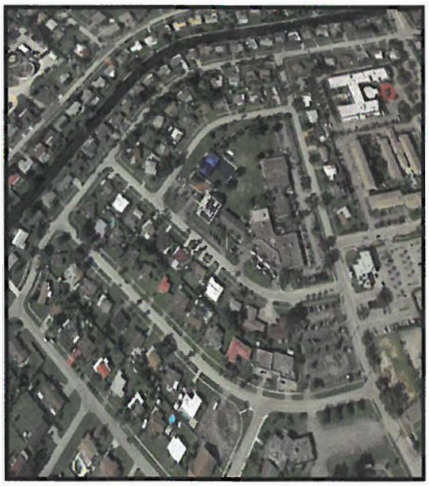
Preliminary Planning, survey, utility locates, soft digs, design, preparation of construction plans and contract documents, and permitting. CAS survey was tasked with providing the map of topographic survey/route surveys within the corridors specified. All visible improvements as well as above and below ground utilities and drainage were identified. Additionally, all trees (4" or greater) and landscaped areas to 10 feet outside each right of way line was located and show. Utility test hole locations included.

Key Personnel:

Stephen C. Smith, P.E. – President; Robert D. Keener, P.S.M. – Vice President of Survey; Greg A. Giarratana – Senior Supervising Engineer; Keith R. Schriner – Project Manager; James Driscoll – Vice President of Utility Locates; William Tanto – Senior Field Supervisor







25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Prime
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	0. EXAMPLE PROJECT KEY NUMBER 1 2

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Lake Osborne Estates Neighborhood Water Main Replacement Phase 1 – Survey & Subsurface Utility Engineering Lake Worth, Florida	2018	2021

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
City of Lake Worth Beach	Brian Shields, P.E.	(561) 586-1675

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

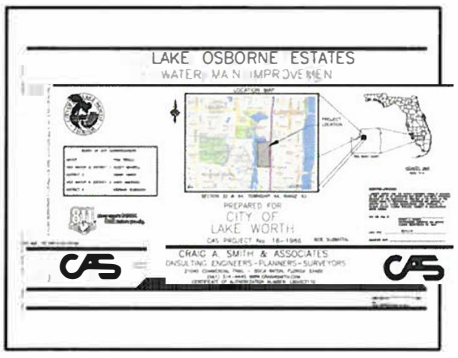
Survey/engineering for the first phase of construction for the water main replacement and water meter relocations in the Lake Osborne Estates residential area located in the City of Lake Worth. The project included approximately 3.1 miles of route survey. CAS performed complete right of way survey including: manholes, pipe inverts, utility poles, utility boxes, fire hydrants, traffic signs, underground and overhead utilities, trees, fences, hedges, existing pavement markings and signal equipment. Total survey and SUE costs for the project was $109,963.

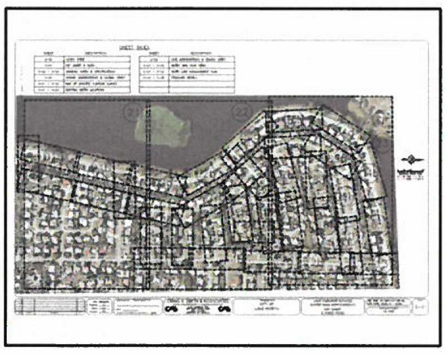
Responsibilities:

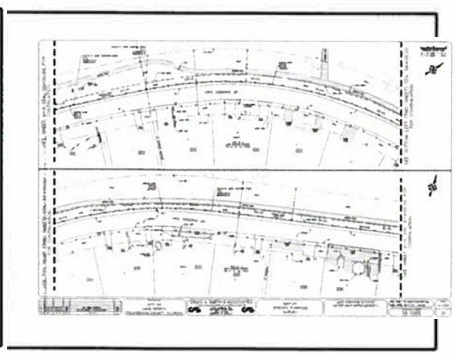
CAS Survey was tasked with providing the Map of Topographic Survey/Route Surveys within the designated corridors including property lines and utility easement designations. All visible improvements, as well as above and below ground utilities and drainage were identified. Trees (3" or greater) and landscaped areas were located and shown to 10 feet outside each right of way line.

Key Personnel:

Stephen C. Smith, P.E. – President; Robert D. Keener, PSM – Vice President of Survey; James F. Driscoll, - Vice President of Utility Locates; David Lookabill – Survey Coordination Manager; Donald Drake – Survey Crew Leader







25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Prime
b.			
c.			

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 13

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
CCPWA/Glades County Avenue N, O, S and 4th Neighborhood Sanitary Sewer Expansion – Survey & Subsurface Utility Engineering Moore Haven, Florida	2018	2020

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
CCPWA/Glades County	Larry Tibbs	(863) 946 1055

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

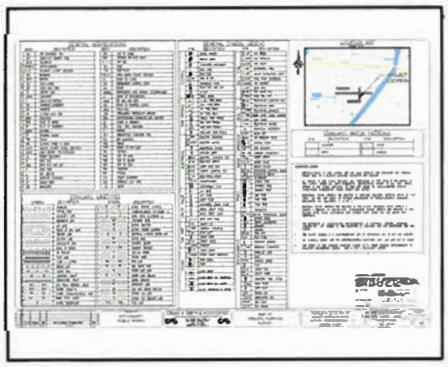
Survey/engineering for the latest phase of construction for the sanitary sewer expansion in the City of Moore Haven. CAS performed complete right of way survey including: manholes, pipe inverts, utility poles, utility boxes, fire hydrants, traffic signs, overhead utilities, trees, fences, hedges, existing pavement markings and signal equipment. The project included approximately 0.8 miles of route survey. Total survey and SUE costs for the project was $19,525.

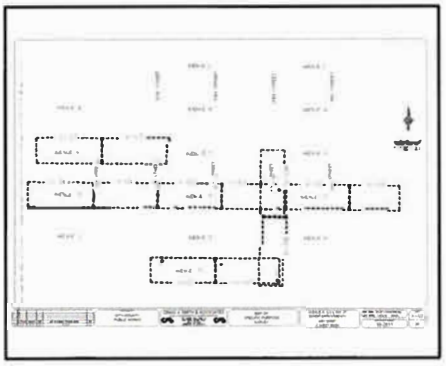
Responsibilities:

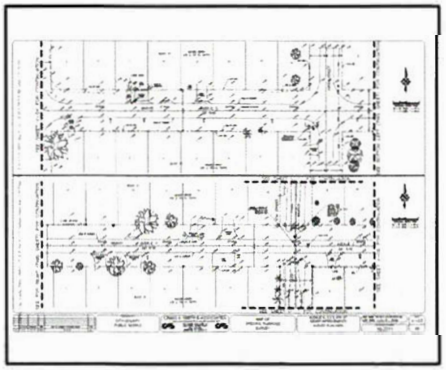
CAS Survey was tasked with providing the Map of Topographic Survey/Route Surveys within the corridors specified. All visible improvements, as well as above and below ground utilities and drainage were identified. Additionally, all trees (3" or greater) and landscaped areas to 10 feet outside each right of way line were located and shown. Additional roadway legal descriptions and easements were required.

Key Personnel:

Stephen C. Smith, P.E., President; Robert D. Keener, P.S.M. – Vice President – Survey; James F. Driscoll – Vice President – Utility Locates; David Lookabill – Survey Coordination Manager; Donald Drake – Survey Crew Leader







25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Prime
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 14

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Collins Avenue Water Main Replacement – Survey & Subsurface Utility Engineering Bal Harbour Village, Florida	2011	2013

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
Bal Harbour Village	John Oldenburg	(305) 866-4633

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

The Bal Harbour Village Water Main Replacement Project consisted of the installation of a 12-inch water main along the east side of Collins Avenue intended to augment the existing water main system to boost existing pressures and flows to the village's high rise district. CAS performed complete right-of-way survey including but not limited to: manholes, pipe inverts, utility poles, utility boxes, irrigation meters, fire hydrants, traffic signs, underground and overhead utilities, trees, fences, hedges, existing pavement markings and signal equipment. Construction included the installation of 1,800 linear feet of 12-inch directionally drilled water main, 680 LF of 12-inch DIP water main, fire hydrant assemblies and connection to nine (9) existing mains. Total design costs including construction management for the project were $123,970. Total construction costs were $558,590. The project began in 2011 and was completed in 2013 without liquidated damages.

Responsibilities:

Survey, utility locates, preparation of engineering design and construction plans, permitting, cost estimates, contract documents, bidding, construction management and construction observation, and certification through project close-out.

Key Personnel:

Stephen C. Smith, P.E., President; Robert D. Keener, P.S.M. – Vice President – Survey; James F. Driscoll – Vice President - Utility Locates

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Prime
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER 15

21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Regional East Central (ECR) Water Reclamation Facility Improvements – Survey & SUE Palm Beach County, Florida	2019	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT	c. POINT OF CONTACT TELEPHONE NUMBER
City of West Palm Beach	Eric Stanley (Hazen & Sawyer)	(561) 997-8070

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Project Description:

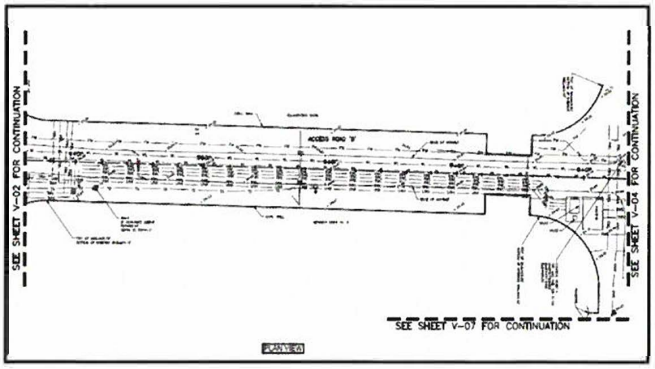
CAS performed Subsurface Utility Engineering services as a subconsultant to Hazen & Sawyer, Inc. for the City of West Palm Beach East Central Regional Water Reclamation Facility. The scope of work included survey to establish horizontal control, benchmarks and locating all pertinent above ground visible improvements and utilities within the project area. Utility surface designation and mapping was performed utilizing 2D Ground Penetrating Radar, 3D Radar Tomography scanning and calibration soft digs for approximately 260,000 ft^2 of the facility to identify types, sizes and locations of buried utilities. Deliverables included full electronic files containing CAD, survey data and imagery collected and scanning performed for this project. All files were compatible with the Civil 3D CADD platform. The project was completed in April 2019. Total project cost was $36,330.

Responsibilities:

Utility surface designation and mapping utilizing 2D Ground Penetrating Radar, 3D Radar Tomography, Soft dogs to locate all buried utilities in project area prior to design and construction of facility improvements.

Key personnel:

Stephen C. Smith, P.E. - President; Robert D. Keener, PSM – Vice President - Survey; James F. Driscoll – Vice President – Utility Locates; David Lookabill – Survey Coordination Manager; Donald Drake – Survey Crew Leader; David Raines – Survey Crew Leader



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Craig A. Smith & Associates	Boca Raton, Florida	Subconsultant to Hazen & Sawyer, Inc.
b.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
c.	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Stephen C. Smith, P.E.	Project Director QA/QC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Robert D. Keener, PSM	Project Manager	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
David Lookabill	Survey Coord. Mgr.	X		X						X	X	X	X	X		X
William Kalbach, PSM	Survey Mgr.								X							
Donald Drake	Crew Chief								X	X	X	X	X	X		X
David Raines	Crew Chief									X						X
James F. Driscoll	Utility Locates	X	X		X	X	X	X	X	X	X	X	X	X	X	X

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	PBCWUD : State Road 7 Force Main Interconnection Project – Survey & SUE	9	City of Boynton Beach: Wastewater Lift Station No. 317 Rehabilitation Project – Survey & SUE
2	PBCWUD: Rehabilitation of Wastewater Lift Station #393, 1023 & 5133 – Survey & SUE	10	Seacoast Utility Authority: Northlake Blvd/US 1 Water & Sewer Force Main Replacement – Survey & SUE
3	PBCWUD: South Bay Regional WWTP Repump Station #8310 Improvements - Survey	11	City of Margate: Neighborhood Water Main Improvements – Phase II – Survey & SUE
4	PBCWUD: 9 North Regional Pumping Facility – Survey & SUE	12	City of Lake Worth Beach: Lake Osborne Estates Neighborhood Water Main Replacement Phase I – Survey & SUE
5	PBCWUD: City of Belle Glade Runyon Village Water Main - Survey & SUE	13	CCPWA/Glades County: Avenue N, O, S and 4th Neighborhood Sanitary Sewer Expansion – Survey & SUE
6	PBCWUD: Lake Region Water Treatment Record Drawing Updates – Survey & SUE	14	Bal Harbour Village: Collins Avenue Water Main Replacement – Survey & SUE
7	PBCWUD: Wastewater Master Repump Station #5 – Survey & SUE	15	City of West Palm Beach East Central Regional Water Reclamation Facility Improvements – Survey & SUE
8	City of Fort Lauderdale: Water Distribution System Mapping Update Zone CA Smith – Survey & SUE		

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(if any)*: **E-RFP 20230097**

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Craig A. Smith & Associates, LLC		3. YEAR ESTABLISHED 1980	4. DUNS NUMBER
2b. STREET 4152 W. Blue Heron Blvd. Suite 116		5. OWNERSHIP a. TYPE LLC	
2c. CITY Riviera Beach, FL 33404	2d. STATE FL	2e. ZIP CODE 33404	b. SMALL BUSINESS STATUS SBE/MBE
6a. POINT OF CONTACT NAME AND TITLE Stephen C. Smith, P.E., President			7. NAME OF FIRM *(If block 2a. is a branch office)* N/A
6b. TELEPHONE NUMBER (561) 314-4445	6c. E-MAIL ADDRESS ssmith@craigasmith.com		

8a. FORMER FIRM NAME(S) (If any)	8b. YR ESTABLISHED	8c. DUNS NUMBER
Craig A. Smith & Associates, Inc	1980	024291826

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	5	
08	CADD Technical	3	
12	Civil Engineering	6	
15	Construction Inspection	3	
42	Mechanical Engineer	1	
38	Land Surveyor	8	
	Utility Locators	21	
	Other Employees		
	Total	47	

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C10	Commercial Buildings	1
C11	Commercial Facilities	1
C16	Construction Survey	3
D04	Design Building	1
D05	Digital Elevation	1
D08	Dredging	1
E09	Environmental Impact Studies	1
G04	GIS	1
C15	Construction Management	3
H07	Highways/Streets	2
I06	Drainage	4
L02	Land Surveying	4
O01	Office Buildings	1
P05	Planning	2
R07	Remote Sensing	1
R09	Recycling	1
R11	Waterways	1
S07	Solid Waste	1
S10	Survey	4
S13	Stormwater Handling & Facilities	4
T04	Topo Survey & Mapping	3
W03	Water Supply	3

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	1
b. Non-Federal Work	7
c. Total Work	7

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 

b. DATE 9-22-2023

c. NAME AND TITLE
Stephen C. Smith, P.E., President

SUBSURFACE UTILITY ENGINEERING (SUE) – 3-D RADAR TOMOGRAPHY

General Summary

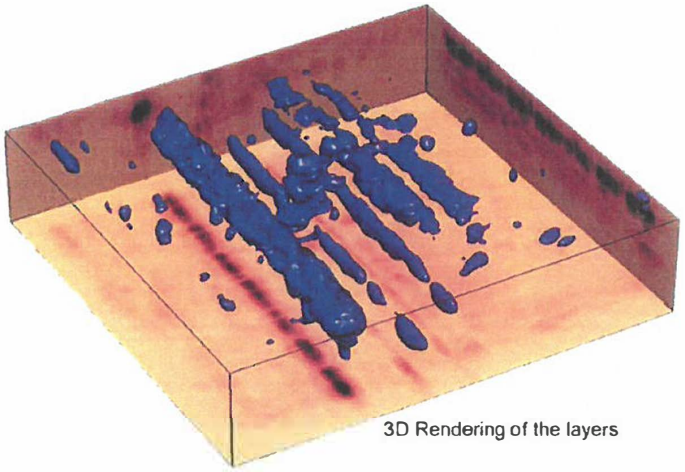
With over 40 years in business, our staff of 45+ professional and technical personnel specialize in providing quality professional services to our clients. CAS has extensive experience in subsurface utility engineering (SUE) and employs the **latest state-of-the-art technologies**. In addition to traditional methods of utility locating such as vacuum excavation (potholing), electromagnetic (EM) induction for tonable utilities, and 2-D Ground Penetrating Radar (GPR), CAS can utilize a **proprietary patented scanning technology known as 3-D Radar Tomography for subsurface utility investigations**. 3-D Radar Tomography is a powerful scanning technology which provides for a continuous 3-dimensional scan of subsurface utilities with high levels of accuracy. CAS has utilized this technology in effectively locating subsurface utilities in South Florida with proven results for over 25 years. In today's congested utility corridors accurate and comprehensive utility locates is essential to sound utility engineering design. A FHWA/Purdue University Study documented a **$4.62 return** on every $1 invested in traditional SUE and an FDOT documented a **$12.00 return** on every $1 invested in 3-D Radar Tomography.

