

# ENGINEERING SOLUTIONS INTERNATIONAL

## QUALIFICATIONS



*Specialists in the Water and Wastewater Industry*

2960 SE 36<sup>th</sup> Lane • Ocala, FL 34471  
(352) 789.6336

116 Ledbury Drive • Longwood, FL 32779  
(407) 682.0817

# I. TITLE PAGE

## QUALIFICATIONS TO PROVIDE WATER & WASTEWATER CONSULTING SERVICES

*Presented by:*

### **ENVIRONMENTAL SOLUTIONS INTERNATIONAL**

2960 SE 36<sup>th</sup> Lane  
Ocala, FL 34471

116 Ledbury Drive  
Longwood, FL 32779

*Office Managers:*

#### **FRED LANE**

Telephone: (352) 789.6336

Cell: (352) 789.0398

E-mail: [fredlane.esi@gmail.com](mailto:fredlane.esi@gmail.com)

#### **LEE CAIN**

Telephone: (407) 682.0817

Cell: (407) 928.1555

E-mail: [leecain.esi@gmail.com](mailto:leecain.esi@gmail.com)



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### **III. LETTER OF INTRODUCTION**



**Engineering Solutions International** is pleased to present this Qualifications Summary to provide Water and Wastewater Consulting Services. **ENGINEERING SOLUTIONS INTERNATIONAL SPECIALIZES IN WATER AND WASTEWATER FACILITIES FOR PRIVATE AND MUNICIPAL UTILITIES.** In conjunction with our Professional Engineering Department, we have successfully provided these services to many governmental and private utilities with combined experience spanning over 80 years. As such, we bring extensive experience to any water and wastewater utilities project in consulting, design, operations, management, construction and inspection.



**Industry Authority** - Our extensive experience in providing design, consulting, operations, management, construction, and inspection services to local utilities has developed ESI into a trusted industry leader. Our approach to all clients needs give clients what they are truly looking for, often promised, but rarely found. A service oriented company willing to do what it takes and ask questions creating an interactive approach.

The company executives have been in the business for many years working, in many different aspects, of utilities and projects:

Fred Lane has extensive experience working in engineering firms in and around the State of Florida primarily employed as Project Manager and CEI department manager. Fred has also been privileged to own and operate several companies responsible for constructing, designing, troubleshooting and operating water & wastewater utilities and lift stations. In addition to his other qualities, Fred is a licensed building and underground contractor as well as a dual “A” Florida certified operator. Fred is currently serving as General Manager for ESI.



Lee Cain has also been employed with engineering firms in roles ranging from surveying and drafting in what he refers to as “the good old days”, to CEI and project manager. Lee has owned many environmental focused companies which specialized in contract operations, design, troubleshooting, maintenance, and construction of local utilities. Lee is also a dual Florida certified operator with numerous safety and other similar certifications. Lee is currently serving as Director of Operations for ESI.



Todd Petrie, P.E. is a Florida native, graduating from University of Central Florida, before entering a packed career working in the capacity of Project Engineer, Utilities Engineer, and Assistant Utilities Director for several municipalities and private sector engineering firms before serving as ESI's Director of Engineering for ESI projects. Todd brings to the table, a vast experience of not only design ability, but a full breadth of knowledge of how to work with and within municipal procedures and budget constraints.

**Authorized Representatives** – Fred Lane, General Manager and CEO, and Lee Cain, Director of Operations and CFO are authorized to make representations for the firm and both can be reached at the Ocala office and the Longwood office respectively.

**Summary** – Backed by our Professional Engineering Department, we believe that our utility experience, expertise and our interactive consulting process is second to none and serves our clients well. We deliver superior services for an excellent price and we look forward to having the opportunity to be of service to you in addressing your utility consulting, design, operations, management, construction and inspection needs. If you have any questions, or need any additional information, please do not hesitate to call Fred Lane at (352) 789.6336 or Lee Cain at (407) 682.0817.

Very truly yours,



Lee Cain  
Director of Operations



## **IV. RESUMES OF KEY PROJECT TEAM MEMBERS**

Resumes of the key project personnel are presented on the following pages.



# FREDERICK J. LANE

## General Qualifications

Mr. Lane is General Manager and CEO of Engineering Solutions International (ESI). He has over 35 years experience with private and governmental utilities. Starting on the ground floor of a local Florida municipal utility, he worked his way up learning all aspects of water and wastewater business including construction, budgeting, consulting, operations and management.

Over the years, Mr. Lane has held positions as Systems Manager of Pasco County and later as General Manager of North Beach Water Company. After which, he co-owned a motor sales, repair and service shop growing it into a multimillion dollar company. He has worked for numerous operations and maintenance firms as well as co-owning one known as Environmental Solutions International also growing it into a multi-million dollar company.

