

SERVICE CONTRACT

THIS AGREEMENT is made and entered into on _____, by the **City of Pompano Beach** (“City”) and **Arcadis U.S., Inc.**, a Corporation (“Contractor”).

WHEREAS, City requires services which Contractor is capable of providing under the terms and conditions described herein; and

WHEREAS, Contractor is able and prepared to provide such services to City under the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of those mutual promises and the terms and conditions set forth hereafter, the parties agree as follows:

1. *Contract Documents.* This Agreement consists of the Scope of Work and **Request for Qualification (RFQ) – RFQ25-037 Professional Services for Sustainability Projects**, set forth in Exhibit “A” (the “Work”) and, the Insurance Requirements set forth in Exhibit “B” both of which are attached hereto and made a part hereof; and all written modifications issued after execution of this Agreement.

2. *Purpose.* The City, on behalf of its Planning Department, desires to contract with Contractor to provide qualified professional services to advance sustainability and resilience initiatives services upon the terms and conditions set forth herein.

3. *Scope of Work.* Contractor shall provide the Scope of Services and **RFQ25-037** set forth in Exhibit “A” and insurance set forth in Exhibit “B” both attached hereto and made a part hereof. If the Work requires Contractor to provide materials or complete the Work within a specified time frame or in accordance with certain plans and specifications, these terms and conditions shall be set forth and included in Exhibit “A” and Contractor agrees to provide said materials or Work in accordance therewith. Contractor and Contractor’s heirs, executors, administrators, successors and assigns, do hereby agree to full performance of all covenants contained herein on Contractor’s part.

4. *Term of Contract.* This Contract shall be for a **term of three (3) years**, beginning with the date it is fully executed by both parties. After the initial three (3) years, the contract **can be renewed for two (2) additional one-year terms**, subject to the agreement of both parties. The CITY reserves the right to negotiate the terms of its respective agreement with the awarded company.

6. *Maximum Obligation.* City agrees to pay Contractor for performing the Work and providing the required insurance.

7. *Price Formula, Payment and Invoices.*

A. *Price Formula.* City agrees to pay Contractor for performance of the Work set forth in this Agreement as follows:

Services not to exceed Two Hundred Thousand Dollars (\$200,000.00) per CITY's fiscal year.

B. **Payment.** All payments by City shall be made after the Work has been verified and completed. **Scope of Work will be assigned** with each task to be initiated as permitted by funding when and as directed **by City via a Work Authorization.**

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 Contractor payment for (i) construction services defined as all labor, services, and materials provided in connection with the construction, alteration, repair, demolition, reconstruction, or any other improvement to real property that require a license under Parts I and II of Chapter 489, Florida Statutes, within twenty-five (25) business days and (ii) forty five (45) days for all goods and services provided other than construction services.

City may temporarily remove for review any disputed amount, by line item, from an invoice and shall timely provide Contractor written notification of any such disputed charge. Contractor 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 Contractor for Work performed hereunder which has not been timely remedied in accordance with the provisions of this Article 7, 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 Contractor, and/or Contractor'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.

Resolution of improper payment requests or invoices shall be in accordance with § 218.76, Florida Statutes, as amended.

C. **Invoices for payment** shall be made after the Work has been verified and completed. Contractor shall submit invoices to City on a monthly basis based on progress of each task.

8. *Disputes.* Any factual disputes between City and the Contractor in regard to this Agreement shall be directed to the City Manager for the City, and such decision shall be final.

9. *Contract Administrators, Notices and Demands.*

A. *Contract Administrators.* During the term of this Agreement, the City's Contract Administrator shall be Jean Dolan, Principal Planner, or designee for the Planning Department, and the Contractor's Contract Administrator shall be provided by Contractor upon commencement of services (or their authorized written designee) as further identified below.

B. *Notices and Demands.* A notice, demand, or other communication hereunder by either party to the other shall be effective if it is in writing and sent via registered or certified mail or other trackable delivery service, postage prepaid to the representatives named below or is addressed and delivered to such other authorized representative at the address as that party, from time to time may designate in writing and forward to the other.

If to Contractor: Leah Richter, P.E., V.P., Assistant Secretary
150 S. Pine Island Road
Suite 300
Plantation, FL 33324
Office: 954-761-3460
Email: Leah.richter@arcadis.com

If to City: Jean Dolan, Principal Planner & Contract Administrator
100 West Atlantic Blvd
Pompano Beach, FL 33060
Office: 954-545-7030
Email: Jean.Dolan@copbfl.com

With a copy to: Aymara Schmidt, Contract Manager
100 West Atlantic Blvd.
Pompano Beach, FL 33060
Phone: 954-786-5574
Email: Aymara.Schmidt@copbfl.com

10. *Ownership of Documents and Information.* All information, data, reports, plans, procedures or other proprietary rights in all Work items, developed, prepared, assembled or compiled by Contractor as required for the Work hereunder, whether complete or unfinished, shall be owned by the City without restriction, reservation or limitation of their use and made available at any time and at no cost to City upon reasonable written request for its use and/or distribution as City deems appropriate provided City has compensated Contractor for said Work product. City's re-use of Contractor's Work product shall be at its sole discretion and risk if done without Contractor's written permission. Upon completion of all Work contemplated hereunder or termination of this Agreement, copies of all of the above data shall be promptly delivered to the City's Contract Administrator upon written request. The Contractor may not disclose, use, license or sell any work developed, created, or otherwise originated hereunder to any third party whatsoever. The rights and obligations created under this Article shall survive the termination or expiration of this Agreement.

To the extent it exists and is necessary to perform the Work hereunder, City shall provide any information, data and reports in its possession to Contractor free of charge.

11. *Termination.*

A. *Termination for Breach or Default.* Breach or default of any of the covenants, duties, or terms of this Agreement shall be cause for termination, in whole or in part, of this Agreement. In the event of a breach or default, the defaulting party shall be given written

notice in accordance with Article 9 herein which describes in reasonable detail the alleged breach or default and ten (10) calendar days to cure same. Failure to cure all such described defects within the required time period shall result in termination of this contract with written notice to Contractor.

B. **Termination for Convenience.** City retains the right to terminate this Agreement for convenience upon ten (10) business days written notice to Contractor in accordance with Article 9 herein. 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. City shall compensate Contractor for all authorized Work satisfactorily performed through the termination date under the payment terms set forth in Article 7 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 Agreement may be extended until said Work is completed and accepted by City.

12. **Force Majeure.** Neither party shall be obligated to perform any duty, requirement or obligation hereunder if such performance is prevented by fire, hurricane, earthquake, explosion, war, civil disorder, sabotage, accident, flood, acts of nature or by any reason of any other matter or condition beyond the control of either party which cannot be overcome by reasonable diligence and without unusual expense ("Force Majeure"). In no event shall economic hardship or lack of funds be considered an event of Force Majeure. If either party is unable to perform or delayed in their performance of any obligations hereunder by reason of any event of Force Majeure, such inability or delay shall be excused at any time during which compliance therewith is prevented by such event and during such period thereafter as may be reasonably necessary for either party to correct the adverse effect of such event of Force Majeure.

Contractor must follow all Federal, State, County, and City safety guidelines, including all CDC safety guidelines in effect during the term of the program, including but not limited to social distancing, and personal protection equipment. Inability to conduct the program and follow any and all required safety guidelines applicable to the COVID-19 virus or other similar pandemic or emergency, or failure to follow such requirements, including but not limited to, social distancing, shall constitute grounds for immediate cancellation of this Agreement unilaterally by the City upon written notice, which may be provided via registered or certified mail or other trackable delivery service.

13. **Insurance.** Contractor shall maintain insurance in accordance with Exhibit "B" throughout the term of this Agreement.

14. **Indemnification.** Except as expressly provided herein, no liability shall attach to the City by reason of entering into this Agreement.

A. Contractor shall at all times indemnify, defend, save and hold harmless the City, its officers, 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 arising directly or indirectly from Contractor's performance under

this Contract, including but not limited to, any act, breach, omission, negligence, recklessness or misconduct of Contractor 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 Contractor, its agents, officers and/or employees, in the performance of services of this contract. Contractor agrees to investigate, handle, respond to, provide defense for, and defend any such claims at its sole expense and to bear all other costs and expenses related thereto, even if the claim(s) is/are groundless, false or fraudulent. To the extent considered necessary by City, any sums due Contractor 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 of interest by City.

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

15. *Sovereign Immunity.* 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.

16. *Non-Assignability and Subcontracting.*

A. *Non-Assignability.* This Agreement is not assignable and Contractor agrees it shall not assign or otherwise transfer any of its interests, rights or obligations hereunder, in whole or in part, to any other person or entity without City's prior written consent which must be sought in writing not less than fifteen (15) days prior to the date of any proposed assignment. Any attempt by Contractor to assign or transfer any of its rights or obligations hereunder without first obtaining City's written approval shall not be binding on City and, at City's sole discretion, may result in City's immediate termination of this Agreement whereby City shall be released of any of its obligations hereunder. In addition, this Agreement and the rights and obligations herein shall not be assignable or transferable by any process or proceeding in court, or by judgment, execution, proceedings in insolvency, bankruptcy or receivership. In the event of Contractor's insolvency or bankruptcy, City may, at its option, terminate and cancel this Agreement without any notice of any kind whatsoever, in which event all rights of Contractor hereunder shall immediately cease and terminate.

B. *Subcontracting.* Prior to subcontracting for Work to be performed hereunder, Contractor shall be required to obtain the written approval of the City's Contract Administrator. If the City's Contract Administrator, in his/her sole discretion, objects to the proposed subcontractor, Contractor shall be prohibited from allowing that subcontractor to provide any Work hereunder. Although Contractor may subcontract Work in accordance with this Article, Contractor remains responsible for any and all contractual obligations hereunder and shall also be responsible to ensure that none of its proposed subcontractors are listed on the *Convicted Vendors List* referenced in accordance with the provisions of Article 28 below.

17. *Performance Under Law.* The Contractor, in the performance of duties under the Agreement, agrees to comply with all applicable local, state and/or federal laws and ordinances including, but not limited to, standards of licensing, conduct of business and those relating to criminal activity, and the Americans with Disabilities Act (ADA).

18. *Audit and Inspection Records.* The Contractor shall permit the authorized representatives of the City to inspect and audit all data and records of the Contractor, if any, relating to performance under the contract until the expiration of three years after final payment under this contract.

The Contractor further agrees to include in all his subcontracts hereunder a provision to the effect that the subcontractor agrees that City or any of their duly authorized representatives shall, until the expiration of three years after final payment under the subcontractor, have access to and the right to examine any directly pertinent books, documents, papers and records of such subcontractor, involving transactions related to the subcontractor.

19. A. *Adherence to Law.* Both parties shall adhere to all applicable laws governing their relationship with their employees including, but not limited to, laws, rules, regulations and policies concerning worker's compensation, unemployment compensation and minimum wage requirements.

B. *Conflict of Interest.* During the time period this Agreement is in effect, Contractor, its employees subcontractors, and agents shall not engage in any conduct or activities that would constitute a conflict of interest, and shall otherwise avoid any appearance of such conflict of interest. Additionally, Contractor, its employees subcontractors, and agents shall refrain from acting adverse to the City's interest in promoting the goals and objectives of this Agreement. Any potential such conflict of interest must be reported to the City and may be waived only upon additional review and approval by the City Manager.

Furthermore, none of Contractor's employees, subcontractors, and agents shall, during the term of this Agreement, serve as an expert witness against City in any legal or administrative proceeding in which he, she, or Contractor is not a party, unless compelled by court process. Further, such persons shall not give sworn testimony or issue a report or writing, as an expression of his or her expert opinion, which is adverse or prejudicial to the interests of City in connection with any such pending or threatened legal or administrative proceeding unless compelled by court process. The limitations of this section shall not preclude Contractor or any persons in any way from representing themselves, including giving expert testimony in support thereof, in any action or in any administrative or legal proceeding.

The existence of any such conflict of interest, or evidence of non-compliance with the above paragraphs, may serve as grounds for termination of this Agreement pursuant to Paragraph 11, Termination.

20. *Independent Contractor.* The Contractor shall be deemed an independent Contractor for all purposes, and the employees of the Contractor or any of its contractors, subcontractors and the employees thereof, shall not in any manner be deemed to be employees of City. As such, the employees of the Contractor, its Contractors or subcontractors, shall not be

subject to any withholding for tax, social security or other purposes by City, nor shall such Contractor, subcontractor or employee be entitled to sick leave, pension benefits, vacation, medical benefits, life insurance, workers or unemployment compensation or the like from City.

21. *Contractor cooperation.* The Contractor recognizes that the performance of this contract is essential to the provision of vital public services and the accomplishment of the stated goals and mission of City. Therefore, the Contractor shall be responsible to maintain a cooperative and good faith attitude in all relations with City and shall actively foster a public image of mutual benefit to both parties. The Contractor shall not make any statements or take any actions detrimental to this effort.

22. *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:

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 Contractor 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 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

23. *Governing Law; Venue; Waiver of Jury Trial.* This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any litigation arising from, related to, or in connection with this Agreement shall be in the Seventeenth Judicial Circuit in and for Broward County, Florida, or in the United States District Court for the Southern District of Florida, or United States Bankruptcy Court for the Southern District of Florida, as applicable. BY ENTERING INTO THIS AGREEMENT, THE PARTIES EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.

24. *Waiver and Modification.*

A. No waiver made by either party with respect to performance, manner, time, or any obligation of either party or any condition hereunder shall be considered a waiver of that party's rights with respect to the particular obligation or condition beyond those expressly waived in writing or a waiver of any other rights of the party making the waiver or any other obligations of the other party.

B. No Waiver by Delay. The City shall have the right to institute such actions or proceedings as it may deem desirable for effectuating the purposes of this Agreement provided that any delay by City in asserting its rights hereunder shall not operate as a waiver of such rights or limit them in any way. The intent of this provision is that City shall not be constrained to exercise such remedy at a time when it may still hope to otherwise resolve the problems created by the default or risk nor shall any waiver made by City with respect to any specific default by Contractor be considered a waiver of City's rights with respect to that default or any other default by Contractor.

C. Either party may request changes to modify certain provisions of this Agreement; however, unless otherwise provided for herein, any such changes must be contained in a written amendment executed by both parties with the same formality of this Agreement.

25. *No Contingent Fee.* Contractor warrants that other than a bona fide employee working solely for Contractor, Contractor has not employed or retained any person or entity, or paid or agreed to pay any person or entity, any fee, commission, gift or any other consideration to solicit or secure this Agreement or contingent upon or resulting from the award or making of this Agreement. In the event of Contractor's breach or violation of this provision, City shall have the right to terminate this Agreement without liability and, at City's sole discretion, to deduct from the Price Formula set forth in Article 7 or otherwise recover the full amount of such fee, commission, gift or other consideration.

26. *Attorneys' Fees and Costs.* In the event of any litigation involving the provisions of this Agreement, both parties agree that the prevailing party in such litigation shall be entitled to recover from the non-prevailing party reasonable attorney and paraprofessional fees as well as all out-of-pocket costs and expenses incurred thereby by the prevailing party in such litigation through all appellate levels.

27. *No Third Party Beneficiaries.* Contractor and City agree that this Agreement and other agreements pertaining to Contractor's performance hereunder shall not create any obligation on Contractor or City's part to third parties. No person not a party to this Agreement shall be a third-party beneficiary or acquire any rights hereunder.

28. *Public Entity Crimes Act.* As of the full execution of this Agreement, Contractor 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 Contractor is subsequently listed on the *Convicted Vendors List* during the term of this Agreement, Contractor agrees it shall immediately provide City written notice of such designation in accordance with Article 9 above.

29. *Entire Agreement.* This document incorporates and includes all prior negotiations, correspondence, conversations, agreements or understandings applicable to the matters contained herein, and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

30. *Headings.* The headings or titles to Articles of this Agreement are not part of the Agreement and shall have no effect upon the construction or interpretation of any part of this Agreement.

31. *Counterparts.* This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. A photocopy, email or facsimile copy of this Agreement and any signatory hereon shall be considered for all purposes as original.

32. *Approvals.* Whenever CITY approval(s) shall be required for any action under this Agreement, said approval(s) shall not be unreasonably withheld.

33. *Absence of Conflicts of Interest.* Contractor represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner

with their performance under this Agreement and that no person having any conflicting interest shall be employed or engaged by either party in its performance under this Agreement.

34. *Binding Effect.* The benefits and obligations imposed pursuant to this Agreement shall be binding and enforceable by and against the parties hereto.

35. *Employment Eligibility.* By entering into this Contract, the Contractor becomes obligated to comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility." This includes but is not limited to utilization of the E-Verify System to verify the work authorization status of all newly hired employees, and requiring all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply will lead to termination of this Contract, or if a subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit or County Court no later than twenty (20) calendar days after the date of termination. If this contract is terminated for a violation of the statute by the Contractor, the Contractor may not be awarded a public contract for a period of one (1) year after the date of termination

36. *Scrutinized Companies.* By execution of this Agreement, in accordance with the requirements of F.S. 287.135 and F.S. 215.473, Contractor certifies that Contractor is not participating in a boycott of Israel. Contractor further certifies that Contractor is not on the Scrutinized Companies that Boycott Israel list, not on the Scrutinized Companies with Activities in Sudan List, and not on the Scrutinized Companies with Activities in Iran Terrorism Sectors List, nor has Contractor been engaged in business operations in Syria. Subject to limited exceptions provided in state law, the City will not contract for the provision of goods or services with any scrutinized company referred to above. In accordance with Section 287.135, Florida Statutes as amended, a company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with any agency or local government entity for goods or services of:

A. Any amount if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, Florida Statutes, or is engaged in a boycott of Israel; or

B. One million dollars or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company:

1. Is on the Scrutinized Companies with Activities in Sudan List of the Scrutinized Companies with Activities in Iran Terrorism Sectors List, created pursuant to Section 215.473, Florida Statutes; or

2. Is engaged in business operations in Syria.

C. Submitting a false certification or being placed on a list created pursuant to Section 215.473, Florida Statutes relating to scrutinized active business operations in Iran after Contractor has submitted a certification, shall be deemed a material breach of contract. The City shall provide notice, in writing, to Contractor of the City's determination concerning the false

certification. Contractor shall have five (5) days from receipt of notice to refute the false certification allegation. If such false certification is discovered during the active contract term, Contractor shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If Contractor does not demonstrate that the City's determination of false certification was made in error then the City shall have the right to terminate the contract and seek civil remedies pursuant to Section 287.135, Florida Statutes, as amended from time to time.

37. *Affidavit of Compliance with Anti-Human Trafficking Laws.* In accordance with section 787.06 (13), Florida Statutes, the undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury that:

A. Entity does not use coercion for labor or services as defined in Section 787.06, Florida Statutes, entitled "Human Trafficking".

38. *Affidavit of Compliance with Foreign Entity Laws.* The undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

A. Entity is not owned by the government of a foreign country of concern as defined in Section 287.138, Florida Statutes.

B. The government of a foreign country of concern does not have a controlling interest in Entity.

C. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern.

D. Entity is not owned or controlled by the government of a foreign country of concern, as defined in Section 692.201, Florida Statutes.

E. Entity is not a partnership, association, corporation, organization, or other combination of persons organized under the laws of or having its principal place of business in a foreign country of concern, as defined in Section 692.201, Florida Statutes, or a subsidiary of such entity.

F. Entity is not a foreign principal, as defined in Section 692.201, Florida Statutes.

G. Entity is in compliance with all applicable requirements of Sections 692.202, 692.203, and 692.204, Florida Statutes.

39. *Annual Budgetary Funding/Cancellation.* This Agreement and all obligations of the City hereunder requiring the expenditure of funds are subject to and contingent upon annual budgetary funding and appropriations by the City Commission.

40. *Severability.* Should any provision of this Agreement or the applications of such provisions be rendered or declared invalid by a court action or by reason of any existing or subsequently enacted legislation, the remaining provisions of this Agreement shall remain in full force and effect.

THE REMAINDER OF THE PAGE IS INTENTIONALLY LEFT BLANK

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

Attest:

CITY OF POMPANO BEACH

KERVIN ALFRED, CITY CLERK

By:_____
REX HARDIN, MAYOR

By:_____
GREGORY P. HARRISON, CITY MANAGER

APPROVED AS TO FORM:

MARK E. BERMAN, CITY ATTORNEY

(SEAL)

"CONTRACTOR"

Arcadis U.S., Inc.

Witnesses:

[Signature]

Tatiana Pina
(Print or Type Name)

[Signature]
Jose Custodio
(Print or Type Name)

By: [Signature]
Leah Richter, P.E., Vice President

STATE OF FLORIDA

COUNTY OF BROWARD

The foregoing instrument was acknowledged before me, by means of ☒ physical presence or ☐ online notarization, this 21 day of AUGUST, 2025 by Leah Richter, P.E., as Vice President of Arcadis U.S., Inc., a Florida registered foreign profit corporation on behalf of the corporation, who is personally known to me or who has produced driver's license as identification.

