

*CITY OF POMPANO BEACH,  
FLORIDA*

**PROFESSIONAL CONSULTING AGREEMENT**

**with**

**TERRACON CONSULTANTS, INC.**



**CONTINUING CONTRACT FOR ENVIROMENTAL TESTING  
SERVICES FOR VARIOUS CITY PROJECTS E-22-20**

**CONTRACT FOR  
PROFESSIONAL CONSULTING SERVICES**

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This Contract is made on \_\_\_\_\_, by and between the CITY OF POMPANO BEACH, a municipal corporation of the State of Florida, hereinafter referred to as "CITY," and TERRACON CONSULTANTS, INC. a Delaware corporation, authorized to do business in Florida, hereinafter referred to as the "Consultant".

**WHEREAS**, the Consultant is able and prepared to provide such services as City requires under the terms and conditions set forth herein; and

**WHEREAS**, the City Commission has approved the recommendation that Consultant be employed by the City and authorized the negotiation of contractual terms.

**NOW, THEREFORE**, in consideration of the mutual promises herein, the City and the Consultant agree as follows:

**ARTICLE 1 – SERVICES/CONSULTANT AND CITY REPRESENTATIVES**

The Consultant's responsibility under this Contract is to provide professional consulting services as more specifically set forth in RLI No. E-22-20 attached hereto as Exhibit A and incorporated herein in its entirety.

The Consultant's representative shall be Richard A. Minichiello

The CITY's representative shall be City Engineer or designee,

**ARTICLE 2 – TERM**

The CONSULTANT shall adhere to the schedule given in each work authorization after receiving the "Notice to Proceed."

Reports and other items shall be delivered or completed in accordance with the detailed schedule set forth in individual Work Authorizations as negotiated.

The Term of this Contract shall be for an initial period of five (5) years from the date of execution by both the City and the Consultant.

### ARTICLE 3 – PAYMENTS TO CONSULTANT

A. City agrees to pay Consultant in consideration for its services described herein. It is the intention of the parties hereby to ensure that unless otherwise directed by the City in writing, Consultant will continue to provide services as specified in Exhibit A for the term of this Contract.

B. Price Formula. City agrees to pay Consultant as negotiated on a Work Authorization basis. Each work authorization shall specifically identify the scope of the work to be performed and the fees for said services. As set forth in RLI No. E-22-20, professional services under this contract will be restricted to those required for any project for which construction costs will not exceed four million dollars (\$4,000,000.00), and for any study activity fees shall not exceed five hundred thousand dollars (\$500,000.00).

C. Fee Determination. Each individual Work Authorization may be negotiated for fees to be earned by Time and Materials with a Not to Exceed Amount, Lump Sum, or a combination of both methods for subtasks contained therein. The total amount to be paid by the City under a Work Authorization shall not exceed specified amounts for all services and materials including “out of pocket” expenses as specified in Paragraph E below and also including any approved subcontracts unless otherwise agreed in writing by both parties. The Consultant shall notify the City’s Representative in writing when 90% of the “not to exceed amount” for the total Work Authorization has been reached. The Consultant will bill the City on a monthly basis, or as otherwise provided. Time and Materials billing will be made at the amounts set forth in Exhibit B for services rendered toward the completion of the Scope of Work. Where incremental billings for partially completed items are permitted, the total billings shall not exceed the estimated percentage of completion as of the billing date. It is acknowledged and agreed to by the Consultant that the dollar limitation set forth in this section is a limitation upon and describes the maximum extent of City’s obligation to pay Consultant, but does not include a limitation upon Consultant’s duty to perform all services set forth in Exhibit A for the total compensation in the amount or less than the guaranteed maximum stated above.

D. Invoices received by the City from the Consultant pursuant to this Contract will be reviewed and approved in writing by the City’s Representative, indicating that services have been rendered in conformity with the Contract, and then will be sent to the City’s Finance Department for payment. All invoices shall contain a detailed breakdown of the services provided for which payment is being requested. In addition to detailed invoices, upon request of the City’s representative, Consultant shall provide City with detailed periodic Status Reports on the project. All invoice payments by City shall be made after the Work has been verified and completed. Unless disputed by City as provided herein, upon City’s receipt of a Proper Invoice as defined in §218.72, Florida Statutes, as amended, City shall forward Consultant payment for work performed within forty five (45) days for all goods and services provided.

City may temporarily remove for review any disputed amount, by line item, from an invoice and shall timely provide Consultant written notification of any such disputed charge. Consultant shall provide clarification and a satisfactory explanation to City, along with revised copies of all such documents if inaccuracies or errors are discovered, within ten (10) days of receipt of City’s notice of the disputed amount

In the event City has a claim against Consultant for Work performed hereunder which has not been timely remedied in accordance with the provisions of this Article 3, City may withhold payment for the contested amount, in whole or in part, to protect itself from loss on account of defective Work, claims filed or reasonable evidence indicating probable filing of claims by other parties against Consultant, and/or Consultant's failure to make proper payments to subcontractors or vendors for material or labor. When the reason(s) for withholding payment are removed or resolved in a manner satisfactory to City, payment shall be made.

E. "Out-of-pocket" expenses shall be reimbursed up to an amount not to exceed amounts included in each Work Authorization. All requests for payment of "out-of-pocket" expenses eligible for reimbursement under the terms of this Contract shall include copies of paid receipts, invoices, or other documentation acceptable to the City's Representative and to the Finance Department. Such documentation shall be sufficient to establish that the expense was actually incurred and necessary in the performance of the Scope of Work described in a Work Authorization and this Contract. All out-of-pocket, reimbursables and expenses shall be billed at actual amount paid by Consultant, with no markup.

F. Final Invoice. In order for both parties herein to close their books and records, the Consultant will clearly state "Final Invoice" on the Consultant's final/last billing to the City. This final invoice shall also certify that all services provided by Consultant have been properly performed and all charges and costs have been invoiced to the City. Because this account will thereupon be closed, any and other further charges not properly included on this final invoice are waived by the Consultant.

#### **ARTICLE 4 – TRUTH-IN-NEGOTIATION CERTIFICATE**

Signature of this Contract by the Consultant shall also act as the execution of a truth in negotiation certificate, certifying that the wage rates, overhead charges, and other costs used to determine the compensation provided for this Contract are accurate, complete and current as of the date of the Contract and no higher than those charged the Consultant's most favored customer for the same or substantially similar service. Should the City determine that said rates and costs were significantly increased due to incomplete, non-current or inaccurate representation, then said rates shall be adjusted accordingly.

#### **ARTICLE 5 – TERMINATION**

City shall have the right to terminate this Contract, in whole or in part, for convenience, cause, default or negligence on Consultant's part, upon ten (10) business days advance written notice to Consultant. Such Notice of Termination may include City's proposed Transition Plan and timeline for terminating the Work, requests for certain Work product documents and materials, and other provisions regarding winding down concerns and activities.

If there is any material breach or default in Consultant's performance of any covenant or obligation hereunder which has not been remedied within ten (10) business days after City's

written Notice of Termination, City, in its sole discretion, may terminate this Contract immediately and Consultant shall not be entitled to receive further payment for services rendered from the effective date of the Notice of Termination.

In the event of termination, City shall compensate Consultant for all authorized Work satisfactorily performed through the termination date under the payment terms set forth in Article 3 above and all Work product documents and materials shall be delivered to City within ten (10) business days from the Notice of Termination. If any Work hereunder is in progress but not completed as of the date of the termination, then upon City's written approval, this Contract may be extended until said Work is completed and accepted by City.

This Contract may be cancelled by the Consultant, upon thirty (30) days prior written notice to the City's Representative, in the event of substantial failure by the City to perform in accordance with the terms of this Contract through no fault of the Consultant.

## **ARTICLE 6 – PERSONNEL**

The Consultant is, and shall be, in the performance of all work services and activities under this Contract, an independent Contractor, and not an employee, agent or servant of the City. All persons engaged in any of the work or services performed pursuant to this Contract shall at all times, and in all places, be subject to the Consultant's sole direction, supervision, and control and shall not in any manner be deemed to be employees of the City. The Consultant shall exercise control over the means and manner in which it and its employees perform the work. This contract does not create a partnership or joint venture between the parties.

The Consultant represents that it has, or will secure at its own expense, all necessary personnel required to perform the services under this Contract. Such personnel shall not be employees of or have any contractual relationship with the City, nor shall such personnel be subject to any withholding for tax, Social Security or other purposes by the City, nor be entitled to any benefits of the City including, but not limited to, sick leave, pension benefits, vacation, medical benefits, life insurance, workers or unemployment compensation benefits, or the like from the City.

All of the services required hereunder shall be performed by the Consultant or under its supervision, and all personnel engaged in performing the services shall be fully qualified and, if required, authorized or permitted under state and local law to perform such services.

Any changes or substitutions in the Consultant's key personnel, as may be listed in Article 1, must be made known to the City's Representative at the time substitution becomes effective.

The Consultant warrants that all services shall be performed by skilled and competent personnel to the degree exercised by consultants performing the same or similar services in the same location at the time the services are provided.

## **ARTICLE 7 – SUBCONTRACTING**

Consultant may subcontract any services or work to be provided to City with the prior written approval of the City's Representative. The City reserves the right to accept the use of a subcontractor or to reject the selection of a particular subcontractor and to inspect all facilities of any subcontractors in order to make determination as to the capability of the subcontractor to perform properly under this Contract. The City's acceptance of a subcontractor shall not be unreasonably withheld. The Consultant is encouraged to seek small business enterprises and to utilize businesses that are physically located in the City of Pompano Beach with a current Business Tax Receipt for participation in its subcontracting opportunities.

## **ARTICLE 8 – FEDERAL AND STATE TAX**

The City is exempt from payment of Florida State Sales and Use Taxes. The City will provide the Consultant with the current state issued exemption certificate. The Consultant shall not be exempted from paying sales tax to its suppliers for materials used to fulfill contractual obligations with the City, nor is the Consultant authorized to use the City's Tax Exemption Number in securing such materials.

The Consultant shall be responsible for payment of its own and its share of its employees' payroll, payroll taxes and benefits with respect to this Contract

## **ARTICLE 9 – AVAILABILITY OF FUNDS**

The City's performance and obligation to pay under this contract is contingent upon appropriation for various projects, tasks and other professional services by the City Commission.

## **ARTICLE 10 - INSURANCE REQUIREMENTS**

The Consultant shall not commence work under this Contract until it has obtained all insurance required under this paragraph and such insurance has been approved by the Risk Manager of the City, nor shall the Consultant allow any Subcontractor to commence work on its sub-contract until the aforementioned approval is obtained.

CERTIFICATE OF INSURANCE, reflecting evidence of the required insurance, shall be filed with the Risk Manager prior to the commencement of the work. The Certificate shall contain a provision that coverage afforded under these policies will not be cancelled, will not expire and will not be materially modified until at least thirty (30) days prior written notice has been given to the City. Policies shall be issued by companies authorized to conduct business under the laws of the State of Florida and shall have adequate Policyholders and Financial ratings in the latest ratings of A. M. Best and be part of the **Florida Insurance Guarantee Association Act**.

Insurance shall be in force until all work required to be performed under the terms of the Contract is satisfactorily completed as evidenced by the formal acceptance by the City. In the event the Insurance Certificate provided indicates that the insurance shall terminate and lapse during the period of this Contract, the Consultant shall furnish, at least ten (10) days prior to the

expiration of the date of such insurance, a renewed Certificate of Insurance as proof that equal and like coverage for the balance of the period of the Contract and extension thereunder is in effect. The Consultant shall not continue to work pursuant to this Contract unless all required insurance remains in full force and effect.

Limits of Liability for required insurance are shown in Exhibit C.

The City of Pompano Beach must be named as an additional insured for the Automobile and Commercial General Liability Coverage.

For Professional Liability, if coverage is provided on a claims made basis, then coverage must be continued for the duration of this Contract and for not less than one (1) year thereafter, or in lieu of continuation, provide an "extended reporting clause" for one (1) year.

Consultant shall notify the City Risk Manager in writing within thirty (30) days of any claims filed or made against the Professional Liability Insurance Policy.

For Workers' Compensation Insurance, coverage shall be maintained during the life of this Contract to comply with statutory limits for all employees, and in the case of any work sublet, the Consultant shall require any Subcontractors similarly to provide Workers' Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the Consultant. The Consultant and his Subcontractors shall maintain during the life of this Contract Employer Liability Insurance.

## **ARTICLE 11 – INDEMNIFICATION**

A. Consultant shall at all times indemnify, hold harmless the City, its officials, employees, volunteers and other authorized agents from and against any and all claims, demands, suit, damages, attorneys' fees, fines, losses, penalties, defense costs or liabilities suffered by the City to the extent caused by any negligent act, omission, breach, recklessness or misconduct of Consultant and/or any of its agents, officers, or employees hereunder, including any inaccuracy in or breach of any of the representations, warranties or covenants made by the Consultant, its agents, officers and/or employees, in the performance of services of this contract. To the extent considered necessary by City, any sums due Consultant hereunder may be retained by City until all of City's claims for indemnification hereunder have been settled or otherwise resolved, and any amount withheld shall not be subject to payment or interest by City.

B. Consultant acknowledges and agrees that City would not enter into this Contract without this indemnification of City by Consultant. The parties agree that one percent (1%) of the total compensation paid to Consultant hereunder shall constitute specific consideration to Consultant for the indemnification provided under this Article and these provisions shall survive expiration or early termination of this Contract.

C. Nothing in this Agreement shall constitute a waiver by the City of its sovereign immunity limits as set forth in section 768.28, Florida Statutes. Nothing herein shall be construed as consent from either party to be sued by third parties.

## **ARTICLE 12 – SUCCESSORS AND ASSIGNS**

The City and the Consultant each binds itself and its partners, successors, executors, administrators and assigns to the other party of this Contract and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Contract. Except as above, neither the City nor the Consultant shall assign, sublet, encumber, convey or transfer its interest in this Contract without prior written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the City, which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the City and the Consultant.

## **ARTICLE 13 – REMEDIES**

The laws of the State of Florida shall govern this Contract. Any and all legal action between the parties arising out of the Contract will be held in Broward County. No remedy herein conferred upon any party is intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power or remedy hereunder shall preclude any other or further exercise thereof.

## **ARTICLE 14 – CONFLICT OF INTEREST**

The Consultant represents that it has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder, as provided for in the Code of Ethics for Public Officers and Employees (Chapter 112, Part III, Florida Statutes). The Consultant further represents that no person having any interest shall be employed for said performance.

The Consultant shall promptly notify the City's representative, in writing, by certified mail, of a potential conflict(s) of interest for any prospective business association, interest or other circumstance, which may influence or appear to influence the Consultant's judgment or quality of services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that the Consultant may undertake and request an opinion of the City as to whether the association, interest or circumstance would, in the opinion of the City, constitute a conflict of interest if entered into by the Consultant. The City agrees to notify the Consultant of its opinion by certified mail within thirty (30) days of receipt of notice by the Consultant. If, in the opinion of the City, the prospective business association, interest, or circumstance would not constitute a conflict of interest by the Consultant, the City shall so state in the notice and the Consultant shall at its option, enter into said association, interest or circumstance and it shall be deemed not a conflict of interest with respect to services provided to the City by the Consultant under the terms of this Contract.



## **ARTICLE 15 – EXCUSABLE DELAYS**

The Consultant shall not be considered in default by reason of any failure in performance if such failure arises out of causes reasonably beyond the control of the Consultant or its subcontractors and without their fault or negligence. Such causes include, but are not limited to, acts of God; natural or public health emergencies; freight embargoes; and abnormally severe and unusual weather conditions.

Upon the Consultant's request, the City shall consider the facts and extent of any failure to perform the work and, if the Consultant's failure to perform was without it, or its subcontractors' fault or negligence, the Contract Schedule and/or any other affected provision of this Contract shall be revised accordingly; subject to the City's rights to change, terminate, or stop any or all of the work at any time.

## **ARTICLE 16 – DEBT**

The Consultant shall not pledge the City's credit or attempt to make it a guarantor of payment or surety for any contract, debt, obligation, judgment, lien or any form of indebtedness. The Consultant further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Contract.

## **ARTICLE 17 – DISCLOSURE AND OWNERSHIP OF DOCUMENTS**

The Consultant shall deliver to the City's representatives for approval and acceptance, and before being eligible for final payment of any amounts due, all documents and materials prepared by and for the City under this Contract.

All written and oral information not in the public domain or not previously known, and all information and data obtained, developed, or supplied by the City or at its expense will be kept confidential by the Consultant and will not be disclosed to any other party, directly or indirectly, without the City's prior written consent unless required by a lawful order. All drawings, maps, sketches, programs, data base, reports and other data developed, or purchased, under this Contract for or at the City's expense shall be and remain the City's property and may be reproduced and reused at the discretion of the City.

A. The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Consultant shall comply with Florida's Public Records Law, as amended. Specifically, the Consultant shall:

1. Keep and maintain public records required by the City in order to perform the service.

2. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law.

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Consultant does not transfer the records to the City.

4. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Consultant, or keep and maintain public records required by the City to perform the service. If the Consultant transfers all public records to the City upon completion of the contract, the Consultant shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Consultant keeps and maintains public records upon completion of the contract, the Consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

B. Failure of the Consultant to provide the above described public records to the City within a reasonable time may subject Consultant to penalties under 119.10, Florida Statutes, as amended.

## **PUBLIC RECORDS CUSTODIAN**

**IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

**CITY CLERK  
100 W. Atlantic Blvd., Suite 253  
Pompano Beach, Florida 33060  
(954) 786-4611  
[RecordsCustodian@copbfl.com](mailto:RecordsCustodian@copbfl.com)**

All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party pursuant hereto, including but not limited to any representations made herein relating to disclosure or ownership of documents, shall survive the execution and delivery of this Contract and the consummation of the transactions contemplated thereby.

## **ARTICLE 18 – CONTINGENT FEES**

The Consultant warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Consultant to solicit or secure this Contract and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Consultant, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Contract. Violation of this Article shall constitute a forfeiture of this Contract by Consultant.

## **ARTICLE 19 – ACCESS AND AUDITS**

The Consultant shall maintain adequate records to justify all charges, expenses, and cost incurred in estimating and performing the work for at least three (3) years after completion of this Contract. The City shall have access to such books, records and documents as required in this section for the purpose of inspection or audit during normal business hours, at the Consultant's place of business.

## **ARTICLE 20 – NONDISCRIMINATION**

The Consultant warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, marital status and sexual orientation.

## **ARTICLE 21 – INTERPRETATION**

The language of this Contract has been agreed to by both parties to express their mutual intent and no rule of strict construction shall be applied to either party hereto. The headings are for reference purposes only and shall not affect in any way the meaning or interpretation of this Contract. All personal pronouns used in this Contract shall include the other gender, and the singular, the plural, and vice versa, unless the context otherwise requires.

## **ARTICLE 22 – AUTHORITY TO PRACTICE**

The Consultant hereby represents and warrants that it has and will continue to maintain all licenses and approvals required conducting its business, and that it will at all times conduct its business activities in a reputable manner. Proof of such licenses and approvals shall be submitted to the City's representative upon request.

## **ARTICLE 23 – SEVERABILITY**

If any term or provision of this Contract, or the application thereof to any person or circumstances shall, to any extent be held invalid or unenforceable, to remainder of this Contract, or the application of such terms or provision, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected, and every other term and provision of this Contract shall be deemed valid and enforceable to the extent permitted by law.

## **ARTICLE 24 – ENTIRETY OF CONTRACTUAL AGREEMENT**

The City and the Consultant agree that this Contract, together with the Exhibits hereto, sets forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein. It is further agreed that no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and off equal dignity herewith. None of the provisions, terms and conditions contained in this Contract may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto in accordance with Article 25 – Modification of Work. In the event of any conflict or inconsistency between this Contract and the provisions in the incorporated Exhibits, the terms of this Contract shall supersede and prevail over the terms in the Exhibits.

## **ARTICLE 25 – MODIFICATION OF SCOPE OF WORK**

The City reserves the right to make changes in the Scope of Work, including alterations, reductions therein or additions thereto. Upon receipt by the Consultant of the City's notification of a contemplated change, the Consultant shall, in writing: (1) provide a detailed estimate for the increase or decrease in cost due to the contemplated change; (2) notify the City of any estimated change in the completion date; and (3) advise the City if the contemplated change shall affect the Consultant's ability to meet the completion dates or schedules of this Contract.

If the City so instructs in writing, the Consultant shall suspend work on that portion of the Scope of Work affected by a contemplated change, pending the City's decision to proceed with the change.

If the City elects to make the change, the City shall initiate a Work Authorization Amendment and the Consultant shall not commence work on any such change until such written amendment is signed by the Consultant and the City Manager, and if such amendment is in excess of \$75,000, it must also first be approved by the City Commission and signed by the appropriate City Official authorized by the City Commission

The City shall not be liable for payment of any additional or modified work, which is not authorized in the manner provided for by this Article.

## **ARTICLE 26 – NOTICE**

All notices required in this Contract shall be sent by certified mail, return receipt requested, to the following:

### **FOR CITY:**

City Manager  
City of Pompano Beach  
Post Office Drawer 1300  
Pompano Beach, Florida 33061

**FOR CONSULTANT:**

Terracon Consultants, Inc.  
5371 NW 33<sup>rd</sup> Ave, Suite 201  
Fort Lauderdale, FL 33309

**ARTICLE 27 – OWNERSHIP OF DOCUMENTS**

All finished or unfinished documents, data, reports, studies, surveys, drawings, maps, models and photographs prepared or provided by the Consultant in connection with this Contract shall become property of the City, whether the project for which they are made is completed or not, and shall be delivered by Consultant to City within ten (10) days of notice of termination. If applicable, City may withhold any payments then due to Consultant until Consultant complies with the provisions of this section.

**ARTICLE 28 – PROMOTING PROJECT OBJECTIVES**

Consultant, its employees, subcontractors, and agents shall refrain from acting adverse to the City’s interest in promoting the goals and objectives of the projects. Consultant shall take all reasonable measures necessary to effectuate these assurances. In the event Consultant determines it is unable to meet or promote the goals and objectives of the projects, it shall immediately notify the City and the City, may then in its discretion, terminate this Contract.

**ARTICLE 29 – PUBLIC ENTITY CRIMES ACT**

As of the full execution of this Contract, Consultant certifies that in accordance with §287.133, Florida Statutes, it is not on the Convicted Vendors List maintained by the State of Florida, Department of General Services. If Consultant is subsequently listed on the Convicted Vendors List during the term of this Contract, Consultant agrees it shall immediately provide City written notice of such designation in accordance with Article 26 above.

**ARTICLE 30 – GOVERNING LAW**

This Contract must be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement will be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claim arising from, related to, or in connection with this Agreement must be litigated in federal court, the exclusive venue for any such lawsuit will be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.

**ARTICLE 31 - BINDING EFFECT**

The benefits and obligations imposed pursuant to this Contract shall be binding and enforceable by and against the parties hereto.

**THE REMAINDER OF THE PAGE IS INTENTIONALLY LEFT BLANK**

**“CITY”**

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed the day and year hereinabove written.

Attest:

**CITY OF POMPANO BEACH**

\_\_\_\_\_  
ASCELETA HAMMOND, CITY CLERK

By: \_\_\_\_\_  
REX HARDIN, MAYOR

(SEAL)

By: \_\_\_\_\_  
GREGORY P. HARRISON, CITY MANAGER

APPROVED AS TO FORM:

\_\_\_\_\_  
MARK E. BERMAN, CITY ATTORNEY

**"CONSULTANT"**

**TERRACON CONSULTANTS, INC.**

Witnesses:

[Handwritten Signature]

Signature

SERGIO A. ADASME

Name Typed, Printed or Stamped

[Handwritten Signature]

Signature

Andrés M. Carmona C.

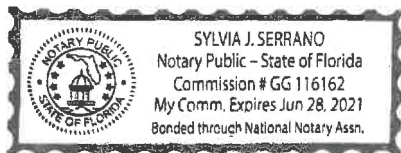
Name Type, Printed or Stamped

By: [Handwritten Signature]  
Richard A. Minichiello, Vice President

STATE OF Florida  
COUNTY OF Broward

The foregoing instrument was acknowledged before me, by means of  physical presence or  online notarization, this 1st day of April, 2021, by Richard A. Minichiello, as Vice President of TERRACON CONSULTANTS, INC., a Delaware corporation, authorized to do business in Florida, on behalf of the corporation. He is personally known to me or who has produced n/a (type of identification) as identification.

NOTARY'S SEAL:



[Handwritten Signature]  
NOTARY PUBLIC, STATE OF Florida

Sylvia J. Serrano  
(Name of Acknowledger Typed, Printed or Stamped)

GG116162  
Commission Number





Florida's Warmest Welcome

**CITY OF POMPANO BEACH  
REQUEST FOR LETTERS OF INTEREST  
E-22-20**

**CONTINUING CONTRACT FOR PROFESSIONAL  
ENVIRONMENTAL TESTING**

**RLI OPENING: August 10, 2020 2:00 P.M.  
PURCHASING OFFICE  
1190 N.E. 3RD AVENUE, BUILDING C (Front)  
POMPANO BEACH, FLORIDA 33060**

July 9, 2020

CITY OF POMPANO BEACH, FLORIDA  
REQUEST FOR LETTERS OF INTEREST  
E-20-20

CONTINUING CONTRACT FOR PROFESSIONAL ENVIRONMENTAL TESTING

Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020**. Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: <https://pompanobeachfl.ionwave.net>. The City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

### **Introduction**

The City of Pompano Beach is seeking qualified engineering firms to work on various projects for the City. The projects range in magnitude from small-scale to large or specialized designs.

### **The types of projects to be undertaken may include, but are not limited to:**

- The City's approved Capital Improvement Plan (CIP) maybe found here: [Adopted Capital Improvement Plan FY 2020-2024](#)
- Preparation of Phase I, Phase II, and Phase III assessments
- Roadway, Streetscape or Parking Lot projects.
- Water or Reuse Main projects.
- Gravity Sewer Main projects.
- Force Main projects.
- Lift station/pump station rehabilitation projects.
- Parks and Recreational Facilities.
- Seawall and dock construction and repair.
- Storm Water/Drainage Improvement projects
- Consultation for Emergency Water/Wastewater/Stormwater Repairs.
- Inspection Services for Emergency Water/Wastewater/Stormwater Repairs.
- Canal and lake dredging.
- Grant reimbursement, FAA and FDOT support and compliance.

- SRF support and Davis Bacon Wage Reporting requirements
- Support Services for Remediation
- Demolition Projects

### **Scope of Services**

The City intends to issue multiple contracts to engineering firms to provide continuing professional services to the City for various projects as-needed. Professional services under this contract will be restricted to those required for any project for which construction costs will not exceed \$4 million, and for any study activity for which fees will not exceed \$500,000.00.

### **The scope of services may include, but is not limited to, the following:**

- Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis.
- Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City)
- Provide project management services for projects, including turbidity monitoring.
- Prepare recommendations and cost estimates for compliance with regulatory requirements.
- Provide project close-out services. This may include preliminary and final acceptance of projects, preparation and approval of punch list items and project certification as required to all permitting agencies.
- Prepare reports for regulatory compliance monitoring and assessments.
- Reporting on endangered animals (turtles and owls)

Firms must have demonstrated and specific experience in coordinating with local, county, state, and federal regulatory agencies as it relates to environmental regulatory requirements.

Additionally, if firms do not have in-house testing capabilities, they must detail the nature and extent of partnerships with a qualified firm or laboratory. Laboratories performing analytical work must be NELAC certified for the analytes of interest and operate under a Laboratory Quality Manual following NELAC requirements. Firms performing environmental sampling or field data collection must have a Field Sampling Quality Manual and follow the current Florida Department of Environmental Protection Standard Operating Procedures.

Firms must have previous municipal experience and must be licensed to practice **Professional Environmental Testing** in the State of Florida, as required by all applicable Florida State Statutes and Board of Professional Regulation.

#### **A. Task/Deliverables**

Tasks and deliverables will be determined per project. Each project shall require a signed Work Authorization (WA) form from the awarded firm to be provided to the City. Forms shall be completed in its entirety and include the agreed upon scope, tasks, schedule, cost, and deliverables for the project. Consultant will be required to provide all applicable insurance requirements.

#### **B. Term of Contract**

The Term of this Contract shall be for an initial period of five (5) years from the date of execution by both the City and the Consultant.

**C. Project Web Requirements:**

1. This project will utilize e-Builder Enterprise™, a web-based project management tool. This web-based application is a collaboration tool, which will allow all project team members continuous access through the Internet to important project data as well as up to the minute decision and approval status information.

e-Builder Enterprise™ is a comprehensive Project and Program Management system that the City will use to manage all project documents, communications and costs between the Lead Consultant, Sub-Consultants, Design Consultants, Contractor and Owner. e-Builder Enterprise™ includes extensive reporting capabilities to facilitate detailed project reporting in a web-based environment that is accessible to all parties and easy to use. Training will be provided for all consultants selected to provide services for the City of Pompano Beach.

2. Lead and Sub-Consultants shall conduct project controls outlined by the Owner, Project Manager, and/or Construction Manager, utilizing e-Builder Enterprise™. **The designated web-based application license(s) shall be provided by the City to the Prime Consultant and Sub-Consultants.** No additional software will be required.

Lead Consultant and Sub-Consultants shall have the responsibility for logging in to the project web site on a daily basis, and as necessary to be kept fully apprised of project developments and required action items. , These may include but are not limited to: Contracts, Contract Exhibits, Contract Amendments, Drawing Issuances, Addenda, Bulletins, Permits, Insurance & Bonds, Safety Program Procedures, Safety Notices, Accident Reports, Personnel Injury Reports, Schedules, Site Logistics, Progress Reports, Correspondence, Daily Logs, Non-Conformance Notices, Quality Control Notices, Punch Lists, Meeting Minutes, Requests for Information, Submittal Packages, Substitution Requests, Monthly Payment Request Applications, Supplemental Instructions, Owner Change Directives, Potential Change Orders, Change Order Requests, Change Orders and the like. All supporting data including but not limited to shop drawings, product data sheets, manufacturer data sheets and instructions, method statements, safety SDS sheets, Substitution Requests and the like will be submitted in digital format via e-Builder Enterprise™.

**D. Local Business Program**

On March 13, 2018, the City Commission approved Ordinance 2018-46, establishing a Local Business Program, a policy to increase the participation of City of Pompano Beach businesses in the City's procurement process.

For purposes of this solicitation, "Local Business" will be defined as follows:

1. **TIER 1 LOCAL VENDOR. POMPANO BEACH BUSINESS EMPLOYING POMPANO BEACH RESIDENTS.** A business entity which has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least ten percent who are residents of the City of Pompano Beach or includes subcontracting commitments to Local Vendors Subcontractors for at least ten percent of the contract value. The permanent place of business may not be a post office box.

The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

2. **TIER 2 LOCAL VENDOR. BROWARD COUNTY BUSINESS EMPLOYING POMPANO BEACH RESIDENTS OR UTILIZING LOCAL VENDOR SUBCONTRACTORS.** A business entity which has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach or includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value. The permanent place of business may not be a post office box. The business must be located in a non- residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the respective Broward County municipality for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.
3. **LOCAL VENDOR SUBCONTRACTOR. POMPANO BEACH BUSINESS.** A business entity which has maintained a permanent place of business within the city limits of the City of Pompano Beach. The permanent place of business may not be a post office box. The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

You can view the list of City businesses that have a current Business Tax Receipt on the City's website, and locate local firms that are available to perform the work required by the bid specifications. The business information, sorted by business use classification, is posted on the webpage for the Business Tax Receipt Division: [www.pompanobeachfl.gov](http://www.pompanobeachfl.gov) by selecting the Pompano Beach Business Directory in the Shop Pompano! section.

The City of Pompano Beach is **strongly committed** to insuring the participation of City of Pompano Beach Businesses as contractors and subcontractors for the procurement of goods and services, including labor, materials and equipment. Proposers are required to participate in the City of Pompano Beach's Local Business Program by including, as part of their package, the Local Business Participation Form (Exhibit A,) listing the local businesses that will be used on the contract, and the Letter of Intent Form (Exhibit B) from each local business that will participate in the contract.

**Please note that, while no goals have been established for this solicitation, the City encourages Local Business participation in *all* of its procurements.**

If a Prime Contractor/Vendor is not able to achieve the level of goal attainment of the contract, the Prime Vendor will be requested to demonstrate and document that good faith efforts were made to achieve the goal by providing the Local Business

Unavailability Form (Exhibit C), listing firms that were contacted but not available, and the Good Faith Effort Report (Exhibit D), describing the efforts made to include local business participation in the contract. This documentation shall be provided to the City Commission for acceptance.

The awarded proposer will be required to submit "Local Business Subcontractor Utilization Reports" during projects and after projects have been completed. The reports will be submitted to the assigned City project manager of the project. The Local Business Subcontractor Utilization Report template and instructions have been included in the bid document.

Failure to meet Local Vendor Goal commitments will result in "unsatisfactory" compliance rating. Unsatisfactory ratings may impact award of future projects if a sanction is imposed by the City Commission.

The city shall award a Local Vendor preference based upon vendors, contractors, or subcontractors who are local with a preferences follows:

1. For evaluation purposes, the Tier 1 and Tier 2 businesses shall be a criterion for award in this Solicitation. No business may qualify for more than one tier level.
2. For evaluation purposes, local vendors shall receive the following preferences:
  - a. Tier 1 business as defined by this subsection shall be granted a preference in the amount of five percent of total score.
  - b. Tier 2 business as defined by this subsection shall be granted a preference in the amount of two and one-half percent of total score.
3. It is the responsibility of the awarded vendor/contractor to comply with all Tier 1 and Tier 2 guidelines. The awarded vendor/contractor must ensure that all requirements are met before execution of a contract.

#### **E. Required Proposal Submittal**

Sealed proposals shall be submitted electronically through the eBid System on or before the due date/time stated above. Proposer shall upload response as one (1) file to the eBid System. The file size for uploads is limited to 250 MB. If the file size exceeds 10 MB the response must be split and uploaded as two (2) separate files.

**Information to be included in the proposal:** In order to maintain comparability and expedite the review process, it is required that proposals be organized in the manner specified below, with the sections clearly labeled:

**Title page:**

Show the project name and number, the name of the Proposer's firm, address, telephone number, name of contact person and the date.

**Table of Contents:**

Include a clear identification of the material by section and by page.

**Letter of Transmittal:**

Briefly state the Proposer's understanding of the project and express a positive commitment to provide the services described herein. State the name(s) of the person(s) who will be authorized to make representations for the Proposer, their title(s), office and E-mail addresses and telephone numbers. Please limit this section to two pages.

**Technical Approach:**

Firms or teams shall submit their technical approach to the tasks described in the scope, including details of how each phase of the project would be completed, and how their firm proposes to maintain time schedules and cost controls.

**Schedule:**

Proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines.

**References:**

References for past projects in the tri-county area (Broward, Palm Beach, and Miami-Dade.) Describe the scope of each project in physical terms and by cost, describe the respondent's responsibilities, and provide the contact information (name, email, telephone number) of an individual in a position of responsibility who can attest to respondent's activities in relation to the project.

List any prior projects performed for the City of Pompano Beach.

**Project Team Form:**

Submit a completed "Project Team" form. The purpose of this form is to identify the key members of your team, including any specialty subconsultants.

**Organizational Chart:**

Specifically identify the management plan (if needed) and provide an organizational chart for the team. The proposer must describe at a minimum, the basic approach to these projects, to include reporting hierarchy of staff and sub-consultants, clarify the individual(s) responsible for the co-ordination of separate components of the scope of services.

**Statement of Skills and Experience of Project Team:**

Describe the experience of the entire project team as it relates to the types of projects described in the Scope section of this solicitation. Include the experience of the prime consultants as well as other members of the project team; i.e., additional personnel, sub-consultants, branch office, team members, and other resources anticipated to be utilized for this project. Name specific projects (successfully completed within the past five years) where the team members have performed similar projects previously.

**Resumes of Key Personnel**

Include resumes for key personnel for prime and subconsultants.

**Office Locations:**

Identify the location of the office from which services will be rendered, and the number of professional and administrative staff at the prime office location. Also identify the location of office(s) of the prime and/or sub consultants that may be utilized to support any or all of the professional services listed above and the number of professional and administrative staff at the prime office location.

If firms are situated outside the local area, (Broward, Palm Beach, and Miami-Dade counties) include a brief statement as to whether or not the firm will arrange for a local office during the term of the contract, if necessary.

**Local Businesses:**

Completed Local Business program forms, Exhibits A-D.

NOTE: Form B must be signed by a representative of the subcontractor, NOT of the Prime.

**Litigation:**

Disclose any litigation within the past five (5) years arising out your firm's performance, including status/outcome.

**City Forms:**

The Proposer Information Page Form and any other required forms must be completed and submitted electronically through the City's eBid System. The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

**Reviewed and Audited Financial Statements:**

Proposers shall be financially solvent and appropriately capitalized to be able to service the City for the duration of the contract. Proposers shall provide a complete financial statement of the firm's most recent audited financial statements, indicating organization's financial condition. Must be uploaded to the Response Attachments tab in the eBid System as a separate file titled "Financial Statements" and marked "CONFIDENTIAL."

Financial statements provided shall not be older than twelve (12) months prior to the date of filing this solicitation response. The financial statements are to be reviewed and submitted with any accompanying notes and supplemental information. The City of Pompano Beach reserve the right to reject financial statements in which the financial condition shown is of a date twelve (12) months or more prior to the date of submittals.

The City is a public agency subject to Chapter 119, Florida's Public Records Law and is required to provide the public with access to public records, however, financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure.

The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

A combination of two (2) or more of the following may substitute for audited financial statements:



- 1) Bank letters/statements for the past 3 months
- 2) Balance sheet, profit and loss statement, cash flow report
- 3) IRS returns for the last 2 years
- 4) Letter from CPA showing profits and loss statements (certified)

## F. Insurance

CONTRACTOR shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the CITY's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to CITY staff responsible for oversight of the subject project/contract.

CONTRACTOR is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONTRACTOR, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONTRACTOR under this Agreement.

Throughout the term of this Agreement, CONTRACTOR and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

1. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. CONTRACTOR further agrees to be responsible for employment, control and conduct of its employees and for any injury sustained by such employees in the course of their employment.

2. Liability Insurance.

(a) Naming the City of Pompano Beach as an additional insured as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONTRACTOR's negligent acts or omissions in connection with Contractor's performance under this Agreement.

(b) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

**Type of Insurance**

**Limits of Liability**

<b>GENERAL LIABILITY:</b>	Minimum \$1,000,000 Per Occurrence and \$2,000,000 Per Aggregate	
* Policy to be written on a claims incurred basis		
XX comprehensive form	bodily injury and property damage	
<b>XX premises - operations explosion &amp; collapse hazard</b>	<b>bodily injury and property damage</b>	
— underground hazard		
XX products/completed operations hazard	bodily injury and property damage combined	
XX contractual insurance	bodily injury and property damage combined	
XX broad form property damage	bodily injury and property damage combined	
XX independent contractors	personal injury	
XX personal injury		
— sexual abuse/molestation	Minimum \$1,000,000 Per Occurrence and Aggregate	
— liquor legal liability	Minimum \$1,000,000 Per Occurrence and Aggregate	

**AUTOMOBILE LIABILITY:** Minimum \$1,000,000 Per Occurrence and Aggregate. Bodily injury (each person) bodily injury (each accident), Property damage, bodily injury and property damage combined.

- XX comprehensive form
- XX owned
- XX hired
- XX non-owned

**REAL & PERSONAL PROPERTY**

— comprehensive form Agent must show proof they have this coverage.

**EXCESS LIABILITY**

Per Occurrence Aggregate

— other than umbrella	bodily injury and property damage combined	\$1,000,000	\$1,000,000
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**PROFESSIONAL LIABILITY**

Per Occurrence Aggregate

XX * Policy to be written on a claims made basis	\$1,000,000	\$1,000,000
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(c) If Professional Liability insurance is required, Contractor agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of four (4) years unless terminated sooner by the applicable statute of limitations.

**CYBER LIABILITY**

Per Occurrence Aggregate

__	* Policy to be written on a claims made basis	\$1,000,000	\$1,000,000
__	Network Security / Privacy Liability		
__	Breach Response / Notification Sublimit (minimum limit of 50% of policy aggregate)		
__	Technology Products E&O - \$1,000,000 (only applicable for vendors supplying technology related services and or products)		
__	Coverage shall be maintained in effect during the period of the Agreement and for not less than four (4) years after termination/ completion of the Agreement.		

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3. Employer's Liability. If required by law, CONTRACTOR and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability Insurance in the minimum amount of One Hundred Thousand Dollars (\$100,000.00) per employee, Five Hundred Thousand Dollars (\$500,000) per aggregate.

4. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONTRACTOR, the CONTRACTOR shall promptly provide the following:

- (a) Certificates of Insurance evidencing the required coverage;
- (b) Names and addresses of companies providing coverage;
- (c) Effective and expiration dates of policies; and

(d) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

5. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

6. Waiver of Subrogation. CONTRACTOR hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONTRACTOR shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONTRACTOR enter into such an agreement on a pre-loss basis.

**G. Selection/Evaluation Process**

A Selection/Evaluation Committee will be appointed to select the most qualified firm(s). The Selection/Evaluation Committee will present their findings to the City Commission.

Proposals will be evaluated using the following criteria.

<b>Line</b>	<b>Criteria</b>	<b>Point Range</b>
1	<p>Prior experience of the firm with projects of similar size and complexity:</p> <ul style="list-style-type: none"> <li>a. Number of similar projects</li> <li>b. Complexity of similar projects</li> <li>c. References from past projects performed by the firm</li> <li>d. Previous projects performed for the City (provide description)</li> <li>e. Litigation within the past 5 years arising out of firm's performance (list, describe outcome)</li> </ul>	0-15
2	<p>Qualifications of personnel including sub consultants:</p> <ul style="list-style-type: none"> <li>a. Organizational chart for project</li> <li>b. Number of technical staff</li> <li>c. Qualifications of technical staff: <ul style="list-style-type: none"> <li>(1) Number of licensed staff</li> <li>(2) Education of staff</li> <li>(3) Experience of staff on similar projects</li> </ul> </li> </ul>	0-15
3	<p>Proximity of the nearest office to the project location:</p> <ul style="list-style-type: none"> <li>a. Location</li> <li>b. Number of staff at the nearest office</li> </ul>	0-15
4	<p>Current and Projected Workload</p> <p>Rating is to reflect the workload (both current and projected) of the firm, staff assigned, and the percentage availability of the staff member assigned. Respondents which fail to note both existing and projected workload conditions and percentage of availability of staff assigned shall receive zero (0) points</p>	0-15
5	<p>Demonstrated Prior Ability to Complete Project on Time</p> <p>Respondents will be evaluated on information provided regarding the firm's experience in the successful completion and steadfast conformance to similar project schedules. Provide an example of successful approaches utilized to achieve a timely project completion. Respondents who demonstrate the ability to complete projects on time shall receive more points.</p>	0-15
6	<p>Demonstrated Prior Ability to Complete Project on Budget</p> <p>Proposers will be evaluated on their ability to adhere to initial design budgets. Examples provided should show a comparison between initial negotiated task costs and final completion costs. Respondents should explain in detail any budgetary overruns due to scope modifications. Respondents which fail to provide schedule and budget information as requested will receive zero (0) points.</p>	0-15
7	<p>Is the firm a certified minority business enterprise as defined by the Florida Small and Minority Business Assistance Act of 1985? (Certification of any sub-contractors should also be included with the response.)</p>	0-10

Additional 0-5% for Tier1/Tier2 Local Business will be calculated on combined scoring totals of each company.

**NOTE:**

Financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure; however, financial statements submitted to prequalify for a solicitation, and are not required by the City, may be subject to public disclosure.

Value of Work Previously Awarded to Firm (Tie-breaker) - In the event of a tie, the firm with the lowest value of work as a prime contractor on City of Pompano Beach projects within the last five years will receive the higher ranking, the firm with the next lowest value of work shall receive the next highest ranking, and so on. The analysis of past work will be based on the City's Purchase Order and payment records.

The Committee has the option to use the above criteria for the initial ranking to short-list Proposers and to use an ordinal ranking system to score short-listed Proposers following presentations (if deemed necessary) with a score of "1" assigned to the short-listed Proposer deemed most qualified by the Committee.

Each firm should submit documentation that evidences the firm's capability to provide the services required for the Committee's review for short listing purposes. After an initial review of the Proposals, the City may invite Proposers for an interview to discuss the proposal and meet firm representatives, particularly key personnel who would be assigned to the project. Should interviews be deemed necessary, it is understood that the City shall incur no costs as a result of this interview, nor bear any obligation in further consideration of the submittal.

When more than three responses are received, the committee shall furnish the City Commission (for their approval) a listing, in ranked order, of no fewer than three firms deemed to be the most highly qualified to perform the service. If three or less firms respond to the Solicitation, the list will contain the ranking of all responses.

The City Commission has the authority to (including, but not limited to); approve the recommendation; reject the recommendation and direct staff to re-advertise the solicitation; or, review the responses themselves and/or request oral presentations and determine a ranking order that may be the same or different from what was originally presented to the City Commission.

Value of Work Previously Awarded to Firm (Tie-breaker) - In the event of a tie, the firm with the lowest value of work as a prime contractor on City of Pompano Beach projects within the last five years will receive the higher ranking, the firm with the next lowest value of work shall receive the next highest ranking, and so on. The analysis of past work will be based on the City's Purchase Order and payment records.

**H. Hold Harmless and Indemnification**

Proposer covenants and agrees that it will indemnify and hold harmless the City and all of its officers, agents, and employees from any claim, loss, damage, cost, charge or expense arising out of any act, action, neglect or omission by the Proposer, whether direct or indirect, or whether to any person or property to which the City or said parties may be

subject, except that neither the Proposer nor any of its subcontractors will be liable under this section for damages arising out of injury or damage to persons or property directly caused by or resulting from the sole negligence of the City or any of its officers, agents or employees.

#### **I. Right to Audit**

Contractor's records which shall include but not be limited to accounting records, written policies and procedures, computer records, disks and software, videos, photographs, subcontract files (including proposals of successful and unsuccessful bidders), originals estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this contract (all the foregoing hereinafter referred to as "records") shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by Owner's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the contractor or any of his payees pursuant to the execution of the contract. Such records subject to examination shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this contract.

For the purpose of such audits, inspections, examinations and evaluations, the Owner's agent or authorized representative shall have access to said records from the effective date of this contract, for the duration of the Work, and until 5 years after the date of final payment by Owner to Consultant pursuant to this contract.

Owner's agent or its authorized representative shall have access to the Contractor's facilities, shall have access to all necessary records, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article. Owner's agent or its authorized representative shall give auditees reasonable advance notice of intended audits.

Contractor shall require all subcontractors, insurance agents, and material suppliers (payees) to comply with the provisions of this article by insertion of the requirements hereof in any written contract agreement. Failure to obtain such written contracts which include such provisions shall be reason to exclude some or all of the related payees' costs from amounts payable to the Contractor pursuant to this contract.

#### **J. Retention of Records and Right to Access**

The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law, as amended. Specifically, the Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service;
2. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a

reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;

3. Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law;

4. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

5. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

**K. Communications**

No negotiations, decisions, or actions shall be initiated or executed by the firm as a result of any discussions with any City employee. Only those communications, which are in writing from the City, may be considered as a duly authorized expression on behalf of the City. In addition, only communications from firms that are signed and in writing will be recognized by the City as duly authorized expressions on behalf of firms.

**L. No Discrimination**

There shall be no discrimination as to race, sex, color, age, religion, or national origin in the operations conducted under any contract with the City.

**M. Independent Contractor**

The selected firm will conduct business as an independent contractor under the terms of this contract. Personnel services provided by the firm shall be by employees of the firm and subject to supervision by the firm, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies and other similar administrative procedures applicable to services rendered under this agreement shall be those of the firm.

**N. Staff Assignment**

The City of Pompano Beach reserves the right to approve or reject, for any reasons, Proposer's staff assigned to this project at any time. Background checks may be required.

**O. Contract Terms**

The contract resulting from this Solicitation shall include, but not be limited to the following terms:

The contract shall include as a minimum, the entirety of this Solicitation document, together with the successful Proposer's proposal. Contract shall be prepared by the City of Pompano Beach City Attorney.

If the City of Pompano Beach defends any claim, demand, cause of action, or lawsuit arising out of any act, action, negligent acts or negligent omissions, or willful misconduct of the contractor, its employees, agents or servants during the performance of the contract, whether directly or indirectly, contractor agrees to reimburse the City of Pompano Beach for all expenses, attorney's fees, and court costs incurred in defending such claim, cause of action or lawsuit.

**P. Waiver**

It is agreed that no waiver or modification of the contract resulting from this Solicitation, or of any covenant, condition or limitation contained in it shall be valid unless it is in writing and duly executed by the party to be charged with it, and that no evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the parties arising out of or affecting this contract, or the right or obligations of any party under it, unless such waiver or modification is in writing, duly executed as above. The parties agree that the provisions of this paragraph may not be waived except by a duly executed writing.

**Q. Survivorship Rights**

This contract resulting from this Solicitation shall be binding on and inure to the benefit of the respective parties and their executors, administrators, heirs, personal representative, successors and assigns.

**R. Termination**

The contract resulting from this Solicitation may be terminated by the City of Pompano Beach without cause upon providing contractor with at least sixty (60) days prior written notice.

Should either party fail to perform any of its obligations under the contract resulting from this Solicitation for a period of thirty (30) days after receipt of written notice of such failure, the non-defaulting part will have the right to terminate the contract immediately upon delivery of written notice to the defaulting part of its election to do so. The foregoing rights of termination are in addition to any other rights and remedies that such party may have.

**S. Manner of Performance**

Proposer agrees to perform its duties and obligations under the contract resulting from this Solicitation in a professional manner and in accordance with all applicable local, federal and state laws, rules and regulations.

Proposer agrees that the services provided under the contract resulting from this Solicitation shall be provided by employees that are educated, trained and experienced, certified and licensed in all areas encompassed within their designated duties. Proposer



agrees to furnish the City of Pompano Beach with all documentation, certification, authorization, license, permit, or registration currently required by applicable laws or rules and regulations. Proposer further certifies that it and its employees are now in and will maintain good standing with such governmental agencies and that it and its employees will keep all license, permits, registration, authorization or certification required by applicable laws or regulations in full force and effect during the term of this contract. Failure of Proposer to comply with this paragraph shall constitute a material breach of contract.

**T. Acceptance Period**

Proposals submitted in response to this Solicitation must be valid for a period no less than ninety (90) days from the closing date of this solicitation.

**U. Conditions and Provisions**

The completed proposal (together with all required attachments) must be submitted electronically to City on or before the time and date stated herein. All Proposers, by electronic submission of a proposal, shall agree to comply with all of the conditions, requirements and instructions of this solicitation as stated or implied herein. All proposals and supporting materials submitted will become the property of the City.

Proposer's response shall not contain any alteration to the document posted other than entering data in spaces provided or including attachments as necessary. By submission of a response, Proposer affirms that a complete set of bid documents was obtained from the eBid System or from the Purchasing Division only and no alteration of any kind has been made to the solicitation. Exceptions or deviations to this proposal may not be added after the submittal date.

All Proposers are required to provide all information requested in this solicitation. Failure to do so may result in disqualification of the proposal.

The City reserves the right to postpone or cancel this solicitation, or reject all proposals, if in its sole discretion it deems it to be in the best interest of the City to do so.

The City reserves the right to waive any technical or formal errors or omissions and to reject all proposals, or to award contract for the items herein, in part or whole, if it is determined to be in the best interests of the City to do so.

The City shall not be liable for any costs incurred by the Proposer in the preparation of proposals or for any work performed in connection therein.

**V. Standard Provisions**

1. Governing Law

Any agreement resulting from this Solicitation shall be governed by the laws of the State of Florida, and the venue for any legal action relating to such agreement will be in Broward County, Florida.

2. Licenses

In order to perform public work, the successful Proposer shall:

Be licensed to do business in Florida, if an entity, and hold or obtain such Contractor' and Business Licenses if required by State Statutes or local ordinances.

3. Conflict Of Interest

For purposes of determining any possible conflict of interest, each Proposer must disclose if any Elected Official, Appointed Official, or City Employee is also an owner, corporate officer, or an employee of the firm. If any Elected Official, Appointed Official, or City Employee is an owner, corporate officer, or an employee, the Proposer must file a statement with the Broward County Supervisor of Elections pursuant to §112.313, Florida Statutes.

4. Drug Free Workplace

The selected firm(s) will be required to verify they will operate a "Drug Free Workplace" as set forth in Florida Statute, 287.087.

5. Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction for public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute, Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

6. Patent Fees, Royalties, And Licenses

If the selected Proposer requires or desires to use any design, trademark, device, material or process covered by letters of patent or copyright, the selected Proposer and his surety shall indemnify and hold harmless the City from any and all claims for infringement by reason of the use of any such patented design, device, trademark, copyright, material or process in connection with the work agreed to be performed and shall indemnify the City from any cost, expense, royalty or damage which the City may be obligated to pay by reason of any infringement at any time during or after completion of the work.

7. Permits

The selected Proposer shall be responsible for obtaining all permits, licenses, certifications, etc., required by federal, state, county, and municipal laws, regulations, codes, and ordinances for the performance of the work required in these specifications and to conform to the requirements of said legislation.

8. Familiarity With Laws

It is assumed the selected firm(s) will be familiar with all federal, state and local laws, ordinances, rules and regulations that may affect its services pursuant to this Solicitation. Ignorance on the part of the firm will in no way relieve the firm from responsibility.

9. Withdrawal Of Proposals

A firm may withdraw its proposal without prejudice no later than the advertised deadline for submission of proposals by written communication to the General Services Department, 1190 N.E. 3<sup>rd</sup> Avenue, Building C, Pompano Beach, Florida 33060.

10. Composition Of Project Team

Firms are required to commit that the principals and personnel named in the proposal will perform the services throughout the contractual term unless otherwise provided for by way of a negotiated contract or written amendment to same executed by both parties. No diversion or substitution of principals or personnel will be allowed unless a written request that sets forth the qualifications and experience of the proposed replacement(s) is submitted to and approved by the City in writing.

11. Invoicing/Payment

All invoices should be sent to City of Pompano Beach, Accounts Payable, P.O. Drawer 1300, Pompano Beach, Florida, 33061. In accordance with Florida Statutes, Chapter 218, payment will be made within 45 days after receipt of a proper invoice.

12. Public Records

- a. The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law, as amended. Specifically, the Contractor shall:
  - i. Keep and maintain public records required by the City in order to perform the service;
  - ii. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;
  - iii. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

- iv. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.
- b. Failure of the Contractor to provide the above described public records to the City within a reasonable time may subject Contractor to penalties under 119.10, Florida Statutes, as amended.

## **PUBLIC RECORDS CUSTODIAN**

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

**CITY CLERK  
100 W. Atlantic Blvd., Suite 253  
Pompano Beach, Florida 33060  
(954) 786-4611  
[RecordsCustodian@copbfl.com](mailto:RecordsCustodian@copbfl.com)**

### **W. Questions and Communication**

All questions regarding the Solicitation are to be submitted using the Questions feature in the eBid System. Questions must be received at least seven (7) calendar days before the scheduled solicitation opening. Oral and other interpretations or clarifications will be without legal effect. Addenda will be posted to the solicitation in the eBid System, and it is the Proposer's responsibility to obtain all addenda before submitting a response to the solicitation.

### **X. Addenda**

The issuance of a written addendum or posting of an answer in response to a question submitted using the Questions feature in the eBid System are the only official methods whereby interpretation, clarification, or additional information can be given. If any addenda are issued to this solicitation the addendum will be issued via the eBid System. It shall be the responsibility of each Proposer, prior to submitting their response, to contact the City Purchasing Office at (954) 786-4098 to determine if addenda were issued and to make

such addenda a part of their proposal. Addenda will be posted to the solicitation in the eBid System.

Y. **Contractor Performance Report**

The City will utilize the Contractor Performance Report to monitor and record the successful proposer's performance for the work specified by the contract. The Contractor Performance Report has been included as an exhibit to this solicitation.

**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

***PROPOSER INFORMATION PAGE***

\_\_\_\_\_, \_\_\_\_\_  
(number) (Title)

To: The City of Pompano Beach, Florida

The below named company hereby agrees to furnish the proposed services under the terms stated subject to all instructions, terms, conditions, specifications, addenda, legal advertisement, and conditions contained in the solicitation. I have read the solicitation and all attachments, including the specifications, and fully understand what is required. By submitting this proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal.

Proposal submitted by:

Name (printed) \_\_\_\_\_ Title \_\_\_\_\_

Company (Legal Registered) \_\_\_\_\_

Federal Tax Identification Number \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Email Address \_\_\_\_\_

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRETY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM**

SOLICITATION NUMBER \_\_\_\_\_

Federal I.D.# \_\_\_\_\_

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	_____	_____	_____
Project Manager	_____	_____	_____
Asst. Project Manager	_____	_____	_____
Other Key Member	_____	_____	_____
Other Key Member	_____	_____	_____

**SUB-CONSULTANT**

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	_____	_____
	_____	_____
Landscaping	_____	_____
	_____	_____
Engineering	_____	_____
	_____	_____
Other Key Member	_____	_____
	_____	_____
Other Key Member	_____	_____
	_____	_____
Other Key Member	_____	_____
	_____	_____

(use attachments if necessary)

**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS**

Respondent Vendor Name: \_\_\_\_\_

Vendor FEIN: \_\_\_\_\_

Section 287.135, Florida Statutes, prohibits agencies 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. Further, Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to sign electronically on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

I Certify





### Exhibit – Contractor Performance Report

CATEGORY	RATING	COMMENTS
<b>1. Quality Assurance/Quality Control</b> - Product/Services of high quality - Proper oversight - Communication	Poor =1 Satisfactory =2 Excellent =3	
<b>2. Record Keeping</b> -Accurate record keeping -Proper invoicing -Testing results complete	Poor =1 Satisfactory =2 Excellent =3	
<b>3. Close-Out Activities</b> - Restoration/Cleanup - Deliverables met - Punch list items addressed	Poor =1 Satisfactory =2 Excellent =3	
<b>4. Customer Service</b> - City Personnel and Residents - Response time - Communication	Poor =1 Satisfactory =2 Excellent =3	
<b>5. Cost Control</b> - Monitoring subcontractors - Change-orders - Meeting budget	Poor =1 Satisfactory =2 Excellent =3	
<b>6. Construction Schedule</b> - Adherence to schedule - Time-extensions - Efficient use of resources	Poor =1 Satisfactory =2 Excellent =3	
<b>SCORE</b>	_____	<b>ADD ABOVE RATINGS/DIVIDE TOTAL BY NUMBER OF CATEGORIES BEING RATED</b>

#### **RATINGS**

**Poor Performance (1.0 – 1.59):** Marginally responsive, effective and/or efficient; delays require significant adjustments to programs; key employees marginally capable; customers somewhat satisfied.

**Satisfactory Performance (1.6 – 2.59):** Generally responsive, effective and/or efficient; delays are excusable and/or results in minor program adjustments; employees are capable and satisfactorily providing service without intervention; customers indicate satisfaction.

**Excellent Performance (2.6 – 3.0):** Immediately responsive; highly efficient and/or effective; no delays; key employees are experts and require minimal direction; customers expectations are exceeded.



## City of Pompano Beach Florida

### Local Business Subcontractor Utilization Report

Project Name (1)		Contract Number and Work Order Number (if applicable) (2)	
Report Number (3)	Reporting Period (4) to	Local Business Contract Goal (5)	Estimated Contract Completion Date (6)
Contractor Name (7)		Contractor Telephone Number (8) ( ) -	Contractor Email Address (9)
Contractor Street Address (10)	Project Manager Name (11)	Project Manager Telephone Number (12) ( ) -	Project Manager Email Address (13)

Local Business Payment Report						
Federal Identification Number (14)	Local Subcontractor Business Name (15)	Description of Work (16)	Project Amount (17)	Amount Paid this Reporting Period (18)	Invoice Number (19)	Total Paid to Date (20)
<b>Total Paid to Date for All Local Business Subcontractors (21) \$</b>						<b>0.00</b>

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

Contractor Name – Authorized Personnel (print) (22)	Contractor Name – Authorized Personnel (sign) (23)	Title (24)	Date (25)
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**Local Business Subcontractor Utilization Report Instructions**

- Box (1) Project Name** – Enter the entire name of the project.
- Box (2) Contract Number (work order)** – Enter the contract number and the work order number, if applicable (i.e., 4600001234, and if work order contract include work order number – 4600000568 WO 01).
- Box (3) Report Number** - Enter the Local Business Subcontractor Utilization Report number. Reports must be in a numerical series (i.e., 1, 2, 3).
- Box (4) Reporting Period** - Enter the beginning and end dates this report covers (i.e., 10/01/2016 – 11/01/2016).
- Box (5) Local Contract Goal** - Enter the Local Contract Goal percentage on entire contract.
- Box (6) Contract Completion Date** - Enter the expiration date of the contract, (not work the order).
- Box (7) Contractor Name** - Enter the complete legal business name of the Prime Contractor.
- Box (8) Contractor Telephone Number** - Enter the telephone number of the Prime Contractor.
- Box (9) Contractor Email Address** - Enter the email address of the Prime Contractor.
- Box (10) Contractor Street Address** – Enter the mailing address of the Prime Contractor.
- Box (11) Project Manager Name** - Enter the name of the Project Manager for the Prime Contractor on the project.
- Box (12) Project Manager Telephone Number** – Enter the direct telephone number of the Prime Contractor's Project Manager.
- Box (13) Project Manager Email Address** – Enter the email address of the Prime Contractor's Project Manager.
- Box (14) Federal Identification Number** – Enter the federal identification number of the Local Subcontractor(s).
- Box (15) Local Subcontractor Business Name** – Enter the complete legal business name of the Local Subcontractor(s).
- Box (16) Description of Work** – Enter the type of work being performed by the Local Subcontractor(s) (i.e., electrical services).
- Box (17) Project Amount** – Enter the dollar amount allocated to the Local Subcontractor(s) for the entire project (i.e., amount in the subcontract agreement).

- Box (18) Amount Paid this Reporting Period** – Enter the total amount paid to the Local Subcontractor(s) during the reporting period.
- Box (19) Invoice Number** – Enter the Local Subcontractor's invoice number related to the payment reported this period.
- Box (20) Total Paid to Date** – Enter the total amount paid to the Local Subcontractor(s) to date.
- Box (21) Total Paid to Date for All Local Subcontractor(s)** – Enter the total dollar amount paid to date to all Local Subcontractors listed on the report.
- Box (22) Contractor Name Authorized Personnel (print)** – Print the name of the employee that is authorized to execute the Local Subcontractor Utilization Report.
- Box (23) Contractor Name Authorized Personnel (sign)** – Signature of authorized employee to execute the Local Subcontractor Utilization Report.
- Box (24) Title** – Enter the title of authorized employee completing the Local Subcontractor Utilization Report.
- Box (25) Date** – Enter the date of submission of the Local Subcontractor Utilization Report to the City.







LOCAL BUSINESS EXHIBIT "C"  
LOCAL BUSINESS UNAVAILABILITY FORM

Solicitation # \_\_\_\_\_

I, \_\_\_\_\_  
(Name and Title)

of \_\_\_\_\_, certify that on the \_\_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_, I invited the following LOCAL BUSINESS(s) to bid work  
(Month) (Year)

items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Said Local Businesses:

- \_\_\_ Did not bid in response to the invitation
- \_\_\_ Submitted a bid which was not the low responsible bid
- \_\_\_ Other: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Date: \_\_\_\_\_

Note: Attach additional documents as available.

LOCAL BUSINESS EXHIBIT "C"

LOCAL BUSINESS EXHIBIT "D"  
GOOD FAITH EFFORT REPORT LOCAL BUSINESS PARTICIPATION

Solicitation # \_\_\_\_\_

1. What portions of the contract have you identified as Local Business opportunities?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Did you send written notices to Local Businesses?

\_\_\_\_ Yes      \_\_\_\_ No

If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

\_\_\_\_ Yes      \_\_\_\_ No

If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

\_\_\_\_\_  
\_\_\_\_\_

7. List the Local Businesses you will utilize and subcontract amount.

_____	\$ _____
_____	\$ _____
_____	\$ _____

8. Other comments: \_\_\_\_\_

\_\_\_\_\_

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LOCAL BUSINESS EXHIBIT "D"

# Online Questions & Answers

## Event Information

Number: E-22-20  
 Title: Continuing Contracts for Professional Environmental Testing Services  
 Type: Request for Letters of Interest  
 Issue Date: 7/9/2020  
 Question Deadline: 8/3/2020 05:00 PM (ET)  
 Response Deadline: 8/24/2020 02:00 PM (ET)  
 Notes: Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020.** Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: <https://pompanobeachfl.ionwave.net>. The City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

## Published Questions

<b>Question</b>	Is a firm allowed to submit as both prime and on another team (in which another firm is submitting as prime)?
<b>Answer</b>	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
<b>Asked</b>	8/3/2020 11:24 AM (ET)
<b>Question</b>	How many references does the prime firm need to provide? Can the prime use reference from our subcontractors.
<b>Answer</b>	Two to three (maximum) references will be sufficient. A firm may NOT use the references of their subcontractors.
<b>Asked</b>	7/28/2020 03:28 PM (ET)

<b>Question</b>	Section Y – Contractor Performance Report. If Contractor Performance Report is to be submitted with the proposal, is it to be used in the reference section. If so how many references do we need. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
<b>Answer</b>	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
<b>Asked</b>	7/28/2020 03:23 PM (ET)
<b>Question</b>	Surveying and Landscaping is not listed in the Scope of Services; however, they are listed on the Project Team form. If Landscaping is required, are you referring to Landscape Architecture services?
<b>Answer</b>	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying.
<b>Asked</b>	7/27/2020 03:15 PM (ET)
<b>Question</b>	On the Local Business Exhibit "B", Local Business Letter of Intent to Perform as a Local Subcontractor, it asks for a price amount. Since the projects and scopes of work to be assigned are not known at this time, can we state "To Be Determined" (TBD) on the form?
<b>Answer</b>	Yes.
<b>Asked</b>	7/16/2020 02:48 PM (ET)
<b>Question</b>	Does the Local Business Subcontractor Utilization Report have to be included with the RFP Response or will this report be utilized once the contract is awarded?
<b>Answer</b>	Do not include the local business subcontractor utilization report in your proposal. Its inclusion in the solicitation is the City's notice to the would-be selected firms that their local business commitments will be tracked.
<b>Asked</b>	7/16/2020 02:46 PM (ET)
<b>Question</b>	Section Y – Contractor Performance Report. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
<b>Answer</b>	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
<b>Asked</b>	7/16/2020 11:10 AM (ET)

<b>Question</b>	Section G – Selection/Evaluation Process. The RFP states Current and Projected Workload is listed as one of the Selection Criteria; however, there is not a designated section for the current workload. Please indicate where this should be discussed in, level of detail and describe how this will be evaluated.
<b>Answer</b>	Incorporate this information at your descension. The evaluation is discussed in Section G, Item #4.
<b>Asked</b>	7/16/2020 11:09 AM (ET)
<b>Question</b>	Section E – Required Proposal Submittal – References. The RFP state that the propose list any prior projects performed for the City of Pompano Beach. What is the timeframe for the list of projects, what detail needs to be provided (i.e., name of project, completion year, cost, etc.). Is this being used to show current workload with the City? Please clarify.
<b>Answer</b>	Please limit the list to projects completed in the past 5 years. Project detail should be provided for each project performed in the City of Pompano Beach. Current projects which have not been completed should be included in the current project workload (Section G).
<b>Asked</b>	7/16/2020 11:09 AM (ET)
<b>Question</b>	Section E – Required Proposal Submittal – References. The RFP does not state the specific number of references that are required. Please clarify.
<b>Answer</b>	Two to three (maximum) references will be sufficient.
<b>Asked</b>	7/16/2020 11:09 AM (ET)
<b>Question</b>	Section E – Required Proposal Submittal – Schedule. For the Schedule section, the RFP requests the proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines. Each scope of work / types of projects would entail unique, project specific tasks; therefore, please elaborate on what type(s) of timelines you are referring to. Would this be one generic timeline?
<b>Answer</b>	Firms awarded a contract will be required to provide a detailed schedule during the issuance of a task order. For the RLI, please provide a technical approach on how your firm proposes to maintain a schedule on a task order.
<b>Asked</b>	7/16/2020 11:08 AM (ET)
<b>Question</b>	Project Team Form. On the Project Team form, there are only two blank lines for “Other Key Member” under PRIME section and only three blank lines under SUB-CONSULTANT section. Please clarify that the proposer can add additional “Other Key Member” lines to the form for both the PRIME and SUB-CONSULTANT?
<b>Answer</b>	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
<b>Asked</b>	7/16/2020 11:08 AM (ET)

<b>Question</b>	Please clarify if the City is requesting us to describe our firm's environmental engineering services related to the types of projects or is the City looking for experience performing the actual services listed under Introduction (i.e. environmental engineering services related to parks and recreational facilities or actual design and/or construction of parks and recreational facilities)?
<b>Answer</b>	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying. Construction is not part of this RLI.
<b>Asked</b>	7/16/2020 11:08 AM (ET)

<b>Question</b>	Scope of Services. Under "Scope of Services", the RFP states "The scope of services may include, but is not limited to, the following:" •Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis. •Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City) •Provide project management services for projects, including turbidity monitoring. •Prepare recommendations and cost estimates for compliance with regulatory requirements. •Provide project close-out services. This may include preliminary and final acceptance of projects, preparation and approval of punch list items and project certification as required to all permitting agencies. •Prepare reports for regulatory compliance monitoring and assessments. •Reporting on endangered animals (turtles and owls)
<b>Answer</b>	The RLI contains a list of services where the City may require professional environmental testing.
<b>Asked</b>	7/16/2020 11:08 AM (ET)

<b>Question</b>	Introduction: The RFP says, "The types of projects to be undertaken may include, but are not limited to: • The City's approved Capital Improvement Plan (CIP) maybe found here: Adopted Capital Improvement Plan FY 2020-2024 • Preparation of Phase I, Phase II, and Phase III assessments • Roadway, Streetscape or Parking Lot projects. • Water or Reuse Main projects. • Gravity Sewer Main projects. • Force Main projects. • Lift station/pump station rehabilitation projects. • Parks and Recreational Facilities. • Seawall and dock construction and repair. • Storm Water/Drainage Improvement projects • Consultation for Emergency Water/Wastewater/Stormwater Repairs. • Inspection Services for Emergency Water/Wastewater/ Stormwater Repairs. • Canal and lake dredging. • Grant reimbursement, FAA and FDOT support and compliance. • SRF support and Davis Bacon Wage Reporting requirements • Support Services for Remediation • Demolition Projects
<b>Answer</b>	The RLI contains a list of project types where the City may require professional environmental testing.
<b>Asked</b>	7/16/2020 11:06 AM (ET)

<b>Question</b>	Can you please list who the incumbent firms for this contract are?
<b>Answer</b>	GFA International, Inc., Professional Service Inc., E Sciences, Inc.
<b>Asked</b>	7/14/2020 11:43 AM (ET)

<b>Question</b>	Who will be on the selection committee?
<b>Answer</b>	Qualified City staff to be determined.
<b>Asked</b>	7/14/2020 08:42 AM (ET)

<b>Question</b>	What are amount of awards per consultant under the previous contract?
<b>Answer</b>	GFA \$24,000.00 E Sciences \$297,872.54 Professional Services \$31,290 The City reserves the right to award contracts in its best interest. Past business is no indication of future contract awards.
<b>Asked</b>	7/14/2020 08:41 AM (ET)

<b>Question</b>	Is a certificate of Insurance Required with the proposal submittal and if so should it be uploaded under the Attachments tab within the Ebid System or a separate tab within the proposal response?
<b>Answer</b>	The certificate of insurance will be required for each SELECTED firm prior to contract negotiation.
<b>Asked</b>	7/14/2020 08:41 AM (ET)

<b>Question</b>	1. Who are the incumbent firms for this contract? 2. Besides the Transmittal Page, are there any other page limits on the RFP response? 3. Is there a contract funding limit?
<b>Answer</b>	1. GFA International, Inc., Professional Service Inc., E Sciences, Inc. 2. There is a 250MB limit for each attachment uploaded, but no limit on the number of attachments. 3. The RLI under "Scope of Services" discusses limits/restrictions. The City's approved Capital Improvement Plan as referenced in the RLI contains estimates of projects to be funded over the next 5 years.
<b>Asked</b>	7/10/2020 11:37 AM (ET)

<b>Question</b>	What City entity is this contract with (CRA, Engineering, etc.)?
<b>Answer</b>	Awarded City contracts will be available for use by any applicable department.
<b>Asked</b>	7/9/2020 03:47 PM (ET)





# City of Pompano Beach

Continuing Contract for Professional Environmental Testing  
RLI No. E-22-20

August 24, 2020

5371 NW 33<sup>rd</sup> Avenue  
Suite 201  
Fort Lauderdale, FL 33309  
(954) 741 8282  
terracon.com



Environmental



Facilities



Geotechnical



Materials

1

# Title Page

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# 1 Title Page



<b>Request for Letter of Interest (RLI) No. and Title:</b>	<b>RLI No. E-22-20 Continuing Contract for Professional Environmental Testing</b>
<b>Firm's Name:</b>	<b>Terracon Consultants, Inc.</b>
<b>Contract Manager:</b>	<b>Steven A. Harrison, P.G.</b>
<b>Address:</b>	<b>5371 NW 33rd Avenue Suite 201 Fort Lauderdale, FL 33309</b>
<b>Telephone No.:</b>	<b>Office: (954) 741-8282 Direct: (954) 703-1866 M: (954) 547-7734</b>
<b>E-mail:</b>	<b>Steven.Harrison@terracon.com</b>
<b>Date of Proposal:</b>	<b>August 24, 2020 by 2:00 PM</b>

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## 2 Table of Content

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**3**

# Letter of Transmittal

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### 3 Letter of Transmittal

August 24, 2020

City of Pompano Beach  
 Purchasing Office  
 1190 NE 3<sup>rd</sup> Avenue, Building C (Front)  
 Pompano Beach, Florida 33060

RE: Letter of Transmittal  
 Request for Letters of Interest (RLI) No. E-22-20  
 Continuing Contract for Professional Environmental Testing



Terracon Consultants, Inc. (Terracon) is pleased to respond to the City of Pompano Beach (City)'s RLI for *Continuing Contract for Professional Environmental Testing*. Terracon understands that these services will be provided in support of the City's transactional, operational and/or developmental objectives at property owned or operated by the City, or in support of capital improvement projects throughout the City. Terracon has prepared this response to provide the following service types: *Environmental Site Assessment (ESA) for Due Diligence, Site Assessment Associated with Subsurface Impacts, Geotechnical Investigations in Support of Capital Improvement and Infrastructure, Civil Engineering and Surveying Services Associated with Sanitary Sewer, Stormwater, Roadway, Parks and Canal Projects*. Terracon and its team members have well established, proven capabilities, resources and expertise to successfully perform these services for the City and are committed to perform the work in a timely manner with a high degree of care and skill to meet, and exceed, your expectations.