Typical 3-D Radar Tomography Scanning Unit

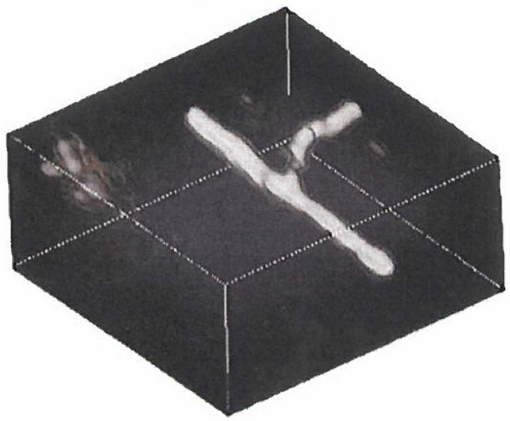
The "CAS Advantage" – Benefits of a Unified Design Process and the Use of 3-D Radar Tomography

CAS has the unique capability of providing clients with survey and advanced utility locates for utility design projects. CAS' highly experienced survey crews and utility locating staff with the use of all the latest technology, coordinate closely with project engineers and collect field data with engineering principles and guidelines in mind. The fact that CAS provides such a unified process to design allows for fast tracking of design projects.

CAS' unique capability in providing 3-D Radar Tomography scanning provides continuous x,y,z positioning of buried utilities with great accuracy (+/- 2inches horizontally and +/-6 inches vertically) along with the associated topographic profile (ground surface elevations). The 3-D Radar Tomography unit is equipped with an array of 17 antennas that "cross communicate" thus allowing for the level of accuracy stated above. Generally, utilities to a buried depth of up to 15 feet can be identified by this technology and all pipe material type can be located, including bends/fittings and offsets. Also, abandoned facilities and non-utility anomalies can be identified that could potentially interfere with design elements. The use of this technology can be especially beneficial for aged utility areas where record drawings are poor or non-existent. The implementation of 3-D Radar Tomography (3-D RT) to water main relocation projects as proposed under this contract offers a practical solution to this critical issue. This allows for the generation of very accurate and complete base maps which, in turn, accelerates the design process delivering 60% design plans at a typical 30% design plan submittal. In addition, this translates to superior final construction plans, greatly reducing the potential for changes orders and delays during construction due to unforeseen conflicts. Each 3-D RT unit scans a 6-foot wide pass. Under ideal conditions (unobstructed clear areas), 5 acres per day can be scanned with a single 3-D Radar Tomography scanning unit. The use of 3-D RT can reduce the need of vacuum excavation by 90% for locating subsurface utilities, thus reducing surface impacts and restoration. 3-D RT is very cost competitive when compared to traditional SUE methods due to the speed of data acquisition, accuracy and processing time.



3D Rendering of the layers



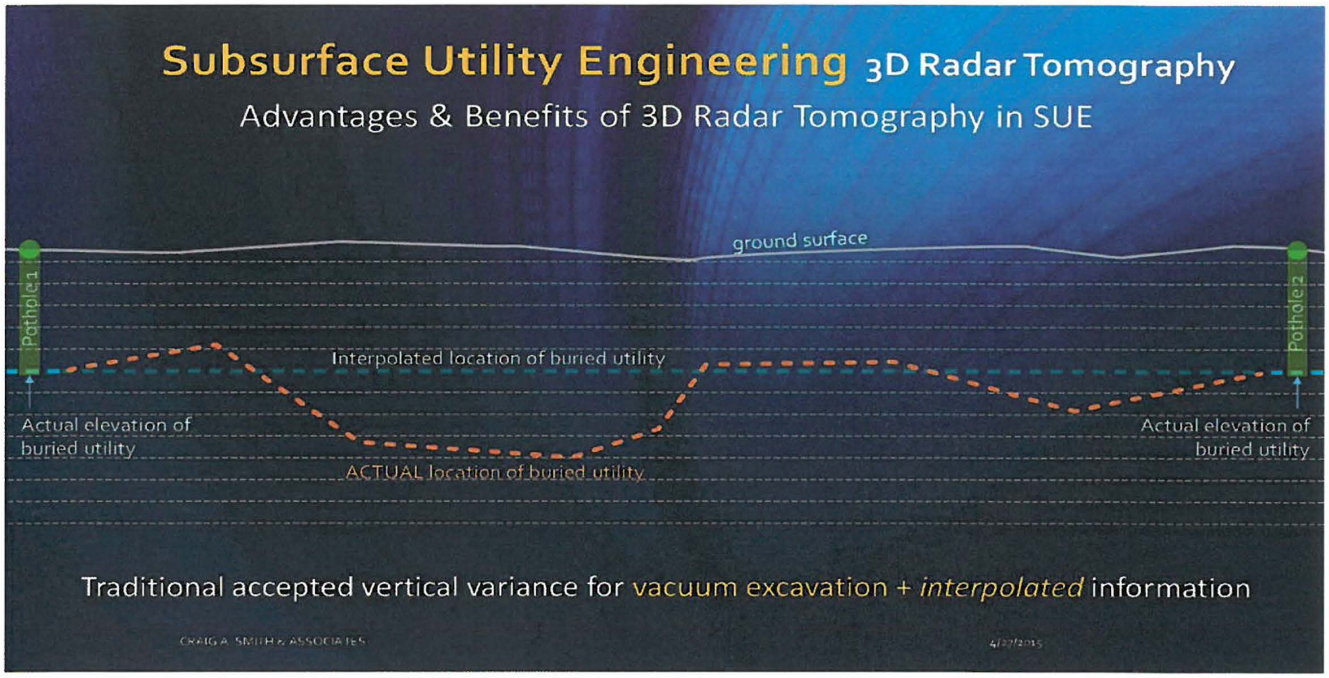


Diagram 1

The traditional vacuum excavation method of utility locating only provides accurate utility locations at the points of excavation, thus requiring estimation or interpolation of the utility location between the points of excavation as shown above in Diagram 1. Often though, there may be considerable variability in utility alignment between points of excavation. The use of 3-D RT scanning eliminates such uncertainties in utility locates by providing a continuous scan of the utility alignment as show below in Diagram 2.

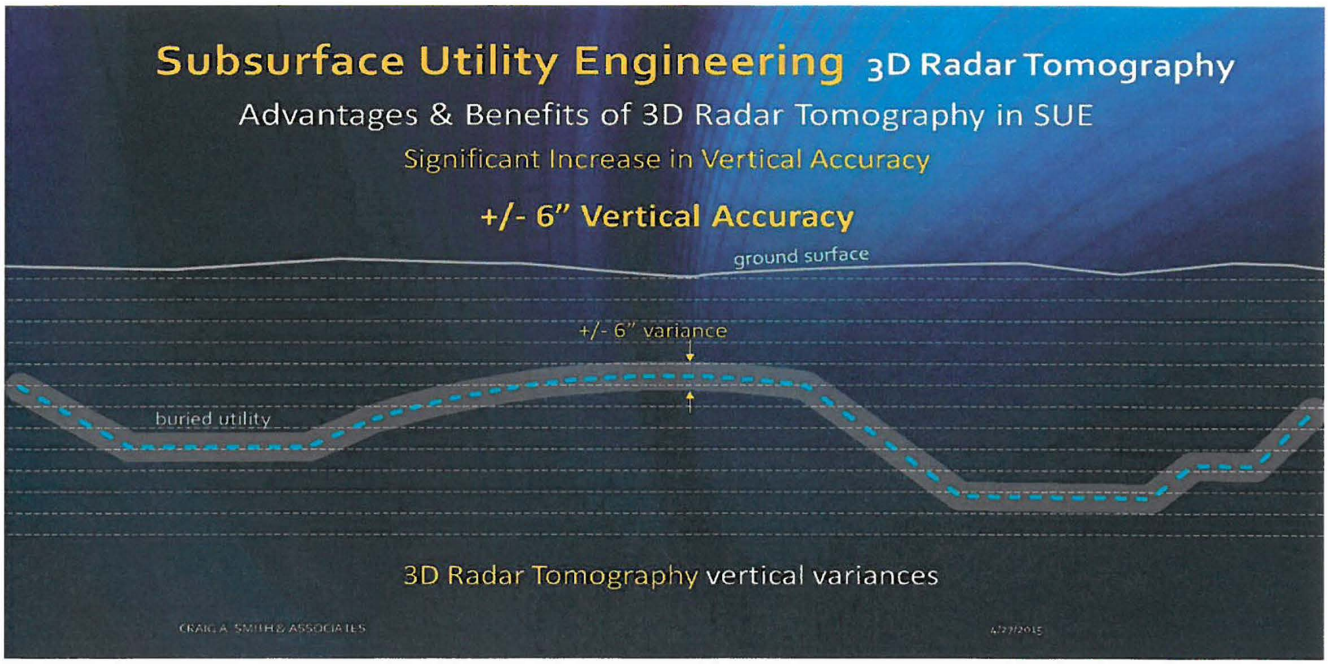
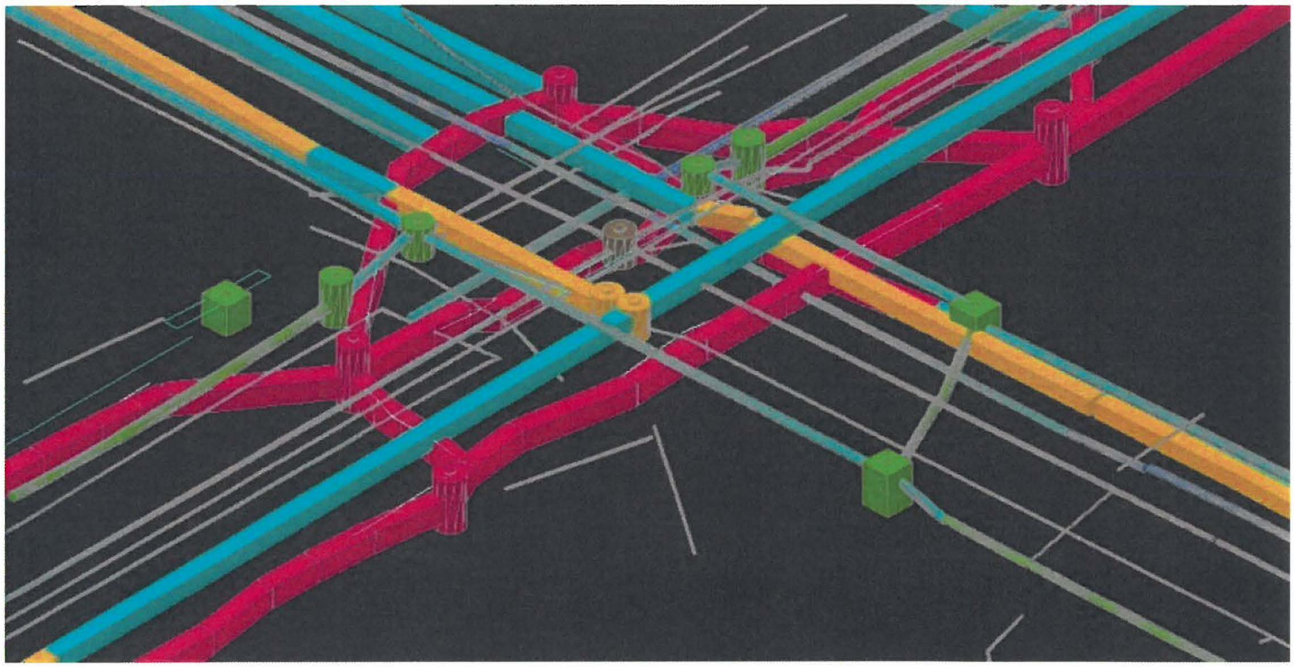
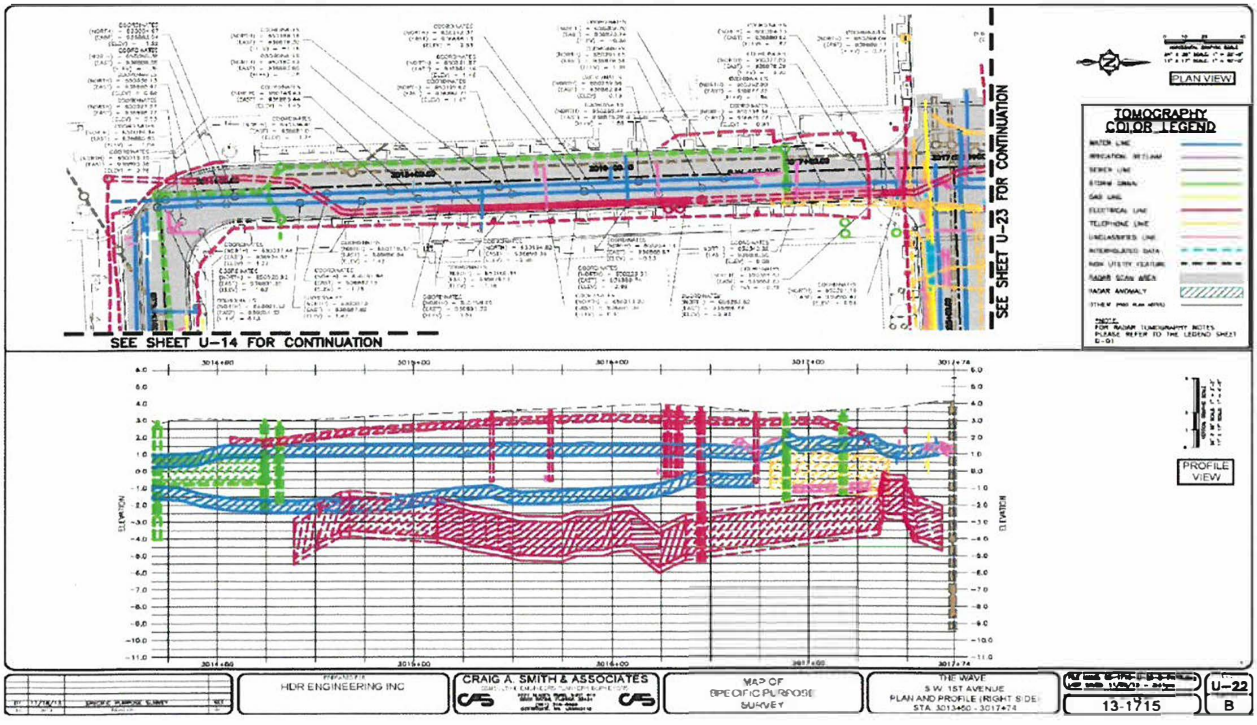


Diagram 2

Once the data is processed and downloaded in Autodesk Civil 3-D, a 3-D model of the subsurface conditions can be generated along with the traditional plan and profile drawings as base maps for design.