NOTARY'S SEAL:



Julissa Burgos
Comm.: HH 642207
Expires: Feb. 18, 2029
Notary Public - State of Florida

[Signature]
NOTARY PUBLIC, STATE OF Florida

Julissa Burgos
(Name of Acknowledger Typed, Printed or Stamped)

HH 642207
Commission Number

EXHIBIT “A”



Florida's Warmest Welcome

CITY OF POMPANO BEACH

**REQUEST FOR QUALIFICATIONS
RFQ25-037**

Professional Services for Sustainability Projects

VIRTUAL PRE-BIDDERS CONFERENCE:

April 29, 2025, 10:00 A.M.

VIRTUAL BID OPENING:

May 22, 2025, 2:00:00 P.M.

For access, go to:

<https://pompanobeachfl.gov/pages/meetings>

Dear Prospective Proposers,

SUBJECT: REQUEST FOR QUALIFICATIONS (RFQ) - RFQ25-037 PROFESSIONAL SERVICES FOR SUSTAINABILITY PROJECTS.

The City of Pompano Beach seeks to engage qualified professional services to advance sustainability and resilience initiatives. This RFQ aims to select firm(s) with proven expertise in engineering, urban planning, vulnerability assessment, adaptation planning, biodiversity enhancement, natural resource conservation, green stormwater infrastructure, urban forestry planning, and sustainability policy integration.

This RFQ intends to approve a list of firms rather than awarding the contract to any specific firm. The City plans to engage up to 8 firms for professional services to advance sustainability and resilience initiatives. This approach allows us to leverage the expertise of multiple firms, ensuring a diverse range of perspectives and solutions. By collaborating with these selected firms, we aim to enhance our efforts in developing and implementing effective strategies that promote sustainability and resilience within our community. The selected firms shall demonstrate specific experience and capabilities and must have qualified personnel and expertise in the specified disciplines.

This RFQ is subject to the “Cone of Silence,” which imposes certain restrictions on communications concerning the RFQ process.

The Cone of Silence shall take effect once this solicitation is released to the General Public. Respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72 hours following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the procurement officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.” (F.S 287.057 (25)).

Any proposer or lobbyist for a proposer is prohibited from having any communications concerning any solicitation for a competitive procurement with any member of the City Commission, City Clerk, City Manager’s Office, any Evaluation Committee Member, or any other City of Pompano Beach employee after Procurement and Contracts releases a solicitation to the General Public. All communications must go through the Procurement and Contracts Department staff. No other member of the City Commission, City Clerk, City Manager’s Office, any Evaluation Committee Member, or any other City of Pompano Beach employee should be contacted concerning this RFQ. Any information that amends any portion of this RFQ received by any method other than an Addendum issued to the RFQ is not binding on the City of Pompano Beach.

The City will receive sealed proposals until 2:00:00 p.m. (EST), May 22, 2025. Proposals must be submitted electronically through the eBid System (IonWave) on or before the due date and time as provided herein. Any proposal received after the due date and time specified will not be considered. Any uncertainty regarding the time a proposal is accepted will be resolved against the proposer.

Proposers 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 from the eBid System as a PDF at <https://www.pompanobeachfl.ionwave.net>. The City is not responsible for the accuracy or completeness of any documentation the proposer receives from any source other than the eBid System. The proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum. To attend the virtual public meeting, go to <https://www.pompanobeachfl.gov/pages/meetings> to find the Zoom link.

Carefully read all portions of the RFP document to ensure the Proposer's bid fully complies with all requirements.

Procurement and Contracts Department
City of Pompano Beach, Florida.

SCHEDULE OF EVENTS

RFQ NUMBER:	RFQ25-037
RFQ TITLE:	PROFESSIONAL SERVICES FOR SUSTAINABILITY PROJECTS
RELEASE DATE:	4/17/2025
DATE PUBLISHED IN SUN-SENTINEL	4/23/2025
VIRTUAL NON-MANDATORY PRE-BIDDERS CONFERENCE	4/29/2025 – 10:00 AM (EST)
WRITTEN QUESTIONS AND INQUIRIES ARE DUE ON OR BEFORE:	5/12/2025 – 05:00 PM (EST)
ADDENDA AS RESPONSES TO QUESTIONS SHALL BE ISSUED ON OR BEFORE:	5/15/2025
RFQ RESPONSES DUE DATE/TIME:	5/22/2025 - 02:00 PM (EST)
EVALUATION COMMITTEE MEETINGS	TBD
RECOMMENDATION FOR AWARD:	TBD
DIRECT ALL INQUIRIES TO:	https://pompanobeachfl.ionwave.net
E-PROPOSAL SUBMITTALS ONLY:	https://pompanobeachfl.ionwave.net
PROPOSAL VIRTUAL OPENING:	https://www.pompanobeachfl.gov/meetings

Non-Mandatory Pre-Proposal Meeting

The non-mandatory Pre-Proposal Meeting will be held via Virtual Zoom Meeting on 4/29/2025, at 10:00 a.m. (local). Attendance at the Pre-Submittal Meeting is non-mandatory. The Zoom link is available on the City's Meetings webpage: <https://www.pompanobeachfl.gov/meetings>

A. Introduction

The City of Pompano Beach seeks to engage qualified professional services to advance sustainability and resilience initiatives. This RFQ aims to select firm(s) with proven expertise in engineering, urban planning, vulnerability assessment, adaptation planning, biodiversity enhancement, natural resource conservation, green stormwater infrastructure, urban forestry planning, and sustainability policy integration.

B. Scope of Services

1. Adaptation Plan Development.

Objective: Develop an Adaptation Plan that builds on the existing vulnerability assessment to enhance community resilience and address identified vulnerabilities.

Key Tasks:

- The 'Request for Proposal' serves as a crucial tool to identify and prioritize adaptation actions

- based on feasibility, cost-effectiveness, and social and environmental impacts.
- Incorporate green stormwater infrastructure as a central component of adaptation strategies where applicable.
- Utilize an objective framework with qualitative and quantitative measures to assess project benefits, community acceptance, and potential obstacles.
- Develop an implementation schedule and funding strategy to support the procurement and execution of prioritized actions.
- Ensure the plan enhances flood mitigation, biodiversity, and natural resource conservation.

2. Implementation Planning

Objective: Translate adaptation strategies into actionable implementation plans that support sustainable urban development.

Key Tasks:

- Develop detailed implementation plans with timelines, budgets, and performance metrics to ensure effective execution.
- Coordinate with city departments and stakeholders to facilitate seamless integration into existing municipal operations.
- Incorporate strategies for biodiversity enhancement, natural resource conservation, and green stormwater infrastructure.
- Identify funding opportunities, including grants and public-private partnerships, to support implementation.

3. Urban Forestry Plan

Objective: Expand and sustain a resilient urban tree canopy to reduce urban heat, enhance climate adaptation, and support stormwater management.

- Key Tasks:
- Develop an Urban Tree Canopy Plan that prioritizes increasing tree coverage in public spaces such as parks, swales, right-of-way, and other municipal properties, targeting areas with high heat exposure and limited shade.
- Prioritize native species for maximum cooling, biodiversity, and low-maintenance benefits.
- Integrate green stormwater infrastructure
- Use GIS and heat mapping to identify priority planting areas and measure cooling benefits.
- Develop educational resources and outreach programs to encourage tree planting and maintenance in heat-stressed areas. Guide on selecting native tree species that are resilient to local climate conditions and beneficial for urban wildlife.

4. CRS Watershed Management Plan

- Objective: Maximize points under the requirements of the CRS Program for a Watershed Management Plan.

Key Tasks:

- Develop a comprehensive Watershed Management Plan to meet the Community Rating System manual requirements.
- Conduct hydrologic and hydraulic modeling to assess existing watershed conditions, identifying areas vulnerable to flooding and water quality issues.
- Prioritize watershed restoration projects and green infrastructure solutions to enhance resilience to climate change impacts.
- Incorporate strategies to promote groundwater recharge, improve water quality, and reduce flood risks.
- Coordinate with regional water management agencies to ensure compliance with regional policies and regulations.

- Integrate the Watershed Management Plan with other sustainability and adaptation initiatives to support holistic water resource management.

5. Water Audit at Selected City Facilities

Objective: Identify inefficiencies and conservation opportunities in municipal water usage to reduce consumption and enhance sustainability.

- Conduct a detailed water audit at selected city facilities to identify inefficiencies and opportunities for conservation.
- Assess indoor and outdoor water usage patterns, leak detection, fixture efficiency, and potential reuse strategies.
- Provide recommendations for reducing water consumption, implementing conservation technologies, and enhancing operational efficiency.

6. Energy Audits at Selected City Facilities

Objective: Improve energy efficiency in municipal facilities through detailed assessments and targeted recommendations.

- Perform energy audits at selected city facilities to assess current energy usage and identify efficiency improvements.
- Evaluate HVAC systems, lighting, insulation, and equipment performance.
- Recommend energy-saving measures, renewable energy integration opportunities, and potential cost savings.
- Develop a prioritized action plan for implementing energy efficiency upgrades.

7. Greenhouse Gas (GHG) Inventory Update

Objective: Track and reduce emissions through an updated Greenhouse Gas Inventory, ensuring alignment with the City's climate goals.

- Update the City's Greenhouse Gas Inventory to measure progress on emissions reduction goals.
- Assess emissions from municipal operations and community-wide sources.
- Identify key areas for emissions reduction and provide recommendations for mitigation strategies.
- Develop a reporting framework to track and communicate progress on climate action initiatives.

C. Term of Agreement

The Term of this Agreement/Contract is effective three (3) years from the start date. After the initial three (3) years, the contract can be renewed for two additional one-year terms, subject to the agreement of both parties. The City reserves the right to negotiate the terms of its respective agreement/contract with the awarded company(ies)/firm(s).

D. Qualifications Requirements:

The selected firm(s) should demonstrate:

- Proven experience in adaptation planning, sustainability, resilience, engineering, and urban planning.
- Expertise in vulnerability assessment, biodiversity enhancement, natural resource conservation, green stormwater infrastructure, urban forestry planning, and integrated watershed management.
- Strong GIS and data analysis capabilities for mapping, modeling, and scenario planning.
- Effective communication and stakeholder engagement skills, including public outreach and

- facilitation of community involvement.
- Capacity to work collaboratively with municipal departments, regional agencies, and community stakeholders.

E. Local Business Program

The Procurement and Contracts staff will evaluate this section. On March 13, 2018, the City Commission approved Ordinance 2018-46, establishing a Local Business Program, a policy to increase the participation of City businesses in the City's procurement process.

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

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 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 city's limits. In addition, the business must have a current business tax receipt from the City for a minimum of one year prior to the date of issuance of a solicitation.

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 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 that reside within the city's limits. 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 solicitation.

LOCAL VENDOR SUBCONTRACTOR.

POMPANO BEACH BUSINESS. A business entity which has maintained a permanent place of business within the city limits of the City. 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 city's limits. In addition, the business must have a current business tax receipt from the City for a minimum of one year prior to the date of issuance of a solicitation.

You can view the list of City businesses with a current Business Tax Receipt on the City's website and locate local companies that are available to perform the work required by the RFP scope of services. The business information, sorted by business use classification, is posted on the Business Tax Receipt Division webpage: www.pompanobeachfl.gov by selecting the Pompano Beach

Business Directory in the Shop Pompano! Section.

The City is **strongly committed** to ensuring the participation of City Businesses as contractors and subcontractors for procuring goods and services, including labor, materials, and equipment.

Proposers are required to participate in the City'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.

The required goal for this Solicitation is **15%** for Local Vendor.

Suppose a Prime Contractor/Vendor cannot attain the contract's goal. In that case, 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 companies 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 and after projects are completed. The reports will be submitted to the assigned City project manager. 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 the award of future projects if the City Commission the City Commission imposes a sanction imposes a sanction.

The City shall award a Local Vendor preference based upon vendors, contractors, or subcontractors who are local with a preference as 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 5 Points.
 - b. Tier 2 business, as defined by this subsection, shall be granted a preference in the amount of 2.5 Points.

The awarded vendor/contractor must comply with all Tier 1 and Tier 2 guidelines and meet all requirements before contract execution.

F. Required Proposal Submittal

Sealed proposals shall be submitted electronically through the eBid System on or before the due date and time as provided herein. Proposer shall upload the 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: To maintain comparability and expedite the review process, proposals must be organized as specified below, with the sections clearly labeled.

Title page:

Show the project name and number, the name of the Proposer's company/firm, address, telephone number, name of the 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. Please 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 (2) pages.

Technical Approach / Relevant Projects:

Companies/Firms or teams shall submit their technical approach to perform the tasks described in the scope. Provide experience the firm with similar projects.

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 Proposer's responsibilities, and provide the contact information (name, email, telephone number) of an individual in a position of responsibility who can attest to the Proposer's activities with the project.

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

Project Team Form:

Submit a proposed "Project Team" form that the firm ~~considers~~ proposes to select when a project is assigned. This form aims to identify the proposed team's key members, including any specialty subconsultants.

Organizational Chart:

Provide the organizational chart for the proposed Project Team.

Statement of Skills and Experience of Project Team:

Describe the experience of the entire project team as it relates to items described in the Scope of Services section of this RFQ. 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 in the situation a project is assigned to the firm. Name specific projects [successfully completed within the past five (5) years] where the team members have performed similar projects previously.

Resumes of Key Personnel:

Include resumes for key personnel for prime and consultants.

Office Locations:

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

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

Litigation:

Disclose any litigation within the past five (5) years arising from your company/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. It has sufficient financial resources to perform the agreement/contract and shall provide proof of its financial solvency. At its sole discretion, the City may ask for additional evidence of financial solvency, including additional documents post-proposal opening and before evaluation demonstrating the Proposer's ability to perform the resulting agreement/contract and provide the required materials and/or services.

Reviewed and Audited Financial Statements:

Proposers shall be financially solvent and appropriately capitalized to service the City for the duration of the agreement/contract. Proposers shall provide a complete financial statement of the company's/firm's most recent audited financial statements, indicating the 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 before the date of filing this solicitation's response. The financial statements must be reviewed and submitted with any accompanying notes and supplemental information. The City of Pompano Beach reserves the right to reject financial statements in which the financial condition shown is twelve (12) months or more before the submittal date.

The City is a public agency subject to Chapter 119, Florida's Public Records Law, and must 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. It has sufficient financial resources to perform the agreement/contract and shall provide proof of its financial solvency. At its sole discretion, the City may ask for additional evidence of financial solvency, including additional documents post-proposal opening and prior to evaluation demonstrating the Proposer's ability to perform the resulting agreement/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 three (3) months
- 2) Balance sheet, profit and loss statement, cash flow report
- 3) IRS returns for the last two (2) years
- 4) Letter from CPA showing profits and loss statements (certified)

G. Insurance

The contractor/consultant shall not commence services under the terms of this agreement/contract 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 solicitation and have questions regarding the insurance requirements, don't hesitate to contact the City's Procurement and Contracts Department at (954) 786-4098. If the agreement/contract has already been awarded, please direct any inquiries and proof of the requisite insurance coverage to City staff responsible for oversight of the subject project/contract.

The contractor/Consultant is responsible for delivering 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 the insured city as an additional insured on a primary basis on all such coverage.

Throughout the term of this agreement/contract, the City, by and through its Risk Manager, reserves the right to review, modify, reject, or accept any insurance policies required by this agreement/contract, including limits, coverages, or endorsements. The 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 the City review or acceptance of insurance maintained by the contractor/consultant, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by the contractor/consultant under this agreement/contract.

Throughout the term of this agreement/contract, the contractor/consultant and all sub-contractors/sub-consultants 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. The contractor/consultant further agrees to be responsible for its employees' employment, control, and conduct and any injury sustained by such employees during their employment.
2. Liability Insurance.
 - (a) Naming the City of Pompano Beach as an additional insured as the City's interests may appear, on General Liability Insurance only, relative to claims which arise from the proposer's negligent acts or omissions in connection with contractor/consultant's performance under this agreement/contract.
 - (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 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	
___ 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 \$1,000,000 \$1,000,000
property damage combined

PROFESSIONAL LIABILITY Per Occurrence Aggregate

XX * Policy to be written on a claim made basis \$1,000,000 \$1,000,000

(c) If Professional Liability insurance is required, the Consultant agrees the indemnification and hold harmless provisions set forth in the agreement/contract shall survive the termination or expiration of the agreement/contract 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/contract and for not less than four (4) years after termination/ completion of the agreement/contract.		

3. Employer's Liability. If required by law, the Consultant and all sub- contractors/sub-consultant 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/contract, insurance is required of the Awarded Proposer, the Awarded Proposer 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 thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

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

6. Waiver of Subrogation. The awarded company/firm waives any and all rights 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/contract to waive subrogation without an endorsement. The awarded company/firm 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 that includes a condition to the policy not specifically prohibiting such an endorsement or voids coverage should the Awarded Proposer enter into such an agreement/contract on a pre-loss basis.

H. Selection/Evaluation Process

A Selection/Evaluation Committee (Committee) will be appointed to select the most qualified company(ies)/ firm(s). The Committee will present its findings to the City Commission. The City Manager will approve a selection evaluation committee to assist in evaluating the Statement of Qualifications(s) received and to select the most qualified firm(s). All Statement of Qualifications will be reviewed by the Evaluation Committee and Procurement and Contracts staff based on the information submitted by the Submitting Firm(s) in response to this RFQ. The Committee's findings will be presented to the City Commission. Based upon the evaluation, the Evaluation Committee will recommend up to eight (8) Submitting Firms to the City Commissioners for the award and execution of

an Agreement.

Proposals will be evaluated using the following criteria:

Line	Criteria	Points Range
1	Demonstrated expertise and experience in sustainability and resilience planning	0 - 40
2	Quality and relevance of previous project examples.	0 - 45
	a) Number of similar projects	
	b) Complexity of similar projects	
	c) References from past projects performed by the company/firm	
	d) Previous projects performed for the City (provide the description)	
	e) Litigation within the past five (5) years arising out of the company's/firm's performance (list, describe outcome)	
4	Local Business Program	0 - 15
Total		100

NOTE:

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

The City Commission has the authority to (including, but not limited to) approve the recommendation, reject the recommendation, and direct staff to re-advertise this 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.

- Tie Breaker:

In case where there is a tie for the highest-ranked proposers, the recommendations shall be made by giving preference to the following items in this order:

- 1) Maintenance of a Drug-Free Workplace in accordance with the requirements of 287.087, F.S.
- 2) Local Business Program Participation
- 3) Coin Toss

- Technicalities:

Failure to respond, provide detailed information, or provide requested proposal elements may reduce points in the evaluation process. The Committee may recommend rejecting any statement of qualifications containing material deviations from the RFQ. The Committee may recommend waiving any irregularities and technicalities. If only one (1) responsive proposal is received, the Committee will proceed without scoring the one (1) responsive statement received and may recommend for Procurement and Contracts Department staff to negotiate the best terms and conditions with that sole firm or may recommend rejecting the proposal.

- Committee's Recommendations:

The Evaluation Committee may recommend rejecting the statement of qualifications received or awarding the contract.

A complete recording shall be made of each meeting (evaluation and negotiation session) conducted by the Committee by the Purchasing Agent. The Committee may choose to conduct one (1) or more exempt negotiation session(s) with as many ranked responsive firms, in its sole judgment, as it deems appropriate

before making its recommendation for award, starting with the highest-ranked firm first, then the second highest-ranked firm, and so on. The Committee also has the discretion to recommend negotiations with only a single responsive firm if the Committee chooses to do so. During any such negotiations, the City staff assigned to negotiate reserves the right to negotiate any term, condition, or specification during an exempt negotiation session with the highest-ranked responsive firm.

Per Section 286.0113(2), Florida Statutes, any negotiation session will be conducted to exclude the other ranked responsive firm and the public. The Committee will recess the open public portion of the evaluation meeting and conduct the exempt negotiation session of the competitive selection process, beginning with the highest-ranked responsive firm first, then the second highest-ranked firm, and so on until finished. The Committee also has the discretion to commence negotiations with only a single responsive firm if it chooses to do so. Each ranked responsive firm must be represented during its exempt negotiations session by an authorized representative possessing the authority to bind the firm to the changes made during the negotiation session and be prepared to provide its best and final offer. Any information communicated between the Committee and a ranked responsive firm during an exempt negotiation session shall not be disclosed to anyone during the open portion of the meeting, including other ranked responsive firms until disclosure is permitted under Section 286.0113(2), Florida Statutes.

After the exempt negotiation session(s) is/are completed, the Committee shall reconvene the open public portion of the evaluation meeting and determine, by motion and a roll call vote, whether to recommend the approval of up to eight (8) ranked responsive firms; to declare an impasse with a ranked responsive firm; or to proceed with further negotiations with one (1) or more of the next highest-ranked responsive firms. The Committee may declare an impasse with a ranked responsive firm at any time or proceed with further negotiations with one (1) or more of the next highest-ranked firm(s). Suppose negotiations are unsuccessful or have reached an impasse with a ranked firm; in that case, the Committee reserves the right not to recommend an award to a ranked firm if it is in the City's best interest and must be stated on the record. The final scores are only a ranking of statements received for negotiation (i.e., the highest-ranked firm will be the first to start the negotiations) and do not determine the actual award.

- **Determination of Award:**

The City Commission shall consider the Committee's recommendation to approve the selection of up to eight (8) firms for this RFQ and may approve such a recommendation. The City Commission may also, at its option, reject the Evaluation Committee's recommendation, or it may also reject all statements received, in which case the City may choose to re-advertise this project "as is" or by adopting a modified version.