**QUALIFICATIONS:** Terracon has become a recognized leader, locally and nationally, in providing environmental testing and engineering services for local government and private clients, and with the support of our team members, we are prepared to support the City with the assessment, evaluation and design services needed to undertake repairs or upgrades to existing infrastructure, structures or roadways, as well as new City projects. The expertise to evaluate site conditions and meet the City's needs is not simply a function of the proper due diligence for a specific project but results from the knowledge gained performing thousands of projects to evaluate, understand, and mitigate conditions that may affect a project. The knowledge developed by Terracon and its team members allow us to complete projects in a cost effective and timely manner. **Terracon staff, and its team, have completed thousands of environmental, geotechnical, and civil design projects within Florida to support governmental agencies and the private sector in their endeavors to repair, improve and develop projects to support and enhance, project development efforts.**

**RESPONSIVENESS:** Terracon's Fort Lauderdale office will support this contract as we do for other contracts with the City. We can be available to meet within a few minutes notice when critical conditions arise. Terracon and its team members understand the types of projects that will arise from the referenced contract and have performed these exact services for local municipalities and private sector clients for nearly three decades. Terracon is currently under contract with the City's community Redevelopment Agency (CRA) and looks forward to providing ongoing professional environmental testing services under this contract.

#### WHY TERRACON?

- Providing Services to the Local Area and Statewide for over 28 Years
- Similar Continuing Contracts with Numerous City and County Agencies
- State of Florida Licensed Engineering, Geology, and Asbestos Business
- Radon and Lead-Safe Certified Firm
- Full Fleet of Drilling Equipment (Truck-mounted and Portable)
- Key Professionals with Multiple Licenses and Certifications
- Court Qualified Engineering Experts
- Certified, Trained and Experienced Field Staff
- Certified, Trained and Experienced Subcontractors

Terracon Consultants, Inc. 5371 N.W. 33<sup>rd</sup> Avenue, Suite 201 Fort Lauderdale, FL 33309  
 P (954) 741 8282 F (954) 741 8240 terracon.com

### 3 Letter of Transmittal

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With our strong technical background and proven track record within the industry, we are prepared to anticipate project requirements and adapt to challenges, making it easy for the City to work with us. For projects large and small, single- or multi-site, you can rely on consistent results.

**TRUSTED PERFORMANCE:** One of Terracon's core businesses is to service local governments through continuing services contracts. Statewide we hold over 125 continuing service contracts (environmental, facilities, geotechnical, construction testing and inspections) with approximately 90 different governmental agencies including state, county, and local governments. Terracon has an outstanding history of contract extensions and re-selection under these contracts, which is indicative of our commitment and performance to providing timely and cost-effective engineering services to our clients.

**DEDICATED TEAM AND ASSIGNED STAFF LEADERSHIP:** Terracon will service this contract from our Fort Lauderdale office, **which is located only 15 minutes door-to-door from City Hall to ours.** Information for the office location and contact details for the persons authorized to make representations on behalf of the company are:

**Richard Minichiello**, Vice President/Regional Manager | Rich.Minichiello@terracon.com

**Steven Harrison, P.G.** Environmental Services Department Manager | Steven.Harrison@terracon.com  
5371 NW 33<sup>rd</sup> Avenue, Suite 201, Fort Lauderdale, Florida 33309 | (954) 741-8282

**DEDICATED TEAM OFFERS A PARTNERSHIP APPROACH:** The Terracon Team understands what it will take to be successful under this contract. The designated Contract/Project Manager, **Steven Harrison, P.G.**, will provide oversight for all assigned projects. He has over 32 years of experience providing environmental consulting services for municipal, federal and private clients. Steven's knowledge of local goals, policies and plans will be an invaluable asset to this contract. The Terracon Team includes our Principal-in-Charge, **Richard Minichiello**, who is responsible for the South Florida Region. As a vice president and senior principal at Terracon, Richard is authorized to contractually bind the firm. He and Steven have a track record of solving problems and reducing costs on complex public and private projects. Our senior technical leadership have played key roles in environmental and infrastructure projects and provide specialized skill sets to ensure we are successfully implementing a wealth of on-demand team resources.

**KEY OBJECTIVES:** Our primary objective for this continuing services contract is to provide cost-effective, value added services for a wide variety of City projects. Based on our experience, we know that meeting this objective will require 1) technical expertise; 2) efficient and timely completion of project services and 2) personalized, attentive service.

The Terracon Team will work with the City to establish proper budgets and task orders, for projects awarded. We also warrant and represent that during the life of our agreement with the City our team will maintain in good standing all required licenses, certifications, and permits required under federal, state and local laws necessary to perform the services requested within this RLI.

We look forward to proceeding to the next step in this procurement process. Please contact us by e-mail at Steven.Harrison@terracon.com or Rich.Minichiello@terracon.com for any additional information.

Sincerely,

**Terracon Consultants, Inc. -**



Steven A. Harrison, P.G.  
Contract/Project Manager



Richard Minichiello  
Principal-in-Charge/Vice President/Region Manager



4

# Technical Approach

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## 4 Technical Approach

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### METHODOLOGY AND PROJECT APPROACH

The accurate and effective completion of any project begins with truly understanding the goals of the project before one begins; this will support a targeted approach that is focused on securing the proper information for the project being conducted. Terracon understands that the City's primary objective is to obtain the services of a qualified consulting firm to provide professional consulting services related to a continuing contract in support of commercial due diligence services. This critical mission will be supported by Terracon and its team members throughout the duration of the contract. The Terracon team's firm goal is to fulfill and exceed the client's objectives on every project. This not only requires our team to focus on the technically accurate and efficient completion of each and every project, but to make certain that the project is completed within agreed time and budget constraints.

Through the performance of hundreds of projects of similar complexity and in similar environments, Terracon is intimate with the technical details required to complete these types of projects, allowing us to anticipate typical diversions, maintain project direction, and effectively complete the project within the allotted time frames and proposed budget. By knowing that unknown circumstances are an eventuality of commercial due diligence projects, Terracon incorporates contingency plans into projects that allow us to seamlessly address findings in a way to minimize impacts to the projected schedule and budget. We understand that any changes will also affect the City's schedule and budget and it is critical for us to complete projects efficiently.

Every project will begin with a strategy meeting where Terracon joins with the City team to discuss the project. As part of the meeting process, Terracon and City personnel will review the details of the site in question which includes an overview of the City's goals. Terracon's staff and its team members will work with municipal and private clients to assess site conditions and provide the environmental services necessary, on an as-needed basis, as requested by the City. Terracon's schedules always consider a buffer to address issues that were not directly identified but suspected to have the possibility of being exposed (underground storage tanks [USTs] and hydraulic lifts that may exist where there is no record of their presence).

The experience and diversity of Terracon and our team members' staff enables us to resolve even the most difficult environmental situation that may be encountered. In doing that, a series of steps are

## 4 Technical Approach

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designed to ensure that our clients are provided expedient, accurate and individualized services to meet their needs today and in the future. Terracon's commitment to client satisfaction is demonstrated by our individualized project management approach that begins each project with a "kickoff" meeting where technical, financial, and scheduling goals are outlined to ensure that every project meets the client's goals and required quality assurance (QA) objectives.

Prior to the initial meeting with the City, Terracon will conduct a preliminary review/inspection of the site to understand the location and type of property that is to be addressed. With a preliminary understanding of the overall site conditions, Terracon will meet with the City to review your goals for the site so that a strategy can be developed to meet that objective. The proposed usage of the property is a critical factor, for example, in finalizing a remedial course of action risk-based closure options offer a viable option; however, as there are potential exposure issues to site occupants, they would need to be managed properly.

Terracon has developed a phased approach to projects that begins with an initial inspection and review of the site to understand current conditions and physical limitations. Terracon will incorporate these observations with the City's plans to develop a timely approach to inspect the site in greater detail. As information regarding the site is developed, additional phases of work may be required to satisfy project needs and requirements. The exact path is unknown, but it will be developed in a manner that helps to control the financial impact while continuing to move the project forward.

Once the scope of services for each phase of work is understood, Terracon will provide the City with a detailed budget which includes the scope of work along with a timeframe and cost to provide the services. Terracon will work with the City to adjust any scheduling conflicts to meet specific timeframes that may have been previously unknown to Terracon. Upon receipt of the City's approval to proceed, all personnel assigned to the project under Terracon will immediately begin their portion of the project.

As with all projects, there is the potential that unknown conditions or unanticipated analytical results may be encountered that require additional time and/or funds to complete the project as intended. When this occurs, the City will be notified and provided a written summary of findings, so that Terracon can work to minimize the impact to the original budget and schedule.

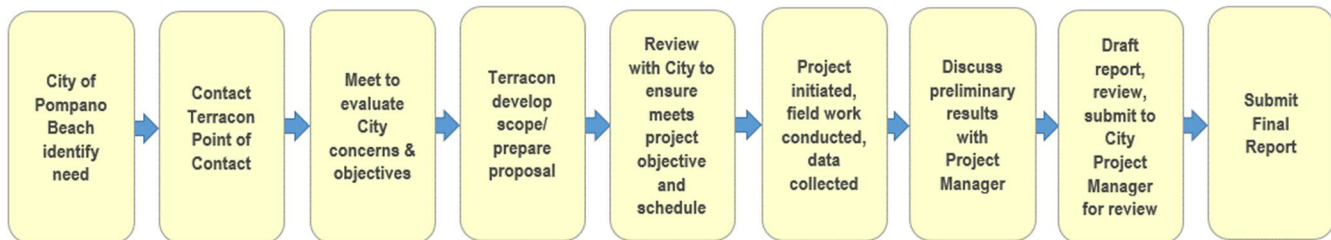
### **TASK ORDER MANAGEMENT AND COMMUNICATION**

The key to delivering successful services rests with the quality of the communications between the client and the project team. Terracon's Contract Manager, Steven Harrison, has worked directly with City/CRA staff on many projects and fully understands the importance of every project to the City, often being time sensitive. Steven understands that it is of critical importance to complete assigned projects timely and with the utmost of accuracy as you be making important financial and policy decisions that are based upon our findings and recommendations. With a full understanding of your needs, Steven will select and assign a highly experienced project manager to complete the assigned project and provide the direct line

## 4 Technical Approach

of communication to your team. Our project manager will be chosen for their expertise in the type of work to be undertaken and receive task order requests from the City. The project manager will, in turn, select the appropriate project team members based on the technical requirements and areas of expertise required. Our Organizational Chart, in Section 8 of this response, outlines the hierarchy (team structure) in place and highlights the depth of our team within each of the technical disciplines provided to the City within the requested services.

Each task included under the overall authorization has a time frame and budget associated with it, that each department is responsible for internally. Project managers will provide internal updates on a weekly basis to keep track of project status and keep the project on schedule. Constant communication between members keep projects moving forward smoothly as we are very aware that maintaining our client's goals is of utmost importance. In addition to tracking the timing of the project, Terracon utilizes an internal cost tracking system to track labor efforts and materials utilized on individual project sites so that budgets can be accurately maintained. Small cost overruns due to internal efforts will be not charged to the City.



The project manager will be responsible for overall performance, administration, billing, project review and will serve as your main point-of-contact to your project manager. They will be fully responsible for meeting requirements, expectations and schedules, project quality, report writing and submittals, managing subcontractors, and communicating resource needs.

There will be frequent communication between our project manager and your staff as this has proven to provide more responsive and consistent results when managing these types of services. We will also provide your staff with draft meeting notes prior to finalizing to minimize the chance of misunderstandings and miscommunications. Our project manager will call or meet periodically with the appropriate task managers to continually check on our progress and performance. We will also conduct a closeout review with your staff for every task order completed, to ascertain that the task's objectives have been satisfactorily achieved.

### COMMITTED TO DELIVERING SUCCESS....SAFELY

#### Safety first! Incident and Injury-Free (IIF)

Safety is one of Terracon's core values and our commitment to an "Incident and Injury-Free (IIF)" philosophy is one of the pillars of our culture. Successful execution and delivery includes the need to work safely and keep our



## 4 Technical Approach

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employees and the public safe every day. Terracon and its subsidiaries are very much a safety-oriented company. We strive to build health and safety into all aspects of our business and into the thinking of our employees. The culture is continued further in our everyday work culture, with all meetings beginning with an IIF moment and safety discussion.

### What is Incident and Injury-Free?

IIF is about care and concern for people. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family every day. It is where safety is held as a core value as well as an operational priority. Working safely is an inseparable part of working correctly, just as much as other operational priorities, in particular quality, budget and schedule. Incident and Injury-Free is our commitment to our people, who we value for who they are and what they do.

Conducting our work safely means conducting our work in the only acceptable way. Incidents, injuries and accidents will not be viewed as problems to make go away, but as opportunities to strengthen Incident and Injury-Free. Incident and Injury Free is about developing a mindset intolerant of any incidents or injuries no matter how minor or infrequent.

### Our Rules to Live By

Our Rules to Live By are at the foundation of our IIF culture. These give employees clear, specific ways to stay safe on the job, covering essential aspects of safety including personal protective equipment (PPE), equipment and tools, working at heights and depths, motorized vehicle safety, and reporting of injuries. We regularly use and discuss our Rules to Live By, and associated practices, in our offices and on job sites to ensure that everyone is following these fundamental rules. Our focus on pre-task planning also serves to reinforce this message every day.

**Live IIF!**



Terracon can't just tell someone to "be safe"; we can, however, ask our employees to follow Our Rules to Live By, do pre-task planning for each task every day, and follow the safe work practices they have been trained to follow to complete work at a task level. Our Rules to Live By have made a measurable difference in keeping our employees safe and in helping us preserve the trust and business with our clients.

We hope to continue our commitment to safety and welcome the opportunity to further discuss our IIF culture and its evolution as well as how it can tie in to the City's upcoming projects.

**Incident and Injury-Free is about care and concern for people. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family every day.**

In addition to the overall concern for the safety of all employees, every project where subsurface intrusive work will occur, begins with the preparation of a Site-Specific Health and Safety Plan (SS-HASP) to identify site specific conditions that could result in injury or chemical exposure to site workers. Underground clearance is conducted by white lining the work area and contacting the Sunshine 811 network to verify if public utilities are within the work area.

## 4 Technical Approach

Safety concerns that were not imagined to be a possibility as recently as a year ago, are a reality for all due the presence of the corona virus, COVID-19, within south Florida. Terracon has developed and implemented internal protocols to address situations where there is a potential exposure to COVID-19, that meet and/or exceed requirements put forth by local and State authorities. The protocols are designed to reduce the risk of exposure to the coronavirus for the complete project team, City and Terracon Team staff, and are integrated into pre-task planning for every project. This pre-task planning allows us to efficiently complete our assignments while minimizing the risk of exposure to the coronavirus for the entire project team.

### COMMITMENT TO QUALITY

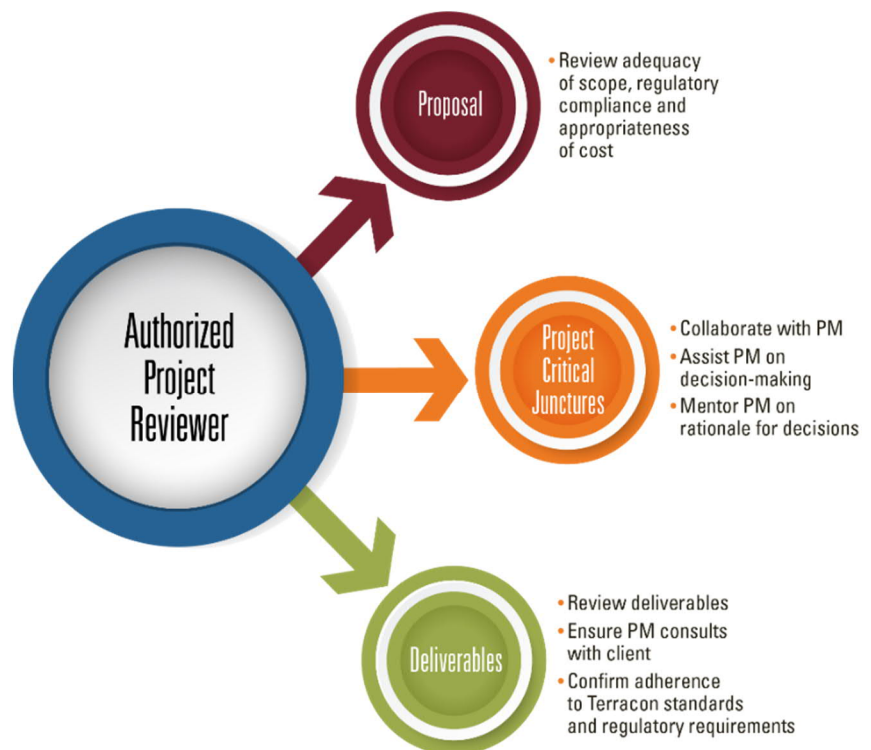
Terracon is committed to providing quality services with experienced technical and professional staff through our comprehensive Corporate Quality Program. As required by our internal quality review process, every project is assigned a well-experienced, senior professional to provide guidance and technical review for the project team. In this manner, we are able to deliver consistent, high-quality consulting services to our clients across the country. This program is based on a continuous improvement philosophy that involves our employees and, when applicable, subconsultants, vendors, and users of our services. Quality service for our clients is achieved by following the methods and practices that have been developed at Terracon for the services being provided.



Terracon maintains a living, written internal quality control/quality assurance (QC/QA) program to assure that all of Terracon's reports and documents are complete, technically accurate, regulatory compliant, and defensible. The QC/QA program is detailed in a Project Quality Review Manual, which is Terracon's primary QC/QA mechanism, relying on the industry best practice of secondary and independent review. Terracon-selected reviewers, termed Authorized Project Reviewers or APRs, provide the foundation for our quality review process.

Technical staff and senior professionals are appointed as APRs through a highly selective

### Terracon's APR Process



## 4 Technical Approach

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process, which maintains quality and consistency of Terracon project deliverables. Our philosophy behind quality review is founded on the premise that our projects and associated deliverables are always provided the direction and oversight of our experienced senior technical professionals.

Contract/Project Manager, Steven Harrison, is accountable for the overall quality of the project. He is also responsible for verifying that the applicable QC criteria, project quality review and company policies have been followed. Our primary mechanism for achieving quality on every project begins with the individual performing the work. Each Terracon employee has responsibilities for professional, technical, or administrative quality, whether for client projects or internal service assignments.

To ensure our personnel execute their responsibilities, Steven and the appropriate APRs will be responsible for conducting checks and reviews, as required, as the work progresses to verify the elements of QC are continuously addressed during the project.

Terracon's success with this type of contract stems from an experienced-based approach, led by senior professional engineers, that reacts responsively to schedule demands, produces complete and reliable technical reports and proactively implements cost control measures. We commit to the City of Pompano Beach that same level of service for the duration of this contract.

### Quality Assurance – Sampling Activities

Data quality objectives of every project are established prior to initiating a project so that data obtained is accurate, appropriate, sufficient, and cost effectively generated. Terracon staff members assigned to sampling activities receive in-house and on the job training to conduct sampling activities in accordance with Florida Department of Environmental Protection's (FDEP)'s standard operating procedures DEP-SOP-001/01, and other FDEP program-specific SOPs such as at petroleum sites: PCS-004 – *Soil Assessment and Sampling Methods for Bureau of Petroleum Storage Systems Sites*, PCS-005 – *Groundwater Sampling Procedures Standard Operating Variances and Clarifications for Bureau of Petroleum Storage Systems Sites*, and PCS-006 – *Design, Installation and Placement of Monitoring Wells*. Terracon insures that well construction, installation, and abandonment are conducted in accordance with protocols listed in Chapter 40C-3. Field, reporting, documentation, and records retention will conform to Chapter 62-160, Florida Administrative Code (FAC).

### Field Sampling Quality Assurance Requirements

All field sampling methods will be performed in accordance with the FDEP Standard Operating Procedures for Field Activities (DEP-SOP/001-01) and Chapter 62-160 FAC and the methods for compliance are incorporated into Terracon's *Field Sampling Quality Manual (FSQM)*. The FSQM details the procedural methods for compliance, sampling capabilities, record keeping and documentation, inventory and calibration of field equipment, and data review and corrective methods.

Samples will be collected of groundwater, surface water, sediment, soil, soil vapor and indoor environments for analysis of pesticides, metals, nutrients, petroleum, chlorinated solvents, asbestos,

## 4 Technical Approach

fungal spores, and other contaminants, as appropriate. Unless otherwise specified, reports submitted to the City will include laboratory reports containing the information specified in FAC, Chapter 62-160, completed chain-of-custody (Form 62-770.900[2]), field instrument calibration records (Form FD 9000-8) and completed water sampling logs, boring logs, well construction logs and development logs. Presentation of data that involves analytical results which report method detection limits in excess of cleanup target levels (CTLs as specified in Chapter 62-777, FAC) will be in accordance with the FDEP's "Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits" dated October 12, 2004 and the Memorandum *Quality Assurance and Related Issues* dated May 14, 2007 to determine how to evaluate data when the CTL is lower than the PQL.

Groundwater and soil sampling will involve the collection and analysis of QA samples detailed in SOP FQ 1000, Quality Control with FDEP/SOP-001-01. Based on the sensitivity and rigorous nature of the reporting required for the project and use of the data for screening, or regulatory, purposes, Terracon is prepared to collect QA samples, to comply with rigorous QA sampling frequencies developed for other projects, as shown in the following table:

QUALITY ASSURANCE SAMPLES	
QA Sample Type	Frequency
Duplicate samples (soil/ groundwater)	10% of each sampling event
Duplicate samples	5% of each sampling event (collected from same container as the original sample)
Split samples	10% of each sampling event
Field generated blanks	5% of the samples collected
Trip blanks (volatile sampling only)	One per cooler
Equipment blanks – Pre-cleaned equipment	Collected prior to equipment use (FDEP SOP/001-01 FQ1211)
Equipment blanks - Field-cleaned equipment	Once per day (minimum) (FDEP SOP/001-01 FQ1212)
Field generated blanks	Each sampling day

### Laboratory Quality Assurance Requirements

Terracon contracts exclusively with analytical laboratories that are accredited through National Environmental Laboratory Accreditation Program (NELAP) by the Florida Department of Health (FDOH) to perform laboratory analyses and will obtain City approval prior to use.

The laboratories subcontracted by Terracon will, if requested, provide copies of their quality manual verifying they follow the National Environmental Laboratory Accreditation Program (NELAC)



## 4 Technical Approach

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guidelines. The laboratories will agree to, and accept, the standards included in the Laboratory Standardization Guidance Document provided by the City and will identify, in writing, those standards with which it cannot comply. Approval for use of alternate laboratories will be requested in writing to allow for performance of the City's audit process. The approved laborator(ies) will not subcontract analyses without prior approval.

Upon receipt of samples in the laboratory, the laboratory will verify that the samples were received at proper temperature and in accordance with the chain of custody and will notify Terracon immediately of any problems. The laboratory will immediately notify Terracon if a sample was received and/or analyzed out of holding time. After verifying proper receipt, the laboratory will set the samples for analysis and, upon completion of the analysis, will e-mail Terracon the Laboratory Receipt Deliverable.

All analytical protocols and quality control requirements will adhere to the FDEP's QA Rule (62-160 FAC), FAC Chapter 64E-1, and the NELAP. Terracon will advise the laboratory of Data Quality Objectives prior to, or at the time of, a sample kit request.

The ADaPT data validation program is available for use to validate the laboratory data from each set of samples received and included with each laboratory report along with a Report Narrative for the project. Terracon understands that not all projects require the additional level of data validation (ie Phase II ESA due diligence sample screening), but we are experienced in using the ADaPT validation program to review field data and QA/QC laboratory results according to the EPA Protocol, Chapter 62-160, FAC, and ADaPT library criteria and have the laboratory rework any QC or sample data to verify results outside the recommended criteria. Final reports will include a letter explaining any sample result discrepancies.

# 5 Schedule

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## 5 Schedule



### MAINTAINING A SCHEDULE

Terracon will maintain complete and full responsibility for the execution of this contract whether services are performed by Terracon or our subconsultant/subcontractor team members. We will maintain the final and ultimate control over the quality, consistency and integrity of the work products that will be delivered to the City of Pompano Beach.

As previously discussed, our experienced team is led by Contract/Project Manager Steven Harrison who will be the single point of contact and will have overall responsibility for this continuing contract, including service (schedule) performance. Steven will manage this contract with the support of a team of highly experienced Florida registered professional geologists, engineers, land surveyors, and landscape architects, licensed special inspectors and building inspectors, engineers in training, staff scientists, a staff geologist, a certified industrial hygienist/licensed asbestos consultant, a project industrial hygienist, certified CADD operators, an Autodesk-certified professional, drillers, irrigations specialists, a certified welding inspector, and qualified field and laboratory technicians,.

Terracon uses a number of tools and processes to establish project schedules, monitor adherence, and plan and execute recovery plans where actual work durations exceed the planned time frames, typically due to unknown conditions at the outset of the task or “force majeure” conditions such as weather or restricted access to project sites due to occupant activities. The tools and processes are as follows:

- Each proposal includes a schedule section. During proposal preparation, the man-hours necessary to complete each task are determined and a plan is prepared to execute the work within a reasonable time frame.
- Where client directed schedules dictate accelerated completion, additional staffing or multi-shift work schedules are established to meet each milestone.
- Each project has a Pre-Task Plan prepared which lays out the schedule and the staffing for each task to achieve completion of the work on time and on budget.
- A Kick-off Meeting is held to brief all participants, including subconsultants/subcontractors, on the required work elements, schedule, and staffing to complete the work.

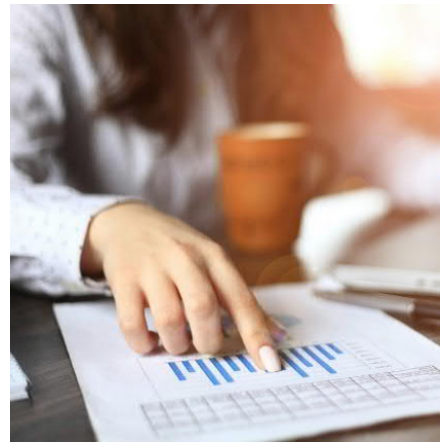
## 5 Schedule

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- For more complex projects a schedule is created, with each task shown in a logical sequence with a critical path to completion. As the project moves forward, the schedule is updated to identify which tasks are on time or behind schedule, and the impact on the overall project schedule and project completion dates.
- Where schedule slippage occurs, the project schedule is adjusted and a recovery plan is prepared which may include additional manpower or additional work shifts to bring the project back on schedule.
- The proposed recovery plan is then submitted to the client for notification and acceptance.

### THE TERRACON TEAM'S CAPACITY

Terracon's staff and resources provide maximum flexibility to meet our clients' scheduling needs. The nature of our work requires us to typically provide services on an expedited basis. Our typical backlog is made up of many short duration assignments and therefore our workload varies on a weekly basis. Furthermore, long-term contracts are of indefinite quantity making workload dependent upon individual work orders, and difficult to predict.



The Terracon Team has the flexibility, ability and capacity to handle all the services required and to meet the scheduling requirements for each City project. Our team has the capacity to perform this work based on actual and projected workload. If additional work is procured during this period, we are committed to increasing staff levels to service all assigned projects. We have made the same commitment on similar contracts with other clients and have never failed to cover the projects assigned to us.

**The Terracon Team is 100% committed to providing all assignments under this contract in a timely and cost-efficient manner.**

All the personnel identified in our organizational chart (see Section 8 of this response) will be available on a priority basis for tasks assigned under this contract. We are committed to provide you with the highest quality personnel that have the specific experience necessary to complete any tasks you may need. It is our pledge to the City of Pompano Beach that adequate staff, who possess all the required licenses and certifications, will be made immediately available once a task has been identified.

The following table further details our team and their availability as of August 2020.

## 5 Schedule

KEY TEAM MEMBERS, FIRM / LOCATION	ROLE	PERCENTAGE OF AVAILABILITY	
		CURRENT	PROJECTED
Steven Harrison, P.G. Terracon / Fort Lauderdale, FL	Contract/Project Manger	50%	50%
Richard Minichiello Terracon / Fort Lauderdale, FL	Principal-in-Charge (PIC)	45%	45%
Terry Horan, P.E. Terracon / West Palm Beach, FL	Assistant Project Manager	45%	50%
Lucas Barroso-Giachetti, P.E., CHMM Terracon / Miami Lakes	Senior Environmental Engineer	45%	50%
Susan Kuzia Terracon / West Palm Beach, FL	Senior Environmental Scientist	55%	55%
Tom Holley, CIH, FLAC, CSP, CHMM Terracon / Tampa, FL	Senior Certified Industrial Hygienist (CIH)/QA/QC Reviewer	40%	45%
Sergio Adasme, MRSA Terracon / Fort Lauderdale, FL	Project Industrial Hygienist/Senior Inspector	50%	55%
Rutu Nulkar, P.E. Terracon / Fort Lauderdale, FL	Geotechnical/Materials Project Manager	50%	50%
Hugo Soto, P.E. Terracon / Miami Lakes, FL	Principal Engineer/QA/QC Reviewer	45%	45%
Caridad Murphy, QCM Terracon / Fort Lauderdale, FL	Materials Testing Manager	50%	50%
James Orth, P.E. Craig A. Smith Associates, Inc. (CAS) / Boca Raton, FL	Vice President of Engineering	45%	55%
Orlando Rubio, P.E. CAS / Boca Raton, FL	Senior Supervising Engineer	45%	55%
Robert Keener, PSM CAS / Boca Raton, FL	Vice President Surveying	45%	55%
Jim Driscoll CSA / Boca Raton, FL	Director of Utility Locates	45%	55%
Michael Kroll, RLA, FASLA Miller Legg / Fort Lauderdale, FL	Landscape Architecture PIC / Project Manager	70%	70%
Brian Shore, RLA Miller Legg / Fort Lauderdale, FL	Senior Landscape Architect	70%	70%

# 6

# References

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## 6 References



### TERRACON REFERENCES FOR TRI-COUNTY AREA PROJECTS

#### Former Sears, Pompano Citicentre Mall

Pompano Beach, FL



With the closing of the Sears store at this mall, Terracon's due diligence efforts (Phase I ESA) found that the historical operation of a fueling facility (USTs and dispenser) at the former Autocenter, may have impacted soil and groundwater at the site. Site assessment efforts conducted to assess soil and groundwater found that the area of the former dispenser island was impacted with residual hydrocarbons in excess of groundwater cleanup target levels (GCTLs). The affected area was found to extend throughout the eastern parking area and extend beneath the east end of the Autocenter building. Terracon submitted a combined Site Assessment Report/Remedial Action Plan (SAR/RAP) to incorporate assessment findings and engineering details to remediate the site into one document and minimize Broward County Environmental Protection and Growth Management Department's (BCEPGMD's) review period.

#### CLIENT:

Rafael Saldamando  
Senior Project Manager  
The Sterling Organization  
302 Datura Street, Suite 100  
West Palm Beach, FL 33401  
(561) 812-7541  
rsaldamando@sterlingorganization.com

#### COMPLETION DATE:

Site Assessment/RAP Completed  
12/2019; Active Remediation  
Completed 10/2020.

#### FEE:

\$550,000



As the site is planned for immediate redevelopment with a new building, Terracon developed an aggressive remedial strategy that would address residual soil impacts, along with groundwater exceedances through multiple remedial technologies. The technologies include source removal of saturated soils impacted with petroleum hydrocarbons beneath the groundwater interface, air sparging of groundwater within the open excavation to volatilize petroleum hydrocarbons dissolved in the groundwater, placement of oxidation chemicals (Insitu chemical oxidation – ISCO) into soil during backfilling of the excavation, and injection of oxidation chemicals (ISCO) beneath the excavation and into the surrounding areas of groundwater impacts. Upon receipt of approval from BCEPGMD, Terracon mobilized to the site and field efforts were completed within 30 days. Monitoring efforts found that

## 6 References

additional oxidation chemicals were needed, and reinjected, within isolated locations to support remediation. ISCO is continuing to remediate petroleum hydrocarbons dissolved in groundwater and groundwater monitoring is being conducted to verify progress of the remedial effort. The site will be monitored for one year following completion of the active remediation and the site will obtain closure from the FDEP and BCEPGMD without conditions. Data shows that the remediation is progressing as designed.

The remediation included removal of approximately 885 tons of impacted soil from 5 to 10 ft bgs after removing overburden soils for reuse; air sparging of groundwater within excavation; injection of chemical oxidation compounds. The site will be remediated within 10 months plus groundwater monitoring period. No Further Action (NFA) without conditions will be granted; estimated completion at \$50K below initial budget

### Costco Wholesale

North Miami, FL



The project involved the construction of an approximately +/- 160,000-square-foot (SF) Costco warehouse. A fuel facility was planned at the northeast portion of the site with paved parking/landscaping areas to the east and south sides of the proposed warehouse. The fuel facility contains three 20,000-gallon USTs with fuel dispensers. The site is located within the northwest portion of the former Munisport Landfill and encompasses approximately 14.1± acres of land in the vicinity of Biscayne Boulevard and NE 151<sup>st</sup> Street, North Miami, Miami-Dade County, Florida. Preparation for development of the site, within a portion of the SoLe Mia development property, included the filling of the onsite Northwest Lake and the placement of material from the former landfill, throughout the majority of the site to raise the grade by approximately 13 to 15 feet.

Terracon provided essential assessment and construction oversight services in support of the site investigation and preparation for development of the project site. Relocation and placement of landfill materials were observed and soil and groundwater quality were assessed for constituents of concern within the development site. The results will be incorporated into the conditional closure utilizing institutional and engineering controls provided through Miami-Dade County Department of Regulatory and Economic Resources (RER) which allowed effective operation of the site without the expense of having to conduct remediation of impacted materials

#### CLIENT:

Heidi Macomber  
Director of Development  
Costco  
45940 Horseshoe Drive, Suite 150  
Sterling, VA 20166  
(703) 406-6842  
hmacomb@costco.com

#### COMPLETION DATE:

2019

#### FEE:

\$251,522





## 6 References

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Terracon conducted a Phase I environmental site assessment (ESA) in general accordance with the consensus document known as ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The purpose of this ESA is to assist the client in developing information to identify recognized environmental conditions (RECs) in connection with the site. This purpose was undertaken through a regulatory database review; historical and physical records review; interviews, including local government inquiries, as applicable; and a visual noninvasive reconnaissance of the site and adjoining properties.

Additional services provided by Terracon included: preliminary archeological, historical, and cultural resources search; hydrological flood plain information search; literature and agency file searches were conducted to identify the potential occurrence of federally listed threatened and endangered (T&E) species located in the site vicinity; research to identify potential wetlands; environmental compliance review; and recommendations pertaining to soil, groundwater, and vapor

In response to the findings of the Phase I ESA, Terracon provided construction oversight/limited site investigation (LSI) to help the client understand site conditions through assessment of soil, subsurface vapor, and groundwater quality at the site. In addition to the subsurface investigation, Terracon analyzed samples of landfill materials that have been placed at the site to raise the grade.

Assessment efforts reported the presence of elevated methane concentrations emanating from the landfill and in accordance with FDEP's Landfill closure permit, Terracon designed and oversaw the installation of a vapor mitigation system beneath the building and parking lot to protect against the potential accumulation of methane vapors beneath the building or to enter the occupied space. The system was approved by Miami Dade County Department of Regulatory and Economic Affairs (RER) and will be monitored through electronic monitoring systems to protect the building occupants.

### Nova Southeastern University's Mako Hall

Davie, FL



Terracon and its subsidiaries have furnished professional engineering services for various Nova Southeastern University (NSU) projects performed as a prime consultant or in a subconsultant capacity since the early 2000's. Projects have included roadways, buildings, athletic facilities/fields, hotels, utilities, etc.

Services have included environmental, geotechnical engineering, materials engineering and testing, and inspection services.

Mako Hall is a new 7-story, inverted "C" shaped residence hall building with a 2-story amenity building, outdoor courtyard amenity space, and a parking lot.

**CLIENT:**

Randall Seneff,  
Executive Director of Design  
and Construction  
Nova Southeastern University  
Facilities Management  
3301 College Avenue  
Davie, FL 33314  
(954) 262-8805  
rseneff@nova.edu

**COMPLETION DATE:**

2017

**FEE:**

\$244,055

## 6 References

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The 608-bed single phase housing development is located on the NSU campus at the NW corner of Nova Road (Perimeter Road) and College Avenue in Davie, Florida.

When Terracon performed environmental engineering services, the approximately 2.17-acre site contained a portion of a soccer field, a stormwater retention area, and asphalted parking. A Phase I ESA was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of the ESA was to assist the client in developing information to identify recognized environmental conditions (RECs) in connection with the site. Terracon conducted geotechnical exploration, that included advancement of soil test borings, to provide information and preliminary geotechnical engineering recommendations relative to the development, including subsurface conditions, groundwater conditions, and laboratory test results.

Additionally, Terracon furnished verification for compliance with contract documents of the items incorporated into the project limited to operations related to concrete, grout, earthwork, and steel operations. Terracon qualified technicians observed and reported earthwork-related work while checking for conformance to the plans and specifications as requested. They also sampled soil materials from the site, conducted earthwork density readings and recorded those findings on daily reports when applicable. Our qualified technicians observed and reported concrete/grout-related work while checking for conformance to plans and specifications and performed plastic property testing for acceptance of concrete materials. Laboratory tests were provided when required. Terracon also performed special inspections for: foundations and soil preparation; concrete; precast; masonry; steel; and asphalt paving.



### Projects Performed for the City of Pompano

Assessment efforts reported the presence of elevated methane concentrations emanating from the landfill and in accordance with FDEP's Landfill closure permit, Terracon designed and oversaw the installation of a vapor mitigation system beneath the building and parking lot to protect against the potential accumulation of methane vapors beneath the building or to enter the occupied space. The system was approved by Miami Dade County Department of Regulatory and Economic Affairs (RER) and will be monitored through electronic monitoring systems to protect the building occupants.

Prior to joining Terracon, Steven Harrison, the designated Contract Manager, had established a strong relationship with the City while providing environmental testing projects for the City of Pompano CRA and the City under two separate continuing services contracts (Engineering and Community Redevelopment Agency [CRA]) that he managed for Sphere Environmental Services, LLC, the company he owned. Sphere had completed almost 40 unique projects for the City/CRA that included asbestos surveys (demolition and renovation), groundwater assessment (Former BT Oil, Former Ables), numerous Phase I ESA and Phase II ESAs, groundwater monitoring and closure assistance for the Brownfield site at the location of the new Civic Center, remediation design (Former Able's), supervision of utility installation within a contaminated area along Hammondville Road/ MLK Boulevard, and geotechnical investigations

## 6 References

with foundation recommendations (including Ali Cultural Center, Former Bailey Hall). Terracon purchased Sphere in 2013 at which time the 2010 CRA contract was reassigned to the firm. Steven continues to manage and direct projects for the City and CRA.

Terracon has performed professional engineering services for the City of Pompano Beach for the projects highlighted in the following table.

PROJECT NAME AND ADDRESS IN POMPANO BEACH	TOTAL CONTRACT AMOUNT/ FEE	TOTAL BILLED	COMPLETION DATE	SERVICES PROVIDED BY TERRACON
Ali Cultural Center Phase II 353 Hammondville Road	\$11,334.00	\$5,830.50	2016	Materials engineering, testing, and inspections
N.E. 9th Avenue Bridge NE 9th Avenue at Charles Waterway	\$1,095.00	\$1,095.00	2015	Materials engineering, testing, and inspections
Former BT Oil 201 Hammondville Road	\$9,425.00	\$9,410.00	2015	Environmental - Remediation
Former Laundromax and Warehouse 11 NE 1st Street	\$2,000.00	\$2,050.00	2015	Environmental - Asbestos
Pompano Fishing Pier 101 N Pompano Beach Boulevard	\$15,625.00	\$15,625.00	2015	Geotechnical Engineering
Former Laundromax and Warehouse 11 NE 1 Street	\$3,500.00	\$3,500.00	2015	Environmental - Asbestos
Old Fire Station 11 and Old Beach Library 221 North Pompano Beach Boulevard	\$3,000.00	\$3,000.00	2015	Environmental - Asbestos
Residential Structure 737 Hammondville	\$7,600.00	\$7,600.00	2015	Environmental - Asbestos
790-800 Hammondville Road	\$4,100.00	\$4,350.00	2015	Environmental - Asbestos
790, 800 Hammondville Road Abatement	\$9,800.00	\$9,800.00	2015	Environmental – Asbestos Abatement Monitoring
Downstairs Lighthouse Building 2300 E Atlantic Boulevard	\$950.00	\$950.00	2015	Environmental – Asbestos Survey

## 6 References

PB CRA Innovation Office 37 NE 1 Street	\$2,500.00	\$2,500.00	2017	Environmental - Asbestos
PB - 741 Hammondville Road	\$3,000.00	\$3,000.00	2018	Environmental - Asbestos
NE 20th Avenue Drainage Improvements 1937 East Atlantic Boulevard	\$1,686.00	\$193.50	2018	Materials engineering, testing, and inspections
Sabal Golf Course Remediation Atlantic Boulevard and FL Turnpike	\$896724	\$896,686.77	2019	Environmental - Remediation
PBCRA - Grisham Family Trust Properties 321 NW 5th S Street	\$10,700.00	\$10,700.00	2018	Environmental - Asbestos
PBCRA - Grisham Family Trust Properties (Turnkey) 321 NW 5th S Street	\$52,500.00	\$52,500.00	2019	Environmental – Asbestos Abatement Monitoring
Vacant Parcel SEC West Atlantic Boulevard and SW 27 Avenue	\$2,450.00	\$2,450.00	2020	Environmental – Phase I ESA
Cultural Arts Center Sculpture Atlantic Boulevard and SW 1st Avenue	\$1,250.00	\$1,250.00	2020	Geotechnical Engineering
Pompano Beach Amphitheater	\$22,095	\$22,095	2019	Geotechnical Engineering

We are committed to maintaining the same team of in-house professionals that is currently in place for the CRA contract and familiar with the City's staff, standards and procedures. With virtually no learning curve, the Terracon Team is in place and ready to go. We offer the project management skills, technical expertise, relevant project experience, manpower, and equipment resources necessary to provide the City of Pompano Beach with the most responsive and quality environmental and geotechnical/materials testing services available.

7

# Project Team Form

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**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRETY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM**

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	<u>Richard Minichiello</u>	<u>34</u>	<u>B.A.</u>
Contract / Project Manager	<u>Steven Harrison, P.G.</u>	<u>32</u>	<u>M.S., B.S.</u>
Asst. Project Manager	<u>Terrence Horan, P.E.</u>	<u>27</u>	<u>B.S.</u>
Other Key Member	<u>Lucas Barroso-Giachetti, P.E., CHMM</u>	<u>19</u>	<u>B.S.</u>
Other Key Member	<u>Susan Kuzia</u>	<u>26</u>	<u>M.S.</u>

**SUB-CONSULTANT**

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	<u>Craig A. Smith and Associates, Inc. (CAS)</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Robert D. Keener, PSM</u>
Landscaping	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Michael Kroll, RLA, FASLA, President</u>
Engineering	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Stephen Smith, P.E.</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Jim Driscoll</u>
Other Key Member	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Brian Shore, RLA</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>James Orth, P.E.</u>

(use attachments if necessary)

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM *Continued***

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Other Key Member	<u>Tom Holley, CIH, FLAC, CSP, CHMM</u>	<u>29</u>	<u>B.S.</u>
Other Key Member	<u>Sergio Adasme, MRSA</u>	<u>36</u>	<u>CM Candidate</u>
Other Key Member	<u>Rutu Nulkar, P.E.</u>	<u>16</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Hugo Soto, P.E.</u>	<u>40</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Caridad Murphy, QCM</u>	<u>28</u>	<u>B.S.</u>
Other Key Member	<u></u>	<u></u>	<u></u>

8

# Organizational Chart

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## 8 Organizational Chart

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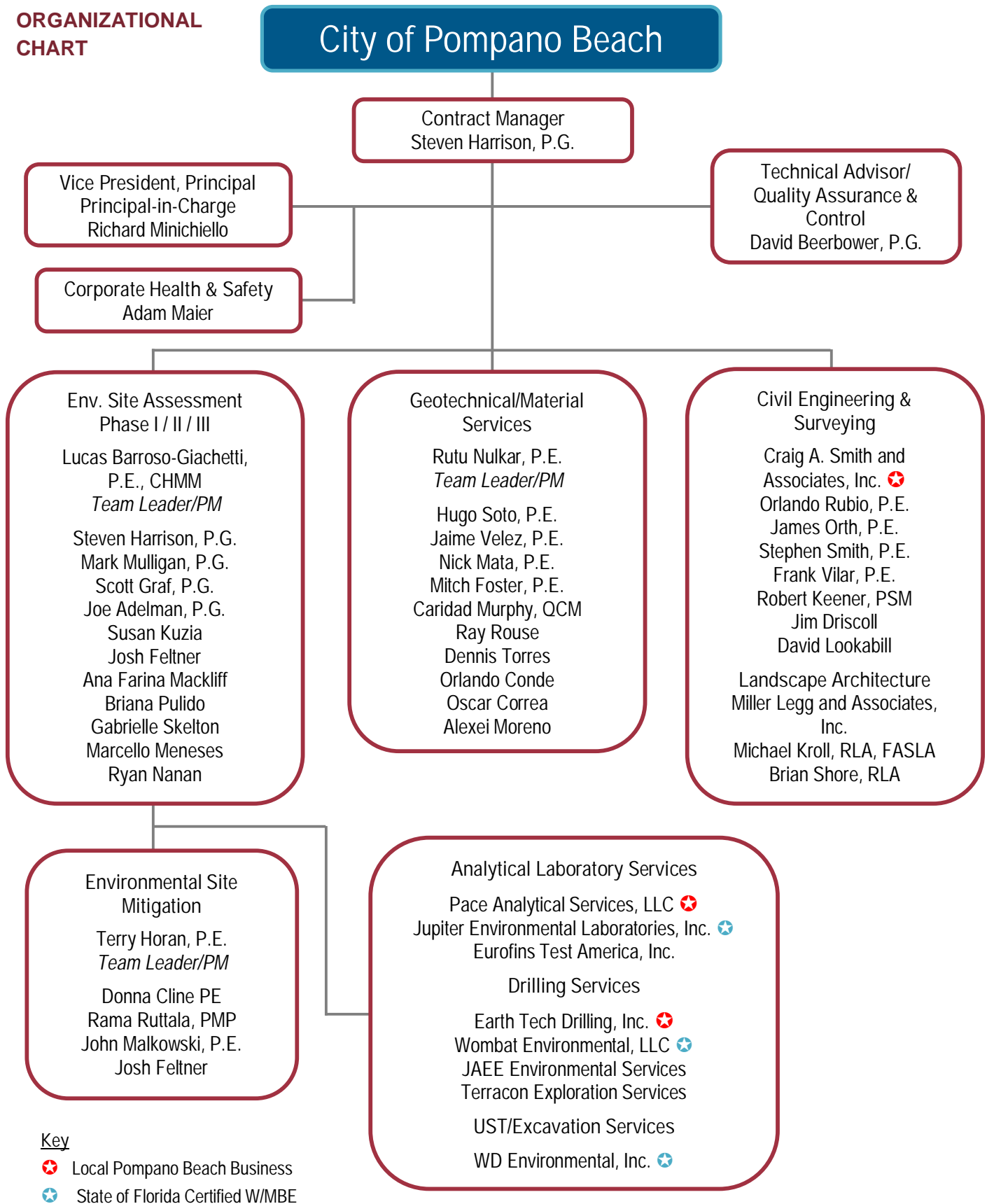
### THE TERRACON TEAM

The Terracon Team is comprised of highly qualified and experienced professionals and specialty subconsultants and potential subcontractors to provide each technical discipline required by this contract. In these efforts, Terracon and its team members will provide the services necessary to resolve the issues identified within any given project. Our team's experience and focus on exceeding client expectations makes Terracon abundantly qualified to undertake this program.

As discussed in Terracon's Technical Approach (Section 4) and Schedule (Section 5), Terracon will maintain complete and full responsibility for the execution of this contract whether services are performed by Terracon or our subconsultant/subcontractor team members. Terracon will maintain the final and ultimate control over the quality, consistency and integrity of the work products that will be delivered to the City of Pompano Beach. Our highly experienced team is led by Contract/Project Manager Steven Harrison who will be the single point of contact. Steven has become very familiar with working the City during the past approximate 10 years and will have overall responsibility for this continuing contract. Our team members and their roles are highlighted hereafter.

# 8 Organizational Chart

## ORGANIZATIONAL CHART



9

# Statement of Skills and Experience of Project Team

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## 9 Statement of Skills and Experience of Project Team



### THE TERRACON TEAM EXPERIENCE

Terracon is a dynamic and growing engineering and scientific consulting firm providing multiple interrelated service lines to clients at local, regional and national levels. We offer specialized engineering services throughout Florida, working with thousands of private and public-sector clients. With the strength of our firm and our existing operations, Terracon has a tremendous presence and broad scope of knowledge in South Florida. The corporation has evolved into a successful multi-discipline firm specializing in:

- Environmental
- Facilities
- Geotechnical
- Materials Testing

Our culture, systems, and structure allow us to excel at both small and large projects, combining our national resources with local expertise. The firm's success is further evidenced by a **current ranking of 22 in *Engineering News-Record's* 2020 listing of the Top 500 Design Firms**, as compared to a ranking of 41 a decade ago, and the **#1 spot for Asbestos/Lead Abatement Design**. We also hold the **#8 spot for Top Design Firms** in the ENR Southeast rankings. Terracon's current national rankings reflect our continued excellence in many key areas.

Saving our clients time and money through tailored services that meet their objectives: it's a commitment we've put into practice since our inception in 1965. Terracon has over 55 years of experience performing the on-call professional services (environmental engineering and geotechnical/materials services, environmental testing and environmental testing) that are required by the City of Pompano Beach. Terracon's staff within the 12-office Florida network has also provided these services statewide for nearly 3 decades.

Throughout our history we have worked extensively with municipal facilities, for both new construction and additions/renovations. The Terracon Team has supported **more than 80,500 projects for 24,110 clients across 50 states** in 2019. In the last three years we have performed services for **more than 84,500 environmental and 96,979 geotechnical projects nationwide**.



## 9 Statement of Skills and Experience of Project Team

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### STATEMENT OF THE TERRACON TEAM'S SKILLS

The submittal of this RLI response provides Terracon the opportunity to clearly describe our expertise, depth of resources, and tenured experience working within both the public and private sectors so it will be easy for you to decide that we should be part of the team to provide these services to the City. The following sections describe the numerous areas of technical expertise provided by our team for thousands of projects in the South Florida area, including many located in the City. During the course of these projects our team members have not only conducted testing and gathered field information for these projects but also provided professional services included below to support these projects. We wanted to highlight these services in a list for clarity and to emphasize that we are very confident with the expertise we offer to support professional services for reporting, costing, permitting and project planning. These key items are weaved into the technical service descriptions below and include, but are certainly not limited to, the following:

- Preparation of preliminary, draft and final reports to summarize findings from modelling and/or field and laboratory analyses that include recommendations for a subsequent course of action;
- Preparation of environmental due diligence reports to support property transactions whether purchasing or divesting;
- Preparation of site assessment and monitoring reports for submittal to you and/or regulatory agencies at the State and County level;
- Preparation of remedial action reports to provide engineering design to address issues of contaminated media (soil, sediment, soil gas, groundwater, surface water);
- Evaluation of regulatory requirements during project planning and development of the scope of work;
- Develop proposals and cost estimates to conduct follow-up work in support of regulatory compliance associated with current operations, infrastructure upgrades, or sites that are contaminated;
- Evaluation and reporting on endangered fauna including, but not limited to, gopher tortoises and burrowing owls;
- Preparation and submittal of permit application to include information required by the involved agencies; packages;
- Preparation and clearing of detailed project punch lists punch and certification of project to permitting agencies for environmental and engineering services;
- Project management for all projects we undertake and support for our clients to include routine updates to keep you informed and aware of conditions directly and indirectly related to the project.

## 9 Statement of Skills and Experience of Project Team

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The Terracon Team staff and resources will allow us to provide the responsive and cost-effective (value added) services you require. **Our resources and knowledge make it easy for you.**

### A Partner to Guide You through The Process

We're not just here to execute the work. We're here to be your trusted partner.

### Experienced and Dedicated Professionals to Support You

You have a powerhouse of expert resources at your disposal who have performed thousands of subsurface explorations, environmental assessments, including NEPA evaluations, site characterization, and groundwater and soil sampling and testing.

### Extensive Resources and Approach to Meet Your Schedule

With more than 900 environmental and 2,800 geotechnical/materials in-house staff, and 160 offices throughout the United States, we have the resources to quickly mobilize to perform work.

### Dynamic Resume of Accomplishments

Our relevant experience and knowledge = we hit the ground running, saving you time and money.

### Our Commitment to Safety

Terracon employees are dedicated to an *Incident and Injury-Free* culture. It is the goal of all employees in the company that everyone goes home safely every day.

## Environmental Services

Terracon provides services on thousands of projects each year. Our culture, systems, and structure enable us to excel at both small and large projects. By combining our national resources with specific local area expertise, we consistently overcome obstacles and deliver the results our clients expect. Terracon serves a diverse portfolio of private and public clients. By being responsive, resourceful, and reliable, we strive to exceed our clients' expectations for service, solutions, quality, and speed of delivery. Based on a deep understanding of our clients' needs, Terracon's commitment is centered around these key objectives. Our breadth of resources, combined with our large geographic footprint, makes Terracon an ideal candidate for these types of contracts.

Terracon staff have performed commercial due diligence services throughout Florida for the public and private sector for over three decades. Terracon staff have conducted commercial due diligence services on multiple projects for clients such as Miami-Dade County, Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida, Broward County, Palm Beach County, City of West Palm Beach, City of Tampa, City of North Miami, Miami Dade College, City of Opa-Locka, Baptist Health South Florida, Allegro Senior Living, AutoNation, Brookdale Senior Living, City of Fort Lauderdale, Nova Southeastern University, City of Hallandale Beach, City of Pompano Beach CRA, Costco Wholesale, FDEP, Florida Department of Highway Safety and Motor Vehicles, South Motor Company of Dade County, Weingarten Realty, to name a few.

As a successful employee-owned multi-discipline firm, we provide environmental engineering and geology services to property owners and municipalities that are engaged in the usage of regulated

## 9 Statement of Skills and Experience of Project Team

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substances within their operations, require regulatory compliance, or those that are purchasing and redeveloping properties. Terracon understands that environmental situations can be cumbersome to deal with and we will go the extra mile to assist you with the process. We will focus on making certain that the City is well taken care of and that we manage your environmental concerns with as little of your time as possible.

Our Due Diligence Consulting Team offers a one-source solution for environmental and geotechnical services at various facilities that are owned, operated, or in the process of being owned by the City.

We have performed environmental consulting services on many project sites in Florida and throughout the country for a wide range of clients, including A&E firms, program managers, construction managers, as well as public and private entities. Terracon's environmental services include:

- Phase I/II ESAs
- Contamination assessment plans (CAPs), reports and monitoring
- Contamination assessment
- Remedial action plans (RAPs), implementation and reports
- Waste characterization
- Remedial design and implementation
- Remediation system operation and performance testing
- Risk management assessment studies
- Management of State of Florida petroleum cleanup sites
- UST management, closure and assessment
- Brownfield site redevelopment
- Public presentations and meetings
- Asbestos/lead/mold/indoor air quality (IAQ)
- Industrial hygiene, health and safety
- Property condition assessments (PCAs)
- Protected wildlife surveys
- Solid waste planning and design
- Regulatory compliance
- Environmental management system
- Stormwater and groundwater monitoring
- Natural resources/wetlands delineation/mitigation

Our project experience is extensive and varied, including most project types in Florida, commercial buildings, airports, ports, parks, agricultural land, cattle land, and undeveloped acreage, to highlight a few.

### Due Diligence Capabilities

Negotiating the complexities of due diligence concerns can be challenging and time consuming. Terracon relies upon demonstrated experience and knowledge of local conditions and regulations to deliver solutions that are timely, practical, and make good business sense.

We have **completed \$204 million in environmental projects across 50 states** in 2019. Terracon has a thorough understanding of local conditions and regulations and knows how to effectively manage the

## 9 Statement of Skills and Experience of Project Team

potential risks presented by hazardous materials and chemical releases that have impacted a site. Our targeted services increase clarity during project development and optimize solutions during design.

Our due diligence services are extensive, varied, and include the following:

- Phase I ESAs
- Phase II ESA/site investigation and closure
- Mitigation/remediation design and implementation
- Regulatory compliance
- Natural/cultural resources
- Brownfields/site development
  - Geotechnical services
- Industrial hygiene – asbestos, mold, IAQ



*Terracon provides clients with a full range of cost-effective services to manage asbestos-related issues which translates to lower abatement fees, fewer contractor change orders, and reduced owner risk.*

### Environmental Due Diligence Services

Terracon's staff has conducted and reviewed thousands of Phase I ESAs for properties throughout Florida's urban and rural environments and was able to identify impacted materials at properties that were not known to be previously impacted. The potential for properties to be affected is real and should always be understood prior to purchase to protect both your legal and financial liability.

As the City identifies and selects properties for redevelopment, it is necessary to understand the conditions that exist and what the potential complications and financial obligations will be to cure the situation. The value of the due diligence efforts is so significant that the efforts should be performed by seasoned personnel because the knowledge gained through the years of assessing hundreds, if not thousands, of properties is invaluable. Terracon ensures that every project is directed, overseen, and reviewed by an environmental professional.

### Phase I ESAs

Numerous local, state, and federal laws have been established to protect people and the environment from contamination caused by industrial and hazardous waste, fugitive emissions, hazardous materials, and other pollutants. The generation and/or release of these and other environmental threats have the potential to contaminate air, soil, and groundwater; affect human health; and create liability for property owners, or those who purchase impacted property.

***Our environmental experts, located in more than 85 offices nationwide with expertise in all 50 states, perform due diligence services on more than 13,000 projects every year.***

Terracon specializes in due diligence services to identify and address environmental issues posing risk to the community, our clients, and their investments. Each time the City begins to consider properties for purchase, redevelopment, or financing, the City will need to understand if the property is impacted from regulated substances from current or historical usage. The first



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step in the environmental due diligence process is to conduct a Phase I ESA to assess whether potential risks, or RECs, exist in association with the property. The Phase I ESA will provide the City with the review of the property's environmental history, which is often the first opportunity to truly understand the potential environmental liabilities associated with a property. Our local knowledge, expertise, and familiarity with local regulations, regulatory agencies, and agency personnel allow us to provide you with the most complete reports, giving you peace of mind regarding your property or facility.

RECs are conditions, potential conditions, or operations associated with the subject property or surrounding properties which result from current or historical uses that could affect the soil and/or groundwater quality. RECs do not signify that a property is impacted but represent the fact that based on the interpretation of the information reviewed, impacted materials may exist. The Phase I ESA can also be utilized to identify business risks associated with asbestos, lead based paint, wetlands, endangered species, and mold/ water intrusion which are an optional component of the due diligence process and are often recommended to assist in understanding additional risks with a property. When on site buildings are being demolished, the presence or absence of asbestos and lead-based paint should be evaluated to develop the proper procedures for removing materials in advance of, or during the demolition process.

Terracon's personnel have conducted thousands of Phase I ESA's for public and private sector client clients throughout Florida in a cost and time effective manner to minimize the timeframe required by the City to conduct their due diligence. The following is a list of the types of properties at which Terracon personnel have conducted Phase I ESA's:

- Commercial properties
- Industrial properties
- Multifamily housing
- Hospitals
- Gasoline and service stations
- Warehouse/distribution facilities
- Dry cleaners
- Retail shopping centers
- Retirement facilities
- Automobile/truck dealerships
- Rental car facilities
- Marinas
- Repair facilities – automobile/truck
- Agricultural land – cattle/row crops
- Landfills
- Undeveloped land/wetlands

Terracon's Phase I ESAs are completed in accordance with ASTM E1527-13 and 40 CFR Part 312, entitled, "Innocent Landowners, Standards for Conducting All Appropriate Inquiries (AAI). These reports are designed to provide "an *environmental site assessment* of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and *petroleum products*". As such, the Phase I ESA is "intended to permit a *user* to satisfy one of the requirements to qualify for one of the three types of limitations on CERCLA liability (hereinafter, the "*landowner liability protections*," or "*LLPs*")":

- innocent landowner;
- contiguous property owner; or
- bona fide prospective purchaser

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### ASTM Phase I ESA Methodology

The Phase I ESA is a research effort conducted to gather readily available documentation concerning historical and current operation of a site and surrounding properties and to perform a physical inspection of those areas to understand if there is the possible presence of an environmental condition that resulted from current or historic operations. The tasks performed as part of the Phase I ESA process are critical to develop an understanding of conditions that could be of potential concern to the soil and groundwater quality. Terracon personnel review facilities and the surrounding area for conditions that would be considered of potential concern to a property due to the usage and handling of regulated substances. The practices utilized during those handling efforts will be reviewed to the extent possible.

The performance of a Phase I ESA includes the completion of the following four tasks, each broken down into key components that are performed as part of the assessment for potential risks to the property.

- Interview
- Site reconnaissance
- Historical site review
- Regulatory file review

### Report Preparation

Upon completion of the research and interpretation of the data obtained, a formal summary report is prepared to present the following:

- Methodologies and sources of information utilized
- Data gaps – any areas of the research that are missing sufficient data to draw a proper conclusion
- Findings, conclusions and presentation of RECs
- Recommendations (if requested by the User)

If RECs are identified in the Phase I ESA, Terracon will discuss the findings of the Phase I ESA with the City personnel to determine if further assessment efforts should be undertaken.

### Phase II ESAs

In the event that a Phase I ESA identifies RECs at the subject property, Terracon will design a Phase II ESA sampling program to assess for the presence of regulated constituents in areas of concern and discuss the planned efforts with the City. The sampling program will address the media most likely to be impacted which could include soil, groundwater, soil vapor, surface water, and lake or canal bottom sediments. If not already completed as a component of the Phase I ESA, building components may be incorporated into the Phase II ESA to assess for the presence of lead-based paint, asbestos, IAQ concerns that could include chemicals as well as mold sampling, and radon.



*During the planning stage, our staff can perform due diligence to identify and quantify the cost of existing or potential environmental liabilities through site assessments, and natural and cultural resource investigations and studies.*

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When RECs include the potential for buried structures or buried debris/landfilling, our team will conduct a geophysical assessment using ground penetrating radar (GPR) to assess for the presence of underground anomalies that may be present at the property.

The scope of work for the Phase II ESA is uniquely designed for each specific property to address the concerns identified within the Phase I ESA prepared for that property with the goal of developing a reasonable understanding of the impacted area so that decisions regarding usage of the property can be developed early in the evaluation process. Terracon conducts Phase II ESA's in accordance with the most recent additions to the ASTM "E1903 (2011) Standard Guide for Environmental Site Assessments". The results generated from the Phase II ESA must be accurate, appropriate and defensible as decisions regarding the purchase of a property is likely to result from this process. This allows the buyer to incorporate potential liabilities, including real and perceived costs, associated with an impacted property, into their decision-making process.

Soil and groundwater samples are often collected utilizing direct push technologies because this provides a very efficient screening device for water sampling; however, when ongoing monitoring and rigorous QC standards are required for groundwater sample collection, monitoring wells will be installed to facilitate sample collection. Prior to working at any project site, a site-specific Health and Safety Plan (SS-HASP) is prepared to detail potential contaminants and physical hazards that site workers may be exposed to during site work. Notice to all public utility companies and requests for private utility information is conducted prior to beginning subsurface work.

Data generated from the analysis of the samples collected during the Phase II ESA are interpreted to assess if impacts are present from the RECs. The identification of impacted materials will be presented to the City to discuss how the impacts could affect proposed usage and remedial requirements. Current or future residential property usage requires that more stringent regulatory requirements be adhered to than if the facility was designated for commercial or industrial use.

The scope of the Phase II ESA will not be designed to fully assess the estimated aerial extent of an impact but to identify its presence and obtain an understanding of its significance. All sampling efforts are conducted in accordance with the Standard Operating Procedures (SOPs) detailed by the FDEP in Chapter 62-160 of the FAC.

Based on the proposed use, ownership requirements and regulatory exceedances, Terracon will recommend if further assessment should be conducted to assist the parties in their decision making process regarding the transaction.

All subcontractors are licensed and insured in their field of specialization and the environmental laboratories utilized by Terracon are State of Florida FDEP, DOH approved, and NELAC compliant.

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### Natural/Cultural Resources

Whether a project site is undeveloped or involves redevelopment of an existing site or right-of-way, compliance with a variety of natural and cultural resource regulations may be required, including the NEPA, Federal Energy Regulatory Commission (FERC) documents and filings, Endangered Species Act, Waters of US / 4 Clean Water Act, Section 106 of the National Historic Preservation Act, and a myriad of state and local regulations.

Terracon's network of experienced professionals helps our clients with:

- Determining what federal, state, and local regulations apply to the site
- Evaluating what regulations are likely to apply depending on how much is known about the project design
- Developing a phased approach with a customized checklist that identifies "critical path items" leading to successful regulatory compliance and project completion.

Terracon's biologists, geologists, archaeologists, historians, NEPA and FERC specialists, and professional engineers apply their skills to a wide range of project settings to conduct natural and cultural resource studies that facilitate environmental planning and compliance with regulations.

Our natural and cultural resource services include the following:

- NEPA EIS, EA, CE (environmental impact statements, environmental assessments, categorical exclusions) studies and checklists
- Environmental impact assessments
- Wetlands/waters of the U.S. delineation
- Wetland/stream mitigation and restoration
- U.S. Army Corps of Engineers (USACE) Section 10/404 Permitting/Mitigation
- Threatened and endangered species habitat assessments
- Species-specific studies
- Tree and vegetation surveys
- Cultural resource management under Section 106
- Archaeological investigations and monitoring
- Historic structure assessments (Historic American Building Surveys - HABS/Historic American Engineering Record - HAER/Historic American Landscapes Survey - HALS)
- Noise studies and modeling
- GIS and GPS mapping services
- Wetland monitoring
- FERC Process: Section 7; Section 2.55; Section 157, Subpart F

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### Wetland Surveys and Mitigation

Wetlands are determined by assessing the type of vegetation that is present, along with the characteristics of the soil and the hydrologic conditions. Jurisdictional wetlands do not necessarily require standing water to be present. Careful site inspections need to be conducted to determine if wetlands characteristics are present pursuant to Sections 62-340.100 through 62-340.500, FAC, as ratified by Section 373.4211 Florida Statutes (F.S.), as well in accordance with the 1987 USACE Wetland Delineation Manual. The vegetative index, as found in Section 62-340.450 FAC, is also used to assist in the identification and delineation of wetlands. Plants on the vegetative index are listed as Obligate (OBL), Facultative Wetland (FACW), or Facultative Upland (FACU). The presence of obligate wetland plant species indicates wetland habitat.



*Terracon combines local knowledge and regional experts to deliver a tailored approach to specific projects and schedules.*

Wetland resources are regulated by the Federal government through the USACE, by the State through the Water Management Districts (SFWMD) or the FDEP and in Broward County by the EPGMD. The goal of wetland resource regulations is a no net loss in function or value of wetland resources. This is accomplished through the avoidance of impacts as the first priority, minimization of impacts as the second, and mitigation as the third.

Consultation with the jurisdictional agencies should be conducted early in the planning stages to confirm if the agencies may or may not consider any portion of a site as wetlands. Should the agencies claim a portion of the site as jurisdictional wetlands, permits from these agencies will be required if the identified wetland area will be directly or indirectly impacted by the proposed development. A formal or informal jurisdictional delineation may be requested, prior to the submittal of an application to an agency, to establish and agree upon the jurisdictional line and specific wetland area to facilitate permit processing.

A wetland mitigation assessment methodology known as the Uniform Mitigation Assessment Method (UMAM), codified in Chapter 62-345 of the FAC, has been adopted in the state of Florida to be utilized by all State and local agencies. The USACE also adopted this methodology for use in the State of Florida. The UMAM provides a quantitative methodology for assessing the Functional Loss (FL) of an impacted wetland resource and the methodology to determine the Relative Function Gain (RFG) of an enhanced or created mitigation area to determine the adequacy of the proposed mitigation. If on-site or off-site mitigation is proposed to offset wetland impacts, the adequacy of the mitigation will need to be evaluated by conducting a UMAM assessment of both the impact and mitigation sites.

If wetland impacts are to be mitigated through the purchase of credits from a licensed mitigation bank, the exact number of credits to be purchased will be determined by the specific methodology the Bank was originally permitted under. Credits can only be purchased from a bank whose service area covers the impact site. Pompano Beach falls within the service area of the Florida Everglades Mitigation Bank (EMB) located in Dade County, and the Loxahatchee Mitigation Bank located in Palm Beach County. The

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EMB utilizes the WATER assessment technique to determine credit needs and Loxahatchee utilizes the WRAP assessment methodology.

As a part of a project planning process we will investigate the existing site and surrounding conditions, and the applicable databases to determine if the project area falls within suitable or identified habitat of any State or Federally listed wildlife species. Should there be any potentially suitable or known habitat present, or imperiled species observed, full coordination will be conducted with the Florida Fish and Wildlife Conservation Commission (FWC), the U.S. Fish and Wildlife Service (USFWS), or National Marine Fisheries if aquatic environments are involved. All required permits will be obtained and the Standard Operating Procedures established for the species that may be present, and any other jurisdictional agency requirements will be followed with the implementation of the project. If wildlife relocation is required all permit conditions will be implemented as well as any seasonal criteria, such as not relocating burrowing owl nests when active.

### Threatened and Endangered Species

Terracon routinely reviews publicly available data during the initial assessment and develops a list of listed species (i.e., threatened and endangered species or species of special concern) or their habitat that may occur on-site or adjacent to the project site. Terracon conducts field assessments and surveys to identify listed species and their habitat that have the potential to occur within the proposed project limits. Data collected includes the following:

- Species observations (i.e., tracks, scat, physically observed, etc.)
- Habitat and quality of the habitat (i.e., low, medium, high)
- GPS coordinates of burrows or nests marked, habitat, and observation points

If listed species or their habitat are observed or documented, Terracon would obtain GPS readings of the location of the observation, notify the City and be prepared to conduct species-specific surveys. Our Environmental Planning team has extensive experience conducting these surveys, consulting and permitting with the agencies (USFWS, FWC, Broward County, Miami-Dade County Department of Regulatory and Economic Resources [DRER], and other agencies), and relocation or mitigation. Species include, but are not limited to, the following:

- |                      |                        |
|----------------------|------------------------|
| ■ Gopher tortoises   | ■ Corals               |
| ■ Sand skinks        | ■ Bald eagles          |
| ■ Burrowing owls     | ■ Crested caracara     |
| ■ Scrub jays         | ■ Florida bonneted bat |
| ■ Johnson's seagrass | ■ Eastern indigo snake |

### Site Investigation

The process to redevelop properties within the urban environment often need to address subsurface impacts that were identified through historical records or analysis of samples collected as part of the due

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diligence process. The presence of impacted groundwater and/or soil samples requires that further assessment be conducted to understand the extent and degree of the affected area. The City will be able to use the assessment data along with projected remedial costs to conduct a cost-benefit analyses in evaluating how to proceed with the property.

### Groundwater and Soil Assessment

The first step in conducting a site assessment is to understand the ultimate goal of a project so that the assessment can be focused to meet those goals. A proper assessment requires that the consultant combine their knowledge of a site's history, lithology, and hydrogeology with their knowledge of sampling technologies and chemical migration into a well formulated approach. All assessment efforts are designed to fulfill the requirements of Chapter 62-780, FAC. Prior to working at a project site, a SS-HASP is prepared to detail potential contaminants and physical hazards that site workers may be exposed to during site work. Notice to all public utility companies and requests for private utility information is conducted prior to beginning work.

Groundwater and soil samples are collected through the advancement of soil borings and monitoring wells to access the specific location and depth from where samples are to be collected. Samples are collected throughout the area of the suspected impact in accordance with FDEP SOPs as detailed in Chapter 62-160 FAC and supported by our FSQM. Soil samples are screened in the field using an organic vapor analyzer (OVA) to assess for the presence of volatile organic carbon compounds prior to the collection of samples for laboratory analysis. The screening results help to guide the placement of soil borings for the collection of samples that will be submitted for laboratory analysis.

Soil and groundwater samples are analyzed for the chemicals of concern and the analytical results are interpreted to estimate the magnitude of the problem as well as the horizontal and vertical extent of the affected area. Integral components to the assessment and understanding of the distribution and migration of affected materials at a facility include the following services:

- Development of aquifer characteristics
- Hydrogeological modeling
- Soil gas assessment
- Source identification
- Historical site usage
- Surface water body and tidal influences
- Understanding of background/naturally occurring conditions

Terracon's personnel have extensive experience with the assessment, evaluation and remediation of impacted soil, sediment, and groundwater at facilities located throughout Florida and are prepared to assess sites for whatever potential impacts may be encountered.

Successful projects have addressed the following regulated substances:

- Petroleum hydrocarbons
- Chlorinated solvents
- Polychlorinated biphenyls (PCBs)
- Metals – arsenic, lead, chromium,

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- Oil and grease
- Pesticides/herbicides
- Dioxins

The assessment data is then utilized to understand the ramifications that the impacted materials will have upon the site and to select the appropriate remedial approach. It is common that multiple media (soil, groundwater, surface water) are affected at a site and it is essential to understand the interactions between the matrices that will affect the degradation and migration of the regulated substances.

With our experience in managing the assessment and remediation of properties, we will provide the City with cost effective timely solutions that will return the property to its expected functionality.

Regulatory standards may require that remedial efforts be implemented to address impacted materials at a residential property while the same concentrations at a commercial property may only be required to utilize engineering (i.e., concrete cap, barrier wall) and institutional controls (i.e. deed restriction) to manage the affected materials.