Typical 3-D Model Deliverable of Subsurface Utilities



Typical Civil 3-D CADD Plan & Profile Deliverable

3-D Radar Tomography – Limiting Factors

3-D RT is generally very successful in scanning through sandy soils, gravel, limestone, granite, asphalt, concrete and shale, but readings can be inhibited by dense organic soil material such as muck, clay or peat. Also, flowable fill may limit the radar's penetrating ability. In addition, narrow corridors (less than 6 feet wide) with numerous above ground obstructions such as utility poles, cable boxes, bollards, or FPL transformers may limit the 3-D RT unit's accessibility. The use of 2-D GPR may be preferred in such restricted areas.

Subsurface Utility Engineering Services for Clients

Our current and past clients for subsurface utility engineering services include federal, state, county, city government facilities; U.S. Naval facilities; NASA Facilities; Port Authorities; design engineers and contractors.

CAS maintains unlimited qualification with FDOT in categories 3.1, 7.1, 8.1 & 8.2 & 8.4. CAS is also licensed by the State of Florida Department of Business and Professional Regulation Board of Surveyors as an Engineering Survey firm, Land Bureau number 03110 (LB 03110).

CAS performs subsurface utility engineering & coordination services for numerous municipal clients and is licensed and capable of performing proprietary and patented **3D Radar Tomography** services throughout the United States.

CAS performs comprehensive subsurface utility engineering for many municipalities on a contractual basis, serving as the municipalities' One Call respondent. In this capacity, CAS staff members perform hundreds of utility line designations every week. CAS also performs 2D Ground Penetrating Radar locates and vacuum excavations for our municipal and private clients. In addition to providing One Call locates, CAS serves as the municipalities' or clients' "clearing house" for design related utility services providing plan mark-up, level D through A utility marking services, and coordination response in accordance with Utility Accommodation Manual requirements.

CAS is currently providing utility locating services for the following:

- City of Oakland Park
- City of Coconut Creek
- City of Lauderhill
- Town of Pembroke Park
- Town of Davie
- City of Pembroke Pines
- City of Weston
- City of West Palm Beach
- City of Hallandale Beach
- Town of Jupiter
- FPL
- FDOT
- Marathon Oil Corp.
- Citgo Petroleum
- Port Everglades
- Coral Springs Improvement District
- Palm Beach County Water Utilities

Additionally, in the past CAS has performed various locating services for the following:

- **Town of Golden Beach**
- **City of Sweetwater**
- **City of Tampa**
- **City of Aventura**
- **City of North Miami Beach**
- **City of North Miami**
- **City of Cooper City**
- **Broward County**
- **Pasco County**
- **Miami-Dade County**
- **Palm Beach County**
- **Sarasota County**
- **Collier County**
- **NASA Kennedy Space Center**
- **Hardee County**
- **AT&T / BellSouth**
- **US Military Facilities**
- **City of Miami Gardens**
- **Village of Bal Harbour**
- **US Navy, NAS Key West**
- **TECO Peoples Gas**
- **Tampa Electric**
- **Martin County**
- **Colonial Pipeline**
- **Marathon Pipeline**
- **Valero Energy**
- **Armada Hess**
- **Motiva (Shell) Enterprises**
- **Port of Tampa**
- **Port of Jacksonville**
- **Koch Pipeline**
- **Buckeye Partners**
- **Progress Energy**
- **Orange County**
- **JEA**
- **US Park Service**
- **Central Intelligence Agency**
- **US Air Force**
- **US Army**
- **Balfour Beatty / Parsons Brinkerhoff**

CAS performs all utility related surveys in accordance with Minimum Technical Standards for Surveying & Mapping, ASCE 38/02. All survey work is performed under the direct supervision of a licensed professional surveyor.

CAS is fully compliant with major CADD software platforms (AutoCAD Civil 3D & AutoDesk Civil Design).

Quality Assurance / Quality Control – CAS maintains a comprehensive Quality Control and Assurance program including, independent reviews by principal members of the firm. The principals maintain a vested financial interest in the operation of the firm and output of quality deliverables. CAS performs quality reviews through each phase of the project, up and through to deliverables. Quality reviews are performed at the staff, project engineer, project manager and principal levels. Records of all deficiencies found are noted and recorded. Corrections to deficiencies are checked against previously noted items and confirmed for correction and compliance. This process is repeated through each project phase, through final delivery.

I. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.	
31. SIGNATURE 	32. DATE 9/22/2023
33. NAME AND TITLE Stephen C. Smith, P.E., President	

Tab 1 – FIRM QUALIFICATIONS

1d Key Staff

Craig A. Smith & Associates

Engineers • Surveyors • Subsurface Utility Engineering • 3D Subsurface Imaging • Utility Coordination

Stephen C. Smith, P.E.

President

Mr. Smith has over 37 years of experience in the engineering, survey and utility construction fields.

Mr. Smith's responsibilities include management of daily business operations for a 43+ member civil engineering and surveying firm with gross sales of $5+ million. He oversees all areas of business including engineering, surveying, construction management services, subsurface utility engineering, accounting and human resources. Specifically, Mr. Smith ensures proper allocation of resources, staffing, financial management, quality control and timely project completion.

Areas of Expertise

- Project Management
- Quality Assurance/Quality Control
- Stormwater Master Planning, Design, Implementation & Management
- Roadway Design & Management
- Resource Management
- Project Scheduling
- Project Budgeting
- Constructability Review

Education

- Auburn University, Auburn, Alabama Bachelor of Science, Civil Engineering 1988
- Auburn University, Auburn, Alabama Bachelor of Science, Building Construction - 1986

Licensure

- Florida Licensed Engineer PE48914

Affiliations

- Florida Engineering Society (FES)
- American Society of Civil Engineers (ASCE)
- Florida Institute of Consulting Engineers
-

Employment with CAS: 34 yrs
Employment with other firms: 3 yrs

Selected Relative Experience:

Utility Master Plan, Design and Construction Management for Town Wide 6 Phase Stormwater Improvement Plan and Water Main Replacement - Town of Golden Beach, Miami-Dade County, Florida. Responsible for the master planning, project management, resource allocation, scheduling, budgeting and quality assurance of the stormwater and watermain and utility undergrounding design. Also responsible for the project management of the stormwater and water main construction and implementation.

Stormwater Master Plan, Design and Construction Management for City Wide Priority Based Stormwater Improvement Plan - City of Oakland Park, Broward County, Florida. Responsible for the master planning, project management, resource allocation and quality assurance of the stormwater design, as well as the project management of the stormwater construction and implementation.

Stormwater Master Plan, Design and Construction Management for City Wide 6 Phase Stormwater Improvement Plan - City of Sweetwater, Miami-Dade County, Florida. Responsible for the master planning, project management, resource allocation, scheduling, budgeting and quality assurance of the stormwater design, as well as the project management of the stormwater construction and implementation.

Andrews Avenue Widening and Intersection Improvements - Broward County, Florida. Responsible for the roadway widening and stormwater design improvements from Cypress Road to Racetrack Road, including intersection improvements at McNab Road and Racetrack Road. Performed project management for construction observation services.

Biscayne Boulevard Widening and Intersection Improvements - Miami-Dade County, Florida (FDOT District 6). Responsible for the roadway widening and stormwater design improvements from NE 163rd Street to 203rd Street, including intersection improvements.

Robert D. Keener, P.S.M.

Vice President
Survey / Geomatics

Mr. Keener has over 40 years of experience in the survey, engineering and utility construction fields.

Mr. Keener has been employed with CAS since April of 1995. Mr. Keener began his career at CAS as a Project Surveyor, advancing to Senior Surveyor and Mapper In charge of surveying in a satellite office and advanced to Vice President in 2005. Mr. Keener will serve as Principal Surveyor for all surveys and will coordinate all survey activities with various disciplines as needed. All surveying pertaining to utility related services such as Radar Tomography, utility surface mapping, utility excavations, etc. will also be overseen and certified by Mr. Keener. He has previously performed plat reviews for municipal clients.

Mr. Keener holds a Florida Surveyors and Mappers License and is a member of the Florida Surveying and Mapping Society of Florida.

Selected Relative Experience:

595 Express Subsurface Utility Engineering and 3D Radar Tomography - Broward County, Florida. Mr. Keener Served as Principal Surveyor for the 3-Dimensional Subsurface Utility Engineering (3D SUE) project completed for the FDOT at the Interstate 595 reversible lanes project in Broward County, Florida. Mr. Keener oversaw the reestablishment of horizontal and vertical control, the mapping of utility surface markings and utility excavation holes, as well as Radar Tomography utilized in various areas along the entire route. Mr. Keener performed all quality control and quality assurance for the project.

Seacoast Utility Authority: Northlake Boulevard/US-1 Water & Sewer Force Main Replacement – Town of Jupiter, Florida. Mr. Keener Served as Principal Surveyor for Route survey along Northlake Boulevard and US-1 (approximately 2.8 miles), including identification of right-of-way, property lines, above ground improvements, utility easements, tree survey, cross sections and subsurface utility engineering (utility locates). Mr. Keener performed quality control and quality assurance for the project.

174th Avenue Roadway Infrastructure Improvements – Sunny Isles Beach, Florida. Mr. Keener Served as Principal Surveyor for the route survey within rights-of-ways of 174th Avenue, which included topographic survey and utility locates of existing buried utilities for the reconstruction of drainage and roadway for approximately 0.2 miles from Collins Avenue to North Bay Road. The design also included a new drainage system that met water quality requirements, site demolition, road regrading, utility relocations, sidewalks and paver walkways, landscaping, curbing, bike paths and parallel parking.

Golden Beach Drive & Collins Avenue – Town of Golden Beach, Florida. Mr. Keener Served as Principal Surveyor for the route survey within the rights-of-ways of Golden Beach Drive, out to the three islands and along Collins Avenue (SR A1A) for drainage improvements due to major flooding issues; total roadway reconstruction,

Areas of Expertise

- Land Surveying
- Boundary / Topo
- Control Surveys
- Utility Surveys
- 3D Radar Tomography
- GPS
- Platting
- Route Surveys
- Legal Descriptions
- Plat Reviews
- Laser Scanning
- Crew Supervision
- Technical Reviews
- Scheduling & Productivity

Education

- Associates of Art, Atlantic Community College
- CEU's – On going

Licensure

- Professional Surveyor & Mapper, Florida #LS4846

Affiliations

Florida Surveying and Mapping Society (FSMS)

Employment with CAS: 27 yrs
Employment with other firms: 17 yrs

Craig A. Smith & Associates

Engineers • Surveyors • Subsurface Utility Engineering • 3D Subsurface Imaging • Utility Coordination

David Lookabill

Survey Coordination Manager/Crew Leader
Survey/Geomatics Department

Mr. Lookabill has 39 years of experience in the survey, engineering and utility construction fields.

Mr. Lookabill began his surveying career as a Rod Man quickly advancing to Survey Crew Leader. He has varied experience in many facets of surveying. He also has vast experience in utility construction such as directional drilling and fuel pipe line staking and as builts performed across the United States. Mr. Lookabill has been employed by CAS since 2014 as a Survey Crew Leader.

Responsibilities include field management, client field coordination, survey crew management and quality control in the field.

Selected Relative Experience:

Miami-Dade Water and Sewer Department Force Main 604 Replacement, Miami-Dade County, Florida. Surveying within the Rights of Ways of NW SW 113th Place and SW 224th Street east to SW 109th Avenue for sewer force main replacement within heavily populated area. Primary and secondary horizontal control points were established utilizing RTK GPS methods. Vertical control was established by a differential level loop based on Miami-Dade County Benchmarks. Route spanned approximately ¾ miles.

Florida Highway 92 Improvements, Lakeland, Florida. Survey for engineering re-design along Highway 92 from North Galloway Road to North Wabash Avenue. Primary and secondary horizontal and vertical control points were established by "leap frogging" multiple base stations 1.5 to 2 hour sessions and then processed through the OPUS software routine. Boundary monumentation was located by (4) 1-minute observations done in pairs at intervals of at least 3 hours.

Interstate 95 Improvements, Palm Beach County, Florida. Survey for engineering re-design along Interstate 95 in Palm Beach County from Indiantown Road to PGA Boulevard. Primary and secondary horizontal and vertical control points were established by "leap frogging" multiple base stations 1.5 to 2 hour sessions and then processed through the OPUS software routine. Boundary monumentation was located by (4) 1-minute observations done in pairs at intervals of at least 3 hours.

FDOT Weight Station, Martin County, Florida. Survey for construction staking along Interstate 95 in Martin County, Florida, north of Indiantown Road. Horizontal and vertical control points were established by the design survey company contracted by the FDOT and confirmed in the field by tying to local NGS and FDOT monumentation for the purposes of construction layout. Laid out roads, ramps, tapers, swales, ditches, etc.

SFWMD Benchmark Recovery, Clewiston, Florida. Project to establish or re-establish vertical control from Clewiston, Florida to the Big Cypress Indian Reservation. First order bench loops were run utilizing differential digital leveling through benchmarks as researched and either verified or re-set. NGS monumentation was utilized for the project.

Areas of Expertise

- Land Surveying
- Boundary / Topo
- Lot Surveys
- Control Surveys
- Utility Surveys
- 3D Radar Tomography
- GPS
- Route Surveys
- Crew Supervision
- Construction Layout
- Quantity Surveys and Calculations
- Utility Coordination
- Directional Drills

Education

- MSI, Port Saint Lucie, Florida – 2011, A.S.
- Indian River Community College, Stuart, Florida – 2006, Survey Law
- Davidson County Community College, Lexington, NC – 1997, AutoCAD 1 & 2
- Guilford Technical Community College, Jamestown, NC – 1988, Civil Drafting and Civil Engineering CAD/CADD

Employment with CAS: 9 yrs
Employment with other firms: 30 yrs

Donald Drake

Survey Crew Leader
Survey/Geomatics Department

Mr. Drake has 39 years of experience in the survey, engineering and utility construction fields.

Mr. Drake began his surveying career as a Rod Man quickly advancing to Survey Crew Leader. He has varied experience in many facets of surveying. He has extensive experience in construction layout, landfill surveys and hydrographic surveys. Mr. Drake has been employed by CAS since February 2018 as a Survey Crew Leader.

Responsibilities include field management, client field coordination, survey crew management and quality control in the field.

Areas of Expertise

- Land Surveying
- Boundary / Topo
- Lot Surveys
- Control Surveys
- Utility Surveys
- 3D Radar Tomography
- GPS
- Route Surveys
- Crew Supervision
- Construction Layout
- Quantity Surveys and Calculations

Education

- Bachelor of Science, Colorado State University, CO - 1987
- Associate of Science, Paul Smith's College, Paul Smith's, NY – 1985

Employment with CAS: 5 yrs
Employment with other firms: 34 yrs

Selected Relative Experience:

SW 2nd Street Drainage, Pompano Beach, Florida. Route survey including all above ground features within existing right-of-way and off-site surveying of critical drainage structures. Scope of work includes 2D GPR utility locates within the project corridor (SW 2nd Street between Dixie Highway and Cypress Road, SW 1st Avenue between SW 2nd Street and Atlantic Boulevard, and SW 1st Terrace & Court between SW 2nd Street and South Cypress Road).