This RFQ intends to approve a list of firms rather than awarding the contract to any specific firm. The City intends to engage up to 8 firms for professional services to advance sustainability and resilience initiatives. This approach allows us to leverage the expertise of multiple firms, ensuring a diverse range of perspectives and solutions. By collaborating with these selected firms, we aim to enhance our efforts in developing and implementing effective strategies that promote sustainability and resilience within our community.

I. Hold Harmless and Indemnification

Proposer covenants and agrees that it will indemnify hold harmless the City, its officials, employees, volunteers and other authorized agents from and against any and all claims, demands, suits, 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 agreement/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.

J. Right to Audit

Awarded company's/firm's records which shall include but not be limited to accounting records, written policies and procedures, computer records, disks and software, videos, photographs, sub-contract/sub-consultants files (including proposals of successful and unsuccessful proposers), originals estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to the agreement/contract (all the foregoing hereinafter referred to as "records") shall be open to inspection and subject to audit and/or reproduction, during regular working hours, by City'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 Awarded Proposer or any of its payees pursuant to the execution of the agreement/contract. Such records subject to the examination shall also include but are not limited to, those necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with the agreement/contract.

For the purpose of such audits, inspections, examinations, and evaluations, the City's agent or authorized representative shall have access to said records from the effective date of the agreement/contract, for the duration of the service, and until five (5) years after the date of final payment by the City to awarded company/firm pursuant to the agreement/contract.

The City agent or its authorized representative shall have access to the awarded company's/firm's facilities, all necessary records, and adequate and appropriate workspace to conduct audits in compliance with this article. The City agent or authorized representative shall give auditees reasonable advance notice of intended audits.

The awarded company/firm shall require all sub-contractors/sub-consultants, insurance agents, and material suppliers (payees) to comply with this article's provisions by inserting the requirements in any written agreement/contract. Failure to obtain such written agreements/contracts that include such provisions shall be reason to exclude some or all of the related payees' costs from amounts payable to the contractor/consultant pursuant to the agreement/contract.

K. Retention of Records and Right to Access

The City is a public agency subject to Florida Statutes Chapter 119. The awarded company/firm shall comply with Florida's Public Records Law, as amended. Specifically, the awarded company/firm shall:

1. Keep and maintain public records required by the City 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 Florida Statutes Chapter 119, 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 agreement/contract term and following completion of the agreement/contract if the awarded company/firm does not transfer the records to the City; and
5. Upon completion of the agreement/contract, transfer all public records in possession of the awarded company/firm at no cost to the City, or keep and maintain public records required by the City to perform the service. If the awarded company/firm transfers all public records to the City upon completion of the agreement/contract, the awarded company/firm shall destroy any duplicate public

records that are exempt or confidential and exempt from public records disclosure requirements. If the awarded company/firm keeps and maintains public records upon completion of the agreement/contract, the awarded company/firm 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 compatible with the City's information technology systems.

L. Communications

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

M. No Discrimination

No discrimination shall be made on the basis of race, sex, color, age, religion, or national origin in the operations conducted under any agreement/contract with the City.

N. Independent Contractor

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

O. Staff Assignment

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

P. Agreement/Contract Terms

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

- The agreement/contract shall include, at minimum, the entirety of this solicitation and the awarded proposal. The City of Pompano Beach City Attorney shall prepare it.
- If the City 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/consultant, its employees, agents, or servants during the performance of the agreement/contract, whether directly or indirectly, awarded company/firm agrees to reimburse the City for all expenses, attorney's fees, and court costs incurred in defending such claim, cause of action or lawsuit.

Q. Waiver

It is agreed that no waiver or modification of the agreement/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. 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 the agreement/contract or the right or obligations of any party under it unless such waiver or modification is in writing, duly executed as previously provided. The parties agree that the provisions of this paragraph may not be waived except by duly executed writing.

R. Survivorship Rights

The agreement/contract resulting from this solicitation shall be binding on and inure to the benefit of the respective parties and their executors, administrators, heirs, personal representatives, successors, and assigns.

S. Manner of Performance

Proposer agrees to perform its duties and obligations under the agreement/contract resulting from this solicitation professionally and in accordance with all applicable local, federal, and state laws, rules, and regulations.

Proposer agrees that the services provided under the agreement/contract resulting from this solicitation shall be provided by educated, trained, experienced, certified, and licensed employees in all areas encompassed within its 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, 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 licenses, permits, registration, authorization or certification required by applicable laws or regulations in full force and effect during the term of the agreement/contract. Failure of Proposer to comply with this paragraph shall constitute a material breach of agreement/contract.

T. Acceptance Period

Proposals submitted in response to this solicitation must be valid for no less than one hundred and twenty (120) days from the closing date.

U. Conditions and Provisions

The completed proposal (together with all required attachments) must be submitted electronically to the City on or before the time and date as written herein. By electronically submitting a proposal, all proposers shall agree to comply with all of this solicitation's conditions, requirements, and instructions as written 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 the spaces provided or including attachments as necessary. By submission of a response, Proposer affirms that a complete set of solicitation documents was obtained from the eBid System only, and no alteration of any kind has been made to this solicitation. Exceptions or deviations to this proposal may not be added after the due 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 City's best interest 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 agreement/contract for the items herein, in part or whole, if it is determined to be in the City's best interests to do so.

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

V. Standard Provisions

1. Governing Law

Any agreement/contract 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/contract will be in Broward County, Florida.

2. Licenses

In order to perform public work, the awarded company/firm 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

To determine 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 company/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 Florida Statute, Section 112.313.

4. Drug-Free Workplace

The awarded company(ies)/firm(s) will be required to verify it will operate a "Drug-Free Workplace" as outlined in Florida Statute, Section 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 an agreement/contract to provide any goods or services to a public entity, may not submit a proposal on an agreement/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, sub-contractor, consultant or sub-consultant under agreement/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 thirty-six (36) months from the date of being placed on the convicted vendor list.

6. Patent Fees, Royalties, And Licenses

Suppose the awarded company/firm requires or desires to use any design, trademark, device, material or process covered by letters of patent or copyright. In that case, the awarded company/firm and his surety shall indemnify and hold harmless the City from any and all claims for infringement because 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 because of any infringement at any time during or after completion of the work.

7. Permits

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

8. Familiarity with Laws

It is assumed the selected company(ies)/firm(s) will be familiar with all federal, state, and local laws, ordinances, rules, and regulations that may affect its/their services pursuant to this solicitation. Ignorance on the part of the company/firm will not relieve the company/firm from responsibility.

9. Withdrawal of Proposals

A company/firm may withdraw its proposal without prejudice no later than the advertised deadline for submission of proposals by written communication to the Procurement and Contracts, 1190 N.E. 3rd Avenue, Building C, Pompano Beach, Florida 33060.

10. Composition of Project Team

Company(ies)/Firm(s) 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 agreement/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 the 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 forty-five (45) days after receipt of a proper invoice.

12. Public Records

- a. The City of Pompano Beach is a public agency subject to Florida Statutes, Section 119. The awarded company/firm shall comply with Florida's Public Records Law, as amended. Specifically, the Awarded Proposer 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 Florida Statutes, Section 119 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 agreement/contract term and following completion of the agreement/contract if the awarded company/firm does not transfer the records to the City; and
 - iv. Upon completion of the agreement/contract, transfer all public records in possession of the awarded company/firm at no cost to the City, or keep and maintain public records required by the City to perform the service. If the awarded company/firm transfers all public records to the City upon completion of the agreement/contract, the awarded company/firm shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the awarded company/firm keeps and maintains public records upon completion of the agreement/contract, the contractor/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 compatible with the City's information technology systems.
- b. Failure of the contractor/consultant to provide the above-described public records to the City within a reasonable time may subject the contractor/consultant to penalties under Florida Statute Section 119.10, as amended.

PUBLIC RECORDS CUSTODIAN

IF THE CONTRACTOR/CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S/CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT/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

W. Questions, Communication, and Addendums

All questions regarding this solicitation will be submitted using the Questions feature in the eBid System. Questions must be received at least seven (7) calendar days before the due date and time specified herein. Oral and other interpretations or clarifications will be without legal effect. Addendum/Addenda will be posted to this solicitation in the eBid System, and it is the proposer's responsibility to obtain all addenda before submitting a response to this solicitation.

Issuing a written addendum or posting an answer in response to a question submitted using the Questions feature in the eBid System are the only official methods for interpretation, clarification, or additional information. If any addendum is issued to this solicitation, the addendum will be issued via the eBid System. Before submitting its response, each proposer shall be responsible for contacting the City's Procurement and Contracts Department at (954) 786-4098 to determine if an addendum was issued and to make such an addendum a part of its proposal. Each addendum will be posted to the solicitation in the eBid System.

X. Contractor Performance Report

The City will utilize the Contractor Performance Report to monitor and record the awarded company's/firm's performance for the work specified by the agreement/contract. The Contractor Performance Report has been included as an exhibit in this solicitation.

Y. Protest Procedures

The Protest Procedures established within the Procurement and Contracts Procedures Manual and Section 120.57, Florida Statutes must be followed to file a valid Protest to this solicitation. To be considered, protests concerning the proposed solicitation award must be filed in writing with the Procurement and Contracts Director. They may only be filed by bidders or proposers whom the solicitation or award may aggrieve. The initial protest must be addressed to the following:

Director of Procurement and Contracts,

City of Pompano Beach

1190 N.E. 3rd Avenue, Building C, Pompano Beach, Florida 33060

Z. Attachments and Attributes

Attachments

1. **Project Team**
2. **T1_T2_Form** - To comply with the City's Local Business Program as a Tier-1 or Tier-2 vendor, you must complete this form and upload it to the Response Attachments tab.
3. **Proposer Information Form** - Proposer Information Form is to be included in your proposal that must be uploaded to the Response Attachments Tab.
4. **Vendor Certif. Scrutinized Companies** - Must be uploaded to the Response Attachment Tab
5. **Bid Bond Form** - Each bid requires a certified check or bid bond executed on the prescribed form, payable to the City of Pompano Beach, Florida, in an amount not less than 5 percent (5%) of the amount bid. Bidder shall upload a copy of their bid bond or a copy of the certified check to the Response Attachments tab in the eBid System. The awarded bidder will be required to submit the original executed bid bond or cashier's check prior to the execution of the contract and before the commencement of any work.
6. **SAMPLE SERVICE AGREEMENT** - Sample purposes only. The City reserves the right to add, delete or modify any and all terms and conditions of this sample agreement.

Attributes

1. Local Business
2. Drug-Free Workplace
3. Conflict of Interest
4. Terms & Conditions
5. Acknowledgement of Addenda
6. Local Business Participation Percentage

RFQ #: RFQ25-037 Tentative City Commission Meeting Date*: TBD

RFQ Title: Professional Services for Sustainability Projects # Notified: 1275 # Downloaded: 27

of Responses Rec'd: 11 # of "No Bids": 1

For: Planning Department RFQ Opening Date: 05/29/2025
(Department)

POSTING OF RFQ RECOMMENDATION/TABULATION: RFQ Recommendations and Tabulations will be posted in the eBid System, IonWave, and will remain posted for 72 hours. Any person who may be adversely affected by the decision or intended decision shall file a notice of protest in writing within 72 hours of posting the notice of the decision or intended decision. The formal written protest shall be filed within ten (10) days after the date the notice of protest is filed. Failure to file a notice of protest or a formal written protest shall constitute a waiver of proceedings under this chapter. Section 120.57(3)(b), Florida Statutes, states that "The formal written protest shall state with particularity the facts and law upon which the protest is based." Saturdays, Sundays, state holidays, and days when the City is closed shall be excluded from the computation of the 72-hour time period provided. Filings shall be at the office of the Director of Procurement and Contracts, 1010 NE 3rd Avenue, Pompano Beach, FL 33060. Any person who files an action protesting an intended decision shall post with the City, at the time of filing the formal written protest, a protest bond, payable to the City of Pompano Beach, Florida, in an amount equal to one percent (1%) of the estimated value of the contract. Failure to submit the protest bond within the time allowed for filing a bond shall constitute a waiver of the right to protest. Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the protest bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

(*) The Cone of Silence, as stated in the RFQ, is in effect until the City Commission approves it. The City Commission meeting date stated above is tentative. Confirm with the Purchasing Agent of record for the actual date the Cone of Silence has concluded.

RECOMMENDATION TABULATION

The City of Pompano Beach, Florida, received eleven (11) proposals for RFQ25-037 Professional Services for Sustainability Projects. IBM and NEBAH Enterprises LLC failed to submit documentation detailed in Section F - Required Proposal Submittal and were deemed non-responsive.

Proposal	Score	Ranking
Keith and Associates, Inc.	296.00	Highest Ranked
Chen Moore and Associates.	267.00	2nd Highest Ranked
Kimley-Horn and Associates, Inc.	257.00	3rd Highest Ranked
Arcadis US, Inc.	244.00	4th Highest Ranked
AECOM (AECOM Technical Services, Inc.)	232.00	5th Highest Ranked
Aptim Environmental & Infrastructure, LLC	231.00	6th Highest Ranked
RS&H, Inc	218.00	7th Highest Ranked
EXP U.S. Services	202.00	8th Highest Ranked
WM Sustainability Services (Waste Management National Services, Inc.)	100.00	9th Highest Ranked
IBM	Non-responsive	Non-responsive
NEBAH Enterprises LLC	Non-responsive	Non-responsive

The Evaluation Committee has passed a formal motion recommending an award to a pool consisting of the eight highest-ranked firms. Upon thorough review of all proposals received in response to the RFQ, the Committee confirmed that each of the top eight firms meets all the requirements outlined in the solicitation. As such, all eight are deemed fully responsive and responsible, and are each recommended for contract award.

By:

Jeffrey English

(Purchasing Agent)

Date:

07/07/2025



RFQ25-037 Addendum 4

Arcadis US, Inc.

Supplier Response

Event Information

Number: RFQ25-037 Addendum 4
Title: Professional Services for Sustainability Projects
Type: Request for Qualifications
Issue Date: 4/17/2025
Deadline: 5/29/2025 02:00 PM (ET)
Notes: The City of Pompano Beach seeks to engage qualified professional services to advance sustainability and resilience initiatives. This RFQ aims to select firm(s) with proven expertise in engineering, urban planning, vulnerability assessment, adaptation planning, biodiversity enhancement, natural resource conservation, green stormwater infrastructure, urban forestry planning, and sustainability policy integration.

This RFQ intends to approve a list of firms rather than awarding the contract to any specific firm. The City plans to engage up to 8 firms for professional services to advance sustainability and resilience initiatives. This approach allows us to leverage the expertise of multiple firms, ensuring a diverse range of perspectives and solutions. By collaborating with these selected firms, we aim to enhance our efforts in developing and implementing effective strategies that promote sustainability and resilience within our community. The selected firms shall demonstrate specific experience and capabilities and must have qualified personnel and expertise in the specified disciplines.

This RFQ is subject to the “Cone of Silence,” which imposes certain restrictions on communications concerning the RFQ process. The Cone of Silence shall take effect once this solicitation is released to the General Public. Respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72 hours following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the procurement officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.” (F.S 287.057 (25)).

Any proposer or lobbyist for a proposer is prohibited from having any communications concerning any solicitation for a competitive procurement with any member of the City Commission, City Clerk, City Manager’s Office, any Evaluation Committee Member, or any other City of Pompano Beach employee after Procurement and Contracts releases a solicitation to the General Public. All communications must go through the Procurement and Contracts Department staff. No other member of the City Commission, City Clerk, City Manager’s Office, any Evaluation Committee Member, or any other City of Pompano Beach employee should be contacted concerning this RFQ. Any information that amends any portion of this RFQ received by any method other than an Addendum issued to the RFQ is not binding on the City of Pompano Beach.

Proposals must be submitted electronically through the eBid System (IonWave) on or before the due date and time as provided herein. Any proposal received after the due date and time specified will not be considered. Any uncertainty regarding the time a proposal is accepted will be resolved against the proposer.

Proposers 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 from the eBid System as a PDF at <https://www.pompanobeachfl.ionwave.net>. The City is not responsible for the accuracy or completeness of any documentation the proposer receives from any source other than the eBid System. The proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum. To attend the virtual public meeting, go to <https://www.pompanobeachfl.gov/pages/meetings> to find the Zoom link.

Contact Information

Contact: Eric Seifer
Address: Procurement and Contracts
1190 NE 3 Avenue

Building C
Pompano Beach, FL 33060
Email: eric.seifer@copbfl.com

Arcadis US, Inc. Information

Contact: Leah Richter
Address: 150 South Pine Island Road
Suite 317
Plantation, FL 33324
Phone: (954) 761-3460
Email: Leah.richter@arcadis.com
Web Address: www.arcadis.com

By submitting this Response I affirm I have received, read and agree to the all terms and conditions as set forth herein. I hereby recognize and agree that upon execution by an authorized officer of the City of Pompano Beach, this Response, together with all documents prepared by or on behalf of the City of Pompano Beach for this solicitation, and the resulting Contract shall become a binding agreement between the parties for the products and services to be provided in accordance with the terms and conditions set forth herein. I further affirm that all information and documentation contained within this response to be true and correct, and that I have the legal authority to submit this response on behalf of the named Supplier (Offeror).

Leah Richter

Signature

Submitted at 5/29/2025 12:12:06 PM (ET)

leah.richter@arcadis.com

Email

Requested Attachments

Proposal

Arcadis Proposal for Pompano Beach Sustainability Projects Part 1.pdf

Proposals shall be submitted electronically through the eBid System (Response Attachments Tab). Proposer shall upload the 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.

Proposer Information Form

10c_Proposer Information Page Form-RFQ.pdf

Proposer Information Form is to be included in your proposal that must be uploaded to the Response Attachments Tab.

Project Team

04_Project Team Form_FINAL.pdf

T1 - T2 Form

10b_T1_T2_Form 12-2021.pdf

To comply with the City's Local Business Program as a Tier-1 or Tier-2 vendor, you must complete this form and upload it.

Vendor Certif. Scrutinized Companies form.

10c_Vendor Certif. Scrutinized Companies Over \$1,000.docx

Financial Statements

Arcadis Financials.pdf

To permit the City to comply with Section 119.071 of Florida Statutes, exempting financial statements from public records, please do not include confidential financial statements in your proposal. Label financial statements "CONFIDENTIAL" and attach them here.

Response Attachments

Arcadis Proposal for Pompano Beach Sustainability Projects.pdf

Arcadis Full Proposal

Bid Attributes

1 Local Business

Is your company a Local Business located within the City of Pompano Beach City Limits as required by the Local Business Program? (A copy of your current City of Pompano Beach Business Tax Receipt may be requested.)

No

2 Drug-Free Workplace

STATEMENT UNDER SECTION 287.087, FLORIDA STATUTES ON DRUG-FREE WORKPLACE
**REQUESTED INFORMATION BELOW IS ON THE ATTRIBUTES TAB FOR THE RFP IN THE EBID SYSTEM.
PROVIDE THIS INFORMATION ELECTRONICALLY.**

Preference must be given to Contractors submitting certification with their bid or proposal, certifying they have a drug-free workplace in accordance with Section 287.087, Florida Statutes. This requirement affects all public entities of the State and becomes effective January 1, 1991.

Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

- (1) Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
 - (2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
 - (3) Give each employee engaged in providing the commodities or contractual services that are under bid, a copy of the statement specified in subsection (1).
 - (4) In the statement specified in subsection (1) notify the employees that as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace, no later than five (5) days after such conviction.
 - (5) Impose a sanction on, or require the satisfactory participation in, a drug abuse assistance or rehabilitation program if such is available in the employee's community, by an employee who is so convicted.
 - (6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.
- As the person authorized to sign this statement, I certify that his company/firm complies with the above requirements.

By choosing YES, I hereby certify that the company/firm complies with all the above requirements

Yes

3 Conflict of Interest

For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Pompano Beach employee is also an owner, corporate officer, or employee of their business. Indicate either "Yes" (a City employee is also associated with your business), or "No". (Note: If answer is "Yes", you must file a statement with the Supervisor of Elections, pursuant to Florida Statutes 112.313.) Indicate Yes or No below with the drop down menu.

No

4 Terms & Conditions

Check the box indicating you agree to the terms and conditions of this solicitation.

☒ Agree

5 Acknowledgement of Addenda

Check this box to acknowledge that you have reviewed all addenda issued for this solicitation.

☒ Yes

6 Local Business Participation Percentage

If you have indicated local business participation on the Local Business Participation Form Exhibit A enter the percentage of the contract that will be performed by local Pompano Beach businesses.