After being in business, he has been successfully employed by firms that specialize in the water and wastewater industry. One business included a local engineering firm in which he headed efforts to establish and grow the Construction Management and Construction Engineering Inspection (CEI) department which grew into one of the best in the state. During his tenure, he created and established protocols and procedures that have saved municipalities' time and money avoiding costly change orders and issues with contractors moving this arena of the company into a new higher standard of business.

Mr. Lane has owned and managed a construction business assisting many devastated homeowners after Hurricane Andrew blew through Homestead in 1992. During a time when contractors could charge high premiums, Mr. Lane became known as running an honest company with whom homeowners and insurance companies alike could trust him to deal with them honestly and fairly.

This transparent honesty has permeated Mr. Lane's career and is one reason Mr. Lane attributes his successes in every business he endeavors.

Mr. Lane's expertise covers a broad range of utility focuses and issues in which he regularly provides service in the following areas:

- *Design Consulting*
- *Cost estimating & Budgeting*
- *Construction Management & CEI*
- *Contract Negotiation*
- *Contract Management*
- *Regulatory Assistance*
- *Public Relations*
- *Utility Valuations*

## Education

Bachelors of Science in  
Environmental Engineering,  
Columbia Southern  
University, Alabama

Contractor's Prep School,  
Underground Utilities, 1989

Florida Construction School, 1988

Practical Hydraulics Workshop,  
Tampa 1983

State of Florida Short School,  
University of Florida,  
Gainesville, 1976-1983

Michigan State University,  
Principles of Management,  
1981

## Certifications

Class "A" Water Treatment Plant  
Operator

Class "A" Wastewater Treatment Plant  
Operator

State of Florida Underground Utility  
Contractor

State of Florida Licensed Building  
Contractor

Confined Space Certification

## Professional Affiliations

Florida Rural Water Association

National Rural Water Association

Florida Water Pollution Control  
Operators Association

American Water Works Association

Florida Institute of Consulting  
Engineers - Firm



# LEE CAIN

## General Qualifications

Mr. Cain is Director of Operations and CFO of Engineering Solutions International (ESI). He has over 25 years of experience with the private and municipal utilities. Starting as a surveyor and draftsman after college for an engineering firm, he learned the utility business literally from the ground up.

After obtaining certifications in the water and wastewater fields, eventually he started a contract operations business which grew to include repairs, construction, and design with gross revenues of over two million dollars. After partner was added, other businesses were started which included pump sales and repairs, lift station control design and sales, and new construction.

Mr. Cain has also played a major role when Florida Department of Environmental Protections (FDEP) rules and regulations changed in regards to water and wastewater facility compliance. Working closely with DEP regulators and rule creators, he helped create new written Standard Operational Procedures (SOP), Operation & Maintenance (O&M) and Cross Connection Manuals and other types of manuals, reports and plans for the needs of utility facilities with normal and re-use discharges.

Joining a local engineering firm as a Construction Engineer Inspector (CEI) manager, he helped grow the department implementing procedures that put the CEI team on the map as a first-class inspection team. A large part of the team philosophy is honesty coupled with communication before, during and after each project. Involving owners and engineers, as well as operators, maintenance personnel and manufacturers during the design steps proved to help avoid change orders making the new facilities easier to operate and more cost effective.

A very similar philosophy with Mr. Lane made for a stronger business ethic and for satisfied clientele. Much of the success of his business was due to word of mouth from satisfied clients who enjoyed being treated with speed and honesty.

Mr. Cain's expertise covers a broad range of utility focuses and issues in which he regularly provides service in the following areas:

- *Design Consulting*
- *Operations*
- *Construction Management & CEI*
- *Manual Writing*
- *Contract Management*
- *Regulatory Assistance*
- *Public Relations*
- *Utility Valuations*

## Education

Bachelors of Business  
Administration Degree  
Harding University,  
Searcy, Arkansas, 1985

University of Florida Short School

University of California,  
Sacramento

## Certifications

Class "C" Water Treatment Plant  
Operator

Class "C" Wastewater Treatment Plant  
Operator

Florida Stormwater Erosion & Sediment  
Control Certification

Trenching & Evacuation Certification

Confined Space Certification

## Professional Affiliations

Florida Rural Water Association

National Rural Water Association

Florida Water Pollution Control

Operators Association

American Water Works Association

Florida Institute of Consulting

Engineers - Firm



# TODD E. PETRIE, P.E.

## General Qualifications

Mr. Petrie is Director of Engineering Services for Engineering Solutions International (ESI). He has over 16 years experience with private and governmental utilities. As a native Floridian, graduating from UCF with a Bachelor of Science in Environmental Engineering, he has working in management and design positions for all aspects of water and wastewater engineering including construction projects, budgeting, consulting, asset management, SCADA configuration and utility management.