### **Contaminated Sediments**

Contaminated sediments potentially exist alongside every roadway of South Florida cities as stormwater runoff carries regulated compounds from roadways into the surface water canals. The regulated compounds will enter the surface water body with sediment particles and migrate through the water where they will tend to become part of the sediment load at the bottom of the canal or lake.

Assessing canal bottom sediments presents a situation that is nothing similar to the methodologies and practices employed at land-based properties. Canal bottom sediments are in constant state of flux and behave as a fluid that makes them difficult to sample and to define boundaries of potential impacts. Bottom sediments are stratified with a nepheloid layer (supersaturated floating layer of mud) in direct contact with the surface water. As sediment depth increases, the weight of the sediments compresses the solid materials and squeeze out the water as a function of the physical and mineralogical composition of the sediments.

Terracon staff completed the assessment and subsequent remediation of canal bottom sediments where a canal in a residential neighborhood was impacted by liquid asphalt. As regulatory guidelines to provide cleanup target levels (CTLs) for sediments are limited, Terracon staff worked with the FDEP to detail the manner in which the analytical data should be interpreted and utilized criteria from the Dutch government and NOAA (National Oceanic and Atmospheric Administration) to develop cleanup goal for the site.

The assessment efforts ran contiguous to mitigation efforts (Source Removal) and included the collection of surface water samples and sludge bottom samples for analysis. The Interim Source Removal effort involved isolating sections of the canal and dewatering each section so that the sediments could be remediated. Floating oil and sediments were removed from the water before returning the water to the



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canal. Canal bottom sediments were removed through a combination of vacuum and excavation efforts until confirmation data of remaining sediments met the criteria established for the site.

The FDEP approved the assessment and source removal efforts under Chapter 62-780 FAC and the site obtained closure upon completion of the 12-month monitoring program.

### Turbidity Monitoring

Terracon staff have supported construction projects where the disturbance of coastal areas may create sediment, or turbidity plumes, that migrate outside of the controlled area. Increased turbidity can negatively affect biological processes and must be monitored during activities that disturb sediments within the coastal environment. Our team has monitored turbidity for the following noteworthy projects 1) an 8 month (24/7) beach nourishment project off the coast of Miami Beach; monitoring was conducted surrounding the dredge site where silt plumes were commonly created-and 2) monitoring an inland waterway when a marina was being developed as part of a condominium project off Atlantic Blvd in Pompano Beach; as the marina was being dredged there were concerns that breaking the “bridge “ between the newly created body of water within the marina and the canal to which it was going to be connected would release a turbid plume into the waterway. Monitoring is conducted to document that turbidity was not increased by more than 29 NTUs (nephelometric turbidity units) above background or work had to stop until additional controls were established to control the turbidity.

### Brownfields

Brownfields are defined as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Brownfields programs can work very well to attract developers to the project areas, with available land for appropriate reuse, through financial incentives (tax credits, job creation, grants (where applicable), low interest loans) and liability protections from preexisting conditions to sites for which a Brownfield Site Rehabilitation Agreement (BSRA) has been signed. Redevelopment is enhanced by the use of risk based corrective actions (RBCA) to develop appropriate CTLs without requiring unnecessary remedial efforts.



Terracon will work with the City to provide a realistic evaluation and assessment of the liability and costs associated with the redevelopment of environmentally-impaired properties that are otherwise valuable. The successful redevelopment of these properties requires foresight and experience in understanding how the interests of all stakeholders may vary and how they can converge. Sometimes a successful project may include leaving contamination in place after development, where the contamination is controlled to minimize potential exposure to underlying hazards.

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Terracon can assist the City with preparing grant applications for potential funding opportunities from the U.S. Environmental Protection Agency (EPA); meet with interested parties to provide assistance in understanding project specifics; assist with negotiation of assessment, remediation requirements as well as timeframe requirements for inclusion in a BSRA; participate in public meetings as requested; prepare technical reports; and conduct assessment and remediation as necessary and appropriate.

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*Since 1996, Terracon has been a part of more Phoenix Award-winning teams than any other consultant. We have received 16 Phoenix Awards representing successful public and privately funded redevelopment projects.*

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Safely restoring a contaminated property and helping to find purpose in its reuse is one of the most rewarding opportunities an environmental consultant can have. It requires a collaborative team with the creative vision to see beyond the condition of an existing site, and instead see the possibilities for redevelopment.

Terracon's knowledge and proven experience offers our Brownfields assessment and redevelopment clients with property-specific solutions at an efficient business pace.

Brownfields services we provide include:

- Grant writing
- Community outreach and engagement
- Property inventory/prioritization/ranking
- Due diligence and site assessment
- Agency plans and reports
- Report preparation
- Grant management
- Environmental assessment and remediation
- Asbestos and LBP surveys
- Mold and IAQ investigations
- Regulatory compliance
- Regulatory permitting and mitigation
- Cost-to-remedy analysis
- Property condition assessments
- Risk management
- Strategic corrective action
- Tax credit assistance

Florida's Brownfields program is more streamlined than the Federal counterpart due to Florida regulations developed to govern these sites. The City can leverage Federal grant money utilized to initiate a project with Florida Tax incentives to maximize the benefits of working within the Brownfields program.

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**Terracon has completed projects funded by more than 253 EPA Cooperative Agreements.** Terracon and our experienced staff have assisted clients in obtaining federal Brownfields grant funds exceeding \$40 million.

### Environmental Mitigation/Remediation

Terracon staff of environmental consultants and engineers have mitigated/remediated hundreds of impacted properties across Florida and the United States through implementation of a variety of technologies selected to best resolve the impacted condition. The selected technology designed and implemented at a specific site is selected through the development of a remedial action plan that considers overall cost, timeframe for completion, ease of implementation, accessibility, and likeliness of regulatory approval. Terracon has remediated sites with a wide variety of technologies, including the majority of those considered by the City in the list provided.



*City of Opa-Locka's Northwest 27<sup>th</sup> Avenue Assessment and Redevelopment Project pictured above. Terracon provided Brownfields consulting services for the City's \$400,000 EPA community-wide assessment grant.*

In developing a remedial strategy for a site, Terracon evaluates available technologies to best mitigate impacted materials and select the technology, or group of technologies that best fit the needs of the site. Various methods utilized to address the constituents of concern include but are not limited to the methods listed below:

- Air sparging – oxygen diffusion
- Bioremediation/bioventing
- Engineered wetlands – phytoremediation - ex-situ treatment
- Excavation
- Fixation
- Groundwater pump and treat – air stripping towers, carbon vessels, resins or other media
- Groundwater ozonation
- In-situ chemical injection
- Reactive barriers
- Slurry walls and recovery trenches
- Soil vapor/multi-phase extraction
- Vapor mitigation of methane and/or volatile compounds

Environmental remediation can be a significant undertaking for buyers/owners of real estate or responsible parties, so it critical that our team of engineers and scientists understand the site and proposed future use, to design a cost-effective remedial approach to obtain regulatory approval and, ultimately, closure. Whether the process pursues conditional, using institutional and engineering controls, or unconditional closure, the process will be undertaken in accordance with regulatory requirements where Terracon works closely with regulators from conceptual development of the remedial plan to implementation and closure of a projects to support a strong working relationship. The path selected will be selected to support the responsible party's plans for use/ redevelopment so the client can realize the

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maximum potential of the property. Remedial design and implementation experience includes conventional remediation technologies (i.e., source removal, contaminated site encapsulation, natural attenuation) and innovative technologies including, *in-situ* bioremediation/ chemical oxidation, soil vapor extraction, enhanced bioremediation, and other *in situ* soil and groundwater treatment technologies.

Throughout the design process, Terracon will seek to select, design, and implement an efficient and cost-effective approach to save the City money and provide a successful site closure.

### Interim Source Removals

Interim source removals provide a regulatory approved mechanism that allows property owners to conduct aggressive remediation of properties without laboring through the preparation and approval of a remedial action plan. Interim source removals allow owners/ responsible parties to pursue a remedy that has the potential to remediate impacted materials at a site. Soils or sediments and groundwater or surface water can be addressed through this mechanism; the most significant limitation is that the process cannot spread contamination into areas of the site that was not previously impacted. Vacuum or groundwater removal systems that require engineering should obtain regulatory authorization prior to use.

Terracon's staff has been conducting Interim Source Removal projects to advance redevelopment projects to the construction phase throughout Florida for many years. Interim Source removal projects are an excellent way to address impacted materials, especially soils with limited groundwater contamination, that were identified at redevelopment sites where timing is critical.

### Remediation Design

Remediation efforts are very site specific and will be designed to incorporate the timing and type of development proposed for the property because future usage can play a significant role in determining the ultimate course of action. Of course, understanding the technical aspects of the distribution of the impacted area are critical to developing a remedial plan, but understanding when the City is willing to obtain a Conditional Closure for a property versus one where it would be unacceptable is essential to the planning of the remediation efforts. The City may allow the land beneath a future commercial building to be closed with a deed restriction but the site where a children's playground is to be constructed would not be amenable to the same closure conditions. The data obtained from the site assessment will detail the subsurface soil and groundwater quality as a framework for the development of a remedial plan.

### Feasibility Studies

To identify appropriate remediation strategies, Terracon conducts feasibility analyses to evaluate the combination of owner's requirements and site factors which include the following:

- media affected (soil or groundwater)
- source area
- extent of the impacts
- future use of the site
- remedial cost including implementation and operations
- site disruption and loss of revenue
- timeframe for completion
- regulatory requirements

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Terracon personnel have extensive engineering experience implementing cost effective methods for properly remediating impacted soil and groundwater in accordance with regulatory requirements. The selected remedial strategy may include conventional remediation technologies (i.e., source removal, contaminated site encapsulation, natural attenuation) and/or innovative technologies including *in-situ* bioremediation, soil vapor extraction, enhanced bioremediation, and other *in-situ* soil and groundwater treatment technologies. The final resolution also considers site conditions, cost, and future site plans.

Terracon's experience in the many varied aspects of remedial operations (Source Removal/Initial Remedial Actions (IRAs), spill recovery, preparation of RAPs, pump and treat systems, insitu methods, vacuum extractions, etc.) enables us to incorporate site findings into an approach that addresses the Client's and regulatory agency's requirements while combining financial and time constraints with technical concerns.

### **Conditional Closure**

While Terracon's remediation experience includes designing and implementing remedial action programs under the oversight of state regulatory agencies, our team will work with the City to develop the best option for securing site closure. Regulations governing assessment and remediation, Ch. 62-770, 780 and 785 FAC, support the use of risk-based criteria to achieve site closure is in line with current and proposed site usage and the evaluation of exposure pathways, so that the closure conditions remain protective of the general public.

The FDEP has established generic closure options that can be requested if the site profile meets the generic conditions. These conditional closures can be achieved with little to no remediation at a property but will require that a restrictive covenant – an institutional control or deed restriction, along with appropriate engineering control, if possible – two feet of clean fill or hardscape, no use of groundwater, relocating stormwater drainage systems, etc. – be obtained. When the property is scheduled to be redeveloped, maintaining contaminated materials on site may result in health and safety concerns that would not ordinarily be an issue at a construction site.

Construction personnel would need to be aware of site conditions and have the appropriate training to work on the site. Other considerations that would need to be evaluated are the management of contaminated soils on site - could the soils be managed and reused beneath paved areas/ foundation or would they need to be transported off site anyway. In making the decision to obtain a conditional closure site development and future operations need to be considered. Terracon's experience in identifying and managing these situations can be very advantageous when redeveloping a property that contains impacted materials.

Conditional closures are also provided when alternative CTLs are developed through the risk assessment process as described earlier. Unless a site meets the most stringent of the CTLs for soil and groundwater, a conditional closure is provided through one of the management options available through the FDEP.

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### Soil and Groundwater Remediation

Classical remediation technologies limited disruption to site activities and focused on withdrawing soil vapors and/or groundwater from the ground for aboveground treatment. While these technologies produced positive results and remain as viable alternatives, changes in technology coupled with increases in the knowledge base produced new schools of thought regarding site remediation. Some of the biggest changes are related to a better understanding of risk and natural attenuation of regulated compounds. Remediation technologies that provide in situ treatment of soil and/or groundwater have the potential to leave residuals of the regulated substances that can cause delayed release of regulated substances, only to cause concentrations of regulated substances to rebound at a later date.

The overall components of a complete remedial strategy are segregated into the following areas that allow for sites to be properly evaluated, remediated and closed with regulatory approval. Some closures will have restrictions that due to the inability to access portions of an affected area or as a cost saving technique, sites may be remediated to commercial rather than residential standards. In these cases, the owner agrees to have institutional controls (deed restrictions) put on the property in addition to potential engineering controls (cap, limited water usage, etc.) to manage the impacted site.

The following components of remedial strategies are used independently or in conjunction, depending upon the specific needs of the property.

#### ■ Source Removals

- Includes the excavation of soils, often coupled with the pumping of affected groundwater from the excavation
- Allows for rapid removal of the source area, which contains the majority of the affected material
- Characterization of the waste streams may allow for reuse of the excavated materials at an alternative facility in lieu of disposal
- Opening the subsurface promotes natural attenuation, if warranted, to reduce remaining limited concentration to below regulatory thresholds

#### ■ Risk Assessments

- Evaluation of analytical data to assess if remedial efforts are warranted
- Allows for development of site specific CTLs based on site conditions and receptors
- Terracon will work with regulators to obtain approval for risk-based CTLs resulting in reduced remedial costs

#### ■ Soil Remediation

- *Incineration/ Landfilling:* Affected soils are excavated and replaced with imported fill, if needed. Soils are disposed at licensed through incineration or landfilling at licensed facilities. This method provides an aggressive method to address sites where access is open and timing is critical.

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- *Vacuum Extraction:* Volatile vapors are withdrawn from the vadose zone by applying vacuum pressure to a series of wells. Extracted vapors are often treated with thermal oxidizers, afterburners, or activated carbon prior to release to the atmosphere.
- *Soil Cover/Engineering Controls:* Impacted materials at some facilities are too extensive or inaccessible to remediate realistically. Through proper understanding of site conditions regarding future use and potential impacts to groundwater, a regulatory approved cover (2-feet of clean fill, concrete, asphalt parking lot, etc.) may be installed to restrict access to the area and meet the requirements for restricted closure.
- *Enhanced Bioremediation:* Rather than disposing of affected soils or waiting for natural processes to degrade regulated constituents, Terracon can also enhance biological and redox (reduction/oxidation) conditions through the addition of regulatory approved chemicals. These chemicals alter subsurface redox conditions to produce a more favorable environment for appropriate bacterial growth and enhanced chemical oxidation.

### ■ Groundwater Remediation

- Terracon's extensive experience includes design, installation, and operations and maintenance of groundwater remediation systems. Groundwater remediation systems must be designed to capture the area of affected groundwater, control future migration, treat the affected water, and document that air emissions are acceptable. Terracon can implement many types of remedial methodologies which include pump and treat systems, in-situ treatment with chemical amendments, natural attenuation and monitoring, or installation of physical barriers (i.e. slurry wall, barrier wall installation).

### ■ Vapor Mitigation

- Vapor mitigation systems have been designed and employed by Terracon at sites to mitigate exposure from methane (landfill gas) and volatile organic compounds). Passive and active systems have been designed and installed using impervious membranes, venting pipes, and explosion proof blowers, individually, or in combination, to mitigate concerns related to vapor intrusion which could result in health impacts or fire/ explosion concerns

Terracon is prepared to address whatever type of remedial situation is required. Terracon staff and our team have specifically remediated soil and groundwater at numerous sites through a wide variety of the technologies available the various technologies. Soils have been remediated through excavation at properties throughout south Florida and the west coast of Florida and been remediated through enhanced bioremediation, and vacuum extraction with emission control through afterburners and vapor phase carbon adsorption. Groundwater has been remediated through natural attenuation, pump and treat with air stripping towers, low profile air strippers, injection of chemicals for insitu treatment, and carbon adsorption. Bioremediation/ oxidation of petroleum hydrocarbons through addition of oxygen release compounds have been conducted in association with petroleum hydrocarbon impacts. Terracon's team fully understands alternative technologies available and is prepared to design the appropriate system for the proper application.

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### Industrial Hygiene – Asbestos, Lead-Based Paint, Mold, and IAQ

Occupational health and safety is a critical part of a productive and safe workplace. Exposures to chemicals, noise, hazardous materials, mold, and other contaminants can result in serious health problems.

Terracon offers our clients one of the largest occupational health and safety groups in the U.S. that includes Certified Industrial Hygienists (CIHs), Certified Safety Professionals (CSPs), and industrial hygienists. Our health and safety team have extensive experience identifying hazards, monitoring exposures, evaluating risks, and formulating measures to correct problem areas.

Terracon's expertise is built on decades of experience with a wide variety of projects and settings that range from individual employee exposure evaluations, to community-wide health research projects. Our clients range from Fortune 500 companies to local small businesses, in various markets including power production, oil and gas exploration, manufacturing, petrochemical refining, healthcare, colleges and universities, railroads, mining, aviation, shipping, food production, and retail.

Projects conducted for the City will often have buildings onsite that require rehabilitation and/or demolition. Prior to any work that might disturb building materials; it must be known if the materials are asbestos containing or painted with lead-based paint. Our team of building material specialists will provide the services needed to address the issues that may exist at these project sites.

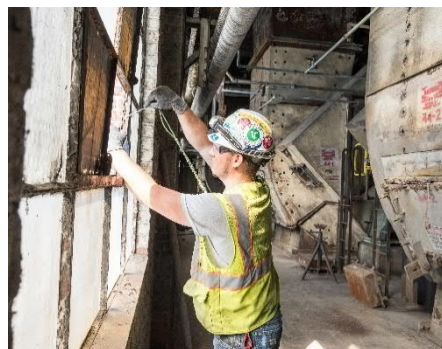
### Asbestos Surveys

Asbestos-containing materials (ACM) were historically utilized during the construction of every type of building. Many types of asbestos materials can still be legally bought and installed today. Asbestos is found in a wide range of building materials including surfacing treatments, pipe insulation, spray-on fire-proofing, floor and ceiling tiles, roofing products, and many others. As these materials age, they deteriorate, and may present health risks to building occupants and maintenance workers if not properly managed or removed. Terracon offers a one-source solution for asbestos consulting with a nationwide network of asbestos professionals, including more than 400 Asbestos Hazard Emergency Response Act (AHERA) certified asbestos staff.

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***Terracon offers a one-source solution for asbestos consulting with a nationwide network of asbestos professionals, including more than 400 AHERA-certified asbestos staff.***

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*Terracon industrial hygienists performed asbestos surveys on more than 4,100 projects in 2018.*

Our staff includes asbestos inspectors, planners, and designers who have experience in providing asbestos management solutions for property management companies, developers, general contractors, healthcare facilities, native american tribes, schools, government facilities, private industries, and the A/E community.



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Terracon's inspectors perform surveys and collect samples of suspect ACM or potential LBP materials in schools, commercial, and municipal buildings. The asbestos surveys follow the guidelines established under the EPA's AHERA program and, as required, by EPA Regulation 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAP).

Asbestos surveys begin with a review of available construction documents to possibly identify suspect asbestos containing building material (ACBM), and a visual survey is then conducted, and suspect material is sampled and analyzed for asbestos content. In accordance with EPA regulations, only those materials containing greater than one percent asbestos would be reported as an ACM.

Asbestos surveys will be performed by appropriately trained staff who are AHERA-certified Building Inspectors. Terracon will begin with a visual survey to determine unique homogeneous areas of suspect ACM and the condition of the materials.

Suspect materials will be physically assessed for friability and evidence of damage or degradation. Bulk sample collection will be conducted in general accordance with the sampling protocols outlined in 40 CFR 763.86 (AHERA). At least three samples of each identified suspect material will be collected. Terracon samplers are aware of the requirements for thorough surveys and excel at locating and sampling suspect materials that can be commonly overlooked such as caulking, vermiculite block insulation, paints, and electrical wiring.

The suspect ACM samples will be submitted to a subcontracted National Voluntary Laboratory Accreditation Program (NVLAP)-accredited lab for analysis by visual estimation using polarized light microscopy (PLM). If friable samples are determined to be  $\leq 3\%$  asbestos-containing by PLM, Terracon recommends the laboratory be instructed to perform point counting analysis on the samples. For all non-friable organically bound materials that are determined by PLM to be  $\leq 1\%$  asbestos-containing (including non-detect), Terracon recommends that one sample of each material will be analyzed by transmission electron microscopy (TEM). The extra point count and/or TEM analyses at minimal cost can result in substantial overall project savings by reducing the quantity of regulated materials requiring abatement and special disposal.

Upon receipt of laboratory results, Terracon will prepare a written report describing the sampling methodology and the results of the asbestos survey. The report will describe the number, type, and location of suspect ACM samples, the analytical results, the estimated quantity and the condition of materials identified as ACM. Drawings depicting the layout of the site, the location of the collected samples (one drawing per building minimum), and the location and extent of ACM will be included as appendices in the report. Representative color photographs of the site will also be included in the report, if requested. One draft PDF copy of the report will be submitted for City review that presents the results of the asbestos survey, and City comments will be considered prior to submittal of the final report.

### Abatement Planning and Monitoring

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If ACM is identified during the survey, Terracon has extensive experience in preparing plans and specifications for remedial actions including enclosure, encapsulation, and partial or complete removal. We can also provide trained and certified technicians for air sampling during the abatement process.

### Abatement Design and Specifications

Terracon has licensed personnel with extensive experience providing oversight, project documentation, and air monitoring throughout abatement projects. Our on-site personnel will work with you and the abatement contractor to ensure the project is conducted in accordance with regulations and project specifications. Upon completion, we provide a project closeout report including all required documentation for your records.

### Operations & Maintenance Planning (O&M)

Terracon prepares management plans that provide specific procedures for operating and working safely around ACBM and lead-containing paint (LCP). Commercial plans include operations and maintenance programs that explain how to protect a building's maintenance and housekeeping personnel, tenants, and occupants from exposure. O&M plans also provide the basis for making informed decisions regarding potential long-term economic liabilities associated with asbestos and LCP.

### Lead-Based (LBP) Paint Surveys

Lead paint survey projects will be performed, when necessary, by an EPA licensed LBP Inspector or Risk Assessor per EPA regulation 40 CFR Part 745, Volume 61 No. 169, page 45813, Section 227, subpart L: Requirements for Lead-based Paint Activities Final Rule, following the U.S. Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing, revised 1997. Surveys will be performed by collecting paint chips of painted surfaces or utilize an X-Ray Fluorescence (XRF) portable lead paint spectrum analyzer to determine which building components contain LBP. Use of XRF technology conforms to HUD guidelines and allows for rapid data gathering in the field, which will result in expedited reporting and cost savings to the City by reducing sample time and laboratory costs. Often times, surveys are limited to the collection and analysis of paint chip samples as they provide results for direct comparison with exposure standards as provide by the Occupational Safety and Health Administration (OSHA).

*"... Lake County Schools had the pleasure of retaining Terracon Consultants, Inc. for our multi-year continuing contract for ... asbestos, indoor air quality, industrial hygiene, mold and lead-paint surveys and project management as well as abatement monitoring and reporting ... Their attitude toward teamwork communication, project flexibility and achieving the client's goals is outstanding."*

*- Randy Wells  
Loss Control Officer-Risk Management  
Lake County Schools, Tavares, FL*

Terracon will conduct a visual assessment of the building areas and facility components to identify testing combinations in each room equivalent. A room equivalent is described as an identifiable part of a building or residence (e.g. room, house exterior, foyer, etc.). Surface coatings will be physically inspected. Coated surfaces will then be sampled by collecting a paint chip or analyzed using the portable XRF lead paint analyzer. At least one individual XRF reading will be taken from each testing combination in each room

## 9 Statement of Skills and Experience of Project Team

equivalent, except for walls where four readings (one from each wall) will be taken in each room equivalent. XRF readings will be classified as either positive or negative for each testing combination.

For those XRF readings within the inconclusive range of the instrument, or at the City's request, Terracon will collect paint chip samples for laboratory analysis to confirm the concentrations of lead. The qualified laboratory selected will be accredited to perform the lead analysis by atomic absorption spectrometry (AAS). The results will be reported in mg/cm<sup>2</sup>, parts per million (ppm), or percent by weight.

Terracon also performs LBP Risk Assessments, involving interpretation of previous data, visual assessments, dust sampling, soil sampling, and deteriorated paint sampling. This effort is used to determine the presence or absence of LBP hazards and the most feasible and effective safety options for lead hazard control. Once the lead hazard control work is completed, clearance of the area is established. A report will then be prepared to list the hazards identified and acceptable control measures.

A table presenting data from all XRF readings and a classification of all surfaces into positive or negative categories will be included in the report, as will a detailed description of the XRF instrument and laboratory methodologies. The analytical results, chains of custody, and personnel/laboratory accreditation certificates will also be appended to the report. The report may also include color photographs to assist in depicting the location and/or condition of identified LBP.

### Mold Evaluation

The mold evaluation will consist of a physical inspection and assessment and indoor environmental monitoring. The physical inspection and assessment will include building hygiene and maintenance and heating, ventilation, and air conditioning (HVAC) system hygiene and maintenance. The indoor environmental parameters that will be measured include temperature, relative humidity, culturable and non-culturable mold, settled dust, and/or Polymerase Chain Reaction (PCR) sampling.

Based on the multiple sources of potential indoor and outdoor contaminants that can affect IAQ, the physical inspection and assessment will be conducted to evaluate general indoor hygiene, building maintenance practices, the HVAC system and hygiene, moisture intrusion and uncontrolled condensate formation, and odors. The assessment focuses primarily on collecting observational data (i.e., information obtained by physical inspection of the building and interviews with the building management, owners, and occupants).



*Terracon conducts a variety of services related to mold growth and water intrusion incidents. These services include mold and water intrusion investigations, bulk sampling, air monitoring, and surface tape lift sampling. We also assist our clients during the removal of contaminated materials with remediation planning, removal specifications development, remediation monitoring, and post remediation testing to verify that mold removal is complete. Terracon's multi-disciplinary approach ensures that all IEQ problems are assessed, giving the client peace-of-mind and cost-effective solutions.*

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The physical assessment can help to formulate plans for a more in-depth investigation. The physical assessment will include:

- an examination of the physical structure and potential point sources of moisture intrusion;
- the identification of any discoloration or odor that could indicate moisture intrusion, water damage and microbial growth;
- the determination of any suspect ACMs that may be impacted by mold;
- using a moisture meter and infrared (IR) imaging camera to detect moisture impacted materials; and
- an examination of the HVAC system(s) and its components.

### Indoor Air Quality

IAQ is comprised of air quality and physical characteristics of building environments that can cause health symptoms among workers, tenants, and other building occupants. Air quality is judged by the accumulation of pollutants from indoor processes, or sometimes infiltration from outdoor sources, and the ability of building ventilation and filtration to dilute and remove them. Physical characteristics that can affect building occupants include air temperature, moisture, and to a lesser extent, lighting and noise. Employers, property managers, and building owners are increasingly concerned about IAQ problems because of associated health, absenteeism, and lost productivity costs.

Undesirable conditions, such as odors, discomfort, visible fungal growth, and occupant perceptions of poor IAQ are generally indicators of the loss of control or failure of one or more building systems. Improperly designed, operating, or maintained HVAC systems, and deficiencies in building maintenance or construction, can contribute to poor building and system hygiene, excess moisture infiltration, the build-up of indoor pollutants, and indoor mold growth. These can all contribute to building-associated health and comfort complaints.

Terracon uses a multi-disciplinary approach to assess and address the root causes of IAQ problems. Our industrial hygiene staff focuses on recognizing and evaluating potential problems that can affect the health, well-being, and productivity of employees or other building occupants. We can also team with our facilities engineering group to identify building deficiencies and building envelope issues. Working together, these specialists can pursue the causes of complaints, and provide practical recommendations to correct IAQ problems.



*Terracon's health and safety team has extensive experience identifying hazards; monitoring exposures, including dust monitoring; evaluating risks; and formulating measures to correct problem areas.*

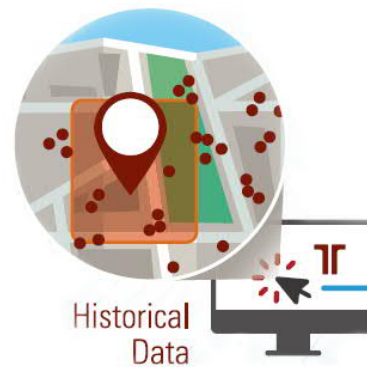
## 9 Statement of Skills and Experience of Project Team

### Geotechnical Services

#### The Terracon Method

When you hire a geotechnical engineer, you look for someone who can drill soil borings, run laboratory tests, and deliver a report within a reasonable time frame. You expect field and laboratory data delivered along with the engineer's site preparation and foundation design opinions.

Terracon has done that for more than 50 years. But we do so much more. We do our research on your site. We retrieve local data from our vast database of historical information using our proprietary GIS platform. We combine that history with the best public domain information available. Then, we develop an opinion of the expected subsurface conditions before we even take our first soil sample.



Using our opinion of expected conditions, we design an intelligent work plan to explore the site. Using our arsenal of conventional drilling/sampling, in-situ testing and nonintrusive, geophysical exploration tools strategically placed across the country, we execute the intelligent work plan using safe, current and effective tools, and procedures.

*"Terracon was an asset to our team in overcoming the challenging site conditions and keeping the project on track. Their response to the project needs is always prompt, accurate and professional."*

*- Adolfo Cotilla, Jr.  
President  
ACAI Associates, Inc.*

Our methods include conventional drilling and sampling, in-situ testing and non-intrusive testing, and geophysical exploration tools that are available through our nationwide network of offices. We execute the intelligent work plan using safe, current, and effective tools and procedures.

And what professional, geotechnical engineering firm would not have an excellent laboratory?

Terracon has more than 140 of them. We maintain required state and federal program accreditations and validations. We utilize an internal quality program that confirms that we meet our standards for safety and efficiency as well as quality, lowering your costs to get the data you need.

Our geotechnical engineers analyze the information, develop site preparation options, foundations, and pavements, and consult with you and your entire design team to create excellent designs faster than ever. Understanding that collaboration builds consensus and time is money, we achieve collaboration by delivering data to the entire design team as soon as we collect it using GeoReport®, Terracon's web-based delivery system.

***With more than 130 drill rigs, Terracon owns and operates the largest drilling fleet of any geotechnical engineering firm in the U.S.***

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As your project moves to construction, our work is not over. Our materials professionals' partner with our geotechnical engineers to further confirm our subsurface understanding, perform testing necessary to document quality, and address encountered variations.

### Subsurface Exploration

#### Drilling/In-Situ Testing Methods

Terracon has been in the exploration business since 1965. Our exploration equipment, which can access almost any site condition, includes:

- Drills
- Cone penetrometer testing
- Direct push units (all sizes mounted on trucks)
- Tracks
- Skids
- Buggies
- Barges (overwater access)
- Other all-terrain Vehicles



*Terracon's Winter Park, Florida exploration team operating a truck-mounted CME-45 drill rig on jack-up boats in Tampa Bay. Borings were performed to depths up to 250-feet- below the mudline to characterize the subsurface for geotechnical parameters.*

Our intrusive methods of exploration and sampling, include:

- Hand augering
- Hollow stem augering
- Wash and air rotary
- Rock coring
- Angle drilling
- Direct push techniques
- ODEX© and Symmetrix© overburden drilling

Specialized in-situ testing methods include:

- Cone penetration testing (CPT and SCPTu)
- Downhole vane shear
- Dilatometer modulus testing
- Pressure meter testing
- Borehole shear
- Packer testing
- Geo-instrumentation installation and automation

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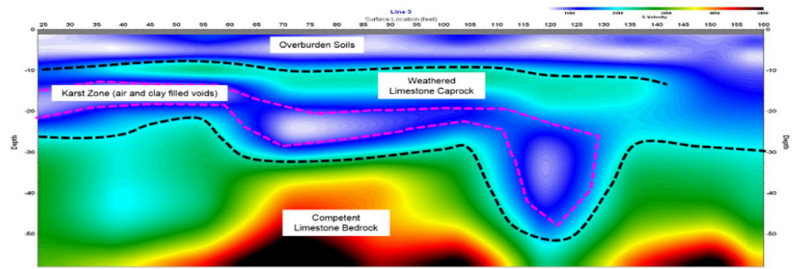
***Terracon is a Gold Shovel Standard® certified contractor and we are constantly evaluating and evolving our practices to deliver on safety, quality, and production.***

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## 9 Statement of Skills and Experience of Project Team

### Geophysical Methods

Terracon's geophysical capabilities include various non-intrusive methods that complement our traditional intrusive methods, greatly improving site characterizations. Geophysical surveys can provide valuable subsurface information in remote and inaccessible areas, allowing our engineers to correlate subsurface data between borings. These methods can help reduce the risk of unknown and unexpected features on a project site before and during site operations. Our highly-qualified geophysicists routinely work with a broad spectrum of clients to provide necessary geophysical information for the exploration, planning, design, locating, and evaluation of a wide variety of project sites.



*Initial borings located shallow bedrock, but a geophysical seismic refraction survey indicated a karst layer with open voids below thin cap-rock. Follow-up drilling confirmed the geophysical findings and the construction program was adjusted to account for unexpected voids beneath the planned building. Terracon's ability to identify the karst features ahead of time saved our client design and construction delays. Terracon's geophysical findings enabled us to help our client to mitigate future major ground settlement that would have damaged their new building.*

Terracon's primary geophysical methods (among others) include:

- Ground Penetrating Radar (GPR)
- Seismic Refraction (MASW, ReMi)
- Electrical Resistivity Imaging (ERI)
- Electromagnetic Induction (EMI)
- Borehole and marine geophysics

Some applications include:

- Contaminated sites
- Vital infrastructure (pipelines, transportation, dams)
- Geotechnical characterization (sinkholes, landslides, bedrock topography, seismic analysis)
- Buried objects (utilities, storage tanks, debris)
- Vibration monitoring
- Deep foundation surveys

### Laboratory Testing and Analysis

#### Soils Testing

Terracon offers a comprehensive suite of index soil property testing to include water content, particle size distribution, Atterberg limits, and density testing.



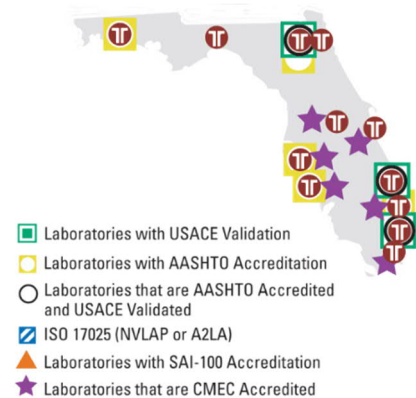
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### Advanced Soils Testing

Terracon's advanced laboratory equipment consists of closed loop, direct feedback, computer controlled, data acquisition systems allowing us to provide quality data in an expedited manner.

This state-of-the-art equipment is utilized to perform the following soil tests:

- Shear Testing
  - Triaxial Shear
    - ASTM D4767 Consolidated Undrained (CU)
    - ASTM D7181 Consolidated Drained (CD)
    - ASTM D2850 Unconsolidated Undrained (UU)
    - $K_0$  Triaxial
  - ASTM D3080 Direct Shear
    - Peak Strength
    - Residual Strength
  - ASTM D6528 Direct Simple Shear
- Consolidation
  - ASTM D2435 Incremental Loading
  - ASTM D4186 Controlled-Strain Loading
- Swell
  - ASTM D4546 One Dimensional Swell or Collapse
- Hydraulic Conductivity
  - ASTM D5084 Flexible Wall Permeameter
  - ASTM D2434 Permeability, Granular Soils
  - Method E Mercury Constant Volume
  - ASTM D5856 Rigid Wall
- Thermal Resistivity
  - ASTM D5334 Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure



***With more than 140 laboratories serving all 50 states, Terracon owns, operates, and maintains the largest network of accredited and validated laboratories of any geotechnical engineering firm in the U.S. Terracon can consistently produce reliable, repeatable, and accurate test data on projects anywhere in the U.S.***

### Corrosivity Testing

Terracon's chemistry lab staff possesses extensive knowledge in Water Soluble Chemical Testing and Acid Soluble Chemical Testing to include combined and suite testing. We routinely perform tests, on samples from various regions around the country, to include: pH analysis, Water Soluble Sulfates, Total Salts, Chlorides, Resistivity and Red-Ox. Terracon is equipped to perform the following tests:



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- Soil Chemistry – sodium, sulfate, solubility, chloride, gypsum, pH, resistivity analysis – ASTM/AASHTO (miller box), DOT corrosion analysis
- Concrete – potential reactivity, chloride, and cement content
- Soil Fertility Tests – agronomy reports



*Terracon continually applies new technologies to improve and expedite our services to solve your project challenges in a timely, reliable, and cost-effective manner.*

### Rock Mechanics Testing

Terracon also offers a wide array of specialized rock mechanics testing including:

- ASTM D 7012 Triaxial Compression
- ASTM D 3967 Indirect Brazilian Tensile Test
- COE RTH 105-93 Hardness by Schmidt Hammer
- COE RTH 109-93 Porosity
- COE RTH 109-93 Bulk Density of Prepared Core
- ASTM D 5607 Direct Shear Intact Rock
- ASTM D 5731 Point Load Axial Diametrical

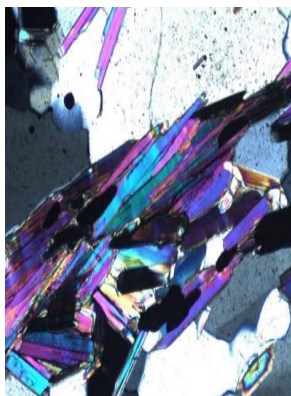
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***Terracon's national laboratory resources allow us to process large volumes of test specimens quickly, reducing risk of delays to your critical project schedule. And, with a local presence, we have in depth familiarity with materials and specifications of numerous local, state, and federal agencies.***

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### Petrographic Analysis

Petrographic examination can be used to determine properties of minerals that include expansion potential and dissolvable characteristics that can lead to acid mine drainage and abrasive qualities likely to result in excessive bit wear. Examination methods may include stereomicroscopy, polarized light microscopy, reflected light microscopy and thin-section examination. These may be augmented by X-Ray diffraction and fluorescence methods.



*Petrographic examination can be used in conjunction with other laboratory tests to evaluate rock weathering and drilling/ripping behavior. Petrographic analysis provides reassurance and confirmation materials meet specific requirements. Additionally, this analysis provides confidence in knowing materials will perform as expected while reducing project delays and future costly repairs.*

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### Quality Management System (QMS)

Safety and quality are the top priorities in all Terracon laboratories. In addition to our rigorous internal Quality Management System (QMS), we maintain laboratory certification and validation through multiple third-party, industry-recognized accrediting agencies. Our quality commitment is rooted in our core value of safety. Terracon laboratory technicians work on sophisticated testing equipment and are internally trained and externally certified as part of “doing things safe and right” for the benefit of our employees, clients, and communities. Terracon delivers accurate, precise, timely results – and the confidence that comes with them.

### Geotechnical Engineering

#### Foundation Analysis and Design

A foundation must be safe, economical, and practical. Choosing the most effective foundation system from a broad range of options requires experience and technical competency. Terracon’s local engineers offer geology and construction knowledge prevalent in their area. They are also supported by nationwide specialists who are competent in the various foundation types, analytical methods, and QC factors affecting project costs and schedules. This combination is critical to project success. Associated services include:

- Shallow foundations – spread, strip and/or mat types
- Ground improvement to support shallow foundations
  - Compacted stone columns
  - Surcharge/preload, with strip drains, if needed
  - Over-excavation and replacement
  - Deep, dynamic compaction
  - Rigid inclusions and soil mixing
- Deep foundations
  - Drilled shafts (straight, belled, slurry-drilled, cased, and secant and tangent walls)
    - Full-scale instrumented load tests and thermal and sonic integrity tests
  - Drilled and grouted piles (conventional auger-cast and displacement types)
    - Automated monitoring and full-scale instrumented load tests
  - Driven concrete and steel piles
    - Pile dynamic analyses and conventional load tests
  - Single and group P-Y lateral load analyses
  - Combined structural pile and settlement reducing pile/load transfer systems
- Groundwater control and under-drainage systems

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***Terracon’s combination of local practical experience and national technical foundation alternatives expertise enables us to deliver optimal projects solutions to keep projects on schedule and within budget.***

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- Backfill reinforcement to reduce basement wall loads
- Foundation performance monitoring instrumentation, including wireless and automated 3-D Finite-element analyses of complex and/or innovative foundation systems
- Specialized solar and wind energy foundation design and testing
- Micro-pile and rock-anchor design and testing

### Earth Structure, Slopes, and Retention Services

The interaction of factors affecting the stability of natural and constructed earth slopes is complex. Terracon utilizes proven laboratory testing techniques and computer software to assist in analyzing and designing earth structures, and retention systems. Terracon provides analysis, design, safety assessments and field construction testing services including:

- Parametric studies to evaluate failed slopes and design reconstructed slopes
- Rockfall evaluation and protection systems – active/passive rock bolts and netting
- Rock cut evaluation and design
- Design using surface mapping and observation implementing drone and LiDAR surveying methods coupled with traditional strike/dip and bedding measurements
- Slope instrumentation (installation and monitoring) such as inclinometers, piezometers, and extensometers
  - Remote and automated data acquisition
- Slope drainage system design and installation
- Design of on-slope and foundation stabilizing elements (toe berms, tiebacks, shear keys, plate piles, and rigid inclusions)
- Levee and earth dam section design including seepage analysis and drainage collection systems, inspection trenches, and routine monitoring programs
- Temporary and permanent earth retention systems selection and design – cast-in-place concrete, MSE, RSS, sheet pile, soldier pile, soil nail, slurry wall, secant/tangent pile walls, and anchored systems
- Embankment geometry, material selection, and compaction specifications
- Field construction observation and QA/QC testing



*Terracon performed subsurface exploration, laboratory testing, embankment seepage and stability modeling, embankment settlement forecasting, evaluation of structure foundations, construction observation and monitoring for SFWMD's C-43 West Basin Storage Reservoir in Hendry County, Florida. Geotechnical information developed by Terracon was utilized as the basis for design of the dam, seepage controls, the hydraulic structure foundations, geotechnical instrumentation, plans and specifications.*

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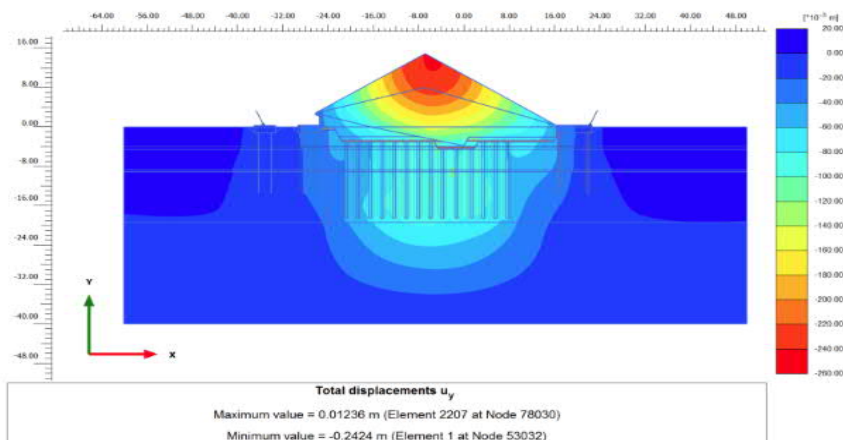
- Anchor load tests
- Rock and soil slope inventory database management

***Earth retention design requires combined geotechnical and structural solutions. Terracon's depth of experience and understanding and breadth of in-house resources (site characterization tools and geo-structural design software) provides an all-encompassing approach to earth retention design and testing services.***

### Specialty Evaluation

Today's built environment involves disturbance of a variety of natural landscapes and terrain in unique ways. The same natural environment can, in turn, wreak havoc on developments and structures. These two scenarios are often unplanned and not adequately designed to meet unexpected challenges. Whether your project requires specialty earth retention design, complex geotechnical modeling, forensics, litigation support, or geo-civil design, Terracon utilizes a wide range of techniques to understand soil behavior and provide the most cost-effective solution.

- Earth Retention Design:** The interaction of factors affecting the stability of natural slopes and constructed slopes is complex. From selection of design parameters to anticipating potential environmental and man-made disturbances, Terracon has the field exploration, geotechnical modeling programs, and soil knowledge to develop economical earth retention designs.
- Geotechnical Modeling:** To optimize results for clients and provide economical designs, Terracon utilizes Finite Element Analysis (FEA) packages such as PLAXIS and midasGTS to perform numerical modeling for geotechnical design and analysis problems. Our geotechnical engineers model non-uniform subsoil and groundwater conditions with discontinuities and anomalies. Soil behavior is captured using sophisticated constitutive soil models. Different boundary and loading conditions can be accurately modeled.



*Terracon's use of geotechnical modeling tools provide optimized solutions compared to classical modeling methods and results in a customized design delivering economical solutions.*

- Litigation Support:** Terracon has skilled geotechnical practitioners to provide expert witness

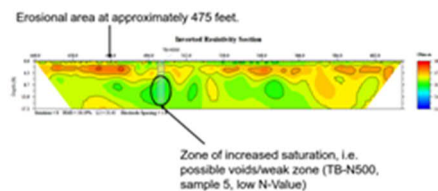
## 9 Statement of Skills and Experience of Project Team

testimony during litigation. From changed soil condition claims evaluation, to weighing in on care standards, to rendering design opinions, we find the facts, maintaining a clear understanding of our client's interests and respecting confidentiality.

- **Geo-Civil Design:** Improperly incorporating civil design aspects with geotechnical elements results in overly conservative geotechnical parameter assumptions and costly solutions. Involving Terracon early in the site civil design provides more cost-effective approaches to mitigate your risks. We support geo-civil projects with a wide array of site exploration tools and material laboratory tests for use by civil designers. Further, Terracon can evaluate foundation and exposed geotechnical aspects of landfills, levees/dams, fills, holding ponds, and earthen structures.
- **Forensics:** Soil is a challenging building material – one that strength, compressibility, and other fundamental engineering properties can differ with direction as well as change with time, moisture conditions, or weathering. Terracon's experienced engineers and geologists are able to draw from a wide array of geophysical techniques, earth probes, and sophisticated laboratory soil sampling methods to determine a soil's ability to maintain performance expectations. Through a parametric study using modern programming and analysis tools, we are able to measure soil behavior under existing, expected, or hypothetical conditions to determine the most probable root cause of observed performance or the probabilistic analysis to make informed decisions to mitigate your risks.



*After the sudden failure of the embankment for this secondary treatment lagoon, Terracon provided forensic analysis to determine the cause, used ERI geophysical techniques to verify integrity of remaining embankments, designed repairs, and developed the elements for the ongoing owner maintenance program.*



### Pavement Engineering

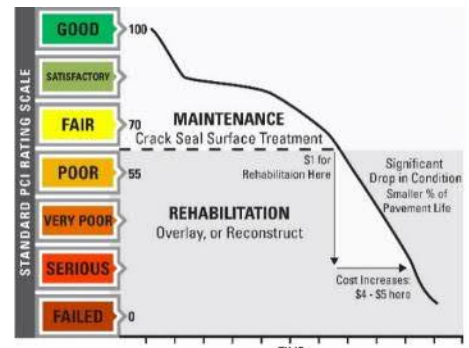
Terracon's pavement evaluation, design, preservation management, and construction management experience provides needed expertise to meet pavement lifespan challenges.

### Evaluation

Terracon uses technologies in field testing and evaluation, laboratory testing, and both visual and geophysical surface condition assessments to provide accurate results. We can provide the most cost-effective recommendations intended to support decision making during the design process and long-term planning for many types of pavement projects.

## 9 Statement of Skills and Experience of Project Team

- **Subgrade Evaluation:** Subgrade properties are fundamental to pavement design. Terracon offers a full range of drilling, sampling, and coring equipment.
- **Material Evaluation:** Dynamic Cone Penetration testing for subgrade support characterization and a suite of laboratory tests for determining material properties.
- **Existing Surface Evaluation:** Paving surfaces may consist of concrete, asphalt, or both. Evaluation of the existing pavement and distresses are performed using ASTM methods.



*Pavement costs represent a significant portion of the total construction and maintenance budget for many public and private projects. If delayed, relatively low-cost maintenance efforts will result in more expensive future rehabilitation.*

### Design

Pavement design requires knowledge of the traffic conditions (current and projected), environmental conditions, subgrade properties, pavement types, and design life criteria. With the appropriate balance between subgrade preparation and pavement design, a practical solution is engineered.

### Preservation Management

Services include performing pavement condition surveys to forecast future pavement condition and lifespan. We prepare work plans to extend pavement life, optimize pavement expenditures, and manage pavement maintenance programs. The client can then make informed decisions and remove the guessing game associated with short- and long-term pavement management.

### Construction Management

Once the path forward has been determined, proper pavement management plan execution is paramount. Terracon provides the owner the peace of mind the construction/maintenance of their pavement investments will be done correctly and efficiently. From construction administration to materials testing, Terracon provides construction management services from project start to finish.

### Subconsultant: Craig A. Smith and Associates, Inc.



Craig A. Smith and Associates, Inc. (CAS) is a Florida corporation licensed for the practice of professional engineering, surveying, utility locates and construction management services. CAS has joined the Terracon Team to provide civil engineering, inclusive of construction management, and surveying services. CAS has a Broward County office in Deerfield Beach to support the corporate office located in Boca Raton and is Tier 2 Broward County local Vendor.



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 and mapping, grants/loan assistance, construction management, utility locates

## 9 Statement of Skills and Experience of Project Team

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and CAD design and development. The firm is organized into five technical operating divisions each under the supervision of a Vice President or Director. These operating divisions are: civil engineering, surveying, CADD, subsurface utility locates, and construction management.

CAS' 40 years of experience gives the firm 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 numerous utility and stormwater/drainage improvement projects for the City of Belle Glade, Indian Trail Improvement District, Sunshine Water Control District, City of Sunny Isles, Glades County, City of Miami Beach, Town of Golden Beach, City of Pompano Beach, City of Oakland Park and the Town of Pembroke Park. CAS has provided professional stormwater engineering services to the following municipalities and is proud to have done so for many years:

- City of Pompano Beach (since 2015)
- Town of Pembroke Park (since 1987)
- City of Margate (since 1988)
- Bal Harbour Village (since 1989)
- 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 Belle Glade (since 2013)
- Village of Biscayne Park (since 2013)
- City of Lauderhill (since 2013)
- City of Sunny Isles Beach (since 2013)
- Sunshine Water Control District (since 2015)

### Civil Engineering

CAS provides clients with a full range of engineering consulting services. Their 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:

- Stormwater management
- Stormwater utilities
- Water treatment and distribution systems
- Wastewater collection/transmission and treatment
- Potable water treatment systems
- Wastewater pump station design

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- Stormwater pump station design
- Canal dredging and sediment removal
- Surface water management
- Utility permitting
- Water/wastewater treatment plant design/rehabilitation
- Utility pipeline design and relocation (water, wastewater and reclaimed water)
- Utility master planning
- Grant funding assistance
- Facility planning
- Solid waste studies
- Solid waste disposal and leachate treatment
- Development permitting
- Feasibility studies
- Inflow and infiltration studies
- Construction cost estimate
- Construction management
- Construction observation and certification
- Contract administration
- Effluent reuse and disposal
- Sludge treatment and disposal
- Roadway and drainage design

### Construction Management

CAS has a knowledgeable and experienced construction management team which is important for keeping a construction project on schedule, realizing potential cost savings and minimizing construction impacts. CAS has experienced staff to provide effective contract administration including cost estimating, schedule review, shop-drawing submittal review, processing of change orders and any other related construction management (CM) activities. CAS will ensure key construction project elements are documented and updated regularly in the E-Builder Enterprise system and that any issues are addressed efficiently. CAS will ensure that the contractor is held accountable, abiding according to design documents and meeting all contractual obligations. Construction progress reporting, to the City of Pompano Beach, will include summary of work completed, critical issues requiring resolution in order to maintain project schedule, planned budget versus actual cost to-date, planned work schedule for the next month and identification of any upcoming conflicts or other critical items requiring tracking in the E-Builder Enterprise system.

- Mobilize and prepare site
- Prepare safety plan
- Project field stake-out
- NPDES permits and maintenance of traffic (MOT) plans
- Shop drawing submittal and approval
- Begin construction
- CM and administration
- Construction inspection and reporting
- Public involvement/community outreach coordination
- Adherence to contract/permitting requirements
- Final construction & restoration
- Final punch-list



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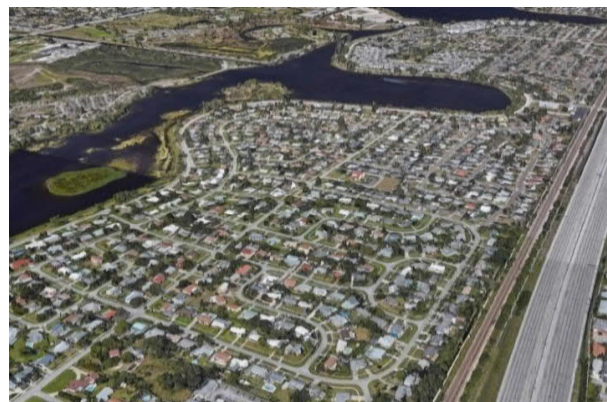
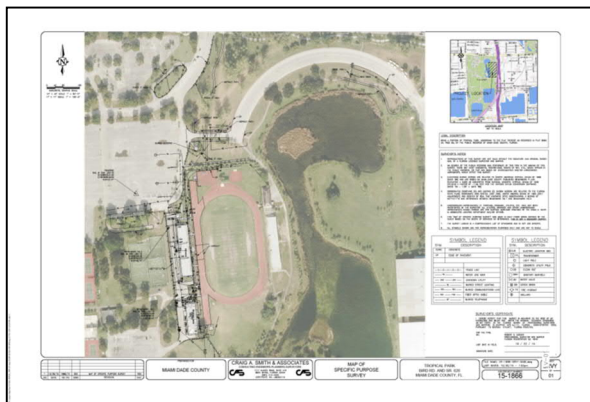
### Surveying

CAS is one of South Florida tenured and respected surveying firms that provides complete land surveying services. The surveying staff is comprised of licensed land surveyors who adhere to strict standards and give special attention to accuracy and detail. The company 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, the survey crews have been trained based on engineering principles and implement daily QC measures ensure that clients receive the highest quality service and most accurate base maps. CAS surveying services include:



- Mapping and platting
- Boundary and acreage surveys
- Land description preparation
- Construction surveys
- Subdivision designs and calculation
- GPS mapping
- Route surveys
- Canal cross-sections
- Parcel description and sketches
- Condemnation surveys
- Highway construction surveys
- Quantity surveys
- Accident surveys
- As-built certifications
- Mean high water surveys
- Drone

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 base maps or scope of work as required for the duration of a project.



## 9 Statement of Skills and Experience of Project Team

### Subconsultant: Miller Legg and Associates, Inc.

Miller Legg is one of Florida's most diversified consulting firms, serving clients globally. The firm provides engineering, design and planning services for public and private sector projects. Established in 1965, Miller Legg is an award-winning consulting firm that provides engineering, planning, landscape architecture and urban design, surveying, subsurface utility engineering, environmental consulting, and geographic information systems to government and the private sector.



Miller Legg has locations in Fort Lauderdale, Miami (Doral), Port St. Lucie, Winter Park, Saudi Arabia and Dubai. Miller Legg's corporate headquarters is located at 544 N Andrews Way, Fort Lauderdale, FL 33309, and the Doral office is located at 7743 NW 48th Street, Suite 140, Doral, FL 33166. Both locations will support the Terracon Team by conducting landscape architecture services.

Miller Legg's corporate tagline, "Improving Communities. Creating Environments" clearly describes their design philosophy, which is utilized in our extensive portfolio of park design and renovation projects. With 55 years of experience, Miller Legg has led significant public involvement efforts, carried out required regulatory agency permitting, coordinated bidding activities and conducted construction administration efforts. Our design philosophy ensures the City's vision, in correlation with the desires of the stakeholders, the existing natural and built environments, as well as a project's sustainability and maintenance requirements.



Government sector projects comprise a significant part of Miller Legg's multi-disciplined experience. Over the years, as one of the State's most recognized consulting firms, the firm has provided a broad range of services to municipal, county, state, and federal agencies.

The wide range of government projects Miller Legg has successfully completed during the past five decades has given the firm the understanding and expertise necessary to meet any requirements, including permitting and project approval. Miller Legg has numerous government clients, with anywhere from 40 to 65 continuing contracts statewide at any given time during the last decade.

Projects successfully completed for government sector clients on time and under budget range from municipal and county parks master plans and recreational facilities design, county neighborhood infrastructure improvements and municipal streetscapes and roadways to municipal landscape architecture and traffic plan reviews, environmental services, as well as complete surveys of government complexes.



## 9 Statement of Skills and Experience of Project Team

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### Landscape Architecture

Miller Legg's Landscape Architects have created quality spaces through functional design, site-sensitive planning, and aesthetic enhancements for residential developments, recreational amenities, commercial facilities, urban centers and transportation corridors.

Although economically productive, commercial developments, enhanced transportation corridors, livable communities, and sustainable ecosystems are vastly different, the design process used to develop and implement these projects is the same. Miller Legg has been successful in the design of these and other landscape architectural projects for both public and private sector clients.

- Landscape architecture services include:
  - Landscape design
  - Landscape planning
  - Hardscape and Feature Design
  - Greenway design
  - Streetscape design
  - Urban design and revitalization
  - Planting design
  - Irrigation design
  - Signage design
  - Graphic design and presentation
- Crime prevention through environmental design
- Recreation facilities design
- Habitat restoration
- Boardwalk design
- Arboriculture and horticultural consulting
- Project theming
- Recreational and commercial planning
- Contract administration
- Construction observation services
- Plan review

Miller Legg approaches each project using a design process to meet our clients' needs and deliver desirable and sustainable public spaces. The firm's typical project design process is the following:

- Evaluation of existing conditions
- Collaboration with stakeholders
- Design stage
- Preparation of construction documents
- Implementation and construction

Miller Legg's landscape architecture staff consists of registered landscape architects, graphic designers, technicians, irrigation specialists and field personnel. Utilizing this team and specialized design approach, the firm has received numerous regional and local landscape architecture design awards for a variety of projects.

### Vendors/Subcontractors

In addition to the aforementioned professional subconsultants, the Terracon Team has assembled vendors/subcontractors to support the services that will be required as part of this contract. Licensed

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and/or certified to perform the requisite services listed below, these contractors, which include firms that are local vendors and MBE/WBE certified, include analytical laboratories, drilling companies, excavation companies, etc., and are incorporated into our Organizational Chart as integral team members.

- **Analytical Laboratory Services**
  - Pace Analytical Services, LLC
  - Jupiter Environmental Laboratories, Inc.
  - Eurofins Test America, Inc.
- **Drilling Services**
  - Earth Tech Drilling, Inc.
  - Wombat Environmental, LLC
  - JAEE Environmental Services
- **UST/Excavation Services**
  - WD Environmental, Inc.

### EXPERIENCE OF THE TERRACON TEAM

#### Experience with Government Agencies

Terracon has a tremendous presence and broad scope of knowledge in South Florida gained through 29 years of conducting professional environmental engineering, facilities consulting, geotechnical engineering, and material testing services.

As previously mentioned, one of Terracon's core businesses is to service local governments through continuing services contracts. We have serviced the public sector for over two decades throughout the South Florida region. Statewide we hold over 125 continuing service contracts (environmental, facility, geotechnical, construction testing and inspections) with approximately 90 different governmental agencies including state, county, and local governments. Terracon has an outstanding history of contract extensions and re-selection under these contracts, which is indicative of our commitment and performance providing timely and cost-effective engineering services to our clients.

Clients we service on an as-needed basis include, but are not limited to, the following:

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| ■ Broward County                | ■ FDOT                            |
| ■ Broward County Public Schools | ■ Florida Keys Aqueduct Authority |
| ■ City of Dania Beach           | ■ Indian River County             |
| ■ City of Fort Lauderdale       | ■ Martin County                   |
| ■ City of Fort Pierce           | ■ Martin County School District   |

## 9 Statement of Skills and Experience of Project Team

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- City of Hallandale Beach
- City of Homestead
- City of Lake Worth
- City of Lauderdale Lakes
- City of Lauderhill
- City of Miami Beach
- City of North Lauderdale
- City of North Miami
- City of Pompano Beach
- City of West Palm Beach
- Florida Atlantic University
- FDEP
- Florida Department of Management Services
- Miami Dade College
- Miami-Dade County
- Nova Southeastern University
- Palm Beach County
- School District of Collier County
- School District of Palm Beach County
- Seminole Tribe of Florida
- South Florida Water Management District
- St. Lucie Public Schools
- Treasure Coast Research Planning Council
- Town of Jupiter
- Town of Miami Lakes
- Village of Royal Palm Beach

### Similar Experience of the Project Team

#### Sabal Golf Course

Pompano Beach, FL



The Former Sabal Golf Course is an 11-acre remnant of the golf course that has not yet been redeveloped. In advance of its redevelopment into a recreational use property (Sports Park), this remaining portion, the site, located at 3151 N.W. 31st Street in Pompano Beach, Florida, underwent a 9,600-ton (non-hazardous) soil source removal project.

Source removal activities were conducted at multiple locations at the proposed Pompano Beach Sports Park (Former Sabal Golf Course) to remove soil exhibiting arsenic concentrations exceeding the alternative recreational SCTL and soil exhibiting dieldrin concentrations above the residential direct exposure SCTL. Source removal activities also included stormwater pollution prevention planning (SWPPP/NPDES) and monitoring and health and safety planning, including dust suppression and air monitoring.

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Terracon managed all subcontractors, coordinated all field activities, documented daily activities, conducted air monitoring, and coordinated logistics associated with the field project. The firm managed the field schedule, ensuring timely completion of field work product on an expedited time frame, coordinated daily and weekly safety meetings, and prepared daily field reports. The firm verified that project-specific QA/QC procedures were implemented through all aspects of the project.



Firm's Fee: \$896,724 / Completed in 2019

### City of Pompano Beach Amphitheater

Pompano Beach, FL



The project consists of construction of a membrane roof over the existing Pompano Beach Amphitheater that is located within the Pompano Community Park at the SW Corner of US 1/Federal Highway and NE 10th Street in Pompano Beach, Florida. It is proposed that the roof cables connect to a rigid steel truss which rests on top of two towers in the front and at the back the membrane is supported by a series of columns (cable-supported masts). The project includes truss columns in the front of the structure and cables and mast on the rear of the structure to be supported on piles.

Terracon performed subsurface exploration and geotechnical engineering services in 2018 for the proposed roof. The scope of work included the advancement of test borings to a depth of 90 feet below existing site grades. The borings were advanced with a truck-mounted drill rig using a rotary method. We observe and record groundwater levels during drilling and sampling. For safety purposes, all borings are backfilled with soil cuttings after their completion. Pavements are patched with cold-mix asphalt and/or pre-mixed concrete, as appropriate. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a geotechnical engineer.

The purpose of these services is to provide information and geotechnical engineering recommendations relative to: subsurface soil (and rock) conditions; groundwater conditions; site preparation and earthwork; and foundation design and construction. Terracon delivered the firm's information, opinions, and recommendations using GeoReport®, a web-based information and delivery collaboration portal.



In 2020 the updated loads for the amphitheater roof membrane became available. Per the client's request, Terracon evaluated 16 and 18-inch auger cast piles to support the foundations of the proposed roof membrane.

Firm's Fee: \$22,095 / Completed in 2020

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### Ali Cultural Center

Pompano Beach, FL

The historic two-story Ali Cultural Arts building was built in the 1930's and was purchased in 2012 by the City of Pompano Beach Community Redevelopment Agency (CRA). Plans were developed for a world class cultural arts venue which would expand the current foot print with an additional 2,400-SF building and an outdoor courtyard for concerts.



Sphere Environmental Services, LLC, the environmental prime consultant, enlisted the services of Terracon to provide professional engineering services for the project. In 2013 Terracon conducted a subsurface study and developed recommendations for site preparation, foundation design and ancillary construction for the renovation project that includes gallery space, multi-purpose space (i.e. dance, meetings, and classes), outdoor event/performance space with seating, administrative space, storage/archive space, and a conference room. The firm also provided Sphere with construction materials testing and inspection services during the construction of the elevator addition at the center. Subsequently, in 2013 Sphere was acquired by Terracon.

The firm was also responsible for performing construction materials testing services in 2014 and 2015 for the CRA during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.

Firm's Fee: \$8,050 for services provide to Sphere; \$5,830 for services provided for the CRA / Completed in 2015

### Opa-Locka EPA Brownfields Assessment Grant

Opa-Locka, FL

The City of Opa-Locka selected Terracon to provide brownfields consulting services for their \$400,000 EPA community-wide assessment grant. Terracon staff led by, Belinda Richard, worked with the City's program since 2013 to build their brownfields program and assisted in writing and securing the EPA Brownfields grant award. Terracon has provided hands-on engineering for more than 55 projects within the City since 2007. Projects include roadway, airport, buildings, recreational, environmental and utilities.



## 9 Statement of Skills and Experience of Project Team



Terracon provided consulting services for this Brownfields contract through a series of Tasks. Programmatic management included but was not limited to quarterly and annual reporting, EPA policies and procedures, progress meetings, financial coordination and the technical findings required through the closeout process. Grant services supported identification, prioritization processes and selection of properties; oversight of subconsultants; and outreach. Outreach activities included the Community Engagement Plan, brochures, an electronic website to coordinate brownfields information and assisted the City to host two community meetings. The Developers Forum was well attended and the audience was varied including realtors, developers, local business owners and interested residents.

Primarily grant services were dedicated to assessment evaluations. Phase I assessments, asbestos survey's, lead-based paint investigation within structures and wetland surveys. The Generic QAPP was completed per regulatory compliance to support Phase II ESAs. Phase II ESAs, SS-QAPPs, HASPs and Site Reuse/Cleanup Planning were all components of the grant. Findings from assessment activities were reported to EPA within the Assessment, Cleanup & Redevelopment Exchange System (ACRES).

The Former Cuyahoga Wrecking Site had been idle for many years and was an eyesore to the community as it had become a derelict site that was party to unregulated dumping. Terracon conducted a Phase I ESA and a comprehensive Phase II ESA for the EPA. Using the findings of the Phase II ESA, Terracon prepared a RAP providing the City and property owner with remedial and closure alternatives to redevelop the site and provide a benefit to the City and surrounding community.

Firm's Fee: \$382,00 (Fee for Former Cuyahoga Wrecking Site: \$200,000) / Completed in 2019

### Royal Palm Beach Commons

Royal Palm Beach, FL

The project consists of a 160±-acre parcel of land that was developed into a community park known as Royal Palm Beach Commons (former Traditions Golf Course site). The park includes a 3-story, 17,000-SF Sporting Center with a 1,900-SF patio area, Golf Training Center with a driving range and 18-hole green, extensive 19-acre lake system, canoe/kayak launch, access road to all amenities, 3 miles of paved walking/jogging/bike trails, banquet garden, wedding pavilion, interactive splash fountain, sand volleyball courts, picnic pavilions, fishing docks, and playscapes.





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In 2007, Terracon's subsidiary (Dunkelberger Engineering & Testing, Inc.), provided a subsurface study, as a subconsultant, that included drilling and sampling of exploratory borings, lake bottom probing and sampling, laboratory soils analysis, evaluation of the impact of the subsoils upon the proposed construction and development of recommendations for foundation design, pavements, earthwork and other related construction. Additionally, the firm provided construction materials testing (field and laboratory) as a subconsultant from 2009 to 2011. In 2012 and 2013, the firm provided engineering services during construction (verification testing) as a prime consultant to the Village.

Because the site was a former golf course, we evaluated soil and groundwater quality to determine impacts from use of turf chemicals and found contaminants of concern in both media whose concentrations exceeded State cleanup levels. Terracon worked with the project team to establish strategies for addressing the impacted media and assisted the civil engineer in developing a contaminated soil source removal plan and construction dewatering plan that was approved by the FDEP and SFWMD. Sampling and analysis was also performed during construction and source removal to assure that the construction contractor followed the project environmental specifications. At the conclusion of construction, the firm performed a comprehensive post-construction site assessment in accordance with Chapter 62-780, FAC. We are currently performing long-term groundwater monitoring at the site in advance of site closure.

Firm's Fee: \$260,000 estimated / Completed in 2007, 2011, 2012, 2013

### City of Pompano Beach Continuing Professional Engineering Services Contract

Pompano Beach, FL

A professional general engineering services contract has been maintained with CAS and the City of Pompano Beach since 2015. The city relies on CAS' professional experience and expertise to properly maintain their utility infrastructure. CAS provides engineering design, survey, utility locates, construction management services for roadway, drainage, water and wastewater related projects. CAS is currently providing design services for the SW 2nd Street Drainage Improvements Project (design cost: \$60,000, construction cost estimate: \$900,000). In addition, CAS completed a Sanitary Sewer Study to provide recommendations and options for future sanitary sewer service to the so-called Non-Sewer Area C which is currently on septic tanks. The Area C Sewer Project is currently in design. The sanitary sewer study and design cost is \$243,343. Status of this contract is ongoing.



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### Town of Golden Beach Continuing Professional Engineering Services Contract

Golden Beach, FL

A professional general engineering services contract has been maintained with the Town of Golden Beach since 2000. With limited staff, the Town relies on CAS' professional experience and expertise to properly maintain their utility infrastructure. CAS provides all engineering design, survey, utility locates, construction management services for roadway, drainage, water, electrical, utility undergrounding, utility easement acquisitions and mechanical related projects within the Town including the Town's recently completed Capital Improvements Project. CAS also provides agency required reporting for NPDES, Department of Environmental Resources (DERM) and WASD, and assistance in securing funding through FEMA and SFWMD grants. The annual budget for these projects ranges from \$100,000 to \$200,000 annually. Status of this contract is ongoing.



### City of Margate Continuing Professional Engineering Services Contract

Margate, FL

A professional general engineering services contract has been maintained with the City of Margate since the late 1990s. In June of 2018, CAS renewed their contract with the city through a Request for Proposal (RFP) process. The city relies on CAS' professional experience and expertise to properly maintain their utility infrastructure. CAS provides engineering design, survey, utility locates, construction management services for water, wastewater, electrical and mechanical related projects. CAS has successfully completed the rehabilitation of 11 wastewater lift stations and associated force main extensions totaling over \$5 million. CAS has completed design on another 5 wastewater lift stations slated for rehabilitation. Of the five lift stations, LS No. 21 is currently in construction (design cost: \$60,990, construction cost: \$298,216) and LS No. 7 (design cost: \$63,450, construction cost: \$550,000) has been advertised for construction. In addition, CAS provided design services for the replacement of undersized steel water mains with 6 inch DIP lines throughout the city service area and is currently providing public outreach, construction inspection and management services. Status of this contract is ongoing.



### City of Miami Morningside Park Tennis Center

Miami, FL

The City of Miami Morningside Park created an expanded and improved tennis facility at this 42-acre Park. The project included improvements to an existing 7 courts that had experienced degradation due to drainage and soil stabilization issues. A new court layout was developed to increase the facility to 8 lighted courts and a warm-up training wall amenity. Other tennis improvements included upgraded lighting, fencing and shaded bench area. A central courtyard was also developed as a key element of the project design.



## 9 Statement of Skills and Experience of Project Team

This courtyard creates an inviting area for players and spectators to gather before and after matches. A themed paver field with lush landscaping that embraces large existing ficus trees creates a pleasant gathering space not previously found at Morningside Park, and helps establish it as a premier public tennis destination in the City of Miami.

Miller Legg services included civil engineering, landscape architecture, arborist, permitting and limited construction administration to assist the City in the bidding, observation and certification of the project improvements. Arborist services included evaluating existing trees for health, longevity and relocation prospects. Once relocated, the trees were monitored for ongoing wellbeing on site. Apart from the City, other agencies with jurisdiction for this project include Miami-Dade County DERM and SFWMD. Received the Facility Showcase award by the Florida Recreation & Park Association. Miller Legg secured this project under the firm's Continuing Services Agreement with the City of Miami. Completed in 2018

### **Town of Lauderdale-by-the-Sea Poinciana/Bougainvillea Roadway and Parking Improvements**

Town of Lauderdale-by-the-Sea, FL

Under the firm's continuing services contract, Miller Legg provided design and permitting services for parking, roadway and landscape architectural improvements for the Poinciana Street and Bougainvillea Drive area north of Commercial Boulevard to alleviate congestion along the parallel corridor of State Road (SR) A1A in the Town of Lauderdale-by-the-Sea. Services included: roadway and parking area design, lighting, utility coordination, permitting, landscape, hardscape and irrigation, and pre- and post-construction observation services. Completed in 2019



### **Memorial Regional Hospital Design-Build (D/B) Parking Garage and Public Roadway Improvements**

Hollywood, FL



Miller Legg provided site development design services for a new 7-story, 1,302-space parking garage located at Johnson Street and Garfield Street on the Memorial Regional Hospital campus in Hollywood. The parking garage included 570,330 SF of parking garage space, ground-floor retail, a courtyard, an auditorium, and hospital staff training room and offices. Associated off-site roadway and signal improvements were provided on Johnson Street along with roundabout modifications on Garfield Street at 35th Avenue. Specific services included: civil engineering, permitting, paving, drainage, water, sewer, traffic engineering, signalization, topographic survey, underground utility designations

(SUE), landscape architecture, irrigation, and hardscape design, as well as construction observation. Miller Legg was a subconsultant to Zyscovich Architects and was on the Stiles/Thornton D/B team.

Completed in 2017

**10**

# Resumes of Key Personnel

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## 10 Resumes of Key Personnel

### Steven A. Harrison, P.G. Contract/Project Manager

#### PROFESSIONAL EXPERIENCE

Steven is a Senior Associate and Department Manager in the South Florida Region that specializes in providing responsive, cost effective, technically accurate and regulatory focused solutions to meet client's project and operational requirements. He has more than 30 years of successful experience continuously exceeding expectations by resolving environmental situations that clients face. Steven's diverse environmental experience includes the assessment and remediation of impacted groundwater and soil, real estate transactional due diligence assessment, storage tank system management, industrial and Resource Conservation and Recovery Act (RCRA) waste disposal, wildlife surveys and compliance assistance with federal and State environmental regulations (Spill Prevention, Control, and Countermeasure [SPCC] Plans).