04. Project Team Form

PROJECT TEAM

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

RFQ # 25-037

Name: Professional Services for Sustainability Projects

Federal I.D. # 57-0373224

PRIME

Role	Name of Individual Assigned to Project	Number of Years' Experience	Education, Degrees
Project Manager	Whitford Remer	15	JD, Environmental Law / MS, Urban & Regional Planning / BS, Geography & Political Science
Principal-In-Charge	Melissa Pomales, PE, ENV SP, PMP	21	MS, Finance / MBA / MS, Civil Engineering / BS, Civil Engineering
QA/QC	Ifetayo Venner, PE, ENV SP	24	MBA, Business Administration / MS, Environmental Engineering / BS, Civil Engineering
QA/QC	Carly Foster, AICP, CFM	17	MSP Urban Planning (Growth Management Specialization) / BS Political Sciences
Adaptation & Implementation Planning Development Lead	Trevor Johnson, AICP, MVP Certified	10	MUP, Urban Planning / MA, Historical Archaeology / BA, Anthropology
CRS Watershed Management Plan Lead	Shandor Szalay	23	MS, Water Resources Science / BS, Environmental Forest Biology
Water Audits Lead	Brian Moore, PhD	28	Post-Doctoral, Inorganic Chemistry / PhD, Environmental Engineering / MS, Environmental Engineering / BS, Civil Engineering
Energy Audits Lead	Matthew Yonkin, PE, CEM	32	MS, Management & Technology / BS, Civil Engineering
GHG Inventory Update Lead	Katie Eisenbrown	16	BS Geography, Cartography and GIS / MBA Sustainability and Entrepreneurship
Adaptation & Implementation Planning Development	Melissa Hew, CFM, WEDG	12	MS, Environmental Science / BA Environmental Studies
H&H Modeling	Brian Bandy, PE	26	BS, Civil Engineering
Water Audits	Gary Trachtman, PhD, CDT	51	MS/BS, Sanitary Engineering
GHG Inventory Update	Ian Minnes	8	MS/BS, Human Geography
GIS / Geospatial Analysis	Kristyn McClure	8	MS, Geographic Information Sciences / BS, Environmental Science

Subconsultant

Role	Company/Firm Name & Address of Office Handling the Project	Name of Individual Assigned to the Project
Urban Forestry Plan, GIS/ Civil	KEITH 301 E. Atlantic Blvd. Pompano Beach, FL 33060	Paul Weinberg, PLA; Kelli Schueler, PLA, LEED AP; Chris Phillips, PLA; Sarah Landucci, ISA
Community Engagement & Related Services	Garth Solutions 5595 Orange Dr. , Ste. 202 Davie, FL 33314	Yvonne Garth; Melissa Barnett-Christie

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 my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

and/or

_____ 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.

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 my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

and/or

_____ 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

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.

05/22/2025

Date

Melissa Pomales, PE

Bidder/Proposer (Print Name)

Arcadis U.S., Inc.

Name of Prime Company/Firm



Bidder/Proposer (Signature)

COMPLETE THE PROPOSER INFORMATION 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 FOR THE RFQ IN THE EBID SYSTEM.

PROPOSER INFORMATION PAGE

RFQ 25-037, Professional Services for Sustainability Projects
(number) (RFQ name)

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 RFQ. I have read the RFQ 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) Melissa Pomales, PE Title Senior Vice President

Company (Legal Registered) Arcadis U.S., Inc.

Federal Tax Identification Number 57-0373224

Address 150 S. Pine Island Road, Suite 315

City/State/Zip Plantation, FL 33324

Telephone No. (954) 761-3460 Fax No. N/A

Email Address melissa.pomales@arcadis.com

REQUESTED INFORMATION BELOW IS ON THE ATTRIBUTES TAB IN THE EBID SYSTEM. PROVIDE THIS INFORMATION ELECTRONICALLY.

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: Arcadis U.S., Inc.

Vendor FEIN: 57-0373224

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



VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: Arcadis U.S., Inc.

Vendor FEIN: 57-0373224

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 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





Proposal

Contact:

Melissa Pomales, PE, ENV SP, PMP
150 S. Pine Island Rd., Suite 315
Plantation, FL 33324
Tel: 954 761 3460



City of Pompano Beach

Professional Services for Sustainability Projects

RFQ25-037

May 29, 2025

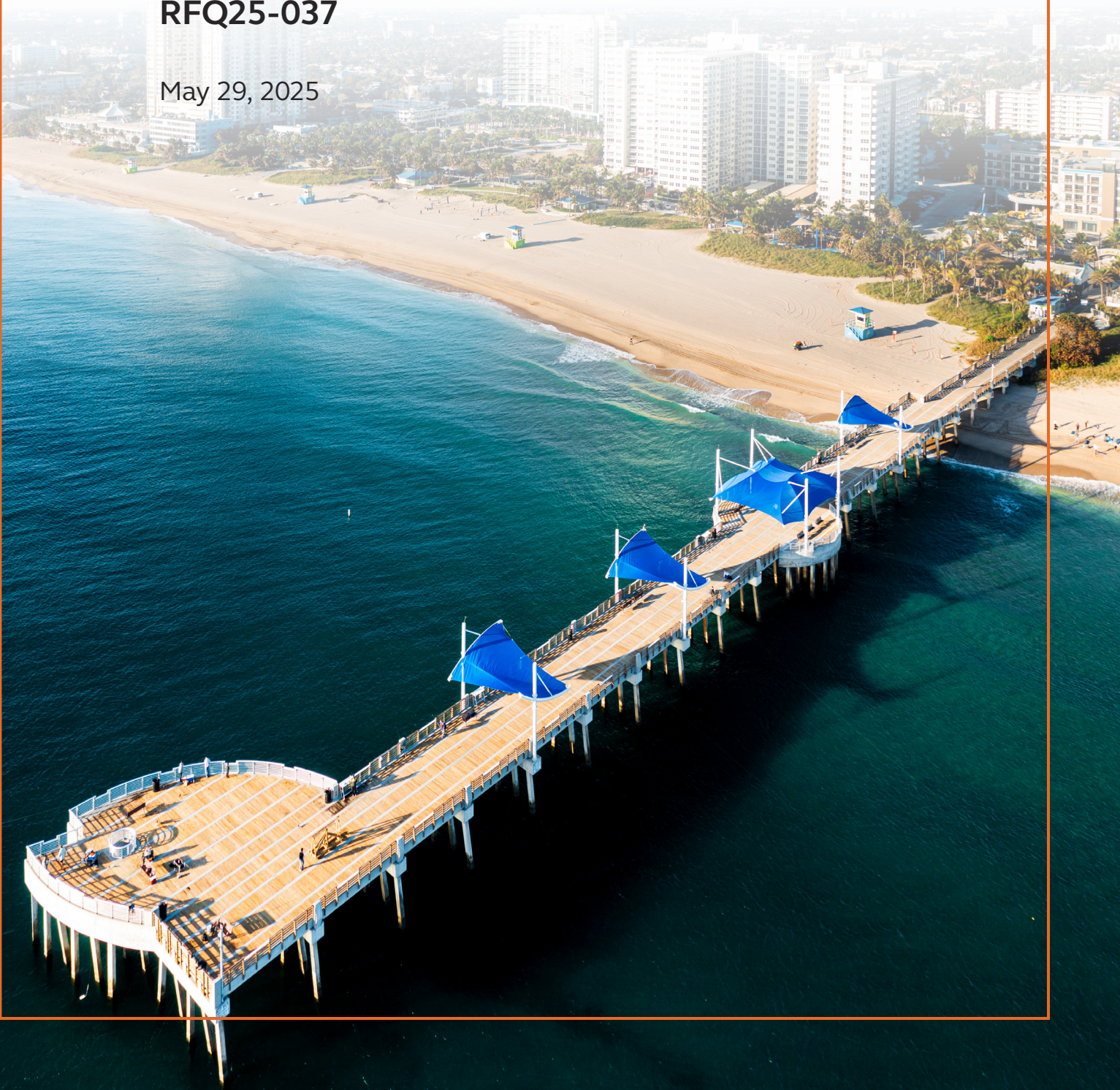




Table of Contents

SECTION 01.

Letter of Transmittal.....1-1

SECTION 02.

Technical Approach / Relevant Projects.....2-1

SECTION 03.

References.....3-1

SECTION 04.

Project Team Form.....4-1

SECTION 05.

Organizational Chart.....5-1

SECTION 06.

Statement of Skills and Experience
of Project Team.....6-1

SECTION 07.

Resumes of Key Personnel.....7-1

SECTION 08.

Office Locations.....8-1

SECTION 09.

Litigation.....9-1

SECTION 10.

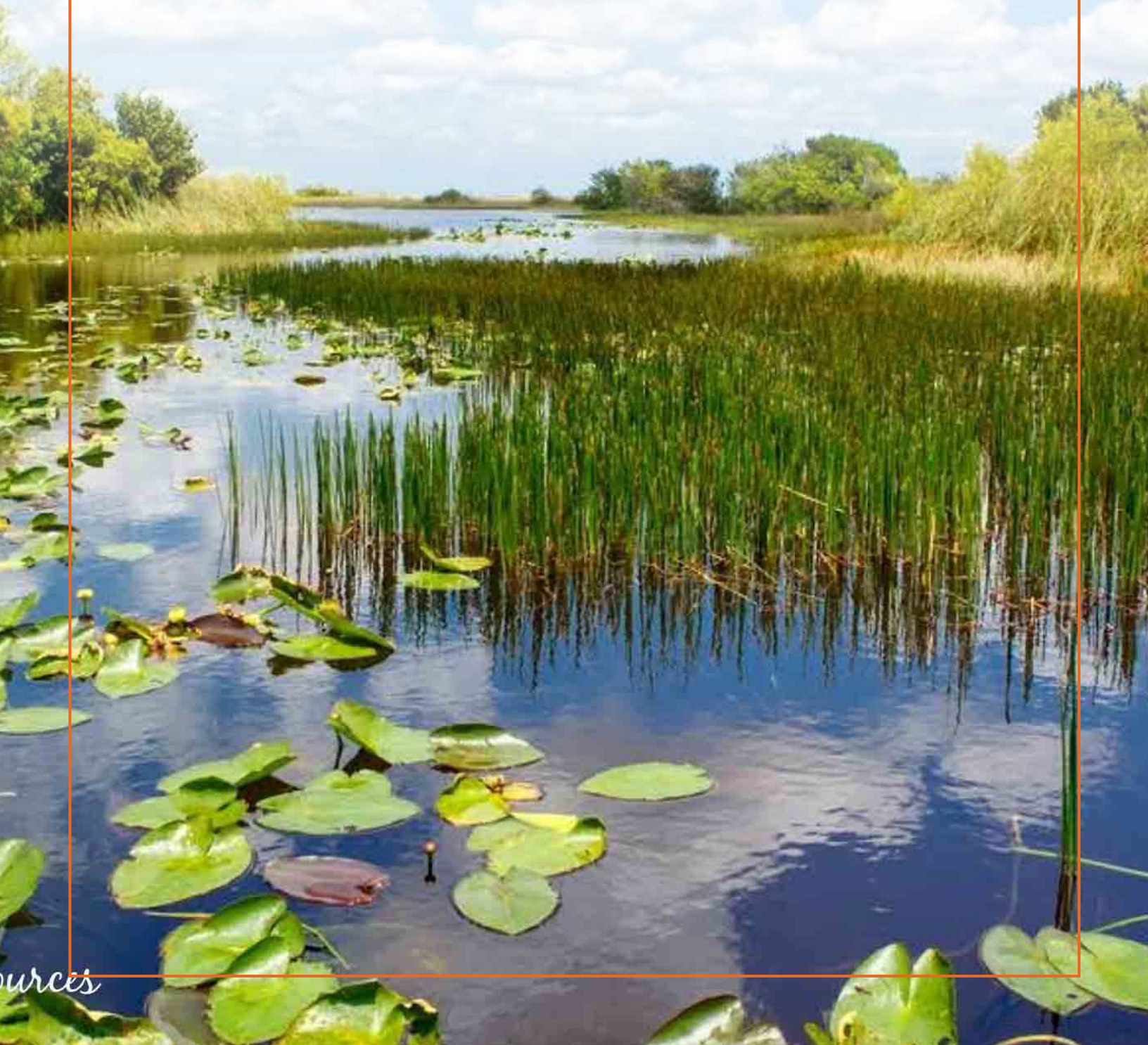
City Forms & Other Required Information.....10-1

This proposal and its contents shall not be duplicated, used or disclosed in whole or in part for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to Arcadis as a result of or in connection with the submission of this proposal, Arcadis and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use or disclose the data contained in this proposal only to the extent provided in the resulting contract.



Section 01.

Letter of Transmittal



City of Pompano Beach, FL
Mr. Eric Seifer, Purchasing Supervisor
1190 NE 3 Avenue
Pompano Beach, FL 33060
Tel: 954 786 4166
Email: eric.seifer@copbfl.com

Arcadis U.S., Inc.
150 S. Pine Island Road
Suite 315
Plantation, FL 33324
Tel: 954 761 3460
www.arcadis.com

May 29, 2025

Re: Professional Services for Sustainability Projects / RFQ25-037

Dear Mr. Seifer and Evaluation Committee Members:

Arcadis U.S., Inc (Arcadis) is pleased to submit this proposal to partner with the City of Pompano Beach (City) in advancing its critical sustainability and resilience goals. As the City transitions from planning to project-based implementation, we are uniquely positioned to bring our deep expertise, innovative tools, and practical experience to transform your foundational strategies into tangible infrastructure.

Arcadis offers the breadth and depth of resources and expertise to best serve the City, stemming from our committed service to clients; our diverse engineering and management consulting experience; a leading global, multi-service organization; and an unmatched organizational culture that fosters innovation and creates sustainable solutions to improve quality of life. As your professional engineering consultant of choice through this contract, Arcadis brings 135+ years of expertise, 30+ years of Florida experience, and a local Florida team with all the capabilities required to meet the City's needs and goals.

Through our legacy firms Malcolm Pirnie and IBI Group (now Arcadis), we possess a rich history of successful project delivery in the City. Our professional services have consistently supported the City and the Pompano Beach CRA, alongside private sector clients. This extensive local experience spans critical utility projects delivered under a water/reclaimed water treatment plant engineering services contract, and more recent contributions to landscape, urbanism, and architecture, such as Mitchell Moore Park, Briny Avenue Streetscape, Exchange Club Park, the Copans Transit Operations Facility, the City's Public Art Master Plan, and Martin Luther King Boulevard.

Our local partner, KEITH, brings over two decades of experience working with the City. Under their continuing services contract, they have delivered a variety of engineering and resilient design solutions, including notable projects such as pier renovations, the SE 8th Court Bridge Replacement, forcemain replacement and reclaimed water main designs, Municipal Golf Course design, and Pompano Beach Branch Library Renovations.

Our team offers the following key benefits, showcasing our distinct qualifications, experience, and capabilities to best serve the City under this contract:



From Strategy to Long-Lasting Impact: Bridging Planning and Implementation

The City has consistently demonstrated leadership in resilience planning, establishing a robust foundation through milestones like the 2014 Sea Level Rise Assessment Report, the 2020 Sustainability Strategy Workplan (Resolution 2020-243), and the 2025 Resilient Florida Vulnerability Assessment. These efforts underscore the City's commitment to understanding risks and charting a sustainable path forward. Arcadis excels at bridging the critical gap between comprehensive planning and successful implementation. We strategically leverage the City's Capital Improvement Plan (CIP) as a vital tool to advance resilience objectives. Our approach focuses on identifying and securing crucial funding opportunities, then designing and delivering projects that translate resilience goals into tangible, protective results for the City.



Trusted Infrastructure and Utility Partner: Local Knowledge, Global Reach

Achieving the City's ambitious goals demands seamless collaboration across departments and with neighboring jurisdictions. Arcadis is a proven and trusted partner for utilities and municipalities across Florida, with a distinguished track record of delivering some of the state's largest and most intricate flood engineering projects. Our unparalleled understanding of the local water industry enables direct, effective collaboration with utility directors, engineers, and facility managers on challenges of any scale. This includes conducting vital water loss audits for treatment plants, irrigation consumption audits for parks and recreation facilities, and designing cutting-edge green stormwater infrastructure solutions. Our Project Manager, Whitford Remer, has invaluable first-hand municipal experience, having recently served as the Chief Sustainability and Resilience Officer for the City of Tampa, where these very tasks were successfully implemented. Arcadis commits to being a knowledgeable and collaborative partner at every step, ensuring the City's infrastructure challenges are met with tailored, practical, and sustainable solutions.



Compelling Storytelling: Connecting Goals to Funding Success

Arcadis brings to the City our proven success obtaining funding for sustainability projects, with billions secured in successful grant and funding applications. Working with the City, we will leverage the resources of our deeply experienced national funding team to create compelling project narratives that articulate value to funders and demonstrate a strong return on investment. Arcadis will allow the City to translate its strategic goals into actionable and successful funding strategies, applying design, visualization, and marketing tools to ensure that the City's projects are not only technically robust but also highly appealing to funders.



A Partnership to Build a Resilient Future

The City stands at a unique juncture to demonstrate exemplary leadership in sustainability and resilience. By partnering with Arcadis, you will gain unparalleled access to a team of highly specialized experts, innovative tools, and a genuinely collaborative approach to problem-solving. Together, we will translate your forward-thinking plans into concrete, meaningful projects that significantly enhance resilience, steadfastly protect your community, and profoundly improve the quality of life for current and future generations.

We eagerly anticipate the opportunity to continue our collaboration with the City of Pompano Beach and welcome the chance to provide further details regarding our proven approach and extensive expertise. Please do not hesitate to contact us if you have any questions.

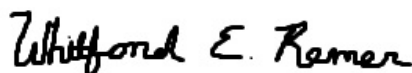
Sincerely,

Arcadis U.S., Inc.



Melissa L. Pomales, PE, ENV SP, PMP
Principal-in-Charge

 melissa.pomales@arcadis.com |  305.761.0232



Whitford Remer, AICP, ENV SP
Project Manager

 whitford.remer@arcadis.com |  813.647.2302



Section 02.

Technical Approach / Relevant Projects



02. Technical Approach / Relevant Projects

Project Understanding

The City of Pompano Beach (the City) has demonstrated a strong commitment to enhancing community resilience and addressing climate vulnerabilities through its foundational work, including a completed vulnerability assessment in 2025. Building on this groundwork, the City seeks a trusted partner to transform these insights into a prioritized and actionable Adaptation Plan that drives measurable outcomes. Arcadis brings unparalleled expertise in climate adaptation and resilience planning, combining technical innovation, funding and financial strategy, and implementation-focused solutions to deliver transformative results. Our team has helped carry out billions of dollars in resilience solutions from the earliest planning phases through to completion and enjoyment.

Our approach is designed to seamlessly integrate with the City's operations, policies, and communities, ensuring that strategies are not only ambitious but also practical, achievable, and tailored to local needs. By embedding implementation planning into every phase, we ensure that recommended solutions are primed for success, supported by detailed project timelines, budgets, feasibility studies, and performance evaluations.

Arcadis will leverage its national funding team to help the City secure resources through innovative

The services outlined in this proposal are designed to be scalable and adaptable, and can be further tailored to align with the City of Pompano Beach's budget, schedule, desired outcomes, and stakeholder priorities. The Arcadis team is committed to collaborating closely with the City to refine the technical approach as needed, ensuring that the scope and scale of services are optimized to deliver maximum value and benefits.

funding and financing opportunities, including grants, public-private partnerships, and climate finance mechanisms. Our team specializes in aligning Adaptation Plan priorities with long-term capital improvement strategies, enabling scalable solutions that accelerate resilience investments.

With a focus on actionable outcomes, we will deliver comprehensive and flexible plans backed by robust technical expertise, data-driven insights, and cost-effective strategies. Arcadis is ready to empower the City to move from planning to implementation, ensuring lasting resilience and sustainability for its community.



Arcadis combines coastal resilience adaptation infrastructure with community amenities and green stormwater infrastructure to transform communities and build resilience.

Technical Approach

1 Adaptation Plan Development

City of Pompano Beach's (City) Objective: Develop an Adaptation Plan that builds on the existing vulnerability assessment to enhance community resilience and address identified vulnerabilities.

The City's 2025 Vulnerability Assessment is a significant step in resilience planning. **To take advantage of this foundational work, we understand the City requires a partner adept at taking these asset inventories and risk profiles and turning them into an actionable and prioritized list of cost-effective projects, with associated funding and implementation strategies.**

The Arcadis Climate Adaptation and Resilience Planning Practice combines unparalleled technical expertise, innovative solutions, and the City-focused approach to address the growing challenges of climate change. The City can look to Arcadis as a trusted partner because of our ability to deliver actionable, data-backed strategies that integrate with the City's operations, policies, and communities.

Our approach follows a proven planning and analysis process tailored to the distinct needs outlined the City. The Arcadis team brings to this assignment a dynamic toolkit that will ensure delivery of a detailed, actionable resilience plan while being flexible enough to respond dynamically to specific needs as they arise during the project.

Arcadis Activities

Activity 1: Discovery and Existing Conditions Analysis

Arcadis will refine its understanding of the City's planning context by reviewing existing municipal, county, and state planning documents, including:

- » The City's vulnerability assessment, hazard mitigation plans, and capital improvement plans.
- » Relevant publicly available data, maps, and reports.
- » Relevant policy documents and zoning.

Additionally, Arcadis will conduct key stakeholder interviews and site visits as appropriate to supplement the review. This exercise will identify gaps in existing assessments and planning documents, ensuring that current and future climate risks are fully addressed. These insights will guide subsequent phases, including scenario development, visioning, and evaluation criteria creation. Substeps include:

City's Key Requested Tasks:

- ▶ Provides a crucial tool to identify and prioritize adaptation actions based on feasibility, cost-effectiveness, and social and environmental impacts.
- ▶ Incorporates green stormwater infrastructure as a central component of adaptation strategies where applicable.
- ▶ Utilizes an objective framework with qualitative and quantitative measures to assess project benefits, community acceptance, and potential obstacles.
- ▶ Develops an implementation schedule and funding strategy to support the procurement and execution of prioritized actions.
- ▶ Ensures the plan enhances flood mitigation, biodiversity, and natural resource conservation.