East Central Regional (ECR) Water Reclamation Facility, West Palm Beach, Florida. Surveying including establishing benchmarks, horizontal control and baselines relative to well defined land lines or physical features. Scope of work also includes utility locates using 2D GPR and 3D radar tomography scanning along with ten (10) excavated test boring holes for identification of onsite buried utilities for updating existing facility record drawings.

Seacoast Utility Authority, Northlake Boulevard/US-1 Water & Sewer Force Main Replacement, Jupiter, Florida. Route survey along Northlake Boulevard and US-1 (approximately 2.8 miles) including identification of right-of-way, property lines, above ground improvements, utility easements, tree survey, cross sections and subsurface utility engineering (utility locates).

Lake Osborne Estates Water Main Replacement – Phase I, Lake Worth, Florida. Route survey along residential streets throughout community, including all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas 10 feet outside right-of-way, property lines, utility easements and subsurface utility engineering (utility locates).

Avenue N, O, S and 4th Sanitary Sewer Expansion, Moore Haven, Florida. Survey/engineering for the latest phase of construction for the sanitary sewer expansion in the City of Moore Haven. The project included approximately 0.8 miles of route survey. Survey was tasked with providing the map of topographic survey/route surveys within the corridors specified. All visible improvements, as well as above and below ground utilities and drainage were identified. Additionally, all trees (3" or greater) and landscaped areas to 10 feet outside

Areas of Expertise

- Land Surveying
- Boundary / Topographic Surveys
- Lot Surveys
- Control Surveys
- Utility Surveys
- 3D Radar Tomography
- GPS
- Route Surveys
- Crew Supervision
- Construction Layout
- Quantity Surveys and Calculations

Employment with CAS: 9 yrs.

David Raines

Survey Crew Leader
Survey/Geomatics Department

Mr. Raines has over 9 years of experience in the survey, engineering and utility construction fields.

Mr. Raines began his surveying career as an Instrument man quickly advancing to Survey Crew Leader. He has varied experience in many facets of surveying. He has extensive experience in Route Surveys, including the use of a High-Definition Scanner (HDS) and traditional survey methods. Mr. Raines has been employed by CAS since April 2014, beginning as a Survey Instrument Person, and then promoted to Survey Crew Leader in October of 2019. Responsibilities include field management, client field coordination, survey crew management and quality control in the field.

Selected Relative Experience:

Central Island Drainage Improvements, Sunny Isles Beach, Florida. Route survey including all above ground features within and extending ten feet beyond existing rights-of-ways and off-site surveying for proposed stormwater pumping stations and associated outfalls. Scope of work included 2D GPR utility locates within the project corridor for all streets between North Bay Road east to A-1-A (Collins Avenue) and 174th Street North to 183rd Street.

Sanitary Sewer Pumping Station No.1 (Egret) Rehabilitation, Hallandale Beach, Florida. Surveying included establishing benchmarks and horizontal control for future survey work. All above ground, visible utilities, as well as physical features, including the existing exterior pump station and interior floor data were located and included in the Topographic Survey. Scope of work also included the locations of utility locates using 2D GPR surface marks of onsite buried utilities for updating existing facility record drawings and design of improvements.

25th Street Drainage Improvements, Phase 2, Pembroke Park, Florida. Route survey included all above ground features within and extending ten feet beyond existing rights-of-ways and off-site surveying for the proposed stormwater pumping station and associated outfall. Scope of work included 2D GPR utility locates and the locations of utility test holes within the project corridor, which included all streets between SW 25th Street south to SW 27th Street and the entrance to Patrick Beehan Park east to Park/Bryan Rd.

Curry Hammock Park, Monroe County Florida. (Florida Keys) Route survey along the Overseas Highway (US Highway 1) in two areas for the design of box culvert/bridge upgrades to improve water flow. The Survey included the locations of all visible improvements, above and below ground utilities, drainage structures as well as trees and landscaped areas to the edge of heavy vegetation and subsurface utility engineering (utility locates).

Bahia Honda State Park, Monroe County Florida. (Florida Keys) Route survey along the entry road from the Overseas Highway (US Highway 1) to the park employee lodging area for the design of drainage improvements due to frequent flooding. The Survey included the locations of all visible improvements.

James F. Driscoll

Director
Subsurface Utility Engineering

Mr. Driscoll has 32 years of experience in the engineering, survey and utility location fields.

Mr. Driscoll serves as the operator and field manager of Radar Tomography projects throughout the United States. Mr. Driscoll coordinates Sunshine State One Call ticket management and locating services for numerous Florida municipalities and privately owned utility companies. He also provides assistance in the performance of electronic designating, layout, and completion of vital soft dig information for vacuum excavation projects. He performs ground penetrating radar surveys for various clients to locate and identify underground facilities. Mr. Driscoll also serves as Division Training Manager and QC Auditor.

Mr. Driscoll has performed over 6,000 G.P.R. surveys and over 12,000 miles of utility surface designating throughout the United States. Additionally, Mr. Driscoll has performed in excess of five million square feet of 3D Radar Tomography scanning projects at various locations throughout the United States. He is proficient with state-of-the-art, traditional, and GPS surveying equipment and is substantially proficient with EM designating equipment, vacuum excavation equipment and various GPR systems with special emphasis on 3D Radar Tomography systems.

Selected Relative Experience:

City of Hollywood Public Utilities, Utility Location and Ticket Management Services - Hollywood, Florida. Mr. Driscoll served as the field manager and coordinator overseeing One Call Locates and Ticket Management for one of the largest city-owned utilities in South Florida. The system includes water, sewer, reclaimed water, raw water, effluent, street lighting, minor power and networked communications for parking systems. Currently, Mr. Driscoll oversees ticket management of 17,000 locates annually for the City of Hollywood.

Town of Davie Public Utilities, Utility Location and Ticket Management Services - Town of Davie, Florida. Mr. Driscoll served as the coordinator overseeing One Call Locates and Ticket Management for one of the largest town-owned utilities in South Florida. Facilities include water, sewer, reclaim, raw water and effluent pipelines. Currently, Mr. Driscoll oversees ticket management and day to day coordination for the Town of Davie.

City of West Palm Beach, Utility Location and Ticket Management Services – West Palm Beach, Florida. Mr. Driscoll served as coordinator overseeing One Call Locates and Ticket Management for city-owned utilities for the City of West Palm Beach. The system includes water, sewer, reclaimed water, raw water, minor power and networked communications. Currently, Mr. Driscoll oversees ticket management of over 7,000 locates annually for the City.

Areas of Expertise

- 3D Radar Tomography
- Subsurface Utility Engineering
- Utility Locating
- Ground Penetrating Radar
- Utility Coordination
- Project Logistics
- Complex Field Survey
- Quality Assurance

Education

- Broward Community College
- US Army
- Route Surveying
- Survey & Engineering
- MOT Training
- OSHA Training
- OQ Training

Certifications

- Certified Utility Locator
- Certified GPR Technician
- OQ Training Certification

Affiliations

- National Utility Locating Contractors Association (NULCA)

Employment with CAS: 29 yrs
Employment with other firms: 3 yrs

Areas of Expertise

- Subsurface Utility Engineering
- Utility Locating
- Ground Penetrating Radar
- 3D Radar Tomography
- Utility Coordination
- Utility Construction

Education

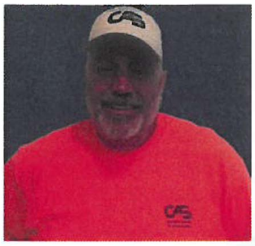
- Staking U
- Mala GPR Tech
- EM Theory & Application
- MOT Training
- OSHA Training
- Confined Space Entry

Affiliations

- National Utility Locating Contractors Association (NULCA)

Employment with CAS: 15 yrs
Employment with other firms: 7 yrs

Alan Lopez



Senior Utility Locator Technician/SUE Manager
SUE / Utility Locates

Mr. Lopez has over 22 years of experience in the utility locating, SUE, survey and utility construction fields.

Mr. Lopez has been employed with CAS since February 2004, starting as a soft dig crew member, and through experience, advanced from utility locator to Senior Locator and recently Field Manager overseeing all locating field operations. Mr. Lopez has performed or overseen in excess of 5,000 vacuum soft digs, as well as thousands of ground penetrating radar surveys and utility mapping efforts.

Mr. Lopez is a Certified Underground Utility Locator and GPR Technician. Mr. Lopez is also MOT certified, confined space entry certified and OSHA 10hr Certified.

Selected Relative Experience:

City of Hollywood Public Utilities, Utility Location and Ticket Management Services - City of Hollywood, Florida. Mr. Lopez has served as a utility locator, Senior Locator and Field Manager overseeing One Call Locates and ticket management for one of the largest city-owned utilities in South Florida. The system includes water, sewer, reclaimed water, raw water, effluent, street lighting, minor power and networked communications for parking systems. Recently, Mr. Lopez is overseeing the City of Hollywood Water Main Replacement Program coordinating utility locates for multiple construction crews and city engineering staff.

Town of Davie Public Utilities, Utility Location and Ticket Management Services - Town of Davie, Florida. Mr. Lopez has served as utility locator and Field/Client Manager for this sprawling utility system. Davie is the largest municipality in Broward County by land area and serves a significant population. Facilities include water, sewer, reclaim, raw water and effluent pipelines. Currently Mr. Lopez oversees ticket management and day-to-day coordination for the Town of Davie.

City of Coconut Creek Utility Location and Ticket Management Services – Coconut Creek, Florida. Mr. Lopez has served Field Manager for this large city-owned utility system. Facilities include water, sewer, reclaim, and city owned networked communications. Currently Mr. Lopez oversees ticket management and day to day coordination for the City of Coconut Creek.

Tab 1 – FIRM QUALIFICATIONS

1e Subconsultants – NOT APPLICABLE

Tab 1 – FIRM QUALIFICATIONS

1f Organizational Chart

ORGANIZATION STRUCTURE

CRAIG A. SMITH & ASSOCIATES

ENGINEERS * SURVEYORS * UTILITY LOCATORS * CONSTRUCTION MANAGERS

Yellow Highlighted Staff are local Port St. Lucie Residents

Stephen C. Smith, P.E.
President

PROJECT DIRECTOR / CONTRACT MANAGER

Robert Keener, PSM
Vice President – Survey

PROJECT MANAGER

SURVEYING

Robert Keener, PSM
Vice President

William Kalbach, PSM
Survey Manager

David Lookabill
Survey Coordination Manager

Donald Drake
Survey Crew Leader

David Raines
Survey Crew Leader

UTILITY LOCATES SUE

James Driscoll
Vice President – Utility Locates

Alan Lopez
Locates Supervisor

20 Locators

1 Softdigs Crew

ORGANIZATIONAL CHART

Tab 2 – METHODOLOGY/APPROACH

TAB 2
Methodology/Approach

TECHNICAL APPROACH

Craig A. Smith & Associates' (CAS's) general team approach to survey projects is as follows::

- An initial meeting will be held with the client's staff to determine the scope of services required to be provided by CAS. This would include the data required to accomplish project goals.
- A cost proposal will be submitted to the client with the scope of services detailed as discussed at the initial meeting referenced above.
- Project scheduling, progress and management will be tracked.
- Data gathering and analysis would then commence. The Surveyor will acquire various instruments, such as Plat Maps, FDOT right of way maps (if applicable) and recorded data shown on the Port St. Lucie County Property Appraisers website. At this time, FDOT/County/City right of way maps will also be acquired as well as utility As-builts (Record Drawings) along with Utility Atlas (GIS maps) information from Government Agencies.
- Simultaneously, a survey crew (normally made up of a one-man GPS crew) will commence work locating any sectional, right-of-way or street survey control points to facilitate the creation of a base map to be utilized for future survey work.
- Geo-referenced survey control points will be established in the horizontal plane relative to the Florida State Plane Coordinate Grid System and vertical plane relative to North American Vertical Datum of 1988 unless an alternate datum is preferred by the client.
- Two-man survey field crews will then commence with field data collection utilizing traditional surveying equipment such as total stations, auto levels, etc. together with non-traditional instruments, such as a 3-D laser scanner, GPS instruments or drone flights. At this time, the CAS Utility Locates Department will commence with marking below ground utilities with 2-D ground penetrating radar (GPR) and electromagnetic (EM) instruments on the surface, if required.
- Elevation cross sections typically at 50-foot or 100-foot intervals shall be provided for the topographic work. Right-of-way cross-sections will include back of sidewalk, type and top of curb, gutter line, edge of pavement, centerline/median and intersection centerline.
- Elevations shall be accurate to 1/100 of a foot at all building entrances, driveways, sidewalk, top of curb, edge of pavement, and 1/10 of a foot at natural ground.
- As the survey data is collected, the files created will be downloaded by the Survey Technician and uploaded into a survey base map. This base map will be used to create a Map of Specific Purpose Survey. The field data will also be checked for quality assurance and quality control. At this point, the Professional Surveyor and Mapper (PSM) will begin his review of the survey.
- All work shall be produced in the latest AUTOCAD version (final CAD file deliverable can be saved on an older AUTOCAD version at the client's request).
- A draft survey will be completed and submitted to client's staff for comments.
- Normally, based on the draft survey, utility test hole (soft dig) locations and the utilization of 2D ground penetrating radar or 3D radar tomography scanning will be determined by the project engineer and completed in the field, if required.
- A final signed and sealed survey will be submitted to client after all comments have been addressed and any final revisions have been made.

TAB 2
Methodology/Approach

LAND SURVEYING & MAPPING

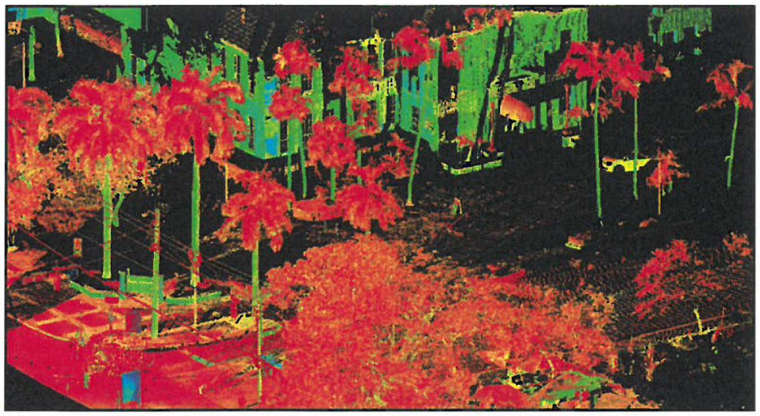
General Experience: Craig A. Smith and Associates, LLC (CAS) is a Florida Corporation licensed for the practice of Professional Surveying, Mapping, Utility Locates and Engineering Services. CAS has been providing surveying and mapping services since 1980 and subsurface utility engineering since 1996. CAS retains numerous Consultant Competitive Negotiation Act (CCNA) contracts which include surveying for a number of municipal clients throughout South Florida. Services under these contracts include but are not limited to route/engineering surveys, boundary surveys, title searches, sketch and legal descriptions for various easements (i.e. utilities, roadway, ingress/egress, canals, FPL, telecommunications, etc.) preparation of property surveys construction stake out, surveying services for as-built drawing preparation for the construction of various utility (water, wastewater, reclaimed water, etc.), road and drainage improvement projects and subsurface utility engineering along with other miscellaneous surveying services such as title searches and elevation certificates. CAS's survey crews have performed surveying services for hundreds of miles of water utility distribution and wastewater collection system improvement projects. We also utilize ArcGIS to collect existing data from city, county and state agencies within the areas being surveyed to help organize and define the limits and the surrounding property information.