A State of Florida-licensed geologist and mold assessor, he has worked with a diverse array of clients ranging from the independent property owner to local, regional, and state municipalities and Fortune 500 companies to address and resolve their business and regulatory environmental concerns. Steven's knowledge of local, state, and federal regulatory requirements is critical to supporting client's objectives to maintain compliance with all applicable regulatory requirements.

#### PROJECT EXPERIENCE

##### City of Pompano Beach, Former Able's Service Station - Pompano Beach, FL

Project Manager. Assessment of a former service station as part of a site assessment consistent with the requirements of Chapter 62-770, FAC. Analytical results of soil and groundwater samples collected to assess conditions reported that soil and groundwater impacts resulted from the former UST area and the previous remedial efforts did not fully remediate the petroleum hydrocarbon affected area. A previous Site Rehabilitation Completion Order (SRCO) was rescinded following Terracon's submittal and a RAP prepared to address the impacted conditions was approved for implementation.

##### Former BT Oil Site - Pompano Beach, FL

Environmental Services Department Manager/Project Manager. Oversight was conducted during soil excavation, in an area located south of the former BT Oil site as the petroleum hydrocarbon contamination, which was found during assessment efforts of the former gas station, migrated southward into the right-of-way. Terracon provided oversight and direction of the excavation of impacted soils during underground utility installation. Terracon designated soil handling protocols, established staging and storage areas and orchestrated the proper disposal of the impacted soils. Manifests documenting the quantity of impacted soil which were properly disposed were utilized for project records.



#### EDUCATION

MS, Marine Geology and Geophysics, Emphasis: Geo-Chemistry, Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, 1988

BS, Geology  
State University of New York  
Binghamton, 1980 – 1984

#### REGISTRATIONS

Professional Geologist  
Florida, No. 0001390

Florida Licensed Mold Assessor,  
No. MRSA508

Florida Licensed Sales Associate  
SL3069031 (Realtor –Florida)

#### CERTIFICATIONS

8- Hr Hazmat Health and Safety  
Training Updates (Current)

40- Hr Hazmat Health and Safety  
Training (1989)

Short Course: Assessing  
Environmental Risk in Property  
Transactions (1990)

Short Course: How to Comply with  
Florida's Haz Waste Regulations for  
Generators

**YEARS OF EXPERIENCE: 32**  
**YEARS AT FIRM: 7**

## 10 Resumes of Key Personnel

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### Steven A. Harrison, P.G. (continued)

#### **Former Sears, Pompano Citicentre Mall - Pompano Beach, FL**

Project Director. Site assessment efforts identified impacted groundwater that resulted from historical operations in the area of the former dispenser island that extended across the eastern parking area and beneath the east end of the Autocenter building. A combined site assessment report/remedial action plan(SAR/RAP) incorporated assessment findings and remediation details into one document to expedite the regulatory process. The aggressive remedial strategy addressed residual soil impacts, along with groundwater exceedances through source removal of saturated soils impacted with petroleum hydrocarbons, air sparging of groundwater within the open excavation to volatilize dissolved petroleum hydrocarbons, placement of oxidation chemicals (ISCO) into soil during backfilling, and injection of oxidation chemicals (ISCO) beneath the excavation and into the surrounding areas of groundwater impacts. Terracon completed field efforts within 30 days from receipt of approval from Broward County Environmental Protection and Growth Management Department (BCEPGMD). ISCO is continuing to remediate petroleum hydrocarbons dissolved in groundwater and monitoring will verify progress of the remedial effort. Upon completion of one year of post active remediation monitoring, the site will obtain regulatory closure without conditions.

#### **Former Sabal Golf Remediation - Pompano Beach, FL**

Project Director. The Former Sabal Golf Course is an 11-acre remnant of the golf course that is planned for redevelopment into a recreational use property (Sports Park). Terracon conducted a 9,600-ton (non-hazardous) soil source removal project. We managed all subcontractors, coordinated all field activities, documented daily activities, conducted air monitoring, and coordinated logistics associated with the field project. Timely completion of field work required daily project and safety meetings, with daily field reports. (QA/QC) procedures were implemented through all aspects of the project.

#### **Ali Cultural Center – Pompano Beach, FL**

Project Manager. The historic two-story Ali Cultural Arts building was built in the 1930's and was purchased in 2012 by the City of Pompano Beach CRA. The world class cultural arts venue was expanded with an additional 2,400-SF building and an outdoor courtyard for concerts. Sphere Environmental Services, LLC, the company Steven owned, was the environmental prime consultant that enlisted the services of Terracon to provide professional engineering services for the project including a subsurface study and developed recommendations for site preparation, foundation design and ancillary construction for the renovation project that includes gallery space, multi-purpose space, outdoor event/performance space with seating, administrative space, storage/archive space, and a conference room. The firm also provided Sphere with construction materials testing and inspection services during the construction of the elevator addition at the center. Subsequently, in 2013 Sphere was acquired by Terracon. The firm was performed construction materials testing services in 2014 and 2015 for the CRA during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.

#### **Vacant Parcel - Pompano Beach, FL**

Project Director. The 1.08-acre (32,313 SF) vacant site is located on West Atlantic Boulevard and SW 27<sup>th</sup> Avenue. An ESA was needed to help assist the client in acquiring the site. Terracon performed a Phase I ESA to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of a report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties.

# 10 Resumes of Key Personnel

## Richard A. Minichiello

### Principal-in-Charge

#### PROFESSIONAL EXPERIENCE

Richard, a senior principal and vice president of Terracon, manages the South Florida operations where he has more than 34 years of progressive experience in the administration, management and growth of a dynamic engineering consultancy. Richard helps lead Terracon's multidiscipline practice specializing in environmental, facilities, geotechnical, materials testing, and laboratory services for transportation, educational, commercial, utility, Federal, state and local market sectors.

Richard provides senior level client interactions and service to Terracon's diverse portfolio of private and public-sector clients. He assures that each client's expectations and needs are being met for quality and technical support. For each contract, he is an integral part of the project start-up team and makes periodic visits to the project and to client meetings to perform quality audits and receive input for what is working well and where additional attention or improvement may be needed. Richard has served in this capacity for many of Terracon's South Florida municipal continuing services contracts including the FDOT Districts 4 and 6, Broward County, Broward County Public Schools, City of Fort Lauderdale, Pompano Beach CRA, City of Hallandale Beach, City of Lauderhill, and Miami Dade County to name a few.

#### PROJECT EXPERIENCE

##### **FDOT District 4, I-95 Express Lanes Segment 3B-1 Broward County, FL**

Principal-in-Charge of Terracon's services as a subconsultant to the D/B team for the project that extends from South of SW 10<sup>th</sup> Street to South of Glades Road and includes converting the existing high occupancy vehicle (HOV) lanes to high occupancy toll (HOT) lanes and widening that will result in two tolled Express Lanes in each direction. The improvements include roadway widening, two bridge widenings and one bridge replacement, MSE wall and sound barrier wall construction. In addition, there will be miscellaneous cantilever and overhead sign structures. As a member of the D/B team, Terracon is performing soil exploration, geotechnical classification laboratory testing, standard foundation studies; and is performing contractor quality control (CQC) services for the project.

##### **United States Southern Command Headquarters Complex (SouthCom), U.S. Army Corps of Engineers (USACE) - Doral, FL**

Served as Principal-in-Charge for QA construction testing services for the \$270 million D/B project. From inception, he assisted the USACE leadership QA and administration needs on this fast-track project. Richard was responsible for leading the team in providing multi-disciplined experts consisting of project managers, estimators, engineers, inspectors, and technicians for this highly complex, state-of-the-art facility.



#### EDUCATION

B.A., Political Science, Long Island University – C.W. Post Center, 1983

#### AFFILIATIONS

American Council of Engineering Companies of Florida (ACEC-FL)

ACEC Membership Committee

Consulting Engineers Legislative Council (CELC)

Florida Transportation Builders Association (FTBA)

Team Florida

American Society of Civil Engineers (ASCE)

Project Management Institute (PMI)

#### WORK HISTORY

Terracon Consultants, Inc., Vice President, Region Manager (South Florida), and Office Manager (Fort Lauderdale), 2012 – Present

AMEC Environment and Infrastructure, Inc., Senior Vice President, 2011 – June 2012

Mactec Engineering and Consulting, Inc., Senior Vice President, 2001 – 2011

Law Engineering and Environmental Services, Inc., Office Manager and Assistant Vice President, 1986 – 2001

**YEARS OF EXPERIENCE: 34**

**YEARS AT FIRM: 7**

## 10 Resumes of Key Personnel

### Terrence R. Horan, P.E. Assistant Project Manager

#### PROFESSIONAL EXPERIENCE

Terry is an Environmental Department Manager for Terracon Consultants, Inc. and its West Palm Beach office. He also serves as a senior environmental engineer for the South Florida Region and throughout Terracon. Since earning a Bachelor of Science degree in environmental engineering, he has specialized in the practice of environmental consulting progressing from staff level to managerial level responsibilities.

A registered professional engineer in the State of Florida, Terry has more than 25 years of progressive experience in due diligence, environmental assessments, remediation, and water resources. He has led multi-disciplinary teams focused on providing solutions to environmental and engineering issues for a wide range of regulated industries. Terry's expertise includes the successful management of site assessments, remedial investigations, feasibility studies, and remediation projects for private sector, municipal, state, and federal agency clients.

On a day-to-day basis, Terry provides technical oversight and direction to environmental engineers, geologists, scientists and technical staff performing services for asbestos/lead-based paint, Brownfields, industrial hygiene, regulatory compliance, remediation, site assessments and investigations, natural and cultural resources, and solid waste. He is responsible for the performance, staffing and administration of those personnel, as well as providing senior level management of environmental projects and peer review of reports.

#### PROJECT EXPERIENCE

##### Proposed Pompano Beach Sports Park - Pompano Beach, FL

Senior Environmental Engineer. Completed source removal at multiple locations at the proposed sports park (Former Sabal Golf Course) to remove 9,600-tons of soil impacted with arsenic and dieldrin.

##### Hialeah Park Race Track - Hialeah, FL

Project Manager for Hialeah Park Race Track property undergoing assessment for arsenic in soils and groundwater and providing redevelopment consulting services for potential site reuse.

##### Former Nursery - Hallandale Beach, FL

Senior Environmental Engineer. Responsible for developing conceptual remediation plans and cost estimates for a former nursery impacted with arsenic from legally-applied pesticides.

##### 500+ Properties – Various Locations throughout South FL

Project Manager. Conducted and directed Phase I environmental assessments and environmental compliance audits of over 500 properties, including waste treatment, storage, and disposal facilities; boat and aircraft manufacturing and maintenance facilities, metal plating plants, printing facilities, and various manufacturing facilities.



#### EDUCATION

Bachelor of Science, Environmental Engineering, University of Florida, 1992

#### REGISTRATIONS

Professional Engineer: Florida, No. 54815 (1999)

#### CERTIFICATIONS

OSHA 40-hour Hazardous Waste Operations & Emergency Response (HAZWOPER)

#### AFFILIATIONS

Florida Engineering Society (FES), Member

FES Palm Beach County Appointed Board Member:

- Department of Health: Environmental Quality Hearing Board (2014-currently Chair)
- Department of Planning, Zoning and Building: Contractor Licensing Board (2016-2021)

**YEARS OF EXPERIENCE:** 25

**YEARS AT FIRM:** 1

\* Work performed prior to joining Terracon.



## 10 Resumes of Key Personnel

### Lucas A. Barroso-Giachetti, P.E., CHMM Senior Environmental Engineer

#### PROFESSIONAL EXPERIENCE

Lucas is a Senior Environmental Engineer in the Miami Lakes office of Terracon's South Florida region and leads the firm's Miami environmental services operations. A State of Florida licensed Professional Engineer and Certified Hazardous Materials Manager, Lucas has over 19 years of experience in remediation and environmental consulting services.

Lucas has worked directly with the Florida Department of Environmental Protection (FDEP) on many complex environmental projects throughout the State of Florida and managed a South Region contract for the Department's Petroleum Restoration Program (PRP). In addition, he has extensive experience with local regulatory authorities in Miami-Dade County, including DERM.

#### PROJECT EXPERIENCE

##### Former Agricultural Property - Pompano Beach, FL\*

Completed environmental assessment of former agricultural property slated for multi-family development with arsenic concentrations in soil above both residential and commercial/industrial soil cleanup target levels (SCTLs) in shallow and deeper intervals. Successfully obtained a NFA without conditions closure from Broward County via 95% UCL statistical methods and detailed review/comparison by strata of site-specific lithology to establish pre-existing depositional conditions. Significantly reduced costs to client by limiting source removal to selected areas.

##### Pompano Beach Airpark Plane Crash Fuel Spill – Pompano Beach, FL

Lucas led this project, as the Professional Engineer (P.E.) and Project Manager, which involved emergency soil screening, soil sampling, groundwater sampling and source removal oversight related to a discharge of fuel resulting from an emergency aircraft crash landing within the Pompano Beach Airpark. Lucas provided P.E. oversight of the field activities and conducted regulatory interface on behalf of the client with Broward County. The impacted area was successfully excavated and remediated, receiving a No Further Action status from Broward County.

##### Miami Dade College Academy of Fire Science, - Miami, FL

Technical lead and Project Manager for the assessment of a firefighter training area that historically utilized Aqueous Fire Fighting Foam (AFFF) during training exercises that contained per- and polyfluoroalkyl substances (PFAS). Terracon was retained by Miami Dade College to assess potential impacts to soil and groundwater from PFAS, including development of a PFAS-focused sampling plan including special and rigorous practices and procedures to prevent cross-contamination during sampling from common everyday items such as water-resistant clothing, sunscreen and others.



#### EDUCATION

Bachelor of Science, Environmental Engineering, University of Florida, 2002

#### REGISTRATIONS

Professional Engineer: Florida, No. 68283

#### CERTIFICATIONS

Certified Hazardous Materials Manager, No. 13849

40-hour HAZWOPER

OSHA Site Supervisor Trained

#### WORK HISTORY

Terracon Consultants, Inc., Senior Environmental Engineer, 2018 - Present

SCS Engineers, Environmental Services Group Leader/Senior Project Manager, 2016 – 2018; Project Manager/Field Services Manager/Client Services Manager, 2007 - 2011

GLE Associates, Inc., Site Environmental Group Leader/FDEP PRP South Region Contract Manager/Senior Engineer, 2011 – 2016

SECOR International Inc. (Stantec), Project Manager/Project Engineer/Office Quality Officer, 2005 - 2006

**YEARS OF EXPERIENCE: 19**  
**YEARS AT FIRM: 2**

## 10 Resumes of Key Personnel

### Susan R. Kuzia

#### Senior Environmental Scientist

##### PROFESSIONAL EXPERIENCE

Susan is a Project Environmental Scientist in Terracon's South Florida region. Her responsibilities and skills include site research, regulatory research, report preparation, Phase I ESAs. Susan's experience has been client focused with wide ranging experience in environmental consulting, teaching, and project management. She is recognized for the ability to handle various and multiple demands while maintaining the highest standards; being effective in communication with clients and colleagues and having excellent management skills. Susan has over 26 years of experience in the performance of Phase I ESAs per ASTM 1527 and Phase II ESA project management experience.

##### PROJECT EXPERIENCE

###### Multiple Projects, CRA - Pompano Beach, FL

Project Scientist/Manager. Responsible for conducting Phase I/II ESAs within the CRA's Northwest Brownfields region and other areas within the CRA's focus areas at properties proposed for redevelopment. Phase I ESAs were completed in accordance with ASTM E1527-05.

###### Vacant Parcel - Pompano Beach, FL

Senior Staff Scientist. The 1.08-acre (32,313 SF) vacant site is located on West Atlantic Boulevard and SW 27<sup>th</sup> Avenue. An ESA was needed to help assist the client in acquiring the site. Terracon performed a Phase I ESA consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of the report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties.

###### Canal Remediation - Parkland, FL

Staff Scientist. The project involved the assessment and remediation of canal bottom sediments where a canal in a residential neighborhood was impacted by liquid asphalt. The cleanup target levels for sediments were poorly defined and it was critical to work closely with the FDEP to develop an accurate methodology for interpretation. The assessment efforts ran contiguous the performance of Interim Source Removal Efforts and included the collection of surface water samples and bottom samples for analysis. The Interim Source Removal effort involved the dewatering of isolated sections of the canal so that the sediments could be remediated. Floating oils were removed from the recovered canal water and impacted sediments were captured before returning the water to the canal. Sediments were removed through a combination of vacuum and excavation efforts until analytical data confirmed the remaining sediments were at an acceptable level. The process was repeated through each of the impacted sections of the canal until the impacted sediments were remediated.



##### EDUCATION

University of Akron  
Master of Science, Biology, 1976

##### CERTIFICATIONS

AHERA Building Inspector

**YEARS OF EXPERIENCE:** 26

**YEARS AT FIRM:** 6

## 10 Resumes of Key Personnel

### Tom C. Holley, CHMM, CIH, CSP, FLAC, MRSA Senior Certified Industrial Hygienist/QA/QC Reviewer

#### PROFESSIONAL EXPERIENCE

Tom has over 29 years of facilities and environmental, health and safety, and OSHA compliance consulting experience. Current responsibilities include support of client facilities and industrial hygiene consulting needs. He previously served as a Principal Industrial Hygienist, Project Manager and Facilities Business Unit Leader in support of a large government contract. He also worked as an analytical chemist, supervisor, and project manager in a large environmental laboratory for approximately 10 years. Tom has Health & Safety (H&S) compliance procedure and program development experience including USACE Health & Safety Plan (EM-385) implementation.

Tom has experience in industrial hygiene consulting and project management, including performance of site assessments, remediation design, and ambient air sampling for various chemical constituents. He has experience in industrial hygiene exposure assessments, providing on-site training for peers and clients, has served as site project safety representative for several projects, and has performed exposure assessments for environmental remediation, demolition, and other project activities for private industry.

#### PROJECT EXPERIENCE

##### Trust Properties on NW 5<sup>th</sup> and NW 4<sup>th</sup> Courts – Pompano Beach, FL

APR/Quality Review. Terracon performed asbestos abatement consulting services at the referenced sites to document the removal of the previously identified ACM, in a previous Terracon Asbestos survey. Terracon's abatement monitoring services for this project included: confirming and documenting that the asbestos abatement work was completed in accordance with applicable federal, state and local regulations; confirming that the ACM scheduled to be removed from the work area was removed, and that post-abatement work surfaces were visually free of asbestos-containing debris; and conducting visual and air clearance sampling (PCM) in the abated areas.

##### Central District Wastewater Treatment Plant (WWTP) – Miami, FL

APR/Quality Review. Terracon conducted a pre-demolition asbestos survey on the interior and exterior of the structures located at the Central District WWTP located in Miami. The plant was initially constructed in 1966, but it is unknown when the specific structures were constructed. The estimated SF of the two buildings surveyed is 1,400. The structures consisted of concrete block exterior walls, poured in place concrete walls atop multiple concrete slabs and concrete ceiling. Our survey was conducted by an AHERA-accredited asbestos inspector. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in the Environmental Protection Agency (EPA) regulation 40 CFR 763 (AHERA). Samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy (PLM).



#### EDUCATION

B.S. Biology / Minor Chemistry –  
Georgia State University, 1990

#### REGISTRATIONS

Certified Hazardous Materials  
Manager- Master Certified Industrial  
Hygienist- 9275CP

Certified Safety Professional- 22954

Licensed Asbestos Consultant,  
FL No. AX75

Licensed Mold Assessor, FL No.  
2749

#### CERTIFICATIONS

EPA/AHERA Asbestos Inspector,

Management Planner, Designer,  
Supervisor

NIOSH 582 Sampling & Analysis of  
Airborne Dusts

OSHA 40-Hour HazWoper

OSHA 30-Hour Construction Safety  
and Health

OSHA 10-hour Construction Safety  
and Health

eRAILSAFE Contractor

#### AFFILIATIONS

American Board of Industrial Hygiene  
Board of Certified Safety  
Professionals

Institute of Hazardous Materials  
Managers

**YEARS OF EXPERIENCE:** 29

**YEARS AT FIRM:** 4.5

## 10 Resumes of Key Personnel

### Sergio Adasme, MRSA

#### Project Industrial Hygienist/Inspector

##### PROFESSIONAL EXPERIENCE

Sergio is a Project Industrial Hygienist and Senior Inspector with three decades of experience. His duties include asbestos abatement project supervision, technical specifications writing, phase contrast microscopy (PCM) analysis, asbestos surveys, mold assessment, and industrial hygiene assessments. Sergio has supervised well over 3,000 asbestos surveys and abatement projects. He is experienced in emergency response for buildings sustaining heavy physical damage from fire, ambient particulate matter, vibration and other causes, conducting surveys to determine levels of asbestos, lead, heavy metals contamination and air quality sampling for clearances prior to restoring occupancy and operations. His IAQ assessment experience has included full service consulting from initial assessments through closeout of remediation projects.

##### PROJECT EXPERIENCE

#### Pompano Beach CRA Vacant Unit on NE 1st Street – Pompano Beach, FL

Project Manager. The vacant space contains approximately 300 SF and abuts adjoining retail space within a mall. An asbestos survey was requested due to the planned interior renovations prior to tenant occupancy. The survey was conducted by an AHERA-accredited building inspector. Interior building components were surveyed and interior homogeneous areas of suspect ACM were visually identified and documented. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763.86 (AHERA). Samples were delivered to an accredited laboratory for analysis by PLM.

#### Lighthouse Building First Floor Suite– Pompano Beach, FL

Project Manager. The building is approximately 9,705 SF and was constructed in 1977. An asbestos renovation survey was requested due to the on-going renovations of the Lighthouse Building-first floor suite. The survey was conducted by an AHERA-accredited building inspector. Interior building components were surveyed and interior homogeneous areas of suspect ACM were visually identified and documented. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763 (AHERA). Samples were delivered to an accredited laboratory for analysis by PLM.

#### Trust Properties on NW 5<sup>th</sup> and NW 4<sup>th</sup> Courts – Pompano Beach, FL

Project Manager. The structures are unoccupied and consists five one-story apartments, a single-family home, a two-story building and a three-story hotel. An asbestos survey was requested due to the planned demolition of the structures. Terracon conducted a pre-demolition asbestos survey on the interior and exterior of the structures. The survey was conducted by an AHERA-accredited asbestos inspector. The interior and exterior building components were surveyed and homogeneous areas of suspect ACM were visually identified and documented. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in the EPA regulation 40 CFR 763 (AHERA). Samples were delivered to an accredited laboratory for analysis by PLM.



##### EDUCATION

Construction Management (Candidate), Florida International University, Miami, FL

##### REGISTRATIONS

Florida Mold Assessor  
No. MRSA1154

##### CERTIFICATIONS

NIOSH 582

Facility Survey and Hazard Assessment

AHERA Accredited Asbestos Inspector

AHERA Accredited Management Planner

AHERA Accredited Project Supervisor

Certified Operator XRF Spectrum Analyzer

Microscopically Identification of Asbestos

OSHA 40 Hour HazMat Emergency Response

Radiation Safety and Use of Nuclear Gauges

PEC Premier SafeGulf SafeLandUSA

West Texas Safety Training Center - H2S

EPA: Lead Renovator,  
Cert No.: R-I-18499-10-13622

##### AFFILIATIONS

American Industrial Hygiene Association

**YEARS OF EXPERIENCE:** 36

**YEARS AT FIRM:** 3

## 10 Resumes of Key Personnel

### Rutugandha “Rutu” H. Nulkar, P.E. Geotechnical/Materials Project Manager

#### PROFESSIONAL EXPERIENCE

Rutu has been practicing geotechnical engineering in South Florida for more than 16 years. A State of Florida-registered P.E., she has managed several public and private sector contracts during her career. Her geotechnical consulting capabilities include providing services for various types of projects including buildings, roadways, bridges, and drilled shaft inspections. Rutu has performed geotechnical analysis and provided recommendations for design of shallow and deep foundation systems for bridges and buildings, and slope stability analyses for levees and canals. She also has over 16 years of construction materials testing and verification experience working on numerous FDOT projects and districtwide materials contracts. She has worked as an in-house geotechnical consultant with the District Materials Research Office (DMRO). Additionally, Rutu has led several geotechnical and materials testing contracts in South Florida.

#### PROJECT EXPERIENCE

##### **Pompano Beach Amphitheater - Pompano Beach, FL**

Project Engineer. The project consists of construction of a membrane roof over the existing amphitheater that is located within the Pompano Community Park. At the time of Terracon's services in 2018, the roof cables connected to a rigid steel truss which rested on top of two towers in the front and at the back the membrane was supported by a series of columns (cable-supported masts). The planned project includes truss columns in the front of the structure and cables and mast on the rear of the structure will be supported on piles. Terracon performed subsurface exploration and geotechnical engineering services for the proposed roof. The purpose of these services was to provide information and geotechnical engineering recommendations relative to: subsurface soil (and rock) conditions; groundwater conditions; site preparation and earthwork; and foundation design and construction. Terracon delivered the firm's information, opinions, and recommendations using GeoReport®, a web-based information and delivery collaboration portal. In 2020 the updated loads for the amphitheater roof membrane became available. Per the client's request, Terracon evaluated 16 and 18-inch auger cast piles to support the foundations of the proposed roof membrane.

##### **Ali Cultural Center - Pompano Beach, FL**

Project Engineer/Manager. The historic two-story historical Ali Cultural Arts building was re-developed with an additional 2,400-SF building and an outdoor courtyard for concerts. Terracon provided construction materials testing and inspection services during the construction of the elevator addition at the center. The firm was also responsible for performing construction materials testing services for the CRA in 2014 and 2015 during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.



#### EDUCATION

M.S., Civil Engineering,  
University of Florida, 2004

B.S., Civil Engineering, V.J.T.I.  
Matunga, Mumbai, India, 2001

#### REGISTRATIONS

Registered Professional Engineer,  
Florida #70625

#### AFFILIATIONS

American Society of Civil  
Engineers (ASCE)

Florida Engineering Society (FES)

Florida Engineering  
Society/Florida Institute of  
Consulting Engineers Leadership  
Institute

**YEARS OF EXPERIENCE: 16**

**YEARS AT FIRM: 16**

# 10 Resumes of Key Personnel

## Hugo E. Soto, P.E.

### Principal Engineer/QA/QC Reviewer

#### PROFESSIONAL EXPERIENCE

Hugo has 39 years of experience providing geotechnical engineering, construction materials testing, inspection and consulting services. Geotechnical services include geotechnical design, analyses and recommendations related to the design and construction of foundations as well as geotechnical exploration programs. He is well versed in performing analysis and evaluation of field and laboratory data, in-situ soil testing, in-place permeability testing and geophysical explorations.

Hugo's extensive experience includes: evaluating bearing capacity and settlement for different types of shallow and deep foundation systems; analysis/evaluation of retaining walls, sheet piling systems, slope stability analysis of conventional and reinforced embankments, evaluation of drilled shafts, auger cast piles and driven piles; evaluation, design, and implementation of subsurface improvement programs (i.e. application of dynamic compaction, preloading, compaction grouting, and vibro-compaction techniques); and conducting studies including monitoring vibrations of structures during construction.

#### PROJECT EXPERIENCE

##### Fire Station No. 114 – Pompano Beach, FL

APR/Quality Review. Terracon performed exfiltration tests on the project site located on the northwest quadrant of the intersection of SW 15th Street and NW 21st Avenue. The tests were performed at a depth of 10 feet below the existing ground surface and in general accordance with the SFWMD procedures for the "Usual Constant Head" Percolation Tests. Hydraulic conductivity was calculated from the test results and reported in units of cubic feet per second per SF of seepage area per foot of head. The soils at the exfiltration test locations were classified by Terracon. The firm provided a report that included the results from the exfiltration tests and boring logs that graphically represented the soil profile at exfiltration test locations.

##### City of Lauderhill Police Station – Lauderhill, FL

APR/Quality Review. The proposed new building includes a three to five-story police building measuring approximately 55 feet by 110 feet. Terracon performed subsurface exploration and geotechnical engineering services to provide information and geotechnical engineering recommendations relative to: subsurface conditions; groundwater conditions; site preparation and earthwork; excavation considerations; foundation design and construction; floor slab design and construction; pavement design and construction; and hydraulic conductivity (k-value).

##### Peace Mound Park - Weston, FL

Contract Manager/Principal Engineer. Terracon provided geotechnical engineering services for Weston Parks and Recreation's Peace Mound Park, site of Tequesta Trace burial mound. The scope of work included: mobilization/demobilization of a drill rig, SPT borings, site reconnaissance, boring layout, and underground utility clearance. Services were provided to the Archaeological and Historical Conservancy, Inc.



#### EDUCATION

Master of Science in Geotechnical Engineering, Utah State University, 1980

Bachelor of Science in Civil Engineering, Utah State University, 1979

#### REGISTRATIONS

Professional Engineer, #56108, Texas, 1994

Professional Engineer, #36440, Florida, 1985

#### AFFILIATIONS

American Society of Civil Engineers

Cuban Society of Engineers

**YEARS OF EXPERIENCE:** 39

**YEARS AT FIRM:** 12

## 10 Resumes of Key Personnel

### Caridad R. Murphy, QCM Materials Testing Manager

#### PROFESSIONAL EXPERIENCE

Caridad Murphy is a project manager with 26 years of experience in the construction management, contract administration and QA/QC of complex transportation projects that include the FDOT and FTE. She has also provided materials testing and inspection services under contracts with cities, counties, school districts, and higher educational clients. She has experience in performing all field and laboratory tests required for verification testing (VT) testing and inspections of soils, asphalt, and concrete; and evaluation of soils, concrete, and asphalt testing for roadway projects. Caridad has worked with various government agencies involved in laboratory inspections such as ASTM Cement and Concrete Reference Laboratory (CCRL), AASHTO Accreditation Program (AAP), AASHTO Materials Reference Library (AMRL), USACE, and the FDOT IID program.

#### PROJECT EXPERIENCE

##### Ali Cultural Center - Pompano Beach, FL

Construction Services Manager. Terracon provided construction materials testing and inspection services during the construction of the elevator addition at the center. The firm was responsible for performing construction materials testing services for the CRA in 2014 and 2015 during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.

##### Fire Stations No. 43 and No. 95 - Coral Springs, FL

Construction Services Manager. The City of Coral Springs intended to demolish and replace both fire stations. Terracon provided a construction material testing services for both facilities. We also conducted construction materials testing services in support of construction of the foundations for two mast arm assemblies that were required for traffic signalization in connection with the reconstruction of Fire Station 95. Special inspections and testing for concrete, soils, and masonry were also provided for the general contractor.

##### Mako Hall - Davie, FL

Materials Project Manager. Terracon furnished verification for compliance with contract documents of the items incorporated into the project limited to operations related to concrete, grout, earthwork, and steel operations. We observed and reported earthwork-related work while checking for conformance to the plans and specifications as requested. Soil materials were sampled from the site, conducted earthwork density readings and recorded those findings on daily reports when applicable, observed and reported concrete/grout-related work being while checking for conformance to plans and specifications, performed plastic property testing for acceptance of concrete materials. Laboratory tests were provided when required. Terracon also performed special inspections for: foundations and soil preparation; concrete; precast; masonry; steel; and asphalt paving.



#### EDUCATION

Bachelor of Science in Civil Engineering,  
Central University of Las Villas, Villa Clara, Cuba, 1992

#### CERTIFICATIONS

CTQP QC Manager

**YEARS OF EXPERIENCE: 28**

**YEARS AT FIRM: 7**

# 10 Resumes of Key Personnel



**Craig A. Smith & Associates, Inc.**

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

## Stephen C. Smith, P.E.

President/CEO



Mr. Smith has over 34 years of experience in the engineering, survey and utility construction fields.

Mr. Smith's responsibilities include management of daily business operations for a 40+ 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 also oversees all transportation/roadway and stormwater projects including studies, reports and design. He ensures proper allocation of resources, staffing, financial management, quality control and timely project completion.

### 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.

### 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: 31 yrs**  
**Employment with other firms:**  
**3 yrs**



## 10 Resumes of Key Personnel



**Craig A. Smith & Associates, Inc.**

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

### Orlando A. Rubio, PE

Senior Supervising Engineer, Engineering Department



Mr. Rubio has over 32 years of experience in the engineering field with a primary focus in the water resources engineering.

Mr. Rubio is responsible for the development of project scopes, stormwater master plans, State & Federal Grant applications, advanced stormwater modeling using ICPR, Hydraflow, & HEC-RAS modeling software programs, construction plans of roadways, land development projects, various surface water management systems in accordance with established criteria, engineering principles, and normal construction practices; development of environmental resources permit packages; and permit agency coordination.

He performs construction management and conducts field & office visits with clients, permitting agency staff, and other project coordination as necessary. Mr. Rubio has conducted site plan and engineering reviews for compliance for municipal clients such as Okeechobee County in accordance with their Land Development Regulations and comes from a regulatory background from the South Florida Water Management District and Broward County Water Resources Division.

#### SELECTED RELATIVE EXPERIENCE:

**City of Oakland Park NE 6<sup>th</sup> Avenue Stormwater Trunkline.** As Engineer of Record, performed hydrologic and hydraulic modeling, designed and permitted stormwater improvements within an area of significant historical flooding concerns. The Trunkline consisted of ½ mile 7' x 4' Reinforced Concrete Box Culvert within a City right-of-way of limited space and occupied with numerous utility conflicts. Obtained Provided construction management assistance to City staff and project certification. The trunkline project allowed for connections to existing and future lateral drainage connections of adjacent streets.

**City of Sweetwater Stormwater Improvements (Phase I, IIA, III, & IV) - Miami-Dade County, Florida.** As Engineer of Record, designed and permitted stormwater improvements within an area of significant historical flooding concerns. Improvements included the design of stormwater gravity collection systems with 8 stormwater pumping stations designed by other CAS staff. Performed computer modeling for each phase. Provided construction engineering services as requested by the City's CEI firm.

#### Areas of Expertise

- Project Management
- Hydrology/Hydraulics
- Computer Modeling
- Stormwater Master Plan
- Climate Change Sea Level Rise Design
- Environmental Resource Permitting
- State of Florida Appropriations Grants
- SRF Loan
- FEMA Hazard Mitigation Grant Program
- FEMA Pre-Disaster Mitigation Competitive Grant Program
- FDEP – S319 Grant Program
- Estimating/Bidding Services
- Construction Management
- Constructability Reviews
- NPDES
- Municipal Site Plan Reviews

#### Education

- (AA) Miami-Dade College
- (BSCE) University of Florida
- FDEP – Qualified Stormwater Management Inspector (#7638)
- CEU's – On going

#### Licensure

Florida Licensed Professional Engineer – PE No. 48265

Employment with CAS: 19 yrs  
Employment with other firms or government agencies: 13 yrs

## 10 Resumes of Key Personnel



**Craig A. Smith & Associates, Inc.**

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

### Robert D. Keener, P.S.M.

Vice President

Survey / Geomatics



Mr. Keener has over 42 years of experience in the survey, engineering and utility construction fields. Mr. Keener has been employed with CAS since April of 1995.

He 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.** 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. 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. Also 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.** 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.

**WWTP Triplex Lift Station Rehabilitation – City of Margate, Florida.** Served as Principal Surveyor for the boundary, topographic survey and utility locates of existing buried utilities, including recovery of horizontal and vertical control relative to project datum as previously established.

#### 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: 25 yrs**

**Employment with other firms: 17 yrs**

# 10 Resumes of Key Personnel

## Michael Kroll, RLA, FASLA

Principal-in-Charge | Project Manager



### PROFESSIONAL EXPERIENCE:

Mr. Kroll, President of Miller Legg, has been actively involved in projects ranging from large scale habitat restoration to international urban redevelopment projects. His 30+/-year career has concentrated on planning, infrastructure, open space, transportation and redevelopment, principally in South Florida. Mr. Kroll's diverse professional experience has led to projects that successfully integrate environmental, planning and landscape architectural services. Under his leadership, Miller Legg develops project solutions that respond to the natural environment, respect the social fabric and create sustainable aesthetic spaces.

### RELEVANT PROJECT EXPERIENCE:

**John Knox Village Pompano Beach Welcome Center** - In preparation for the proposed new Welcome Center at the John Knox Village retirement community Pompano Beach campus, Miller Legg was retained to perform site development services consisting of planning, engineering and landscape architecture. Preparation of the conceptual site plan entails a review of relevant City of Pompano Beach development codes, existing utilities information, the proposed building plan and existing site conditions. Engineering services include engineering construction document production and construction observation. In addition to the City of Pompano Beach, permitting is being coordinated with the Broward County Health Department (BCHD), BCEPGMD and SFWMD. A photometric lighting plan for surface parking is also part of the scope. The landscape architecture tasks include tree assessment, removal permitting, planting and irrigation design and construction documents, in addition to construction observation.

**North County SW Quad & BP12** - For the NCNIP Bid Package 12, Miller Legg was responsible for design of stormwater drainage, water, sanitary sewer, reclaimed water, street pavement, sidewalks, landscaping and signage improvements for this 173-acre area. Miller Legg designed and managed the construction administration of a lift station and forcemain for BP 12. The project included installation of 5.3 miles of reclaimed water pipe installation resulting in reclaimed water service being provided to 455 homes. This installation consisted of 2 miles of 20" pipe, 0.4 miles of 16" pipe, 2.9 miles of 4" pipe, 7 air release valves; 38 gate and butterfly valves; 12 tons of fittings; as well as roadways and swale were also restored. Provided construction documents for the installation of the reclaimed water transmission main from the City of Pompano Beach reuse plant into Bid Package #12 and reclaimed water system within the Bid Package #12 area constructed in the street.



**Years of Experience:** 34  
**Years With the Firm:** 32

### Registrations & Certifications:

*Registered Landscape Architect, FL, 1989*  
*Registered Landscape Architect, TX, 2009*  
*Fellow American Society of Landscape Architects, 2014*

### Education:

*Bachelor of Landscape Architecture*  
*University of Florida, 1986*  
*Graduate Studies, Urban and Regional Planning*  
*Florida State University, 1989*

### Publications & Presentations:

*American Society of Landscape Architects, Broward Section, Habitat Restoration, October 1995*  
*Builders Association of South Florida, Environmental Issues & Development, 1999, Lecturer*  
*Florida Educational Facilities Planners' Association, Inc., Making Connections: Benefits of On-Campus Mass Transit Elements, July 2014, Presenter/Speaker*  
*Florida Engineering Society, Environmental Design & Habitat Restoration, April 1995, Lecturer*  
*Florida Planning and Zoning Association, Public Private Partnerships, June 2007, Presenter/Speaker*  
*University of Florida School of Architecture, Where the Water Meets the Land, September 1996, Guest Lecturer*

### Professional & Civic Activities:

*Fellow, American Society of Landscape Architects*  
*Past Member, American Society of Landscape Architects, Florida Executive Committee*  
*Vice Chair, Broward County Bicycle & Pedestrian Advisory Committee*  
*Member, Broward Section, American Planning Association*  
*Past Chair, Broward Section, American Society of Landscape Architects*  
*Member, Florida Board of Landscape Architecture, 2013-current*  
*Member, Florida Earth Foundation, Engineering Advisory Committee, 2004-present*  
*Member, Florida Recreation and Park Association*  
*Member, Florida Redevelopment Association Recipient, UF Distinguished Landscape Architect Alumnus*

# 10 Resumes of Key Personnel

## Brian Shore, RLA

Senior Landscape Architect



### PROFESSIONAL EXPERIENCE:

As a Senior Landscape Architect, Mr. Shore has significant experience in landscape architectural design and landscape construction services for a variety of public and private projects. Specialties include landscape, hardscape, and irrigation design services for streetscape and roadway projects including the FDOT, all aspects of active and passive park design, healthcare campuses, and environmental wetland habitat creation. Other

experience includes various residential and commercial projects. Mr. Shore is a Senior Associate of the firm.

### RELEVANT PROJECT EXPERIENCE:

**John Knox Village Campus Wide Tree Inventory** - Miller Legg was selected by John Knox Village to perform arborist services and a tree inventory for the Pompano Beach campus. The tree inventory and evaluation reflected the following data to meet the requirements for City of Pompano Beach: tree species; common and scientific names; dbh (diameter at breast height) for dicot trees; clear trunk, grey wood, or overall heights for palms; canopy spread, and general health/ condition/ hazard determination as evaluated by an ISA Certified Arborist. Locations of trees were recorded using a sub meter differential global positioning satellite (dGPS).

**John Knox Village Pompano Beach Welcome Center** - In preparation for the proposed new Welcome Center at the John Knox Village retirement community Pompano Beach campus, Miller Legg was retained to perform site development services consisting of planning, engineering and landscape architecture. Preparation of the conceptual site plan entails a review of relevant City of Pompano Beach development codes, existing utilities information, the proposed building plan and existing site conditions. Engineering services include engineering construction document production and construction observation. In addition to the City of Pompano Beach, permitting is being coordinated with the Broward County Health Department (BCHD), Environmental Protection and Growth Management (BCEPGMD) and South Florida Water Management (SFWMD). A photometric lighting plan for surface parking is also part of the scope. The landscape architecture tasks include tree assessment, removal permitting, planting and irrigation design and construction documents, in addition to construction observation.

**Palm Aire Golf Course Lake Excavation** - Miller Legg was engaged to provide engineering and construction observation services for the excavation of property and lakes on the 121-acre Palm Aire Golf & Country Club in Pompano Beach. Permit closeout services were coordinated with relevant authorities - South Florida Water Management District, Broward Co. Environmental Protection, City of Pompano Beach, Florida Department of Environmental Protection, National Pollutant Discharge Elimination System and Broward Co. Health Department.

**FDOT District 4 Andrews Avenue Expedited Tree Permitting** - Under Miller Legg's multi-year Districtwide Landscape Design contract, the firm provided expedited tree permitting services along a one-mile segment of off-system roadway, Andrews Avenue from Atlantic Boulevard to north of Copans Road, in the City of Pompano Beach.

**Years of Experience:** 20  
**Years With the Firm:** 20

**Registrations & Certifications:**  
*Registered Landscape Architect, FL, 2005*  
*FDOT Intermediate Maintenance of Traffic, FL, 2013*

**Education:**  
*Bachelor of Science, Landscape Architecture*  
*North Carolina A&T State University, 2000*

**Continuing Education:**  
*Eminent Domain for Landscape Architects, 2013*  
*FDOT Landscape Highway Seminar, 2005, 2006, 2008 and 2013*  
*FDOT Outdoor Advertising Workshop, November 2008 and February 2010*  
*FDOT Plan Reviewer's Workshop, November 2006 and November 2007*  
*FDOT Specifications Package Preparation Training Certificate, 2016*  
*Irrigation: The End to Water Waste in Landscapes 2013*  
*Landscape Palm Diseases, 2013*  
*LAP Project Inception to Notice to Proceed, October 2007*  
*LAP Training for Right-of-Way and Real Estate Acquisition, May 2008*  
*PSMJ Project Management Boot Camp, 2007*

**11**

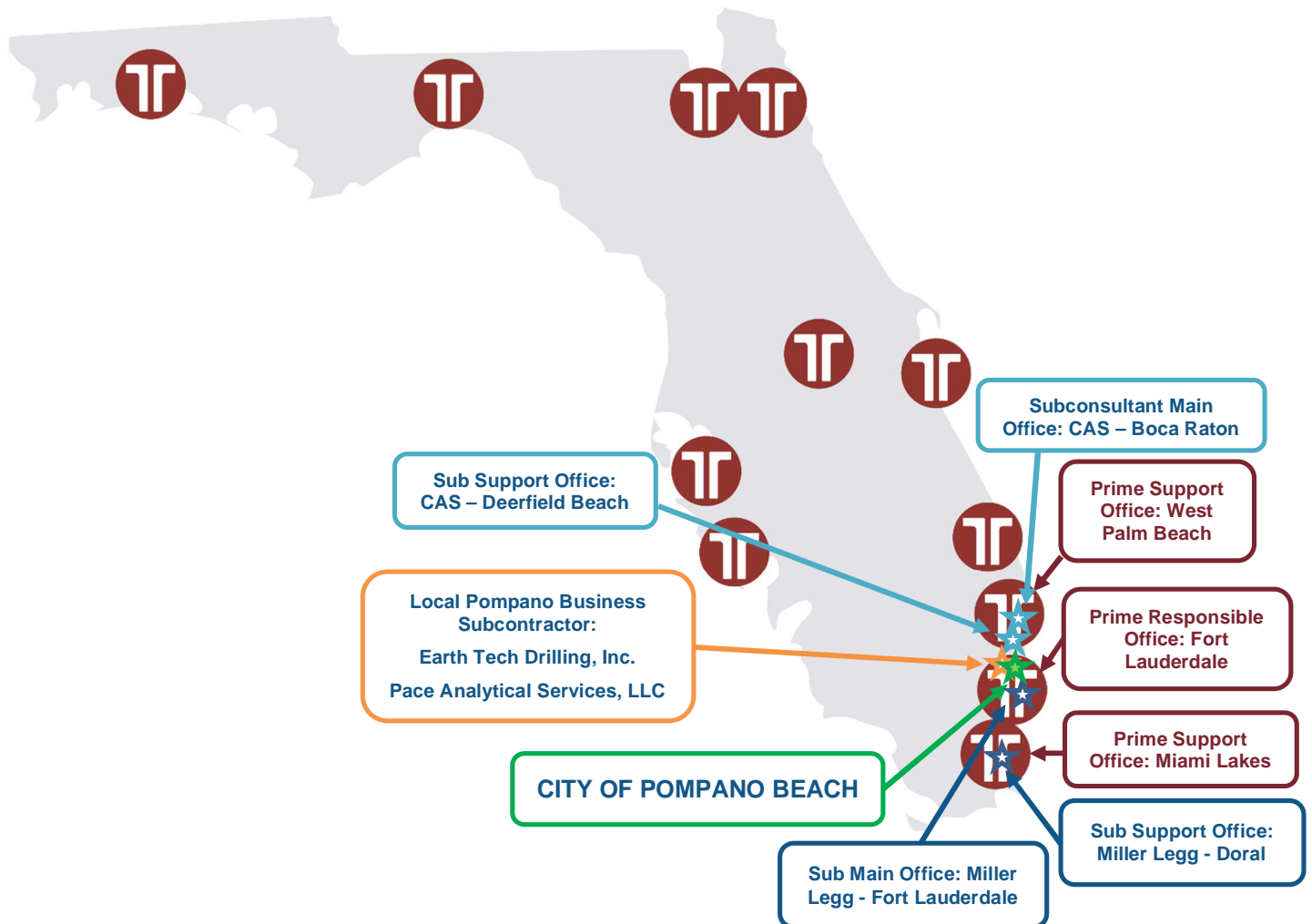
# Office Locations

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# 11 Office Locations

## FIRM'S LOCATION/PROXIMITY TO SERVICE AREA

The Terracon Team has the necessary resources, equipment, and facilities to perform professional environmental and geotechnical/materials services for this contract. As previously mentioned, Terracon will service this contract from our Fort Lauderdale office, **which is located only 15 minutes door-to-door from your City Hall to ours**. Please find below a map of Terracon's Florida offices, including our South Florida offices, and our teaming partners that will service this contract.



*The Terracon Team's offices are strategically located to provide proactive support to the City of Pompano Beach.*

## 11 Office Locations

KEY TEAM MEMBERS, LOCATION	OFFICE ROLE		NO. OF STAFF	
	MAIN	SUPPORT	PROFESSIONAL	ADMIN
<b>Prime Consultant</b>				
Terracon Consultants, Inc. (Terracon) Fort Lauderdale, FL ** Office Responsible for this Contract	✓		16	2
Terracon Miami Lakes, FL		✓	7	2
Terracon West Palm Beach		✓	12	1
<b>Subconsultants</b>				
Craig A. Smith & Associates, Inc. (CAS) Boca Raton, FL	✓		22	6
CAS Deerfield		✓	9	1
Miller Legg Fort Lauderdale, FL	✓		34	10
Miller Legg Doral, FL		✓	8	-
<b>Local Subcontractor</b>				
Earth Tech Drilling, Inc. Pompano Beach, FL	✓		UK	UK
Pace Analytical Services, LLC Pompano Beach, FL	✓		UK	UK

Terracon has 9 additional Florida offices, with 162 professional and 13 administrative staff, that can also help support this contract if the need arises.

**12**

# Local Businesses

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# 12 Local Businesses




## LOCAL BUSINESS PROGRAM FORMS

The required Local Business Program Forms, Exhibits A – D have been executed and are provided in Section 14 City Forms of this submittal. The referenced forms were also uploaded in the Requested Attachments tab on the City's Ebid System.

### City of Pompano Beach Business Tax Receipt of Subcontractor - Earth Tech Drilling, Inc.

		CITY OF POMPANO BEACH BUSINESS TAX RECEIPT FISCAL YEAR: 2019 - 2020	
Business Tax Receipt Valid from: October 1, 2019 through September 30, 2020			
4430524			2/11/2020
EARTH TECH DRILLING E T D INC 2703 NW 19 ST POMPANO BEACH FL 33069			
<b><u>THIS IS NOT A BILL</u></b>			
THIS IS YOUR BUSINESS TAX RECEIPT. PLEASE POST IN A CONSPICUOUS PLACE AT THE BUSINESS LOCATION.			
BUSINESS OWNER: E T D INC BUSINESS LOCATION: 2703 NW 19 ST POMPANO BEACH FL			
RECEIPT NO:	CLASSIFICATION		
20-00051855	CONTRACTOR SPEC-WELL DRILL (S FL WA MGT)		

		CITY OF POMPANO BEACH BUSINESS TAX RECEIPT FISCAL YEAR: 2019 - 2020	
Business Tax Receipt Valid from: October 1, 2019 through September 30, 2020			
4449692			10/10/2019
PACE ANALYTICAL SERVICES INC 3610 PARK CENTRAL BLVD N POMPANO BEACH FL 33064			
<b><u>THIS IS NOT A BILL</u></b>			
THIS IS YOUR BUSINESS TAX RECEIPT. PLEASE POST IN A CONSPICUOUS PLACE AT THE BUSINESS LOCATION.			
BUSINESS OWNER: PACE ANALYTICAL SERVICES INC BUSINESS LOCATION: 3610 N PARK CENTRAL BL POMPANO BEACH FL			
RECEIPT NO:	CLASSIFICATION		
20-00075068	OFFICE-LAB		

**13**

# Litigation

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## 13 Litigation

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### TERRACON LITIGATION STATEMENT

Terracon is a large engineering firm specializing primarily in geotechnical, environmental, and construction materials testing services and we perform tens of thousands of projects nationwide. Given the large volume of projects we perform annually, we are subject to periodic claims and litigation. The number of claims received annually is a very small percentage of the overall number of projects performed, well less than 0.5% of the total.

As a large firm performing many projects, on very rare occasions we have terminated services on our projects prior to project completion. These situations usually arise from a failure to pay for those services, or from decisions to reduce our scope of service to the point where we are no longer comfortable, from a professional perspective, with the continuation of our services on a project. Again, we would stress that we perform several thousand projects annually and these situations arise very rarely and only after thorough efforts to reasonably resolve these issues.

Terracon carries a robust program of insurance to protect us and our clients when applicable against claims arising out of our services. The majority of our reported claims are not ultimately pursued against Terracon. In the claims that are pursued, Terracon has been very successful in defending itself against claims and in many of these cases, has been able to be completely vindicated. None of our claims have in the past impacted or are estimated in the future to impact either the financial strength of our company or the ability to provide quality services to our clients.

Due to the confidentiality and sensitivity of claim information, Terracon does not provide specific information on individual claims or litigation. If you have any specific questions or concerns about this disclosure, feel free to contact us to discuss further.

Contact:  
Aaron Mann  
Senior Attorney  
(913) 774-1090

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# City Forms

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## 14 City Forms

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### COMPLETED FORMS

The required forms listed below have been executed and are provided on the following pages. Those with asterisks were also uploaded in the Requested Attachments tab on the City's Ebid System.

- Proposer Information Page \*
- Project Team Form \*
- Vendor Certification Regarding Scrutinized Companies Lists
- Local Business Program Forms, Exhibits A – D \*
- Minority Business Enterprise Participation Exhibit E \*
- Tier 1/Tier 2 Compliance Form \*

Terracon has also responded to the following items on the Bid Attributes tab on the City's Ebid System.

- Drug-Free Workplace
- Conflict of Interest
- Local Business Participation Percentage
- Terms and Conditions
- Acknowledgment of Addenda

**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

***PROPOSER INFORMATION PAGE***

RLI, E-22-20 Continuing Contract for Professional Environmental Testing  
(number) (Title)

To: The City of Pompano Beach, Florida

The below named company hereby agrees to furnish the proposed services under the terms stated subject to all instructions, terms, conditions, specifications, addenda, legal advertisement, and conditions contained in the solicitation. I have read the solicitation and all attachments, including the specifications, and fully understand what is required. By submitting this proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal.

Proposal submitted by:

Name (printed) Richard A. Minichiello Title Vice President, Regional Manager, PIC

Company (Legal Registered) Terracon Consultants, Inc.

Federal Tax Identification Number 42-1249917

Address 5371 NW 33rd Avenue, Suite 201

City/State/Zip Fort Lauderdale, FL 33309

Telephone No. (954) 741-8282 Fax No. (954) 741-8240

Email Address Rich.Minichiello@terracon.com

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRETY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM**

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	<u>Richard Minichiello</u>	<u>34</u>	<u>B.A.</u>
Contract / Project Manager	<u>Steven Harrison, P.G.</u>	<u>32</u>	<u>M.S., B.S.</u>
Asst. Project Manager	<u>Terrence Horan, P.E.</u>	<u>27</u>	<u>B.S.</u>
Other Key Member	<u>Lucas Barroso-Giachetti, P.E., CHMM</u>	<u>19</u>	<u>B.S.</u>
Other Key Member	<u>Susan Kuzia</u>	<u>26</u>	<u>M.S.</u>

**SUB-CONSULTANT**

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	<u>Craig A. Smith and Associates, Inc. (CAS)</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Robert D. Keener, PSM</u>
Landscaping	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Michael Kroll, RLA, FASLA, President</u>
Engineering	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Stephen Smith, P.E.</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Jim Driscoll</u>
Other Key Member	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Brian Shore, RLA</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>James Orth, P.E.</u>

(use attachments if necessary)

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM *Continued***

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Other Key Member	<u>Tom Holley, CIH, FLAC, CSP, CHMM</u>	<u>29</u>	<u>B.S.</u>
Other Key Member	<u>Sergio Adasme, MRSA</u>	<u>36</u>	<u>CM Candidate</u>
Other Key Member	<u>Rutu Nulkar, P.E.</u>	<u>16</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Hugo Soto, P.E.</u>	<u>40</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Caridad Murphy, QCM</u>	<u>28</u>	<u>B.S.</u>
Other Key Member	<u></u>	<u></u>	<u></u>



**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS**

Respondent Vendor Name: Terracon Consultants, Inc.

Vendor FEIN: 42-1249917

Section 287.135, Florida Statutes, prohibits agencies 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. Further, Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to sign electronically on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

I Certify



**REQUESTED INFORMATION BELOW IS ON LOCAL BUSINESS PROGRAM FORM ON THE BID ATTACHMENTS TAB. BIDDERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

CITY OF POMPANO BEACH, FLORIDA  
LOCAL BUSINESS PARTICIPATION FORM

RLI E-22-20 Continuing Contract

Solicitation # & Title: for Professional Environmental Testing

Prime Contractor's Name: Terracon Consultants, Inc.

<u>Name of Firm, Address</u>	<u>Contact Person, Telephone Number</u>	<u>Type of Work to be Performed/Materials to be Purchased</u>	<u>Contract Amount</u>
Earth Tech Drilling, Inc. 2703 NW 19 St., Pompano Beach, FL 33069	(954) 974-2424	Drilling Services	To be determined (TBD)
Pace Analytical Services, LLC 3610 Park Central Blvd N, Pompano Beach, FL 33064	(954) 582-4300	Analytical Laboratory Services	TBD
Craig A. Smith and Associates, Inc. 277 Goolsby Blvd, Unit 4C, Deerfield Beach, FL 33442	(954) 782-8222	Civil Engineering, Survey Services	TBD

LOCAL BUSINESS EXHIBIT "A"

LOCAL BUSINESS EXHIBIT "B"  
LOCAL BUSINESS  
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number RLI No. E-22-20

TO: Terracon Consultants, Inc.  
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

an individual  a corporation  
 a partnership  a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

Drilling Subcontractor for Environmental Assessments and Remediation

Projects as a Tier 1 Local Vendor & Subcontractor

at the following price: TBD


08/21/2020  
(Date)

Earth Tech Drilling, Inc.  
(Print Name of Local Business Contractor)

2703 NW 19 St.

(Street Address)

Pompano Beach, FL 33069  
(City, State Zip Code)

BY: Edward Marks   
ETD Operations Mgr. (Signature) 08/20/2020

**IMPORTANT NOTE:** Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"

LOCAL BUSINESS EXHIBIT "B"  
LOCAL BUSINESS  
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number E-23-20

TO: Terracon  
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

\_\_\_\_\_ an individual  Limited Liability Company LLC \_\_\_\_\_ a corporation

\_\_\_\_\_ a partnership \_\_\_\_\_ a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

Laboratory Analytical Testing Services.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

at the following price: \_\_\_\_\_

8/20/2020  
(Date)

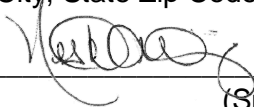
Pace Analytical Services, LLC  
(Print Name of Local Business Contractor)

3610 Park Central Blvd. N.

(Street Address)

Pompano Beach, FL 33064

(City, State Zip Code)

BY:   
(Signature)

**IMPORTANT NOTE:** Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"

LOCAL BUSINESS EXHIBIT "C"  
LOCAL BUSINESS UNAVAILABILITY FORM

Solicitation # RLI E-22-20

I, \_\_\_\_\_  
(Name and Title)

of \_\_\_\_\_, certify that on the \_\_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_, I invited the following LOCAL BUSINESS(es) to bid work  
(Month) (Year)

items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)

Said Local Businesses:

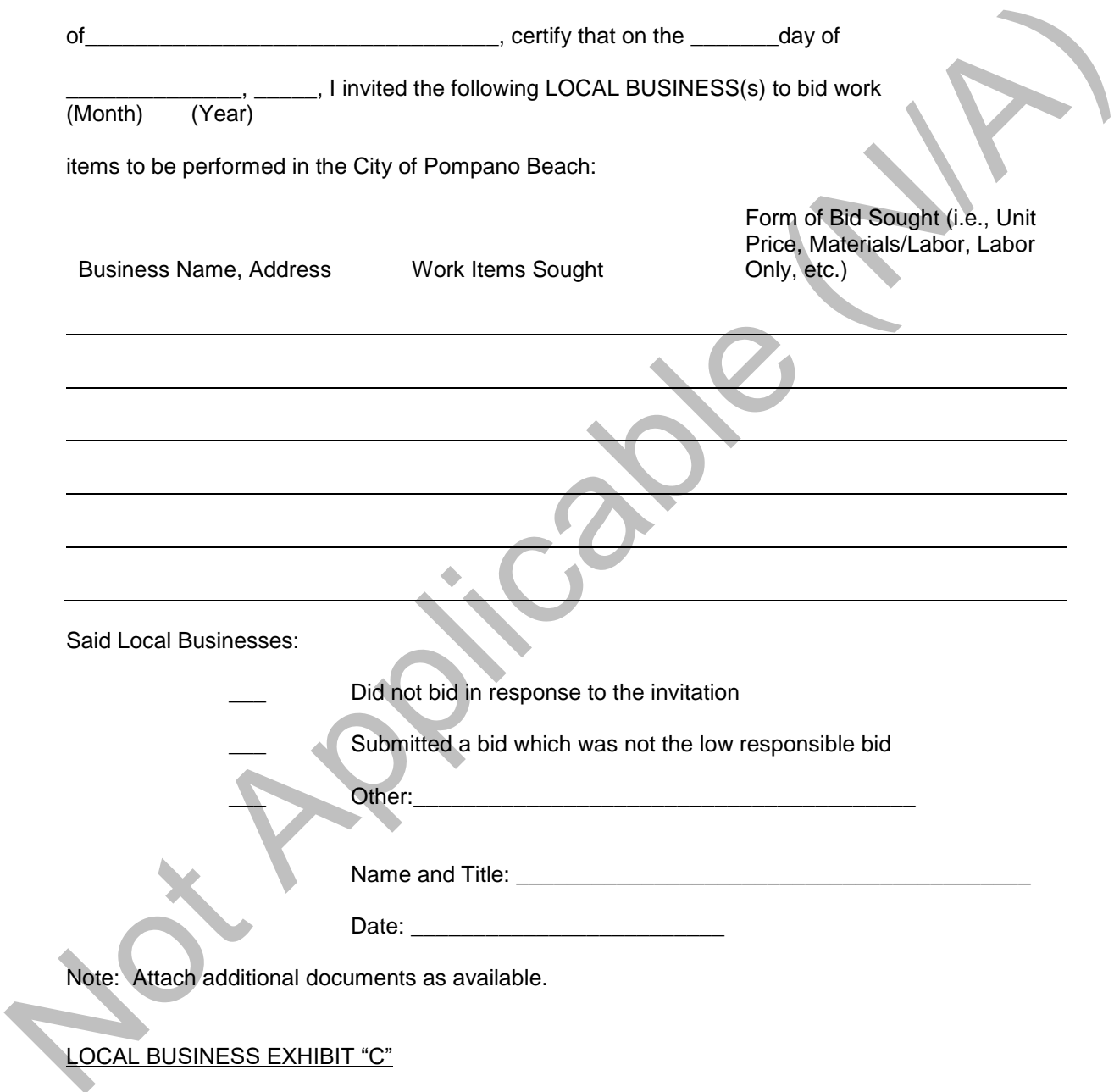
- Did not bid in response to the invitation
- Submitted a bid which was not the low responsible bid
- Other: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Date: \_\_\_\_\_

Note: Attach additional documents as available.

LOCAL BUSINESS EXHIBIT "C"



LOCAL BUSINESS EXHIBIT "D"  
GOOD FAITH EFFORT REPORT LOCAL BUSINESS PARTICIPATION

Solicitation # RLI E-22-20

1. What portions of the contract have you identified as Local Business opportunities?

When projects are undertaken, Terracon will make a concerted effort to  
utilize local vendors that are appropriate for the project to be completed  
(i.e. equipment rentals, trucking, paving, etc.).

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

Calls were made and emails were sent to local vendors Terracon  
works with on a routine basis. Terracon was able to secure local  
businesses to provide critical elements for this team including  
engineering, drilling, and laboratory analyses.

3. Did you send written notices to Local Businesses?

Yes       No

If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

Yes       No

If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

Calls were made and emails were sent to local vendors Terracon  
works with on a routine basis.

7. List the Local Businesses you will utilize and subcontract amount.

<u>Earth Tech Drilling, Inc.</u>	<u>\$ TBD</u>
<u>Pace Analytical Services, Inc.</u>	<u>\$ TBD</u>
<u>TBD</u>	<u>\$ TBD</u>

8. Other comments: Local vendors are significant to perform the scope of  
services that are required in this RLI. As specific projects are identified,

Terracon will make all reasonable attempts to identify and utilize local  
Pompano Beach vendors for appropriate tasks to provide the City with  
the best services possible.

LOCAL BUSINESS EXHIBIT "D"

**BIDDERS ARE TO COMPLETE FORM AND UPLOAD COMPLETED FORM TO THE EBID SYSTEM**

**EXHIBIT E**

**MINORITY BUSINESS ENTERPRISE PARTICIPATION**

RLI # RLI E-22-20

List all members of your team that are a certified Minority Business Enterprise (as defined by the State of Florida.) You must include copies of the MBE certificates for each firm listed with your electronic submittal.

<b>Name of Firm</b>	<b>Certificate Included?</b>
WD Environmental, Inc.	
Jupiter Environmental Laboratories, Inc.	
Wombat Environmental, LLC	



# State of Florida

## Woman Business Certification

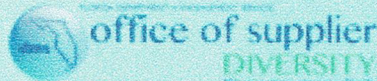
### WD Environmental Inc.

Is certified under the provisions of  
287 and 295.187, Florida Statutes, for a period from:

11/26/2018 to 11/26/2020



Erin Rock, Secretary  
Florida Department of Management Services



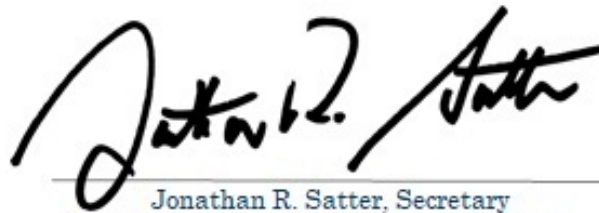
# State of Florida

## Woman Business Certification

### Jupiter Environmental Laboratories, Inc.

Is certified under the provisions of  
287 and 295.187, Florida Statutes, for a period from:

07/02/2019 to 07/02/2021



Jonathan R. Satter, Secretary  
Florida Department of Management Services



Office of Supplier Diversity  
4050 Esplanade Way, Suite 380  
Tallahassee, FL 32399  
850-487-0915  
[www.dms.myflorida.com/osd](http://www.dms.myflorida.com/osd)

# State of Florida

## Minority Business Certification

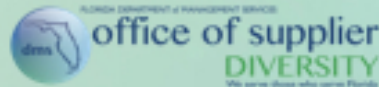
### Wombat Environmental LLC

Is certified under the provisions of  
287 and 295.187, Florida Statutes, for a period from:

10/30/2018 to 10/30/2020



Erin Rock, Secretary  
Florida Department of Management Services



### TIER 1/TIER 2 COMPLIANCE FORM

**IN ORDER FOR YOUR FIRM TO COMPLY WITH THE CITY'S LOCAL BUSINESS PROGRAM AS A TIER 1 OR TIER 2 VENDOR, BIDDERS MUST COMPLETE THE INFORMATION BELOW AND UPLOAD THE FORM TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

#### **TIER 1 LOCAL VENDOR**

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least 10 % who are residents of the City of Pompano Beach.

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

Or

My firm does not qualify as a Tier 1 Vendor.

#### **TIER 2 LOCAL VENDOR**

\_\_\_\_\_ My firm has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within Broward County and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

Or

My firm does not qualify as a Tier 2 Vendor.

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

8-24-20

(Date)

Terracon Consultants, Inc.

(Name of Firm)



BY: Richard A. Minichiello

(Name)

### TIER 1/TIER 2 COMPLIANCE FORM

**IN ORDER FOR YOUR FIRM TO COMPLY WITH THE CITY'S LOCAL BUSINESS PROGRAM AS A TIER 1 OR TIER 2 VENDOR, BIDDERS MUST COMPLETE THE INFORMATION BELOW AND UPLOAD THE FORM TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**TIER 1 LOCAL VENDOR**

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least 10 % who are residents of the City of Pompano Beach.

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

Or

\_\_\_\_\_ My firm does not qualify as a Tier 1 Vendor.

**TIER 2 LOCAL VENDOR**

My firm has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within Broward County and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

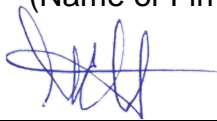
Or

\_\_\_\_\_ My firm does not qualify as a Tier 2 Vendor.

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

July 29, 2020  
(Date)

Craig A. Smith and Associates, Inc.  
(Name of Firm)

BY:   
(Name)

Stephen C. Smith, P.E., President/CEO



# Terracon

**CONTACT:**  
5371 NW 33<sup>rd</sup> Avenue  
Suite 201  
Fort Lauderdale, FL 33309

Phone: (954) 741 8282  
Fax: (954) 741 8240  
terracon.com

**RESPONSIVE.  
RESOURCEFUL.  
RELIABLE.**

Environmental



Facilities



Geotechnical



Materials

# Terracon Consultants, Inc.

## Consulting Services Rate Sheet

### City of Pompano Beach

RLI E-20-20: Continuing Contract for  
Professional Environmental Testing  
March 2021

Professional Services	Rate	Units
Principal	\$250.00	Hour
Environmental Director	\$215.00	Hour
Sr. Geologist, P.G./Senior Engineer, P.E.	\$180.00	Hour
Sr. Project Manager	\$200.00	Hour
Project Manager II/Project Engineer	\$160.00	Hour
Project Manager	\$140.00	Hour
SENIOR I Registered Engineer/Geologist/Scientist/	\$165.00	Hour
SENIOR II Registered Engineer/Geologist/Scientist	\$185.00	Hour
STAFF I Engineer/Geologist/Scientist/Biologist	\$90.00	Hour
Staff II Environmental Scientist/ Geologist/ Biologist/Engineer	\$100.00	Hour
Grants Administrator	\$150.00	Hour
Brownfields Coordinator	\$225.00	Hour
Sustainability/ Resiliency Manager	\$175.00	Hour
Field Scientist	\$75.00	Hour
Threshold Inspector	\$215.00	Hour
Threshold Agent	\$105.00	Hour
Sr. Technician	\$85.00	Hour
Technician	\$65.00	Hour
CADD Operator	\$85.00	Hour
Sr. CADD Operator	\$110.00	Hour

GIS Analyst II	\$125.00	Hour
GIS Technician	\$85.00	Hour
Asbestos Building Inspector	\$80.00	Hour
Asbestos Project Designer	\$135.00	Hour
FL Licensed Asbestos Consultant	\$185.00	Hour
FL Radon Measurement Specialist	\$155.00	Hour
Administrative Assistant/ Clerical	\$80.00	Hour
IAQ Consultant	\$145.00	Hour
LBP Risk Assessor	\$145.00	Hour
Lead Based Paint (LBP) Inspector	\$80.00	Hour
Expert Testimony (1.5 times rate)		
Asphalt Testing Inspection	\$95.00	Hour
Reinforcing Steel Inspection	\$95.00	Hour
Senior Certified Welding Inspector (CWI)	\$110.00	Hour
<b>Environmental Testing/Equipment</b>		
<u>Groundwater Sampling Equipment</u>		
4-piece GW sampling Kit - PP, DTW, Multimeter, Turbidimeter	\$185.00	Day
Peristaltic Pump - Geopump	\$50.00	Day
Multimeter - Ph, Cond, DO, temp - YSI 556	\$100.00	Day
Turbidity Meter - Hach	\$40.00	Day
Water Level Meter - Solinst	\$40.00	Day
1.0 Micron filters	\$30.00	Each
Sampling supplies- tubing , decontamination liquids, etc	\$20.00	GW sample
<u>Soil Sampling Equipment</u>		
OVA - PID/FID	\$145.00	Day
Multigas Meter (LEL, O2, H2S, CO)	\$120.00	Day
Core Drill, 4" bit	\$125.00	Day



Generator - Gasoline	\$100.00	Day
Hand Auger	\$20.00	Day
<u>IAQ Sampling Equipment</u>		
Air Pumps	\$15.00	Day
Summa Canisters incl regulator (rental)	\$90.00	Day
Anderson Impactor (mold sampling with pump)	\$100.00	Day
XRF Gun (min 6 hr/day)	\$100.00	Hour
Survey Equipment (no licensed surveyor)	\$100.00	Day
Vehicle Usage - Light duty	\$100.00	Day
Vehicle Usage	\$80.00	Half-Day
Mileage	\$0.80	Mile
Copies (8.5" x 11") - black & white	\$0.30	Page
Copies (8.5" x 11") - color	\$0.45	Page
Disposable Field Supplies	\$50.00	Day
Personal Protective Equipment (level D)	\$30.00	Day/Man
Shipping	Cost plus 10%	
<b>Subcontracted Services</b>	<b>Rate</b>	<b>Unit</b>
Monitoring Well Installation (2-inch diam 15 ft w/ MH) with hollow stem augers (Does not included Drill rig and mobilization fees)	\$1,200.00	Each
Monitoring Well Installation (1-inch diam 15 ft w/ MH) with direct push (Geoprobe) drill rig (in addition to Geoprobe Drilling Rig and mobilization fees)	\$600.00	Each
Geoprobe Drilling Rig	\$2,200.00	Day
Monitoring Well Permits	\$150.00	each
Drilling Rig Mobilization (Geoprobe or Traditional)	\$600.00	Day
Ground Penetrating Radar Survey - Half Day (Min)	\$1,200.00	1/2 Day
Ground Penetrating Radar Survey - Full Day (8hr)	\$1,800.00	Day
Ground Penetrating Radar report	\$1,000.00	Each
<b>Environmental Laboratory Analyses</b>		
Volatile Organic Compounds (VOCs)	\$100.00	each

Semivolatile Organic Compounds (full list SVOCs)	\$220.00	each
Polynuclear Aromatic Hydrocarbons (PAH) (low level, water)	\$100.00	each
Total Petroleum Hydrocarbons (FLPRO Method)	\$75.00	each
EPA Method TO-15	\$240.00	each
Polynuclear Aromatic Hydrocarbons (PAH) (low level, soil)	\$100.00	each
Semivolatile Organic Compounds (full list SVOCs + PAH, low level)	\$295.00	each
Volatile Organic Aromatics	\$50.00	each
Volatile Organic Halocarbons	\$65.00	each
Metals (each), except Mercury	\$24.00	each
RCRA Metals (8) (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	\$100.00	each
Hexavalent Chromium water	\$48.00	each
Hexavalent Chromium soil	\$79.00	each
Mercury	\$31.00	each
Organochlorine Pesticides - EPA Method 8081	\$151.00	each
Organophosphorous Pesticides - EPA method 8141	\$187.00	each
Polychlorinated Biphenyls (PCBs) - EPA Method 8082	\$84.00	each
Chlorinated Herbicides - EPA Method 8151	\$205.00	each
Chlorinated Herbicides – EPA Method 8321	\$230.00	each
Asbestos – PLM (5-day TAT)	\$20.00	each
Asbestos – TEM Standard TAT	\$75.00	each
Mold - Spore Count - Air/ Tape Lift/ Swab – 5-day TAT	\$65.00	each
Mold - cultured – 2-week TAT	\$105.00	each
Lead in paint – 2-week TAT	\$22.00	each
Analytical costs do not include any associated collection or shipping costs. IAQ, Vapor samples, other groundwater and soil analyses to be quoted on an as needed basis utilizing a cost plus 10% basis.		
<b>Services not included within the above price lists will be quoted on a project-specific basis. Additional items may include, but not be limited to, the following:</b>		
Laboratory Analyses not included above		
Site Survey / Top of Casing Elevation Survey as they are project specific		

MOT Plans and roadway closure
Storage Tank Operations
Drilling Efforts not Provided above

<b>Geotechnical &amp; Material Testing Services</b>		
Mobilization/Demobilization - Drill Rig & Crew (Truck Rig)	\$550.00	each
Mobilization/Demobilization – Drill Rig & Crew (Mud Bug Rig/Track Rig)	\$2,000.00	each
Mobilization/Demobilization - Drill Rig & Crew (Mini Rig)	\$1,300.00	each
<u><i>Standard Penetration Test Borings (ATSM D-1586), Truck Rig or Mud Bug Rig</i></u>		
0 - 50 Foot Depth Interval	\$17.00	l.ft
51 - 100 Foot Depth Interval	\$19.00	l.ft
101 - 150 Foot Depth Interval	\$21.00	l.ft
<u><i>Auger Borings (Drill Rig – ASTM 4700)</i></u>		
0 - 50 Foot Depth Interval	\$15.00	l.ft.
51 - 100 Foot Depth Interval	\$17.00	l.ft.
101 - 150 Foot Depth Interval	\$19.00	l.ft.
<u><i>Undisturbed Samples (Shelby Tubes)</i></u>		
0 - 50 Foot	\$175.00	Each
51 - 100 Foot	\$200.00	Each
<u><i>Temporary Casing (3-inch casing)</i></u>		
0-50 Foot	\$7.00	l.ft.
51 - 100 Foot	\$9.00	l.ft.
101 - 150 Foot	\$11.00	l.ft.
<u><i>Grout Boreholes (Truck/Mud Bug)</i></u>		

0-50 Ft	\$6.00	l.ft.
51-100 ft	\$8.00	l.ft.
101-150 ft	\$10.00	l.ft.
<u>Muck Probing</u>		
2-Man Crew	\$200.00	Hour
3-Man Crew	\$275.00	Hour
Permeability/Percolations Tests – Field (SFWMD Usual Open Hole Method)	\$500.00	Each
Double Ring Infiltrometer Test	\$800.00	Each
Rock Coring (0 to 50 feet- Truck Mounted)	\$90.00	l.ft.
Rock Coring (51 to 100 feet- Truck Mounted)	\$120.00	l.ft.
<u>Temporary Casing (6-inch casing)</u>		
0 to 50 feet	\$10.00	l.ft.
51 to 100 feet	\$12.00	l.ft.
Extra Split Spoons (0 to 50 feet – truck and mud bug mounted)	\$45.00	Each
Extra Split Spoons (51 to 100 feet - truck and mudbug mounted)	\$50.00	Each
Ground Penetrating Radar (utility locates) (No report)	\$1,800	Per Day
PDA Testing including PDA Engineer/Operator	\$2,000	Per Day
PDA Equipment Mobilization	\$500	Each
Mobilization of Asphalt / Concrete Coring Equipment	\$350.00	Each
Patching Concrete Cores	\$70.00	Each
Patching Asphalt Cores – 4” diameter	\$50.00	Each
Patching Asphalt Cores – 6” diameter	\$70.00	Each
<b>Concrete and Soil Field Testing will be charged at hourly rate</b>		
<b>GEOTECHNICAL AND MATERIALS LABORATORY TESTING</b>		

Atterberg Limits	\$150.00	Per sample
Grain Size Distribution	\$95.00	Per sample
Percent Fines (Wash No. 200)	\$50.00	Per sample
Hydrometer Analysis with Grain Size Distribution	\$225.00	Per sample
Organic Content Determination	\$60.00	Per sample
Moisture content	\$25.00	Per sample
Specific Gravity (fine aggregate/soil)	\$90.00	Per sample
Specific Gravity (coarse aggregate)	\$90.00	Per sample
Consolidation Test (10 load increments)	\$1,000	Per sample
pH	\$55.00	Per sample
Resistivity	\$55.00	Per sample
Chloride	\$55.00	Per sample
Sulfates	\$55.00	Per sample
Corrosion Series	\$220.00	Per sample
Limerock Bearing Ratio	\$450.00	Per sample
Standard and Modified Proctor Test	\$150.00	Per sample
Concrete Compressive Strength Test	\$25.00	Per Cylinder
Flexural Beams	\$55.00	Per Beam
Los Angeles Abrasion	\$360.00	Each
Soundness Test	\$180.00	Per sample
Asphalt Core Extraction/Gradation	\$200.00	Per sample
<i><u>Rock Core Testing (preparing sample for testing is charged hourly)</u></i>		
Unit weight	\$60.00	Each
Unconfined Compression Test	\$150.00	Each
Splitting Tensile Test	\$130.00	Each
Rock Core Boxes	\$80.00	Each
<b>Services not included within the above price lists will be quoted on a project-specific basis. Additional items may include, but not be limited to, the following:</b>		
Laboratory Analyses not included above		

MOT Plans and roadway closure
Drilling Efforts not Provided above

<b>Civil Engineering/ Land Survey/ SUE (Utility Locate)/ Stormwater Engineering Craig A Smith, Inc.</b>		
Principal	\$250.00	Hour
Court Testimony	\$250.00	Hour
Vice President	\$225.00	Hour
Senior Supervising Engineer	\$195.00	Hour
Supervising Engineer	\$170.00	Hour
Project Manager	\$145.00	Hour
Project Engineer	\$125.00	Hour
Senior CADD Technician	\$125.00	Hour
CADD Technician	\$90.00	Hour
Senior Field Representative	\$125.00	Hour
Field Representative	\$95.00	Hour
Professional Surveyor and Mapper	\$150.00	Hour
Survey Coordination Manager	\$120.00	Hour
Survey Technician	\$90.00	Hour
Clerical	\$65.00	Hour
Survey Crew (2-man)	\$160.00	Hour
Survey Crew (3-man)	\$195.00	Hour
Survey Crew, Lidar	\$375.00	Hour
Survey Crew - pile staking	\$225.00	Hour
Utility Locate Crew	\$150.00	Hour
Soft Dig Crew (per hole)	\$495.00	Hour
3D Radar Crew	\$450.00	Hour
3D Radar Processor	\$175.00	Hour
<b>PRODUCTION COSTS</b>		

Computer Usage (CADD)	\$2.50	Hour
<u>Reproductions</u>		
Engineering (24x36)	\$2.50	Sheet
Engineering Color	\$3.50	Sheet
Standard Copies	\$0.30	Sheet
Standard Color	\$0.40	Sheet
Ledger (11x17)	\$0.40	Sheet
Ledger Color	\$0.55	Sheet

<b>Miller Legg Landscape/Survey</b>		
Principal	\$270.00	Hour
Senior Landscape Architect II/ Senior Planner II	\$195.00	Hour
Senior Landscape Architect I/ Senior Planner I	\$165.00	Hour
Landscape Architect II/ Planner II/ Certified Arborist	\$140.00	Hour
Landscape Architect I/ Planner I	\$115.00	Hour
Senior Designer	\$130.00	Hour
Designer II	\$110.00	Hour
Designer I	\$100.00	Hour
Clerical	\$85.00	Hour
Mileage	\$0.75	Mile
<b>PRODUCTION COSTS</b>		
Color Copies (<8 1/2" X 11")	\$1.00	Per Copy
Color Copies (<11" X 17")	\$2.00	Per Copy
Blackline Prints (<24" X 36")	\$2.20	Per Sheet
Blackline Prints (<24" X 36")	\$28.00	Per Sheet
Vellums (<24" X 36")	\$5.50	Per Sheet
Official Record Docs	\$1.00	Per Page
Out-of-Pocket Expenses	Cost +15%	

*NOTE: Fees and Services provided by Terracon's subconsultants will be invoiced at Cost+10%*



## EXHIBIT C

### INSURANCE REQUIREMENTS

CONSULTANT shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the City's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to City staff responsible for oversight of the subject project/contract.