1. **Gap Analysis Report.** Arcadis will deliver a report summarizing gaps in previous assessments, including specific vulnerabilities not addressed, blind spots in asset inventories, and areas requiring further data collection.
2. **Asset Risk Categorization.** Arcadis will categorize municipal assets (e.g., critical infrastructure, community assets, vulnerable populations) by exposure to climate risks, such as flooding and extreme weather events.
3. **Scenario Mapping.** Develop preliminary maps of risk exposure zones (e.g., flood zones, high-heat areas) and overlay existing infrastructure to visualize vulnerabilities spatially.

Activity 2: Community Engagement

Arcadis will collaborate with the City to engage municipal and community stakeholders throughout this task. Using a multifaceted approach, Arcadis will:

- » Maximize awareness and input on Adaptation Plan prioritization and recommendations.
- » Ensure stakeholder feedback is incorporated into all levels of plan development.

Engagement methods will be transparent, adaptable, and respectful of participants' time, with clear communication about decision-making processes. Arcadis brings extensive experience in developing public outreach plans for major resilience and infrastructure projects, including work for the City of Boston, Town of Nantucket, City of New York, New Jersey Transit, and more. Substeps include:

City Vulnerability Assessment

Key Takeaways for Adaptation Planning and Implementation

Your Vulnerability Assessment (VA) is a comprehensive study aimed at evaluating the City's exposure to climate-driven flooding and its associated impacts. This assessment serves as a foundational resource for the City's long-term resilience planning and outlines critical actions to safeguard infrastructure and communities from the escalating effects of climate change. Arcadis will incorporate the results of this study to target resilience investments toward the City's most critical and vulnerable assets.

Key Findings

- ✓ **Flood Risk Projections.** The assessment uses nine flood scenarios, including combinations of sea level rise, storm surge, and heavy rainfall, to evaluate potential impacts under various future climate conditions. These scenarios incorporate updated NOAA 2017 Intermediate-Low and Intermediate-High projections for 2040 and 2070.
- ✓ **Critical Asset Vulnerability.** The analysis reveals that essential infrastructure, including lift stations, arterial roads, fire stations, and public utilities, are particularly vulnerable to projected flood scenarios, with potential for significant service disruptions.
- ✓ **Social Vulnerability.** The VA highlights that disadvantaged communities, identified through Justice40 census tracts, face a disproportionate share of flood risk, emphasizing the need for equitable adaptation planning.
- ✓ **Groundwater and Infrastructure Challenges.** Rising groundwater levels are projected to increase flood risks and reduce stormwater system capacity, potentially exposing contaminated sites and threatening critical underground infrastructure.

Recommendations for City Action

- ✓ **Establish Adaptation Action Areas (AAAs).** Designate high-risk zones for prioritized funding and adaptation planning, in line with state resilience guidelines.
- ✓ **Regular VA Updates.** Continue to refine and update the VA as new climate data becomes available, ensuring the City's resilience strategies remain aligned with the latest science and state requirements.
- ✓ **Community and Stakeholder Engagement.** Strengthen public participation in resilience planning to ensure adaptation efforts reflect community priorities and address localized vulnerabilities.
- ✓ **Equity-Focused Resilience.** Develop targeted interventions for disadvantaged communities to reduce flood impacts and support recovery efforts.
- ✓ **Infrastructure Upgrades.** Invest in critical infrastructure improvements, including stormwater system enhancements, pump station upgrades, and flood barrier construction, to improve long-term resilience.

1. Stakeholder Mapping

- » Identify key stakeholder groups, including internal City departments, community organizations, environmental advocacy groups, and vulnerable populations (e.g., low-income households and elderly residents).
- » **Deliverable:** Stakeholder engagement plan with roles, responsibilities, and targeted outreach methods.

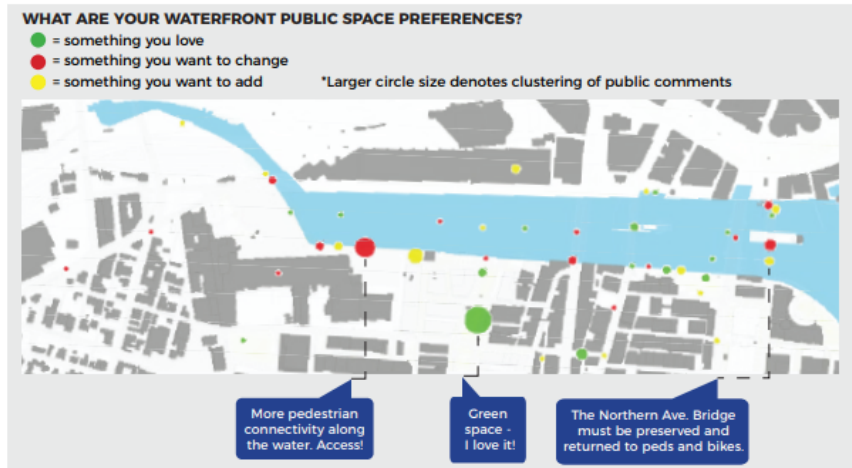
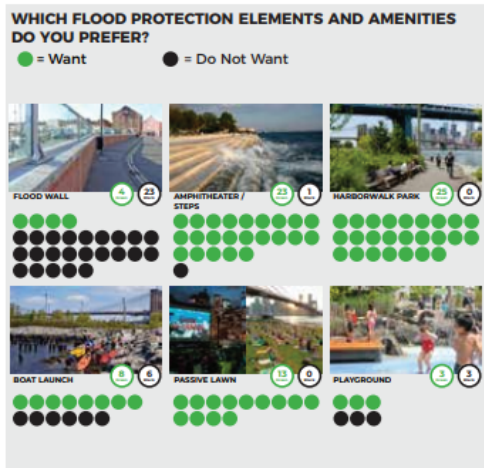
2. Engagement Tools

- » Use interactive tools such as surveys, focus groups, and workshops to collect qualitative and quantitative input.
- » **Example:** Incorporate mapping exercises during workshops for stakeholders to pinpoint areas of concern or priority.

3. Feedback Integration

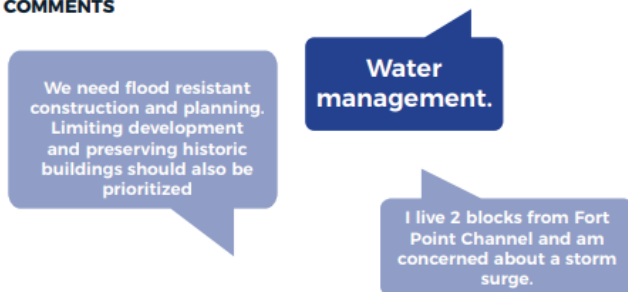
- » Develop a feedback loop to ensure stakeholder recommendations are revisited and incorporated throughout the planning process.

Our team develops fit for purpose engagement strategies based on the needs of stakeholders, always asking: "Who could affect or be affected by the outcomes of this decision? Who could affect this process?"



Open House Summary for Fort Point Channel Planning Zone, 12/11/17

COMMENTS

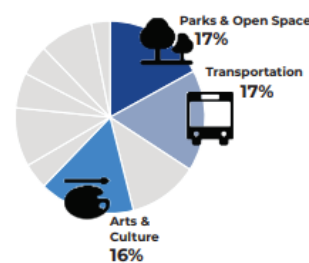


Online Survey Results for Fort Point Channel Planning Zone, 9/28/17 - 12/31/17

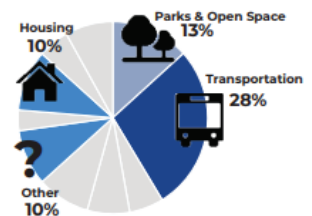
PRIORITIES

Respondents were asked to choose up to two top priorities for improvement. The following pie chart percentages indicate top categories selected for the Fort Point Channel.

RESIDENT PRIORITIES



NON-RESIDENT PRIORITIES



Arcadis routinely compiles and reports community feedback as part of sustainability planning efforts.

Activity 3: Adaptation Toolkit

Arcadis will develop an Adaptation Toolbox containing a suite of technical solutions, policies, programs, and projects for various asset types, including:

- » Power, drinking water, wastewater, and stormwater infrastructure.
- » Shoreline protection structures, dams, roads, bridges, and emergency shelters.

The toolbox will evolve based on interdisciplinary expertise and insights gained through Activities 1 and 2, and will serve as the foundation for scenario evaluations in Activity 4. Substeps include:

1. **Solution Categorization.** Divide adaptation solutions into categories such as structural (e.g., flood barriers), operational (e.g., emergency response plans), and policy-based (e.g., zoning changes).
2. **Feasibility Screening.** Conduct a high-level feasibility screening of initial solutions to eliminate options that are cost-prohibitive or technically unviable.
3. **Multi-Benefit Analysis.** Analyze potential solutions for co-benefits, such as biodiversity enhancement, water quality improvement, or economic revitalization.

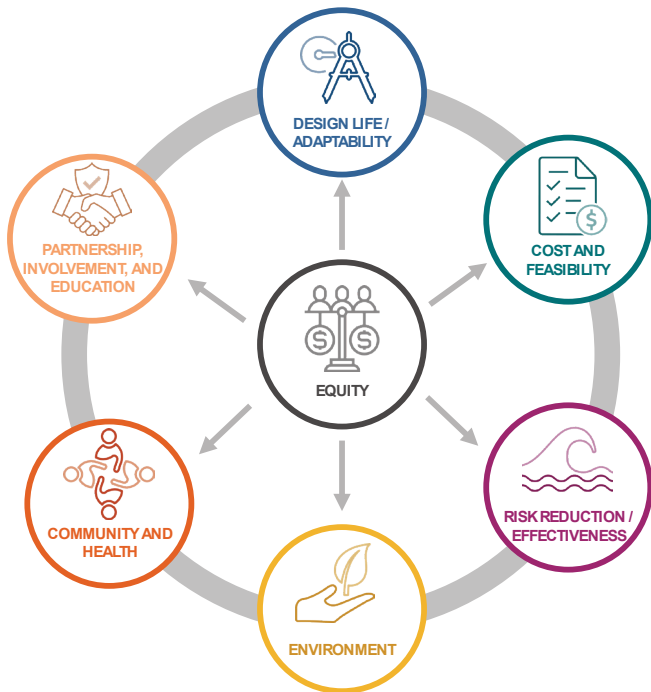
An example toolkit Arcadis has used for a project in the past is available on this public meeting board at https://miro.com/app/board/o9J_l7HgNaE=/

Activity 4: Adaptation Scenarios and Prioritization

Building on Activities 1 -3, the Arcadis team will undertake a collaborative process of adaptation scenario development, evaluation, and prioritization. This process will include several interrelated steps.

1. Evaluation Criteria and Metrics

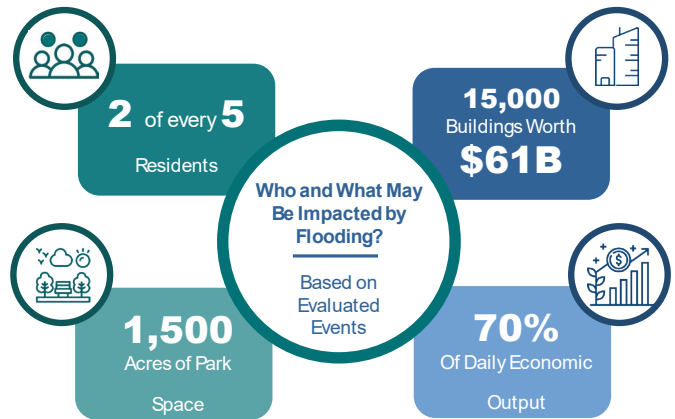
- » Establish preliminary evaluation criteria based on stakeholder input to prioritize actions that enhance flood mitigation, biodiversity, and natural resource conservation.
- » Revise evaluation criteria throughout the process to refine the selection of preferred actions City-wide.



Arcadis works with communities to develop comprehensive evaluation criteria, ensuring a well-rounded and holistic project portfolio.

2. No Action Scenario

Using inputs from the City's vulnerability assessment, Arcadis will define a No Action Scenario to illustrate the risks and consequences of maintaining the status quo. This scenario will substantiate the need for proactive adaptation.

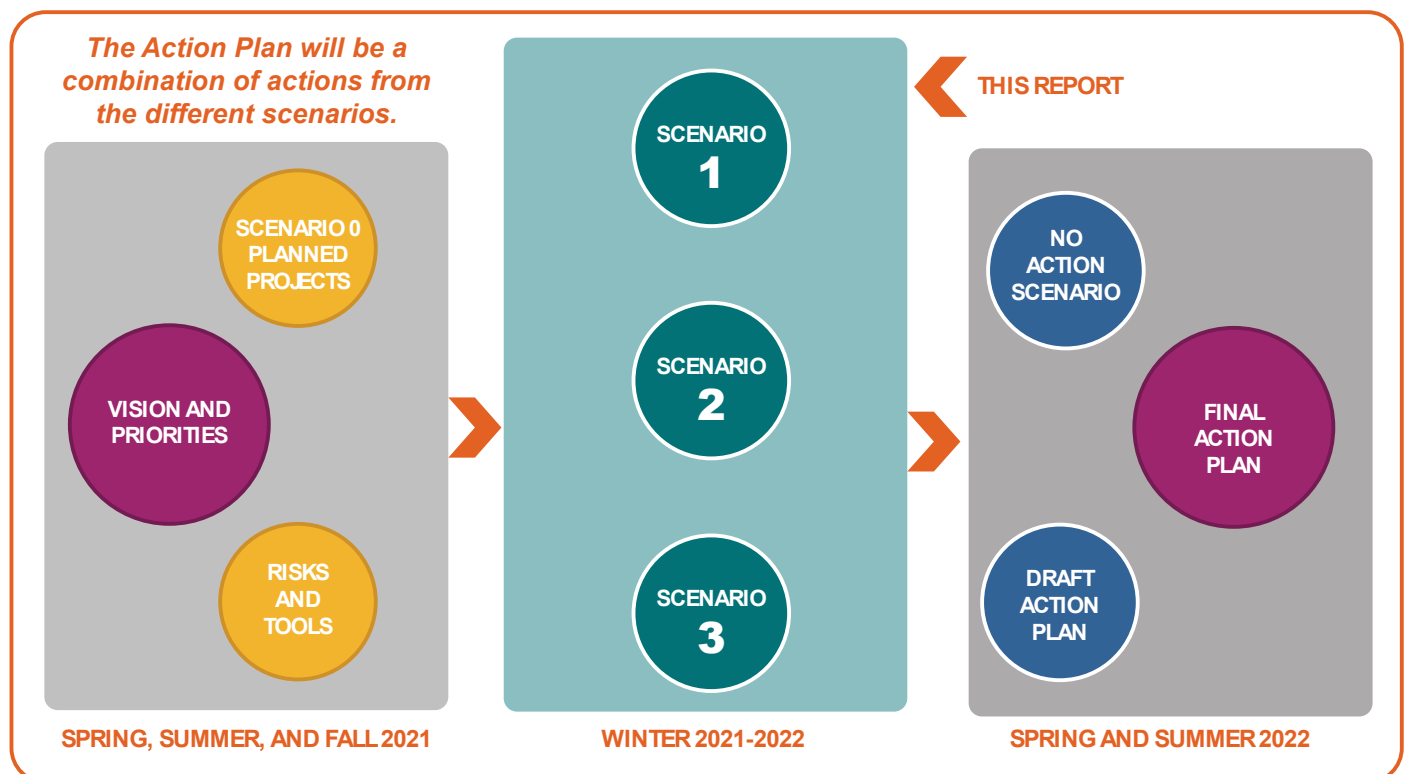


Arcadis uses infographics to compellingly illustrate the cost of inaction.

3. Alternatives Development

Arcadis will develop a series of alternative resilience actions for evaluation and discussion. These alternatives may be asset-specific or tailored to specific geographies, such as neighborhoods or Adaptation Action Areas. Arcadis will facilitate stakeholder meetings to refine prioritization processes, create a list of priority actions, and select a subset for cost estimate development. Arcadis has the ability to quantify risks under each adaptation scenario using metrics such as avoided damage costs, reduction in the number of people affected, and improved system reliability.

- » Develop a series of alternative resilience actions for evaluation and discussion.
- » Facilitate stakeholder meetings to refine prioritization processes, create a list of priority actions, and select a subset for cost estimate development.



Arcadis uses visual calendar graphics to clearly communicate project phases and deliverables.

- » Conduct detailed Benefit Cost Analysis' (BCA) for high-priority actions, incorporating direct costs, avoided costs, and ancillary benefits (e.g., economic growth, habitat restoration).
- » Provide phased prioritization by assigning priority levels to actions based on urgency (immediate, near-term, long-term) and feasibility, aligning with available funding and City capacity.

Activity 5: Implementation Schedule & Funding Strategy

Arcadis will develop an Implementation Schedule and Funding Strategy that outlines the roadmap for realizing prioritized solutions. This plan will:

- » Prioritize investment over phased periods.
- » Identify and mitigate implementation roadblocks.
- » Clarify costs and benefits of taking action during specific time periods.
- » Allocate roles and responsibilities.
- » Define implementation mechanisms, catalysts, and champions to facilitate change.

The strategy will clearly articulate how progress toward resilience goals will be measured and will include:

1. **Funding Source Identification.** Identify specific funding opportunities, such as federal grants, state resilience programs, private partnerships, or municipal bonds.
2. **Implementation Framework.** Outline timelines for permitting, design, construction, and ongoing maintenance for each priority project.
3. **Monitoring and Reporting.** Create a framework for monitoring progress on implementation, including specific KPIs (e.g., percentage reduction in flood risk, number of assets retrofitted).
4. **Phased Investment Strategy.** Develop a phased investment strategy that aligns with funding availability, urgency of risks, and capacity to implement.

Activity 6: Capacity Building and Training

To ensure long-term resilience, Arcadis will support capacity building for City staff and community stakeholders, as appropriate.

1. **Training Programs.** Identify and / or develop training programs focused on resilience best practices, climate adaptation techniques, and emergency response protocols.
2. **Workforce Development.** Identify opportunities for workforce development related to resilience projects, such as green infrastructure construction or maintenance training.

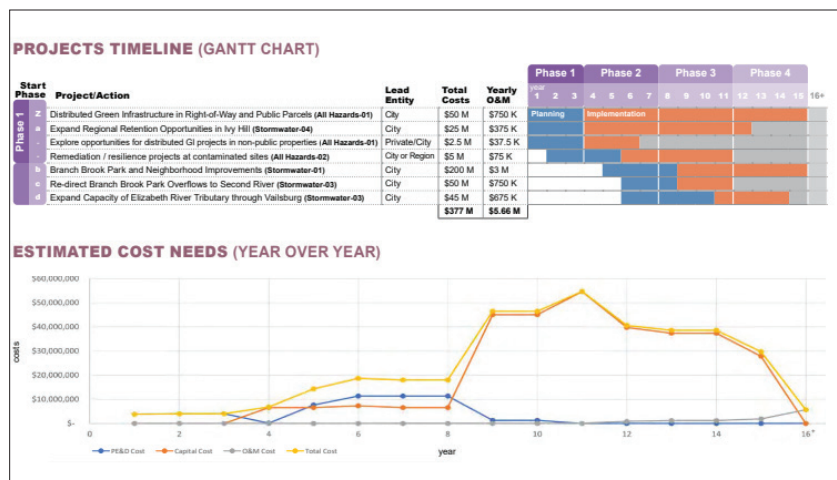
Activity 7: Technology Integration

Arcadis will integrate technology to enhance the City's ability to track and manage resilience efforts, based on the City's needs.

1. **Resilience Dashboard.** Develop a digital dashboard to track ongoing adaptation efforts, monitor risks, and communicate progress to stakeholders.
2. **Data Management System.** Establish a centralized data management system for storing and analyzing climate risk data and project outcomes.

This Adaptation Plan will provide the City with actionable strategies to enhance community resilience and address identified vulnerabilities. By building on the City's vulnerability assessment, engaging stakeholders, and prioritizing cost-effective solutions, Arcadis will deliver a comprehensive roadmap to achieve measurable climate resilience goals and long-term sustainability

The Adaptation Plan will also include a tailored funding strategy. The Arcadis team includes dedicated funding experts who understand the growing pressure and urgency cities across the country feel to provide and improve service with limited income, rising operating costs, and increased public scrutiny. Needs and priorities are also changing as transformative



Implementation Period	Area	Capital Cost Range	Annual Maintenance Cost Range
Near-term	1. 100 Acres Master Plan	\$2M to \$12M	\$0.03M to \$0.18M
	2. GE Headquarters	\$1M to \$4M	\$0.02M to \$0.06M
	3. Arcade	*	*
Mid-term	4. South Boston Manufacturing Center (by 2030)	\$3M to \$13M	\$0.05M to \$0.19M
	5. Boston Children's Museum (by 2030)	\$5M to \$6M	\$0.08M to \$0.09M
	6. Between Bridges (by 2030)	\$9M to \$10M	\$0.13M to \$0.15M
	7. Martin's Park (by 2030)	\$4M to \$5M	\$0.07M to \$0.08M
	8. South End of the Fort Point Channel (2030s)	\$34M to \$39M	\$0.51M to \$0.59M
Long-term	Additional Enhancements to Fort Point Channel	\$49.3M to \$49.5M	\$0.74M
Total		\$108M to \$139M	\$1.6M to \$2.1M

Arcadis uses integrated tabular, mapping, and graphing tools to effectively communicate the inter-relationships between projects, costs, locations, and timelines.

infrastructure projects are needed along the waterfront and the needs of vulnerable communities are considered alongside future climate risks.