Advanced Principle, Practices and Methods of Survey Work: Land surveying relies on mathematical, scientific, legal and research principals in order to obtain precise and accurate measurements, investigate, define and create legal boundaries, and also provide our investigative and research capabilities and experience to review title to properties for boundaries, ownership and encumbrances that affect them. CAS's surveying practices involve complex traverses, both horizontal and vertical in performing boundary, topographic, and hydrographic surveys utilizing the current state-of-the-art surveying equipment that includes Total Stations, Digital Levels, 3D Laser Scanners and GPS Receivers. The surveying methods used depend on the property, field conditions, and client's needs. Commercial real estate requires the most advance and precise measurements while performing any type of survey due to details, costs, insurance, liability and safety considerations on the job site, as well as complex office calculations and details acquired from multiple contractors. Boundary and topographic surveys require due diligence in the field and office. In the field close attention must be paid to location details needed for engineering design purposes such as all utility features that either

exist visually at or above grade and all existing buried facilities once our utility locating crews have completed their subsurface utility engineering (SUE). We also locate all above grade improvements such as building, sidewalks, driveways, parking lots, and fences. Usually the client defines the vertical datum to be utilized, whether it's the National Geodetic Vertical Datum of 1929 or the North American Vertical Datum of 1988. Then we locate the closest known benchmarks to the site and run a benchmark level loop checking into a minimum of two (2) known benchmarks and bring the elevations to the site and transfer them to benchmarks set out of the way from potential construction. Parks and other municipal properties may require additional locations including wetlands, landscaping, trees, footers of adjacent buildings, walls or other structures or monitoring wells.

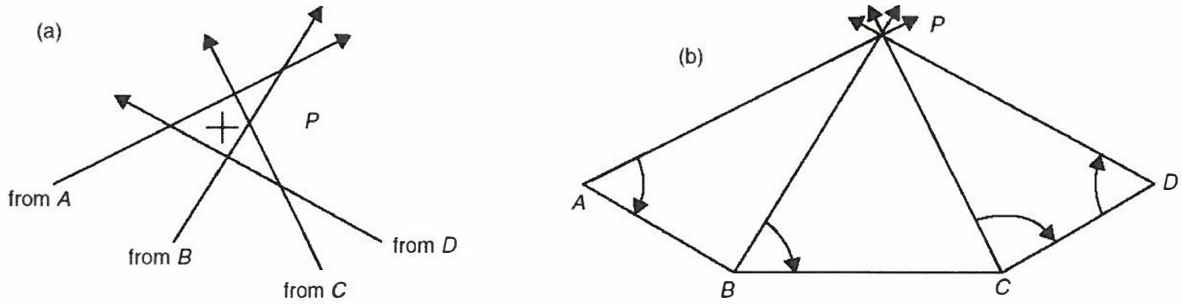
Utilizing A Total Station: A total station is an electronic theodolite that incorporates distance measuring using a laser or infrared beam, along with internal/external electronic data logging. These devices save the surveyor from collecting multiple measurements for each point location whose position needs to be known, as triangles can be constructed trigonometrically once you know one internal angle (between baseline and unknown point) and two (2) edge lengths (the baseline and measured distance to the unknown point). Total stations include LCD display screens where you can set up the type of survey task you want to perform and it will prompt you for set up data (coordinates of benchmark, height of the instrument over the benchmark, etc.). The total station then logs the observations made which helps in reducing recording errors. Rigorous checks are carried out on how data is being stored to ensure its integrity and the data is downloaded and backed up as soon as the survey is complete. To prevent data loss, it is advisable to manually record the data while surveying. If using a prism-based system, the station operator typically will have to wait while the roving survey team member moves to the next location, giving the opportunity to record data.

Utilizing Levels: To establish heights relative to a benchmark a device with a sighting telescope called a level is used. Two types of levels are used in surveying. They can be the standard engineering style level or the electronic digital level, both which are set up on a tripod and can be set to be precisely horizontal using leveling bubbles. Once level, the cross hairs seen through the telescope will sight points with the same elevation, regardless of position, within the range of the instrument. We can now measure deviations above and below this precisely level line using a graduated measuring staff that is read manually with the engineering level of electronically with the digital level. The level operator either records the values that he or she reads off a graduated survey rod through the telescope, or the readings are electronically read and stored in the digital level. Values read off from the rod that are greater than the height of the level instrument above the benchmark indicate that the ground on which the rod stands is below the benchmark height and vice versa if the readings are lower.



TAB 2
Methodology/Approach

Utilizing 3D Laser Scanner (High Definition Survey): A high Definition Survey using a 3D Laser Scanner is where there is a need to capture a great deal of details about a particular project site in three dimensions (3D). Whether it is the architectural features on the face of a building, outside fuel or water storage tanks, above ground piping at water treatment plants, high tension wires on poles, rooms inside of building or other facilities or busy intersections or roads, a 3D laser scanner can be used to capture details from a safe place on the ground. The scanner emits a pulsed laser that is eye-safe and everything the laser hits, the instrument captures a 3D point (CLOUD) with x-y-z values and returns it to the instrument. The Leica P30 scanner that we use captures 50,000 points per second, it rotates 360 degrees horizontally and 270 degrees vertically and captures a 3D point cloud of data within 300 feet of wherever it is set up. The scanner also captures digital images at each scanner position. Large areas may require several scanning positions, but they can be stitched together to form a single point cloud of 3D points. Once the scan is complete we can take the point cloud and create both 2D and 3D surveys of data including creating accurate 3D models of buildings, pipes, roadways, etc. The accuracy is superior to any other existing survey instrument.

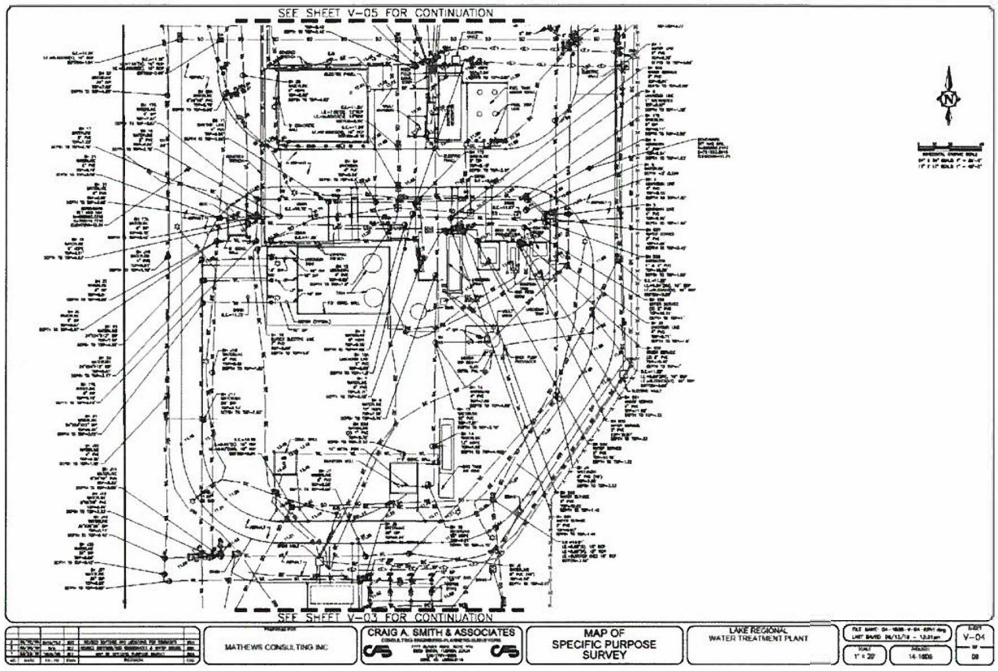


Mathematical Analysis Related to Surveys: There are numerous types of mathematical procedures related to surveying and mapping including traverse and adjustment procedures used for analyzing boundaries, survey lines, GPS observations and benchmark level loops. The most common adjustment procedures used are the **Compass Rule** and the **Least Square**.

The **Compass Rule** is a simplified analysis that takes into account the angular and horizontal measurements of each line of a traverse and averages the error out based on latitudes and departures in the overall closure. It assumes equal weight is applied to each line and that there is no gross error.

The **Least Square** adjustment is a more comprehensive adjustment giving different weights to each line and angle and creating error ellipses around each pint to provide a higher level of confidence in both the procedure and the final result.

TAB 2
Methodology/Approach



Preparing Survey Plans: CAS develops survey plans from measurements obtained in the field using a variety of software such as AUTOCAD Civil 3D 2019, Trimble's Tripod Data System, Leica's Jetstream Software and Leica's Cloudworx software for AUTOCAD and ESRI's ArcGIS ArcMap. All of these products require intense training and constant continuing education in order to provide quality survey deliverables to our clients. We are constantly searching for ways to increase efficiency by the use of technology and pride ourselves in being proactive in maintaining update to-date equipment and training our staff. Our surveyors are all highly experienced at using checks and balances on each survey project to minimize errors. Survey projects are reviewed with clients and can be provided in both hardcopy and electronic format for use.

Applicable Federal, State and Local Regulations: Mr. Robert D. Keener, PSM, is familiar with the following State Laws governing the Surveying Profession:

1. 2013 Florida Statutes, Title X Public Officers, Employees and Records, Chapter 120 Administrative Procedure Act
2. 2013 Florida Statutes, Title XII Municipalities, Chapter 177 Land Boundaries
3. 2013 Florida Statutes, Title XXXII Regulations of Professions and Occupations, Chapter 472 Land Surveying and Mapping
4. Florida Administrative Register & Florida Administrative Code, Rule Chapter: 5J-17, Chapter Title: Board of Professional Surveyors and Mappers

Survey Staff Training & Experience: Mr. Robert D. Keener, PSM, Vice President of Survey, has completed a vast number of surveys for utility (water, waste water, etc.), roadway, drainage, and canal improvement

projects. CAS has two(2) highly trained and experienced survey crews. CAS can conduct almost any type of survey, due to CAS's careful selection program and training of personnel based on industry accepted surveying and engineering principles which are technically equipped with state-of-art instrumentation. In addition to conventional boundary and topographic surveys CAS retains the experience to provide the latest in 3D Laser Scanning High Definition Surveying, Geodetic Control, Hydrographic, PLSS Retracement, Photogrammetric Control, Right-of-Way and Construction Surveys. Through the utilization of a Global Positioning System, 3D Laser Scanner and total stations with state-of-the-art data collectors, our survey data can be imported into CADD software which can be plotted or transmitted to our clients via email or CD/DVD. The latest technology with personalized service forms the core of every CAS project.

Survey Equipment

(3) Topcon Total Stations
(1) Trimble SC Robotic Total Station
(1) Trimble R-2 5800 RTK Rover (CPS)
(1) Trimble R-6 RTK Rovers (CPS)
(1) Leica HDS P-30 Laser Scanner
(1) Ranger 500X Data Collector
(2) Topcon ATC Levels
(3) Wild Levels
(3) Dell Laptop Computers

All support equipment needed for field operations including RODS, LEGS, Prisms

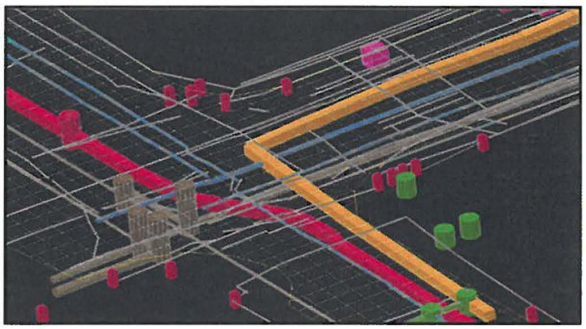
Field Reconnaissance: Research on all available record documents such as right-of-way maps, plats, previous surveys, county and state survey resources for the subject project site is conducted prior to field reconnaissance. CAS survey crew leaders or project managers then visit the project site to determine the level of effort and time it will take to complete the proposed task. Field reconnaissance will determine availability of horizontal and vertical control along with any specific or unique site characteristics that will require to be included in the scope of work for each County assigned Work Authorization.

Topographic, Record Drawing (As-Built) and Specific Purpose Survey: CAS prides itself on constantly upgrading, improving and providing cutting edge technology when it comes to data collections methods in use to address the needs of our clients pertaining to level of accuracy, cost and scheduling for assigned projects. For these types of surveys, we use conventional data collection methods for smaller projects to be cost effective. For mid-size and large-scale projects, we will determine which method of data collection will be most efficient and cost-effective. Innovative methods would include GPS (Global Positioning System) Fast Static Control Survey and data collection, 3D fixed base laser scanning, mobile above-ground scanning and aerial photogrammetry. CAS has the capability to combine these diverse data acquisition methods in order to provide quality and cost-effective survey deliverables.

GPS Surveys: CAS utilizes GPS equipment on almost all surveys. This provides unified survey data that is easily transferred into GIS databases with little need for adjustment. CAS's equipment ranges from hand held models with 3-meter accuracy to the latest survey-grade receivers and base stations with sub-meter accuracy. This along with continually upgrading our field equipment provides the ability to provide our clients with faster, more accurate and cost-effective survey solutions. Types of GPS surveys usually are project network control, that is field monumentation for localized survey networks, or regional GPS survey control for large-scale projects such as neighborhood improvements, extensive water, reclaimed or wastewater pipeline projects, etc.

TAB 2
Methodology/Approach

3D Laser Scanning: CAS often uses 3D laser scanning to prepare topographic surveys including survey of roadways, parking lots, buildings, water and wastewater treatment plans and interior of structures as needed. The scanner captures every feature needed for design purposes in a point cloud of laser data consisting of millions of 3D points. This data is used to prepare an AUTOCAD drawing with great detail in either 2D or 3D formats. This process consists of establishing survey control points at strategic locations around the proposed survey area or property in an x-y-z format. With these control points set, the 3D scanner can then be positioned on or near each of the controls and tied down to orientate the laser point clouds collected in the field. Multiple scanning positions are run in order to capture horizontal and vertical point positions in an x-y-z format. Thereafter, those scanned points are registered together to form a seamless overall point cloud of the subject area or property improvements. Each scanner position captures everything in a 360-degree arc around the scanner within a 100-200 foot radius buffer, above and below the scanner along with digitally registered photographs of each area scanned. These points are finally extracted into a Civil 3D AUTOCAD base file for preparation of design drawings.



Our staff of professional and technical personnel specializes in providing quality professional utility locating services to our clients. CAS has extensive experience in subsurface utility engineering (SUE) and employs the latest state-of-the-art technologies. In addition to traditional methods of utility locating such as vacuum excavation (potholing), electromagnetic (EM) induction for toneable utilities, and 2-D Ground Penetrating Radar (GPR), CAS can utilize a proprietary patented scanning technology known as 3-D Radar Tomography for subsurface utility investigations.

CAS staff utilize the following equipment for performing SUE:

Designating Equipment for Utilities

- Metrotech 9890 DXLT Elec Verifier
- Metrotech i5000 Elec Locator
- Subsite R75 Electronic Verifier
- Pipehorn Classic Pipe & Cable Locator
- Metro Tech 810DX Electronic Verifier
- Vivax Vloc Pro 5w Locator
- Vivax Vloc ML 5w Locator
- Metrotech Transmitting Sondes (9.82 KHz)
- Metrotech Transmitting Sondes (982Hz)
- RD 100 Non-Metallic Fish Cables for Sondes
- Metro Tech HPL50 – 50 Watt Transmitter

Craig A. Smith & Associates
Engineers • Surveyors • Subsurface Utility Engineering
3D Subsurface Imaging • Utility Coordination

TAB 2
Methodology/Approach

CAS Certified Utility Locators perform complete electromagnetic designation of toneable facilities (DIP, CIP, Steel, Copper and other Metallic Conduits) throughout project limits to identify and catalog known existing facilities for survey and inclusion of such facilities in project base files or during the construction phase of projects for unforeseen utility conflicts.