CONSULTANT is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONSULTANT, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONSULTANT under this Agreement.

Throughout the term of this Agreement, CONSULTANT and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

A. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. CONSULTANT further agrees to be responsible for employment, control and conduct of its employees and for any injury sustained by such employees in the course of their employment.

B. Liability Insurance.

(1) Naming the City of Pompano Beach as an additional insured as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONSULTANT's negligent acts or omissions in connection with CONSULTANT's performance under this Agreement.

(2) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

**Type of Insurance****Limits of Liability****GENERAL LIABILITY:**

Minimum 1,000,000 Per Occurrence and  
\$1,000,000 Per Aggregate

\* Policy to be written on a claims incurred basis

XX	comprehensive form	bodily injury and property damage
XX	premises - operations	bodily injury and property damage
—	explosion & collapse hazard	
—	underground hazard	
XX	products/completed operations hazard	bodily injury and property damage combined
XX	contractual insurance	bodily injury and property damage combined
XX	broad form property damage	bodily injury and property damage combined
XX	independent contractors	personal injury
XX	personal injury	

**AUTOMOBILE LIABILITY:**

Minimum \$1,000,000 Per Occurrence and \$1,000,000 Per Aggregate. Bodily injury (each person) bodily injury (each accident), property damage, bodily injury and property damage combined.

- XX comprehensive form
- XX owned
- XX hired
- XX non-owned

**REAL & PERSONAL PROPERTY**

— comprehensive form Agent must show proof they have this coverage.

**EXCESS LIABILITY**

Per Occurrence Aggregate

XX	Umbrella and other than umbrella	bodily injury and property damage combined	\$2,000,000	\$2,000,000
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**PROFESSIONAL LIABILITY**

Per Occurrence Aggregate

XX	* Policy to be written on a claims made basis		\$2,000,000	\$2,000,000
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(3) If Professional Liability insurance is required, CONSULTANT agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of three (3) years unless terminated sooner by the applicable statute of limitations.

C. Employer's Liability. If required by law, CONSULTANT and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability

Insurance in the minimum amount of One Hundred Thousand Dollars (\$100,000.00) per employee, Five Hundred Thousand Dollars (\$500,000) per aggregate.

D. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONSULTANT, the CONSULTANT shall promptly provide the following:

- (1) Certificates of Insurance evidencing the required coverage;
- (2) Names and addresses of companies providing coverage;
- (3) Effective and expiration dates of policies; and
- (4) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

E. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

F. Waiver of Subrogation. CONSULTANT hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONSULTANT shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONSULTANT enter into such an agreement on a pre-loss basis.



# CERTIFICATE OF LIABILITY INSURANCE

1/1/2022

DATE (MMDD/YYYY)

3/8/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED 1312890 TERRACON CONSULTANTS, INC. 10841 S. RIDGEVIEW ROAD OLATHE KS 66061	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A : Lexington Insurance Company	NAIC # 19437
	INSURER B : Travelers Property Casualty Co of America	25674
	INSURER C : The Travelers Indemnity Company	25658
	INSURER D : INSURER E : INSURER F :	

COVERAGES TERCO01 CERTIFICATE NUMBER: 16925586 REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INBR LTR	TYPE OF INSURANCE	ADDITIONAL INSURED	SUBROGATED	POLICY NUMBER	POLICY EFF (MMDD/YYYY)	POLICY EXP (MMDD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> CONTRACTUAL LIAB <input checked="" type="checkbox"/> XCU COVERAGE GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC. <input type="checkbox"/> OTHER	Y	Y	TC2J-GLSA-1118L293	1/1/2021	1/1/2022	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 25,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	TC2J-CAP-131J3858	1/1/2021	1/1/2022	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTIONS\$	Y	Y	ZUP-91M46583 (EXCLUDES PROF. LIAB.)	1/1/2021	1/1/2022	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$ XXXXXXXX
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	TC2J-UB-6N32541-0 (AOS) TRK-UB-6N32384-0 (AZ, MA, WI)	1/1/2021	1/1/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	PROFESSIONAL LIABILITY	N	N	26030216	1/1/2021	1/1/2022	\$2,000,000 EACH CLAIM & \$2,000,000 IN THE ANNUAL AGGREGATE.

**APPROVED**  
By Danielle Thorpe at 5:46 pm, Apr 01, 2021

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

THIS CERTIFICATE SUPERSEDES ALL PREVIOUSLY ISSUED CERTIFICATES FOR THIS HOLDER, APPLICABLE TO THE CARRIERS LISTED AND THE POLICY TERM(S) REFERENCED.  
RE: PROFESSIONAL CONSULTING AGREEMENT. CITY OF POMPANO BEACH IS ADDITIONAL INSURED ON A PRIMARY BASIS AS RESPECTS TO GENERAL, AUTO, AND EXCESS/UMBRELLA LIABILITY IF REQUIRED BY WRITTEN CONTRACT. WAIVER OF SUBROGATION APPLIES TO GENERAL, AUTO, EXCESS/UMBRELLA AND WORKERS COMPENSATION/EMPLOYERS LIABILITY WHERE ALLOWED BY STATE LAW AND IF REQUIRED BY WRITTEN CONTRACT

CERTIFICATE HOLDER 16925586 CITY OF POMPANO BEACH 100 WEST ATLANTIC BLVD., SUITE 253 POMPANO BEACH FL 33060	CANCELLATION See Attachment  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE <i>Joseph M. Agnello</i>
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Florida's Warmest Welcome

**CITY OF POMPANO BEACH  
REQUEST FOR LETTERS OF INTEREST  
E-22-20**

**CONTINUING CONTRACT FOR PROFESSIONAL  
ENVIRONMENTAL TESTING**

**RLI OPENING: August 10, 2020 2:00 P.M.  
PURCHASING OFFICE  
1190 N.E. 3RD AVENUE, BUILDING C (Front)  
POMPANO BEACH, FLORIDA 33060**

July 9, 2020

CITY OF POMPANO BEACH, FLORIDA  
REQUEST FOR LETTERS OF INTEREST  
E-20-20

CONTINUING CONTRACT FOR PROFESSIONAL ENVIRONMENTAL TESTING

Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020**. Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: <https://pompanobeachfl.ionwave.net>. The City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

### **Introduction**

The City of Pompano Beach is seeking qualified engineering firms to work on various projects for the City. The projects range in magnitude from small-scale to large or specialized designs.

### **The types of projects to be undertaken may include, but are not limited to:**

- The City's approved Capital Improvement Plan (CIP) maybe found here: [Adopted Capital Improvement Plan FY 2020-2024](#)
- Preparation of Phase I, Phase II, and Phase III assessments
- Roadway, Streetscape or Parking Lot projects.
- Water or Reuse Main projects.
- Gravity Sewer Main projects.
- Force Main projects.
- Lift station/pump station rehabilitation projects.
- Parks and Recreational Facilities.
- Seawall and dock construction and repair.
- Storm Water/Drainage Improvement projects
- Consultation for Emergency Water/Wastewater/Stormwater Repairs.
- Inspection Services for Emergency Water/Wastewater/Stormwater Repairs.
- Canal and lake dredging.
- Grant reimbursement, FAA and FDOT support and compliance.

- SRF support and Davis Bacon Wage Reporting requirements
- Support Services for Remediation
- Demolition Projects

### **Scope of Services**

The City intends to issue multiple contracts to engineering firms to provide continuing professional services to the City for various projects as-needed. Professional services under this contract will be restricted to those required for any project for which construction costs will not exceed \$4 million, and for any study activity for which fees will not exceed \$500,000.00.

### **The scope of services may include, but is not limited to, the following:**

- Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis.
- Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City)
- Provide project management services for projects, including turbidity monitoring.
- Prepare recommendations and cost estimates for compliance with regulatory requirements.
- Provide project close-out services. This may include preliminary and final acceptance of projects, preparation and approval of punch list items and project certification as required to all permitting agencies.
- Prepare reports for regulatory compliance monitoring and assessments.
- Reporting on endangered animals (turtles and owls)

Firms must have demonstrated and specific experience in coordinating with local, county, state, and federal regulatory agencies as it relates to environmental regulatory requirements.

Additionally, if firms do not have in-house testing capabilities, they must detail the nature and extent of partnerships with a qualified firm or laboratory. Laboratories performing analytical work must be NELAC certified for the analytes of interest and operate under a Laboratory Quality Manual following NELAC requirements. Firms performing environmental sampling or field data collection must have a Field Sampling Quality Manual and follow the current Florida Department of Environmental Protection Standard Operating Procedures.

Firms must have previous municipal experience and must be licensed to practice **Professional Environmental Testing** in the State of Florida, as required by all applicable Florida State Statutes and Board of Professional Regulation.

#### **A. Task/Deliverables**

Tasks and deliverables will be determined per project. Each project shall require a signed Work Authorization (WA) form from the awarded firm to be provided to the City. Forms shall be completed in its entirety and include the agreed upon scope, tasks, schedule, cost, and deliverables for the project. Consultant will be required to provide all applicable insurance requirements.

#### **B. Term of Contract**

The Term of this Contract shall be for an initial period of five (5) years from the date of execution by both the City and the Consultant.

**C. Project Web Requirements:**

1. This project will utilize e-Builder Enterprise™, a web-based project management tool. This web-based application is a collaboration tool, which will allow all project team members continuous access through the Internet to important project data as well as up to the minute decision and approval status information.

e-Builder Enterprise™ is a comprehensive Project and Program Management system that the City will use to manage all project documents, communications and costs between the Lead Consultant, Sub-Consultants, Design Consultants, Contractor and Owner. e-Builder Enterprise™ includes extensive reporting capabilities to facilitate detailed project reporting in a web-based environment that is accessible to all parties and easy to use. Training will be provided for all consultants selected to provide services for the City of Pompano Beach.

2. Lead and Sub-Consultants shall conduct project controls outlined by the Owner, Project Manager, and/or Construction Manager, utilizing e-Builder Enterprise™. **The designated web-based application license(s) shall be provided by the City to the Prime Consultant and Sub-Consultants.** No additional software will be required.

Lead Consultant and Sub-Consultants shall have the responsibility for logging in to the project web site on a daily basis, and as necessary to be kept fully apprised of project developments and required action items. , These may include but are not limited to: Contracts, Contract Exhibits, Contract Amendments, Drawing Issuances, Addenda, Bulletins, Permits, Insurance & Bonds, Safety Program Procedures, Safety Notices, Accident Reports, Personnel Injury Reports, Schedules, Site Logistics, Progress Reports, Correspondence, Daily Logs, Non-Conformance Notices, Quality Control Notices, Punch Lists, Meeting Minutes, Requests for Information, Submittal Packages, Substitution Requests, Monthly Payment Request Applications, Supplemental Instructions, Owner Change Directives, Potential Change Orders, Change Order Requests, Change Orders and the like. All supporting data including but not limited to shop drawings, product data sheets, manufacturer data sheets and instructions, method statements, safety SDS sheets, Substitution Requests and the like will be submitted in digital format via e-Builder Enterprise™.

**D. Local Business Program**

On March 13, 2018, the City Commission approved Ordinance 2018-46, establishing a Local Business Program, a policy to increase the participation of City of Pompano Beach businesses in the City's procurement process.

For purposes of this solicitation, "Local Business" will be defined as follows:

1. **TIER 1 LOCAL VENDOR. POMPANO BEACH BUSINESS EMPLOYING POMPANO BEACH RESIDENTS.** A business entity which has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least ten percent who are residents of the City of Pompano Beach or includes subcontracting commitments to Local Vendors Subcontractors for at least ten percent of the contract value. The permanent place of business may not be a post office box.



The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

2. **TIER 2 LOCAL VENDOR. BROWARD COUNTY BUSINESS EMPLOYING POMPANO BEACH RESIDENTS OR UTILIZING LOCAL VENDOR SUBCONTRACTORS.** A business entity which has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach or includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value. The permanent place of business may not be a post office box. The business must be located in a non- residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the respective Broward County municipality for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.
3. **LOCAL VENDOR SUBCONTRACTOR. POMPANO BEACH BUSINESS.** A business entity which has maintained a permanent place of business within the city limits of the City of Pompano Beach. The permanent place of business may not be a post office box. The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

You can view the list of City businesses that have a current Business Tax Receipt on the City's website, and locate local firms that are available to perform the work required by the bid specifications. The business information, sorted by business use classification, is posted on the webpage for the Business Tax Receipt Division: [www.pompanobeachfl.gov](http://www.pompanobeachfl.gov) by selecting the Pompano Beach Business Directory in the Shop Pompano! section.

The City of Pompano Beach is **strongly committed** to insuring the participation of City of Pompano Beach Businesses as contractors and subcontractors for the procurement of goods and services, including labor, materials and equipment. Proposers are required to participate in the City of Pompano Beach's Local Business Program by including, as part of their package, the Local Business Participation Form (Exhibit A,) listing the local businesses that will be used on the contract, and the Letter of Intent Form (Exhibit B) from each local business that will participate in the contract.

**Please note that, while no goals have been established for this solicitation, the City encourages Local Business participation in *all* of its procurements.**

If a Prime Contractor/Vendor is not able to achieve the level of goal attainment of the contract, the Prime Vendor will be requested to demonstrate and document that good faith efforts were made to achieve the goal by providing the Local Business

Unavailability Form (Exhibit C), listing firms that were contacted but not available, and the Good Faith Effort Report (Exhibit D), describing the efforts made to include local business participation in the contract. This documentation shall be provided to the City Commission for acceptance.

The awarded proposer will be required to submit "Local Business Subcontractor Utilization Reports" during projects and after projects have been completed. The reports will be submitted to the assigned City project manager of the project. The Local Business Subcontractor Utilization Report template and instructions have been included in the bid document.

Failure to meet Local Vendor Goal commitments will result in "unsatisfactory" compliance rating. Unsatisfactory ratings may impact award of future projects if a sanction is imposed by the City Commission.

The city shall award a Local Vendor preference based upon vendors, contractors, or subcontractors who are local with a preferences follows:

1. For evaluation purposes, the Tier 1 and Tier 2 businesses shall be a criterion for award in this Solicitation. No business may qualify for more than one tier level.
2. For evaluation purposes, local vendors shall receive the following preferences:
  - a. Tier 1 business as defined by this subsection shall be granted a preference in the amount of five percent of total score.
  - b. Tier 2 business as defined by this subsection shall be granted a preference in the amount of two and one-half percent of total score.
3. It is the responsibility of the awarded vendor/contractor to comply with all Tier 1 and Tier 2 guidelines. The awarded vendor/contractor must ensure that all requirements are met before execution of a contract.

#### **E. Required Proposal Submittal**

Sealed proposals shall be submitted electronically through the eBid System on or before the due date/time stated above. Proposer shall upload response as one (1) file to the eBid System. The file size for uploads is limited to 250 MB. If the file size exceeds 10 MB the response must be split and uploaded as two (2) separate files.

**Information to be included in the proposal:** In order to maintain comparability and expedite the review process, it is required that proposals be organized in the manner specified below, with the sections clearly labeled:

**Title page:**

Show the project name and number, the name of the Proposer's firm, address, telephone number, name of contact person and the date.

**Table of Contents:**

Include a clear identification of the material by section and by page.

**Letter of Transmittal:**

Briefly state the Proposer's understanding of the project and express a positive commitment to provide the services described herein. State the name(s) of the person(s) who will be authorized to make representations for the Proposer, their title(s), office and E-mail addresses and telephone numbers. Please limit this section to two pages.

**Technical Approach:**

Firms or teams shall submit their technical approach to the tasks described in the scope, including details of how each phase of the project would be completed, and how their firm proposes to maintain time schedules and cost controls.

**Schedule:**

Proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines.

**References:**

References for past projects in the tri-county area (Broward, Palm Beach, and Miami-Dade.) Describe the scope of each project in physical terms and by cost, describe the respondent's responsibilities, and provide the contact information (name, email, telephone number) of an individual in a position of responsibility who can attest to respondent's activities in relation to the project.

List any prior projects performed for the City of Pompano Beach.

**Project Team Form:**

Submit a completed "Project Team" form. The purpose of this form is to identify the key members of your team, including any specialty subconsultants.

**Organizational Chart:**

Specifically identify the management plan (if needed) and provide an organizational chart for the team. The proposer must describe at a minimum, the basic approach to these projects, to include reporting hierarchy of staff and sub-consultants, clarify the individual(s) responsible for the co-ordination of separate components of the scope of services.

**Statement of Skills and Experience of Project Team:**

Describe the experience of the entire project team as it relates to the types of projects described in the Scope section of this solicitation. Include the experience of the prime consultants as well as other members of the project team; i.e., additional personnel, sub-consultants, branch office, team members, and other resources anticipated to be utilized for this project. Name specific projects (successfully completed within the past five years) where the team members have performed similar projects previously.

**Resumes of Key Personnel**

Include resumes for key personnel for prime and subconsultants.

**Office Locations:**

Identify the location of the office from which services will be rendered, and the number of professional and administrative staff at the prime office location. Also identify the location of office(s) of the prime and/or sub consultants that may be utilized to support any or all of the professional services listed above and the number of professional and administrative staff at the prime office location.

If firms are situated outside the local area, (Broward, Palm Beach, and Miami-Dade counties) include a brief statement as to whether or not the firm will arrange for a local office during the term of the contract, if necessary.

**Local Businesses:**

Completed Local Business program forms, Exhibits A-D.

NOTE: Form B must be signed by a representative of the subcontractor, NOT of the Prime.

**Litigation:**

Disclose any litigation within the past five (5) years arising out your firm's performance, including status/outcome.

**City Forms:**

The Proposer Information Page Form and any other required forms must be completed and submitted electronically through the City's eBid System. The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

**Reviewed and Audited Financial Statements:**

Proposers shall be financially solvent and appropriately capitalized to be able to service the City for the duration of the contract. Proposers shall provide a complete financial statement of the firm's most recent audited financial statements, indicating organization's financial condition. Must be uploaded to the Response Attachments tab in the eBid System as a separate file titled "Financial Statements" and marked "CONFIDENTIAL."

Financial statements provided shall not be older than twelve (12) months prior to the date of filing this solicitation response. The financial statements are to be reviewed and submitted with any accompanying notes and supplemental information. The City of Pompano Beach reserve the right to reject financial statements in which the financial condition shown is of a date twelve (12) months or more prior to the date of submittals.

The City is a public agency subject to Chapter 119, Florida's Public Records Law and is required to provide the public with access to public records, however, financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure.

The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

A combination of two (2) or more of the following may substitute for audited financial statements:

- 1) Bank letters/statements for the past 3 months
- 2) Balance sheet, profit and loss statement, cash flow report
- 3) IRS returns for the last 2 years
- 4) Letter from CPA showing profits and loss statements (certified)

## F. Insurance

CONTRACTOR shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the CITY's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to CITY staff responsible for oversight of the subject project/contract.

CONTRACTOR is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONTRACTOR, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONTRACTOR under this Agreement.

Throughout the term of this Agreement, CONTRACTOR and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

1. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. CONTRACTOR further agrees to be responsible for employment, control and conduct of its employees and for any injury sustained by such employees in the course of their employment.

2. Liability Insurance.

(a) Naming the City of Pompano Beach as an additional insured as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONTRACTOR's negligent acts or omissions in connection with Contractor's performance under this Agreement.

(b) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

**Type of Insurance**

**Limits of Liability**

**GENERAL LIABILITY:**

Minimum \$1,000,000 Per Occurrence and \$2,000,000 Per Aggregate

\* Policy to be written on a claims incurred basis

XX	comprehensive form	bodily injury and property damage
XX	<b>premises - operations</b>	<b>bodily injury and property damage</b>
—	<b>explosion &amp; collapse</b>	
	hazard	
—	underground hazard	
XX	products/completed operations hazard	bodily injury and property damage combined
XX	contractual insurance	bodily injury and property damage combined
XX	broad form property damage	bodily injury and property damage combined
XX	independent contractors	personal injury
XX	personal injury	

— sexual abuse/molestation Minimum \$1,000,000 Per Occurrence and Aggregate

— liquor legal liability Minimum \$1,000,000 Per Occurrence and Aggregate

**AUTOMOBILE LIABILITY:**

Minimum \$1,000,000 Per Occurrence and Aggregate. Bodily injury (each person) bodily injury (each accident), Property damage, bodily injury and property damage combined.

XX	comprehensive form
XX	owned
XX	hired
XX	non-owned

**REAL & PERSONAL PROPERTY**

— comprehensive form Agent must show proof they have this coverage.

**EXCESS LIABILITY**

Per Occurrence Aggregate

—	other than umbrella	bodily injury and property damage combined	\$1,000,000	\$1,000,000
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**PROFESSIONAL LIABILITY**

Per Occurrence Aggregate

XX	* Policy to be written on a claims made basis	\$1,000,000	\$1,000,000
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(c) If Professional Liability insurance is required, Contractor agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of four (4) years unless terminated sooner by the applicable statute of limitations.

**CYBER LIABILITY**

Per Occurrence Aggregate

__	* Policy to be written on a claims made basis	\$1,000,000	\$1,000,000
__	Network Security / Privacy Liability		
__	Breach Response / Notification Sublimit (minimum limit of 50% of policy aggregate)		
__	Technology Products E&O - \$1,000,000 (only applicable for vendors supplying technology related services and or products)		
__	Coverage shall be maintained in effect during the period of the Agreement and for not less than four (4) years after termination/ completion of the Agreement.		

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3. Employer's Liability. If required by law, CONTRACTOR and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability Insurance in the minimum amount of One Hundred Thousand Dollars (\$100,000.00) per employee, Five Hundred Thousand Dollars (\$500,000) per aggregate.

4. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONTRACTOR, the CONTRACTOR shall promptly provide the following:

- (a) Certificates of Insurance evidencing the required coverage;
- (b) Names and addresses of companies providing coverage;
- (c) Effective and expiration dates of policies; and

(d) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

5. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

6. Waiver of Subrogation. CONTRACTOR hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONTRACTOR shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONTRACTOR enter into such an agreement on a pre-loss basis.

**G. Selection/Evaluation Process**

A Selection/Evaluation Committee will be appointed to select the most qualified firm(s). The Selection/Evaluation Committee will present their findings to the City Commission.

Proposals will be evaluated using the following criteria.

<b>Line</b>	<b>Criteria</b>	<b>Point Range</b>
1	<p>Prior experience of the firm with projects of similar size and complexity:</p> <ul style="list-style-type: none"> <li>a. Number of similar projects</li> <li>b. Complexity of similar projects</li> <li>c. References from past projects performed by the firm</li> <li>d. Previous projects performed for the City (provide description)</li> <li>e. Litigation within the past 5 years arising out of firm's performance (list, describe outcome)</li> </ul>	0-15
2	<p>Qualifications of personnel including sub consultants:</p> <ul style="list-style-type: none"> <li>a. Organizational chart for project</li> <li>b. Number of technical staff</li> <li>c. Qualifications of technical staff: <ul style="list-style-type: none"> <li>(1) Number of licensed staff</li> <li>(2) Education of staff</li> <li>(3) Experience of staff on similar projects</li> </ul> </li> </ul>	0-15
3	<p>Proximity of the nearest office to the project location:</p> <ul style="list-style-type: none"> <li>a. Location</li> <li>b. Number of staff at the nearest office</li> </ul>	0-15
4	<p>Current and Projected Workload</p> <p>Rating is to reflect the workload (both current and projected) of the firm, staff assigned, and the percentage availability of the staff member assigned. Respondents which fail to note both existing and projected workload conditions and percentage of availability of staff assigned shall receive zero (0) points</p>	0-15
5	<p>Demonstrated Prior Ability to Complete Project on Time</p> <p>Respondents will be evaluated on information provided regarding the firm's experience in the successful completion and steadfast conformance to similar project schedules. Provide an example of successful approaches utilized to achieve a timely project completion. Respondents who demonstrate the ability to complete projects on time shall receive more points.</p>	0-15
6	<p>Demonstrated Prior Ability to Complete Project on Budget</p> <p>Proposers will be evaluated on their ability to adhere to initial design budgets. Examples provided should show a comparison between initial negotiated task costs and final completion costs. Respondents should explain in detail any budgetary overruns due to scope modifications. Respondents which fail to provide schedule and budget information as requested will receive zero (0) points.</p>	0-15
7	<p>Is the firm a certified minority business enterprise as defined by the Florida Small and Minority Business Assistance Act of 1985? (Certification of any sub-contractors should also be included with the response.)</p>	0-10



Additional 0-5% for Tier1/Tier2 Local Business will be calculated on combined scoring totals of each company.

**NOTE:**

Financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure; however, financial statements submitted to prequalify for a solicitation, and are not required by the City, may be subject to public disclosure.

Value of Work Previously Awarded to Firm (Tie-breaker) - In the event of a tie, the firm with the lowest value of work as a prime contractor on City of Pompano Beach projects within the last five years will receive the higher ranking, the firm with the next lowest value of work shall receive the next highest ranking, and so on. The analysis of past work will be based on the City's Purchase Order and payment records.

The Committee has the option to use the above criteria for the initial ranking to short-list Proposers and to use an ordinal ranking system to score short-listed Proposers following presentations (if deemed necessary) with a score of "1" assigned to the short-listed Proposer deemed most qualified by the Committee.

Each firm should submit documentation that evidences the firm's capability to provide the services required for the Committee's review for short listing purposes. After an initial review of the Proposals, the City may invite Proposers for an interview to discuss the proposal and meet firm representatives, particularly key personnel who would be assigned to the project. Should interviews be deemed necessary, it is understood that the City shall incur no costs as a result of this interview, nor bear any obligation in further consideration of the submittal.

When more than three responses are received, the committee shall furnish the City Commission (for their approval) a listing, in ranked order, of no fewer than three firms deemed to be the most highly qualified to perform the service. If three or less firms respond to the Solicitation, the list will contain the ranking of all responses.

The City Commission has the authority to (including, but not limited to); approve the recommendation; reject the recommendation and direct staff to re-advertise the solicitation; or, review the responses themselves and/or request oral presentations and determine a ranking order that may be the same or different from what was originally presented to the City Commission.

Value of Work Previously Awarded to Firm (Tie-breaker) - In the event of a tie, the firm with the lowest value of work as a prime contractor on City of Pompano Beach projects within the last five years will receive the higher ranking, the firm with the next lowest value of work shall receive the next highest ranking, and so on. The analysis of past work will be based on the City's Purchase Order and payment records.

**H. Hold Harmless and Indemnification**

Proposer covenants and agrees that it will indemnify and hold harmless the City and all of its officers, agents, and employees from any claim, loss, damage, cost, charge or expense arising out of any act, action, neglect or omission by the Proposer, whether direct or indirect, or whether to any person or property to which the City or said parties may be

subject, except that neither the Proposer nor any of its subcontractors will be liable under this section for damages arising out of injury or damage to persons or property directly caused by or resulting from the sole negligence of the City or any of its officers, agents or employees.

**I. Right to Audit**

Contractor's records which shall include but not be limited to accounting records, written policies and procedures, computer records, disks and software, videos, photographs, subcontract files (including proposals of successful and unsuccessful bidders), originals estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this contract (all the foregoing hereinafter referred to as "records") shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by Owner's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the contractor or any of his payees pursuant to the execution of the contract. Such records subject to examination shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this contract.

For the purpose of such audits, inspections, examinations and evaluations, the Owner's agent or authorized representative shall have access to said records from the effective date of this contract, for the duration of the Work, and until 5 years after the date of final payment by Owner to Consultant pursuant to this contract.

Owner's agent or its authorized representative shall have access to the Contractor's facilities, shall have access to all necessary records, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article. Owner's agent or its authorized representative shall give auditees reasonable advance notice of intended audits.

Contractor shall require all subcontractors, insurance agents, and material suppliers (payees) to comply with the provisions of this article by insertion of the requirements hereof in any written contract agreement. Failure to obtain such written contracts which include such provisions shall be reason to exclude some or all of the related payees' costs from amounts payable to the Contractor pursuant to this contract.

**J. Retention of Records and Right to Access**

The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law, as amended. Specifically, the Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service;
2. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a

reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;

3. Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law;

4. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

5. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

**K. Communications**

No negotiations, decisions, or actions shall be initiated or executed by the firm as a result of any discussions with any City employee. Only those communications, which are in writing from the City, may be considered as a duly authorized expression on behalf of the City. In addition, only communications from firms that are signed and in writing will be recognized by the City as duly authorized expressions on behalf of firms.

**L. No Discrimination**

There shall be no discrimination as to race, sex, color, age, religion, or national origin in the operations conducted under any contract with the City.

**M. Independent Contractor**

The selected firm will conduct business as an independent contractor under the terms of this contract. Personnel services provided by the firm shall be by employees of the firm and subject to supervision by the firm, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies and other similar administrative procedures applicable to services rendered under this agreement shall be those of the firm.

**N. Staff Assignment**

The City of Pompano Beach reserves the right to approve or reject, for any reasons, Proposer's staff assigned to this project at any time. Background checks may be required.

**O. Contract Terms**

The contract resulting from this Solicitation shall include, but not be limited to the following terms:

The contract shall include as a minimum, the entirety of this Solicitation document, together with the successful Proposer's proposal. Contract shall be prepared by the City of Pompano Beach City Attorney.

If the City of Pompano Beach defends any claim, demand, cause of action, or lawsuit arising out of any act, action, negligent acts or negligent omissions, or willful misconduct of the contractor, its employees, agents or servants during the performance of the contract, whether directly or indirectly, contractor agrees to reimburse the City of Pompano Beach for all expenses, attorney's fees, and court costs incurred in defending such claim, cause of action or lawsuit.

**P. Waiver**

It is agreed that no waiver or modification of the contract resulting from this Solicitation, or of any covenant, condition or limitation contained in it shall be valid unless it is in writing and duly executed by the party to be charged with it, and that no evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the parties arising out of or affecting this contract, or the right or obligations of any party under it, unless such waiver or modification is in writing, duly executed as above. The parties agree that the provisions of this paragraph may not be waived except by a duly executed writing.

**Q. Survivorship Rights**

This contract resulting from this Solicitation shall be binding on and inure to the benefit of the respective parties and their executors, administrators, heirs, personal representative, successors and assigns.

**R. Termination**

The contract resulting from this Solicitation may be terminated by the City of Pompano Beach without cause upon providing contractor with at least sixty (60) days prior written notice.

Should either party fail to perform any of its obligations under the contract resulting from this Solicitation for a period of thirty (30) days after receipt of written notice of such failure, the non-defaulting part will have the right to terminate the contract immediately upon delivery of written notice to the defaulting part of its election to do so. The foregoing rights of termination are in addition to any other rights and remedies that such party may have.

**S. Manner of Performance**

Proposer agrees to perform its duties and obligations under the contract resulting from this Solicitation in a professional manner and in accordance with all applicable local, federal and state laws, rules and regulations.

Proposer agrees that the services provided under the contract resulting from this Solicitation shall be provided by employees that are educated, trained and experienced, certified and licensed in all areas encompassed within their designated duties. Proposer

agrees to furnish the City of Pompano Beach with all documentation, certification, authorization, license, permit, or registration currently required by applicable laws or rules and regulations. Proposer further certifies that it and its employees are now in and will maintain good standing with such governmental agencies and that it and its employees will keep all license, permits, registration, authorization or certification required by applicable laws or regulations in full force and effect during the term of this contract. Failure of Proposer to comply with this paragraph shall constitute a material breach of contract.

**T. Acceptance Period**

Proposals submitted in response to this Solicitation must be valid for a period no less than ninety (90) days from the closing date of this solicitation.

**U. Conditions and Provisions**

The completed proposal (together with all required attachments) must be submitted electronically to City on or before the time and date stated herein. All Proposers, by electronic submission of a proposal, shall agree to comply with all of the conditions, requirements and instructions of this solicitation as stated or implied herein. All proposals and supporting materials submitted will become the property of the City.

Proposer's response shall not contain any alteration to the document posted other than entering data in spaces provided or including attachments as necessary. By submission of a response, Proposer affirms that a complete set of bid documents was obtained from the eBid System or from the Purchasing Division only and no alteration of any kind has been made to the solicitation. Exceptions or deviations to this proposal may not be added after the submittal date.

All Proposers are required to provide all information requested in this solicitation. Failure to do so may result in disqualification of the proposal.

The City reserves the right to postpone or cancel this solicitation, or reject all proposals, if in its sole discretion it deems it to be in the best interest of the City to do so.

The City reserves the right to waive any technical or formal errors or omissions and to reject all proposals, or to award contract for the items herein, in part or whole, if it is determined to be in the best interests of the City to do so.

The City shall not be liable for any costs incurred by the Proposer in the preparation of proposals or for any work performed in connection therein.

**V. Standard Provisions**

1. Governing Law

Any agreement resulting from this Solicitation shall be governed by the laws of the State of Florida, and the venue for any legal action relating to such agreement will be in Broward County, Florida.

2. Licenses

In order to perform public work, the successful Proposer shall:

Be licensed to do business in Florida, if an entity, and hold or obtain such Contractor' and Business Licenses if required by State Statutes or local ordinances.

3. Conflict Of Interest

For purposes of determining any possible conflict of interest, each Proposer must disclose if any Elected Official, Appointed Official, or City Employee is also an owner, corporate officer, or an employee of the firm. If any Elected Official, Appointed Official, or City Employee is an owner, corporate officer, or an employee, the Proposer must file a statement with the Broward County Supervisor of Elections pursuant to §112.313, Florida Statutes.

4. Drug Free Workplace

The selected firm(s) will be required to verify they will operate a "Drug Free Workplace" as set forth in Florida Statute, 287.087.

5. Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction for public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute, Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

6. Patent Fees, Royalties, And Licenses

If the selected Proposer requires or desires to use any design, trademark, device, material or process covered by letters of patent or copyright, the selected Proposer and his surety shall indemnify and hold harmless the City from any and all claims for infringement by reason of the use of any such patented design, device, trademark, copyright, material or process in connection with the work agreed to be performed and shall indemnify the City from any cost, expense, royalty or damage which the City may be obligated to pay by reason of any infringement at any time during or after completion of the work.

7. Permits

The selected Proposer shall be responsible for obtaining all permits, licenses, certifications, etc., required by federal, state, county, and municipal laws, regulations, codes, and ordinances for the performance of the work required in these specifications and to conform to the requirements of said legislation.

8. Familiarity With Laws

It is assumed the selected firm(s) will be familiar with all federal, state and local laws, ordinances, rules and regulations that may affect its services pursuant to this Solicitation. Ignorance on the part of the firm will in no way relieve the firm from responsibility.

9. Withdrawal Of Proposals

A firm may withdraw its proposal without prejudice no later than the advertised deadline for submission of proposals by written communication to the General Services Department, 1190 N.E. 3<sup>rd</sup> Avenue, Building C, Pompano Beach, Florida 33060.

10. Composition Of Project Team

Firms are required to commit that the principals and personnel named in the proposal will perform the services throughout the contractual term unless otherwise provided for by way of a negotiated contract or written amendment to same executed by both parties. No diversion or substitution of principals or personnel will be allowed unless a written request that sets forth the qualifications and experience of the proposed replacement(s) is submitted to and approved by the City in writing.

11. Invoicing/Payment

All invoices should be sent to City of Pompano Beach, Accounts Payable, P.O. Drawer 1300, Pompano Beach, Florida, 33061. In accordance with Florida Statutes, Chapter 218, payment will be made within 45 days after receipt of a proper invoice.

12. Public Records

- a. The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law, as amended. Specifically, the Contractor shall:
  - i. Keep and maintain public records required by the City in order to perform the service;
  - ii. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;
  - iii. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

- iv. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.
- b. Failure of the Contractor to provide the above described public records to the City within a reasonable time may subject Contractor to penalties under 119.10, Florida Statutes, as amended.

## **PUBLIC RECORDS CUSTODIAN**

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

**CITY CLERK  
100 W. Atlantic Blvd., Suite 253  
Pompano Beach, Florida 33060  
(954) 786-4611  
[RecordsCustodian@copbfl.com](mailto:RecordsCustodian@copbfl.com)**

### **W. Questions and Communication**

All questions regarding the Solicitation are to be submitted using the Questions feature in the eBid System. Questions must be received at least seven (7) calendar days before the scheduled solicitation opening. Oral and other interpretations or clarifications will be without legal effect. Addenda will be posted to the solicitation in the eBid System, and it is the Proposer's responsibility to obtain all addenda before submitting a response to the solicitation.

### **X. Addenda**

The issuance of a written addendum or posting of an answer in response to a question submitted using the Questions feature in the eBid System are the only official methods whereby interpretation, clarification, or additional information can be given. If any addenda are issued to this solicitation the addendum will be issued via the eBid System. It shall be the responsibility of each Proposer, prior to submitting their response, to contact the City Purchasing Office at (954) 786-4098 to determine if addenda were issued and to make



such addenda a part of their proposal. Addenda will be posted to the solicitation in the eBid System.

Y. **Contractor Performance Report**

The City will utilize the Contractor Performance Report to monitor and record the successful proposer's performance for the work specified by the contract. The Contractor Performance Report has been included as an exhibit to this solicitation.

**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

***PROPOSER INFORMATION PAGE***

\_\_\_\_\_, \_\_\_\_\_  
(number) (Title)

To: The City of Pompano Beach, Florida

The below named company hereby agrees to furnish the proposed services under the terms stated subject to all instructions, terms, conditions, specifications, addenda, legal advertisement, and conditions contained in the solicitation. I have read the solicitation and all attachments, including the specifications, and fully understand what is required. By submitting this proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal.

Proposal submitted by:

Name (printed) \_\_\_\_\_ Title \_\_\_\_\_

Company (Legal Registered) \_\_\_\_\_

Federal Tax Identification Number \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Email Address \_\_\_\_\_

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRETY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM**

SOLICITATION NUMBER \_\_\_\_\_

Federal I.D.# \_\_\_\_\_

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	_____	_____	_____
Project Manager	_____	_____	_____
Asst. Project Manager	_____	_____	_____
Other Key Member	_____	_____	_____
Other Key Member	_____	_____	_____

**SUB-CONSULTANT**

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	_____	_____
	_____	_____
Landscaping	_____	_____
	_____	_____
Engineering	_____	_____
	_____	_____
Other Key Member	_____	_____
	_____	_____
Other Key Member	_____	_____
	_____	_____
Other Key Member	_____	_____
	_____	_____

(use attachments if necessary)

**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS**

Respondent Vendor Name: \_\_\_\_\_

Vendor FEIN: \_\_\_\_\_

Section 287.135, Florida Statutes, prohibits agencies 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. Further, Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to sign electronically on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

I Certify



### Exhibit – Contractor Performance Report

CATEGORY	RATING	COMMENTS
<b>1. Quality Assurance/Quality Control</b> - Product/Services of high quality - Proper oversight - Communication	Poor =1 Satisfactory =2 Excellent =3	
<b>2. Record Keeping</b> -Accurate record keeping -Proper invoicing -Testing results complete	Poor =1 Satisfactory =2 Excellent =3	
<b>3. Close-Out Activities</b> - Restoration/Cleanup - Deliverables met - Punch list items addressed	Poor =1 Satisfactory =2 Excellent =3	
<b>4. Customer Service</b> - City Personnel and Residents - Response time - Communication	Poor =1 Satisfactory =2 Excellent =3	
<b>5. Cost Control</b> - Monitoring subcontractors - Change-orders - Meeting budget	Poor =1 Satisfactory =2 Excellent =3	
<b>6. Construction Schedule</b> - Adherence to schedule - Time-extensions - Efficient use of resources	Poor =1 Satisfactory =2 Excellent =3	
<b>SCORE</b>	_____	<b>ADD ABOVE RATINGS/DIVIDE TOTAL BY NUMBER OF CATEGORIES BEING RATED</b>

#### **RATINGS**

**Poor Performance (1.0 – 1.59):** Marginally responsive, effective and/or efficient; delays require significant adjustments to programs; key employees marginally capable; customers somewhat satisfied.

**Satisfactory Performance (1.6 – 2.59):** Generally responsive, effective and/or efficient; delays are excusable and/or results in minor program adjustments; employees are capable and satisfactorily providing service without intervention; customers indicate satisfaction.

**Excellent Performance (2.6 – 3.0):** Immediately responsive; highly efficient and/or effective; no delays; key employees are experts and require minimal direction; customers expectations are exceeded.



## City of Pompano Beach Florida

### Local Business Subcontractor Utilization Report

Project Name (1)		Contract Number and Work Order Number (if applicable) (2)	
Report Number (3)	Reporting Period (4) to	Local Business Contract Goal (5)	Estimated Contract Completion Date (6)
Contractor Name (7)		Contractor Telephone Number (8) ( ) -	Contractor Email Address (9)
Contractor Street Address (10)	Project Manager Name (11)	Project Manager Telephone Number (12) ( ) -	Project Manager Email Address (13)

<b>Local Business Payment Report</b>						
Federal Identification Number (14)	Local Subcontractor Business Name (15)	Description of Work (16)	Project Amount (17)	Amount Paid this Reporting Period (18)	Invoice Number (19)	Total Paid to Date (20)
<b>Total Paid to Date for All Local Business Subcontractors (21) \$</b>						<b>0.00</b>

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

Contractor Name – Authorized Personnel (print) (22)	Contractor Name – Authorized Personnel (sign) (23)	Title (24)	Date (25)
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### Local Business Subcontractor Utilization Report Instructions

- Box (1) Project Name** – Enter the entire name of the project.
- Box (2) Contract Number (work order)** – Enter the contract number and the work order number, if applicable (i.e., 4600001234, and if work order contract include work order number – 4600000568 WO 01).
- Box (3) Report Number** - Enter the Local Business Subcontractor Utilization Report number. Reports must be in a numerical series (i.e., 1, 2, 3).
- Box (4) Reporting Period** - Enter the beginning and end dates this report covers (i.e., 10/01/2016 – 11/01/2016).
- Box (5) Local Contract Goal** - Enter the Local Contract Goal percentage on entire contract.
- Box (6) Contract Completion Date** - Enter the expiration date of the contract, (not work the order).
- Box (7) Contractor Name** - Enter the complete legal business name of the Prime Contractor.
- Box (8) Contractor Telephone Number** - Enter the telephone number of the Prime Contractor.
- Box (9) Contractor Email Address** - Enter the email address of the Prime Contractor.
- Box (10) Contractor Street Address** – Enter the mailing address of the Prime Contractor.
- Box (11) Project Manager Name** - Enter the name of the Project Manager for the Prime Contractor on the project.
- Box (12) Project Manager Telephone Number** – Enter the direct telephone number of the Prime Contractor's Project Manager.
- Box (13) Project Manager Email Address** – Enter the email address of the Prime Contractor's Project Manager.
- Box (14) Federal Identification Number** – Enter the federal identification number of the Local Subcontractor(s).
- Box (15) Local Subcontractor Business Name** – Enter the complete legal business name of the Local Subcontractor(s).
- Box (16) Description of Work** – Enter the type of work being performed by the Local Subcontractor(s) (i.e., electrical services).
- Box (17) Project Amount** – Enter the dollar amount allocated to the Local Subcontractor(s) for the entire project (i.e., amount in the subcontract agreement).

- Box (18) Amount Paid this Reporting Period** – Enter the total amount paid to the Local Subcontractor(s) during the reporting period.
- Box (19) Invoice Number** – Enter the Local Subcontractor's invoice number related to the payment reported this period.
- Box (20) Total Paid to Date** – Enter the total amount paid to the Local Subcontractor(s) to date.
- Box (21) Total Paid to Date for All Local Subcontractor(s)** – Enter the total dollar amount paid to date to all Local Subcontractors listed on the report.
- Box (22) Contractor Name Authorized Personnel (print)** – Print the name of the employee that is authorized to execute the Local Subcontractor Utilization Report.
- Box (23) Contractor Name Authorized Personnel (sign)** – Signature of authorized employee to execute the Local Subcontractor Utilization Report.
- Box (24) Title** – Enter the title of authorized employee completing the Local Subcontractor Utilization Report.
- Box (25) Date** – Enter the date of submission of the Local Subcontractor Utilization Report to the City.





LOCAL BUSINESS EXHIBIT "C"  
LOCAL BUSINESS UNAVAILABILITY FORM

Solicitation # \_\_\_\_\_

I, \_\_\_\_\_  
(Name and Title)

of \_\_\_\_\_, certify that on the \_\_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_, I invited the following LOCAL BUSINESS(es) to bid work  
(Month) (Year)

items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Said Local Businesses:

- \_\_\_ Did not bid in response to the invitation
- \_\_\_ Submitted a bid which was not the low responsible bid
- \_\_\_ Other: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Date: \_\_\_\_\_

Note: Attach additional documents as available.

LOCAL BUSINESS EXHIBIT "C"

LOCAL BUSINESS EXHIBIT "D"  
GOOD FAITH EFFORT REPORT LOCAL BUSINESS PARTICIPATION

Solicitation # \_\_\_\_\_

1. What portions of the contract have you identified as Local Business opportunities?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Did you send written notices to Local Businesses?

\_\_\_\_ Yes      \_\_\_\_ No

If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

\_\_\_\_ Yes      \_\_\_\_ No

If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

\_\_\_\_\_

\_\_\_\_\_

7. List the Local Businesses you will utilize and subcontract amount.

_____	\$ _____
_____	\$ _____
_____	\$ _____

8. Other comments: \_\_\_\_\_

\_\_\_\_\_

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LOCAL BUSINESS EXHIBIT "D"

# Online Questions & Answers

## Event Information

Number: E-22-20  
 Title: Continuing Contracts for Professional Environmental Testing Services  
 Type: Request for Letters of Interest  
 Issue Date: 7/9/2020  
 Question Deadline: 8/3/2020 05:00 PM (ET)  
 Response Deadline: 8/24/2020 02:00 PM (ET)  
 Notes: Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020.** Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: <https://pompanobeachfl.ionwave.net>. The City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

## Published Questions

<b>Question</b>	Is a firm allowed to submit as both prime and on another team (in which another firm is submitting as prime)?
<b>Answer</b>	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
<b>Asked</b>	8/3/2020 11:24 AM (ET)

<b>Question</b>	How many references does the prime firm need to provide? Can the prime use reference from our subcontractors.
<b>Answer</b>	Two to three (maximum) references will be sufficient. A firm may NOT use the references of their subcontractors.
<b>Asked</b>	7/28/2020 03:28 PM (ET)



<b>Question</b>	Section Y – Contractor Performance Report. If Contractor Performance Report is to be submitted with the proposal, is it to be used in the reference section. If so how many references do we need. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
<b>Answer</b>	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
<b>Asked</b>	7/28/2020 03:23 PM (ET)
<b>Question</b>	Surveying and Landscaping is not listed in the Scope of Services; however, they are listed on the Project Team form. If Landscaping is required, are you referring to Landscape Architecture services?
<b>Answer</b>	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying.
<b>Asked</b>	7/27/2020 03:15 PM (ET)
<b>Question</b>	On the Local Business Exhibit "B", Local Business Letter of Intent to Perform as a Local Subcontractor, it asks for a price amount. Since the projects and scopes of work to be assigned are not known at this time, can we state "To Be Determined" (TBD) on the form?
<b>Answer</b>	Yes.
<b>Asked</b>	7/16/2020 02:48 PM (ET)
<b>Question</b>	Does the Local Business Subcontractor Utilization Report have to be included with the RFP Response or will this report be utilized once the contract is awarded?
<b>Answer</b>	Do not include the local business subcontractor utilization report in your proposal. Its inclusion in the solicitation is the City's notice to the would-be selected firms that their local business commitments will be tracked.
<b>Asked</b>	7/16/2020 02:46 PM (ET)
<b>Question</b>	Section Y – Contractor Performance Report. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
<b>Answer</b>	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
<b>Asked</b>	7/16/2020 11:10 AM (ET)

<b>Question</b>	Section G – Selection/Evaluation Process. The RFP states Current and Projected Workload is listed as one of the Selection Criteria; however, there is not a designated section for the current workload. Please indicate where this should be discussed in, level of detail and describe how this will be evaluated.
<b>Answer</b>	Incorporate this information at your descension. The evaluation is discussed in Section G, Item #4.
<b>Asked</b>	7/16/2020 11:09 AM (ET)
<b>Question</b>	Section E – Required Proposal Submittal – References. The RFP state that the propose list any prior projects performed for the City of Pompano Beach. What is the timeframe for the list of projects, what detail needs to be provided (i.e., name of project, completion year, cost, etc.). Is this being used to show current workload with the City? Please clarify.
<b>Answer</b>	Please limit the list to projects completed in the past 5 years. Project detail should be provided for each project performed in the City of Pompano Beach. Current projects which have not been completed should be included in the current project workload (Section G).
<b>Asked</b>	7/16/2020 11:09 AM (ET)
<b>Question</b>	Section E – Required Proposal Submittal – References. The RFP does not state the specific number of references that are required. Please clarify.
<b>Answer</b>	Two to three (maximum) references will be sufficient.
<b>Asked</b>	7/16/2020 11:09 AM (ET)
<b>Question</b>	Section E – Required Proposal Submittal – Schedule. For the Schedule section, the RFP requests the proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines. Each scope of work / types of projects would entail unique, project specific tasks; therefore, please elaborate on what type(s) of timelines you are referring to. Would this be one generic timeline?
<b>Answer</b>	Firms awarded a contract will be required to provide a detailed schedule during the issuance of a task order. For the RLI, please provide a technical approach on how your firm proposes to maintain a schedule on a task order.
<b>Asked</b>	7/16/2020 11:08 AM (ET)
<b>Question</b>	Project Team Form. On the Project Team form, there are only two blank lines for “Other Key Member” under PRIME section and only three blank lines under SUB-CONSULTANT section. Please clarify that the proposer can add additional “Other Key Member” lines to the form for both the PRIME and SUB-CONSULTANT?
<b>Answer</b>	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
<b>Asked</b>	7/16/2020 11:08 AM (ET)

<b>Question</b>	Please clarify if the City is requesting us to describe our firm's environmental engineering services related to the types of projects or is the City looking for experience performing the actual services listed under Introduction (i.e. environmental engineering services related to parks and recreational facilities or actual design and/or construction of parks and recreational facilities)?
<b>Answer</b>	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying. Construction is not part of this RLI.
<b>Asked</b>	7/16/2020 11:08 AM (ET)

<b>Question</b>	Scope of Services. Under "Scope of Services", the RFP states "The scope of services may include, but is not limited to, the following:" •Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis. •Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City) •Provide project management services for projects, including turbidity monitoring. •Prepare recommendations and cost estimates for compliance with regulatory requirements. •Provide project close-out services. This may include preliminary and final acceptance of projects, preparation and approval of punch list items and project certification as required to all permitting agencies. •Prepare reports for regulatory compliance monitoring and assessments. •Reporting on endangered animals (turtles and owls)
<b>Answer</b>	The RLI contains a list of services where the City may require professional environmental testing.
<b>Asked</b>	7/16/2020 11:08 AM (ET)

<b>Question</b>	Introduction: The RFP says, "The types of projects to be undertaken may include, but are not limited to: • The City's approved Capital Improvement Plan (CIP) maybe found here: Adopted Capital Improvement Plan FY 2020-2024 • Preparation of Phase I, Phase II, and Phase III assessments • Roadway, Streetscape or Parking Lot projects. • Water or Reuse Main projects. • Gravity Sewer Main projects. • Force Main projects. • Lift station/pump station rehabilitation projects. • Parks and Recreational Facilities. • Seawall and dock construction and repair. • Storm Water/Drainage Improvement projects • Consultation for Emergency Water/Wastewater/Stormwater Repairs. • Inspection Services for Emergency Water/Wastewater/ Stormwater Repairs. • Canal and lake dredging. • Grant reimbursement, FAA and FDOT support and compliance. • SRF support and Davis Bacon Wage Reporting requirements • Support Services for Remediation • Demolition Projects
<b>Answer</b>	The RLI contains a list of project types where the City may require professional environmental testing.
<b>Asked</b>	7/16/2020 11:06 AM (ET)

<b>Question</b>	Can you please list who the incumbent firms for this contract are?
<b>Answer</b>	GFA International, Inc., Professional Service Inc., E Sciences, Inc.
<b>Asked</b>	7/14/2020 11:43 AM (ET)

<b>Question</b>	Who will be on the selection committee?
<b>Answer</b>	Qualified City staff to be determined.
<b>Asked</b>	7/14/2020 08:42 AM (ET)

<b>Question</b>	What are amount of awards per consultant under the previous contract?
<b>Answer</b>	GFA \$24,000.00 E Sciences \$297,872.54 Professional Services \$31,290 The City reserves the right to award contracts in its best interest. Past business is no indication of future contract awards.
<b>Asked</b>	7/14/2020 08:41 AM (ET)

<b>Question</b>	Is a certificate of Insurance Required with the proposal submittal and if so should it be uploaded under the Attachments tab within the Ebid System or a separate tab within the proposal response?
<b>Answer</b>	The certificate of insurance will be required for each SELECTED firm prior to contract negotiation.
<b>Asked</b>	7/14/2020 08:41 AM (ET)

<b>Question</b>	1. Who are the incumbent firms for this contract? 2. Besides the Transmittal Page, are there any other page limits on the RFP response? 3. Is there a contract funding limit?
<b>Answer</b>	1. GFA International, Inc., Professional Service Inc., E Sciences, Inc. 2. There is a 250MB limit for each attachment uploaded, but no limit on the number of attachments. 3. The RLI under "Scope of Services" discusses limits/restrictions. The City's approved Capital Improvement Plan as referenced in the RLI contains estimates of projects to be funded over the next 5 years.
<b>Asked</b>	7/10/2020 11:37 AM (ET)

<b>Question</b>	What City entity is this contract with (CRA, Engineering, etc.)?
<b>Answer</b>	Awarded City contracts will be available for use by any applicable department.
<b>Asked</b>	7/9/2020 03:47 PM (ET)



# City of Pompano Beach

Continuing Contract for Professional Environmental Testing  
RLI No. E-22-20

August 24, 2020

5371 NW 33<sup>rd</sup> Avenue  
Suite 201  
Fort Lauderdale, FL 33309  
(954) 741 8282  
terracon.com



Environmental



Facilities



Geotechnical



Materials

1

# Title Page

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# 1 Title Page



<b>Request for Letter of Interest (RLI) No. and Title:</b>	<b>RLI No. E-22-20 Continuing Contract for Professional Environmental Testing</b>
Firm's Name:	Terracon Consultants, Inc.
Contract Manager:	Steven A. Harrison, P.G.
Address:	5371 NW 33rd Avenue Suite 201 Fort Lauderdale, FL 33309
Telephone No.:	Office: (954) 741-8282 Direct: (954) 703-1866 M: (954) 547-7734
E-mail:	Steven.Harrison@terracon.com
Date of Proposal:	August 24, 2020 by 2:00 PM

**2**

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**3**

# Letter of Transmittal

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### 3 Letter of Transmittal

August 24, 2020

City of Pompano Beach  
Purchasing Office  
1190 NE 3<sup>rd</sup> Avenue, Building C (Front)  
Pompano Beach, Florida 33060

RE: Letter of Transmittal  
Request for Letters of Interest (RLI) No. E-22-20  
Continuing Contract for Professional Environmental Testing



Terracon Consultants, Inc. (Terracon) is pleased to respond to the City of Pompano Beach (City)'s RLI for *Continuing Contract for Professional Environmental Testing*. Terracon understands that these services will be provided in support of the City's transactional, operational and/or developmental objectives at property owned or operated by the City, or in support of capital improvement projects throughout the City. Terracon has prepared this response to provide the following service types: *Environmental Site Assessment (ESA) for Due Diligence, Site Assessment Associated with Subsurface Impacts, Geotechnical Investigations in Support of Capital Improvement and Infrastructure, Civil Engineering and Surveying Services Associated with Sanitary Sewer, Stormwater, Roadway, Parks and Canal Projects*. Terracon and its team members have well established, proven capabilities, resources and expertise to successfully perform these services for the City and are committed to perform the work in a timely manner with a high degree of care and skill to meet, and exceed, your expectations.

**QUALIFICATIONS:** Terracon has become a recognized leader, locally and nationally, in providing environmental testing and engineering services for local government and private clients, and with the support of our team members, we are prepared to support the City with the assessment, evaluation and design services needed to undertake repairs or upgrades to existing infrastructure, structures or roadways, as well as new City projects. The expertise to evaluate site conditions and meet the City's needs is not simply a function of the proper due diligence for a specific project but results from the knowledge gained performing thousands of projects to evaluate, understand, and mitigate conditions that may affect a project. The knowledge developed by Terracon and its team members allow us to complete projects in a cost effective and timely manner. **Terracon staff, and its team, have completed thousands of environmental, geotechnical, and civil design projects within Florida to support governmental agencies and the private sector in their endeavors to repair, improve and develop projects to support and enhance, project development efforts.**

**RESPONSIVENESS:** Terracon's Fort Lauderdale office will support this contract as we do for other contracts with the City. We can be available to meet within a few minutes notice when critical conditions arise. Terracon and its team members understand the types of projects that will arise from the referenced contract and have performed these exact services for local municipalities and private sector clients for nearly three decades. Terracon is currently under contract with the City's community Redevelopment Agency (CRA) and looks forward to providing ongoing professional environmental testing services under this contract.

#### WHY TERRACON?

- Providing Services to the Local Area and Statewide for over 28 Years
- Similar Continuing Contracts with Numerous City and County Agencies
- State of Florida Licensed Engineering, Geology, and Asbestos Business
- Radon and Lead-Safe Certified Firm
- Full Fleet of Drilling Equipment (Truck-mounted and Portable)
- Key Professionals with Multiple Licenses and Certifications
- Court Qualified Engineering Experts
- Certified, Trained and Experienced Field Staff
- Certified, Trained and Experienced Subcontractors

Terracon Consultants, Inc. 5371 N.W. 33<sup>rd</sup> Avenue, Suite 201 Fort Lauderdale, FL 33309  
P (954) 741 8282 F (954) 741 8240 terracon.com

### 3 Letter of Transmittal

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With our strong technical background and proven track record within the industry, we are prepared to anticipate project requirements and adapt to challenges, making it easy for the City to work with us. For projects large and small, single- or multi-site, you can rely on consistent results.

**TRUSTED PERFORMANCE:** One of Terracon's core businesses is to service local governments through continuing services contracts. Statewide we hold over 125 continuing service contracts (environmental, facilities, geotechnical, construction testing and inspections) with approximately 90 different governmental agencies including state, county, and local governments. Terracon has an outstanding history of contract extensions and re-selection under these contracts, which is indicative of our commitment and performance to providing timely and cost-effective engineering services to our clients.

**DEDICATED TEAM AND ASSIGNED STAFF LEADERSHIP:** Terracon will service this contract from our Fort Lauderdale office, **which is located only 15 minutes door-to-door from City Hall to ours.** Information for the office location and contact details for the persons authorized to make representations on behalf of the company are:

**Richard Minichiello**, Vice President/Regional Manager | Rich.Minichiello@terracon.com

**Steven Harrison, P.G.** Environmental Services Department Manager | Steven.Harrison@terracon.com  
5371 NW 33<sup>rd</sup> Avenue, Suite 201, Fort Lauderdale, Florida 33309 | (954) 741-8282

**DEDICATED TEAM OFFERS A PARTNERSHIP APPROACH:** The Terracon Team understands what it will take to be successful under this contract. The designated Contract/Project Manager, **Steven Harrison, P.G.**, will provide oversight for all assigned projects. He has over 32 years of experience providing environmental consulting services for municipal, federal and private clients. Steven's knowledge of local goals, policies and plans will be an invaluable asset to this contract. The Terracon Team includes our Principal-in-Charge, **Richard Minichiello**, who is responsible for the South Florida Region. As a vice president and senior principal at Terracon, Richard is authorized to contractually bind the firm. He and Steven have a track record of solving problems and reducing costs on complex public and private projects. Our senior technical leadership have played key roles in environmental and infrastructure projects and provide specialized skill sets to ensure we are successfully implementing a wealth of on-demand team resources.

**KEY OBJECTIVES:** Our primary objective for this continuing services contract is to provide cost-effective, value added services for a wide variety of City projects. Based on our experience, we know that meeting this objective will require 1) technical expertise; 2) efficient and timely completion of project services and 2) personalized, attentive service.

The Terracon Team will work with the City to establish proper budgets and task orders, for projects awarded. We also warrant and represent that during the life of our agreement with the City our team will maintain in good standing all required licenses, certifications, and permits required under federal, state and local laws necessary to perform the services requested within this RLI.

We look forward to proceeding to the next step in this procurement process. Please contact us by e-mail at Steven.Harrison@terracon.com or Rich.Minichiello@terracon.com for any additional information.

Sincerely,

**Terracon Consultants, Inc. -**



Steven A. Harrison, P.G.  
Contract/Project Manager



Richard Minichiello  
Principal-in-Charge/Vice President/Region Manager

4

# Technical Approach

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## 4 Technical Approach

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### METHODOLOGY AND PROJECT APPROACH

The accurate and effective completion of any project begins with truly understanding the goals of the project before one begins; this will support a targeted approach that is focused on securing the proper information for the project being conducted. Terracon understands that the City's primary objective is to obtain the services of a qualified consulting firm to provide professional consulting services related to a continuing contract in support of commercial due diligence services. This critical mission will be supported by Terracon and its team members throughout the duration of the contract. The Terracon team's firm goal is to fulfill and exceed the client's objectives on every project. This not only requires our team to focus on the technically accurate and efficient completion of each and every project, but to make certain that the project is completed within agreed time and budget constraints.

Through the performance of hundreds of projects of similar complexity and in similar environments, Terracon is intimate with the technical details required to complete these types of projects, allowing us to anticipate typical diversions, maintain project direction, and effectively complete the project within the allotted time frames and proposed budget. By knowing that unknown circumstances are an eventuality of commercial due diligence projects, Terracon incorporates contingency plans into projects that allow us to seamlessly address findings in a way to minimize impacts to the projected schedule and budget. We understand that any changes will also affect the City's schedule and budget and it is critical for us to complete projects efficiently.

Every project will begin with a strategy meeting where Terracon joins with the City team to discuss the project. As part of the meeting process, Terracon and City personnel will review the details of the site in question which includes an overview of the City's goals. Terracon's staff and its team members will work with municipal and private clients to assess site conditions and provide the environmental services necessary, on an as-needed basis, as requested by the City. Terracon's schedules always consider a buffer to address issues that were not directly identified but suspected to have the possibility of being exposed (underground storage tanks [USTs] and hydraulic lifts that may exist where there is no record of their presence).

The experience and diversity of Terracon and our team members' staff enables us to resolve even the most difficult environmental situation that may be encountered. In doing that, a series of steps are

## 4 Technical Approach

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designed to ensure that our clients are provided expedient, accurate and individualized services to meet their needs today and in the future. Terracon's commitment to client satisfaction is demonstrated by our individualized project management approach that begins each project with a "kickoff" meeting where technical, financial, and scheduling goals are outlined to ensure that every project meets the client's goals and required quality assurance (QA) objectives.

Prior to the initial meeting with the City, Terracon will conduct a preliminary review/inspection of the site to understand the location and type of property that is to be addressed. With a preliminary understanding of the overall site conditions, Terracon will meet with the City to review your goals for the site so that a strategy can be developed to meet that objective. The proposed usage of the property is a critical factor, for example, in finalizing a remedial course of action risk-based closure options offer a viable option; however, as there are potential exposure issues to site occupants, they would need to be managed properly.

Terracon has developed a phased approach to projects that begins with an initial inspection and review of the site to understand current conditions and physical limitations. Terracon will incorporate these observations with the City's plans to develop a timely approach to inspect the site in greater detail. As information regarding the site is developed, additional phases of work may be required to satisfy project needs and requirements. The exact path is unknown, but it will be developed in a manner that helps to control the financial impact while continuing to move the project forward.

Once the scope of services for each phase of work is understood, Terracon will provide the City with a detailed budget which includes the scope of work along with a timeframe and cost to provide the services. Terracon will work with the City to adjust any scheduling conflicts to meet specific timeframes that may have been previously unknown to Terracon. Upon receipt of the City's approval to proceed, all personnel assigned to the project under Terracon will immediately begin their portion of the project.

As with all projects, there is the potential that unknown conditions or unanticipated analytical results may be encountered that require additional time and/or funds to complete the project as intended. When this occurs, the City will be notified and provided a written summary of findings, so that Terracon can work to minimize the impact to the original budget and schedule.

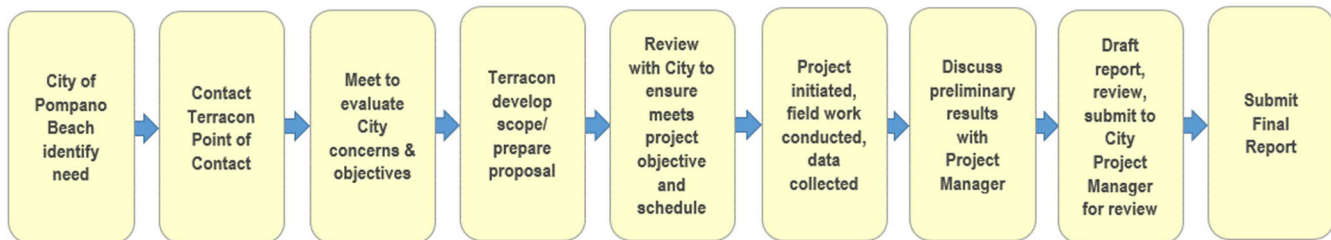
### **TASK ORDER MANAGEMENT AND COMMUNICATION**

The key to delivering successful services rests with the quality of the communications between the client and the project team. Terracon's Contract Manager, Steven Harrison, has worked directly with City/CRA staff on many projects and fully understands the importance of every project to the City, often being time sensitive. Steven understands that it is of critical importance to complete assigned projects timely and with the utmost of accuracy as you be making important financial and policy decisions that are based upon our findings and recommendations. With a full understanding of your needs, Steven will select and assign a highly experienced project manager to complete the assigned project and provide the direct line

## 4 Technical Approach

of communication to your team. Our project manager will be chosen for their expertise in the type of work to be undertaken and receive task order requests from the City. The project manager will, in turn, select the appropriate project team members based on the technical requirements and areas of expertise required. Our Organizational Chart, in Section 8 of this response, outlines the hierarchy (team structure) in place and highlights the depth of our team within each of the technical disciplines provided to the City within the requested services.

Each task included under the overall authorization has a time frame and budget associated with it, that each department is responsible for internally. Project managers will provide internal updates on a weekly basis to keep track of project status and keep the project on schedule. Constant communication between members keep projects moving forward smoothly as we are very aware that maintaining our client's goals is of utmost importance. In addition to tracking the timing of the project, Terracon utilizes an internal cost tracking system to track labor efforts and materials utilized on individual project sites so that budgets can be accurately maintained. Small cost overruns due to internal efforts will be not charged to the City.



The project manager will be responsible for overall performance, administration, billing, project review and will serve as your main point-of-contact to your project manager. They will be fully responsible for meeting requirements, expectations and schedules, project quality, report writing and submittals, managing subcontractors, and communicating resource needs.

There will be frequent communication between our project manager and your staff as this has proven to provide more responsive and consistent results when managing these types of services. We will also provide your staff with draft meeting notes prior to finalizing to minimize the chance of misunderstandings and miscommunications. Our project manager will call or meet periodically with the appropriate task managers to continually check on our progress and performance. We will also conduct a closeout review with your staff for every task order completed, to ascertain that the task's objectives have been satisfactorily achieved.