We understand that the City needs to augment existing sources of funding, identify new sources, and create cost-effective budgets and capital plans while delivering impactful projects. Funding opportunities to meet such needs arise on an annual basis, through congressional and state appropriations, after presidentially declared disaster, as well as through

innovative approaches, such as district scale fees or cost sharing arrangements. Arcadis has taken a proactive role to assist our clients in developing funding strategies and obtaining project funding. Our approach to this project will incorporate key considerations related to “grant readiness” from the beginning in order to ensure that project scoping and design do not deviate from the core criteria that our experience shows to be reflective of successful funding applications.

Nature-Based Solutions for Coastal Resilience

Key Takeaways for Adaptation Planning and Implementation

Arcadis champions nature-based solutions that work in harmony with natural ecosystems to enhance coastal resilience. These solutions—such as wetlands restoration and living shorelines—provide sustainable flood protection, improve biodiversity, and strengthen ecosystem services, all while reducing the environmental impact of traditional infrastructure.

Well-planned and well-designed nature-based solutions can contribute significantly to both climate mitigation and climate adaptation, while protecting and improving the natural system.

It is not always possible to choose an exclusively nature-based solution. Compromises must be made

to make climate-related solutions as integrative as possible and to address multiple issues at once. The costs of these adjustments are often offset by reduced risk of damage, lower energy bills and maintenance costs, carbon credits, and increased quality of life. Solutions therefore need to be considered that are beneficial for nature, society, and the economy together.

Re-establishing lost or degraded coastal ecosystems, restoring riverbanks and flood plains, or bringing green into our cities, provide opportunities to give back to nature and maintain these vital environments for generations to come.



Arcadis has worked with the nation's largest and most complex urban green infrastructure programs to provide comprehensive services across the project and program life cycle including design, construction, program management, research and development, construction oversight, and planning.

The Arcadis Climate Adaptation and Resilience Planning Practice combines unparalleled technical expertise, innovative solutions, and a City-focused approach to address the growing challenges of climate change. The City can look to Arcadis as a trusted partner because of our ability to deliver actionable, data-backed strategies that integrate with the City's operations, policies, and communities. Our expert team provides exceptional value to the City in the implementation of the vulnerability assessment in the following ways:



Comprehensive Expertise, Tailored Solutions

With a global footprint and over a century of experience, Arcadis brings best practices from around the world while tailoring solutions to the local context. Arcadis offers a multidisciplinary team of climate scientists, engineers, planners, designers, economists, and engagement specialists who combine global knowledge with local insights. This ensures that the City receives tailored, site-specific solutions that align with your unique challenges, goals, and regulatory requirements, while bringing innovative solutions from national and global experts.



Proven Track Record in Implementation

Arcadis embeds implementation into every phase of the planning process. By integrating technical engineering and modeling staff within our planning teams, we ensure that strategies are not only innovative but also practical, achievable, and designed to translate into tangible actions. Experts in funding, finance, and benefit-cost analysis help accelerate the process of moving from planning to implementation — helping the City transition seamlessly to real outcomes.



Technology-Driven Innovation

Arcadis leverages cutting-edge tools such as GIS mapping, digital twins, and advanced climate modeling to deliver precise, data-driven insights. These technologies enable the City to make informed decisions, set clear priorities, and visualize the long-term benefits of their investments.



Commitment to Community-Centered Solutions

Arcadis prioritizes inclusivity by engaging stakeholders and communities at every stage of planning. We integrate equity into our solutions, ensuring that all populations, especially the most vulnerable, benefit from climate adaptation efforts. Arcadis' planners are experts in community engagement and have led dozens of successful engagement processes at the local and statewide level.

2 Implementation Planning

City's Objective: Translate adaptation strategies into actionable implementation plans that support sustainable urban development.

Our team emphasizes implementation as a core aspect of all its services, ensuring that climate adaptation strategies are not just theoretical but actionable and impactful. Across every project, the team integrates implementation-focused thinking, from initial planning through to execution, providing the City with clear, practical roadmaps to bring resilience initiatives to life. This includes prioritizing projects based on risk, cost, and feasibility, identifying funding opportunities, and aligning solutions with regulatory and stakeholder requirements.

Building on the Adaptation Plan, as well as other planning documents developed with and for the City, the Arcadis team will assist in developing a strategic roadmap for implementation, including capital improvement planning, governance and decision-making tools, and funding and financing opportunities for priority resilience and adaptation actions.

City's Key Requested Tasks:

- ▶ Develop detailed implementation plans with timelines, budgets, and performance metrics to ensure effective execution.
- ▶ Coordinate with city departments and stakeholders to facilitate seamless integration into existing municipal operations.
- ▶ Incorporate strategies for biodiversity enhancement, natural resource conservation, and green stormwater infrastructure.
- ▶ Identify funding opportunities, including grants and public-private partnerships, to support implementation.

Arcadis Activities

Activity 1: Implementation Timelines, Budgets, and Performance Evaluation

Arcadis plans for implementation as an integral part of the project from the outset. This ensures that solutions recommended through the plan are set up for success. Arcadis' proposed team's expertise as planners and implementers enables us to address technical needs while enhancing capabilities, resources, and governance structures that foster effective implementation and long-term operations. Substeps include:

1. **Identification of Priority Areas.** Confirm priority Adaptation Action Areas across the City, based on the Vulnerability Assessment and other planning materials.
2. **Implementation Action Memos.** Develop detailed Implementation Action Memos for each priority project, outlining feasibility studies, concept development, and funding strategy recommendations.
3. **Project Planning and Design**
 - » Conduct feasibility studies, cost estimation, benefit-cost analyses, and schedule development for recommended adaptation projects and programs.
 - » Examples of potential implementation actions include:
 - Marsh restoration, erosion management, and dredging projects.
 - Design and promotion of bulkheads and nature-based approaches for public and private properties.
 - Neighborhood planning studies to develop flood risk reduction strategies, identify funding sources, and prepare grant applications.
 - Program design and grant development for home elevation initiatives.
 - Technical support for City-wide critical asset mitigation efforts.

4. **Data Collection and Analysis.** Work with the City to identify and collect relevant data (e.g., past reports, plans, and designs) from internal departments and external stakeholders to support technical implementation activities.
5. **Progress Tracking and Reporting.** Track implementation progress across the Adaptation Plan and provide regular reports summarizing how each action item has been advanced.
 - » **Deliverable:** A final progress report detailing accomplishments, challenges, and next steps.

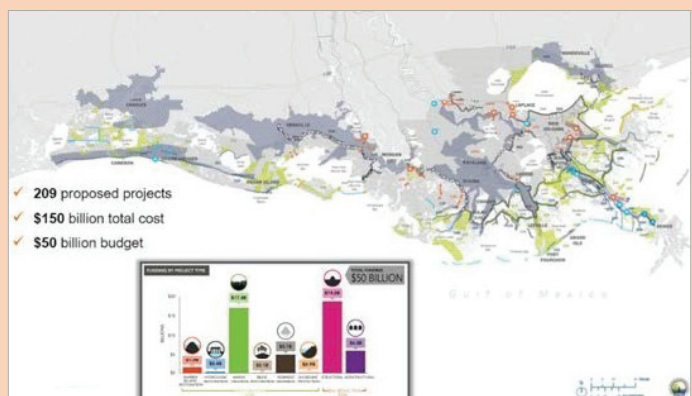
Activity 2: Stakeholder Engagement

The scope for stakeholder and community engagement associated with the above implementation actions will be developed as the actions are confirmed. We will foster a collaborative relationship with City officials and stakeholders, establishing a meeting frequency with key staff to guide project efforts in line with the scope of work. While we recommend biweekly meetings, we will identify a cadence that best accommodates City officials' capacities and schedules. We have found having a regularly scheduled check-in on the calendar helps maintain momentum, but these regular meetings may be shifted – or additional touchpoints scheduled – as needed.

In addition to engagement activities specific to implementation actions above, Arcadis will also collaborate with the City, as appropriate, to engage residents, increase community capacity around emergency preparedness and response, and continue to spread awareness of the Adaptation Plan. This could include in-person community events, as well as additional virtual calls with stakeholders to plan the events. Arcadis will provide meeting notes, materials, attendance lists, flyers, handouts, and other related documents for all engagement meetings and events. Substeps include:

Our **Project Costing Tool (PCT)** produces high-level cost estimates for large scale infrastructure and mitigation projects. Footprints of features are defined in GIS and construction cost estimates are parametrically derived from a library of unit costs for certain built features, like creating new levees or restoring natural ridges. Additional allowances (like mobilization of equipment and contractor overhead), soft costs (like planning, engineering, and design), life cycle costs (like operations and maintenance) and uncertainties (like contingencies) are applied to the construction costs. This is a tool we use in our work with the Coastal Protection and Restoration Authority (CPRA) for the State of Louisiana as we support the planning, design, and construction of various types of coastal resilience projects to combat rising sea levels along the coastal zone. The image to the left is an

example from CPRA in the challenge at hand with respect to needs compared to available funds. The PCT helps CPRA evaluate and prioritize projects with trustworthy costing data.



1. **Stakeholder Engagement Plan.** Develop a tailored engagement plan, identifying key stakeholders, meeting cadences, and outreach methods. We recommend biweekly meetings with City officials, with flexibility to adjust based on project needs and stakeholder schedules.



Photos of Arcadis team members working on site, directly with stakeholders. We believe that our team members completing detailed analyses must be fully integrated into engagement processes to ensure feedback is seamlessly assessed alongside other forms of data.

2. **Community Capacity Building.** Collaborate with the City to engage residents and increase community capacity around emergency preparedness and response. Plan in-person community events and virtual stakeholder calls to support Adaptation Plan awareness and gather input on implementation priorities.
3. **Documentation and Follow-Up.** Provide meeting notes, attendance lists, flyers, handouts, and other outreach materials for all engagement activities. Track stakeholder feedback and ensure it is integrated into the implementation process.

Activity 3: Funding and Financing Opportunities

Leveraging our national Funding Team, funding and finance services help City secure resources to realize adaptation projects. The team specializes in integrating Adaptation priorities into capital improvement plans, ensuring long-term local investments align with resilience goals. As described elsewhere in this proposal, our team also provides expert guidance

on identifying and securing federal and state grant funding, navigating complex application processes and developing innovative Benefit-Cost Analyses to maximize financial support. Additionally, the team explores innovative financing approaches, such as public-private partnerships, district scale governance and financing approaches, green bonds, and climate finance mechanisms, to unlock new funding opportunities.

Arcadis will leverage its national Funding Team to secure resources that enable the City to realize adaptation projects. By combining technical expertise with financial strategy, Arcadis empowers the City to implement cost-effective, scalable solutions that drive adaptation. Substeps include:

1. **Fit-for-Funding Assessments.** Conduct strategic assessments of recommended projects to evaluate competitiveness for various grant opportunities, including federal, state, and local funding sources, and including recommended adjustments to improve competitiveness.
2. **Capital Improvement Plan Integration.** Review the City's Capital Improvement Plan (CIP) to ensure alignment with Adaptation Plan recommendations.
3. **Economic Analysis.** Explore non-grant funding avenues, such as user fees, insurance surcharges, and public-private partnerships, to diversify funding sources.
4. **Benefit-Cost Analysis (BCA).** Develop BCAs to substantiate project cost-effectiveness for stakeholders and funders. These analyses will include direct costs, avoided costs, and ancillary benefits such as environmental restoration and economic revitalization.
5. **Innovative Financing Mechanisms.** Explore district-scale governance and financing approaches, green bonds, and climate finance mechanisms to unlock new funding opportunities.

Activity 4: Capacity Building and Training

Arcadis will assist the City in building internal capacity to sustain implementation efforts and ensure long-term resilience, as appropriate, through mechanisms like:

1. **Training Programs.** Identify and develop training programs for City staff focused on project implementation, emergency preparedness, and long-term infrastructure maintenance.
2. **Knowledge Transfer.** Provide documentation and guidance on best practices for managing and executing adaptation projects.



A Full Range of Capabilities to Support Implementation Strategy Development

Arcadis has developed dozens of implementation plans for resilience related projects across the country. Our team is adept at converting conceptual plans into real projects through a robust process of feasibility assessment, design and engineering, cost estimation and benefit cost analysis, and stakeholder engagement. We view each of these components as integral to the creation of projects that can be funded, permitted, and built. Because we offer a full suite of services, from engineering design to stakeholder engagement, the City can look to Arcadis as a complete resource to develop reliable implementation plans for the most complex projects.



Focus on Funding and Financing to Drive Implementation

Arcadis excels in helping the City unlock financial opportunities through capital improvement plans, federal and state grants, and innovative financing mechanisms like public-private partnerships. This ensures projects are not only feasible but financially achievable. Arcadis' funding experts have helped our clients capture over \$10 billion in funding for resilience and infrastructure projects nationwide.

3 Urban Forestry Plan

City's Objective: Expand and sustain a resilient urban tree canopy to reduce urban heat, enhance climate adaptation, and support stormwater management.

Arcadis employs leading edge methodologies to assess, analyze, and manage tree canopies. Urban forest management plans across the United States employ sophisticated methodologies to assess, analyze, and manage urban tree canopies. These methodologies integrate advanced technologies such as Geographic Information Systems (GIS), Light Detection and Ranging (LiDAR), and field verification techniques. The following outlines Arcadis' comprehensive approach based on best practices observed in various urban forestry initiatives:

Arcadis Activities

Activity 1: Data Collection. Develop a plan to collect data, including but not limited to the following:

1. **Remote Sensing Technologies**
 - » **LiDAR (Light Detection and Ranging):** Utilized to generate high-resolution, three-dimensional representations of urban forests, enabling precise measurements of tree height, canopy structure, and biomass.
 - » **Multispectral and Hyperspectral Imagery:** Employed to assess vegetation health, species differentiation, and land cover classification.
2. **Geographic Information Systems (GIS)**
 - » **Spatial Data Integration:** GIS platforms compile and manage diverse datasets, including tree inventories, land use, and environmental variables, facilitating spatial analysis and visualization.

City's Key Requested Tasks:

- » Develop an Urban Tree Canopy Plan that prioritizes increasing tree coverage in public spaces such as parks, swales, right-of-way, and other municipal properties, targeting areas with high heat exposure and limited shade.
- » Prioritize native species for maximum cooling, biodiversity, and low-maintenance benefits.
- » Integrate green stormwater infrastructure
- » Use GIS and heat mapping to identify priority planting areas and measure cooling benefits.
- » Develop educational resources and outreach programs to encourage tree planting and maintenance in heat-stressed areas. Guide on selecting native tree species that are resilient to local climate conditions and beneficial for urban wildlife.

3. Field Verification

- » **Ground Truthing:** On-the-ground surveys validate remote sensing data, ensuring accuracy in species identification, tree health assessments, and structural measurements. auf.isa-arbor.com

Activity 2: Data Analysis and Presentation

1. **Urban Tree Canopy (UTC) Assessments**
2. **Canopy Cover Analysis:** Determines the percentage of land area covered by tree canopies, identifying areas with low coverage for targeted planting.
3. **Ecosystem Services Valuation**
 - » **i-Tree Tools:** Quantify benefits such as air pollution removal, carbon sequestration, and stormwater runoff mitigation provided by urban trees. [Wikipedia](http://Wikipedia.org).

4. Spatial Modeling and Visualization

- » **3D Modeling:** Creates detailed visualizations of urban forests, aiding in planning and community engagement.

Activity 3: Application of Results

1. **Strategic Planning:** Review opportunities in Capital Improvement Plan for leverage.
2. **Urban Forest Management Plans:** Develop long-term strategies for tree planting, maintenance, and preservation, incorporating data-driven insights.
3. **Policy Development:** What provide text. Determine how current building regulations and City operations may need to be updated based on plan.

4. **Regulatory Frameworks:** Inform policies on tree protection, land development, and green infrastructure integration.

Activity 4: Community Engagement

- » **Participatory GIS:** Engage residents in mapping and decision-making processes, fostering stewardship and equitable distribution of urban forestry resources.

Arcadis' urban forestry team serves New York City and has helped increase NYC's canopy by over 100,000 trees.

4 CRS Watershed Management Plan

City's Objective: Maximize points under the requirements of the CRS Program for a Watershed Management Plan.

Arcadis bring extensive experience preparing watershed management plans for a variety of clients, settings, scales, and applications. We understand and have worked with the CRS and are familiar with the CRS requirements for Water Management Master Planning requirements. At the outset of this task, we will work with the City to identify watersheds for inclusion in a watershed management master planning effort.

Arcadis Activities

Our approach to this task is summarized below:

We understand the CRS manual is currently undergoing revisions. As such, the below is based on known existing requirements. The Arcadis team will update the approach, as needed, and as requirements evolve.

Activity 1: System characterization and Hydrologic & Hydraulic (H&H) modeling

Arcadis brings extensive experience in Hydrologic and Hydraulic (H&H) modeling, leveraging a wide variety of tools such as PC-SWMM, HEC-RAS, and InfoWorks ICM, among others. Our modeling approach emphasizes balancing model accuracy, complexity, and runtime to maximize benefits for decision-making. Arcadis adapts

City's Key Requested Tasks:

- ▶ Develop a comprehensive Watershed Management Plan to meet the Community Rating System manual requirements.
- ▶ Conduct hydrologic and hydraulic modeling to assess existing watershed conditions, identifying areas vulnerable to flooding and water quality issues.
- ▶ Prioritize watershed restoration projects and green infrastructure solutions to enhance resilience to climate change impacts.
- ▶ Incorporate strategies to promote groundwater recharge, improve water quality, and reduce flood risks.
- ▶ Coordinate with regional water management agencies to ensure compliance with regional policies and regulations.
- ▶ Integrate the Watershed Management Plan with other sustainability and adaptation initiatives to support holistic water resource management.

its tools and techniques to meet project needs, whether at the watershed scale or for evaluating site-specific strategies.

Our modeling approach includes watershed and drainage system characterization, model parameterization, calibration, and scenario analysis to deliver actionable results. This is supported by advanced technologies for flood detection, data visualization, and future condition assessments. Substeps include:

1. **Watershed and Drainage System Characterization.** Arcadis will begin by compiling and analyzing available GIS datasets and other publicly available or city-provided data to characterize the watershed and drainage system. This step includes:

- » Identifying key hydrologic and hydraulic features (e.g., catchments, flow paths, stormwater infrastructure).
 - » Assessing current system conditions using historical data and GIS mapping tools.
 - » Reviewing and incorporating data from previous studies, reports, and flood hazard assessments.
 - » Integrating with existing stormwater management plans and reviewing the City's existing Stormwater Management Master Plan to ensure consistency and alignment with CRS requirements.
2. **Initial Model Parameterization, Testing, Calibration, and Validation.** Arcadis will develop and refine H&H models, as needed, to achieve a balance of accuracy and practicality:
- » **Parameterization:** Establish initial model inputs, including precipitation, infiltration, flow rates, and system geometry.
 - » **Testing:** Run preliminary simulations to identify key behavior patterns and validate model logic.
 - » **Calibration:** Refine model parameters using real-world data, such as flood sensors or flood sensing algorithms (e.g., FloodScope).
 - » **Validation:** Ensure the model accurately reflects observed conditions by comparing results against historical flood data and precipitation records.
3. **Scenario Modeling.** Arcadis will conduct detailed scenario modeling to evaluate a range of storm events and identify system vulnerabilities. This includes:
- » **Storm Events:** Simulating a variety of storm conditions, such as the 10-year, 25-year, 100-year, and 5-day events, as outlined in CRS guidance.
 - » **Precipitation Data:** Using Atlas 14, radar-rainfall data, or precipitation gauge data to simulate events.
 - » **Future Conditions:** Incorporating delta change factors to account for anticipated changes in sea level and precipitation patterns due to climate change, as well as build out and expected future land use and development patterns.
 - » **Continuous Simulation:** Conducting continuous simulations to model storm volumes, peak flows, and statistical trends over time.
 - » **Open Space Analysis:** Identify flood-prone areas that could be preserved as open space to enhance floodplain functionality and earn CRS credits.
4. **CRS Compliance.** To meet CRS requirements, Arcadis can develop model results for both current and future developed conditions. These results will help the City achieve CRS credits while enhancing resilience planning and flood mitigation efforts.
5. **Results Communication and Visualization.** Arcadis will deliver model results in formats that maximize usability, public outreach, one of the key areas to earn CRS credits, and understanding of the results, including:

For Athens-Clarke County, Georgia (home of University of Georgia), Arcadis has developed and implemented their stormwater master plan starting in 1998 and we continue to assist with it. For development of the master plan and CIP, watershed analyses included both existing and future build land use conditions. Floodplain maps were also developed for future land use conditions for Planning and Zoning to regulate development in and adjacent to flood prone areas. Improvements to address flooding consisted of both structural and non-structural solutions. Developments ordinances were reviewed and updated to be consistent with the master plan findings.