2D Ground Penetrating Radar (GPR)

Mala Geosciences High Dynamic Range Radar System - HDR

- Detects metallic and non-metallic utilities
- More than 14 hours of continuous operating time
- Operating speed is well above 25 km/h (>15 mph)
- Scan rate is above 1024 scans/sec. (@ 700 samples/trace)
- Single button operation
- High Dynamic Range (HDR) broadband Antenna
- Built-in DGPS (SBAS). External devices are also supported
- Data/Power combination cable (reduced cabling)
- Water resistant and protected to IP65
- Large color TFT, sunlight-readable, LCD monitor screen
- Mala Geosciences HDR Easy Locator GPR System
- Portable, lightweight modular design
- Multi antennas / transducers
- High contrast, shock proof TFT monitor
- Rugged, weatherproof construction
- Easy to use, automated controls and settings
- Easy Vision software
- Utility Pipes and sewers / Power cables
- Telecom cables / Buried Tanks
- Buried Ordnance / Voids

CAS certified GPR technicians perform complete ground penetrating radar grid scanning throughout project site limits to identify and catalog non-toneable facilities (HDPE, PVC, ACP, RCP, PCCP and fiber optic cable) for survey and inclusion of such facilities in project base files for engineering design or during the construction phase of projects for unforeseen utility conflicts.

CAS 3D Radar Tomography Scanning

- Designed for Comprehensive Subsurface Investigation
- Radar Antenna Arrayed System
- 72 Channel Radar Output
- True 3D Subsurface Detection and Imaging
- Geospatially Accurate Subsurface Mapping
- Continuous Depiction of Subsurface Systems
- Large Area Coverage / Rough Terrain Capable
- Produces 1" Tomographic Slice Imagery
- Slice Image Movies through subsurface penetration
- Subsurface Void Detection
- Fluid Facility Leak Detection
- Data Output to 3D CAD System (Civil3D)

TAB 2
Methodology/Approach

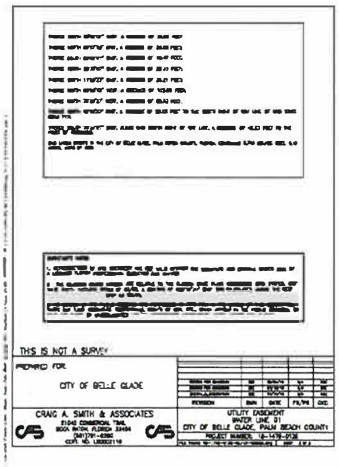
- Data Deliverable in All CADD Platforms
- 3D Models for Subsurface System Analysis
- BIM System Integration

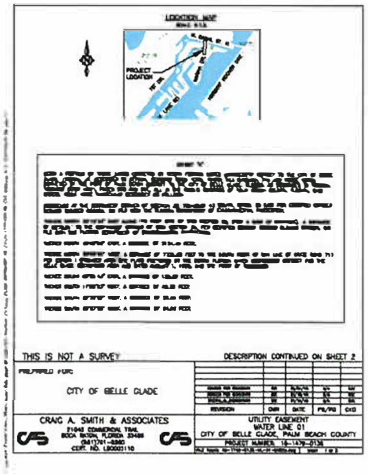
CAS's unique capability in providing 3D Radar Tomography scanning provides continuous x,y,z positioning of buried utilities with great accuracy (+/- 2inches horizontally and +/- 6 inches vertically) along with the associated topographic profile (ground surface elevations). The 3-D Radar Tomography unit is equipped with an array of 17 antennas that "cross communicate" thus allowing for the level of accuracy stated above. Generally, utilities to a buried depth of up to 15 feet can be identified by this technology and all pipe material type can be located including bends/fittings and offsets. Also, abandoned facilities and non-utility anomalies can be identified that could potentially interfere with design elements. The use of this technology can be especially beneficial for aged utility areas where record drawings are poor or non-existent.

Vacuum Excavation Equipment

- VacMaster System 3000 Vacuum Excavator
- Utiliscope Vacuum Excavator System
- Utilivac Canister Vacuum Excavator
- Ingersoll-Rand 185s Compressor
- Sullair 90lb Air Actuated Jack Hammer w/Bits
- IR 90lb Air Actuated Jack Hammer w/Bits
- Sullair MBT6 Air Actuated Pencil Tip Compactor
- American Air Products pencil tip compactor
- Utiliscope 6' Air Lance – Pistol Activated
- Utiliscope 12' Air Lance – Pistol Activated
- Vacmasters 6' Fiberglass / Composite Air Lance
- Vacmasters 12' Fiberglass / Composite Air Lance

CAS locate technicians perform safe vacuum excavation to positively identify and precisely locate existing buried facilities as necessary to identify conflicts or to provide precision calibration for 3D Radar Tomography Scanning



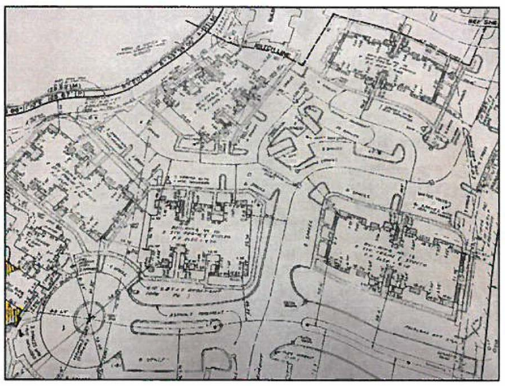


TAB 2
Methodology/Approach

Sketch & Legal Descriptions and Preparation of Easements: Procedures for preparing sketch and legal descriptions and easements are similar but dependent on the type od document required. A sketch and legal description could include any type of property and easements would include a sketch and legal description of a portion of a subject property covering a utility, access, sidewalk, roadway or other type of improvement. The scope of work would be outlined in the County's approved Work Authorization for a specific project(s) which would determine the purpose of the sketch and legal description, research of the property to determine ownership limits which could also establish the limits of the sketch and legal description and/or easement. All sketch and legal descriptions are prepared using Civil 3D AUTOCAD software. CAS also strives to prepare the base calculations and final document in the state plane coordinate system to provide a seamless importation of the information into current databases.

Right-of-Way Surveys : Using existing record such as right-of-way maps, plat dedications and maintenance maps, we establish the limits of a prescribed corridor and the survey boundaries. The improvements in and adjacent to the right-of-way are then located with either 3D fixed base laser scanning, mobile scanning or aerial photogrammetry. CAS has utilized all these methods in the past individually or in combination. These methods keep our survey field crews away from traffic thereby increasing the safety of our staff, the driving public and reducing the need for maintenance of traffic (MOT) during the field survey process.

ALTA Surveys: CAS will provide to the County the minimum standard detail requirements for ALTA/NSPS Land Title Surveys or as approved by the County Surveyor. CAS will work with the County to determine the exact purpose of the survey and tailor the final product that best suits the County's needs.



Hydrographic Survey - Canal Cross Sections & Profiles: CAS uses the latest survey-grade sonar equipment integrated into our GPS data collection systems to collect thousands of points in a body of water. Also using GPS we collect the embankment topography and then import both sets of data into one seamless 3D drawing. This allows the cutting of cross sections and providing canal profiles at any required position. We can also prepare quantity calculations of the subject site based on the acquisition of this data.

Construction Layout/Staking: Construction layout/staking surveys require precise accuracy to assure the proper installation of facilities. All elements required for staking are calculated in the office based on design drawings that are verified for accuracy. Once the components of the proposed facility are staked, the survey field crew then uses independent field control to check the precision of the stakeout to ensure the location of the facility meets the tolerance of the design drawings. The field notes are afterwards office checked to verify the facility is properly placed. This procedure confirms the fieldwork was accomplished successfully.

Title Search & Legal Documentation: CAS surveyors have extensive experience working with title companies and real estate lawyers in reviewing title searches and legal documentation on residential, commercial and municipal properties. CAS survey staff are experts in interpretation of real property boundary related documents recorded in the public and court records.

TAB 2
Methodology/Approach

PROJECT SCHEDULING TO MEET DEADLINES

CAS workload projects and staffing assignments are reviewed on a weekly basis by the surveyor and the principals of the firm. As necessary, the overall staffing of the firm is adjusted to meet the workload demands. This may include an increase or decrease in hours by the current available staff of the need to hire new staff. Currently, our workload projections do not include any unusual demands that require any staff adjustments or affect our ability to meet project schedules. The CAS team retains sufficient staff to provide the necessary surveying and mapping services and to continue to serve the client in a timely manner. We constantly monitor our workload in relationship to our staff size.

QUALITY ASSURANCE/QUALITY CONTROL

Quality control throughout each assigned project will be handled by a check and balance system and through the team's client relationships we form during the project by providing continuous open, often face-to-face and honest lines of communication. CAS conducts weekly QA/QC meetings in-house every Monday to ensure projects are on schedule and within budget. The CAS process will be methodical and timely in approach. The established goals identified in the project initiation will be implemented through successful project completion.

Tab 3 – CERTIFIED MINORITY BUSINESS ENTERPRISE

MODIFICATION

Palm Beach County
Office of Equal Business Opportunity

Certifies That

CAS Engineering Associates, d/b/a Craig A. Smith & Associates, LLC

Vendor # **VS0000024110**

is a Small/Minority Business Enterprise (S/MBE) as prescribed by section 2-80.21 - 2.80.30 of the Palm Beach County Code for a three year period from

September 14, 2022 to February 06, 2025

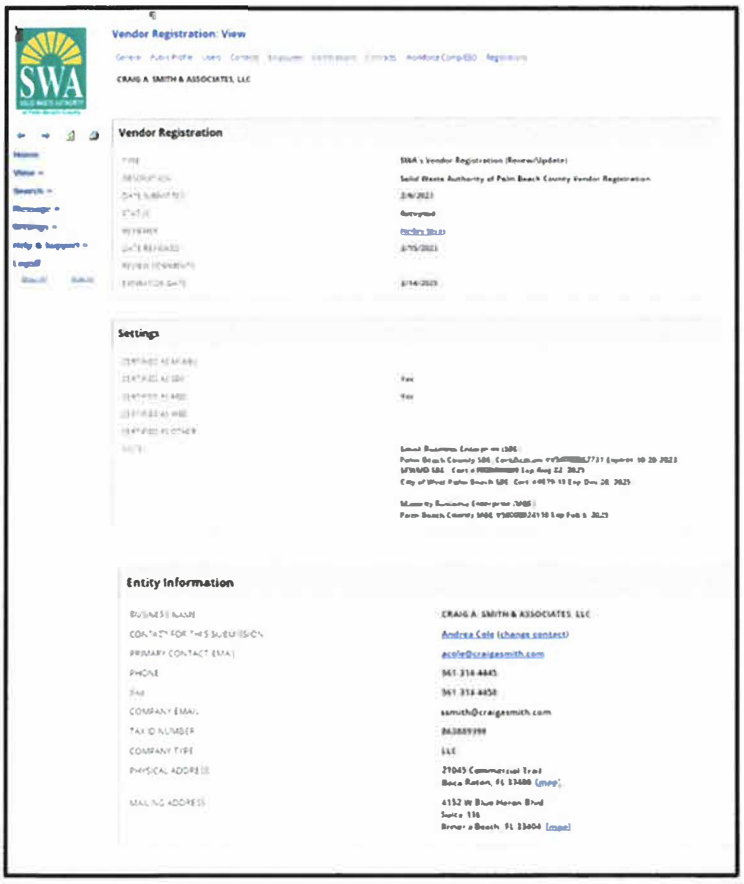
The following services and/or products are covered under this certification:

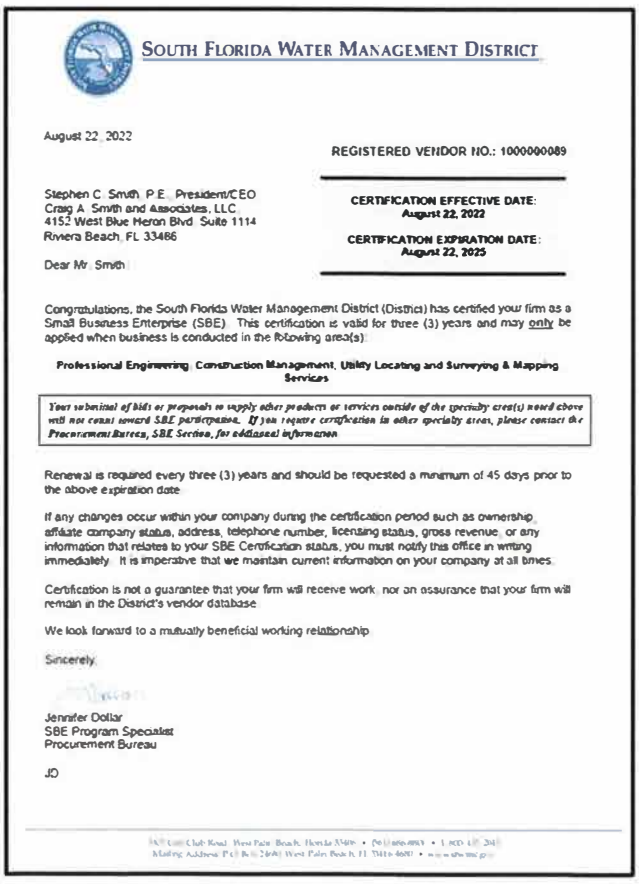
Civil Engineering; Drainage Engineering; Geotechnical Engineering; Mapping & Geographical Information Systems (GIS) Services; Mechanical Engineering; Sanitary Engineering; Sewage Collection, Treatment, and Disposal/Engineering; Surveyor Services, Land; Utility Locator Service (Underground); Waste Water Treatment Engineering; Water Supply, Treatment, and Distribution/Engineering

Allen Gray, Manager
09/14/2022

Palm Beach County Board of County Commissioners
Robert S. Weinroth, Mayor
Gregg K. Weiss, Vice Mayor
Maria G. Marino
Dave Kerner
Maria Sachs
Melissa McKinlay
Mark Bernard

County Administrator
Verdenia C. Baker





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

August 22, 2022

REGISTERED VENDOR NO.: 1000000089

Stephen C. Smith, P.E., President/CEO
Craig A. Smith and Associates, LLC
4152 West Blue Heron Blvd. Suite 1114
Riviera Beach, FL 33486

CERTIFICATION EFFECTIVE DATE:
August 22, 2022

CERTIFICATION EXPIRATION DATE:
August 22, 2025

Dear Mr. Smith:

Congratulations, the South Florida Water Management District (District) has certified your firm as a Small Business Enterprise (SBE). This certification is valid for three (3) years and may only be applied when business is conducted in the following area(s):

Professional Engineering, Construction Management, Utility Locating and Surveying & Mapping Services

Your submittal of bids or proposals to supply other products or services outside of the specialty area(s) noted above will not count toward SBE participation. If you require certification in other specialty areas, please contact the Procurement Bureau, SBE Section, for additional information.

Renewal is required every three (3) years and should be requested a minimum of 45 days prior to the above expiration date.

If any changes occur within your company during the certification period such as ownership, affiliate company status, address, telephone number, licensing status, gross revenue, or any information that relates to your SBE Certification status, you must notify this office in writing immediately. It is imperative that we maintain current information on your company at all times.