Over the years, Mr. Petrie has held positions as Project Engineer for the City of Kissimmee, Senior Utilities Engineer for the City of St. Cloud, Assistant Public Utilities Director for the City of Clearwater as well as Marion County Utilities. In these positions, he has supervised over 175 employees at any one time. As a professional engineer, he has often been responsible for different aspects of utility design and regulatory compliance. During that time he has also owned and operated a local engineering firm.

Working in the public sector, Mr. Petrie has had responsibility for plan reviews, budget reviews, capital improvements programs and overall project management. He has developed criteria for project coordination that has helped each municipality he has worked in, completing projects on budget and with as few complications and change orders as possible. He has worked with F.D.O.T. creating Joint Agreements for construction and property transfers, later negotiating with developers. After starting at a municipality, he would often overhaul the water, wastewater and reuse operations, as well as lab and maintenance divisions to create a better, more efficient work environment while always instituting asset and maintenance management practices.

Working with countless regulatory agencies, Mr. Petrie has worked closely with these agencies often making himself the expert on new legislation in order to keep the municipality at the peak of efficiency as well as applying for as many Project Grants that applied to his departments.

As a team member at ESI, honesty has directed Mr. Petrie's decision making ESI be a success in every project he oversees. Mr. Petrie's expertise covers a broad range of utility focuses and issues in which he regularly provides service in the following areas:

- *Design and Consulting*
- *Utility efficiency improvement*
- *Operation Programs creation and implementation*
- *Asset Management and work flow analysis*
- *SCADA configuration*
- *Regulatory Assistance*
- *Utility Management*



## Education

Bachelors of Science in  
Environmental Engineering,  
University of Central Florida  
Orlando, Florida 1993

Associates of Arts  
Polk Community College  
Winter Haven, Florida 1991

## Certifications

Licensed Professional Engineer  
Florida PE# 53204

## Professional Affiliations

Florida Institute of Consulting  
Engineers - Firm  
Water Environmental Federation  
(FWEA/FIPA presenter)  
American Water Works Association  
American Society of Civil Engineers  
Florida Engineering Society

## **A. PROJECTS**

### **COMBINED PROJECT EXPERIENCE**

- Project Management, CEI, Contract Administration. Potable water treatment plant expansion for Poinciana Water Systems for FGUA and Toho Water Authority. Increased capacity of plant, added high service pumps, electrical controls and PLC.
- Project Management, CEI, Contract Administration. Marion Oaks Water Treatment Plant for Marion County Utilities. These featured new high service pump stations to increase the capacity from 1.8 to 4.5 MGD; a 1 million gallon pre-stressed concrete ground storage tank; new well; electrical components and controls; and chlorination system and buildings for controls and chlorination system.
- Project Management, CEI, Contract Administration. New commercial subdivision from the bidding process to the final closeout. Included new roadways, FDOT tie-in with Interstate 75 off ramp, sidewalks, grading, drainage and DRA's, sewer lines with lift station, potable water wells with treatment plant and piping.
- Project Management, CEI, Contract Administration. Water main relocation in association with the widening of State Road 20 in Interlachen. Services included the relocation, re-routing and funding coordination with FDOT, inspection services with Town of Interlachen.
- Project Management, CEI, Contract Administration. Design and installation of upgraded and new lift stations for FDEP special grant project in Crystal River. Reviewed all plans and specification as well as construction engineering inspections from inception to completion.
- Project Management, CEI, Contract Administration. Potable water treatment plant for the Kunal II commercial development in Marion County. The design included raw water wells, disinfection system, hydro pneumatic tanks, electrical components and controls.
- Project Management, CEI, Contract Administration. Tremont Water Treatment Plant for Town of Interlachen. New well pump with generator, yard piping, and new building with new control and chlorination systems.
- Troubleshooting, Consulting. Marion County Utilities. Inspected Wastewater Treatment Facility in regards to all aspects: Design, Construction, Operations, Standard Operating Procedures, and Personnel. Report created to bring system back into compliance and made recommendations for future Re-Use capabilities.

### **Municipal Clientele:**



*Toho Water Authority*



*Marion County Utilities*



*City of Crystal River*



*Town of Interlachen*



*US Virgin Islands*



*City of Altamonte Springs*



*City of Ocoee*

*City of Tarpon Springs*



- Quality Assurance of newly designed and constructed bank protection on intake and discharge canal revetments for FP&L Nuclear Power Plant in Port St. Lucie, FL.
- Construction. Upgrades to drinking water system for the City of Apopka.
- Construction. Concrete reconstruction and restoration for manholes around the city of Fort Pierce.
- Construction. New street-level lift stations and manholes for the City of North Miami.
- Construction. De-chlorination system for the City of Altamonte Springs.
- Equipment calibration contract for City of Orlando
- Contract Operations, Maintenance & Repairs, Consulting. Misc ongoing contracts with over 150 local water and wastewater treatment facilities and Utilities. Varied responsibilities included:
  - Contract operations
  - Repairs
  - Inspection
    - Compliance
    - Operations
  - Design assistance for drainage, water and wastewater facilities
  - Utility relocations
  - Utility coordination
  - Repair of treatment plant equipment
  - Consulting and representation with FDEP
  - Construction management and consulting - pre-bid research studies to final completion of projects.
  - Lift station rehabs
  - Construction of new and rehabbed facilities