- » **Mapping:** High-resolution flood hazard maps showing vulnerable areas, peak flow paths, inundation extents, and potential open space preservation zones.
- » **Tabular Summaries:** Statistical summaries of storm volumes, peak flows, and system capacity under different scenarios.
- » **Technical Narratives:** Clear, actionable narratives explaining model assumptions, results, and implications for decision-making.
- » **Advanced Visualization Tools:** Using tools like StormCity, Arcadis will provide 3-D video animations of flooding areas from multiple perspectives, including birds-eye, ground-level, and isometric views. Model results can also be used to “trigger” warning and response actions against pre-established flood levels.

Activity 2: Prioritization of Watershed Restoration Projects

Arcadis leverages extensive experience in supporting clients to prioritize restoration projects, encompassing green, blue-green, and gray infrastructure solutions. Our approach employs a community-driven, data-oriented benefit-cost framework to rank projects based on their effectiveness, feasibility, and co-benefits. Substeps include:

1. **Community-Driven Goal Setting and Metric Development.** Arcadis will work closely with the City and its stakeholders to define project goals and develop qualitative and quantitative metrics for prioritization. This process includes:

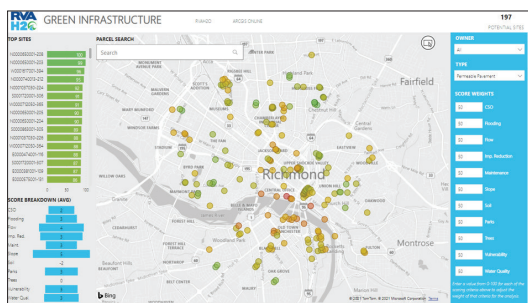
- » **Public Participation Documentation:** Arcadis will conduct workshops, surveys, and public meetings to ensure community input is documented and incorporated into planning. Please see more on engagement under Adaptation Plan Development above and Engagement below.
 - » **Metric Definition:** Arcadis will establish evaluation criteria, such as flood reduction (e.g., depth-damage functions), groundwater recharge, water quality improvement, and co-benefits like community beautification. These metrics can be established in coordination with the Adaptation Plan development process outlined above.
2. **Data-Driven Benefit-Cost Analysis.** Arcadis will apply a cost-benefit framework to evaluate potential restoration projects across multiple scales, including site-specific, neighborhood, and watershed levels. This includes:
- » **Scenario Evaluation:** We will develop and evaluate alternative restoration scenarios using parametric modeling tools to estimate costs, benefits, and trade-offs between implementation options.
 - » **Benefits Analysis:** Quantify project benefits, such as flood risk reduction, improved water quality, enhanced groundwater recharge, and community co-benefits (e.g., aesthetic improvements, recreation opportunities).
 - » **Cost Estimation:** Integrate community-specific cost curves, incorporating local construction cost data, economies of scale, and full life-cycle costs (e.g., operations, maintenance, and replacement costs).
3. **Optimization of Restoration Strategies.** Arcadis will use the data-driven metrics to develop optimized strategies for watershed restoration across varying levels of investment. This includes:
- » **Prioritization at Multiple Scales:** Rank projects based on benefits, costs, and feasibility at the site, neighborhood, and watershed scales.

4. **Development of Implementation Plan.** Arcadis will compile prioritized restoration projects into a clear implementation roadmap that supports the City's capital planning and grant application processes. This includes:
- » **Integration with CRS Activity 510:** Include strategies for addressing repetitive loss areas and mitigation opportunities.

Activity 3: Incorporate Strategies to Promote Groundwater Recharge, Water Quality, and Flood Reduction

Arcadis will leverage its global expertise and holistic approach to help the City of Pompano Beach identify and implement highly effective strategies that enhance groundwater recharge, improve water quality, and reduce flooding. Substeps include:

1. **Identification and Design of Site-Scale BMPs.** Arcadis will evaluate and recommend site-scale BMPs to promote groundwater recharge, enhance water quality, and reduce flooding.
2. **Development of Connected Stormwater Management Systems.** Arcadis will identify opportunities to design interconnected systems of multi-functional stormwater management strategies.
3. **Open Space Preservation.** Identify flood-prone areas that can be preserved as open space to protect natural floodplain functions and earn CRS credits.
4. **Coastal System Integration.** Arcadis will design stormwater solutions that account for coastal and tidewater conditions, addressing challenges such as low-gradient systems and tidal influences.
5. **Long-Term Operations and Maintenance (O&M) Considerations.** Arcadis' approach incorporates full life-cycle planning to ensure long-term functionality and sustainability of stormwater systems.
6. **Policy and Ordinance Development.** Arcadis will work with the City to identify recommendations and implement zoning, policy, and ordinance appropriate selected changes that promote watershed management and BMP adoption.



Arcadis uses advanced 3-D visualization tools to aid in project outreach and prioritization.



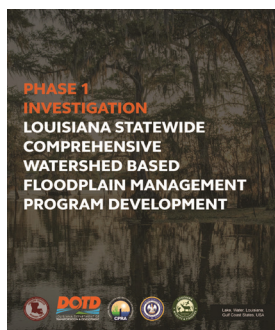


Arcadis brings a full range of site-scale BMPs, ranging from large and scale nature-based solutions, to pumping and conveyance based solutions, to a variety of levees, berms, and barriers, to provide comprehensive flood mitigation solutions.

Activity 4: Coordinate with Regional Water Management Authorities

Arcadis brings over 25 years of experience collaborating with regional water management authorities, including the South Florida Water Management District (SFWMD). Substeps include:

1. **Coordination with Regional Authorities.** Arcadis will facilitate collaboration between the City of Pompano Beach and regional water management entities such as the South Florida Water Management District.
2. **Alignment with Regional Goals and Regulations.** Arcadis will ensure that watershed management strategies and projects align with regional water management objectives and regulatory requirements.
3. **Support for Regional Project Collaboration.** Arcadis will identify opportunities for collaborative projects between the City and regional water management authorities.



Arcadis team members proposed for this project led the development of the Louisiana Watershed Initiative, including recommended watershed plans, programmatic, policy, and technical support.

Activity 5: Integrate Watershed Management Plan with Other Sustainability and Adaptation Initiatives

Arcadis recognizes that watershed planning is often siloed from other sustainability initiatives, creating missed opportunities for holistic urban resilience. Substeps include:

1. **Integration with Sustainability Goals.** Arcadis will work with the City of Pompano Beach to identify opportunities for integrating watershed management strategies with sustainability initiatives.
2. **Identification of Co-Design Opportunities.** Arcadis will assess city infrastructure, land use, and development patterns to identify opportunities for co-locating sustainability improvements with watershed management solutions.
3. **Policy Recommendations to Enhance Integration.** Arcadis will provide recommendations for policy and ordinance changes that enable better integration of watershed management with sustainability and adaptation initiatives.
4. **Alignment with Adaptation Initiatives.** Arcadis will ensure that the watershed management plan aligns with other City adaptation and resilience initiatives.

Additional Deliverables for CRS Compliance:

1. **Formal Adoption:** Ensure the watershed management plan is adopted by the City Council through ordinances or resolutions.
2. **Public Outreach Materials:** Include brochures, videos, and online tools to educate residents about flood risks and watershed strategies.
3. **CRS-Specific Documentation:** Provide high-resolution maps, technical reports, and prioritized project lists tailored to CRS requirements.
4. **Drainage Maintenance Plan:** Incorporate protocols for ongoing inspection and maintenance of drainage infrastructure.

Arcadis' comprehensive approach ensures the City meets all CRS requirements for a watershed management plan and maximizes points. By formalizing adoption, strengthening public participation, emphasizing open space preservation, and aligning with CRS documentation standards, the plan will enhance flood resilience, improve CRS scores, and support long-term sustainability.



Arcadis looks to innovative technologies and applications, like solar/green roof projects, to bridge the gap between traditionally siloed elements of sustainability planning.

The Arcadis team has supported more than 120 communities with CRS compliance.

Much of this work focused on helping jurisdictions meet CRS requirements, giving us a unique ability to identify shortcomings, reduce flood risk, improve CRS scores, and increase insurance premium discounts for residents.

Arcadis partnered with the Florida Division of Emergency Management (FDEM) and FEMA to enhance the state's participation in the National Flood Insurance Program (NFIP) and expand the number of communities enrolled in the CRS. Through this partnership, Arcadis supported over 120 Florida communities, delivering technical assistance to improve compliance with NFIP regulations and implement best practices for floodplain management. Key services provided include:

Field Community Assistance Contact (FCAC)

Visits: Conducted in-person visits to more than 120 communities, working directly with local officials to evaluate enforcement of NFIP regulations, identify compliance gaps, and develop actionable strategies for improvement.

Community Rating System (CRS) Support: Assisted communities in understanding and implementing CRS requirements, enabling them to secure lower flood insurance premiums for residents by achieving higher CRS class ratings.

Best Practices Development: Leveraged insights from field visits to identify challenges in enforcing

NFIP regulations and compiled a library of best management practices to improve floodplain management and community resilience.

Stakeholder Engagement and Capacity Building:

Worked closely with local governments, emergency managers, and floodplain administrators to build technical capacity, overseeing compliance with NFIP standards while tailoring solutions to local needs. This program strengthened floodplain management across Florida by improving compliance with NFIP regulations and encouraging communities to adopt resilience-focused policies and practices. Arcadis' extensive interaction with diverse stakeholders provided valuable insights into the challenges local governments face, enabling the development of practical, enforceable solutions that enhance long-term community resilience.



5 Energy Audits at Selected City Facilities

City's Objective: Improve energy efficiency in municipal facilities through detailed assessments and targeted recommendations.

The City has taken several important steps to reduce energy and water consumption at its buildings. The City obtained LEED Gold status for the Library and Cultural Center. Achieving LEED Gold status is a testament to the City's commitment to environmental stewardship, energy efficiency, and creating healthy, resilient spaces for the community. In reviewing the City's 2019 Sustainability Baseline and GHG Report notes, it appears the City had some difficulty obtaining and reviewing full account information from Florida Power & Light (FP&L). This is a common problem when requesting data sets from electric utility providers.

Arcadis Activities

Activity 1: Gather Information. It's essential that the Arcadis team develop a thorough understanding of the context within which we're working and have the data needed to perform energy audits. Substeps include:

1. Understand the City's primary energy, climate, and GHG goals and determine how they may have changed since the 2019 Sustainability Baseline and Goals Sustainability Strategy Workplan Phase 1 or direction from the City Commission or City Manager. This work is closely aligned with that of the Task on Greenhouse Gas Emissions.
2. Develop a multi-prong approach to request information from FP&L to allow visibility and control of the City's customer accounts, meters, and data.
3. Compile the results of this information gathering and review of data into a context memorandum.

Activity 2: Confirm Rate Schedule and Support Refunds, As Needed. Many times, electric utilities will assign a default rate schedule to a commercial customer. These rate schedules are often not the lowest cost rates available and result in the customer being billed thousands of extra dollars in demand or similar charges. The Arcadis team can support reducing costs through the following substeps:

1. Review the City's accounts and meters to determine whether the City is on the correct rate schedule.
2. Provide support in conducting a thorough review of accounts and meters to identify potential incorrect rate schedules or overages
3. Assist the City in requesting refunds from FP&L for any identified incorrect billing.

City's Key Requested Tasks:

- ▶ Perform energy audits at selected city facilities to assess current energy usage and identify efficiency improvements.
- ▶ Evaluate HVAC systems, lighting, insulation, and equipment performance.
- ▶ Recommend energy-saving measures, renewable energy integration opportunities, and potential cost savings.
- ▶ Develop a prioritized action plan for implementing energy efficiency upgrades.

There are five accounts that combined account for over 70% of the municipal energy use in the City.

Facility	Annual Electricity Use (kWh)	% of City Total
Library/Cultural Center	758,040	28.62%
Lift Station (190 N Ocean Blvd)	494,580	18.68%
City Hall Offices	334,740	12.64%
Pompano Beach Pier	167,640	6.33%
Tennis Clubhouse	110,544	4.17%

Activity 3: Scope Energy Audits. Arcadis will work with the City to identify and prioritize city facilities and assess current energy usage to identify efficiency improvements via the following substeps:

1. Verify via desktop review potential facilities to audit, prioritizing based on criteria agreed to by the city.
2. Scope which facilities and what level to conduct audit: For example: ASHRAE Level 1: Walk-through analysis for obvious savings ASHRAE Level 2: Detailed energy & cost analysis of ECMs ASHRAE Level 3: Investment-grade audit for capital-intensive retrofits.
3. Develop and agree to action plan and schedule based on the scope.

Activity 4: Conduct Audits / Evaluate Performance.

Arcadis will review and perform engineering analyses on building envelope and HVAC systems, airflows, central plans, temperature settings, control systems, etc., to support providing recommendations for energy conservation. Substeps include:

1. Develop the Energy Use Intensity (EUI) and carbon emissions intensity of the properties and establish a baseline to perform energy conservation calculations.
2. Benchmark and rank the subject properties' energy usage and compare them to similar properties and against Energy Star Portfolio Manager database.
3. As appropriate, review existing and assess opportunities for architectural and energy conservation measures (ECMs), based on the benchmarking analysis, utility records, site surveys, collected data, and energy analysis including HVAC equipment, motors, lighting systems, systems, behavioral changes, 'no/low cost' operational measures, user engagement, etc.
4. Conduct site visits, as appropriate, and as needed.

Activity 5: Develop Recommendations. The Arcadis team will develop recommended energy savings measures, through renewable energy, energy efficiency improvements, and energy integration measures through the following substeps:

1. Prioritize areas of intervention based on the outcomes of Activity 4.
2. Identify possible improvements and alternatives based on best practices and based on criteria identified in coordination with the City. Alternatives will be flagged for trade-offs and implications early on.
3. Estimate costs, savings, emissions reductions, and payback periods for each ECM.
4. Provide:
 - » A list of decarbonization measures within improved efficiency (EUI), electrification, and technology upgrade solution space.
 - » Calculations of optimum renewable energy potential on-site and/or off-site.
 - » Realistic and implementable recommendations for energy conservation measures (ECM) for the building and MEP systems (envelope, electrical, lighting and HVAC systems).
 - » Renewable energy integration options, as appropriate (e.g., solar power purchase agreements, community solar, or energy storage systems)
 - » Target goal and metrics achievement with implementation

Activity 6: Prioritized action plan for implementing energy efficiency upgrades. The Arcadis team will develop an optimized implementation action plan for the ECMs to maximize cost saving and prioritize assets in critical condition. Arcadis will provide a fully customized action plan to undertake changes to accounts serviced by FP&L, energy efficiency opportunities, renewable energy opportunities, available tax breaks and timelines for potential sunsetting, benefit-cost analysis, and potential grant

funding. Please see the Implementation Plan section above for more on this activity.

On-Site Facility Audit

Energy Systems

- HVAC:
 - » Check system sizing, runtime, and condition of air handling units
 - » Identify short cycling, leaks in ducts, dirty coils/filters, VFD performance
- Lighting:
 - » Evaluate fixture type, controls, occupancy sensors, daylighting
- Envelope:
 - » Inspect for air leaks, poor insulation, high solar heat gain
- Plug Loads:
 - » Assess IT, kitchen equipment, chargers, and any non-critical plug use
- Controls & BAS:
 - » Test for override issues, poor setpoints, and scheduling inconsistencies

The 190 N Ocean Blvd used nearly 19% of the City's energy.

The Arcadis Difference

According to the City's 2019 GHG Baseline study, the Library and Cultural Center is the largest single user of electricity. However, given the building is already LEED Gold Certified, the opportunities for energy efficiency are likely limited. The most likely feasible strategy to reduce electricity costs is installation of on site solar. Retrofitting buildings for solar can be costly, even with new tax credits. Roof racking and associated labor costs can often exceed the cost of panels. With the known available information, Arcadis would likely suggest focusing on energy efficiency targets further down the list provided in Table 4 of the City's Sustainability Baseline and Goals Sustainability Strategy Workplan Phase 1. As a company with deep facility knowledge and capacities, Arcadis could conduct loss audits in conjunction with other departments.

6 Water Audits at Selected City Facilities

City's Objective: Identify inefficiencies and conservation opportunities in municipal water usage to reduce consumption and enhance sustainability.

Addressing water loss at City facilities shares similarities with energy audits but has several distinct differences. One notable difference is that the water meters servicing these accounts are owned by a City entity, which theoretically simplifies access to and management of large datasets.

The City seeks to enhance water efficiency and sustainability across its municipal facilities. Arcadis will conduct a comprehensive water audit to identify opportunities for water use reduction, cost savings, and improved operational efficiency. The approach focuses on targeting high-priority facilities, auditing water consumption, analyzing data, and recommending actionable solutions.

Arcadis often also supports water audits as part of drought management planning and initiatives.

City's Key Requested Tasks:

- ▶ Conduct a detailed water audit at selected City facilities to identify inefficiencies and opportunities for conservation.
- ▶ Assess indoor and outdoor water usage patterns, leak detection, fixture efficiency, and potential reuse strategies.
- ▶ Provide recommendations for reducing water consumption, implementing conservation technologies, and enhancing operational efficiency.

This response assumes that access to water meter data will be simplified because the City owns these meters. We recognize that there may still be incomplete data sets or inconsistencies in meter readings. Arcadis is familiar with such circumstances and will work with the City, as needed, to address potential data collection issues.

Arcadis Activities

Activity 1: Target Facilities for Audit

Arcadis will prioritize the following facilities for water audits, as identified in the City's 2019 Sustainability Baseline and GHG Report:

- » Top 20 potable water users, ranked by volume and/or cost.
- » Facilities with high Water Use Intensity (WUI), measured in gallons per square foot.
- » Irrigation accounts, comprising 94 accounts consuming approximately 95.7 million gallons (MG) in 2019.
- » Facilities with unusual or spiking consumption patterns, potentially caused by leaks or metering issues.

Activity 2: Audit Methodology

Arcadis will employ a systematic approach to assess water use efficiency, identify inefficiencies, and detect leaks or anomalies. The methodology includes the following substeps:

1. Preliminary Data Review

- » Collect 12–24 months of utility bills (potable, reuse, and irrigation).

- » Compile building square footage and irrigated landscape areas.
- » Analyze billing anomalies, trends, and seasonal spikes.

2. Site Walk through & Fixture Inventory

- » Inspect restrooms, kitchens, locker rooms, gyms, janitor closets, and other water-using areas.
- » Identify:
 - ▶ Fixture types and flow rates (e.g., toilets, faucets, urinals, showers).
 - ▶ Leaks or continuously running fixtures.
 - ▶ Issues with automatic controls or sensor failures.

3. Irrigation System Review

- » Assess irrigation controllers for:
 - ▶ Programming accuracy and seasonal adjustments.
 - ▶ Compatibility with smart/weather-based controllers.
- » Inspect sprinkler heads for alignment, coverage, and overspray.
- » Measure irrigation zone flow rates and compare them to landscape needs.

4. Leak Detection & Meter Verification

- » Perform meter accuracy checks or install temporary submetering/loggers.
- » Use acoustic detection or pressure drop testing to locate underground leaks.
- » Cross-reference irrigation controller run times with meter readings.

Activity 3: Data Analysis & Benchmarking

Arcadis will analyze collected data to quantify water use efficiency and identify opportunities for improvement:

- » Calculate WUI (gallons per square foot per year) for each facility.
- » Compare results against industry benchmarks (e.g., GSA, AWWA).
- » Identify outliers with high indoor or irrigation water consumption.

Activity 4: Recommendations & Solutions

Arcadis will provide tailored recommendations to address identified inefficiencies:

Problem Identified	Recommended Solution
High-flow fixtures	Retrofit with WaterSense-labeled toilets, urinals, faucets, and showers.
Leaks or running fixtures	Perform immediate repairs, replace flappers/seals, or upgrade automatic shutoffs.
Over-irrigation	Replace controllers with smart/weather-based units, and adjust watering schedules.
Spray irrigation on hardscapes	Replace with drip or bubbler systems, and audit irrigation coverage zones.
Potable water used for landscaping	Assess feasibility of switching to reclaimed (reuse) water.
High WUI with unclear cause	Install submeters and log usage by system (irrigation, domestic, HVAC makeup).

Activity 5: Track KPIs and Plan Retrofits

Arcadis will track key performance indicators (KPIs) and develop a plan for water efficiency retrofits:

- » Set water use reduction goals (e.g., 10–20% reduction for high WUI sites).
- » Prioritize retrofits based on benefit-cost analysis (ROI), water usage, and facility visibility.
- » Integrate recommendations into the Capital Improvement Plan (CIP) or sustainability budget. This will support quick wins.

Activity 6: Maintenance & Follow-Up Plans

To ensure sustained improvements, Arcadis will work with the City to implement ongoing maintenance and monitoring strategies:

- » Deploy a Water Use Dashboard or utility tracking platform to monitor consumption.
- » Train Operations & Maintenance (O&M) staff on leak detection and best practices for irrigation system management.
- » Schedule re-audits for facilities every 3–5 years or after major upgrades, as well as to manage the dashboard. The Arcadis team will work with the City to develop an effective program and materials for support.