Certification is not a guarantee that your firm will receive work, nor an assurance that your firm will remain in the District's vendor database.

We look forward to a mutually beneficial working relationship.

Sincerely,

Jennifer Dollar
SBE Program Specialist
Procurement Bureau

JD

3301 Gun Club Road, West Palm Beach, Florida 33406 • [illegible]
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

SMALL BUSINESS CERTIFICATION

The City of West Palm Beach's Small Business Program

Certifies that

CRAIG A. SMITH & ASSOCIATES, LLC

Has met the necessary requirements for certification as a Small Business under the Small Business Program as prescribed by the City of West Palm Beach's Ordinance Number 3366-00.

The following List of Services and/or Product are covered under this certification:

* * * *

- Aircraft Operations Services: Aerial Surveys (Including Wildlife Censuses)
- Architectural Professional Design Services: Recreation Facilities (Parks, Marinas, etc)
- Architectural and Engineering Services, Non-Professional
- Engineering Services, Professional: Civil, Surveyor Services, Land
- Environmental and Ecological Services: Tank Testing and Disposal Services, Storage Including Underground Types
- Mapping Services Including Cartography and Surveying Services, Not Aerial, for Digitized Mapping

* * * *

Issued by the City of West Palm Beach for a three-year period December 29, 2022 to December 28, 2025

Certificate Vendor Number: 1070664

Frank Hayden
Director Office of Equal Opportunity

MINORITY/WOMAN BUSINESS CERTIFICATION

The City of West Palm Beach's Minority/Women Business Program

Certifies that

CRAIG A. SMITH & ASSOCIATES, LLC

Has met the necessary requirements for certification as a Minority/Women Business under the Minority/Women Business Program as prescribed by the City of West Palm Beach's Ordinance Number 4679-18

The following List of Services and/or Product are covered under this certification:

* * * *

- Aircraft Operations Services: Aerial Surveys (Including Wildlife Censuses)
- Architectural Professional Design Services: Recreation Facilities (Parks, Marinas, etc)
- Architectural and Engineering Services, Non-Professional
- Engineering Services, Professional: Civil, Surveyor Services, Land
- Environmental and Ecological Services: Tank Testing and Disposal Services, Storage Including Underground Types
- Mapping Services Including Cartography and Surveying Services, Not Aerial, for Digitized Mapping

* * * *

Issued by the City of West Palm Beach for a three-year period December 29, 2022, to December 28, 2025

Certificate Vendor Number: 1070664

Frank Hayden
Procurement Official

Tab 4 -ADDITIONAL REQUIRED PROPOSAL SUBMITTAL FORMS

CONSULTANT'S GENERAL INFORMATION WORK SHEET
E-RFP #20230097

It is understood and agreed that the following information is to be used by the City to determine the qualifications of prospective Consultant to perform the work required. The Consultant waives any claim against the City that might arise with respect to any decision concerning the qualifications of the Consultant.

The undersigned attests to the truth and accuracy of all statements made on this questionnaire. Also, the undersigned hereby authorizes any public official, Engineer, Surety, bank, material or equipment manufacturer, or distributor, or any person, firm or corporation to furnish the City any pertinent information requested by the City deemed necessary to verify the information on this questionnaire.

Dated at Deerfield Beach, Florida **(Location)** **, this** 22 **day of** September **2023**

Name of Organization/Consultant: Craig A. Smith & Associates, LLC

By: Stephen C. Smith,P.E., President
Name and Title

1. **Corporation, Partnership, Joint Venture, Individual or other?** Corporation

2. **Firm's name and main office address, telephone, and fax numbers**

Name: Craig A. Smith & Associates, LLC
Address: 41 52 W. Blue Heron Blvd. Suite 1 1 6, Riviera Beach, FL 33404

Telephone Number: 561 314 4445
Fax Number: 561 314 4458

3. **Contact person:** Stephen C. Smith,P.E., President **Email:** ssmith@craigasmith.com

4. **Firm's previous names (if any).** Craig A. Smith & Associates, Inc

5. **ADDENDUM ACKNOWLEDGMENT - Bidder acknowledges that the following addenda have been received and are included in its proposal/bid:**

Addendum Number	Date Issued	Addendum Number	Date Issued
1	9-14-23		

6. **List any lawsuits pending or completed within the past five (5) years involving the corporation, partnership or individuals with more than ten percent (10 %) interest:**

None

(N/A is not an acceptable answer - insert lines if needed)

7. **List any judgments from lawsuits in the last five (5) years:**

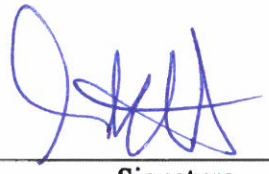
None

(N/A is not an acceptable answer - insert lines if needed)

8. **List any criminal violations and/or convictions of the Proposer and/or any of its principals:**

None

(N/A is not an acceptable answer - insert lines if needed)



Signature

Stephen C. Smith, P.E.

President

Title

NOTICE TO ALL PROPOSERS

To ensure fair consideration is given for all Proposers, it must be clearly understood that upon release of the proposal and during the proposal process, firms and their employees of related companies as well as paid or unpaid personnel acting on their behalf shall not contact or participate in any type of contact with City employees, department heads or elected officials, up to and including the Mayor and City Council. The "Cone of Silence" is in effect for this solicitation from the date the solicitation is advertised on DemandStar, until the time an award decision has been approved by City Council and fully executed by all parties. Information about the Cone of Silence can be found under the City of Port St. Lucie Ordinance 20-15, Section 35.13. Contact with anyone other than the Issuing Officer may result in the vendor being disqualified. All contact must be coordinated through Ms. Robyn Holder, Issuing Officer, for the procurement of these services.

All questions regarding this Solicitation are to be submitted in writing to Robyn Holder, Procurement Manager with the Procurement Management Department via e-mail rholder@cityofpsl.com, or by phone 772-344-4293. Please reference the Solicitation number on all correspondence to the City.
All questions, comments and requests for clarification must reference the Solicitation number on all correspondence to the City. Any oral communications shall be considered unofficial and non-binding.

Only written responses to written communication shall be considered official and binding upon the City. The City reserves the right, at its sole discretion, to determine appropriate and adequate responses to the written comments, questions, and requests for clarification.

**NOTE: All addendums and/or any other correspondence before bid close date (general information, question and responses) to this solicitation will be made available exclusively through the DemandStar's Website for retrieval. All notice of intent to award documentation will be published on the City Clerk's Website. Proposers are solely responsible for frequently checking these websites for updates to this solicitation.*

I understand and shall fully comply with all requirements of City of Port. St. Lucie Ordinance 20-15, Section 35.13.

Typed Name: Stephen C. Smith, P.E.
Signed: _____
Company and Job Title: Craig A. Smith & Associates, LLC President
Date: September 22, 2023

"A City for All Ages"

CONSULTANT'S CODE OF ETHICS

The City of Port St Lucie ("City), through its Procurement Management Department ("Procurement Management Department") is committed to a procurement process that fosters fair and open competition, is conducted under the highest ethical standards and enjoys the complete confidence of the public. To achieve these purposes, Procurement Management Department requires each vendor who seeks to do business with the City to subscribe to this Consultant's Code of Ethics.

- A Consultant's bid or proposal will be competitive, consistent and appropriate to the bid documents.
- A Consultant will not discuss or consult with other Vendors intending to bid on the same contract or similar City contract for the purpose of limiting competition. A Vendor will not make any attempt to induce any individual or entity to submit or not submit a bid or proposal.
- Consultant will not disclose the terms of its bids or proposal, directly or indirectly, to any other competing Vendor prior to the bid or proposal closing date.
- Consultant will completely perform any contract awarded to it at the contracted price pursuant to the terms set forth in the contract.
- Consultant will submit timely, accurate and appropriate invoices for goods and/or services actually performed under the contract.
- Consultant will not offer or give any gift, item or service of value, directly or indirectly, to a City employee, City official, employee family member or other vendor contracted by the City.
- Consultant will not cause, influence or attempt to cause or influence, any City employee or City Official, which might tend to impair his/her objectivity or independence of judgment; or to use, or attempt to use, his/her official position to secure any unwarranted privileges or advantages for that Vendor or for any other person.
- Consultant will disclose to the City any direct or indirect personal interests a City employee or City official holds as it relates to a Vendor contracted by the City.
- Consultant must comply with all applicable laws, codes or regulations of the countries, states and localities in which they operate. This includes, but is not limited to, laws and regulations relating to environmental, occupational health and safety, and labor practices. In addition, Consultant

must require their suppliers (including temporary labor agencies) to do the same. Consultant must conform their practices to any published standards for their industry. Compliance with laws, regulations and practices include, but are not limited to the following:

- Obtaining and maintaining all required environmental permits. Further, Consultant will endeavor to minimize natural resource consumption through conservation, recycling and substitution methods.

- Providing workers with a safe working environment, which includes identifying and evaluating workplace risks and establishing processes for which employee can report health and safety incidents, as well as providing adequate safety training.

- Providing workers with an environment free of discrimination, harassment and abuse, which includes establishing a written antidiscrimination and anti-bullying/harassment policy, as well as clearly noticed policies pertaining to forced labor, child labor, wage and hours, and freedom of association.

Name of Organization/Proposer Craig A. Smith & Associates, LLC

Signature 

Printed Name and Title Stephen C. Smith,P.E., President

Date September 22, 2023

DISCLAIMER: This Code of Ethics is intended as a reference and procedural guide to Consultants. The information it contains should not be interpreted to supersede any law or regulation, nor does it supersede the applicable Consultant contract. In the case of any discrepancies between it and the law, regulation(s) and/or Consultant contract, the law, regulatory provision(s) and/or vendor contract shall prevail.

E-Verify Form

Contractor acknowledges and agrees to the following:

1. Shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Supplier/Consultant during the term of the contract; and

2. Shall expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

E-Verify Company Identification Number	405675
Date of Authorization	April 01, 2011
Name of Contractor	Craig A. Smith & Associates, LLC
Name of Project	Continuing Contracts for Survey & Mapping Services
Solicitation Number (If Applicable)	20230097

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on September, 22, **20**23 **in** Deerfield Beach **(city),** Florida **(state).**

Signature of Authorized Officer

Stephen C. Smith,P.E., President

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE 22 **DAY OF** September, **20**23.

NOTARY PUBLIC

My Commission Expires: 7.11.2027

ANDREA COLE
MY COMMISSION # HH 413340
EXPIRES: July 11, 2027

NON-COLLUSION AFFIDAVIT

State of Florida

County of Broward }

Stephen C. Smith, P.E., being first duly sworn, disposes and says that:

(Name/s)

1. They are President of Craig A. Smith & Associates, LLC the Proposer that

(Title) (Name of Company)

has submitted the attached PROPOSAL;

2. He is fully informed respecting the preparation and contents of the attached proposal and of all pertinent circumstances respecting such PROPOSAL;

3. Such Proposal is genuine and is not a collusive or sham Proposal;

4. Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Proposer, firm or person to submit a collusive or sham Proposal in connection with the contract for which the attached proposal has been submitted or to refrain from proposing in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices in the attached Proposal or of any other Proposer, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Port St. Lucie or any person interested in the proposed Contract; and

5. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

(Title) Stephen C. Smith,P.E., President

STATE OF FLORIDA }
COUNTY OF ST. LUCIE} SS:

The foregoing instrument was acknowledged before me this *(Date)* September 22,2023

by: Stephen C. Smith, P.E. who is personally known to me or who has produced

_____ as identification and who did (did not) take an oath.

Commission No. HH413340

Notary Print: Andrea Cole

Notary Signature: Andrea Cole

NOTARY PUBLIC STATE OF FLORIDA
ANDREA COLE
MY COMMISSION # HH 413340
EXPIRES: July 11, 2027

DRUG-FREE WORKPLACE FORM

The undersigned Contractor in accordance with Florida Statute 287.087 hereby certifies that Craig A. Smith & Associates, LLC does:

(Name of Business)

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 proposal 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 proposal, 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 Florida Statutes 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.

Bidder's Signature

Stephen C. Smith,P.E., President

September 22, 2023

Date:

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES' LISTS

Vendor Name:	Craig A. Smith & Associates, LLC
Vendor FEIN:	863889398
Authorized Representative's Name:	Stephen C. Smith, P.E.
Authorized Representative's Title:	President
Address:	4152 W. Blue Heron Blvd.
City, State and Zip Code:	Riviera Beach, Florida 33404
Phone Number:	561 314 4445
Email Address:	ssmith@craigasmith.com

Sections 287.135 and 215.473, Florida Statutes, prohibit Florida municipalities from contracting with companies, for goods or services over $1,000,000 that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or to engage in any Business operations with Cuba or Syria. Sections 287.135 and 215.4725 also prohibit Florida municipalities from contracting with companies, for goods or services in any amount that are on the list of Scrutinized Companies that Boycott Israel.

The list of "Scrutinized Companies" is created pursuant to Section 215.473, Florida Statutes. A copy of the current list of "Scrutinized Companies" can be found at the following link: https://www.sbafla.com/fsb/FundsWeManage/FRSPensionPlan/GlobalGovernanceMandates/QuarterlyReports.aspx

As the person authorized to sign on behalf of the Respondent Vendor, I hereby certify that the company identified above in the section entitled "Respondent Vendor Name" is not listed on either the Scrutinized Companies with Activities in Sudan List; or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; is not participating in a boycott of Israel; and does not have any business operations with Cuba or Syria. I understand that pursuant to Sections 287.135 and 215.473, Florida Statutes, the submission of a false certification may subject the Respondent Vendor to civil penalties, attorney's fees, and/or costs.

I understand and agree that the City may immediately terminate any contract resulting from this solicitation upon written notice if the company referenced above are found to have submitted a false certification or any of the following occur with respect to the company or a related entity: (i) for any contract for goods or services in any amount of monies, it has been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, or (ii) for any contract for goods or services of one million dollars ($1,000,000) or more, it has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or it is found to have been engaged in business operations in Cuba or Syria.

Authorized Signature

Stephen C. Smith, P.E., President

Print Name

Signature

TRUTH-IN-NEGOTIATION CERTIFICATE AND AFFIDAVIT

STATE OF FLORIDA §
COUNTY OF ST. LUCIE §

Before me, the undersigned authority, personally appeared affiant Stephen C. Smith,P.E., President, who being first duly sworn, deposes and says:

1. That the undersigned firm is furnishing this Truth in Negotiation Certificate pursuant to Section 287.055(5)(a) of the Florida Statutes for the undersigned firm to receive an agreement for professional services with the City of Port St. Lucie, St. Lucie County, Florida.

2. That the undersigned firm is a corporation which engages in furnishing professional engineering services and is entering into an agreement with the City of Port St. Lucie, St. Lucie County, Florida to provide professional services for a project known as Survey & Mapping Services, Contract # 20230097.

3. That the undersigned firm has furnished the City of Port St. Lucie, St. Lucie County, Florida a detailed analysis of the cost of the professional services required for the project.

4. That the wage rate information and other factual unit cost, which the undersigned firm furnished, were accurate, complete and current at the time the undersigned firm and the City of Port St. Lucie entered into the agreement for professional services on the project.

5. That the agreement which the undersigned firm and the City of Port St. Lucie entered into on this job contained a provision that the original agreement price and any additions thereto shall be adjusted to include any significant sums by which the City of Port St. Lucie determines the agreement price was increased due to inaccurate, incomplete or non-current wage rates or other factual unit cost and that all such agreement adjustments shall be made within one (1) year following the end of the agreement.