### COMMITTED TO DELIVERING SUCCESS....SAFELY

#### Safety first! Incident and Injury-Free (IIF)

Safety is one of Terracon's core values and our commitment to an "Incident and Injury-Free (IIF)" philosophy is one of the pillars of our culture. Successful execution and delivery includes the need to work safely and keep our





## 4 Technical Approach

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employees and the public safe every day. Terracon and its subsidiaries are very much a safety-oriented company. We strive to build health and safety into all aspects of our business and into the thinking of our employees. The culture is continued further in our everyday work culture, with all meetings beginning with an IIF moment and safety discussion.

### What is Incident and Injury-Free?

IIF is about care and concern for people. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family every day. It is where safety is held as a core value as well as an operational priority. Working safely is an inseparable part of working correctly, just as much as other operational priorities, in particular quality, budget and schedule. Incident and Injury-Free is our commitment to our people, who we value for who they are and what they do.

Conducting our work safely means conducting our work in the only acceptable way. Incidents, injuries and accidents will not be viewed as problems to make go away, but as opportunities to strengthen Incident and Injury-Free. Incident and Injury Free is about developing a mindset intolerant of any incidents or injuries no matter how minor or infrequent.

### Our Rules to Live By

Our Rules to Live By are at the foundation of our IIF culture. These give employees clear, specific ways to stay safe on the job, covering essential aspects of safety including personal protective equipment (PPE), equipment and tools, working at heights and depths, motorized vehicle safety, and reporting of injuries. We regularly use and discuss our Rules to Live By, and associated practices, in our offices and on job sites to ensure that everyone is following these fundamental rules. Our focus on pre-task planning also serves to reinforce this message every day.

**Live IIF!**



Terracon can't just tell someone to "be safe"; we can, however, ask our employees to follow Our Rules to Live By, do pre-task planning for each task every day, and follow the safe work practices they have been trained to follow to complete work at a task level. Our Rules to Live By have made a measurable difference in keeping our employees safe and in helping us preserve the trust and business with our clients.

We hope to continue our commitment to safety and welcome the opportunity to further discuss our IIF culture and its evolution as well as how it can tie in to the City's upcoming projects.

**Incident and Injury-Free is about care and concern for people. It is our personal and organizational commitment at all levels of the company to everyone going home safe to their family every day.**

In addition to the overall concern for the safety of all employees, every project where subsurface intrusive work will occur, begins with the preparation of a Site-Specific Health and Safety Plan (SS-HASP) to identify site specific conditions that could result in injury or chemical exposure to site workers. Underground clearance is conducted by white lining the work area and contacting the Sunshine 811 network to verify if public utilities are within the work area.

## 4 Technical Approach

Safety concerns that were not imagined to be a possibility as recently as a year ago, are a reality for all due the presence of the corona virus, COVID-19, within south Florida. Terracon has developed and implemented internal protocols to address situations where there is a potential exposure to COVID-19, that meet and/or exceed requirements put forth by local and State authorities. The protocols are designed to reduce the risk of exposure to the coronavirus for the complete project team, City and Terracon Team staff, and are integrated into pre-task planning for every project. This pre-task planning allows us to efficiently complete our assignments while minimizing the risk of exposure to the coronavirus for the entire project team.

### COMMITMENT TO QUALITY

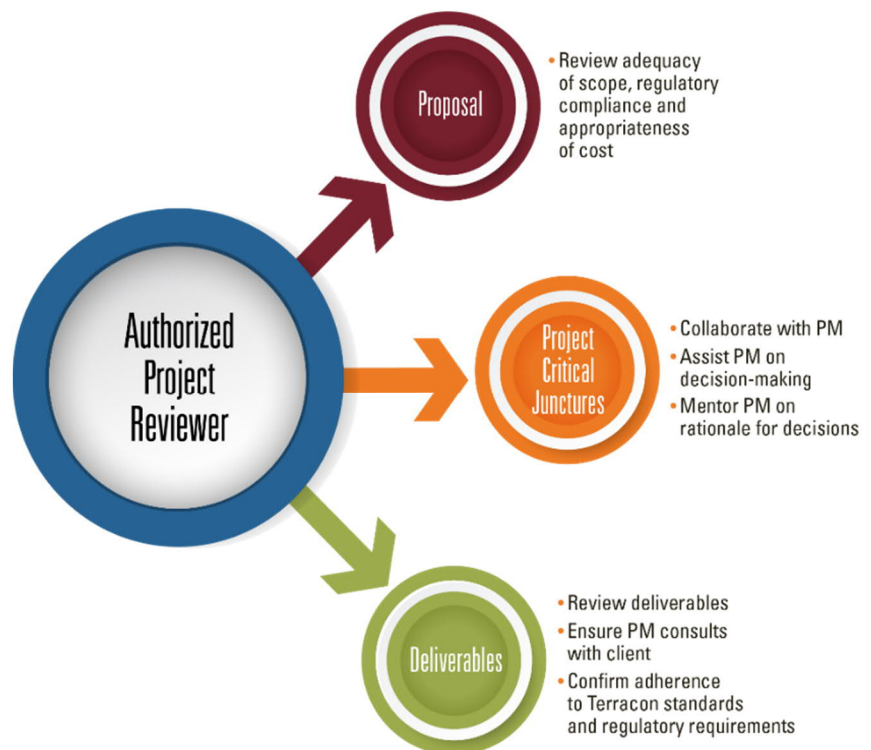
Terracon is committed to providing quality services with experienced technical and professional staff through our comprehensive Corporate Quality Program. As required by our internal quality review process, every project is assigned a well-experienced, senior professional to provide guidance and technical review for the project team. In this manner, we are able to deliver consistent, high-quality consulting services to our clients across the country. This program is based on a continuous improvement philosophy that involves our employees and, when applicable, subconsultants, vendors, and users of our services. Quality service for our clients is achieved by following the methods and practices that have been developed at Terracon for the services being provided.



Terracon maintains a living, written internal quality control/quality assurance (QC/QA) program to assure that all of Terracon's reports and documents are complete, technically accurate, regulatory compliant, and defensible. The QC/QA program is detailed in a Project Quality Review Manual, which is Terracon's primary QC/QA mechanism, relying on the industry best practice of secondary and independent review. Terracon-selected reviewers, termed Authorized Project Reviewers or APRs, provide the foundation for our quality review process.

Technical staff and senior professionals are appointed as APRs through a highly selective

### Terracon's APR Process



## 4 Technical Approach

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process, which maintains quality and consistency of Terracon project deliverables. Our philosophy behind quality review is founded on the premise that our projects and associated deliverables are always provided the direction and oversight of our experienced senior technical professionals.

Contract/Project Manager, Steven Harrison, is accountable for the overall quality of the project. He is also responsible for verifying that the applicable QC criteria, project quality review and company policies have been followed. Our primary mechanism for achieving quality on every project begins with the individual performing the work. Each Terracon employee has responsibilities for professional, technical, or administrative quality, whether for client projects or internal service assignments.

To ensure our personnel execute their responsibilities, Steven and the appropriate APRs will be responsible for conducting checks and reviews, as required, as the work progresses to verify the elements of QC are continuously addressed during the project.

Terracon's success with this type of contract stems from an experienced-based approach, led by senior professional engineers, that reacts responsively to schedule demands, produces complete and reliable technical reports and proactively implements cost control measures. We commit to the City of Pompano Beach that same level of service for the duration of this contract.

### Quality Assurance – Sampling Activities

Data quality objectives of every project are established prior to initiating a project so that data obtained is accurate, appropriate, sufficient, and cost effectively generated. Terracon staff members assigned to sampling activities receive in-house and on the job training to conduct sampling activities in accordance with Florida Department of Environmental Protection's (FDEP)'s standard operating procedures DEP-SOP-001/01, and other FDEP program-specific SOPs such as at petroleum sites: PCS-004 – *Soil Assessment and Sampling Methods for Bureau of Petroleum Storage Systems Sites*, PCS-005 – *Groundwater Sampling Procedures Standard Operating Variances and Clarifications for Bureau of Petroleum Storage Systems Sites*, and PCS-006 – *Design, Installation and Placement of Monitoring Wells*. Terracon insures that well construction, installation, and abandonment are conducted in accordance with protocols listed in Chapter 40C-3. Field, reporting, documentation, and records retention will conform to Chapter 62-160, Florida Administrative Code (FAC).

### Field Sampling Quality Assurance Requirements

All field sampling methods will be performed in accordance with the FDEP Standard Operating Procedures for Field Activities (DEP-SOP/001-01) and Chapter 62-160 FAC and the methods for compliance are incorporated into Terracon's *Field Sampling Quality Manual (FSQM)*. The FSQM details the procedural methods for compliance, sampling capabilities, record keeping and documentation, inventory and calibration of field equipment, and data review and corrective methods.

Samples will be collected of groundwater, surface water, sediment, soil, soil vapor and indoor environments for analysis of pesticides, metals, nutrients, petroleum, chlorinated solvents, asbestos,

## 4 Technical Approach

fungal spores, and other contaminants, as appropriate. Unless otherwise specified, reports submitted to the City will include laboratory reports containing the information specified in FAC, Chapter 62-160, completed chain-of-custody (Form 62-770.900[2]), field instrument calibration records (Form FD 9000-8) and completed water sampling logs, boring logs, well construction logs and development logs. Presentation of data that involves analytical results which report method detection limits in excess of cleanup target levels (CTLs as specified in Chapter 62-777, FAC) will be in accordance with the FDEP's "Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits" dated October 12, 2004 and the Memorandum *Quality Assurance and Related Issues* dated May 14, 2007 to determine how to evaluate data when the CTL is lower than the PQL.

Groundwater and soil sampling will involve the collection and analysis of QA samples detailed in SOP FQ 1000, Quality Control with FDEP/SOP-001-01. Based on the sensitivity and rigorous nature of the reporting required for the project and use of the data for screening, or regulatory, purposes, Terracon is prepared to collect QA samples, to comply with rigorous QA sampling frequencies developed for other projects, as shown in the following table:

QUALITY ASSURANCE SAMPLES	
QA Sample Type	Frequency
Duplicate samples (soil/ groundwater)	10% of each sampling event
Duplicate samples	5% of each sampling event (collected from same container as the original sample)
Split samples	10% of each sampling event
Field generated blanks	5% of the samples collected
Trip blanks (volatile sampling only)	One per cooler
Equipment blanks – Pre-cleaned equipment	Collected prior to equipment use (FDEP SOP/001-01 FQ1211)
Equipment blanks - Field-cleaned equipment	Once per day (minimum) (FDEP SOP/001-01 FQ1212)
Field generated blanks	Each sampling day

### Laboratory Quality Assurance Requirements

Terracon contracts exclusively with analytical laboratories that are accredited through National Environmental Laboratory Accreditation Program (NELAP) by the Florida Department of Health (FDOH) to perform laboratory analyses and will obtain City approval prior to use.

The laboratories subcontracted by Terracon will, if requested, provide copies of their quality manual verifying they follow the National Environmental Laboratory Accreditation Program (NELAC)

## 4 Technical Approach

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guidelines. The laboratories will agree to, and accept, the standards included in the Laboratory Standardization Guidance Document provided by the City and will identify, in writing, those standards with which it cannot comply. Approval for use of alternate laboratories will be requested in writing to allow for performance of the City's audit process. The approved laborator(ies) will not subcontract analyses without prior approval.

Upon receipt of samples in the laboratory, the laboratory will verify that the samples were received at proper temperature and in accordance with the chain of custody and will notify Terracon immediately of any problems. The laboratory will immediately notify Terracon if a sample was received and/or analyzed out of holding time. After verifying proper receipt, the laboratory will set the samples for analysis and, upon completion of the analysis, will e-mail Terracon the Laboratory Receipt Deliverable.

All analytical protocols and quality control requirements will adhere to the FDEP's QA Rule (62-160 FAC), FAC Chapter 64E-1, and the NELAP. Terracon will advise the laboratory of Data Quality Objectives prior to, or at the time of, a sample kit request.

The ADaPT data validation program is available for use to validate the laboratory data from each set of samples received and included with each laboratory report along with a Report Narrative for the project. Terracon understands that not all projects require the additional level of data validation (ie Phase II ESA due diligence sample screening), but we are experienced in using the ADaPT validation program to review field data and QA/QC laboratory results according to the EPA Protocol, Chapter 62-160, FAC, and ADaPT library criteria and have the laboratory rework any QC or sample data to verify results outside the recommended criteria. Final reports will include a letter explaining any sample result discrepancies.

# 5 Schedule

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## 5 Schedule



### MAINTAINING A SCHEDULE

Terracon will maintain complete and full responsibility for the execution of this contract whether services are performed by Terracon or our subconsultant/subcontractor team members. We will maintain the final and ultimate control over the quality, consistency and integrity of the work products that will be delivered to the City of Pompano Beach.

As previously discussed, our experienced team is led by Contract/Project Manager Steven Harrison who will be the single point of contact and will have overall responsibility for this continuing contract, including service (schedule) performance. Steven will manage this contract with the support of a team of highly experienced Florida registered professional geologists, engineers, land surveyors, and landscape architects, licensed special inspectors and building inspectors, engineers in training, staff scientists, a staff geologist, a certified industrial hygienist/licensed asbestos consultant, a project industrial hygienist, certified CADD operators, an Autodesk-certified professional, drillers, irrigations specialists, a certified welding inspector, and qualified field and laboratory technicians,.

Terracon uses a number of tools and processes to establish project schedules, monitor adherence, and plan and execute recovery plans where actual work durations exceed the planned time frames, typically due to unknown conditions at the outset of the task or “force majeure” conditions such as weather or restricted access to project sites due to occupant activities. The tools and processes are as follows:

- Each proposal includes a schedule section. During proposal preparation, the man-hours necessary to complete each task are determined and a plan is prepared to execute the work within a reasonable time frame.
- Where client directed schedules dictate accelerated completion, additional staffing or multi-shift work schedules are established to meet each milestone.
- Each project has a Pre-Task Plan prepared which lays out the schedule and the staffing for each task to achieve completion of the work on time and on budget.
- A Kick-off Meeting is held to brief all participants, including subconsultants/subcontractors, on the required work elements, schedule, and staffing to complete the work.

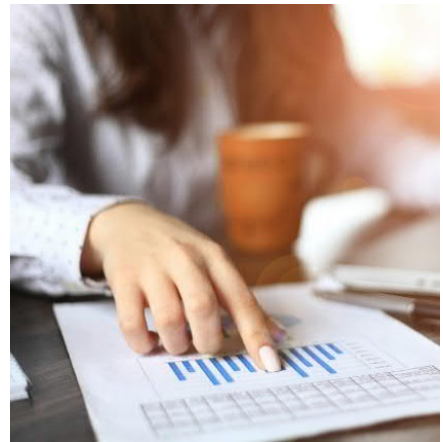
## 5 Schedule

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- For more complex projects a schedule is created, with each task shown in a logical sequence with a critical path to completion. As the project moves forward, the schedule is updated to identify which tasks are on time or behind schedule, and the impact on the overall project schedule and project completion dates.
- Where schedule slippage occurs, the project schedule is adjusted and a recovery plan is prepared which may include additional manpower or additional work shifts to bring the project back on schedule.
- The proposed recovery plan is then submitted to the client for notification and acceptance.

### THE TERRACON TEAM'S CAPACITY

Terracon's staff and resources provide maximum flexibility to meet our clients' scheduling needs. The nature of our work requires us to typically provide services on an expedited basis. Our typical backlog is made up of many short duration assignments and therefore our workload varies on a weekly basis. Furthermore, long-term contracts are of indefinite quantity making workload dependent upon individual work orders, and difficult to predict.



The Terracon Team has the flexibility, ability and capacity to handle all the services required and to meet the scheduling requirements for each City project. Our team has the capacity to perform this work based on actual and projected workload. If additional work is procured during this period, we are committed to increasing staff levels to service all assigned projects. We have made the same commitment on similar contracts with other clients and have never failed to cover the projects assigned to us.

**The Terracon Team is 100% committed to providing all assignments under this contract in a timely and cost-efficient manner.**

All the personnel identified in our organizational chart (see Section 8 of this response) will be available on a priority basis for tasks assigned under this contract. We are committed to provide you with the highest quality personnel that have the specific experience necessary to complete any tasks you may need. It is our pledge to the City of Pompano Beach that adequate staff, who possess all the required licenses and certifications, will be made immediately available once a task has been identified.

The following table further details our team and their availability as of August 2020.



## 5 Schedule

KEY TEAM MEMBERS, FIRM / LOCATION	ROLE	PERCENTAGE OF AVAILABILITY	
		CURRENT	PROJECTED
Steven Harrison, P.G. Terracon / Fort Lauderdale, FL	Contract/Project Manger	50%	50%
Richard Minichiello Terracon / Fort Lauderdale, FL	Principal-in-Charge (PIC)	45%	45%
Terry Horan, P.E. Terracon / West Palm Beach, FL	Assistant Project Manager	45%	50%
Lucas Barroso-Giachetti, P.E., CHMM Terracon / Miami Lakes	Senior Environmental Engineer	45%	50%
Susan Kuzia Terracon / West Palm Beach, FL	Senior Environmental Scientist	55%	55%
Tom Holley, CIH, FLAC, CSP, CHMM Terracon / Tampa, FL	Senior Certified Industrial Hygienist (CIH)/QA/QC Reviewer	40%	45%
Sergio Adasme, MRSA Terracon / Fort Lauderdale, FL	Project Industrial Hygienist/Senior Inspector	50%	55%
Rutu Nulkar, P.E. Terracon / Fort Lauderdale, FL	Geotechnical/Materials Project Manager	50%	50%
Hugo Soto, P.E. Terracon / Miami Lakes, FL	Principal Engineer/QA/QC Reviewer	45%	45%
Caridad Murphy, QCM Terracon / Fort Lauderdale, FL	Materials Testing Manager	50%	50%
James Orth, P.E. Craig A. Smith Associates, Inc. (CAS) / Boca Raton, FL	Vice President of Engineering	45%	55%
Orlando Rubio, P.E. CAS / Boca Raton, FL	Senior Supervising Engineer	45%	55%
Robert Keener, PSM CAS / Boca Raton, FL	Vice President Surveying	45%	55%
Jim Driscoll CSA / Boca Raton, FL	Director of Utility Locates	45%	55%
Michael Kroll, RLA, FASLA Miller Legg / Fort Lauderdale, FL	Landscape Architecture PIC / Project Manager	70%	70%
Brian Shore, RLA Miller Legg / Fort Lauderdale, FL	Senior Landscape Architect	70%	70%

# 6

# References

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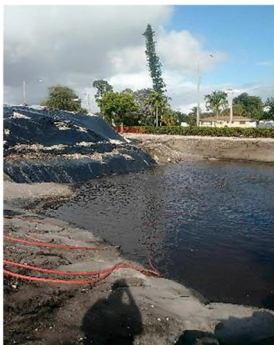
## 6 References



### TERRACON REFERENCES FOR TRI-COUNTY AREA PROJECTS

#### Former Sears, Pompano Citicentre Mall

Pompano Beach, FL



With the closing of the Sears store at this mall, Terracon's due diligence efforts (Phase I ESA) found that the historical operation of a fueling facility (USTs and dispenser) at the former Autocenter, may have impacted soil and groundwater at the site. Site assessment efforts conducted to assess soil and groundwater found that the area of the former dispenser island was impacted with residual hydrocarbons in excess of groundwater cleanup target levels (GCTLs). The affected area was found to extend throughout the eastern parking area and extend beneath the east end of the Autocenter building. Terracon submitted a combined Site Assessment Report/Remedial Action Plan (SAR/RAP) to incorporate assessment findings and engineering details to remediate the site into one document and minimize Broward County Environmental Protection and Growth Management Department's (BCEPGMD's) review period.

#### CLIENT:

Rafael Saldamando  
Senior Project Manager  
The Sterling Organization  
302 Datura Street, Suite 100  
West Palm Beach, FL 33401  
(561) 812-7541  
rsaldamando@sterlingorganization.com

#### COMPLETION DATE:

Site Assessment/RAP Completed  
12/2019; Active Remediation  
Completed 10/2020.

#### FEE:

\$550,000



As the site is planned for immediate redevelopment with a new building, Terracon developed an aggressive remedial strategy that would address residual soil impacts, along with groundwater exceedances through multiple remedial technologies. The technologies include source removal of saturated soils impacted with petroleum hydrocarbons beneath the groundwater interface, air sparging of groundwater within the open excavation to volatilize petroleum hydrocarbons dissolved in the groundwater, placement of oxidation chemicals (Insitu chemical oxidation – ISCO) into soil during backfilling of the excavation, and injection of oxidation chemicals (ISCO) beneath the excavation and into the surrounding areas of groundwater impacts. Upon receipt of approval from BCEPGMD, Terracon mobilized to the site and field efforts were completed within 30 days. Monitoring efforts found that

## 6 References

additional oxidation chemicals were needed, and reinjected, within isolated locations to support remediation. ISCO is continuing to remediate petroleum hydrocarbons dissolved in groundwater and groundwater monitoring is being conducted to verify progress of the remedial effort. The site will be monitored for one year following completion of the active remediation and the site will obtain closure from the FDEP and BCEPGMD without conditions. Data shows that the remediation is progressing as designed.

The remediation included removal of approximately 885 tons of impacted soil from 5 to 10 ft bgs after removing overburden soils for reuse; air sparging of groundwater within excavation; injection of chemical oxidation compounds. The site will be remediated within 10 months plus groundwater monitoring period. No Further Action (NFA) without conditions will be granted; estimated completion at \$50K below initial budget

### Costco Wholesale

North Miami, FL



The project involved the construction of an approximately +/- 160,000-square-foot (SF) Costco warehouse. A fuel facility was planned at the northeast portion of the site with paved parking/landscaping areas to the east and south sides of the proposed warehouse. The fuel facility contains three 20,000-gallon USTs with fuel dispensers. The site is located within the northwest portion of the former Munisport Landfill and encompasses approximately 14.1± acres of land in the vicinity of Biscayne Boulevard and NE 151<sup>st</sup> Street, North Miami, Miami-Dade County, Florida. Preparation for development of the site, within a portion of the SoLe Mia development property, included the filling of the onsite Northwest Lake and the placement of material from the former landfill, throughout the majority of the site to raise the grade by approximately 13 to 15 feet.

Terracon provided essential assessment and construction oversight services in support of the site investigation and preparation for development of the project site. Relocation and placement of landfill materials were observed and soil and groundwater quality were assessed for constituents of concern within the development site. The results will be incorporated into the conditional closure utilizing institutional and engineering controls provided through Miami-Dade County Department of Regulatory and Economic Resources (RER) which allowed effective operation of the site without the expense of having to conduct remediation of impacted materials

#### CLIENT:

Heidi Macomber  
Director of Development  
Costco  
45940 Horseshoe Drive, Suite 150  
Sterling, VA 20166  
(703) 406-6842  
hmacomb@costco.com

#### COMPLETION DATE:

2019

#### FEE:

\$251,522



## 6 References

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Terracon conducted a Phase I environmental site assessment (ESA) in general accordance with the consensus document known as ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The purpose of this ESA is to assist the client in developing information to identify recognized environmental conditions (RECs) in connection with the site. This purpose was undertaken through a regulatory database review; historical and physical records review; interviews, including local government inquiries, as applicable; and a visual noninvasive reconnaissance of the site and adjoining properties.

Additional services provided by Terracon included: preliminary archeological, historical, and cultural resources search; hydrological flood plain information search; literature and agency file searches were conducted to identify the potential occurrence of federally listed threatened and endangered (T&E) species located in the site vicinity; research to identify potential wetlands; environmental compliance review; and recommendations pertaining to soil, groundwater, and vapor

In response to the findings of the Phase I ESA, Terracon provided construction oversight/limited site investigation (LSI) to help the client understand site conditions through assessment of soil, subsurface vapor, and groundwater quality at the site. In addition to the subsurface investigation, Terracon analyzed samples of landfill materials that have been placed at the site to raise the grade.

Assessment efforts reported the presence of elevated methane concentrations emanating from the landfill and in accordance with FDEP's Landfill closure permit, Terracon designed and oversaw the installation of a vapor mitigation system beneath the building and parking lot to protect against the potential accumulation of methane vapors beneath the building or to enter the occupied space. The system was approved by Miami Dade County Department of Regulatory and Economic Affairs (RER) and will be monitored through electronic monitoring systems to protect the building occupants.

### Nova Southeastern University's Mako Hall

Davie, FL



Terracon and its subsidiaries have furnished professional engineering services for various Nova Southeastern University (NSU) projects performed as a prime consultant or in a subconsultant capacity since the early 2000's. Projects have included roadways, buildings, athletic facilities/fields, hotels, utilities, etc.

Services have included environmental, geotechnical engineering, materials engineering and testing, and inspection services.

Mako Hall is a new 7-story, inverted "C" shaped residence hall building with a 2-story amenity building, outdoor courtyard amenity space, and a parking lot.

**CLIENT:**

Randall Seneff,  
Executive Director of Design  
and Construction  
Nova Southeastern University  
Facilities Management  
3301 College Avenue  
Davie, FL 33314  
(954) 262-8805  
rseneff@nova.edu

**COMPLETION DATE:**

2017

**FEE:**

\$244,055

## 6 References

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The 608-bed single phase housing development is located on the NSU campus at the NW corner of Nova Road (Perimeter Road) and College Avenue in Davie, Florida.

When Terracon performed environmental engineering services, the approximately 2.17-acre site contained a portion of a soccer field, a stormwater retention area, and asphalted parking. A Phase I ESA was conducted consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of the ESA was to assist the client in developing information to identify recognized environmental conditions (RECs) in connection with the site. Terracon conducted geotechnical exploration, that included advancement of soil test borings, to provide information and preliminary geotechnical engineering recommendations relative to the development, including subsurface conditions, groundwater conditions, and laboratory test results.

Additionally, Terracon furnished verification for compliance with contract documents of the items incorporated into the project limited to operations related to concrete, grout, earthwork, and steel operations. Terracon qualified technicians observed and reported earthwork-related work while checking for conformance to the plans and specifications as requested. They also sampled soil materials from the site, conducted earthwork density readings and recorded those findings on daily reports when applicable. Our qualified technicians observed and reported concrete/grout-related work while checking for conformance to plans and specifications and performed plastic property testing for acceptance of concrete materials. Laboratory tests were provided when required. Terracon also performed special inspections for: foundations and soil preparation; concrete; precast; masonry; steel; and asphalt paving.



### Projects Performed for the City of Pompano

Assessment efforts reported the presence of elevated methane concentrations emanating from the landfill and in accordance with FDEP's Landfill closure permit, Terracon designed and oversaw the installation of a vapor mitigation system beneath the building and parking lot to protect against the potential accumulation of methane vapors beneath the building or to enter the occupied space. The system was approved by Miami Dade County Department of Regulatory and Economic Affairs (RER) and will be monitored through electronic monitoring systems to protect the building occupants.

Prior to joining Terracon, Steven Harrison, the designated Contract Manager, had established a strong relationship with the City while providing environmental testing projects for the City of Pompano CRA and the City under two separate continuing services contracts (Engineering and Community Redevelopment Agency [CRA]) that he managed for Sphere Environmental Services, LLC, the company he owned. Sphere had completed almost 40 unique projects for the City/CRA that included asbestos surveys (demolition and renovation), groundwater assessment (Former BT Oil, Former Ables), numerous Phase I ESA and Phase II ESAs, groundwater monitoring and closure assistance for the Brownfield site at the location of the new Civic Center, remediation design (Former Able's), supervision of utility installation within a contaminated area along Hammondville Road/ MLK Boulevard, and geotechnical investigations

## 6 References

with foundation recommendations (including Ali Cultural Center, Former Bailey Hall). Terracon purchased Sphere in 2013 at which time the 2010 CRA contract was reassigned to the firm. Steven continues to manage and direct projects for the City and CRA.

Terracon has performed professional engineering services for the City of Pompano Beach for the projects highlighted in the following table.

PROJECT NAME AND ADDRESS IN POMPANO BEACH	TOTAL CONTRACT AMOUNT/ FEE	TOTAL BILLED	COMPLETION DATE	SERVICES PROVIDED BY TERRACON
Ali Cultural Center Phase II 353 Hammondville Road	\$11,334.00	\$5,830.50	2016	Materials engineering, testing, and inspections
N.E. 9th Avenue Bridge NE 9th Avenue at Charles Waterway	\$1,095.00	\$1,095.00	2015	Materials engineering, testing, and inspections
Former BT Oil 201 Hammondville Road	\$9,425.00	\$9,410.00	2015	Environmental - Remediation
Former Laundromax and Warehouse 11 NE 1st Street	\$2,000.00	\$2,050.00	2015	Environmental - Asbestos
Pompano Fishing Pier 101 N Pompano Beach Boulevard	\$15,625.00	\$15,625.00	2015	Geotechnical Engineering
Former Laundromax and Warehouse 11 NE 1 Street	\$3,500.00	\$3,500.00	2015	Environmental - Asbestos
Old Fire Station 11 and Old Beach Library 221 North Pompano Beach Boulevard	\$3,000.00	\$3,000.00	2015	Environmental - Asbestos
Residential Structure 737 Hammondville	\$7,600.00	\$7,600.00	2015	Environmental - Asbestos
790-800 Hammondville Road	\$4,100.00	\$4,350.00	2015	Environmental - Asbestos
790, 800 Hammondville Road Abatement	\$9,800.00	\$9,800.00	2015	Environmental – Asbestos Abatement Monitoring
Downstairs Lighthouse Building 2300 E Atlantic Boulevard	\$950.00	\$950.00	2015	Environmental – Asbestos Survey

## 6 References

PB CRA Innovation Office 37 NE 1 Street	\$2,500.00	\$2,500.00	2017	Environmental - Asbestos
PB - 741 Hammondville Road	\$3,000.00	\$3,000.00	2018	Environmental - Asbestos
NE 20th Avenue Drainage Improvements 1937 East Atlantic Boulevard	\$1,686.00	\$193.50	2018	Materials engineering, testing, and inspections
Sabal Golf Course Remediation Atlantic Boulevard and FL Turnpike	\$896724	\$896,686.77	2019	Environmental - Remediation
PBCRA - Grisham Family Trust Properties 321 NW 5th S Street	\$10,700.00	\$10,700.00	2018	Environmental - Asbestos
PBCRA - Grisham Family Trust Properties (Turnkey) 321 NW 5th S Street	\$52,500.00	\$52,500.00	2019	Environmental – Asbestos Abatement Monitoring
Vacant Parcel SEC West Atlantic Boulevard and SW 27 Avenue	\$2,450.00	\$2,450.00	2020	Environmental – Phase I ESA
Cultural Arts Center Sculpture Atlantic Boulevard and SW 1st Avenue	\$1,250.00	\$1,250.00	2020	Geotechnical Engineering
Pompano Beach Amphitheater	\$22,095	\$22,095	2019	Geotechnical Engineering

We are committed to maintaining the same team of in-house professionals that is currently in place for the CRA contract and familiar with the City's staff, standards and procedures. With virtually no learning curve, the Terracon Team is in place and ready to go. We offer the project management skills, technical expertise, relevant project experience, manpower, and equipment resources necessary to provide the City of Pompano Beach with the most responsive and quality environmental and geotechnical/materials testing services available.



7

# Project Team Form

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**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRETY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM**

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	<u>Richard Minichiello</u>	<u>34</u>	<u>B.A.</u>
Contract / Project Manager	<u>Steven Harrison, P.G.</u>	<u>32</u>	<u>M.S., B.S.</u>
Asst. Project Manager	<u>Terrence Horan, P.E.</u>	<u>27</u>	<u>B.S.</u>
Other Key Member	<u>Lucas Barroso-Giachetti, P.E., CHMM</u>	<u>19</u>	<u>B.S.</u>
Other Key Member	<u>Susan Kuzia</u>	<u>26</u>	<u>M.S.</u>

**SUB-CONSULTANT**

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	<u>Craig A. Smith and Associates, Inc. (CAS)</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Robert D. Keener, PSM</u>
Landscaping	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Michael Kroll, RLA, FASLA, President</u>
Engineering	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Stephen Smith, P.E.</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Jim Driscoll</u>
Other Key Member	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Brian Shore, RLA</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>James Orth, P.E.</u>

(use attachments if necessary)

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM *Continued***

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Other Key Member	<u>Tom Holley, CIH, FLAC, CSP, CHMM</u>	<u>29</u>	<u>B.S.</u>
Other Key Member	<u>Sergio Adasme, MRSA</u>	<u>36</u>	<u>CM Candidate</u>
Other Key Member	<u>Rutu Nulkar, P.E.</u>	<u>16</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Hugo Soto, P.E.</u>	<u>40</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Caridad Murphy, QCM</u>	<u>28</u>	<u>B.S.</u>
Other Key Member	<u></u>	<u></u>	<u></u>

8

# Organizational Chart

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## 8 Organizational Chart

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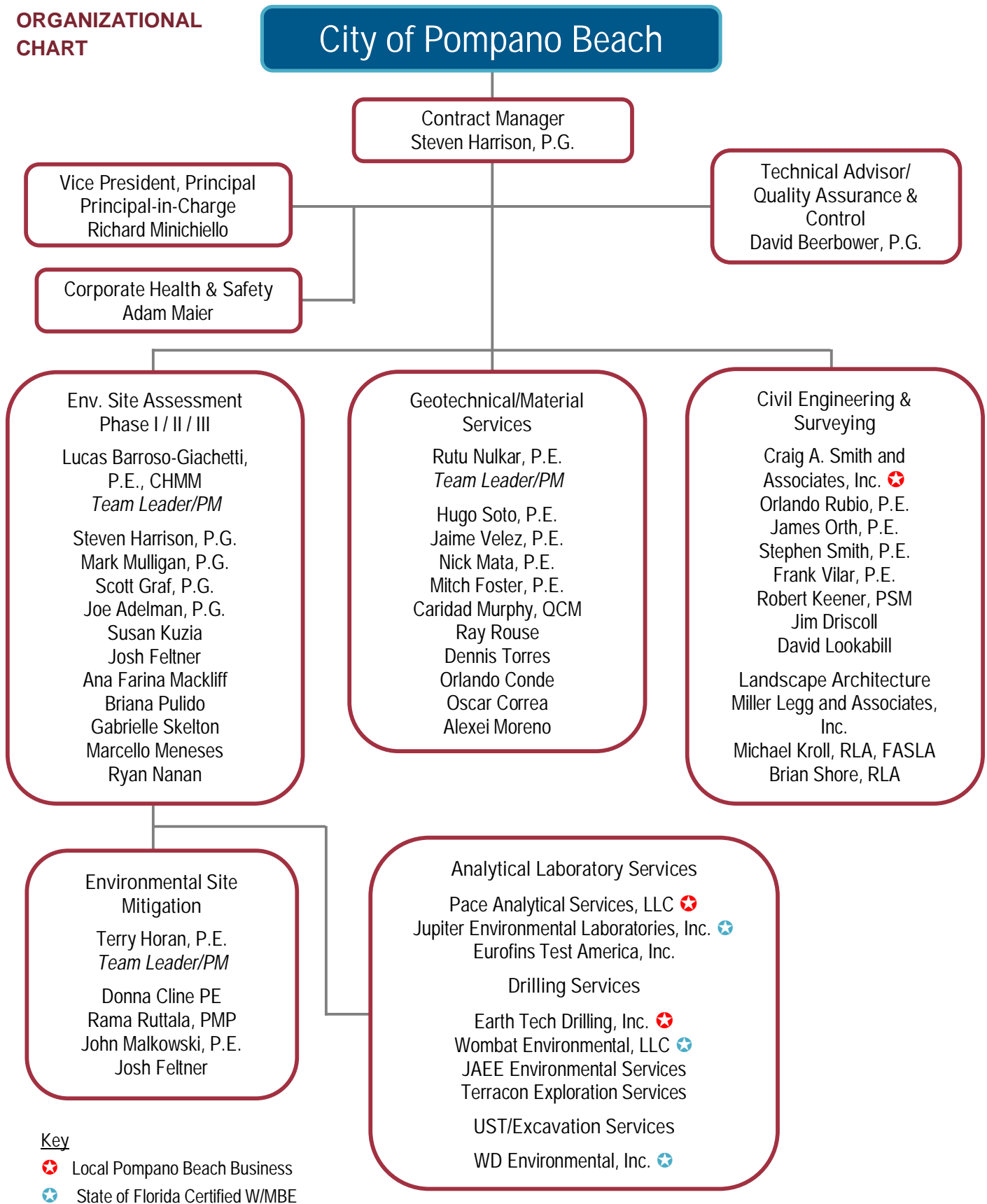
### **THE TERRACON TEAM**

The Terracon Team is comprised of highly qualified and experienced professionals and specialty subconsultants and potential subcontractors to provide each technical discipline required by this contract. In these efforts, Terracon and its team members will provide the services necessary to resolve the issues identified within any given project. Our team's experience and focus on exceeding client expectations makes Terracon abundantly qualified to undertake this program.

As discussed in Terracon's Technical Approach (Section 4) and Schedule (Section 5), Terracon will maintain complete and full responsibility for the execution of this contract whether services are performed by Terracon or our subconsultant/subcontractor team members. Terracon will maintain the final and ultimate control over the quality, consistency and integrity of the work products that will be delivered to the City of Pompano Beach. Our highly experienced team is led by Contract/Project Manager Steven Harrison who will be the single point of contact. Steven has become very familiar with working the City during the past approximate 10 years and will have overall responsibility for this continuing contract. Our team members and their roles are highlighted hereafter.

# 8 Organizational Chart

## ORGANIZATIONAL CHART



9

# Statement of Skills and Experience of Project Team

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## 9 Statement of Skills and Experience of Project Team



### THE TERRACON TEAM EXPERIENCE

Terracon is a dynamic and growing engineering and scientific consulting firm providing multiple interrelated service lines to clients at local, regional and national levels. We offer specialized engineering services throughout Florida, working with thousands of private and public-sector clients. With the strength of our firm and our existing operations, Terracon has a tremendous presence and broad scope of knowledge in South Florida. The corporation has evolved into a successful multi-discipline firm specializing in:

- Environmental
- Facilities
- Geotechnical
- Materials Testing

Our culture, systems, and structure allow us to excel at both small and large projects, combining our national resources with local expertise. The firm's success is further evidenced by a **current ranking of 22 in *Engineering News-Record's* 2020 listing of the Top 500 Design Firms**, as compared to a ranking of 41 a decade ago, and the **#1 spot for Asbestos/Lead Abatement Design**. We also hold the **#8 spot for Top Design Firms** in the ENR Southeast rankings. Terracon's current national rankings reflect our continued excellence in many key areas.

Saving our clients time and money through tailored services that meet their objectives: it's a commitment we've put into practice since our inception in 1965. Terracon has over 55 years of experience performing the on-call professional services (environmental engineering and geotechnical/materials services, environmental testing and environmental testing) that are required by the City of Pompano Beach. Terracon's staff within the 12-office Florida network has also provided these services statewide for nearly 3 decades.

Throughout our history we have worked extensively with municipal facilities, for both new construction and additions/renovations. The Terracon Team has supported **more than 80,500 projects for 24,110 clients across 50 states** in 2019. In the last three years we have performed services for **more than 84,500 environmental and 96,979 geotechnical projects nationwide**.





## 9 Statement of Skills and Experience of Project Team

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### STATEMENT OF THE TERRACON TEAM'S SKILLS

The submittal of this RLI response provides Terracon the opportunity to clearly describe our expertise, depth of resources, and tenured experience working within both the public and private sectors so it will be easy for you to decide that we should be part of the team to provide these services to the City. The following sections describe the numerous areas of technical expertise provided by our team for thousands of projects in the South Florida area, including many located in the City. During the course of these projects our team members have not only conducted testing and gathered field information for these projects but also provided professional services included below to support these projects. We wanted to highlight these services in a list for clarity and to emphasize that we are very confident with the expertise we offer to support professional services for reporting, costing, permitting and project planning. These key items are weaved into the technical service descriptions below and include, but are certainly not limited to, the following:

- Preparation of preliminary, draft and final reports to summarize findings from modelling and/or field and laboratory analyses that include recommendations for a subsequent course of action;
- Preparation of environmental due diligence reports to support property transactions whether purchasing or divesting;
- Preparation of site assessment and monitoring reports for submittal to you and/or regulatory agencies at the State and County level;
- Preparation of remedial action reports to provide engineering design to address issues of contaminated media (soil, sediment, soil gas, groundwater, surface water);
- Evaluation of regulatory requirements during project planning and development of the scope of work;
- Develop proposals and cost estimates to conduct follow-up work in support of regulatory compliance associated with current operations, infrastructure upgrades, or sites that are contaminated;
- Evaluation and reporting on endangered fauna including, but not limited to, gopher tortoises and burrowing owls;
- Preparation and submittal of permit application to include information required by the involved agencies; packages;
- Preparation and clearing of detailed project punch lists punch and certification of project to permitting agencies for environmental and engineering services;
- Project management for all projects we undertake and support for our clients to include routine updates to keep you informed and aware of conditions directly and indirectly related to the project.

## 9 Statement of Skills and Experience of Project Team

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The Terracon Team staff and resources will allow us to provide the responsive and cost-effective (value added) services you require. **Our resources and knowledge make it easy for you.**

### A Partner to Guide You through The Process

We're not just here to execute the work. We're here to be your trusted partner.

### Experienced and Dedicated Professionals to Support You

You have a powerhouse of expert resources at your disposal who have performed thousands of subsurface explorations, environmental assessments, including NEPA evaluations, site characterization, and groundwater and soil sampling and testing.

### Extensive Resources and Approach to Meet Your Schedule

With more than 900 environmental and 2,800 geotechnical/materials in-house staff, and 160 offices throughout the United States, we have the resources to quickly mobilize to perform work.

### Dynamic Resume of Accomplishments

Our relevant experience and knowledge = we hit the ground running, saving you time and money.

### Our Commitment to Safety

Terracon employees are dedicated to an *Incident and Injury-Free* culture. It is the goal of all employees in the company that everyone goes home safely every day.

## Environmental Services

Terracon provides services on thousands of projects each year. Our culture, systems, and structure enable us to excel at both small and large projects. By combining our national resources with specific local area expertise, we consistently overcome obstacles and deliver the results our clients expect. Terracon serves a diverse portfolio of private and public clients. By being responsive, resourceful, and reliable, we strive to exceed our clients' expectations for service, solutions, quality, and speed of delivery. Based on a deep understanding of our clients' needs, Terracon's commitment is centered around these key objectives. Our breadth of resources, combined with our large geographic footprint, makes Terracon an ideal candidate for these types of contracts.

Terracon staff have performed commercial due diligence services throughout Florida for the public and private sector for over three decades. Terracon staff have conducted commercial due diligence services on multiple projects for clients such as Miami-Dade County, Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida, Broward County, Palm Beach County, City of West Palm Beach, City of Tampa, City of North Miami, Miami Dade College, City of Opa-Locka, Baptist Health South Florida, Allegro Senior Living, AutoNation, Brookdale Senior Living, City of Fort Lauderdale, Nova Southeastern University, City of Hallandale Beach, City of Pompano Beach CRA, Costco Wholesale, FDEP, Florida Department of Highway Safety and Motor Vehicles, South Motor Company of Dade County, Weingarten Realty, to name a few.

As a successful employee-owned multi-discipline firm, we provide environmental engineering and geology services to property owners and municipalities that are engaged in the usage of regulated

## 9 Statement of Skills and Experience of Project Team

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substances within their operations, require regulatory compliance, or those that are purchasing and redeveloping properties. Terracon understands that environmental situations can be cumbersome to deal with and we will go the extra mile to assist you with the process. We will focus on making certain that the City is well taken care of and that we manage your environmental concerns with as little of your time as possible.

Our Due Diligence Consulting Team offers a one-source solution for environmental and geotechnical services at various facilities that are owned, operated, or in the process of being owned by the City.

We have performed environmental consulting services on many project sites in Florida and throughout the country for a wide range of clients, including A&E firms, program managers, construction managers, as well as public and private entities. Terracon's environmental services include:

- Phase I/II ESAs
- Contamination assessment plans (CAPs), reports and monitoring
- Contamination assessment
- Remedial action plans (RAPs), implementation and reports
- Waste characterization
- Remedial design and implementation
- Remediation system operation and performance testing
- Risk management assessment studies
- Management of State of Florida petroleum cleanup sites
- UST management, closure and assessment
- Brownfield site redevelopment
- Public presentations and meetings
- Asbestos/lead/mold/indoor air quality (IAQ)
- Industrial hygiene, health and safety
- Property condition assessments (PCAs)
- Protected wildlife surveys
- Solid waste planning and design
- Regulatory compliance
- Environmental management system
- Stormwater and groundwater monitoring
- Natural resources/wetlands delineation/mitigation

Our project experience is extensive and varied, including most project types in Florida, commercial buildings, airports, ports, parks, agricultural land, cattle land, and undeveloped acreage, to highlight a few.

### Due Diligence Capabilities

Negotiating the complexities of due diligence concerns can be challenging and time consuming. Terracon relies upon demonstrated experience and knowledge of local conditions and regulations to deliver solutions that are timely, practical, and make good business sense.

We have **completed \$204 million in environmental projects across 50 states** in 2019. Terracon has a thorough understanding of local conditions and regulations and knows how to effectively manage the

## 9 Statement of Skills and Experience of Project Team

potential risks presented by hazardous materials and chemical releases that have impacted a site. Our targeted services increase clarity during project development and optimize solutions during design.

Our due diligence services are extensive, varied, and include the following:

- Phase I ESAs
- Phase II ESA/site investigation and closure
- Mitigation/remediation design and implementation
- Regulatory compliance
- Natural/cultural resources
- Brownfields/site development
  - Geotechnical services
- Industrial hygiene – asbestos, mold, IAQ



*Terracon provides clients with a full range of cost-effective services to manage asbestos-related issues which translates to lower abatement fees, fewer contractor change orders, and reduced owner risk.*

### Environmental Due Diligence Services

Terracon's staff has conducted and reviewed thousands of Phase I ESAs for properties throughout Florida's urban and rural environments and was able to identify impacted materials at properties that were not known to be previously impacted. The potential for properties to be affected is real and should always be understood prior to purchase to protect both your legal and financial liability.

As the City identifies and selects properties for redevelopment, it is necessary to understand the conditions that exist and what the potential complications and financial obligations will be to cure the situation. The value of the due diligence efforts is so significant that the efforts should be performed by seasoned personnel because the knowledge gained through the years of assessing hundreds, if not thousands, of properties is invaluable. Terracon ensures that every project is directed, overseen, and reviewed by an environmental professional.

### Phase I ESAs

Numerous local, state, and federal laws have been established to protect people and the environment from contamination caused by industrial and hazardous waste, fugitive emissions, hazardous materials, and other pollutants. The generation and/or release of these and other environmental threats have the potential to contaminate air, soil, and groundwater; affect human health; and create liability for property owners, or those who purchase impacted property.

***Our environmental experts, located in more than 85 offices nationwide with expertise in all 50 states, perform due diligence services on more than 13,000 projects every year.***

Terracon specializes in due diligence services to identify and address environmental issues posing risk to the community, our clients, and their investments. Each time the City begins to consider properties for purchase, redevelopment, or financing, the City will need to understand if the property is impacted from regulated substances from current or historical usage. The first

## 9 Statement of Skills and Experience of Project Team

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step in the environmental due diligence process is to conduct a Phase I ESA to assess whether potential risks, or RECs, exist in association with the property. The Phase I ESA will provide the City with the review of the property's environmental history, which is often the first opportunity to truly understand the potential environmental liabilities associated with a property. Our local knowledge, expertise, and familiarity with local regulations, regulatory agencies, and agency personnel allow us to provide you with the most complete reports, giving you peace of mind regarding your property or facility.

RECs are conditions, potential conditions, or operations associated with the subject property or surrounding properties which result from current or historical uses that could affect the soil and/or groundwater quality. RECs do not signify that a property is impacted but represent the fact that based on the interpretation of the information reviewed, impacted materials may exist. The Phase I ESA can also be utilized to identify business risks associated with asbestos, lead based paint, wetlands, endangered species, and mold/ water intrusion which are an optional component of the due diligence process and are often recommended to assist in understanding additional risks with a property. When on site buildings are being demolished, the presence or absence of asbestos and lead-based paint should be evaluated to develop the proper procedures for removing materials in advance of, or during the demolition process.

Terracon's personnel have conducted thousands of Phase I ESA's for public and private sector client clients throughout Florida in a cost and time effective manner to minimize the timeframe required by the City to conduct their due diligence. The following is a list of the types of properties at which Terracon personnel have conducted Phase I ESA's:

- Commercial properties
- Industrial properties
- Multifamily housing
- Hospitals
- Gasoline and service stations
- Warehouse/distribution facilities
- Dry cleaners
- Retail shopping centers
- Retirement facilities
- Automobile/truck dealerships
- Rental car facilities
- Marinas
- Repair facilities – automobile/truck
- Agricultural land – cattle/row crops
- Landfills
- Undeveloped land/wetlands

Terracon's Phase I ESAs are completed in accordance with ASTM E1527-13 and 40 CFR Part 312, entitled, "Innocent Landowners, Standards for Conducting All Appropriate Inquiries (AAI). These reports are designed to provide "an *environmental site assessment* of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and *petroleum products*". As such, the Phase I ESA is "intended to permit a *user* to satisfy one of the requirements to qualify for one of the three types of limitations on CERCLA liability (hereinafter, the "*landowner liability protections*," or "*LLPs*")":

- innocent landowner;
- bona fide prospective purchaser
- contiguous property owner; or

## 9 Statement of Skills and Experience of Project Team

### ASTM Phase I ESA Methodology

The Phase I ESA is a research effort conducted to gather readily available documentation concerning historical and current operation of a site and surrounding properties and to perform a physical inspection of those areas to understand if there is the possible presence of an environmental condition that resulted from current or historic operations. The tasks performed as part of the Phase I ESA process are critical to develop an understanding of conditions that could be of potential concern to the soil and groundwater quality. Terracon personnel review facilities and the surrounding area for conditions that would be considered of potential concern to a property due to the usage and handling of regulated substances. The practices utilized during those handling efforts will be reviewed to the extent possible.

The performance of a Phase I ESA includes the completion of the following four tasks, each broken down into key components that are performed as part of the assessment for potential risks to the property.

- Interview
- Site reconnaissance
- Historical site review
- Regulatory file review

### Report Preparation

Upon completion of the research and interpretation of the data obtained, a formal summary report is prepared to present the following:

- Methodologies and sources of information utilized
- Data gaps – any areas of the research that are missing sufficient data to draw a proper conclusion
- Findings, conclusions and presentation of RECs
- Recommendations (if requested by the User)

If RECs are identified in the Phase I ESA, Terracon will discuss the findings of the Phase I ESA with the City personnel to determine if further assessment efforts should be undertaken.

### Phase II ESAs

In the event that a Phase I ESA identifies RECs at the subject property, Terracon will design a Phase II ESA sampling program to assess for the presence of regulated constituents in areas of concern and discuss the planned efforts with the City. The sampling program will address the media most likely to be impacted which could include soil, groundwater, soil vapor, surface water, and lake or canal bottom sediments. If not already completed as a component of the Phase I ESA, building components may be incorporated into the Phase II ESA to assess for the presence of lead-based paint, asbestos, IAQ concerns that could include chemicals as well as mold sampling, and radon.



*During the planning stage, our staff can perform due diligence to identify and quantify the cost of existing or potential environmental liabilities through site assessments, and natural and cultural resource investigations and studies.*

## 9 Statement of Skills and Experience of Project Team

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When RECs include the potential for buried structures or buried debris/landfilling, our team will conduct a geophysical assessment using ground penetrating radar (GPR) to assess for the presence of underground anomalies that may be present at the property.

The scope of work for the Phase II ESA is uniquely designed for each specific property to address the concerns identified within the Phase I ESA prepared for that property with the goal of developing a reasonable understanding of the impacted area so that decisions regarding usage of the property can be developed early in the evaluation process. Terracon conducts Phase II ESA's in accordance with the most recent additions to the ASTM "E1903 (2011) Standard Guide for Environmental Site Assessments". The results generated from the Phase II ESA must be accurate, appropriate and defensible as decisions regarding the purchase of a property is likely to result from this process. This allows the buyer to incorporate potential liabilities, including real and perceived costs, associated with an impacted property, into their decision-making process.

Soil and groundwater samples are often collected utilizing direct push technologies because this provides a very efficient screening device for water sampling; however, when ongoing monitoring and rigorous QC standards are required for groundwater sample collection, monitoring wells will be installed to facilitate sample collection. Prior to working at any project site, a site-specific Health and Safety Plan (SS-HASP) is prepared to detail potential contaminants and physical hazards that site workers may be exposed to during site work. Notice to all public utility companies and requests for private utility information is conducted prior to beginning subsurface work.

Data generated from the analysis of the samples collected during the Phase II ESA are interpreted to assess if impacts are present from the RECs. The identification of impacted materials will be presented to the City to discuss how the impacts could affect proposed usage and remedial requirements. Current or future residential property usage requires that more stringent regulatory requirements be adhered to than if the facility was designated for commercial or industrial use.

The scope of the Phase II ESA will not be designed to fully assess the estimated aerial extent of an impact but to identify its presence and obtain an understanding of its significance. All sampling efforts are conducted in accordance with the Standard Operating Procedures (SOPs) detailed by the FDEP in Chapter 62-160 of the FAC.

Based on the proposed use, ownership requirements and regulatory exceedances, Terracon will recommend if further assessment should be conducted to assist the parties in their decision making process regarding the transaction.

All subcontractors are licensed and insured in their field of specialization and the environmental laboratories utilized by Terracon are State of Florida FDEP, DOH approved, and NELAC compliant.

## 9 Statement of Skills and Experience of Project Team

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### Natural/Cultural Resources

Whether a project site is undeveloped or involves redevelopment of an existing site or right-of-way, compliance with a variety of natural and cultural resource regulations may be required, including the NEPA, Federal Energy Regulatory Commission (FERC) documents and filings, Endangered Species Act, Waters of US / 4 Clean Water Act, Section 106 of the National Historic Preservation Act, and a myriad of state and local regulations.

Terracon's network of experienced professionals helps our clients with:

- Determining what federal, state, and local regulations apply to the site
- Evaluating what regulations are likely to apply depending on how much is known about the project design
- Developing a phased approach with a customized checklist that identifies "critical path items" leading to successful regulatory compliance and project completion.

Terracon's biologists, geologists, archaeologists, historians, NEPA and FERC specialists, and professional engineers apply their skills to a wide range of project settings to conduct natural and cultural resource studies that facilitate environmental planning and compliance with regulations.

Our natural and cultural resource services include the following:

- NEPA EIS, EA, CE (environmental impact statements, environmental assessments, categorical exclusions) studies and checklists
- Environmental impact assessments
- Wetlands/waters of the U.S. delineation
- Wetland/stream mitigation and restoration
- U.S. Army Corps of Engineers (USACE) Section 10/404 Permitting/Mitigation
- Threatened and endangered species habitat assessments
- Species-specific studies
- Tree and vegetation surveys
- Cultural resource management under Section 106
- Archaeological investigations and monitoring
- Historic structure assessments (Historic American Building Surveys - HABS/Historic American Engineering Record - HAER/Historic American Landscapes Survey - HALS)
- Noise studies and modeling
- GIS and GPS mapping services
- Wetland monitoring
- FERC Process: Section 7; Section 2.55; Section 157, Subpart F



## 9 Statement of Skills and Experience of Project Team

### Wetland Surveys and Mitigation

Wetlands are determined by assessing the type of vegetation that is present, along with the characteristics of the soil and the hydrologic conditions. Jurisdictional wetlands do not necessarily require standing water to be present. Careful site inspections need to be conducted to determine if wetlands characteristics are present pursuant to Sections 62-340.100 through 62-340.500, FAC, as ratified by Section 373.4211 Florida Statutes (F.S.), as well in accordance with the 1987 USACE Wetland Delineation Manual. The vegetative index, as found in Section 62-340.450 FAC, is also used to assist in the identification and delineation of wetlands. Plants on the vegetative index are listed as Obligate (OBL), Facultative Wetland (FACW), or Facultative Upland (FACU). The presence of obligate wetland plant species indicates wetland habitat.



*Terracon combines local knowledge and regional experts to deliver a tailored approach to specific projects and schedules.*

Wetland resources are regulated by the Federal government through the USACE, by the State through the Water Management Districts (SFWMD) or the FDEP and in Broward County by the EPGMD. The goal of wetland resource regulations is a no net loss in function or value of wetland resources. This is accomplished through the avoidance of impacts as the first priority, minimization of impacts as the second, and mitigation as the third.

Consultation with the jurisdictional agencies should be conducted early in the planning stages to confirm if the agencies may or may not consider any portion of a site as wetlands. Should the agencies claim a portion of the site as jurisdictional wetlands, permits from these agencies will be required if the identified wetland area will be directly or indirectly impacted by the proposed development. A formal or informal jurisdictional delineation may be requested, prior to the submittal of an application to an agency, to establish and agree upon the jurisdictional line and specific wetland area to facilitate permit processing.

A wetland mitigation assessment methodology known as the Uniform Mitigation Assessment Method (UMAM), codified in Chapter 62-345 of the FAC, has been adopted in the state of Florida to be utilized by all State and local agencies. The USACE also adopted this methodology for use in the State of Florida. The UMAM provides a quantitative methodology for assessing the Functional Loss (FL) of an impacted wetland resource and the methodology to determine the Relative Function Gain (RFG) of an enhanced or created mitigation area to determine the adequacy of the proposed mitigation. If on-site or off-site mitigation is proposed to offset wetland impacts, the adequacy of the mitigation will need to be evaluated by conducting a UMAM assessment of both the impact and mitigation sites.

If wetland impacts are to be mitigated through the purchase of credits from a licensed mitigation bank, the exact number of credits to be purchased will be determined by the specific methodology the Bank was originally permitted under. Credits can only be purchased from a bank whose service area covers the impact site. Pompano Beach falls within the service area of the Florida Everglades Mitigation Bank (EMB) located in Dade County, and the Loxahatchee Mitigation Bank located in Palm Beach County. The

## 9 Statement of Skills and Experience of Project Team

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EMB utilizes the WATER assessment technique to determine credit needs and Loxahatchee utilizes the WRAP assessment methodology.

As a part of a project planning process we will investigate the existing site and surrounding conditions, and the applicable databases to determine if the project area falls within suitable or identified habitat of any State of Federally listed wildlife species. Should there be any potentially suitable or known habitat present, or imperiled species observed, full coordination will be conducted with the Florida Fish and Wildlife Conservation Commission (FWC), the U.S. Fish and Wildlife Service (USFWS), or National Marine Fisheries if aquatic environments are involved. All required permits will be obtained and the Standard Operating Procedures established for the species that may be present, and any other jurisdictional agency requirements will be followed with the implementation of the project. If wildlife relocation is required all permit conditions will be implemented as well as any seasonal criteria, such as not relocating burrowing owl nests when active.

### Threatened and Endangered Species

Terracon routinely reviews publicly available data during the initial assessment and develops a list of listed species (i.e., threatened and endangered species or species of special concern) or their habitat that may occur on-site or adjacent to the project site. Terracon conducts field assessments and surveys to identify listed species and their habitat that have the potential to occur within the proposed project limits. Data collected includes the following:

- Species observations (i.e., tracks, scat, physically observed, etc.)
- Habitat and quality of the habitat (i.e., low, medium, high)
- GPS coordinates of burrows or nests marked, habitat, and observation points

If listed species or their habitat are observed or documented, Terracon would obtain GPS readings of the location of the observation, notify the City and be prepared to conduct species-specific surveys. Our Environmental Planning team has extensive experience conducting these surveys, consulting and permitting with the agencies (USFWS, FWC, Broward County, Miami-Dade County Department of Regulatory and Economic Resources [DRER], and other agencies), and relocation or mitigation. Species include, but are not limited to, the following:

- |                      |                        |
|----------------------|------------------------|
| ■ Gopher tortoises   | ■ Corals               |
| ■ Sand skinks        | ■ Bald eagles          |
| ■ Burrowing owls     | ■ Crested caracara     |
| ■ Scrub jays         | ■ Florida bonneted bat |
| ■ Johnson's seagrass | ■ Eastern indigo snake |

### Site Investigation

The process to redevelop properties within the urban environment often need to address subsurface impacts that were identified through historical records or analysis of samples collected as part of the due

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diligence process. The presence of impacted groundwater and/or soil samples requires that further assessment be conducted to understand the extent and degree of the affected area. The City will be able to use the assessment data along with projected remedial costs to conduct a cost-benefit analyses in evaluating how to proceed with the property.

### Groundwater and Soil Assessment

The first step in conducting a site assessment is to understand the ultimate goal of a project so that that the assessment can be focused to meet those goals. A proper assessment requires that the consultant combine their knowledge of a site's history, lithology, and hydrogeology with their knowledge of sampling technologies and chemical migration into a well formulated approach. All assessment efforts are designed to fulfill the requirements of Chapter 62-780, FAC. Prior to working at a project site, a SS-HASP is prepared to detail potential contaminants and physical hazards that site workers may be exposed to during site work. Notice to all public utility companies and requests for private utility information is conducted prior to beginning work.

Groundwater and soil samples are collected through the advancement of soil borings and monitoring wells to access the specific location and depth from where samples are to be collected. Samples are collected throughout the area of the suspected impact in accordance with FDEP SOPs as detailed in Chapter 62-160 FAC and supported by our FSQM. Soil samples are screened in the field using an organic vapor analyzer (OVA) to assess for the presence of volatile organic carbon compounds prior to the collection of samples for laboratory analysis. The screening results help to guide the placement of soil borings for the collection of samples that will be submitted for laboratory analysis.

Soil and groundwater samples are analyzed for the chemicals of concern and the analytical results are interpreted to estimate the magnitude of the problem as well as the horizontal and vertical extent of the affected area. Integral components to the assessment and understanding of the distribution and migration of affected materials at a facility include the following services:

- Development of aquifer characteristics
- Hydrogeological modeling
- Soil gas assessment
- Source identification
- Historical site usage
- Surface water body and tidal influences
- Understanding of background/naturally occurring conditions

Terracon's personnel have extensive experience with the assessment, evaluation and remediation of impacted soil, sediment, and groundwater at facilities located throughout Florida and are prepared to assess sites for whatever potential impacts may be encountered.

Successful projects have addressed the following regulated substances:

- Petroleum hydrocarbons
- Chlorinated solvents
- Polychlorinated biphenyls (PCBs)
- Metals – arsenic, lead, chromium,

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- Oil and grease
- Pesticides/herbicides
- Dioxins

The assessment data is then utilized to understand the ramifications that the impacted materials will have upon the site and to select the appropriate remedial approach. It is common that multiple media (soil, groundwater, surface water) are affected at a site and it is essential to understand the interactions between the matrices that will affect the degradation and migration of the regulated substances.

With our experience in managing the assessment and remediation of properties, we will provide the City with cost effective timely solutions that will return the property to its expected functionality.

Regulatory standards may require that remedial efforts be implemented to address impacted materials at a residential property while the same concentrations at a commercial property may only be required to utilize engineering (i.e., concrete cap, barrier wall) and institutional controls (i.e. deed restriction) to manage the affected materials.

### **Contaminated Sediments**

Contaminated sediments potentially exist alongside every roadway of South Florida cities as stormwater runoff carries regulated compounds from roadways into the surface water canals. The regulated compounds will enter the surface water body with sediment particles and migrate through the water where they will tend to become part of the sediment load at the bottom of the canal or lake.

Assessing canal bottom sediments presents a situation that is nothing similar to the methodologies and practices employed at land-based properties. Canal bottom sediments are in constant state of flux and behave as a fluid that makes them difficult to sample and to define boundaries of potential impacts. Bottom sediments are stratified with a nepheloid layer (supersaturated floating layer of mud) in direct contact with the surface water. As sediment depth increases, the weight of the sediments compresses the solid materials and squeeze out the water as a function of the physical and mineralogical composition of the sediments.

Terracon staff completed the assessment and subsequent remediation of canal bottom sediments where a canal in a residential neighborhood was impacted by liquid asphalt. As regulatory guidelines to provide cleanup target levels (CTLs) for sediments are limited, Terracon staff worked with the FDEP to detail the manner in which the analytical data should be interpreted and utilized criteria from the Dutch government and NOAA (National Oceanic and Atmospheric Administration) to develop cleanup goal for the site.

The assessment efforts ran contiguous to mitigation efforts (Source Removal) and included the collection of surface water samples and sludge bottom samples for analysis. The Interim Source Removal effort involved isolating sections of the canal and dewatering each section so that the sediments could be remediated. Floating oil and sediments were removed from the water before returning the water to the

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canal. Canal bottom sediments were removed through a combination of vacuum and excavation efforts until confirmation data of remaining sediments met the criteria established for the site.

The FDEP approved the assessment and source removal efforts under Chapter 62-780 FAC and the site obtained closure upon completion of the 12-month monitoring program.

### Turbidity Monitoring

Terracon staff have supported construction projects where the disturbance of coastal areas may create sediment, or turbidity plumes, that migrate outside of the controlled area. Increased turbidity can negatively affect biological processes and must be monitored during activities that disturb sediments within the coastal environment. Our team has monitored turbidity for the following noteworthy projects 1) an 8 month (24/7) beach nourishment project off the coast of Miami Beach; monitoring was conducted surrounding the dredge site where silt plumes were commonly created-and 2) monitoring an inland waterway when a marina was being developed as part of a condominium project off Atlantic Blvd in Pompano Beach; as the marina was being dredged there were concerns that breaking the “bridge “ between the newly created body of water within the marina and the canal to which it was going to be connected would release a turbid plume into the waterway. Monitoring is conducted to document that turbidity was not increased by more than 29 NTUs (nephelometric turbidity units) above background or work had to stop until additional controls were established to control the turbidity.

### Brownfields

Brownfields are defined as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Brownfields programs can work very well to attract developers to the project areas, with available land for appropriate reuse, through financial incentives (tax credits, job creation, grants (where applicable), low interest loans) and liability protections from preexisting conditions to sites for which a Brownfield Site Rehabilitation Agreement (BSRA) has been signed. Redevelopment is enhanced by the use of risk based corrective actions (RBCA) to develop appropriate CTLs without requiring unnecessary remedial efforts.



Terracon will work with the City to provide a realistic evaluation and assessment of the liability and costs associated with the redevelopment of environmentally-impaired properties that are otherwise valuable. The successful redevelopment of these properties requires foresight and experience in understanding how the interests of all stakeholders may vary and how they can converge. Sometimes a successful project may include leaving contamination in place after development, where the contamination is controlled to minimize potential exposure to underlying hazards.

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Terracon can assist the City with preparing grant applications for potential funding opportunities from the U.S. Environmental Protection Agency (EPA); meet with interested parties to provide assistance in understanding project specifics; assist with negotiation of assessment, remediation requirements as well as timeframe requirements for inclusion in a BSRA; participate in public meetings as requested; prepare technical reports; and conduct assessment and remediation as necessary and appropriate.

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***Since 1996, Terracon has been a part of more Phoenix Award-winning teams than any other consultant. We have received 16 Phoenix Awards representing successful public and privately funded redevelopment projects.***

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Safely restoring a contaminated property and helping to find purpose in its reuse is one of the most rewarding opportunities an environmental consultant can have. It requires a collaborative team with the creative vision to see beyond the condition of an existing site, and instead see the possibilities for redevelopment.

Terracon's knowledge and proven experience offers our Brownfields assessment and redevelopment clients with property-specific solutions at an efficient business pace.

Brownfields services we provide include:

- Grant writing
- Community outreach and engagement
- Property inventory/prioritization/ranking
- Due diligence and site assessment
- Agency plans and reports
- Report preparation
- Grant management
- Environmental assessment and remediation
- Asbestos and LBP surveys
- Mold and IAQ investigations
- Regulatory compliance
- Regulatory permitting and mitigation
- Cost-to-remedy analysis
- Property condition assessments
- Risk management
- Strategic corrective action
- Tax credit assistance

Florida's Brownfields program is more streamlined than the Federal counterpart due to Florida regulations developed to govern these sites. The City can leverage Federal grant money utilized to initiate a project with Florida Tax incentives to maximize the benefits of working within the Brownfields program.

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**Terracon has completed projects funded by more than 253 EPA Cooperative Agreements.** Terracon and our experienced staff have assisted clients in obtaining federal Brownfields grant funds exceeding \$40 million.

### Environmental Mitigation/Remediation

Terracon staff of environmental consultants and engineers have mitigated/remediated hundreds of impacted properties across Florida and the United States through implementation of a variety of technologies selected to best resolve the impacted condition. The selected technology designed and implemented at a specific site is selected through the development of a remedial action plan that considers overall cost, timeframe for completion, ease of implementation, accessibility, and likeliness of regulatory approval. Terracon has remediated sites with a wide variety of technologies, including the majority of those considered by the City in the list provided.



*City of Opa-Locka's Northwest 27<sup>th</sup> Avenue Assessment and Redevelopment Project pictured above. Terracon provided Brownfields consulting services for the City's \$400,000 EPA community-wide assessment grant.*

In developing a remedial strategy for a site, Terracon evaluates available technologies to best mitigate impacted materials and select the technology, or group of technologies that best fit the needs of the site. Various methods utilized to address the constituents of concern include but are not limited to the methods listed below:

- Air sparging – oxygen diffusion
- Bioremediation/bioventing
- Engineered wetlands – phytoremediation - ex-situ treatment
- Excavation
- Fixation
- Groundwater pump and treat – air stripping towers, carbon vessels, resins or other media
- Groundwater ozonation
- In-situ chemical injection
- Reactive barriers
- Slurry walls and recovery trenches
- Soil vapor/multi-phase extraction
- Vapor mitigation of methane and/or volatile compounds

Environmental remediation can be a significant undertaking for buyers/owners of real estate or responsible parties, so it critical that our team of engineers and scientists understand the site and proposed future use, to design a cost-effective remedial approach to obtain regulatory approval and, ultimately, closure. Whether the process pursues conditional, using institutional and engineering controls, or unconditional closure, the process will be undertaken in accordance with regulatory requirements where Terracon works closely with regulators from conceptual development of the remedial plan to implementation and closure of a projects to support a strong working relationship. The path selected will be selected to support the responsible party's plans for use/ redevelopment so the client can realize the

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maximum potential of the property. Remedial design and implementation experience includes conventional remediation technologies (i.e., source removal, contaminated site encapsulation, natural attenuation) and innovative technologies including, *in-situ* bioremediation/ chemical oxidation, soil vapor extraction, enhanced bioremediation, and other *in situ* soil and groundwater treatment technologies.

Throughout the design process, Terracon will seek to select, design, and implement an efficient and cost-effective approach to save the City money and provide a successful site closure.

### Interim Source Removals

Interim source removals provide a regulatory approved mechanism that allows property owners to conduct aggressive remediation of properties without laboring through the preparation and approval of a remedial action plan. Interim source removals allow owners/ responsible parties to pursue a remedy that has the potential to remediate impacted materials at a site. Soils or sediments and groundwater or surface water can be addressed through this mechanism; the most significant limitation is that the process cannot spread contamination into areas of the site that was not previously impacted. Vacuum or groundwater removal systems that require engineering should obtain regulatory authorization prior to use.

Terracon's staff has been conducting Interim Source Removal projects to advance redevelopment projects to the construction phase throughout Florida for many years. Interim Source removal projects are an excellent way to address impacted materials, especially soils with limited groundwater contamination, that were identified at redevelopment sites where timing is critical.

### Remediation Design

Remediation efforts are very site specific and will be designed to incorporate the timing and type of development proposed for the property because future usage can play a significant role in determining the ultimate course of action. Of course, understanding the technical aspects of the distribution of the impacted area are critical to developing a remedial plan, but understanding when the City is willing to obtain a Conditional Closure for a property versus one where it would be unacceptable is essential to the planning of the remediation efforts. The City may allow the land beneath a future commercial building to be closed with a deed restriction but the site where a children's playground is to be constructed would not be amenable to the same closure conditions. The data obtained from the site assessment will detail the subsurface soil and groundwater quality as a framework for the development of a remedial plan.

### Feasibility Studies

To identify appropriate remediation strategies, Terracon conducts feasibility analyses to evaluate the combination of owner's requirements and site factors which include the following:

- media affected (soil or groundwater)
- source area
- extent of the impacts
- future use of the site
- remedial cost including implementation and operations
- site disruption and loss of revenue
- timeframe for completion
- regulatory requirements



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Terracon personnel have extensive engineering experience implementing cost effective methods for properly remediating impacted soil and groundwater in accordance with regulatory requirements. The selected remedial strategy may include conventional remediation technologies (i.e., source removal, contaminated site encapsulation, natural attenuation) and/or innovative technologies including *in-situ* bioremediation, soil vapor extraction, enhanced bioremediation, and other *in-situ* soil and groundwater treatment technologies. The final resolution also considers site conditions, cost, and future site plans.

Terracon's experience in the many varied aspects of remedial operations (Source Removal/Initial Remedial Actions (IRAs), spill recovery, preparation of RAPs, pump and treat systems, insitu methods, vacuum extractions, etc.) enables us to incorporate site findings into an approach that addresses the Client's and regulatory agency's requirements while combining financial and time constraints with technical concerns.

### **Conditional Closure**

While Terracon's remediation experience includes designing and implementing remedial action programs under the oversight of state regulatory agencies, our team will work with the City to develop the best option for securing site closure. Regulations governing assessment and remediation, Ch. 62-770, 780 and 785 FAC, support the use of risk-based criteria to achieve site closure is in line with current and proposed site usage and the evaluation of exposure pathways, so that the closure conditions remain protective of the general public.

The FDEP has established generic closure options that can be requested if the site profile meets the generic conditions. These conditional closures can be achieved with little to no remediation at a property but will require that a restrictive covenant – an institutional control or deed restriction, along with appropriate engineering control, if possible – two feet of clean fill or hardscape, no use of groundwater, relocating stormwater drainage systems, etc. – be obtained. When the property is scheduled to be redeveloped, maintaining contaminated materials on site may result in health and safety concerns that would not ordinarily be an issue at a construction site.

Construction personnel would need to be aware of site conditions and have the appropriate training to work on the site. Other considerations that would need to be evaluated are the management of contaminated soils on site - could the soils be managed and reused beneath paved areas/ foundation or would they need to be transported off site anyway. In making the decision to obtain a conditional closure site development and future operations need to be considered. Terracon's experience in identifying and managing these situations can be very advantageous when redeveloping a property that contains impacted materials.