**Municipal Clientele:**



*City of Fort Pierce*



*City of North Miami*



*City of Apopka*



*City of Kissimmee*



*City of St. Cloud*



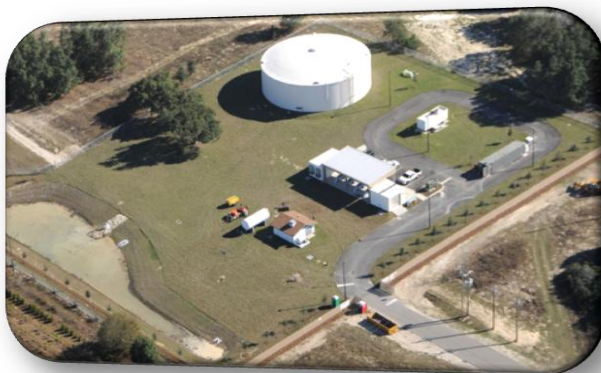
*City of Clearwater*

## **V. Areas of Practice**



*Engineering Solutions International (ESI)* is a consulting firm that specializes in serving the public & private agencies by providing a variety of water, wastewater, storm water, reclaimed water operations and other services. *ESI's* service team members give clientele the very best our field has to offer. With outstanding communication, our integrated approach to public & private agency challenges, along with our innovative solutions and responsive, experienced staff, *ESI* is becoming the preferred consultant in the utility industry. Long Term Contracts, Project Specific, Staff Support, or One Time Consulting are just a few of the avenues *ESI* would be proud to serve you.

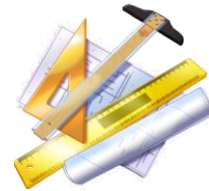
- **Engineering - Utilities**
- **Capacity Analysis**
- **Permitting & Renewals**
- **Potable Water & Wastewater Design / Build  
& Contract Operations**
- **FDEP Consulting**
- **Construction Engineering Management & Inspection Services**
- **Bid & Contract Administration**
- **Plan Review**
- **Utility Maintenance, Repair & Construction**
- **Facility Compliance Inspection, Evaluation & Analysis**
- **Facility Value Assessment**
- **Tank Inspections**
- **Asset Management**
- **Preventative Maintenance Programs**
- **Utility Management Services**
- **Grease Trap, CBOD Removal and Consulting**
- **Pond Restoration & Clean-up**



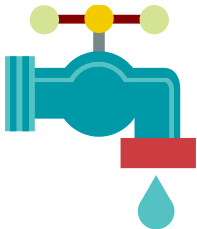
## VI. TYPICAL APPROACH

This section presents our typical approach to a utility project.

**Our Interactive Approach to Design** - Our unique approach to providing comprehensive services for all projects, large and small, is to carefully review the needs of the client and the scope of services. We attempt to fully understand the activities that are necessary to assure that the project as designed is constructed in conformity with the client needs. Our overlying rationale and approach can be described in two words: **COMMUNICATION AND DOCUMENTATION**. Coupled with the practical experience of the company personnel, many potential issues are discovered before construction begins. Listening to clients needs and desires for design, ensuring that all persons, from owner to operator and maintenance repair person are given an opportunity to voice potential issues and ideas, have lead to changes in design that lead to fewer change orders and other issues after a facility is brought on line which actually lowers costs.



**Our Interactive Approach for Utilities** - Our interactive approach also applies to our utility operations and troubleshooting services for all projects, large and small. As business owners and operators, we understand the issues that often create customers and/or FDEP anxiety. However, understanding it is only half the problem. Communication and willingness to be proactive plays a big part in maintaining good customer and public relations as well as preserving a good relationship with FDEP and other state regulatory authorities.



**Our Interactive Approach for Construction Management** - Our interactive approach also serves very well before, during and after construction. Before construction, communications with our engineers, owners, operators and FDEP help avoid costly delays during construction due to change orders. Fully understanding the client's needs, FDEP requirements as well as the operator's needs, a facility can be constructed right "the first time". Most of the problems associated with design, planning, construction administration and inspection are due to a lack of accurate and constant communication or improper or poor documentation of these communications. In an era of e-mails, cell phones, document scanning, computer based RFI systems, etc., construction professionals have the ability to minimize or eliminate problems that may arise. Communication and documentation protocols extend from the very way we think to the execution of these services. *ESI* integrates these protocols into every professional effort to bring utility projects to a successful and satisfying completion.