FURTHER AFFIANT SAYETH NAUGHT

Craig A. Smith & Associates, LLC
Name of Firm

By: _____
President
Stephen C. Smith,P.E., President

The foregoing instrument was acknowledged before me by Stephen C. Smith who has produced _____ as identification or is personally known to me.

WITNESS my hand and official seal in the Stare of County last aforesaid this 22 day of September, 2023

(SEAL)

_____
Signature

ANDREA COLE
MY COMMISSION # HH 413340
EXPIRES: July 11, 2027

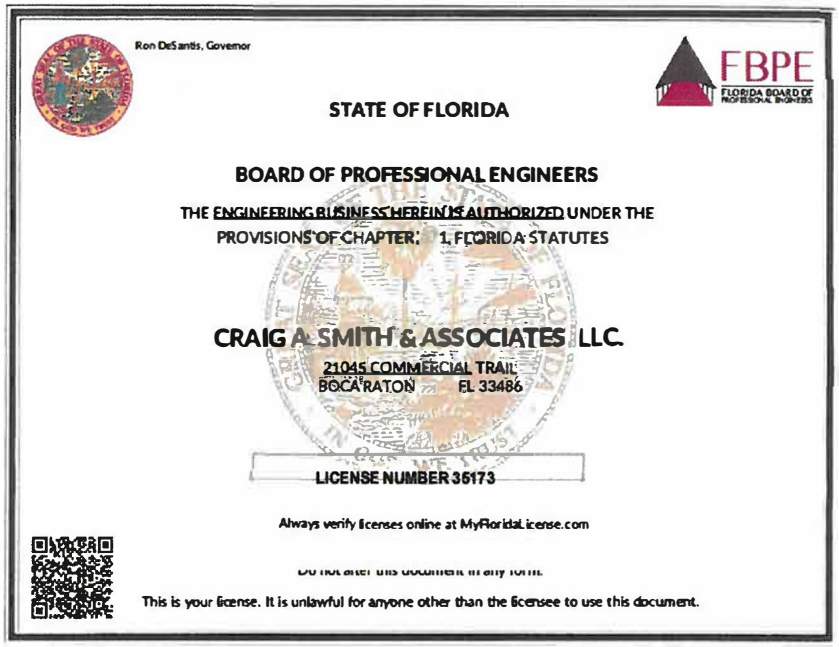
Andrea Cole
Notary Name (typed or printed)

Office Manager
Title or Rank

Tab 5 -LICENSES & CERTIFICATES

State of Florida Business Licenses

ENGINEERING



Ron DeSantis, Governor

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE ENGINEERING BUSINESS HEREIN IS AUTHORIZED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

CRAIG A SMITH & ASSOCIATES LLC.

21045 COMMERCIAL TRAIL
BOCA RATON FL 33486

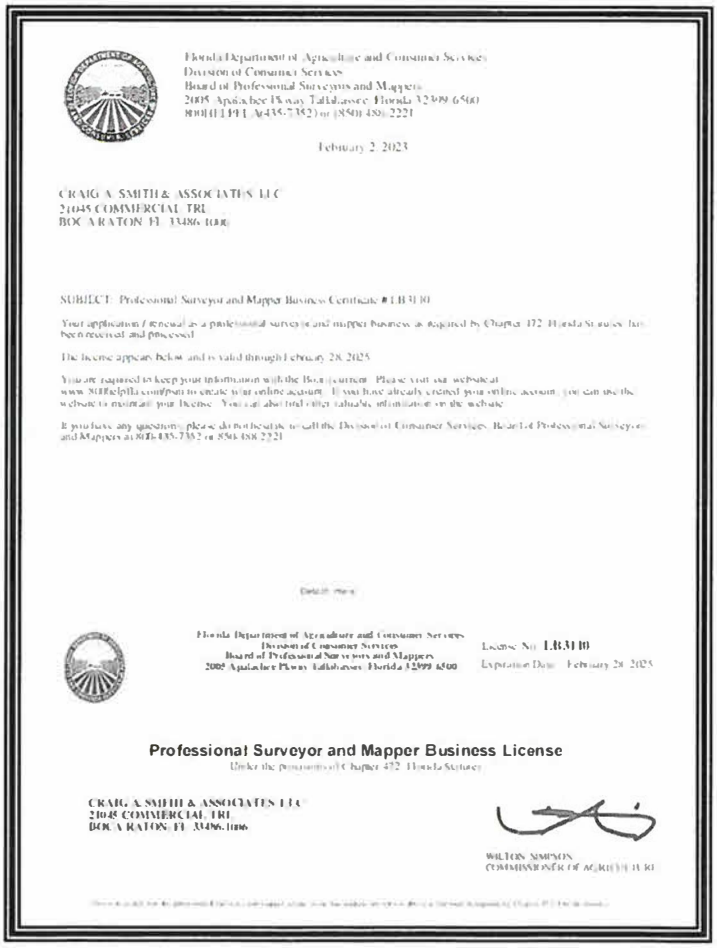
LICENSE NUMBER 35173

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

SURVEYING



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

February 2, 2023

CRAIG A. SMITH & ASSOCIATES, LLC
21045 COMMERCIAL TRL
BOCA RATON FL 33486-1006

SUBJECT: Professional Surveyor and Mapper Business Certificate # LB 3110

Your application / renewal as a professional surveyor and mapper business 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/portal 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
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkwy, Tallahassee, Florida 32399-6500

License No. LB 3110
Expiration Date: February 28, 2025

Professional Surveyor and Mapper Business License
Under the provisions of Chapter 472, Florida Statutes

CRAIG A SMITH & ASSOCIATES LLC
21045 COMMERCIAL TRL
BOCA RATON FL 33486-1006

WILTON SIMPSON
COMMISSIONER OF AGRICULTURE

State of Florida
Department of State

I certify from the records of this office that CRAIG A. SMITH & ASSOCIATES, LLC is a limited liability company organized under the laws of the State of Florida, filed on May 13, 2021.

The document number of this limited liability company is L21000210726.

I further certify that said limited liability company has paid all fees due this office through December 31, 2023, that its most recent annual report was filed on January 19, 2023, and that its status is active.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Nineteenth day of January, 2023

Secretary of State

Tracking Number: 3763019851CC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

Florida Department of Agriculture and Consumer Services
Division of Consumer Services

WILTON SIMPSON

Mailing Address:
Florida Department of Agriculture and Consumer Services
2005 Apalachee Parkway
Tallahassee FL 32399-6700
www.FDACS.gov
1-800-HELP-FLA (435-7352) FL Only
850-488-2221 Calling Outside Florida
Fax 850-410-3804

BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS
APPLICATION FOR CERTIFICATE OF AUTHORIZATION

Chapter 472, Florida Statutes

Note: All documents and attachments submitted with this application are subject to public review pursuant to Chapter 119, F.S.

ADDITIONAL INFORMATION

License No#: LB3110

BUSINESS INFORMATION

Business Name	CRAIG A. SMITH & ASSOCIATES, LLC
FEIN	
Business Address	21045 COMMERCIAL TRL BOCA RATON,Florida,33486-1006
Mailing Address	21045 COMMERCIAL TRL BOCA RATON,Florida,33486-1006
Email address	acole@craigasmith.com
Website	www.craigasmith.com
Business Phone	561-314-4445
Fax	561-314-4458

PRINCIPAL OFFICERS

1	License Number	L5486
	Name	KEENER, ROBERT D
	Address1	950 SE ATLANTUS AVE
	City State Zip	FORT PIERCE,FL,34983-3906
	Address Type	HOME
2	License Number	L5486
	Name	KEENER, ROBERT D
	Address1	950 SE ATLANTUS AVE
	City State Zip	FORT PIERCE,FL,34983-3906
	Address Type	HOME

BRANCH OFFICES

AUTHORIZATION

I affirm that I have provided the above information completely and truthfully to the best of my knowledge. [X]

Ron DeSantis, Governor

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

SMITH, STEPHEN CRAIG
9960 MAJORCA PLACE
BOCA RATON FL 334340000

LICENSE NUMBER: PE48914
EXPIRATION DATE: FEBRUARY 28, 2023
Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.
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Ron DeSantis, Governor
Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

RUBIO, ORLANDO ALBERTO
7281 BRIELLA DR
BOYNTON BEACH FL 33437

LICENSE NUMBER: PE48265
EXPIRATION DATE: FEBRUARY 28, 2025
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Ron DeSantis, Governor
Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

VILAR, FRANK
21045 COMMERCIAL TRAIL
BOCA RATON FL 33486

LICENSE NUMBER: PES5459
EXPIRATION DATE: FEBRUARY 28, 2025
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Ron DeSantis, Governor
Melanie S. Griffin, Secretary

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

SHONK, DANIEL EUGENE
9500 126-B SW 3RD STREET
BOCA RATON FL 33428

PE90261
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com

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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: LS4846
Expiration Date February 28, 2023

Professional Surveyor and Mapper License

Under the provisions of Chapter 472, Florida Statutes

ROBERT D KEENER
950 SE ATLANTUS AVE
FORT PIERCE, FL 34983-3906

Nicole Fried

NICOLE "NIKKI" FRIED
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.

Detach Here

Receipt of Payment

OTN	Name	Fee
3715558	WILLIAM DELANEY KALBACH	$255.00
	Convenience Fees	$6.38
		Total: $261.38

Mailing Address:
FDACS - DIVISION OF CONSUMER SERVICES
BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS
2005 APALACHEE PKWY
TALLAHASSEE FL 32399-6500

Fax Number: 850-410-3804
Phone Number: 1-800-HELP-FLA (435-7352) within Florida, 850-410-3800 outside Florida

State of Florida
Department of Environmental Protection

ISSUED: 04/20/2023 **LICENSE NO.: 0005083**

THE CLASS A DRINKING WATER TREATMENT OPERATOR NAMED BELOW IS LICENSED UNDER THE PROVISIONS OF CHAPTER 403, FLORIDA STATUTES.

VALID UNTIL: 04/30/2025

TODD V. LARSON

RON DESANTIS — GOVERNOR

SHAWN HAMILTON — SECRETARY

DISPLAY IS REQUIRED BY LAW

State of Florida
Department of Environmental Protection

ISSUED: 04/20/2023 **LICENSE NO.: 0006341**

THE CLASS B WASTEWATER TREATMENT OPERATOR NAMED BELOW IS LICENSED UNDER THE PROVISIONS OF CHAPTER 403, FLORIDA STATUTES.

VALID UNTIL: 04/30/2025

TODD V. LARSON

RON DESANTIS — GOVERNOR

SHAWN HAMILTON — SECRETARY

DISPLAY IS REQUIRED BY LAW

U.S. ARMY CORPS OF ENGINEERS

NAVFAC

CERTIFICATE

David Lookabill

SAJ-08-23-00012

has completed the Corps of Engineers and Naval Facilities Engineering Command Training Course

CONSTRUCTION QUALITY MANAGEMENT FOR CONTRACTORS

EAA Area Office, Wellington, Florida	30 June 2023	Jacksonville District	Mark C. Waddell, Civil Engineer SAJ
Location	Training Date(s)	Instructional District/ NAVFAC	CQM-C Manager

Juan Sanchez Bulted P.E., PMP	juan.m.sanchez-bulted2@usace.army.mil	561-308-8679	
Facilitator/Instructor	Instructor's Email	Telephone	Facilitator/Instructor Signature

THIS CERTIFICATE EXPIRES FIVE YEARS FROM DATE OF ISSUE

Chief, Construction Division SAJ
Jim Jeffords, P.E.

FAA
Aviation Safety

Certificate of Achievement

This is to certify that

David Wayne Lookabill

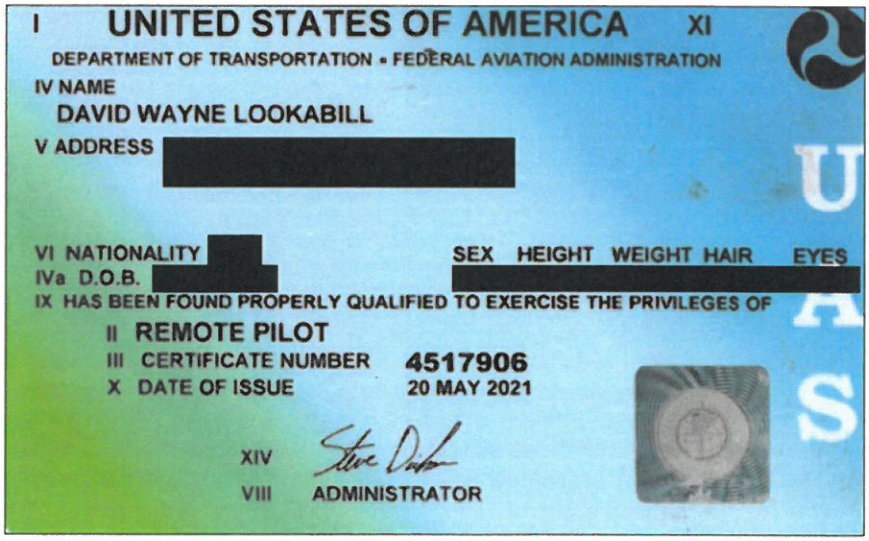
has successfully completed the
FAA Safety Team Aviation Learning Center Online Course

Part 107 Small Uas Recurrent

Course Number ALC-677
Presented by FAASTeam
May 11, 2023

Certificate Number 1424835-20230511-00677

Patricia Mathes, Manager, National FAA Safety Team



I UNITED STATES OF AMERICA XI
DEPARTMENT OF TRANSPORTATION • FEDERAL AVIATION ADMINISTRATION
IV NAME
DAVID WAYNE LOOKABILL
V ADDRESS [redacted]

VI NATIONALITY [redacted] SEX HEIGHT WEIGHT HAIR EYES
IVa D.O.B. [redacted]
IX HAS BEEN FOUND PROPERLY QUALIFIED TO EXERCISE THE PRIVILEGES OF
II REMOTE PILOT
III CERTIFICATE NUMBER 4517906
X DATE OF ISSUE 20 MAY 2021

XIV
VIII ADMINISTRATOR

U
A
S

FDOT
Florida Department of Transportation
RON DESANTIS
GOVERNOR
605 Suwannee Street
Tallahassee, FL 32399-0450
JARED W. PERDUE, P.E.
SECRETARY

March 14, 2023

Aneesh Goly, Principal
CRAIG A. SMITH & ASSOCIATES, LLC
21045 Commercial Trail
Boca Raton, Florida 33486

Dear Mr. Goly:

The Florida Department of Transportation has reviewed your application for prequalification package and determined that the data submitted is adequate to technically prequalify your firm for the following types of work:

Group 3 - Highway Design - Roadway

3.1 - Minor Highway Design

Group 7 - Traffic Operations Design

7.1 - Signing, Pavement Marking and Channelization

Group 8 - Survey and Mapping

8.1 - Control Surveying
8.2 - Design, Right of Way & Construction Surveying
8.4 - Right of Way Mapping

Your firm is now technically prequalified with the Department for Professional Services in the above referenced work types. Your firm may pursue projects in the referenced work types with fees estimated at less than $500,000.00.* This status shall be valid until November 29, 2023, for contracting purposes.
*Limit for FDOT projects only

Should you have any questions, please feel free to contact me by email at carliayn.kell@dot.state.fl.us or by phone at 850-414-4597.

Sincerely,

Carliayn Kell
Professional Services
Qualification Administrator

CONTACT:

CRAIG A. SMITH & ASSOCIATES

4152 W. Blue Heron Blvd.
Riviera Beach, FL 33404
561 314 4445
Stephen C. Smith, P.E., President
ssmith@craigasmith.com
www.craigasmith.com