Conditional closures are also provided when alternative CTLs are developed through the risk assessment process as described earlier. Unless a site meets the most stringent of the CTLs for soil and groundwater, a conditional closure is provided through one of the management options available through the FDEP.

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### Soil and Groundwater Remediation

Classical remediation technologies limited disruption to site activities and focused on withdrawing soil vapors and/or groundwater from the ground for aboveground treatment. While these technologies produced positive results and remain as viable alternatives, changes in technology coupled with increases in the knowledge base produced new schools of thought regarding site remediation. Some of the biggest changes are related to a better understanding of risk and natural attenuation of regulated compounds. Remediation technologies that provide in situ treatment of soil and/or groundwater have the potential to leave residuals of the regulated substances that can cause delayed release of regulated substances, only to cause concentrations of regulated substances to rebound at a later date.

The overall components of a complete remedial strategy are segregated into the following areas that allow for sites to be properly evaluated, remediated and closed with regulatory approval. Some closures will have restrictions that due to the inability to access portions of an affected area or as a cost saving technique, sites may be remediated to commercial rather than residential standards. In these cases, the owner agrees to have institutional controls (deed restrictions) put on the property in addition to potential engineering controls (cap, limited water usage, etc.) to manage the impacted site.

The following components of remedial strategies are used independently or in conjunction, depending upon the specific needs of the property.

#### ■ Source Removals

- Includes the excavation of soils, often coupled with the pumping of affected groundwater from the excavation
- Allows for rapid removal of the source area, which contains the majority of the affected material
- Characterization of the waste streams may allow for reuse of the excavated materials at an alternative facility in lieu of disposal
- Opening the subsurface promotes natural attenuation, if warranted, to reduce remaining limited concentration to below regulatory thresholds

#### ■ Risk Assessments

- Evaluation of analytical data to assess if remedial efforts are warranted
- Allows for development of site specific CTLs based on site conditions and receptors
- Terracon will work with regulators to obtain approval for risk-based CTLs resulting in reduced remedial costs

#### ■ Soil Remediation

- *Incineration/ Landfilling:* Affected soils are excavated and replaced with imported fill, if needed. Soils are disposed at licensed through incineration or landfilling at licensed facilities. This method provides an aggressive method to address sites where access is open and timing is critical.

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- *Vacuum Extraction:* Volatile vapors are withdrawn from the vadose zone by applying vacuum pressure to a series of wells. Extracted vapors are often treated with thermal oxidizers, afterburners, or activated carbon prior to release to the atmosphere.
- *Soil Cover/Engineering Controls:* Impacted materials at some facilities are too extensive or inaccessible to remediate realistically. Through proper understanding of site conditions regarding future use and potential impacts to groundwater, a regulatory approved cover (2-feet of clean fill, concrete, asphalt parking lot, etc.) may be installed to restrict access to the area and meet the requirements for restricted closure.
- *Enhanced Bioremediation:* Rather than disposing of affected soils or waiting for natural processes to degrade regulated constituents, Terracon can also enhance biological and redox (reduction/oxidation) conditions through the addition of regulatory approved chemicals. These chemicals alter subsurface redox conditions to produce a more favorable environment for appropriate bacterial growth and enhanced chemical oxidation.

### ■ Groundwater Remediation

- Terracon's extensive experience includes design, installation, and operations and maintenance of groundwater remediation systems. Groundwater remediation systems must be designed to capture the area of affected groundwater, control future migration, treat the affected water, and document that air emissions are acceptable. Terracon can implement many types of remedial methodologies which include pump and treat systems, in-situ treatment with chemical amendments, natural attenuation and monitoring, or installation of physical barriers (i.e. slurry wall, barrier wall installation).

### ■ Vapor Mitigation

- Vapor mitigation systems have been designed and employed by Terracon at sites to mitigate exposure from methane (landfill gas) and volatile organic compounds). Passive and active systems have been designed and installed using impervious membranes, venting pipes, and explosion proof blowers, individually, or in combination, to mitigate concerns related to vapor intrusion which could result in health impacts or fire/ explosion concerns

Terracon is prepared to address whatever type of remedial situation is required. Terracon staff and our team have specifically remediated soil and groundwater at numerous sites through a wide variety of the technologies available the various technologies. Soils have been remediated through excavation at properties throughout south Florida and the west coast of Florida and been remediated through enhanced bioremediation, and vacuum extraction with emission control through afterburners and vapor phase carbon adsorption. Groundwater has been remediated through natural attenuation, pump and treat with air stripping towers, low profile air strippers, injection of chemicals for insitu treatment, and carbon adsorption. Bioremediation/ oxidation of petroleum hydrocarbons through addition of oxygen release compounds have been conducted in association with petroleum hydrocarbon impacts. Terracon's team fully understands alternative technologies available and is prepared to design the appropriate system for the proper application.

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### Industrial Hygiene – Asbestos, Lead-Based Paint, Mold, and IAQ

Occupational health and safety is a critical part of a productive and safe workplace. Exposures to chemicals, noise, hazardous materials, mold, and other contaminants can result in serious health problems.

Terracon offers our clients one of the largest occupational health and safety groups in the U.S. that includes Certified Industrial Hygienists (CIHs), Certified Safety Professionals (CSPs), and industrial hygienists. Our health and safety team have extensive experience identifying hazards, monitoring exposures, evaluating risks, and formulating measures to correct problem areas.

Terracon's expertise is built on decades of experience with a wide variety of projects and settings that range from individual employee exposure evaluations, to community-wide health research projects. Our clients range from Fortune 500 companies to local small businesses, in various markets including power production, oil and gas exploration, manufacturing, petrochemical refining, healthcare, colleges and universities, railroads, mining, aviation, shipping, food production, and retail.

Projects conducted for the City will often have buildings onsite that require rehabilitation and/or demolition. Prior to any work that might disturb building materials; it must be known if the materials are asbestos containing or painted with lead-based paint. Our team of building material specialists will provide the services needed to address the issues that may exist at these project sites.

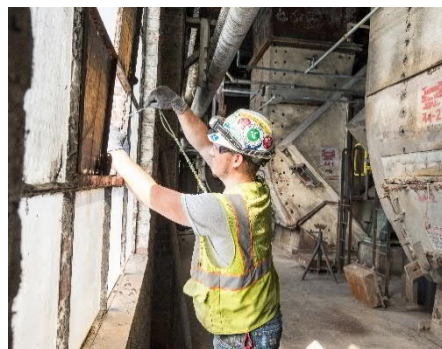
#### Asbestos Surveys

Asbestos-containing materials (ACM) were historically utilized during the construction of every type of building. Many types of asbestos materials can still be legally bought and installed today. Asbestos is found in a wide range of building materials including surfacing treatments, pipe insulation, spray-on fire-proofing, floor and ceiling tiles, roofing products, and many others. As these materials age, they deteriorate, and may present health risks to building occupants and maintenance workers if not properly managed or removed. Terracon offers a one-source solution for asbestos consulting with a nationwide network of asbestos professionals, including more than 400 Asbestos Hazard Emergency Response Act (AHERA) certified asbestos staff.

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***Terracon offers a one-source solution for asbestos consulting with a nationwide network of asbestos professionals, including more than 400 AHERA-certified asbestos staff.***

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*Terracon industrial hygienists performed asbestos surveys on more than 4,100 projects in 2018.*

Our staff includes asbestos inspectors, planners, and designers who have experience in providing asbestos management solutions for property management companies, developers, general contractors, healthcare facilities, native american tribes, schools, government facilities, private industries, and the A/E community.

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Terracon's inspectors perform surveys and collect samples of suspect ACM or potential LBP materials in schools, commercial, and municipal buildings. The asbestos surveys follow the guidelines established under the EPA's AHERA program and, as required, by EPA Regulation 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAP).

Asbestos surveys begin with a review of available construction documents to possibly identify suspect asbestos containing building material (ACBM), and a visual survey is then conducted, and suspect material is sampled and analyzed for asbestos content. In accordance with EPA regulations, only those materials containing greater than one percent asbestos would be reported as an ACM.

Asbestos surveys will be performed by appropriately trained staff who are AHERA-certified Building Inspectors. Terracon will begin with a visual survey to determine unique homogeneous areas of suspect ACM and the condition of the materials.

Suspect materials will be physically assessed for friability and evidence of damage or degradation. Bulk sample collection will be conducted in general accordance with the sampling protocols outlined in 40 CFR 763.86 (AHERA). At least three samples of each identified suspect material will be collected. Terracon samplers are aware of the requirements for thorough surveys and excel at locating and sampling suspect materials that can be commonly overlooked such as caulking, vermiculite block insulation, paints, and electrical wiring.

The suspect ACM samples will be submitted to a subcontracted National Voluntary Laboratory Accreditation Program (NVLAP)-accredited lab for analysis by visual estimation using polarized light microscopy (PLM). If friable samples are determined to be  $\leq 3\%$  asbestos-containing by PLM, Terracon recommends the laboratory be instructed to perform point counting analysis on the samples. For all non-friable organically bound materials that are determined by PLM to be  $\leq 1\%$  asbestos-containing (including non-detect), Terracon recommends that one sample of each material will be analyzed by transmission electron microscopy (TEM). The extra point count and/or TEM analyses at minimal cost can result in substantial overall project savings by reducing the quantity of regulated materials requiring abatement and special disposal.

Upon receipt of laboratory results, Terracon will prepare a written report describing the sampling methodology and the results of the asbestos survey. The report will describe the number, type, and location of suspect ACM samples, the analytical results, the estimated quantity and the condition of materials identified as ACM. Drawings depicting the layout of the site, the location of the collected samples (one drawing per building minimum), and the location and extent of ACM will be included as appendices in the report. Representative color photographs of the site will also be included in the report, if requested. One draft PDF copy of the report will be submitted for City review that presents the results of the asbestos survey, and City comments will be considered prior to submittal of the final report.

### Abatement Planning and Monitoring

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If ACM is identified during the survey, Terracon has extensive experience in preparing plans and specifications for remedial actions including enclosure, encapsulation, and partial or complete removal. We can also provide trained and certified technicians for air sampling during the abatement process.

### Abatement Design and Specifications

Terracon has licensed personnel with extensive experience providing oversight, project documentation, and air monitoring throughout abatement projects. Our on-site personnel will work with you and the abatement contractor to ensure the project is conducted in accordance with regulations and project specifications. Upon completion, we provide a project closeout report including all required documentation for your records.

### Operations & Maintenance Planning (O&M)

Terracon prepares management plans that provide specific procedures for operating and working safely around ACBM and lead-containing paint (LCP). Commercial plans include operations and maintenance programs that explain how to protect a building's maintenance and housekeeping personnel, tenants, and occupants from exposure. O&M plans also provide the basis for making informed decisions regarding potential long-term economic liabilities associated with asbestos and LCP.

### Lead-Based (LBP) Paint Surveys

Lead paint survey projects will be performed, when necessary, by an EPA licensed LBP Inspector or Risk Assessor per EPA regulation 40 CFR Part 745, Volume 61 No. 169, page 45813, Section 227, subpart L: Requirements for Lead-based Paint Activities Final Rule, following the U.S. Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing, revised 1997. Surveys will be performed by collecting paint chips of painted surfaces or utilize an X-Ray Fluorescence (XRF) portable lead paint spectrum analyzer to determine which building components contain LBP. Use of XRF technology conforms to HUD guidelines and allows for rapid data gathering in the field, which will result in expedited reporting and cost savings to the City by reducing sample time and laboratory costs. Often times, surveys are limited to the collection and analysis of paint chip samples as they provide results for direct comparison with exposure standards as provide by the Occupational Safety and Health Administration (OSHA).

*"... Lake County Schools had the pleasure of retaining Terracon Consultants, Inc. for our multi-year continuing contract for ... asbestos, indoor air quality, industrial hygiene, mold and lead-paint surveys and project management as well as abatement monitoring and reporting ... Their attitude toward teamwork communication, project flexibility and achieving the client's goals is outstanding."*

*- Randy Wells  
Loss Control Officer-Risk Management  
Lake County Schools, Tavares, FL*

Terracon will conduct a visual assessment of the building areas and facility components to identify testing combinations in each room equivalent. A room equivalent is described as an identifiable part of a building or residence (e.g. room, house exterior, foyer, etc.). Surface coatings will be physically inspected. Coated surfaces will then be sampled by collecting a paint chip or analyzed using the portable XRF lead paint analyzer. At least one individual XRF reading will be taken from each testing combination in each room

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equivalent, except for walls where four readings (one from each wall) will be taken in each room equivalent. XRF readings will be classified as either positive or negative for each testing combination.

For those XRF readings within the inconclusive range of the instrument, or at the City's request, Terracon will collect paint chip samples for laboratory analysis to confirm the concentrations of lead. The qualified laboratory selected will be accredited to perform the lead analysis by atomic absorption spectrometry (AAS). The results will be reported in mg/cm<sup>2</sup>, parts per million (ppm), or percent by weight.

Terracon also performs LBP Risk Assessments, involving interpretation of previous data, visual assessments, dust sampling, soil sampling, and deteriorated paint sampling. This effort is used to determine the presence or absence of LBP hazards and the most feasible and effective safety options for lead hazard control. Once the lead hazard control work is completed, clearance of the area is established. A report will then be prepared to list the hazards identified and acceptable control measures.

A table presenting data from all XRF readings and a classification of all surfaces into positive or negative categories will be included in the report, as will a detailed description of the XRF instrument and laboratory methodologies. The analytical results, chains of custody, and personnel/laboratory accreditation certificates will also be appended to the report. The report may also include color photographs to assist in depicting the location and/or condition of identified LBP.

### Mold Evaluation

The mold evaluation will consist of a physical inspection and assessment and indoor environmental monitoring. The physical inspection and assessment will include building hygiene and maintenance and heating, ventilation, and air conditioning (HVAC) system hygiene and maintenance. The indoor environmental parameters that will be measured include temperature, relative humidity, culturable and non-culturable mold, settled dust, and/or Polymerase Chain Reaction (PCR) sampling.

Based on the multiple sources of potential indoor and outdoor contaminants that can affect IAQ, the physical inspection and assessment will be conducted to evaluate general indoor hygiene, building maintenance practices, the HVAC system and hygiene, moisture intrusion and uncontrolled condensate formation, and odors. The assessment focuses primarily on collecting observational data (i.e., information obtained by physical inspection of the building and interviews with the building management, owners, and occupants).



*Terracon conducts a variety of services related to mold growth and water intrusion incidents. These services include mold and water intrusion investigations, bulk sampling, air monitoring, and surface tape lift sampling. We also assist our clients during the removal of contaminated materials with remediation planning, removal specifications development, remediation monitoring, and post remediation testing to verify that mold removal is complete. Terracon's multi-disciplinary approach ensures that all IEQ problems are assessed, giving the client peace-of-mind and cost-effective solutions.*

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The physical assessment can help to formulate plans for a more in-depth investigation. The physical assessment will include:

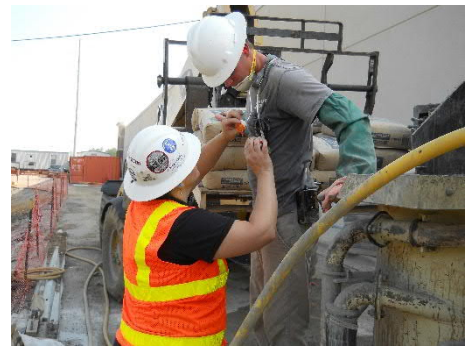
- an examination of the physical structure and potential point sources of moisture intrusion;
- the identification of any discoloration or odor that could indicate moisture intrusion, water damage and microbial growth;
- the determination of any suspect ACMs that may be impacted by mold;
- using a moisture meter and infrared (IR) imaging camera to detect moisture impacted materials; and
- an examination of the HVAC system(s) and its components.

### Indoor Air Quality

IAQ is comprised of air quality and physical characteristics of building environments that can cause health symptoms among workers, tenants, and other building occupants. Air quality is judged by the accumulation of pollutants from indoor processes, or sometimes infiltration from outdoor sources, and the ability of building ventilation and filtration to dilute and remove them. Physical characteristics that can affect building occupants include air temperature, moisture, and to a lesser extent, lighting and noise. Employers, property managers, and building owners are increasingly concerned about IAQ problems because of associated health, absenteeism, and lost productivity costs.

Undesirable conditions, such as odors, discomfort, visible fungal growth, and occupant perceptions of poor IAQ are generally indicators of the loss of control or failure of one or more building systems. Improperly designed, operating, or maintained HVAC systems, and deficiencies in building maintenance or construction, can contribute to poor building and system hygiene, excess moisture infiltration, the build-up of indoor pollutants, and indoor mold growth. These can all contribute to building-associated health and comfort complaints.

Terracon uses a multi-disciplinary approach to assess and address the root causes of IAQ problems. Our industrial hygiene staff focuses on recognizing and evaluating potential problems that can affect the health, well-being, and productivity of employees or other building occupants. We can also team with our facilities engineering group to identify building deficiencies and building envelope issues. Working together, these specialists can pursue the causes of complaints, and provide practical recommendations to correct IAQ problems.



*Terracon's health and safety team has extensive experience identifying hazards; monitoring exposures, including dust monitoring; evaluating risks; and formulating measures to correct problem areas.*



## 9 Statement of Skills and Experience of Project Team

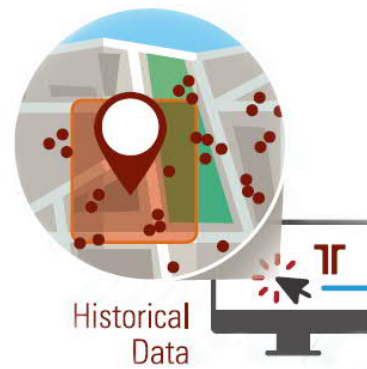
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### Geotechnical Services

#### The Terracon Method

When you hire a geotechnical engineer, you look for someone who can drill soil borings, run laboratory tests, and deliver a report within a reasonable time frame. You expect field and laboratory data delivered along with the engineer's site preparation and foundation design opinions.

Terracon has done that for more than 50 years. But we do so much more. We do our research on your site. We retrieve local data from our vast database of historical information using our proprietary GIS platform. We combine that history with the best public domain information available. Then, we develop an opinion of the expected subsurface conditions before we even take our first soil sample.



Using our opinion of expected conditions, we design an intelligent work plan to explore the site. Using our arsenal of conventional drilling/sampling, in-situ testing and nonintrusive, geophysical exploration tools strategically placed across the country, we execute the intelligent work plan using safe, current and effective tools, and procedures.

*"Terracon was an asset to our team in overcoming the challenging site conditions and keeping the project on track. Their response to the project needs is always prompt, accurate and professional."*

*- Adolfo Cotilla, Jr.  
President  
ACAI Associates, Inc.*

Our methods include conventional drilling and sampling, in-situ testing and non-intrusive testing, and geophysical exploration tools that are available through our nationwide network of offices. We execute the intelligent work plan using safe, current, and effective tools and procedures.

And what professional, geotechnical engineering firm would not have an excellent laboratory?

Terracon has more than 140 of them. We maintain required state and federal program accreditations and validations. We utilize an internal quality program that confirms that we meet our standards for safety and efficiency as well as quality, lowering your costs to get the data you need.

Our geotechnical engineers analyze the information, develop site preparation options, foundations, and pavements, and consult with you and your entire design team to create excellent designs faster than ever. Understanding that collaboration builds consensus and time is money, we achieve collaboration by delivering data to the entire design team as soon as we collect it using GeoReport®, Terracon's web-based delivery system.

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***With more than 130 drill rigs, Terracon owns and operates the largest drilling fleet of any geotechnical engineering firm in the U.S.***

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## 9 Statement of Skills and Experience of Project Team

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As your project moves to construction, our work is not over. Our materials professionals' partner with our geotechnical engineers to further confirm our subsurface understanding, perform testing necessary to document quality, and address encountered variations.

### Subsurface Exploration

#### Drilling/In-Situ Testing Methods

Terracon has been in the exploration business since 1965. Our exploration equipment, which can access almost any site condition, includes:

- Drills
- Cone penetrometer testing
- Direct push units (all sizes mounted on trucks)
- Tracks
- Skids
- Buggies
- Barges (overwater access)
- Other all-terrain Vehicles



*Terracon's Winter Park, Florida exploration team operating a truck-mounted CME-45 drill rig on jack-up boats in Tampa Bay. Borings were performed to depths up to 250-feet- below the mudline to characterize the subsurface for geotechnical parameters.*

Our intrusive methods of exploration and sampling, include:

- Hand augering
- Hollow stem augering
- Wash and air rotary
- Rock coring
- Angle drilling
- Direct push techniques
- ODEX© and Symmetrix© overburden drilling

Specialized in-situ testing methods include:

- Cone penetration testing (CPT and SCPTu)
- Downhole vane shear
- Dilatometer modulus testing
- Pressure meter testing
- Borehole shear
- Packer testing
- Geo-instrumentation installation and automation

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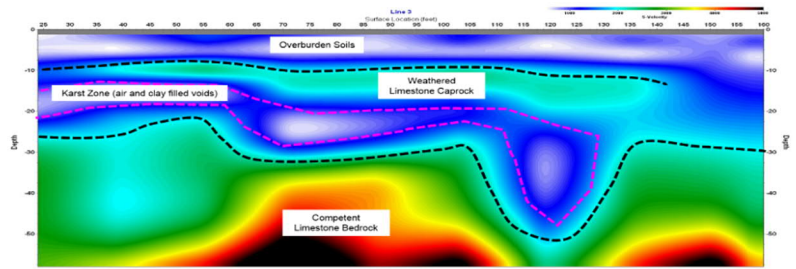
***Terracon is a Gold Shovel Standard® certified contractor and we are constantly evaluating and evolving our practices to deliver on safety, quality, and production.***

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## 9 Statement of Skills and Experience of Project Team

### Geophysical Methods

Terracon's geophysical capabilities include various non-intrusive methods that complement our traditional intrusive methods, greatly improving site characterizations. Geophysical surveys can provide valuable subsurface information in remote and inaccessible areas, allowing our engineers to correlate subsurface data between borings. These methods can help reduce the risk of unknown and unexpected features on a project site before and during site operations. Our highly-qualified geophysicists routinely work with a broad spectrum of clients to provide necessary geophysical information for the exploration, planning, design, locating, and evaluation of a wide variety of project sites.



*Initial borings located shallow bedrock, but a geophysical seismic refraction survey indicated a karst layer with open voids below thin cap-rock. Follow-up drilling confirmed the geophysical findings and the construction program was adjusted to account for unexpected voids beneath the planned building. Terracon's ability to identify the karst features ahead of time saved our client design and construction delays. Terracon's geophysical findings enabled us to help our client to mitigate future major ground settlement that would have damaged their new building.*

Terracon's primary geophysical methods (among others) include:

- Ground Penetrating Radar (GPR)
- Seismic Refraction (MASW, ReMi)
- Electrical Resistivity Imaging (ERI)
- Electromagnetic Induction (EMI)
- Borehole and marine geophysics

Some applications include:

- Contaminated sites
- Vital infrastructure (pipelines, transportation, dams)
- Geotechnical characterization (sinkholes, landslides, bedrock topography, seismic analysis)
- Buried objects (utilities, storage tanks, debris)
- Vibration monitoring
- Deep foundation surveys

### Laboratory Testing and Analysis

#### Soils Testing

Terracon offers a comprehensive suite of index soil property testing to include water content, particle size distribution, Atterberg limits, and density testing.



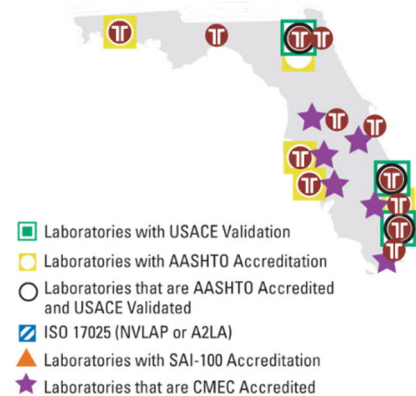
## 9 Statement of Skills and Experience of Project Team

### Advanced Soils Testing

Terracon's advanced laboratory equipment consists of closed loop, direct feedback, computer controlled, data acquisition systems allowing us to provide quality data in an expedited manner.

This state-of-the-art equipment is utilized to perform the following soil tests:

- Shear Testing
  - Triaxial Shear
    - ASTM D4767 Consolidated Undrained (CU)
    - ASTM D7181 Consolidated Drained (CD)
    - ASTM D2850 Unconsolidated Undrained (UU)
    - $K_0$  Triaxial
  - ASTM D3080 Direct Shear
    - Peak Strength
    - Residual Strength
  - ASTM D6528 Direct Simple Shear
- Consolidation
  - ASTM D2435 Incremental Loading
  - ASTM D4186 Controlled-Strain Loading
- Swell
  - ASTM D4546 One Dimensional Swell or Collapse
- Hydraulic Conductivity
  - ASTM D5084 Flexible Wall Permeameter
  - ASTM D2434 Permeability, Granular Soils
  - Method E Mercury Constant Volume
  - ASTM D5856 Rigid Wall
- Thermal Resistivity
  - ASTM D5334 Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure



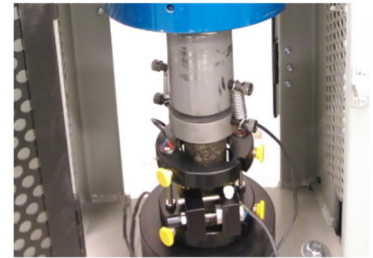
***With more than 140 laboratories serving all 50 states, Terracon owns, operates, and maintains the largest network of accredited and validated laboratories of any geotechnical engineering firm in the U.S. Terracon can consistently produce reliable, repeatable, and accurate test data on projects anywhere in the U.S.***

### Corrosivity Testing

Terracon's chemistry lab staff possesses extensive knowledge in Water Soluble Chemical Testing and Acid Soluble Chemical Testing to include combined and suite testing. We routinely perform tests, on samples from various regions around the country, to include: pH analysis, Water Soluble Sulfates, Total Salts, Chlorides, Resistivity and Red-Ox. Terracon is equipped to perform the following tests:

## 9 Statement of Skills and Experience of Project Team

- Soil Chemistry – sodium, sulfate, solubility, chloride, gypsum, pH, resistivity analysis – ASTM/AASHTO (miller box), DOT corrosion analysis
- Concrete – potential reactivity, chloride, and cement content
- Soil Fertility Tests – agronomy reports



*Terracon continually applies new technologies to improve and expedite our services to solve your project challenges in a timely, reliable, and cost-effective manner.*

### Rock Mechanics Testing

Terracon also offers a wide array of specialized rock mechanics testing including:

- ASTM D 7012 Triaxial Compression
- ASTM D 3967 Indirect Brazilian Tensile Test
- COE RTH 105-93 Hardness by Schmidt Hammer
- COE RTH 109-93 Porosity
- COE RTH 109-93 Bulk Density of Prepared Core
- ASTM D 5607 Direct Shear Intact Rock
- ASTM D 5731 Point Load Axial Diametrical

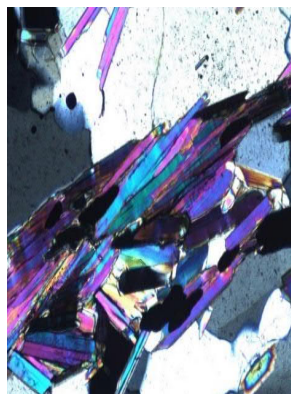
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***Terracon's national laboratory resources allow us to process large volumes of test specimens quickly, reducing risk of delays to your critical project schedule. And, with a local presence, we have in depth familiarity with materials and specifications of numerous local, state, and federal agencies.***

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### Petrographic Analysis

Petrographic examination can be used to determine properties of minerals that include expansion potential and dissolvable characteristics that can lead to acid mine drainage and abrasive qualities likely to result in excessive bit wear. Examination methods may include stereomicroscopy, polarized light microscopy, reflected light microscopy and thin-section examination. These may be augmented by X-Ray diffraction and fluorescence methods.



*Petrographic examination can be used in conjunction with other laboratory tests to evaluate rock weathering and drilling/ripping behavior. Petrographic analysis provides reassurance and confirmation materials meet specific requirements. Additionally, this analysis provides confidence in knowing materials will perform as expected while reducing project delays and future costly repairs.*

## 9 Statement of Skills and Experience of Project Team

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### Quality Management System (QMS)

Safety and quality are the top priorities in all Terracon laboratories. In addition to our rigorous internal Quality Management System (QMS), we maintain laboratory certification and validation through multiple third-party, industry-recognized accrediting agencies. Our quality commitment is rooted in our core value of safety. Terracon laboratory technicians work on sophisticated testing equipment and are internally trained and externally certified as part of “doing things safe and right” for the benefit of our employees, clients, and communities. Terracon delivers accurate, precise, timely results – and the confidence that comes with them.

### Geotechnical Engineering

#### Foundation Analysis and Design

A foundation must be safe, economical, and practical. Choosing the most effective foundation system from a broad range of options requires experience and technical competency. Terracon’s local engineers offer geology and construction knowledge prevalent in their area. They are also supported by nationwide specialists who are competent in the various foundation types, analytical methods, and QC factors affecting project costs and schedules. This combination is critical to project success. Associated services include:

- Shallow foundations – spread, strip and/or mat types
- Ground improvement to support shallow foundations
  - Compacted stone columns
  - Surcharge/preload, with strip drains, if needed
  - Over-excavation and replacement
  - Deep, dynamic compaction
  - Rigid inclusions and soil mixing
- Deep foundations
  - Drilled shafts (straight, belled, slurry-drilled, cased, and secant and tangent walls)
    - Full-scale instrumented load tests and thermal and sonic integrity tests
  - Drilled and grouted piles (conventional auger-cast and displacement types)
    - Automated monitoring and full-scale instrumented load tests
  - Driven concrete and steel piles
    - Pile dynamic analyses and conventional load tests
  - Single and group P-Y lateral load analyses
  - Combined structural pile and settlement reducing pile/load transfer systems
- Groundwater control and under-drainage systems

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***Terracon’s combination of local practical experience and national technical foundation alternatives expertise enables us to deliver optimal projects solutions to keep projects on schedule and within budget.***

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## 9 Statement of Skills and Experience of Project Team

- Backfill reinforcement to reduce basement wall loads
- Foundation performance monitoring instrumentation, including wireless and automated 3-D Finite-element analyses of complex and/or innovative foundation systems
- Specialized solar and wind energy foundation design and testing
- Micro-pile and rock-anchor design and testing

### Earth Structure, Slopes, and Retention Services

The interaction of factors affecting the stability of natural and constructed earth slopes is complex. Terracon utilizes proven laboratory testing techniques and computer software to assist in analyzing and designing earth structures, and retention systems. Terracon provides analysis, design, safety assessments and field construction testing services including:

- Parametric studies to evaluate failed slopes and design reconstructed slopes
- Rockfall evaluation and protection systems – active/passive rock bolts and netting
- Rock cut evaluation and design
- Design using surface mapping and observation implementing drone and LiDAR surveying methods coupled with traditional strike/dip and bedding measurements
- Slope instrumentation (installation and monitoring) such as inclinometers, piezometers, and extensometers
  - Remote and automated data acquisition
- Slope drainage system design and installation
- Design of on-slope and foundation stabilizing elements (toe berms, tiebacks, shear keys, plate piles, and rigid inclusions)
- Levee and earth dam section design including seepage analysis and drainage collection systems, inspection trenches, and routine monitoring programs
- Temporary and permanent earth retention systems selection and design – cast-in-place concrete, MSE, RSS, sheet pile, soldier pile, soil nail, slurry wall, secant/tangent pile walls, and anchored systems
- Embankment geometry, material selection, and compaction specifications
- Field construction observation and QA/QC testing



*Terracon performed subsurface exploration, laboratory testing, embankment seepage and stability modeling, embankment settlement forecasting, evaluation of structure foundations, construction observation and monitoring for SFWMD's C-43 West Basin Storage Reservoir in Hendry County, Florida. Geotechnical information developed by Terracon was utilized as the basis for design of the dam, seepage controls, the hydraulic structure foundations, geotechnical instrumentation, plans and specifications.*

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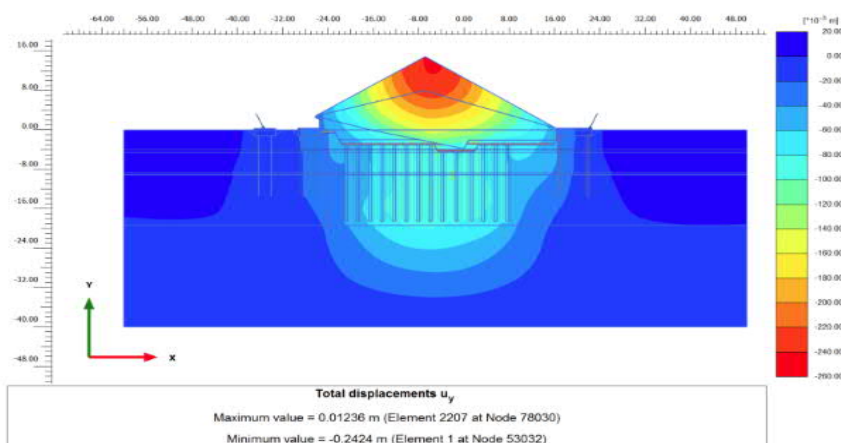
- Anchor load tests
- Rock and soil slope inventory database management

***Earth retention design requires combined geotechnical and structural solutions. Terracon's depth of experience and understanding and breadth of in-house resources (site characterization tools and geo-structural design software) provides an all-encompassing approach to earth retention design and testing services.***

### Specialty Evaluation

Today's built environment involves disturbance of a variety of natural landscapes and terrain in unique ways. The same natural environment can, in turn, wreak havoc on developments and structures. These two scenarios are often unplanned and not adequately designed to meet unexpected challenges. Whether your project requires specialty earth retention design, complex geotechnical modeling, forensics, litigation support, or geo-civil design, Terracon utilizes a wide range of techniques to understand soil behavior and provide the most cost-effective solution.

- Earth Retention Design:** The interaction of factors affecting the stability of natural slopes and constructed slopes is complex. From selection of design parameters to anticipating potential environmental and man-made disturbances, Terracon has the field exploration, geotechnical modeling programs, and soil knowledge to develop economical earth retention designs.
- Geotechnical Modeling:** To optimize results for clients and provide economical designs, Terracon utilizes Finite Element Analysis (FEA) packages such as PLAXIS and midasGTS to perform numerical modeling for geotechnical design and analysis problems. Our geotechnical engineers model non-uniform subsoil and groundwater conditions with discontinuities and anomalies. Soil behavior is captured using sophisticated constitutive soil models. Different boundary and loading conditions can be accurately modeled.



*Terracon's use of geotechnical modeling tools provide optimized solutions compared to classical modeling methods and results in a customized design delivering economical solutions.*

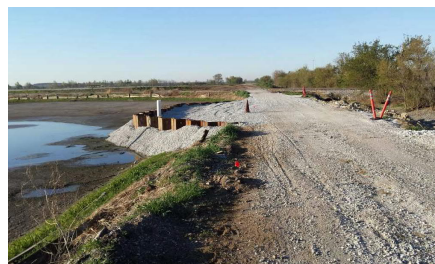
- Litigation Support:** Terracon has skilled geotechnical practitioners to provide expert witness



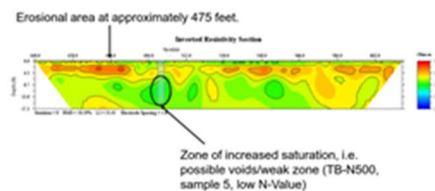
## 9 Statement of Skills and Experience of Project Team

testimony during litigation. From changed soil condition claims evaluation, to weighing in on care standards, to rendering design opinions, we find the facts, maintaining a clear understanding of our client's interests and respecting confidentiality.

- Geo-Civil Design:** Improperly incorporating civil design aspects with geotechnical elements results in overly conservative geotechnical parameter assumptions and costly solutions. Involving Terracon early in the site civil design provides more cost-effective approaches to mitigate your risks. We support geo-civil projects with a wide array of site exploration tools and material laboratory tests for use by civil designers. Further, Terracon can evaluate foundation and exposed geotechnical aspects of landfills, levees/dams, fills, holding ponds, and earthen structures.
- Forensics:** Soil is a challenging building material – one that strength, compressibility, and other fundamental engineering properties can differ with direction as well as change with time, moisture conditions, or weathering. Terracon's experienced engineers and geologists are able to draw from a wide array of geophysical techniques, earth probes, and sophisticated laboratory soil sampling methods to determine a soil's ability to maintain performance expectations. Through a parametric study using modern programming and analysis tools, we are able to measure soil behavior under existing, expected, or hypothetical conditions to determine the most probable root cause of observed performance or the probabilistic analysis to make informed decisions to mitigate your risks.



*After the sudden failure of the embankment for this secondary treatment lagoon, Terracon provided forensic analysis to determine the cause, used ERI geophysical techniques to verify integrity of remaining embankments, designed repairs, and developed the elements for the ongoing owner maintenance program.*



### Pavement Engineering

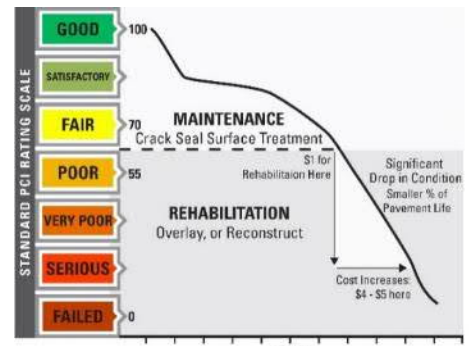
Terracon's pavement evaluation, design, preservation management, and construction management experience provides needed expertise to meet pavement lifespan challenges.

### Evaluation

Terracon uses technologies in field testing and evaluation, laboratory testing, and both visual and geophysical surface condition assessments to provide accurate results. We can provide the most cost-effective recommendations intended to support decision making during the design process and long-term planning for many types of pavement projects.

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- **Subgrade Evaluation:** Subgrade properties are fundamental to pavement design. Terracon offers a full range of drilling, sampling, and coring equipment.
- **Material Evaluation:** Dynamic Cone Penetration testing for subgrade support characterization and a suite of laboratory tests for determining material properties.
- **Existing Surface Evaluation:** Paving surfaces may consist of concrete, asphalt, or both. Evaluation of the existing pavement and distresses are performed using ASTM methods.



*Pavement costs represent a significant portion of the total construction and maintenance budget for many public and private projects. If delayed, relatively low-cost maintenance efforts will result in more expensive future rehabilitation.*

### Design

Pavement design requires knowledge of the traffic conditions (current and projected), environmental conditions, subgrade properties, pavement types, and design life criteria. With the appropriate balance between subgrade preparation and pavement design, a practical solution is engineered.

### Preservation Management

Services include performing pavement condition surveys to forecast future pavement condition and lifespan. We prepare work plans to extend pavement life, optimize pavement expenditures, and manage pavement maintenance programs. The client can then make informed decisions and remove the guessing game associated with short- and long-term pavement management.

### Construction Management

Once the path forward has been determined, proper pavement management plan execution is paramount. Terracon provides the owner the peace of mind the construction/maintenance of their pavement investments will be done correctly and efficiently. From construction administration to materials testing, Terracon provides construction management services from project start to finish.

### Subconsultant: Craig A. Smith and Associates, Inc.



Craig A. Smith and Associates, Inc. (CAS) is a Florida corporation licensed for the practice of professional engineering, surveying, utility locates and construction management services. CAS has joined the Terracon Team to provide civil engineering, inclusive of construction management, and surveying services. CAS has a Broward County office in Deerfield Beach to support the corporate office located in Boca Raton and is Tier 2 Broward County local Vendor.



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 and mapping, grants/loan assistance, construction management, utility locates

## 9 Statement of Skills and Experience of Project Team

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and CAD design and development. The firm is organized into five technical operating divisions each under the supervision of a Vice President or Director. These operating divisions are: civil engineering, surveying, CADD, subsurface utility locates, and construction management.

CAS' 40 years of experience gives the firm 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 numerous utility and stormwater/drainage improvement projects for the City of Belle Glade, Indian Trail Improvement District, Sunshine Water Control District, City of Sunny Isles, Glades County, City of Miami Beach, Town of Golden Beach, City of Pompano Beach, City of Oakland Park and the Town of Pembroke Park. CAS has provided professional stormwater engineering services to the following municipalities and is proud to have done so for many years:

- City of Pompano Beach (since 2015)
- Town of Pembroke Park (since 1987)
- City of Margate (since 1988)
- Bal Harbour Village (since 1989)
- 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 Belle Glade (since 2013)
- Village of Biscayne Park (since 2013)
- City of Lauderhill (since 2013)
- City of Sunny Isles Beach (since 2013)
- Sunshine Water Control District (since 2015)

### Civil Engineering

CAS provides clients with a full range of engineering consulting services. Their 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:

- Stormwater management
- Stormwater utilities
- Water treatment and distribution systems
- Wastewater collection/transmission and treatment
- Potable water treatment systems
- Wastewater pump station design

## 9 Statement of Skills and Experience of Project Team

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- Stormwater pump station design
- Canal dredging and sediment removal
- Surface water management
- Utility permitting
- Water/wastewater treatment plant design/rehabilitation
- Utility pipeline design and relocation (water, wastewater and reclaimed water)
- Utility master planning
- Grant funding assistance
- Facility planning
- Solid waste studies
- Solid waste disposal and leachate treatment
- Development permitting
- Feasibility studies
- Inflow and infiltration studies
- Construction cost estimate
- Construction management
- Construction observation and certification
- Contract administration
- Effluent reuse and disposal
- Sludge treatment and disposal
- Roadway and drainage design

### Construction Management

CAS has a knowledgeable and experienced construction management team which is important for keeping a construction project on schedule, realizing potential cost savings and minimizing construction impacts. CAS has experienced staff to provide effective contract administration including cost estimating, schedule review, shop-drawing submittal review, processing of change orders and any other related construction management (CM) activities. CAS will ensure key construction project elements are documented and updated regularly in the E-Builder Enterprise system and that any issues are addressed efficiently. CAS will ensure that the contractor is held accountable, abiding according to design documents and meeting all contractual obligations. Construction progress reporting, to the City of Pompano Beach, will include summary of work completed, critical issues requiring resolution in order to maintain project schedule, planned budget versus actual cost to-date, planned work schedule for the next month and identification of any upcoming conflicts or other critical items requiring tracking in the E-Builder Enterprise system.

- Mobilize and prepare site
- Prepare safety plan
- Project field stake-out
- NPDES permits and maintenance of traffic (MOT) plans
- Shop drawing submittal and approval
- Begin construction
- CM and administration
- Construction inspection and reporting
- Public involvement/community outreach coordination
- Adherence to contract/permitting requirements
- Final construction & restoration
- Final punch-list

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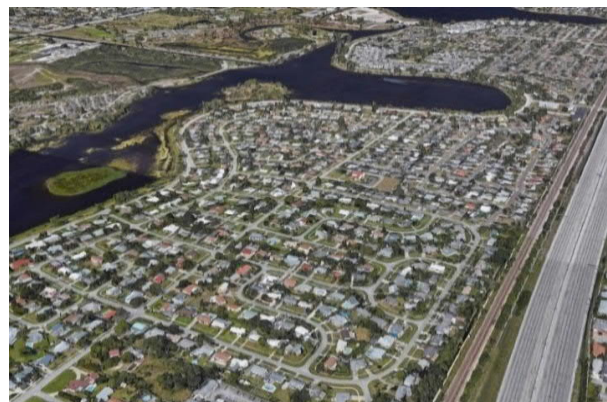
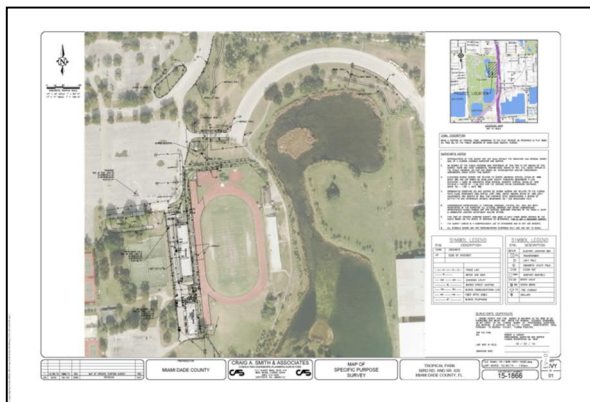
### Surveying

CAS is one of South Florida tenured and respected surveying firms that provides complete land surveying services. The surveying staff is comprised of licensed land surveyors who adhere to strict standards and give special attention to accuracy and detail. The company 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, the survey crews have been trained based on engineering principles and implement daily QC measures ensure that clients receive the highest quality service and most accurate base maps. CAS surveying services include:



- Mapping and platting
- Boundary and acreage surveys
- Land description preparation
- Construction surveys
- Subdivision designs and calculation
- GPS mapping
- Route surveys
- Canal cross-sections
- Parcel description and sketches
- Condemnation surveys
- Highway construction surveys
- Quantity surveys
- Accident surveys
- As-built certifications
- Mean high water surveys
- Drone

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 base maps or scope of work as required for the duration of a project.



## 9 Statement of Skills and Experience of Project Team

### Subconsultant: Miller Legg and Associates, Inc.

Miller Legg is one of Florida's most diversified consulting firms, serving clients globally. The firm provides engineering, design and planning services for public and private sector projects. Established in 1965, Miller Legg is an award-winning consulting firm that provides engineering, planning, landscape architecture and urban design, surveying, subsurface utility engineering, environmental consulting, and geographic information systems to government and the private sector.



Miller Legg has locations in Fort Lauderdale, Miami (Doral), Port St. Lucie, Winter Park, Saudi Arabia and Dubai. Miller Legg's corporate headquarters is located at 544 N Andrews Way, Fort Lauderdale, FL 33309, and the Doral office is located at 7743 NW 48th Street, Suite 140, Doral, FL 33166. Both locations will support the Terracon Team by conducting landscape architecture services.

Miller Legg's corporate tagline, "Improving Communities. Creating Environments" clearly describes their design philosophy, which is utilized in our extensive portfolio of park design and renovation projects. With 55 years of experience, Miller Legg has led significant public involvement efforts, carried out required regulatory agency permitting, coordinated bidding activities and conducted construction administration efforts. Our design philosophy ensures the City's vision, in correlation with the desires of the stakeholders, the existing natural and built environments, as well as a project's sustainability and maintenance requirements.



Government sector projects comprise a significant part of Miller Legg's multi-disciplined experience. Over the years, as one of the State's most recognized consulting firms, the firm has provided a broad range of services to municipal, county, state, and federal agencies.

The wide range of government projects Miller Legg has successfully completed during the past five decades has given the firm the understanding and expertise necessary to meet any requirements, including permitting and project approval. Miller Legg has numerous government clients, with anywhere from 40 to 65 continuing contracts statewide at any given time during the last decade.

Projects successfully completed for government sector clients on time and under budget range from municipal and county parks master plans and recreational facilities design, county neighborhood infrastructure improvements and municipal streetscapes and roadways to municipal landscape architecture and traffic plan reviews, environmental services, as well as complete surveys of government complexes.



## 9 Statement of Skills and Experience of Project Team

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### Landscape Architecture

Miller Legg's Landscape Architects have created quality spaces through functional design, site-sensitive planning, and aesthetic enhancements for residential developments, recreational amenities, commercial facilities, urban centers and transportation corridors.

Although economically productive, commercial developments, enhanced transportation corridors, livable communities, and sustainable ecosystems are vastly different, the design process used to develop and implement these projects is the same. Miller Legg has been successful in the design of these and other landscape architectural projects for both public and private sector clients.

- Landscape architecture services include:
  - Landscape design
  - Landscape planning
  - Hardscape and Feature Design
  - Greenway design
  - Streetscape design
  - Urban design and revitalization
  - Planting design
  - Irrigation design
  - Signage design
  - Graphic design and presentation
- Crime prevention through environmental design
- Recreation facilities design
- Habitat restoration
- Boardwalk design
- Arboriculture and horticultural consulting
- Project theming
- Recreational and commercial planning
- Contract administration
- Construction observation services
- Plan review

Miller Legg approaches each project using a design process to meet our clients' needs and deliver desirable and sustainable public spaces. The firm's typical project design process is the following:

- Evaluation of existing conditions
- Collaboration with stakeholders
- Design stage
- Preparation of construction documents
- Implementation and construction

Miller Legg's landscape architecture staff consists of registered landscape architects, graphic designers, technicians, irrigation specialists and field personnel. Utilizing this team and specialized design approach, the firm has received numerous regional and local landscape architecture design awards for a variety of projects.

### Vendors/Subcontractors

In addition to the aforementioned professional subconsultants, the Terracon Team has assembled vendors/subcontractors to support the services that will be required as part of this contract. Licensed

## 9 Statement of Skills and Experience of Project Team

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and/or certified to perform the requisite services listed below, these contractors, which include firms that are local vendors and MBE/WBE certified, include analytical laboratories, drilling companies, excavation companies, etc., and are incorporated into our Organizational Chart as integral team members.

- **Analytical Laboratory Services**
  - Pace Analytical Services, LLC
  - Jupiter Environmental Laboratories, Inc.
  - Eurofins Test America, Inc.
- **Drilling Services**
  - Earth Tech Drilling, Inc.
  - Wombat Environmental, LLC
  - JAEE Environmental Services
- **UST/Excavation Services**
  - WD Environmental, Inc.

### EXPERIENCE OF THE TERRACON TEAM

#### Experience with Government Agencies

Terracon has a tremendous presence and broad scope of knowledge in South Florida gained through 29 years of conducting professional environmental engineering, facilities consulting, geotechnical engineering, and material testing services.

As previously mentioned, one of Terracon's core businesses is to service local governments through continuing services contracts. We have serviced the public sector for over two decades throughout the South Florida region. Statewide we hold over 125 continuing service contracts (environmental, facility, geotechnical, construction testing and inspections) with approximately 90 different governmental agencies including state, county, and local governments. Terracon has an outstanding history of contract extensions and re-selection under these contracts, which is indicative of our commitment and performance providing timely and cost-effective engineering services to our clients.

Clients we service on an as-needed basis include, but are not limited to, the following:

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| ■ Broward County                | ■ FDOT                            |
| ■ Broward County Public Schools | ■ Florida Keys Aqueduct Authority |
| ■ City of Dania Beach           | ■ Indian River County             |
| ■ City of Fort Lauderdale       | ■ Martin County                   |
| ■ City of Fort Pierce           | ■ Martin County School District   |



## 9 Statement of Skills and Experience of Project Team

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- City of Hallandale Beach
- City of Homestead
- City of Lake Worth
- City of Lauderdale Lakes
- City of Lauderhill
- City of Miami Beach
- City of North Lauderdale
- City of North Miami
- City of Pompano Beach
- City of West Palm Beach
- Florida Atlantic University
- FDEP
- Florida Department of Management Services
- Miami Dade College
- Miami-Dade County
- Nova Southeastern University
- Palm Beach County
- School District of Collier County
- School District of Palm Beach County
- Seminole Tribe of Florida
- South Florida Water Management District
- St. Lucie Public Schools
- Treasure Coast Research Planning Council
- Town of Jupiter
- Town of Miami Lakes
- Village of Royal Palm Beach

### Similar Experience of the Project Team

#### Sabal Golf Course

Pompano Beach, FL



The Former Sabal Golf Course is an 11-acre remnant of the golf course that has not yet been redeveloped. In advance of its redevelopment into a recreational use property (Sports Park), this remaining portion, the site, located at 3151 N.W. 31st Street in Pompano Beach, Florida, underwent a 9,600-ton (non-hazardous) soil source removal project.

Source removal activities were conducted at multiple locations at the proposed Pompano Beach Sports Park (Former Sabal Golf Course) to remove soil exhibiting arsenic concentrations exceeding the alternative recreational SCTL and soil exhibiting dieldrin concentrations above the residential direct exposure SCTL. Source removal activities also included stormwater pollution prevention planning (SWPPP/NPDES) and monitoring and health and safety planning, including dust suppression and air monitoring.

## 9 Statement of Skills and Experience of Project Team

Terracon managed all subcontractors, coordinated all field activities, documented daily activities, conducted air monitoring, and coordinated logistics associated with the field project. The firm managed the field schedule, ensuring timely completion of field work product on an expedited time frame, coordinated daily and weekly safety meetings, and prepared daily field reports. The firm verified that project-specific QA/QC procedures were implemented through all aspects of the project.



Firm's Fee: \$896,724 / Completed in 2019

### City of Pompano Beach Amphitheater

Pompano Beach, FL



The project consists of construction of a membrane roof over the existing Pompano Beach Amphitheater that is located within the Pompano Community Park at the SW Corner of US 1/Federal Highway and NE 10th Street in Pompano Beach, Florida. It is proposed that the roof cables connect to a rigid steel truss which rests on top of two towers in the front and at the back the membrane is supported by a series of columns (cable-supported masts). The project includes truss columns in the front of the structure and cables and mast on the rear of the structure to be supported on piles.

Terracon performed subsurface exploration and geotechnical engineering services in 2018 for the proposed roof. The scope of work included the advancement of test borings to a depth of 90 feet below existing site grades. The borings were advanced with a truck-mounted drill rig using a rotary method. We observe and record groundwater levels during drilling and sampling. For safety purposes, all borings are backfilled with soil cuttings after their completion. Pavements are patched with cold-mix asphalt and/or pre-mixed concrete, as appropriate. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a geotechnical engineer.

The purpose of these services is to provide information and geotechnical engineering recommendations relative to: subsurface soil (and rock) conditions; groundwater conditions; site preparation and earthwork; and foundation design and construction. Terracon delivered the firm's information, opinions, and recommendations using GeoReport®, a web-based information and delivery collaboration portal.



In 2020 the updated loads for the amphitheater roof membrane became available. Per the client's request, Terracon evaluated 16 and 18-inch auger cast piles to support the foundations of the proposed roof membrane.

Firm's Fee: \$22,095 / Completed in 2020

## 9 Statement of Skills and Experience of Project Team

### Ali Cultural Center

Pompano Beach, FL

The historic two-story Ali Cultural Arts building was built in the 1930's and was purchased in 2012 by the City of Pompano Beach Community Redevelopment Agency (CRA). Plans were developed for a world class cultural arts venue which would expand the current foot print with an additional 2,400-SF building and an outdoor courtyard for concerts.



Sphere Environmental Services, LLC, the environmental prime consultant, enlisted the services of Terracon to provide professional engineering services for the project. In 2013 Terracon conducted a subsurface study and developed recommendations for site preparation, foundation design and ancillary construction for the renovation project that includes gallery space, multi-purpose space (i.e. dance, meetings, and classes), outdoor event/performance space with seating, administrative space, storage/archive space, and a conference room. The firm also provided Sphere with construction materials testing and inspection services during the construction of the elevator addition at the center. Subsequently, in 2013 Sphere was acquired by Terracon.

The firm was also responsible for performing construction materials testing services in 2014 and 2015 for the CRA during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.

Firm's Fee: \$8,050 for services provide to Sphere; \$5,830 for services provided for the CRA / Completed in 2015

### Opa-Locka EPA Brownfields Assessment Grant

Opa-Locka, FL

The City of Opa-Locka selected Terracon to provide brownfields consulting services for their \$400,000 EPA community-wide assessment grant. Terracon staff led by, Belinda Richard, worked with the City's program since 2013 to build their brownfields program and assisted in writing and securing the EPA Brownfields grant award. Terracon has provided hands-on engineering for more than 55 projects within the City since 2007. Projects include roadway, airport, buildings, recreational, environmental and utilities.



## 9 Statement of Skills and Experience of Project Team



Terracon provided consulting services for this Brownfields contract through a series of Tasks. Programmatic management included but was not limited to quarterly and annual reporting, EPA policies and procedures, progress meetings, financial coordination and the technical findings required through the closeout process. Grant services supported identification, prioritization processes and selection of properties; oversight of subconsultants; and outreach. Outreach activities included the Community Engagement Plan, brochures, an electronic website to coordinate brownfields information and assisted the City to host two community meetings. The Developers Forum was well attended and the audience was varied including realtors, developers, local business owners and interested residents.

Primarily grant services were dedicated to assessment evaluations. Phase I assessments, asbestos survey's, lead-based paint investigation within structures and wetland surveys. The Generic QAPP was completed per regulatory compliance to support Phase II ESAs. Phase II ESAs, SS-QAPPs, HASPs and Site Reuse/Cleanup Planning were all components of the grant. Findings from assessment activities were reported to EPA within the Assessment, Cleanup & Redevelopment Exchange System (ACRES).

The Former Cuyahoga Wrecking Site had been idle for many years and was an eyesore to the community as it had become a derelict site that was party to unregulated dumping. Terracon conducted a Phase I ESA and a comprehensive Phase II ESA for the EPA. Using the findings of the Phase II ESA, Terracon prepared a RAP providing the City and property owner with remedial and closure alternatives to redevelop the site and provide a benefit to the City and surrounding community.

Firm's Fee: \$382,00 (Fee for Former Cuyahoga Wrecking Site: \$200,000) / Completed in 2019

### Royal Palm Beach Commons

Royal Palm Beach, FL

The project consists of a 160±-acre parcel of land that was developed into a community park known as Royal Palm Beach Commons (former Traditions Golf Course site). The park includes a 3-story, 17,000-SF Sporting Center with a 1,900-SF patio area, Golf Training Center with a driving range and 18-hole green, extensive 19-acre lake system, canoe/kayak launch, access road to all amenities, 3 miles of paved walking/jogging/bike trails, banquet garden, wedding pavilion, interactive splash fountain, sand volleyball courts, picnic pavilions, fishing docks, and playscapes.



## 9 Statement of Skills and Experience of Project Team



In 2007, Terracon's subsidiary (Dunkelberger Engineering & Testing, Inc.), provided a subsurface study, as a subconsultant, that included drilling and sampling of exploratory borings, lake bottom probing and sampling, laboratory soils analysis, evaluation of the impact of the subsoils upon the proposed construction and development of recommendations for foundation design, pavements, earthwork and other related construction. Additionally, the firm provided construction materials testing (field and laboratory) as a subconsultant from 2009 to 2011. In 2012 and 2013, the firm provided engineering services during construction (verification testing) as a prime consultant to the Village.

Because the site was a former golf course, we evaluated soil and groundwater quality to determine impacts from use of turf chemicals and found contaminants of concern in both media whose concentrations exceeded State cleanup levels. Terracon worked with the project team to establish strategies for addressing the impacted media and assisted the civil engineer in developing a contaminated soil source removal plan and construction dewatering plan that was approved by the FDEP and SFWMD. Sampling and analysis was also performed during construction and source removal to assure that the construction contractor followed the project environmental specifications. At the conclusion of construction, the firm performed a comprehensive post-construction site assessment in accordance with Chapter 62-780, FAC. We are currently performing long-term groundwater monitoring at the site in advance of site closure.

Firm's Fee: \$260,000 estimated / Completed in 2007, 2011, 2012, 2013

### **City of Pompano Beach Continuing Professional Engineering Services Contract**

Pompano Beach, FL

A professional general engineering services contract has been maintained with CAS and the City of Pompano Beach since 2015. The city relies on CAS' professional experience and expertise to properly maintain their utility infrastructure. CAS provides engineering design, survey, utility locates, construction management services for roadway, drainage, water and wastewater related projects. CAS is currently providing design services for the SW 2nd Street Drainage Improvements Project (design cost: \$60,000, construction cost estimate: \$900,000). In addition, CAS completed a Sanitary Sewer Study to provide recommendations and options for future sanitary sewer service to the so-called Non-Sewer Area C which is currently on septic tanks. The Area C Sewer Project is currently in design. The sanitary sewer study and design cost is \$243,343. Status of this contract is ongoing.



## 9 Statement of Skills and Experience of Project Team

### Town of Golden Beach Continuing Professional Engineering Services Contract

Golden Beach, FL

A professional general engineering services contract has been maintained with the Town of Golden Beach since 2000. With limited staff, the Town relies on CAS' professional experience and expertise to properly maintain their utility infrastructure. CAS provides all engineering design, survey, utility locates, construction management services for roadway, drainage, water, electrical, utility undergrounding, utility easement acquisitions and mechanical related projects within the Town including the Town's recently completed Capital Improvements Project. CAS also provides agency required reporting for NPDES, Department of Environmental Resources (DERM) and WASD, and assistance in securing funding through FEMA and SFWMD grants. The annual budget for these projects ranges from \$100,000 to \$200,000 annually. Status of this contract is ongoing.



### City of Margate Continuing Professional Engineering Services Contract

Margate, FL

A professional general engineering services contract has been maintained with the City of Margate since the late 1990s. In June of 2018, CAS renewed their contract with the city through a Request for Proposal (RFP) process. The city relies on CAS' professional experience and expertise to properly maintain their utility infrastructure. CAS provides engineering design, survey, utility locates, construction management services for water, wastewater, electrical and mechanical related projects. CAS has successfully completed the rehabilitation of 11 wastewater lift stations and associated force main extensions totaling over \$5 million. CAS has completed design on another 5 wastewater lift stations slated for rehabilitation. Of the five lift stations, LS No. 21 is currently in construction (design cost: \$60,990, construction cost: \$298,216) and LS No. 7 (design cost: \$63,450, construction cost: \$550,000) has been advertised for construction. In addition, CAS provided design services for the replacement of undersized steel water mains with 6 inch DIP lines throughout the city service area and is currently providing public outreach, construction inspection and management services. Status of this contract is ongoing.



### City of Miami Morningside Park Tennis Center

Miami, FL

The City of Miami Morningside Park created an expanded and improved tennis facility at this 42-acre Park. The project included improvements to an existing 7 courts that had experienced degradation due to drainage and soil stabilization issues. A new court layout was developed to increase the facility to 8 lighted courts and a warm-up training wall amenity. Other tennis improvements included upgraded lighting, fencing and shaded bench area. A central courtyard was also developed as a key element of the project design.



## 9 Statement of Skills and Experience of Project Team

This courtyard creates an inviting area for players and spectators to gather before and after matches. A themed paver field with lush landscaping that embraces large existing ficus trees creates a pleasant gathering space not previously found at Morningside Park, and helps establish it as a premier public tennis destination in the City of Miami.

Miller Legg services included civil engineering, landscape architecture, arborist, permitting and limited construction administration to assist the City in the bidding, observation and certification of the project improvements. Arborist services included evaluating existing trees for health, longevity and relocation prospects. Once relocated, the trees were monitored for ongoing wellbeing on site. Apart from the City, other agencies with jurisdiction for this project include Miami-Dade County DERM and SFWMD. Received the Facility Showcase award by the Florida Recreation & Park Association. Miller Legg secured this project under the firm's Continuing Services Agreement with the City of Miami. Completed in 2018

### **Town of Lauderdale-by-the-Sea Poinciana/Bougainvillea Roadway and Parking Improvements**

Town of Lauderdale-by-the-Sea, FL

Under the firm's continuing services contract, Miller Legg provided design and permitting services for parking, roadway and landscape architectural improvements for the Poinciana Street and Bougainvillea Drive area north of Commercial Boulevard to alleviate congestion along the parallel corridor of State Road (SR) A1A in the Town of Lauderdale-by-the-Sea. Services included: roadway and parking area design, lighting, utility coordination, permitting, landscape, hardscape and irrigation, and pre- and post-construction observation services. Completed in 2019



### **Memorial Regional Hospital Design-Build (D/B) Parking Garage and Public Roadway Improvements**

Hollywood, FL



Miller Legg provided site development design services for a new 7-story, 1,302-space parking garage located at Johnson Street and Garfield Street on the Memorial Regional Hospital campus in Hollywood. The parking garage included 570,330 SF of parking garage space, ground-floor retail, a courtyard, an auditorium, and hospital staff training room and offices. Associated off-site roadway and signal improvements were provided on Johnson Street along with roundabout modifications on Garfield Street at 35th Avenue. Specific services included: civil engineering, permitting, paving, drainage, water, sewer, traffic engineering, signalization, topographic survey, underground utility designations

(SUE), landscape architecture, irrigation, and hardscape design, as well as construction observation. Miller Legg was a subconsultant to Zyscovich Architects and was on the Stiles/Thornton D/B team.

Completed in 2017

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# Resumes of Key Personnel

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## 10 Resumes of Key Personnel

### Steven A. Harrison, P.G. Contract/Project Manager

#### PROFESSIONAL EXPERIENCE

Steven is a Senior Associate and Department Manager in the South Florida Region that specializes in providing responsive, cost effective, technically accurate and regulatory focused solutions to meet client's project and operational requirements. He has more than 30 years of successful experience continuously exceeding expectations by resolving environmental situations that clients face. Steven's diverse environmental experience includes the assessment and remediation of impacted groundwater and soil, real estate transactional due diligence assessment, storage tank system management, industrial and Resource Conservation and Recovery Act (RCRA) waste disposal, wildlife surveys and compliance assistance with federal and State environmental regulations (Spill Prevention, Control, and Countermeasure [SPCC] Plans).

A State of Florida-licensed geologist and mold assessor, he has worked with a diverse array of clients ranging from the independent property owner to local, regional, and state municipalities and Fortune 500 companies to address and resolve their business and regulatory environmental concerns. Steven's knowledge of local, state, and federal regulatory requirements is critical to supporting client's objectives to maintain compliance with all applicable regulatory requirements.

#### PROJECT EXPERIENCE

##### City of Pompano Beach, Former Able's Service Station - Pompano Beach, FL

Project Manager. Assessment of a former service station as part of a site assessment consistent with the requirements of Chapter 62-770, FAC. Analytical results of soil and groundwater samples collected to assess conditions reported that soil and groundwater impacts resulted from the former UST area and the previous remedial efforts did not fully remediate the petroleum hydrocarbon affected area. A previous Site Rehabilitation Completion Order (SRCO) was rescinded following Terracon's submittal and a RAP prepared to address the impacted conditions was approved for implementation.

##### Former BT Oil Site - Pompano Beach, FL

Environmental Services Department Manager/Project Manager. Oversight was conducted during soil excavation, in an area located south of the former BT Oil site as the petroleum hydrocarbon contamination, which was found during assessment efforts of the former gas station, migrated southward into the right-of-way. Terracon provided oversight and direction of the excavation of impacted soils during underground utility installation. Terracon designated soil handling protocols, established staging and storage areas and orchestrated the proper disposal of the impacted soils. Manifests documenting the quantity of impacted soil which were properly disposed were utilized for project records.



#### EDUCATION

MS, Marine Geology and Geophysics, Emphasis: Geo-Chemistry, Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, 1988

BS, Geology  
State University of New York  
Binghamton, 1980 – 1984

#### REGISTRATIONS

Professional Geologist  
Florida, No. 0001390

Florida Licensed Mold Assessor,  
No. MRSA508

Florida Licensed Sales Associate  
SL3069031 (Realtor –Florida)

#### CERTIFICATIONS

8- Hr Hazmat Health and Safety  
Training Updates (Current)

40- Hr Hazmat Health and Safety  
Training (1989)

Short Course: Assessing  
Environmental Risk in Property  
Transactions (1990)

Short Course: How to Comply with  
Florida's Haz Waste Regulations for  
Generators

**YEARS OF EXPERIENCE: 32**  
**YEARS AT FIRM: 7**

## 10 Resumes of Key Personnel

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### Steven A. Harrison, P.G. (continued)

#### **Former Sears, Pompano Citicentre Mall - Pompano Beach, FL**

Project Director. Site assessment efforts identified impacted groundwater that resulted from historical operations in the area of the former dispenser island that extended across the eastern parking area and beneath the east end of the Autocenter building. A combined site assessment report/remedial action plan(SAR/RAP) incorporated assessment findings and remediation details into one document to expedite the regulatory process. The aggressive remedial strategy addressed residual soil impacts, along with groundwater exceedances through source removal of saturated soils impacted with petroleum hydrocarbons, air sparging of groundwater within the open excavation to volatilize dissolved petroleum hydrocarbons, placement of oxidation chemicals (ISCO) into soil during backfilling, and injection of oxidation chemicals (ISCO) beneath the excavation and into the surrounding areas of groundwater impacts. Terracon completed field efforts within 30 days from receipt of approval from Broward County Environmental Protection and Growth Management Department (BCEPGMD). ISCO is continuing to remediate petroleum hydrocarbons dissolved in groundwater and monitoring will verify progress of the remedial effort. Upon completion of one year of post active remediation monitoring, the site will obtain regulatory closure without conditions.

#### **Former Sabal Golf Remediation - Pompano Beach, FL**

Project Director. The Former Sabal Golf Course is an 11-acre remnant of the golf course that is planned for redevelopment into a recreational use property (Sports Park). Terracon conducted a 9,600-ton (non-hazardous) soil source removal project. We managed all subcontractors, coordinated all field activities, documented daily activities, conducted air monitoring, and coordinated logistics associated with the field project. Timely completion of field work required daily project and safety meetings, with daily field reports. (QA/QC) procedures were implemented through all aspects of the project.

#### **Ali Cultural Center – Pompano Beach, FL**

Project Manager. The historic two-story Ali Cultural Arts building was built in the 1930's and was purchased in 2012 by the City of Pompano Beach CRA. The world class cultural arts venue was expanded with an additional 2,400-SF building and an outdoor courtyard for concerts. Sphere Environmental Services, LLC, the company Steven owned, was the environmental prime consultant that enlisted the services of Terracon to provide professional engineering services for the project including a subsurface study and developed recommendations for site preparation, foundation design and ancillary construction for the renovation project that includes gallery space, multi-purpose space, outdoor event/performance space with seating, administrative space, storage/archive space, and a conference room. The firm also provided Sphere with construction materials testing and inspection services during the construction of the elevator addition at the center. Subsequently, in 2013 Sphere was acquired by Terracon. The firm was performed construction materials testing services in 2014 and 2015 for the CRA during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.

#### **Vacant Parcel - Pompano Beach, FL**

Project Director. The 1.08-acre (32,313 SF) vacant site is located on West Atlantic Boulevard and SW 27<sup>th</sup> Avenue. An ESA was needed to help assist the client in acquiring the site. Terracon performed a Phase I ESA to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of a report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties.

# 10 Resumes of Key Personnel

## Richard A. Minichiello

### Principal-in-Charge

#### PROFESSIONAL EXPERIENCE

Richard, a senior principal and vice president of Terracon, manages the South Florida operations where he has more than 34 years of progressive experience in the administration, management and growth of a dynamic engineering consultancy. Richard helps lead Terracon's multidiscipline practice specializing in environmental, facilities, geotechnical, materials testing, and laboratory services for transportation, educational, commercial, utility, Federal, state and local market sectors.

Richard provides senior level client interactions and service to Terracon's diverse portfolio of private and public-sector clients. He assures that each client's expectations and needs are being met for quality and technical support. For each contract, he is an integral part of the project start-up team and makes periodic visits to the project and to client meetings to perform quality audits and receive input for what is working well and where additional attention or improvement may be needed. Richard has served in this capacity for many of Terracon's South Florida municipal continuing services contracts including the FDOT Districts 4 and 6, Broward County, Broward County Public Schools, City of Fort Lauderdale, Pompano Beach CRA, City of Hallandale Beach, City of Lauderhill, and Miami Dade County to name a few.

#### PROJECT EXPERIENCE

##### **FDOT District 4, I-95 Express Lanes Segment 3B-1 Broward County, FL**

Principal-in-Charge of Terracon's services as a subconsultant to the D/B team for the project that extends from South of SW 10<sup>th</sup> Street to South of Glades Road and includes converting the existing high occupancy vehicle (HOV) lanes to high occupancy toll (HOT) lanes and widening that will result in two tolled Express Lanes in each direction. The improvements include roadway widening, two bridge widenings and one bridge replacement, MSE wall and sound barrier wall construction. In addition, there will be miscellaneous cantilever and overhead sign structures. As a member of the D/B team, Terracon is performing soil exploration, geotechnical classification laboratory testing, standard foundation studies; and is performing contractor quality control (CQC) services for the project.

##### **United States Southern Command Headquarters Complex (SouthCom), U.S. Army Corps of Engineers (USACE) - Doral, FL**

Served as Principal-in-Charge for QA construction testing services for the \$270 million D/B project. From inception, he assisted the USACE leadership QA and administration needs on this fast-track project. Richard was responsible for leading the team in providing multi-disciplined experts consisting of project managers, estimators, engineers, inspectors, and technicians for this highly complex, state-of-the-art facility.



#### EDUCATION

B.A., Political Science, Long Island University – C.W. Post Center, 1983

#### AFFILIATIONS

American Council of Engineering Companies of Florida (ACEC-FL)

ACEC Membership Committee

Consulting Engineers Legislative Council (CELC)

Florida Transportation Builders Association (FTBA)

Team Florida

American Society of Civil Engineers (ASCE)

Project Management Institute (PMI)

#### WORK HISTORY

Terracon Consultants, Inc., Vice President, Region Manager (South Florida), and Office Manager (Fort Lauderdale), 2012 – Present

AMEC Environment and Infrastructure, Inc., Senior Vice President, 2011 – June 2012

Mactec Engineering and Consulting, Inc., Senior Vice President, 2001 – 2011

Law Engineering and Environmental Services, Inc., Office Manager and Assistant Vice President, 1986 – 2001

**YEARS OF EXPERIENCE: 34**

**YEARS AT FIRM: 7**

## 10 Resumes of Key Personnel

### Terrence R. Horan, P.E. Assistant Project Manager

#### PROFESSIONAL EXPERIENCE

Terry is an Environmental Department Manager for Terracon Consultants, Inc. and its West Palm Beach office. He also serves as a senior environmental engineer for the South Florida Region and throughout Terracon. Since earning a Bachelor of Science degree in environmental engineering, he has specialized in the practice of environmental consulting progressing from staff level to managerial level responsibilities.

A registered professional engineer in the State of Florida, Terry has more than 25 years of progressive experience in due diligence, environmental assessments, remediation, and water resources. He has led multi-disciplinary teams focused on providing solutions to environmental and engineering issues for a wide range of regulated industries. Terry's expertise includes the successful management of site assessments, remedial investigations, feasibility studies, and remediation projects for private sector, municipal, state, and federal agency clients.

On a day-to-day basis, Terry provides technical oversight and direction to environmental engineers, geologists, scientists and technical staff performing services for asbestos/lead-based paint, Brownfields, industrial hygiene, regulatory compliance, remediation, site assessments and investigations, natural and cultural resources, and solid waste. He is responsible for the performance, staffing and administration of those personnel, as well as providing senior level management of environmental projects and peer review of reports.

#### PROJECT EXPERIENCE

##### **Proposed Pompano Beach Sports Park - Pompano Beach, FL**

Senior Environmental Engineer. Completed source removal at multiple locations at the proposed sports park (Former Sabal Golf Course) to remove 9,600-tons of soil impacted with arsenic and dieldrin.

##### **Hialeah Park Race Track - Hialeah, FL**

Project Manager for Hialeah Park Race Track property undergoing assessment for arsenic in soils and groundwater and providing redevelopment consulting services for potential site reuse.

##### **Former Nursery - Hallandale Beach, FL**

Senior Environmental Engineer. Responsible for developing conceptual remediation plans and cost estimates for a former nursery impacted with arsenic from legally-applied pesticides.

##### **500+ Properties – Various Locations throughout South FL**

Project Manager. Conducted and directed Phase I environmental assessments and environmental compliance audits of over 500 properties, including waste treatment, storage, and disposal facilities; boat and aircraft manufacturing and maintenance facilities, metal plating plants, printing facilities, and various manufacturing facilities.



#### EDUCATION

Bachelor of Science, Environmental Engineering, University of Florida, 1992

#### REGISTRATIONS

Professional Engineer: Florida, No. 54815 (1999)

#### CERTIFICATIONS

OSHA 40-hour Hazardous Waste Operations & Emergency Response (HAZWOPER)

#### AFFILIATIONS

Florida Engineering Society (FES), Member

FES Palm Beach County Appointed Board Member:

- Department of Health: Environmental Quality Hearing Board (2014-currently Chair)
- Department of Planning, Zoning and Building: Contractor Licensing Board (2016-2021)

**YEARS OF EXPERIENCE:** 25

**YEARS AT FIRM:** 1

\* Work performed prior to joining Terracon.

## 10 Resumes of Key Personnel

### Lucas A. Barroso-Giachetti, P.E., CHMM Senior Environmental Engineer

#### PROFESSIONAL EXPERIENCE

Lucas is a Senior Environmental Engineer in the Miami Lakes office of Terracon's South Florida region and leads the firm's Miami environmental services operations. A State of Florida licensed Professional Engineer and Certified Hazardous Materials Manager, Lucas has over 19 years of experience in remediation and environmental consulting services.

Lucas has worked directly with the Florida Department of Environmental Protection (FDEP) on many complex environmental projects throughout the State of Florida and managed a South Region contract for the Department's Petroleum Restoration Program (PRP). In addition, he has extensive experience with local regulatory authorities in Miami-Dade County, including DERM.

#### PROJECT EXPERIENCE

##### Former Agricultural Property - Pompano Beach, FL\*

Completed environmental assessment of former agricultural property slated for multi-family development with arsenic concentrations in soil above both residential and commercial/industrial soil cleanup target levels (SCTLs) in shallow and deeper intervals. Successfully obtained a NFA without conditions closure from Broward County via 95% UCL statistical methods and detailed review/comparison by strata of site-specific lithology to establish pre-existing depositional conditions. Significantly reduced costs to client by limiting source removal to selected areas.

##### Pompano Beach Airpark Plane Crash Fuel Spill – Pompano Beach, FL

Lucas led this project, as the Professional Engineer (P.E.) and Project Manager, which involved emergency soil screening, soil sampling, groundwater sampling and source removal oversight related to a discharge of fuel resulting from an emergency aircraft crash landing within the Pompano Beach Airpark. Lucas provided P.E. oversight of the field activities and conducted regulatory interface on behalf of the client with Broward County. The impacted area was successfully excavated and remediated, receiving a No Further Action status from Broward County.

##### Miami Dade College Academy of Fire Science, - Miami, FL

Technical lead and Project Manager for the assessment of a firefighter training area that historically utilized Aqueous Fire Fighting Foam (AFFF) during training exercises that contained per- and polyfluoroalkyl substances (PFAS). Terracon was retained by Miami Dade College to assess potential impacts to soil and groundwater from PFAS, including development of a PFAS-focused sampling plan including special and rigorous practices and procedures to prevent cross-contamination during sampling from common everyday items such as water-resistant clothing, sunscreen and others.



#### EDUCATION

Bachelor of Science, Environmental Engineering, University of Florida, 2002

#### REGISTRATIONS

Professional Engineer: Florida, No. 68283

#### CERTIFICATIONS

Certified Hazardous Materials Manager, No. 13849

40-hour HAZWOPER

OSHA Site Supervisor Trained

#### WORK HISTORY

Terracon Consultants, Inc., Senior Environmental Engineer, 2018 - Present

SCS Engineers, Environmental Services Group Leader/Senior Project Manager, 2016 – 2018; Project Manager/Field Services Manager/Client Services Manager, 2007 - 2011

GLE Associates, Inc., Site Environmental Group Leader/FDEP PRP South Region Contract Manager/Senior Engineer, 2011 – 2016

SECOR International Inc. (Stantec), Project Manager/Project Engineer/Office Quality Officer, 2005 - 2006

**YEARS OF EXPERIENCE: 19**  
**YEARS AT FIRM: 2**

## 10 Resumes of Key Personnel

### Susan R. Kuzia

#### Senior Environmental Scientist

##### PROFESSIONAL EXPERIENCE

Susan is a Project Environmental Scientist in Terracon's South Florida region. Her responsibilities and skills include site research, regulatory research, report preparation, Phase I ESAs. Susan's experience has been client focused with wide ranging experience in environmental consulting, teaching, and project management. She is recognized for the ability to handle various and multiple demands while maintaining the highest standards; being effective in communication with clients and colleagues and having excellent management skills. Susan has over 26 years of experience in the performance of Phase I ESAs per ASTM 1527 and Phase II ESA project management experience.

##### PROJECT EXPERIENCE

###### Multiple Projects, CRA - Pompano Beach, FL

Project Scientist/Manager. Responsible for conducting Phase I/II ESAs within the CRA's Northwest Brownfields region and other areas within the CRA's focus areas at properties proposed for redevelopment. Phase I ESAs were completed in accordance with ASTM E1527-05.

###### Vacant Parcel - Pompano Beach, FL

Senior Staff Scientist. The 1.08-acre (32,313 SF) vacant site is located on West Atlantic Boulevard and SW 27<sup>th</sup> Avenue. An ESA was needed to help assist the client in acquiring the site. Terracon performed a Phase I ESA consistent with the procedures included in ASTM E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of the report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties.

###### Canal Remediation - Parkland, FL

Staff Scientist. The project involved the assessment and remediation of canal bottom sediments where a canal in a residential neighborhood was impacted by liquid asphalt. The cleanup target levels for sediments were poorly defined and it was critical to work closely with the FDEP to develop an accurate methodology for interpretation. The assessment efforts ran contiguous the performance of Interim Source Removal Efforts and included the collection of surface water samples and bottom samples for analysis. The Interim Source Removal effort involved the dewatering of isolated sections of the canal so that the sediments could be remediated. Floating oils were removed from the recovered canal water and impacted sediments were captured before returning the water to the canal. Sediments were removed through a combination of vacuum and excavation efforts until analytical data confirmed the remaining sediments were at an acceptable level. The process was repeated through each of the impacted sections of the canal until the impacted sediments were remediated.



##### EDUCATION

University of Akron  
Master of Science, Biology, 1976

##### CERTIFICATIONS

AHERA Building Inspector

**YEARS OF EXPERIENCE:** 26

**YEARS AT FIRM:** 6

## 10 Resumes of Key Personnel

### Tom C. Holley, CHMM, CIH, CSP, FLAC, MRSA Senior Certified Industrial Hygienist/QA/QC Reviewer

#### PROFESSIONAL EXPERIENCE

Tom has over 29 years of facilities and environmental, health and safety, and OSHA compliance consulting experience. Current responsibilities include support of client facilities and industrial hygiene consulting needs. He previously served as a Principal Industrial Hygienist, Project Manager and Facilities Business Unit Leader in support of a large government contract. He also worked as an analytical chemist, supervisor, and project manager in a large environmental laboratory for approximately 10 years. Tom has Health & Safety (H&S) compliance procedure and program development experience including USACE Health & Safety Plan (EM-385) implementation.

Tom has experience in industrial hygiene consulting and project management, including performance of site assessments, remediation design, and ambient air sampling for various chemical constituents. He has experience in industrial hygiene exposure assessments, providing on-site training for peers and clients, has served as site project safety representative for several projects, and has performed exposure assessments for environmental remediation, demolition, and other project activities for private industry.

#### PROJECT EXPERIENCE

##### Trust Properties on NW 5<sup>th</sup> and NW 4<sup>th</sup> Courts – Pompano Beach, FL

APR/Quality Review. Terracon performed asbestos abatement consulting services at the referenced sites to document the removal of the previously identified ACM, in a previous Terracon Asbestos survey. Terracon's abatement monitoring services for this project included: confirming and documenting that the asbestos abatement work was completed in accordance with applicable federal, state and local regulations; confirming that the ACM scheduled to be removed from the work area was removed, and that post-abatement work surfaces were visually free of asbestos-containing debris; and conducting visual and air clearance sampling (PCM) in the abated areas.

##### Central District Wastewater Treatment Plant (WWTP) – Miami, FL

APR/Quality Review. Terracon conducted a pre-demolition asbestos survey on the interior and exterior of the structures located at the Central District WWTP located in Miami. The plant was initially constructed in 1966, but it is unknown when the specific structures were constructed. The estimated SF of the two buildings surveyed is 1,400. The structures consisted of concrete block exterior walls, poured in place concrete walls atop multiple concrete slabs and concrete ceiling. Our survey was conducted by an AHERA-accredited asbestos inspector. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in the Environmental Protection Agency (EPA) regulation 40 CFR 763 (AHERA). Samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy (PLM).



#### EDUCATION

B.S. Biology / Minor Chemistry –  
Georgia State University, 1990

#### REGISTRATIONS

Certified Hazardous Materials  
Manager- Master Certified Industrial  
Hygienist- 9275CP

Certified Safety Professional- 22954

Licensed Asbestos Consultant,  
FL No. AX75

Licensed Mold Assessor, FL No.  
2749

#### CERTIFICATIONS

EPA/AHERA Asbestos Inspector,

Management Planner, Designer,  
Supervisor

NIOSH 582 Sampling & Analysis of  
Airborne Dusts

OSHA 40-Hour HazWoper

OSHA 30-Hour Construction Safety  
and Health

OSHA 10-hour Construction Safety  
and Health

eRAILSAFE Contractor

#### AFFILIATIONS

American Board of Industrial Hygiene  
Board of Certified Safety  
Professionals

Institute of Hazardous Materials  
Managers

**YEARS OF EXPERIENCE:** 29

**YEARS AT FIRM:** 4.5

## 10 Resumes of Key Personnel

### Sergio Adasme, MRSA

#### Project Industrial Hygienist/Inspector

##### PROFESSIONAL EXPERIENCE

Sergio is a Project Industrial Hygienist and Senior Inspector with three decades of experience. His duties include asbestos abatement project supervision, technical specifications writing, phase contrast microscopy (PCM) analysis, asbestos surveys, mold assessment, and industrial hygiene assessments. Sergio has supervised well over 3,000 asbestos surveys and abatement projects. He is experienced in emergency response for buildings sustaining heavy physical damage from fire, ambient particulate matter, vibration and other causes, conducting surveys to determine levels of asbestos, lead, heavy metals contamination and air quality sampling for clearances prior to restoring occupancy and operations. His IAQ assessment experience has included full service consulting from initial assessments through closeout of remediation projects.

##### PROJECT EXPERIENCE

#### Pompano Beach CRA Vacant Unit on NE 1st Street – Pompano Beach, FL

Project Manager. The vacant space contains approximately 300 SF and abuts adjoining retail space within a mall. An asbestos survey was requested due to the planned interior renovations prior to tenant occupancy. The survey was conducted by an AHERA-accredited building inspector. Interior building components were surveyed and interior homogeneous areas of suspect ACM were visually identified and documented. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763.86 (AHERA). Samples were delivered to an accredited laboratory for analysis by PLM.

#### Lighthouse Building First Floor Suite– Pompano Beach, FL

Project Manager. The building is approximately 9,705 SF and was constructed in 1977. An asbestos renovation survey was requested due to the on-going renovations of the Lighthouse Building-first floor suite. The survey was conducted by an AHERA-accredited building inspector. Interior building components were surveyed and interior homogeneous areas of suspect ACM were visually identified and documented. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763 (AHERA). Samples were delivered to an accredited laboratory for analysis by PLM.

#### Trust Properties on NW 5<sup>th</sup> and NW 4<sup>th</sup> Courts – Pompano Beach, FL

Project Manager. The structures are unoccupied and consists five one-story apartments, a single-family home, a two-story building and a three-story hotel. An asbestos survey was requested due to the planned demolition of the structures. Terracon conducted a pre-demolition asbestos survey on the interior and exterior of the structures. The survey was conducted by an AHERA-accredited asbestos inspector. The interior and exterior building components were surveyed and homogeneous areas of suspect ACM were visually identified and documented. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in the EPA regulation 40 CFR 763 (AHERA). Samples were delivered to an accredited laboratory for analysis by PLM.



##### EDUCATION

Construction Management (Candidate), Florida International University, Miami, FL

##### REGISTRATIONS

Florida Mold Assessor  
No. MRSA1154

##### CERTIFICATIONS

NIOSH 582

Facility Survey and Hazard Assessment

AHERA Accredited Asbestos Inspector

AHERA Accredited Management Planner

AHERA Accredited Project Supervisor

Certified Operator XRF Spectrum Analyzer

Microscopically Identification of Asbestos

OSHA 40 Hour HazMat Emergency Response

Radiation Safety and Use of Nuclear Gauges

PEC Premier SafeGulf SafeLandUSA

West Texas Safety Training Center - H2S

EPA: Lead Renovator,  
Cert No.: R-I-18499-10-13622

##### AFFILIATIONS

American Industrial Hygiene Association

**YEARS OF EXPERIENCE:** 36

**YEARS AT FIRM:** 3



## 10 Resumes of Key Personnel

### Rutugandha “Rutu” H. Nulkar, P.E. Geotechnical/Materials Project Manager

#### PROFESSIONAL EXPERIENCE

Rutu has been practicing geotechnical engineering in South Florida for more than 16 years. A State of Florida-registered P.E., she has managed several public and private sector contracts during her career. Her geotechnical consulting capabilities include providing services for various types of projects including buildings, roadways, bridges, and drilled shaft inspections. Rutu has performed geotechnical analysis and provided recommendations for design of shallow and deep foundation systems for bridges and buildings, and slope stability analyses for levees and canals. She also has over 16 years of construction materials testing and verification experience working on numerous FDOT projects and districtwide materials contracts. She has worked as an in-house geotechnical consultant with the District Materials Research Office (DMRO). Additionally, Rutu has led several geotechnical and materials testing contracts in South Florida.

#### PROJECT EXPERIENCE

##### **Pompano Beach Amphitheater - Pompano Beach, FL**

Project Engineer. The project consists of construction of a membrane roof over the existing amphitheater that is located within the Pompano Community Park. At the time of Terracon's services in 2018, the roof cables connected to a rigid steel truss which rested on top of two towers in the front and at the back the membrane was supported by a series of columns (cable-supported masts). The planned project includes truss columns in the front of the structure and cables and mast on the rear of the structure will be supported on piles. Terracon performed subsurface exploration and geotechnical engineering services for the proposed roof. The purpose of these services was to provide information and geotechnical engineering recommendations relative to: subsurface soil (and rock) conditions; groundwater conditions; site preparation and earthwork; and foundation design and construction. Terracon delivered the firm's information, opinions, and recommendations using GeoReport®, a web-based information and delivery collaboration portal. In 2020 the updated loads for the amphitheater roof membrane became available. Per the client's request, Terracon evaluated 16 and 18-inch auger cast piles to support the foundations of the proposed roof membrane.

##### **Ali Cultural Center - Pompano Beach, FL**

Project Engineer/Manager. The historic two-story historical Ali Cultural Arts building was re-developed with an additional 2,400-SF building and an outdoor courtyard for concerts. Terracon provided construction materials testing and inspection services during the construction of the elevator addition at the center. The firm was also responsible for performing construction materials testing services for the CRA in 2014 and 2015 during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.



#### EDUCATION

M.S., Civil Engineering,  
University of Florida, 2004

B.S., Civil Engineering, V.J.T.I.  
Matunga, Mumbai, India, 2001

#### REGISTRATIONS

Registered Professional Engineer,  
Florida #70625

#### AFFILIATIONS

American Society of Civil  
Engineers (ASCE)

Florida Engineering Society (FES)

Florida Engineering  
Society/Florida Institute of  
Consulting Engineers Leadership  
Institute

**YEARS OF EXPERIENCE: 16**

**YEARS AT FIRM: 16**

# 10 Resumes of Key Personnel

## Hugo E. Soto, P.E.

### Principal Engineer/QA/QC Reviewer

#### PROFESSIONAL EXPERIENCE

Hugo has 39 years of experience providing geotechnical engineering, construction materials testing, inspection and consulting services. Geotechnical services include geotechnical design, analyses and recommendations related to the design and construction of foundations as well as geotechnical exploration programs. He is well versed in performing analysis and evaluation of field and laboratory data, in-situ soil testing, in-place permeability testing and geophysical explorations.

Hugo's extensive experience includes: evaluating bearing capacity and settlement for different types of shallow and deep foundation systems; analysis/evaluation of retaining walls, sheet piling systems, slope stability analysis of conventional and reinforced embankments, evaluation of drilled shafts, auger cast piles and driven piles; evaluation, design, and implementation of subsurface improvement programs (i.e. application of dynamic compaction, preloading, compaction grouting, and vibro-compaction techniques); and conducting studies including monitoring vibrations of structures during construction.

#### PROJECT EXPERIENCE

##### Fire Station No. 114 – Pompano Beach, FL

APR/Quality Review. Terracon performed exfiltration tests on the project site located on the northwest quadrant of the intersection of SW 15th Street and NW 21st Avenue. The tests were performed at a depth of 10 feet below the existing ground surface and in general accordance with the SFWMD procedures for the "Usual Constant Head" Percolation Tests. Hydraulic conductivity was calculated from the test results and reported in units of cubic feet per second per SF of seepage area per foot of head. The soils at the exfiltration test locations were classified by Terracon. The firm provided a report that included the results from the exfiltration tests and boring logs that graphically represented the soil profile at exfiltration test locations.

##### City of Lauderhill Police Station – Lauderhill, FL

APR/Quality Review. The proposed new building includes a three to five-story police building measuring approximately 55 feet by 110 feet. Terracon performed subsurface exploration and geotechnical engineering services to provide information and geotechnical engineering recommendations relative to: subsurface conditions; groundwater conditions; site preparation and earthwork; excavation considerations; foundation design and construction; floor slab design and construction; pavement design and construction; and hydraulic conductivity (k-value).

##### Peace Mound Park - Weston, FL

Contract Manager/Principal Engineer. Terracon provided geotechnical engineering services for Weston Parks and Recreation's Peace Mound Park, site of Tequesta Trace burial mound. The scope of work included: mobilization/demobilization of a drill rig, SPT borings, site reconnaissance, boring layout, and underground utility clearance. Services were provided to the Archaeological and Historical Conservancy, Inc.



#### EDUCATION

Master of Science in Geotechnical Engineering, Utah State University, 1980

Bachelor of Science in Civil Engineering, Utah State University, 1979

#### REGISTRATIONS

Professional Engineer, #56108, Texas, 1994

Professional Engineer, #36440, Florida, 1985

#### AFFILIATIONS

American Society of Civil Engineers

Cuban Society of Engineers

**YEARS OF EXPERIENCE:** 39

**YEARS AT FIRM:** 12

## 10 Resumes of Key Personnel

### Caridad R. Murphy, QCM Materials Testing Manager

#### PROFESSIONAL EXPERIENCE

Caridad Murphy is a project manager with 26 years of experience in the construction management, contract administration and QA/QC of complex transportation projects that include the FDOT and FTE. She has also provided materials testing and inspection services under contracts with cities, counties, school districts, and higher educational clients. She has experience in performing all field and laboratory tests required for verification testing (VT) testing and inspections of soils, asphalt, and concrete; and evaluation of soils, concrete, and asphalt testing for roadway projects. Caridad has worked with various government agencies involved in laboratory inspections such as ASTM Cement and Concrete Reference Laboratory (CCRL), AASHTO Accreditation Program (AAP), AASHTO Materials Reference Library (AMRL), USACE, and the FDOT IID program.

#### PROJECT EXPERIENCE

##### Ali Cultural Center - Pompano Beach, FL

Construction Services Manager. Terracon provided construction materials testing and inspection services during the construction of the elevator addition at the center. The firm was responsible for performing construction materials testing services for the CRA in 2014 and 2015 during construction of the building footings, slab on grade, columns, and walls of CMU, fill cells with grout, construction of beams and metal roof deck with insulation. The scope of Terracon's services included earthwork observation and testing, concrete testing, masonry grout testing, structural inspections, laboratory services, and reporting.

##### Fire Stations No. 43 and No. 95 - Coral Springs, FL

Construction Services Manager. The City of Coral Springs intended to demolish and replace both fire stations. Terracon provided a construction material testing services for both facilities. We also conducted construction materials testing services in support of construction of the foundations for two mast arm assemblies that were required for traffic signalization in connection with the reconstruction of Fire Station 95. Special inspections and testing for concrete, soils, and masonry were also provided for the general contractor.

##### Mako Hall - Davie, FL

Materials Project Manager. Terracon furnished verification for compliance with contract documents of the items incorporated into the project limited to operations related to concrete, grout, earthwork, and steel operations. We observed and reported earthwork-related work while checking for conformance to the plans and specifications as requested. Soil materials were sampled from the site, conducted earthwork density readings and recorded those findings on daily reports when applicable, observed and reported concrete/grout-related work being while checking for conformance to plans and specifications, performed plastic property testing for acceptance of concrete materials. Laboratory tests were provided when required. Terracon also performed special inspections for: foundations and soil preparation; concrete; precast; masonry; steel; and asphalt paving.



#### EDUCATION

Bachelor of Science in Civil Engineering,  
Central University of Las Villas, Villa Clara, Cuba, 1992

#### CERTIFICATIONS

CTQP QC Manager

**YEARS OF EXPERIENCE: 28**

**YEARS AT FIRM: 7**

# 10 Resumes of Key Personnel



**Craig A. Smith & Associates, Inc.**

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

## Stephen C. Smith, P.E.

President/CEO



Mr. Smith has over 34 years of experience in the engineering, survey and utility construction fields.

Mr. Smith's responsibilities include management of daily business operations for a 40+ 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 also oversees all transportation/roadway and stormwater projects including studies, reports and design. He ensures proper allocation of resources, staffing, financial management, quality control and timely project completion.

### 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.

### 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

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**Employment with CAS: 31 yrs**  
**Employment with other firms:**  
**3 yrs**

# 10 Resumes of Key Personnel



**Craig A. Smith & Associates, Inc.**

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

## Orlando A. Rubio, PE

Senior Supervising Engineer, Engineering Department



Mr. Rubio has over 32 years of experience in the engineering field with a primary focus in the water resources engineering.

Mr. Rubio is responsible for the development of project scopes, stormwater master plans, State & Federal Grant applications, advanced stormwater modeling using ICPR, Hydraflow, & HEC-RAS modeling software programs, construction plans of roadways, land development projects, various surface water management systems in accordance with established criteria, engineering principles, and normal construction practices; development of environmental resources permit packages; and permit agency coordination.

He performs construction management and conducts field & office visits with clients, permitting agency staff, and other project coordination as necessary. Mr. Rubio has conducted site plan and engineering reviews for compliance for municipal clients such as Okeechobee County in accordance with their Land Development Regulations and comes from a regulatory background from the South Florida Water Management District and Broward County Water Resources Division.

### SELECTED RELATIVE EXPERIENCE:

**City of Oakland Park NE 6<sup>th</sup> Avenue Stormwater Trunkline.** As Engineer of Record, performed hydrologic and hydraulic modeling, designed and permitted stormwater improvements within an area of significant historical flooding concerns. The Trunkline consisted of ½ mile 7' x 4' Reinforced Concrete Box Culvert within a City right-of-way of limited space and occupied with numerous utility conflicts. Obtained Provided construction management assistance to City staff and project certification. The trunkline project allowed for connections to existing and future lateral drainage connections of adjacent streets.

**City of Sweetwater Stormwater Improvements (Phase I, IIA, III, & IV) - Miami-Dade County, Florida.** As Engineer of Record, designed and permitted stormwater improvements within an area of significant historical flooding concerns. Improvements included the design of stormwater gravity collection systems with 8 stormwater pumping stations designed by other CAS staff. Performed computer modeling for each phase. Provided construction engineering services as requested by the City's CEI firm.

### Areas of Expertise

- Project Management
- Hydrology/Hydraulics
- Computer Modeling
- Stormwater Master Plan
- Climate Change Sea Level Rise Design
- Environmental Resource Permitting
- State of Florida Appropriations Grants
- SRF Loan
- FEMA Hazard Mitigation Grant Program
- FEMA Pre-Disaster Mitigation Competitive Grant Program
- FDEP – S319 Grant Program
- Estimating/Bidding Services
- Construction Management
- Constructability Reviews
- NPDES
- Municipal Site Plan Reviews

### Education

- (AA)Miami-Dade College
- (BSCE) University of Florida
- FDEP – Qualified Stormwater Management Inspector (#7638)
- CEU's – On going

### Licensure

Florida Licensed Professional Engineer – PE No. 48265

Employment with CAS: 19 yrs  
Employment with other firms or government agencies: 13 yrs

## 10 Resumes of Key Personnel



**Craig A. Smith & Associates, Inc.**

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

### Robert D. Keener, P.S.M.

Vice President

Survey / Geomatics



Mr. Keener has over 42 years of experience in the survey, engineering and utility construction fields. Mr. Keener has been employed with CAS since April of 1995.

He 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.** 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. 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. Also 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.** 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.

**WWTP Triplex Lift Station Rehabilitation – City of Margate, Florida.** Served as Principal Surveyor for the boundary, topographic survey and utility locates of existing buried utilities, including recovery of horizontal and vertical control relative to project datum as previously established.

#### 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: 25 yrs**

**Employment with other firms: 17 yrs**

# 10 Resumes of Key Personnel

## Michael Kroll, RLA, FASLA

Principal-in-Charge | Project Manager



### PROFESSIONAL EXPERIENCE:

Mr. Kroll, President of Miller Legg, has been actively involved in projects ranging from large scale habitat restoration to international urban redevelopment projects. His 30+/-year career has concentrated on planning, infrastructure, open space, transportation and redevelopment, principally in South Florida. Mr. Kroll's diverse professional experience has led to projects that successfully integrate environmental, planning and landscape architectural services. Under his leadership, Miller Legg develops project solutions that respond to the natural environment, respect the social fabric and create sustainable aesthetic spaces.

### RELEVANT PROJECT EXPERIENCE:

**John Knox Village Pompano Beach Welcome Center** - In preparation for the proposed new Welcome Center at the John Knox Village retirement community Pompano Beach campus, Miller Legg was retained to perform site development services consisting of planning, engineering and landscape architecture. Preparation of the conceptual site plan entails a review of relevant City of Pompano Beach development codes, existing utilities information, the proposed building plan and existing site conditions. Engineering services include engineering construction document production and construction observation. In addition to the City of Pompano Beach, permitting is being coordinated with the Broward County Health Department (BCHD), BCEPGMD and SFWMD. A photometric lighting plan for surface parking is also part of the scope. The landscape architecture tasks include tree assessment, removal permitting, planting and irrigation design and construction documents, in addition to construction observation.

**North County SW Quad & BP12** - For the NCNIP Bid Package 12, Miller Legg was responsible for design of stormwater drainage, water, sanitary sewer, reclaimed water, street pavement, sidewalks, landscaping and signage improvements for this 173-acre area. Miller Legg designed and managed the construction administration of a lift station and forcemain for BP 12. The project included installation of 5.3 miles of reclaimed water pipe installation resulting in reclaimed water service being provided to 455 homes. This installation consisted of 2 miles of 20" pipe, 0.4 miles of 16" pipe, 2.9 miles of 4" pipe, 7 air release valves; 38 gate and butterfly valves; 12 tons of fittings; as well as roadways and swale were also restored. Provided construction documents for the installation of the reclaimed water transmission main from the City of Pompano Beach reuse plant into Bid Package #12 and reclaimed water system within the Bid Package #12 area constructed in the street.



**Years of Experience:** 34  
**Years With the Firm:** 32

### Registrations & Certifications:

*Registered Landscape Architect, FL, 1989*  
*Registered Landscape Architect, TX, 2009*  
*Fellow American Society of Landscape Architects, 2014*

### Education:

*Bachelor of Landscape Architecture*  
*University of Florida, 1986*  
*Graduate Studies, Urban and Regional Planning*  
*Florida State University, 1989*

### Publications & Presentations:

*American Society of Landscape Architects, Broward Section, Habitat Restoration, October 1995*  
*Builders Association of South Florida, Environmental Issues & Development, 1999, Lecturer*  
*Florida Educational Facilities Planners' Association, Inc., Making Connections: Benefits of On-Campus Mass Transit Elements, July 2014, Presenter/Speaker*  
*Florida Engineering Society, Environmental Design & Habitat Restoration, April 1995, Lecturer*  
*Florida Planning and Zoning Association, Public Private Partnerships, June 2007, Presenter/Speaker*  
*University of Florida School of Architecture, Where the Water Meets the Land, September 1996, Guest Lecturer*

### Professional & Civic Activities:

*Fellow, American Society of Landscape Architects*  
*Past Member, American Society of Landscape Architects, Florida Executive Committee*  
*Vice Chair, Broward County Bicycle & Pedestrian Advisory Committee*  
*Member, Broward Section, American Planning Association*  
*Past Chair, Broward Section, American Society of Landscape Architects*  
*Member, Florida Board of Landscape Architecture, 2013-current*  
*Member, Florida Earth Foundation, Engineering Advisory Committee, 2004-present*  
*Member, Florida Recreation and Park Association*  
*Member, Florida Redevelopment Association*  
*Recipient, UF Distinguished Landscape Architect Alumnus*

# 10 Resumes of Key Personnel

## Brian Shore, RLA

Senior Landscape Architect



### PROFESSIONAL EXPERIENCE:

As a Senior Landscape Architect, Mr. Shore has significant experience in landscape architectural design and landscape construction services for a variety of public and private projects. Specialties include landscape, hardscape, and irrigation design services for streetscape and roadway projects including the FDOT, all aspects of active and passive park design, healthcare campuses, and environmental wetland habitat creation. Other

experience includes various residential and commercial projects. Mr. Shore is a Senior Associate of the firm.

### RELEVANT PROJECT EXPERIENCE:

**John Knox Village Campus Wide Tree Inventory** - Miller Legg was selected by John Knox Village to perform arborist services and a tree inventory for the Pompano Beach campus. The tree inventory and evaluation reflected the following data to meet the requirements for City of Pompano Beach: tree species; common and scientific names; dbh (diameter at breast height) for dicot trees; clear trunk, grey wood, or overall heights for palms; canopy spread, and general health/ condition/ hazard determination as evaluated by an ISA Certified Arborist. Locations of trees were recorded using a sub meter differential global positioning satellite (dGPS).

**John Knox Village Pompano Beach Welcome Center** - In preparation for the proposed new Welcome Center at the John Knox Village retirement community Pompano Beach campus, Miller Legg was retained to perform site development services consisting of planning, engineering and landscape architecture. Preparation of the conceptual site plan entails a review of relevant City of Pompano Beach development codes, existing utilities information, the proposed building plan and existing site conditions. Engineering services include engineering construction document production and construction observation. In addition to the City of Pompano Beach, permitting is being coordinated with the Broward County Health Department (BCHD), Environmental Protection and Growth Management (BCEPGMD) and South Florida Water Management (SFWMD). A photometric lighting plan for surface parking is also part of the scope. The landscape architecture tasks include tree assessment, removal permitting, planting and irrigation design and construction documents, in addition to construction observation.

**Palm Aire Golf Course Lake Excavation** - Miller Legg was engaged to provide engineering and construction observation services for the excavation of property and lakes on the 121-acre Palm Aire Golf & Country Club in Pompano Beach. Permit closeout services were coordinated with relevant authorities - South Florida Water Management District, Broward Co. Environmental Protection, City of Pompano Beach, Florida Department of Environmental Protection, National Pollutant Discharge Elimination System and Broward Co. Health Department.

**FDOT District 4 Andrews Avenue Expedited Tree Permitting** - Under Miller Legg's multi-year Districtwide Landscape Design contract, the firm provided expedited tree permitting services along a one-mile segment of off-system roadway, Andrews Avenue from Atlantic Boulevard to north of Copans Road, in the City of Pompano Beach.

**Years of Experience:** 20  
**Years With the Firm:** 20

**Registrations & Certifications:**  
*Registered Landscape Architect, FL, 2005*  
*FDOT Intermediate Maintenance of Traffic, FL, 2013*

**Education:**  
*Bachelor of Science, Landscape Architecture*  
*North Carolina A&T State University, 2000*

**Continuing Education:**  
*Eminent Domain for Landscape Architects, 2013*  
*FDOT Landscape Highway Seminar, 2005, 2006, 2008 and 2013*  
*FDOT Outdoor Advertising Workshop, November 2008 and February 2010*  
*FDOT Plan Reviewer's Workshop, November 2006 and November 2007*  
*FDOT Specifications Package Preparation Training Certificate, 2016*  
*Irrigation: The End to Water Waste in Landscapes 2013*  
*Landscape Palm Diseases, 2013*  
*LAP Project Inception to Notice to Proceed, October 2007*  
*LAP Training for Right-of-Way and Real Estate Acquisition, May 2008*  
*PSMJ Project Management Boot Camp, 2007*



**11**

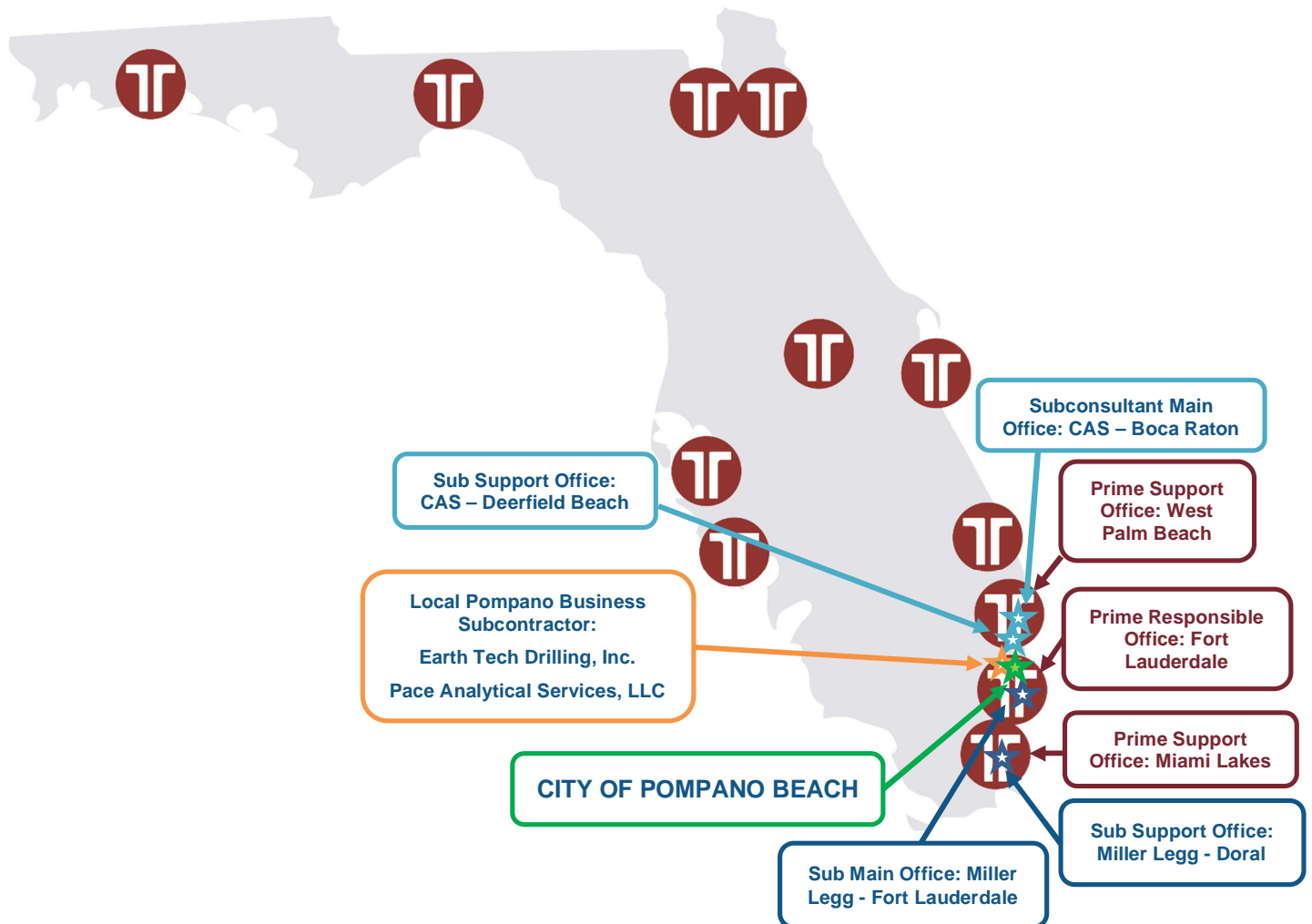
# Office Locations

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# 11 Office Locations

## FIRM'S LOCATION/PROXIMITY TO SERVICE AREA

The Terracon Team has the necessary resources, equipment, and facilities to perform professional environmental and geotechnical/materials services for this contract. As previously mentioned, Terracon will service this contract from our Fort Lauderdale office, **which is located only 15 minutes door-to-door from your City Hall to ours**. Please find below a map of Terracon's Florida offices, including our South Florida offices, and our teaming partners that will service this contract.



*The Terracon Team's offices are strategically located to provide proactive support to the City of Pompano Beach.*

## 11 Office Locations

KEY TEAM MEMBERS, LOCATION	OFFICE ROLE		NO. OF STAFF	
	MAIN	SUPPORT	PROFESSIONAL	ADMIN
<b>Prime Consultant</b>				
Terracon Consultants, Inc. (Terracon) Fort Lauderdale, FL ** Office Responsible for this Contract	✓		16	2
Terracon Miami Lakes, FL		✓	7	2
Terracon West Palm Beach		✓	12	1
<b>Subconsultants</b>				
Craig A. Smith & Associates, Inc. (CAS) Boca Raton, FL	✓		22	6
CAS Deerfield		✓	9	1
Miller Legg Fort Lauderdale, FL	✓		34	10
Miller Legg Doral, FL		✓	8	-
<b>Local Subcontractor</b>				
Earth Tech Drilling, Inc. Pompano Beach, FL	✓		UK	UK
Pace Analytical Services, LLC Pompano Beach, FL	✓		UK	UK

Terracon has 9 additional Florida offices, with 162 professional and 13 administrative staff, that can also help support this contract if the need arises.

**12**

# Local Businesses

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# 12 Local Businesses




## LOCAL BUSINESS PROGRAM FORMS

The required Local Business Program Forms, Exhibits A – D have been executed and are provided in Section 14 City Forms of this submittal. The referenced forms were also uploaded in the Requested Attachments tab on the City's Ebid System.

### City of Pompano Beach Business Tax Receipt of Subcontractor - Earth Tech Drilling, Inc.

		CITY OF POMPANO BEACH BUSINESS TAX RECEIPT FISCAL YEAR: 2019 - 2020	
Business Tax Receipt Valid from: October 1, 2019 through September 30, 2020			
4430524			2/11/2020
EARTH TECH DRILLING E T D INC 2703 NW 19 ST POMPANO BEACH FL 33069			
<b><u>THIS IS NOT A BILL</u></b>			
THIS IS YOUR BUSINESS TAX RECEIPT. PLEASE POST IN A CONSPICUOUS PLACE AT THE BUSINESS LOCATION.			
BUSINESS OWNER: E T D INC BUSINESS LOCATION: 2703 NW 19 ST POMPANO BEACH FL			
RECEIPT NO:	CLASSIFICATION		
20-00051855	CONTRACTOR SPEC-WELL DRILL (S FL WA MGT)		

		CITY OF POMPANO BEACH BUSINESS TAX RECEIPT FISCAL YEAR: 2019 - 2020	
Business Tax Receipt Valid from: October 1, 2019 through September 30, 2020			
4449692			10/10/2019
PACE ANALYTICAL SERVICES INC 3610 PARK CENTRAL BLVD N POMPANO BEACH FL 33064			
<b><u>THIS IS NOT A BILL</u></b>			
THIS IS YOUR BUSINESS TAX RECEIPT. PLEASE POST IN A CONSPICUOUS PLACE AT THE BUSINESS LOCATION.			
BUSINESS OWNER: PACE ANALYTICAL SERVICES INC BUSINESS LOCATION: 3610 N PARK CENTRAL BL POMPANO BEACH FL			
RECEIPT NO:	CLASSIFICATION		
20-00075068	OFFICE-LAB		

# 13 Litigation

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## 13 Litigation

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### TERRACON LITIGATION STATEMENT

Terracon is a large engineering firm specializing primarily in geotechnical, environmental, and construction materials testing services and we perform tens of thousands of projects nationwide. Given the large volume of projects we perform annually, we are subject to periodic claims and litigation. The number of claims received annually is a very small percentage of the overall number of projects performed, well less than 0.5% of the total.

As a large firm performing many projects, on very rare occasions we have terminated services on our projects prior to project completion. These situations usually arise from a failure to pay for those services, or from decisions to reduce our scope of service to the point where we are no longer comfortable, from a professional perspective, with the continuation of our services on a project. Again, we would stress that we perform several thousand projects annually and these situations arise very rarely and only after thorough efforts to reasonably resolve these issues.

Terracon carries a robust program of insurance to protect us and our clients when applicable against claims arising out of our services. The majority of our reported claims are not ultimately pursued against Terracon. In the claims that are pursued, Terracon has been very successful in defending itself against claims and in many of these cases, has been able to be completely vindicated. None of our claims have in the past impacted or are estimated in the future to impact either the financial strength of our company or the ability to provide quality services to our clients.

Due to the confidentiality and sensitivity of claim information, Terracon does not provide specific information on individual claims or litigation. If you have any specific questions or concerns about this disclosure, feel free to contact us to discuss further.

Contact:  
Aaron Mann  
Senior Attorney  
(913) 774-1090

**14**

# City Forms

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## 14 City Forms

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### COMPLETED FORMS

The required forms listed below have been executed and are provided on the following pages. Those with asterisks were also uploaded in the Requested Attachments tab on the City's Ebid System.

- Proposer Information Page \*
- Project Team Form \*
- Vendor Certification Regarding Scrutinized Companies Lists
- Local Business Program Forms, Exhibits A – D \*
- Minority Business Enterprise Participation Exhibit E \*
- Tier 1/Tier 2 Compliance Form \*

Terracon has also responded to the following items on the Bid Attributes tab on the City's Ebid System.

- Drug-Free Workplace
- Conflict of Interest
- Local Business Participation Percentage
- Terms and Conditions
- Acknowledgment of Addenda

**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

***PROPOSER INFORMATION PAGE***

RLI, E-22-20 Continuing Contract for Professional Environmental Testing  
(number) (Title)

To: The City of Pompano Beach, Florida

The below named company hereby agrees to furnish the proposed services under the terms stated subject to all instructions, terms, conditions, specifications, addenda, legal advertisement, and conditions contained in the solicitation. I have read the solicitation and all attachments, including the specifications, and fully understand what is required. By submitting this proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal.

Proposal submitted by:

Name (printed) Richard A. Minichiello Title Vice President, Regional Manager, PIC

Company (Legal Registered) Terracon Consultants, Inc.

Federal Tax Identification Number 42-1249917

Address 5371 NW 33rd Avenue, Suite 201

City/State/Zip Fort Lauderdale, FL 33309

Telephone No. (954) 741-8282 Fax No. (954) 741-8240

Email Address Rich.Minichiello@terracon.com

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRETY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM**

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	<u>Richard Minichiello</u>	<u>34</u>	<u>B.A.</u>
Contract / Project Manager	<u>Steven Harrison, P.G.</u>	<u>32</u>	<u>M.S., B.S.</u>
Asst. Project Manager	<u>Terrence Horan, P.E.</u>	<u>27</u>	<u>B.S.</u>
Other Key Member	<u>Lucas Barroso-Giachetti, P.E., CHMM</u>	<u>19</u>	<u>B.S.</u>
Other Key Member	<u>Susan Kuzia</u>	<u>26</u>	<u>M.S.</u>

**SUB-CONSULTANT**

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	<u>Craig A. Smith and Associates, Inc. (CAS)</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Robert D. Keener, PSM</u>
Landscaping	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Michael Kroll, RLA, FASLA, President</u>
Engineering	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Stephen Smith, P.E.</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>Jim Driscoll</u>
Other Key Member	<u>Miller Legg</u> <u>5747 N. Andrews Way, Fort Lauderdale, FL 33309</u>	<u>Brian Shore, RLA</u>
Other Key Member	<u>CAS</u> <u>21045 Commercial Trail, Boca Raton, FL 33486</u>	<u>James Orth, P.E.</u>

(use attachments if necessary)

**COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**PROJECT TEAM *Continued***

SOLICITATION NUMBER RLI No. E-22-20

Federal I.D.# 42-1249917

**PRIME**

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Other Key Member	<u>Tom Holley, CIH, FLAC, CSP, CHMM</u>	<u>29</u>	<u>B.S.</u>
Other Key Member	<u>Sergio Adasme, MRSA</u>	<u>36</u>	<u>CM Candidate</u>
Other Key Member	<u>Rutu Nulkar, P.E.</u>	<u>16</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Hugo Soto, P.E.</u>	<u>40</u>	<u>M.S., B.S.</u>
Other Key Member	<u>Caridad Murphy, QCM</u>	<u>28</u>	<u>B.S.</u>
Other Key Member	<u></u>	<u></u>	<u></u>

**COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRETY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS**

Respondent Vendor Name: Terracon Consultants, Inc.

Vendor FEIN: 42-1249917

Section 287.135, Florida Statutes, prohibits agencies 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. Further, Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to sign electronically on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

I Certify



**REQUESTED INFORMATION BELOW IS ON LOCAL BUSINESS PROGRAM FORM ON THE BID ATTACHMENTS TAB. BIDDERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

CITY OF POMPANO BEACH, FLORIDA  
LOCAL BUSINESS PARTICIPATION FORM

RLI E-22-20 Continuing Contract

Solicitation # & Title: for Professional Environmental Testing

Prime Contractor's Name: Terracon Consultants, Inc.

<u>Name of Firm, Address</u>	<u>Contact Person, Telephone Number</u>	<u>Type of Work to be Performed/Materials to be Purchased</u>	<u>Contract Amount</u>
Earth Tech Drilling, Inc. 2703 NW 19 St., Pompano Beach, FL 33069	(954) 974-2424	Drilling Services	To be determined (TBD)
Pace Analytical Services, LLC 3610 Park Central Blvd N, Pompano Beach, FL 33064	(954) 582-4300	Analytical Laboratory Services	TBD
Craig A. Smith and Associates, Inc. 277 Goolsby Blvd, Unit 4C, Deerfield Beach, FL 33442	(954) 782-8222	Civil Engineering, Survey Services	TBD

LOCAL BUSINESS EXHIBIT "A"

LOCAL BUSINESS EXHIBIT "B"  
LOCAL BUSINESS  
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number RLI No. E-22-20

TO: Terracon Consultants, Inc.  
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

an individual  a corporation  
 a partnership  a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

Drilling Subcontractor for Environmental Assessments and Remediation

Projects as a Tier 1 Local Vendor & Subcontractor

at the following price: TBD

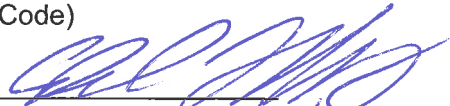
08/21/2020  
(Date)

Earth Tech Drilling, Inc.  
(Print Name of Local Business Contractor)

2703 NW 19 St.

(Street Address)

Pompano Beach, FL 33069  
(City, State Zip Code)

BY: Edward Marks   
ETD Operations Mgr. (Signature) 08/20/2020

**IMPORTANT NOTE:** Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"

LOCAL BUSINESS EXHIBIT "B"  
LOCAL BUSINESS  
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number E-23-20

TO: Terracon  
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

\_\_\_\_\_ an individual  Limited Liability Company LLC \_\_\_\_\_ a corporation  
\_\_\_\_\_ a partnership \_\_\_\_\_ a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

Laboratory Analytical Testing Services.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

at the following price: \_\_\_\_\_

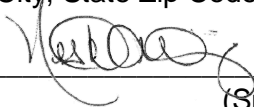
8/20/2020  
(Date)

Pace Analytical Services, LLC  
(Print Name of Local Business Contractor)

3610 Park Central Blvd. N.

(Street Address)

Pompano Beach, FL 33064  
(City, State Zip Code)

BY:   
(Signature)

**IMPORTANT NOTE:** Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"



LOCAL BUSINESS EXHIBIT "C"  
LOCAL BUSINESS UNAVAILABILITY FORM

Solicitation # RLI E-22-20

I, \_\_\_\_\_  
(Name and Title)

of \_\_\_\_\_, certify that on the \_\_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_, I invited the following LOCAL BUSINESS(es) to bid work  
(Month) (Year)

items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Said Local Businesses:

- Did not bid in response to the invitation
- Submitted a bid which was not the low responsible bid
- Other: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Date: \_\_\_\_\_

Note: Attach additional documents as available.

LOCAL BUSINESS EXHIBIT "C"

LOCAL BUSINESS EXHIBIT "D"  
GOOD FAITH EFFORT REPORT LOCAL BUSINESS PARTICIPATION

Solicitation # RLI E-22-20

1. What portions of the contract have you identified as Local Business opportunities?

When projects are undertaken, Terracon will make a concerted effort to  
utilize local vendors that are appropriate for the project to be completed  
(i.e. equipment rentals, trucking, paving, etc.).

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

Calls were made and emails were sent to local vendors Terracon  
works with on a routine basis. Terracon was able to secure local  
businesses to provide critical elements for this team including  
engineering, drilling, and laboratory analyses.

3. Did you send written notices to Local Businesses?

Yes       No

If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

Yes       No

If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

Calls were made and emails were sent to local vendors Terracon  
works with on a routine basis.

7. List the Local Businesses you will utilize and subcontract amount.

<u>Earth Tech Drilling, Inc.</u>	<u>\$ TBD</u>
<u>Pace Analytical Services, Inc.</u>	<u>\$ TBD</u>
<u>TBD</u>	<u>\$ TBD</u>

8. Other comments: Local vendors are significant to perform the scope of  
services that are required in this RLI. As specific projects are identified,

Terracon will make all reasonable attempts to identify and utilize local  
Pompano Beach vendors for appropriate tasks to provide the City with  
the best services possible.

LOCAL BUSINESS EXHIBIT "D"

**BIDDERS ARE TO COMPLETE FORM AND UPLOAD COMPLETED FORM TO THE EBID SYSTEM**

**EXHIBIT E**

**MINORITY BUSINESS ENTERPRISE PARTICIPATION**

RLI # RLI E-22-20

List all members of your team that are a certified Minority Business Enterprise (as defined by the State of Florida.) You must include copies of the MBE certificates for each firm listed with your electronic submittal.

<b>Name of Firm</b>	<b>Certificate Included?</b>
WD Environmental, Inc.	
Jupiter Environmental Laboratories, Inc.	
Wombat Environmental, LLC	

# State of Florida

## Woman Business Certification

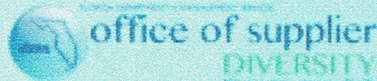
### WD Environmental Inc.

Is certified under the provisions of  
287 and 295.187, Florida Statutes, for a period from:

11/26/2018 to 11/26/2020



Erin Rock, Secretary  
Florida Department of Management Services



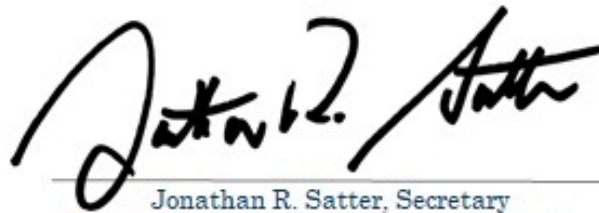
# State of Florida

## Woman Business Certification

### Jupiter Environmental Laboratories, Inc.

Is certified under the provisions of  
287 and 295.187, Florida Statutes, for a period from:

07/02/2019 to 07/02/2021



Jonathan R. Satter, Secretary  
Florida Department of Management Services



Office of Supplier Diversity  
4050 Esplanade Way, Suite 380  
Tallahassee, FL 32399  
850-487-0915  
[www.dms.myflorida.com/osd](http://www.dms.myflorida.com/osd)

# State of Florida

## Minority Business Certification

### Wombat Environmental LLC

Is certified under the provisions of  
287 and 295.187, Florida Statutes, for a period from:

10/30/2018 to 10/30/2020



Erin Rock, Secretary  
Florida Department of Management Services



FLORIDA DEPARTMENT OF MANAGEMENT SERVICES  
office of supplier  
DIVERSITY  
We serve those who serve Florida

### TIER 1/TIER 2 COMPLIANCE FORM

**IN ORDER FOR YOUR FIRM TO COMPLY WITH THE CITY'S LOCAL BUSINESS PROGRAM AS A TIER 1 OR TIER 2 VENDOR, BIDDERS MUST COMPLETE THE INFORMATION BELOW AND UPLOAD THE FORM TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**TIER 1 LOCAL VENDOR**

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least 10 % who are residents of the City of Pompano Beach.

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

Or

My firm does not qualify as a Tier 1 Vendor.

**TIER 2 LOCAL VENDOR**

\_\_\_\_\_ My firm has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within Broward County and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

Or

My firm does not qualify as a Tier 2 Vendor.

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

8-24-20

(Date)

Terracon Consultants, Inc.

(Name of Firm)



BY: Richard A. Minichiello

(Name)



**TIER 1/TIER 2 COMPLIANCE FORM**

**IN ORDER FOR YOUR FIRM TO COMPLY WITH THE CITY'S LOCAL BUSINESS PROGRAM AS A TIER 1 OR TIER 2 VENDOR, BIDDERS MUST COMPLETE THE INFORMATION BELOW AND UPLOAD THE FORM TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.**

**TIER 1 LOCAL VENDOR**

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least 10 % who are residents of the City of Pompano Beach.

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within the city limits and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

Or

\_\_\_\_\_ My firm does not qualify as a Tier 1 Vendor.

**TIER 2 LOCAL VENDOR**

My firm has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach

And/Or

\_\_\_\_\_ My firm has maintained a permanent place of business within Broward County and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

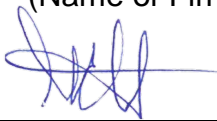
Or

\_\_\_\_\_ My firm does not qualify as a Tier 2 Vendor.

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

July 29, 2020  
(Date)

Craig A. Smith and Associates, Inc.  
(Name of Firm)

BY:   
(Name)

Stephen C. Smith, P.E., President/CEO



# Terracon

**CONTACT:**  
5371 NW 33<sup>rd</sup> Avenue  
Suite 201  
Fort Lauderdale, FL 33309

Phone: (954) 741 8282  
Fax: (954) 741 8240  
terracon.com

**RESPONSIVE.  
RESOURCEFUL.  
RELIABLE.**

Environmental



Facilities



Geotechnical



Materials

# Terracon Consultants, Inc.

## Consulting Services Rate Sheet

### City of Pompano Beach

RLI E-20-20: Continuing Contract for  
Professional Environmental Testing  
March 2021

Professional Services	Rate	Units
Principal	\$250.00	Hour
Environmental Director	\$215.00	Hour
Sr. Geologist, P.G./Senior Engineer, P.E.	\$180.00	Hour
Sr. Project Manager	\$200.00	Hour
Project Manager II/Project Engineer	\$160.00	Hour
Project Manager	\$140.00	Hour
SENIOR I Registered Engineer/Geologist/Scientist/	\$165.00	Hour
SENIOR II Registered Engineer/Geologist/Scientist	\$185.00	Hour
STAFF I Engineer/Geologist/Scientist/Biologist	\$90.00	Hour
Staff II Environmental Scientist/ Geologist/ Biologist/Engineer	\$100.00	Hour
Grants Administrator	\$150.00	Hour
Brownfields Coordinator	\$225.00	Hour
Sustainability/ Resiliency Manager	\$175.00	Hour
Field Scientist	\$75.00	Hour
Threshold Inspector	\$215.00	Hour
Threshold Agent	\$105.00	Hour
Sr. Technician	\$85.00	Hour
Technician	\$65.00	Hour
CADD Operator	\$85.00	Hour
Sr. CADD Operator	\$110.00	Hour

GIS Analyst II	\$125.00	Hour
GIS Technician	\$85.00	Hour
Asbestos Building Inspector	\$80.00	Hour
Asbestos Project Designer	\$135.00	Hour
FL Licensed Asbestos Consultant	\$185.00	Hour
FL Radon Measurement Specialist	\$155.00	Hour
Administrative Assistant/ Clerical	\$80.00	Hour
IAQ Consultant	\$145.00	Hour
LBP Risk Assessor	\$145.00	Hour
Lead Based Paint (LBP) Inspector	\$80.00	Hour
Expert Testimony (1.5 times rate)		
Asphalt Testing Inspection	\$95.00	Hour
Reinforcing Steel Inspection	\$95.00	Hour
Senior Certified Welding Inspector (CWI)	\$110.00	Hour
<b>Environmental Testing/Equipment</b>		
<u>Groundwater Sampling Equipment</u>		
4-piece GW sampling Kit - PP, DTW, Multimeter, Turbidimeter	\$185.00	Day
Peristaltic Pump - Geopump	\$50.00	Day
Multimeter - Ph, Cond, DO, temp - YSI 556	\$100.00	Day
Turbidity Meter - Hach	\$40.00	Day
Water Level Meter - Solinst	\$40.00	Day
1.0 Micron filters	\$30.00	Each
Sampling supplies- tubing , decontamination liquids, etc	\$20.00	GW sample
<u>Soil Sampling Equipment</u>		
OVA - PID/FID	\$145.00	Day
Multigas Meter (LEL, O2, H2S, CO)	\$120.00	Day
Core Drill, 4" bit	\$125.00	Day

Generator - Gasoline	\$100.00	Day
Hand Auger	\$20.00	Day
<u>IAQ Sampling Equipment</u>		
Air Pumps	\$15.00	Day
Summa Canisters incl regulator (rental)	\$90.00	Day
Anderson Impactor (mold sampling with pump)	\$100.00	Day
XRF Gun (min 6 hr/day)	\$100.00	Hour
Survey Equipment (no licensed surveyor)	\$100.00	Day
Vehicle Usage - Light duty	\$100.00	Day
Vehicle Usage	\$80.00	Half-Day
Mileage	\$0.80	Mile
Copies (8.5" x 11") - black & white	\$0.30	Page
Copies (8.5" x 11") - color	\$0.45	Page
Disposable Field Supplies	\$50.00	Day
Personal Protective Equipment (level D)	\$30.00	Day/Man
Shipping	Cost plus 10%	
<b>Subcontracted Services</b>	<b>Rate</b>	<b>Unit</b>
Monitoring Well Installation (2-inch diam 15 ft w/ MH) with hollow stem augers (Does not included Drill rig and mobilization fees)	\$1,200.00	Each
Monitoring Well Installation (1-inch diam 15 ft w/ MH) with direct push (Geoprobe) drill rig (in addition to Geoprobe Drilling Rig and mobilization fees)	\$600.00	Each
Geoprobe Drilling Rig	\$2,200.00	Day
Monitoring Well Permits	\$150.00	each
Drilling Rig Mobilization (Geoprobe or Traditional)	\$600.00	Day
Ground Penetrating Radar Survey - Half Day (Min)	\$1,200.00	1/2 Day
Ground Penetrating Radar Survey - Full Day (8hr)	\$1,800.00	Day
Ground Penetrating Radar report	\$1,000.00	Each
<b>Environmental Laboratory Analyses</b>		
Volatile Organic Compounds (VOCs)	\$100.00	each

Semivolatile Organic Compounds (full list SVOCs)	\$220.00	each
Polynuclear Aromatic Hydrocarbons (PAH) (low level, water)	\$100.00	each
Total Petroleum Hydrocarbons (FLPRO Method)	\$75.00	each
EPA Method TO-15	\$240.00	each
Polynuclear Aromatic Hydrocarbons (PAH) (low level, soil)	\$100.00	each
Semivolatile Organic Compounds (full list SVOCs + PAH, low level)	\$295.00	each
Volatile Organic Aromatics	\$50.00	each
Volatile Organic Halocarbons	\$65.00	each
Metals (each), except Mercury	\$24.00	each
RCRA Metals (8) (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	\$100.00	each
Hexavalent Chromium water	\$48.00	each
Hexavalent Chromium soil	\$79.00	each
Mercury	\$31.00	each
Organochlorine Pesticides - EPA Method 8081	\$151.00	each
Organophosphorous Pesticides - EPA method 8141	\$187.00	each
Polychlorinated Biphenyls (PCBs) - EPA Method 8082	\$84.00	each
Chlorinated Herbicides - EPA Method 8151	\$205.00	each
Chlorinated Herbicides – EPA Method 8321	\$230.00	each
Asbestos – PLM (5-day TAT)	\$20.00	each
Asbestos – TEM Standard TAT	\$75.00	each
Mold - Spore Count - Air/ Tape Lift/ Swab – 5-day TAT	\$65.00	each
Mold - cultured – 2-week TAT	\$105.00	each
Lead in paint – 2-week TAT	\$22.00	each
Analytical costs do not include any associated collection or shipping costs. IAQ, Vapor samples, other groundwater and soil analyses to be quoted on an as needed basis utilizing a cost plus 10% basis.		
<b>Services not included within the above price lists will be quoted on a project-specific basis. Additional items may include, but not be limited to, the following:</b>		
Laboratory Analyses not included above		
Site Survey / Top of Casing Elevation Survey as they are project specific		

MOT Plans and roadway closure
Storage Tank Operations
Drilling Efforts not Provided above

<b>Geotechnical &amp; Material Testing Services</b>		
Mobilization/Demobilization - Drill Rig & Crew (Truck Rig)	\$550.00	each
Mobilization/Demobilization – Drill Rig & Crew (Mud Bug Rig/Track Rig)	\$2,000.00	each
Mobilization/Demobilization - Drill Rig & Crew (Mini Rig)	\$1,300.00	each
<u>Standard Penetration Test Borings (ATSM D-1586), Truck Rig or Mud Bug Rig</u>		
0 - 50 Foot Depth Interval	\$17.00	l.ft
51 - 100 Foot Depth Interval	\$19.00	l.ft
101 - 150 Foot Depth Interval	\$21.00	l.ft
<u>Auger Borings (Drill Rig – ASTM 4700)</u>		
0 - 50 Foot Depth Interval	\$15.00	l.ft.
51 - 100 Foot Depth Interval	\$17.00	l.ft.
101 - 150 Foot Depth Interval	\$19.00	l.ft.
<u>Undisturbed Samples (Shelby Tubes)</u>		
0 - 50 Foot	\$175.00	Each
51 - 100 Foot	\$200.00	Each
<u>Temporary Casing (3-inch casing)</u>		
0-50 Foot	\$7.00	l.ft.
51 - 100 Foot	\$9.00	l.ft.
101 - 150 Foot	\$11.00	l.ft.
<u>Grout Boreholes (Truck/Mud Bug)</u>		

0-50 Ft	\$6.00	l.ft.
51-100 ft	\$8.00	l.ft.
101-150 ft	\$10.00	l.ft.
<u>Muck Probing</u>		
2-Man Crew	\$200.00	Hour
3-Man Crew	\$275.00	Hour
Permeability/Percolations Tests – Field (SFWMD Usual Open Hole Method)	\$500.00	Each
Double Ring Infiltrometer Test	\$800.00	Each
Rock Coring (0 to 50 feet- Truck Mounted)	\$90.00	l.ft.
Rock Coring (51 to 100 feet- Truck Mounted)	\$120.00	l.ft.
<u>Temporary Casing (6-inch casing)</u>		
0 to 50 feet	\$10.00	l.ft.
51 to 100 feet	\$12.00	l.ft.
Extra Split Spoons (0 to 50 feet – truck and mud bug mounted)	\$45.00	Each
Extra Split Spoons (51 to 100 feet - truck and mudbug mounted)	\$50.00	Each
Ground Penetrating Radar (utility locates) (No report)	\$1,800	Per Day
PDA Testing including PDA Engineer/Operator	\$2,000	Per Day
PDA Equipment Mobilization	\$500	Each
Mobilization of Asphalt / Concrete Coring Equipment	\$350.00	Each
Patching Concrete Cores	\$70.00	Each
Patching Asphalt Cores – 4” diameter	\$50.00	Each
Patching Asphalt Cores – 6” diameter	\$70.00	Each
<b>Concrete and Soil Field Testing will be charged at hourly rate</b>		
<b>GEOTECHNICAL AND MATERIALS LABORATORY TESTING</b>		



Atterberg Limits	\$150.00	Per sample
Grain Size Distribution	\$95.00	Per sample
Percent Fines (Wash No. 200)	\$50.00	Per sample
Hydrometer Analysis with Grain Size Distribution	\$225.00	Per sample
Organic Content Determination	\$60.00	Per sample
Moisture content	\$25.00	Per sample
Specific Gravity (fine aggregate/soil)	\$90.00	Per sample
Specific Gravity (coarse aggregate)	\$90.00	Per sample
Consolidation Test (10 load increments)	\$1,000	Per sample
pH	\$55.00	Per sample
Resistivity	\$55.00	Per sample
Chloride	\$55.00	Per sample
Sulfates	\$55.00	Per sample
Corrosion Series	\$220.00	Per sample
Limerock Bearing Ratio	\$450.00	Per sample
Standard and Modified Proctor Test	\$150.00	Per sample
Concrete Compressive Strength Test	\$25.00	Per Cylinder
Flexural Beams	\$55.00	Per Beam
Los Angeles Abrasion	\$360.00	Each
Soundness Test	\$180.00	Per sample
Asphalt Core Extraction/Gradation	\$200.00	Per sample
<i><u>Rock Core Testing (preparing sample for testing is charged hourly)</u></i>		
Unit weight	\$60.00	Each
Unconfined Compression Test	\$150.00	Each
Splitting Tensile Test	\$130.00	Each
Rock Core Boxes	\$80.00	Each
<b>Services not included within the above price lists will be quoted on a project-specific basis. Additional items may include, but not be limited to, the following:</b>		
Laboratory Analyses not included above		

MOT Plans and roadway closure
Drilling Efforts not Provided above

<b>Civil Engineering/ Land Survey/ SUE (Utility Locate)/ Stormwater Engineering Craig A Smith, Inc.</b>		
Principal	\$250.00	Hour
Court Testimony	\$250.00	Hour
Vice President	\$225.00	Hour
Senior Supervising Engineer	\$195.00	Hour
Supervising Engineer	\$170.00	Hour
Project Manager	\$145.00	Hour
Project Engineer	\$125.00	Hour
Senior CADD Technician	\$125.00	Hour
CADD Technician	\$90.00	Hour
Senior Field Representative	\$125.00	Hour
Field Representative	\$95.00	Hour
Professional Surveyor and Mapper	\$150.00	Hour
Survey Coordination Manager	\$120.00	Hour
Survey Technician	\$90.00	Hour
Clerical	\$65.00	Hour
Survey Crew (2-man)	\$160.00	Hour
Survey Crew (3-man)	\$195.00	Hour
Survey Crew, Lidar	\$375.00	Hour
Survey Crew - pile staking	\$225.00	Hour
Utility Locate Crew	\$150.00	Hour
Soft Dig Crew (per hole)	\$495.00	Hour
3D Radar Crew	\$450.00	Hour
3D Radar Processor	\$175.00	Hour
<b>PRODUCTION COSTS</b>		

Computer Usage (CADD)	\$2.50	Hour
<u>Reproductions</u>		
Engineering (24x36)	\$2.50	Sheet
Engineering Color	\$3.50	Sheet
Standard Copies	\$0.30	Sheet
Standard Color	\$0.40	Sheet
Ledger (11x17)	\$0.40	Sheet
Ledger Color	\$0.55	Sheet

<b>Miller Legg Landscape/Survey</b>		
Principal	\$270.00	Hour
Senior Landscape Architect II/ Senior Planner II	\$195.00	Hour
Senior Landscape Architect I/ Senior Planner I	\$165.00	Hour
Landscape Architect II/ Planner II/ Certified Arborist	\$140.00	Hour
Landscape Architect I/ Planner I	\$115.00	Hour
Senior Designer	\$130.00	Hour
Designer II	\$110.00	Hour
Designer I	\$100.00	Hour
Clerical	\$85.00	Hour
Mileage	\$0.75	Mile
<b>PRODUCTION COSTS</b>		
Color Copies (<8 1/2" X 11")	\$1.00	Per Copy
Color Copies (<11" X 17")	\$2.00	Per Copy
Blackline Prints (<24" X 36")	\$2.20	Per Sheet
Blackline Prints (<24" X 36")	\$28.00	Per Sheet
Vellums (<24" X 36")	\$5.50	Per Sheet
Official Record Docs	\$1.00	Per Page
Out-of-Pocket Expenses	Cost +15%	

*NOTE: Fees and Services provided by Terracon's subconsultants will be invoiced at Cost+10%*

## EXHIBIT C

### INSURANCE REQUIREMENTS

CONSULTANT shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the City's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to City staff responsible for oversight of the subject project/contract.

CONSULTANT is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONSULTANT, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONSULTANT under this Agreement.

Throughout the term of this Agreement, CONSULTANT and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

A. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. CONSULTANT further agrees to be responsible for employment, control and conduct of its employees and for any injury sustained by such employees in the course of their employment.

B. Liability Insurance.

(1) Naming the City of Pompano Beach as an additional insured as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONSULTANT's negligent acts or omissions in connection with CONSULTANT's performance under this Agreement.

(2) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

**Type of Insurance****Limits of Liability****GENERAL LIABILITY:**

Minimum 1,000,000 Per Occurrence and  
\$1,000,000 Per Aggregate

\* Policy to be written on a claims incurred basis

XX	comprehensive form	bodily injury and property damage
XX	premises - operations	bodily injury and property damage
—	explosion & collapse hazard	
—	underground hazard	
XX	products/completed operations hazard	bodily injury and property damage combined
XX	contractual insurance	bodily injury and property damage combined
XX	broad form property damage	bodily injury and property damage combined
XX	independent contractors	personal injury
XX	personal injury	

**AUTOMOBILE LIABILITY:**

Minimum \$1,000,000 Per Occurrence and \$1,000,000 Per Aggregate. Bodily injury (each person) bodily injury (each accident), property damage, bodily injury and property damage combined.

- XX comprehensive form
- XX owned
- XX hired
- XX non-owned

**REAL & PERSONAL PROPERTY**

— comprehensive form                      Agent must show proof they have this coverage.

**EXCESS LIABILITY**

Per Occurrence    Aggregate

XX	Umbrella and other than umbrella	bodily injury and property damage combined	\$2,000,000	\$2,000,000
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**PROFESSIONAL LIABILITY**

Per Occurrence    Aggregate

XX	* Policy to be written on a claims made basis		\$2,000,000	\$2,000,000
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(3) If Professional Liability insurance is required, CONSULTANT agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of three (3) years unless terminated sooner by the applicable statute of limitations.

C. Employer's Liability. If required by law, CONSULTANT and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability

Insurance in the minimum amount of One Hundred Thousand Dollars (\$100,000.00) per employee, Five Hundred Thousand Dollars (\$500,000) per aggregate.

D. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONSULTANT, the CONSULTANT shall promptly provide the following:

- (1) Certificates of Insurance evidencing the required coverage;
- (2) Names and addresses of companies providing coverage;
- (3) Effective and expiration dates of policies; and
- (4) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

E. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

F. Waiver of Subrogation. CONSULTANT hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONSULTANT shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONSULTANT enter into such an agreement on a pre-loss basis.



# CERTIFICATE OF LIABILITY INSURANCE

1/1/2022

DATE (MMDD/YYYY)

3/8/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED 1312890 TERRACON CONSULTANTS, INC. 10841 S. RIDGEVIEW ROAD OLATHE KS 66061	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A:	NAIC #
	INSURER B:	
	INSURER C:	
	INSURER D:	
INSURER E:		
INSURER F:		

COVERAGES TERCO01 CERTIFICATE NUMBER: 16925586 REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INBR LTR	TYPE OF INSURANCE	ADDITIONAL INSURED	SUBROGATION	POLICY NUMBER	POLICY EFF (MMDD/YYYY)	POLICY EXP (MMDD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> CONTRACTUAL LIAB <input checked="" type="checkbox"/> XCU COVERAGE GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC. <input type="checkbox"/> OTHER	Y	Y	TC2J-GLSA-1118L293	1/1/2021	1/1/2022	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 25,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	TC2J-CAP-131J3858	1/1/2021	1/1/2022	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTIONS \$	Y	Y	ZUP-91M46583 (EXCLUDES PROF. LIAB.)	1/1/2021	1/1/2022	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$ XXXXXXXX
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	TC2J-UB-6N32541-0 (AOS) TRK-UB-6N32384-0 (AZ, MA, WI)	1/1/2021	1/1/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	PROFESSIONAL LIABILITY	N	N	26030216	1/1/2021	1/1/2022	\$2,000,000 EACH CLAIM & \$2,000,000 IN THE ANNUAL AGGREGATE.

**APPROVED**  
By Danielle Thorpe at 5:46 pm, Apr 01, 2021

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

THIS CERTIFICATE SUPERSEDES ALL PREVIOUSLY ISSUED CERTIFICATES FOR THIS HOLDER, APPLICABLE TO THE CARRIERS LISTED AND THE POLICY TERM(S) REFERENCED.  
RE: PROFESSIONAL CONSULTING AGREEMENT. CITY OF POMPANO BEACH IS ADDITIONAL INSURED ON A PRIMARY BASIS AS RESPECTS TO GENERAL, AUTO, AND EXCESS/UMBRELLA LIABILITY IF REQUIRED BY WRITTEN CONTRACT. WAIVER OF SUBROGATION APPLIES TO GENERAL, AUTO, EXCESS/UMBRELLA AND WORKERS COMPENSATION/EMPLOYERS LIABILITY WHERE ALLOWED BY STATE LAW AND IF REQUIRED BY WRITTEN CONTRACT

CERTIFICATE HOLDER 16925586 CITY OF POMPANO BEACH 100 WEST ATLANTIC BLVD., SUITE 253 POMPANO BEACH FL 33060	CANCELLATION See Attachment  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE <i>Joseph M. Agnello</i>
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