This water audit approach will provide the City with actionable insights to enhance water efficiency, reduce costs, and contribute to its broader sustainability goals. By targeting high-use facilities, identifying inefficiencies, and implementing solutions, Arcadis will support the City in achieving measurable water savings and operational improvements.



Water Audits and Field Inspections.

7 Greenhouse Gas (GHG) Inventory Update

City's Objective: Track and reduce emissions through an updated Greenhouse Gas Inventory, ensuring alignment with the City's climate goals.

The City is to be commended for their foresight and commitment to climate adaptation with your Sustainability Strategy adoption and establishment of long-term Net Zero GHG emissions, with a 45% reduction goal by 2030. Your 2021 GHG inventory will provide baseline information that will prove critical as the City seeks to update the inventory against current emissions and long term reduction goals and track progress. While the landscape around GHG emissions and inventories has vacillated significantly over the last 12 months, it's critical that cities continue to track and analyze these emissions as part of a broader landscape of both energy efficiency, cost savings, and ultimately the long term implications related to potential future regulation of emissions and contribution of emissions related to broader climate-related hazards.

Arcadis Activities

Activity 1: Understand Previous GHG Inventory and Broward County Efforts

Arcadis will collaborate with the City to review the methodologies used in the previous City Greenhouse Gas Inventory. Additionally, we will examine any work conducted under the Greenhouse Gas Reduction Fund, which supported inventories in the Broward County area. Update prior targets accordingly.

Activity 2: Municipal Emissions – Electric Meter Account Review

Arcadis will work alongside FP&L to analyze electric meter account loads and extract associated GHG data. This activity will complement ongoing Energy Efficiency Audits. By prioritizing municipal emissions, which are directly under the City's control, Arcadis will identify opportunities for cost savings and immediate impact.

Activity 3: Municipal Emissions – Vehicle Fleet Emissions

Arcadis will conduct an assessment of the City's vehicle fleet, including an analysis of Vehicle Miles Traveled (VMT) data and relevant emissions factors to calculate associated GHG emissions. Additionally, we will determine whether any electric vehicles or charging stations qualify for tax credits and assist in filing accordingly.

Activity 4: Municipal Emissions – Solid Waste Emissions

Given the City's dual approach to waste disposal—landfill and waste-to-energy—Arcadis will analyze GHG emissions from both methods using tailored approaches:

- » **Landfill Emissions:** Estimate the approximate metric tons of landfill waste, accounting for any methane capture mitigation activities at the disposal site.

City's Key Requested Tasks:

- ▶ Update the City's Greenhouse Gas Inventory to measure progress on emissions reduction goals.
 - ▶ Assess emissions from municipal operations and community-wide sources.
 - ▶ Identify key areas for emissions reduction and provide recommendations for mitigation strategies.
 - ▶ Develop a reporting framework to track and communicate progress on climate action initiatives.
- » **Waste-to-Energy Emissions:** Calculate direct GHG emissions from waste-to-energy facilities, including biogenic versus non-biogenic carbon emissions. Arcadis will recommend strategies for diverting biogenic waste, such as composting or yard waste diversion, based on extensive experience in solid waste management.

Activity 5: Community-Wide Emissions – Transportation

Transportation-related emissions are more challenging to quantify at the community level. Arcadis will collaborate with relevant transportation planning agencies to estimate VMT emissions across the City, including emissions from large fleet operations, aviation, and passenger commuting; and provide recommendations for emissions reduction.

Activity 6: Community-Wide Emissions – Residential, Commercial, and Industrial Buildings

Arcadis will analyze emissions from residential, commercial, and industrial buildings community-wide. This will include working closely with FP&L to collect and assess relevant energy consumption data energy consumption data with a breakdown of fuel sources and conversion technologies, and providing recommendations for GHG reduction. Industrial accounts will be a key focus area in this analysis.

Activity 7: Community-Wide Emissions – Carbon Sinks

Arcadis will identify opportunities to mitigate GHG emissions by enhancing carbon sinks, such as forests and green spaces, within the City. This analysis will include current initiatives and recommendations for future enhancements.

Activity 8: Develop a Climate Action Reporting Framework

Arcadis will create a reporting framework to track and communicate progress on the City's climate action initiatives. This framework will ensure transparency, accountability, and stakeholder engagement as the City advances its climate goals.



Proposal

Contact:

Melissa Pomales, PE, ENV SP, PMP
150 S. Pine Island Rd., Suite 315
Plantation, FL 33324
Tel: 954 761 3460



City of Pompano Beach

Professional Services for Sustainability Projects

RFQ25-037

May 29, 2025

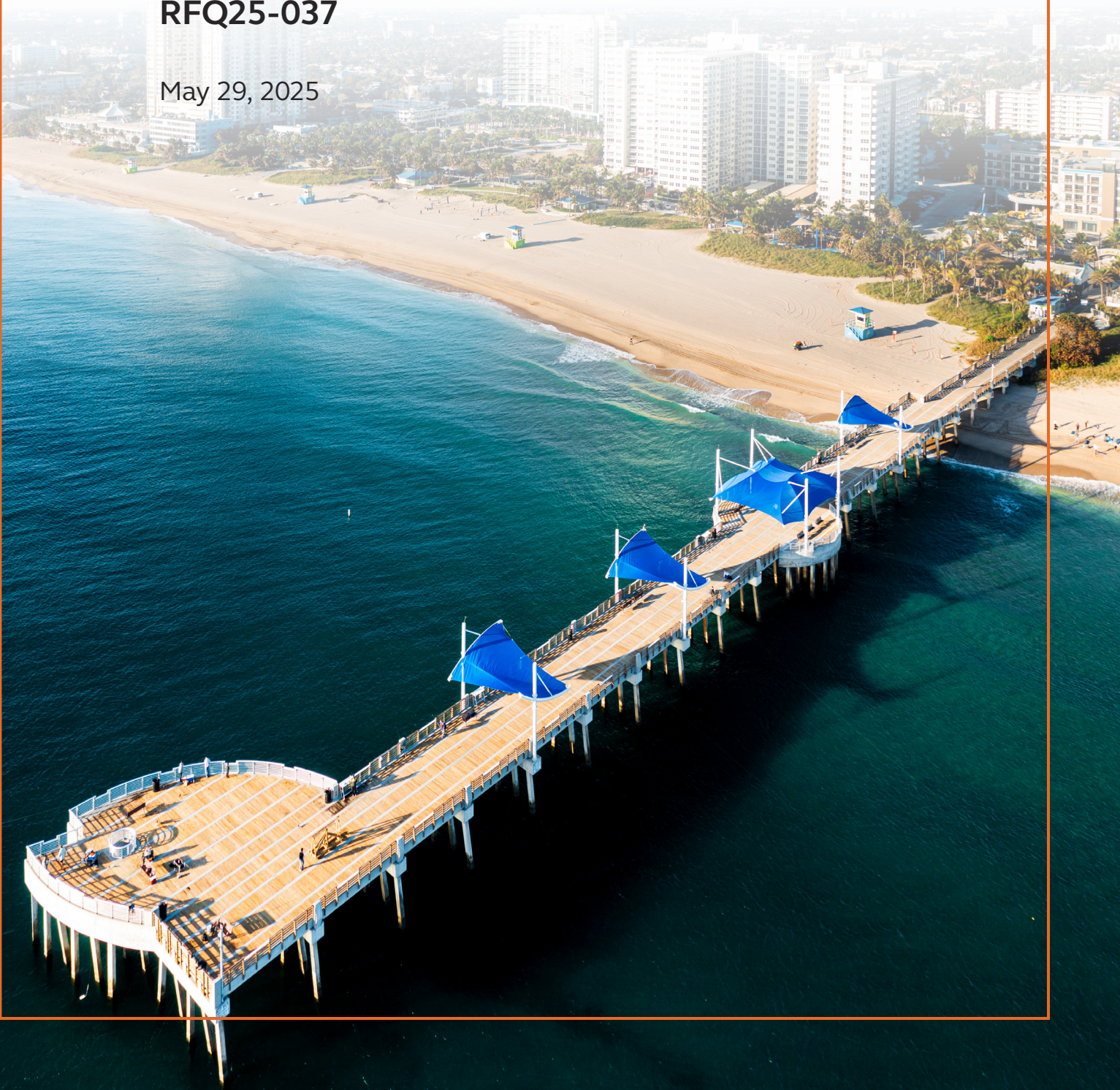




Table of Contents

SECTION 01.

Letter of Transmittal.....	1-1
----------------------------	-----

SECTION 02.

Technical Approach / Relevant Projects.....	2-1
---	-----

SECTION 03.

References.....	3-1
-----------------	-----

SECTION 04.

Project Team Form.....	4-1
------------------------	-----

SECTION 05.

Organizational Chart.....	5-1
---------------------------	-----

SECTION 06.

Statement of Skills and Experience of Project Team.....	6-1
--	-----

SECTION 07.

Resumes of Key Personnel.....	7-1
-------------------------------	-----

SECTION 08.

Office Locations.....	8-1
-----------------------	-----

SECTION 09.

Litigation.....	9-1
-----------------	-----

SECTION 10.

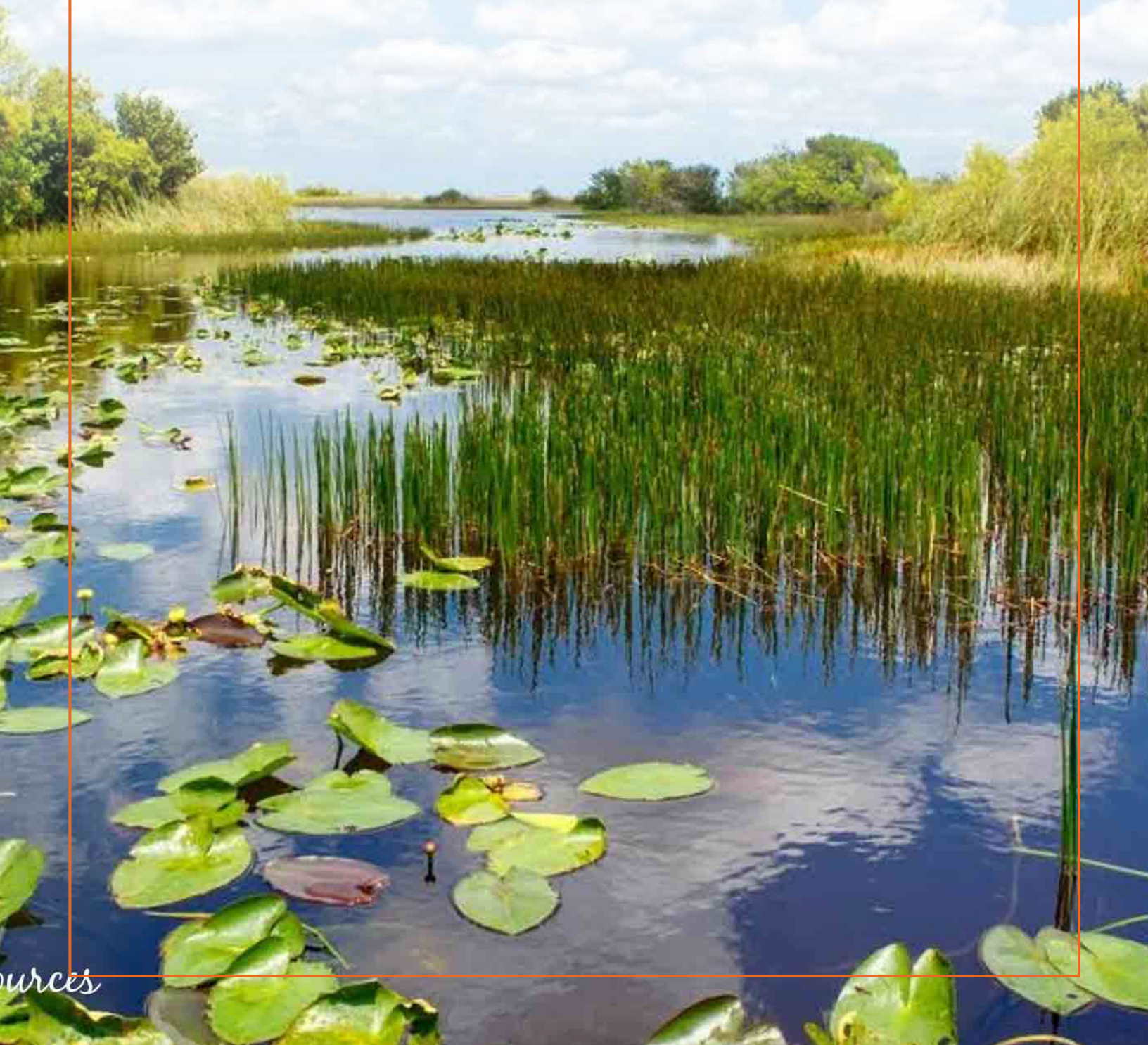
City Forms & Other Required Information.....	10-1
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This proposal and its contents shall not be duplicated, used or disclosed in whole or in part for any purpose other than to evaluate the proposal. This proposal is not intended to be binding or form the terms of a contract. The scope and price of this proposal will be superseded by the contract. If this proposal is accepted and a contract is awarded to Arcadis as a result of or in connection with the submission of this proposal, Arcadis and/or the client shall have the right to make appropriate revisions of its terms, including scope and price, for purposes of the contract. Further, client shall have the right to duplicate, use or disclose the data contained in this proposal only to the extent provided in the resulting contract.



Section 01.

Letter of Transmittal



City of Pompano Beach, FL
Mr. Eric Seifer, Purchasing Supervisor
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150 S. Pine Island Road
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May 29, 2025

Re: Professional Services for Sustainability Projects / RFQ25-037

Dear Mr. Seifer and Evaluation Committee Members:

Arcadis U.S., Inc (Arcadis) is pleased to submit this proposal to partner with the City of Pompano Beach (City) in advancing its critical sustainability and resilience goals. As the City transitions from planning to project-based implementation, we are uniquely positioned to bring our deep expertise, innovative tools, and practical experience to transform your foundational strategies into tangible infrastructure.

Arcadis offers the breadth and depth of resources and expertise to best serve the City, stemming from our committed service to clients; our diverse engineering and management consulting experience; a leading global, multi-service organization; and an unmatched organizational culture that fosters innovation and creates sustainable solutions to improve quality of life. As your professional engineering consultant of choice through this contract, Arcadis brings 135+ years of expertise, 30+ years of Florida experience, and a local Florida team with all the capabilities required to meet the City's needs and goals.

Through our legacy firms Malcolm Pirnie and IBI Group (now Arcadis), we possess a rich history of successful project delivery in the City. Our professional services have consistently supported the City and the Pompano Beach CRA, alongside private sector clients. This extensive local experience spans critical utility projects delivered under a water/reclaimed water treatment plant engineering services contract, and more recent contributions to landscape, urbanism, and architecture, such as Mitchell Moore Park, Briny Avenue Streetscape, Exchange Club Park, the Copans Transit Operations Facility, the City's Public Art Master Plan, and Martin Luther King Boulevard.

Our local partner, KEITH, brings over two decades of experience working with the City. Under their continuing services contract, they have delivered a variety of engineering and resilient design solutions, including notable projects such as pier renovations, the SE 8th Court Bridge Replacement, forcemain replacement and reclaimed water main designs, Municipal Golf Course design, and Pompano Beach Branch Library Renovations.

Our team offers the following key benefits, showcasing our distinct qualifications, experience, and capabilities to best serve the City under this contract:



From Strategy to Long-Lasting Impact: Bridging Planning and Implementation

The City has consistently demonstrated leadership in resilience planning, establishing a robust foundation through milestones like the 2014 Sea Level Rise Assessment Report, the 2020 Sustainability Strategy Workplan (Resolution 2020-243), and the 2025 Resilient Florida Vulnerability Assessment. These efforts underscore the City's commitment to understanding risks and charting a sustainable path forward. Arcadis excels at bridging the critical gap between comprehensive planning and successful implementation. We strategically leverage the City's Capital Improvement Plan (CIP) as a vital tool to advance resilience objectives. Our approach focuses on identifying and securing crucial funding opportunities, then designing and delivering projects that translate resilience goals into tangible, protective results for the City.



Trusted Infrastructure and Utility Partner: Local Knowledge, Global Reach

Achieving the City's ambitious goals demands seamless collaboration across departments and with neighboring jurisdictions. Arcadis is a proven and trusted partner for utilities and municipalities across Florida, with a distinguished track record of delivering some of the state's largest and most intricate flood engineering projects. Our unparalleled understanding of the local water industry enables direct, effective collaboration with utility directors, engineers, and facility managers on challenges of any scale. This includes conducting vital water loss audits for treatment plants, irrigation consumption audits for parks and recreation facilities, and designing cutting-edge green stormwater infrastructure solutions. Our Project Manager, Whitford Remer, has invaluable first-hand municipal experience, having recently served as the Chief Sustainability and Resilience Officer for the City of Tampa, where these very tasks were successfully implemented. Arcadis commits to being a knowledgeable and collaborative partner at every step, ensuring the City's infrastructure challenges are met with tailored, practical, and sustainable solutions.



Compelling Storytelling: Connecting Goals to Funding Success

Arcadis brings to the City our proven success obtaining funding for sustainability projects, with billions secured in successful grant and funding applications. Working with the City, we will leverage the resources of our deeply experienced national funding team to create compelling project narratives that articulate value to funders and demonstrate a strong return on investment. Arcadis will allow the City to translate its strategic goals into actionable and successful funding strategies, applying design, visualization, and marketing tools to ensure that the City's projects are not only technically robust but also highly appealing to funders.



A Partnership to Build a Resilient Future

The City stands at a unique juncture to demonstrate exemplary leadership in sustainability and resilience. By partnering with Arcadis, you will gain unparalleled access to a team of highly specialized experts, innovative tools, and a genuinely collaborative approach to problem-solving. Together, we will translate your forward-thinking plans into concrete, meaningful projects that significantly enhance resilience, steadfastly protect your community, and profoundly improve the quality of life for current and future generations.

We eagerly anticipate the opportunity to continue our collaboration with the City of Pompano Beach and welcome the chance to provide further details regarding our proven approach and extensive expertise. Please do not hesitate to contact us if you have any questions.

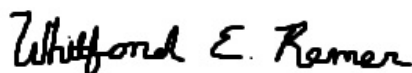
Sincerely,

Arcadis U.S., Inc.



Melissa L. Pomales, PE, ENV SP, PMP
Principal-in-Charge

 melissa.pomales@arcadis.com |  305.761.0232



Whitford Remer, AICP, ENV SP
Project Manager

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Section 02.

Technical Approach / Relevant Projects



02. Technical Approach / Relevant Projects

Project Understanding

The City of Pompano Beach (the City) has demonstrated a strong commitment to enhancing community resilience and addressing climate vulnerabilities through its foundational work, including a completed vulnerability assessment in 2025. Building on this groundwork, the City seeks a trusted partner to transform these insights into a prioritized and actionable Adaptation Plan that drives measurable outcomes. Arcadis brings unparalleled expertise in climate adaptation and resilience planning, combining technical innovation, funding and financial strategy, and implementation-focused solutions to deliver transformative results. Our team has helped carry out billions of dollars in resilience solutions from the earliest planning phases through to completion and enjoyment.

Our approach is designed to seamlessly integrate with the City's operations, policies, and communities, ensuring that strategies are not only ambitious but also practical, achievable, and tailored to local needs. By embedding implementation planning into every phase, we ensure that recommended solutions are primed for success, supported by detailed project timelines, budgets, feasibility studies, and performance evaluations.

Arcadis will leverage its national funding team to help the City secure resources through innovative

The services outlined in this proposal are designed to be scalable and adaptable, and can be further tailored to align with the City of Pompano Beach's budget, schedule, desired outcomes, and stakeholder priorities. The Arcadis team is committed to collaborating closely with the City to refine the technical approach as needed, ensuring that the scope and scale of services are optimized to deliver maximum value and benefits.

funding and financing opportunities, including grants, public-private partnerships, and climate finance mechanisms. Our team specializes in aligning Adaptation Plan priorities with long-term capital improvement strategies, enabling scalable solutions that accelerate resilience investments.

With a focus on actionable outcomes, we will deliver comprehensive and flexible plans backed by robust technical expertise, data-driven insights, and cost-effective strategies. Arcadis is ready to empower the City to move from planning to implementation, ensuring lasting resilience and sustainability for its community.



Arcadis combines coastal resilience adaptation infrastructure with community amenities and green stormwater infrastructure to transform communities and build resilience.

Technical Approach

1 Adaptation Plan Development

City of Pompano Beach's (City) Objective: Develop an Adaptation Plan that builds on the existing vulnerability assessment to enhance community resilience and address identified vulnerabilities.

The City's 2025 Vulnerability Assessment is a significant step in resilience planning. **To take advantage of this foundational work, we understand the City requires a partner adept at taking these asset inventories and risk profiles and turning them into an actionable and prioritized list of cost-effective projects, with associated funding and implementation strategies.**

The Arcadis Climate Adaptation and Resilience Planning Practice combines unparalleled technical expertise, innovative solutions, and the City-focused approach to address the growing challenges of climate change. The City can look to Arcadis as a trusted partner because of our ability to deliver actionable, data-backed strategies that integrate with the City's operations, policies, and communities.

Our approach follows a proven planning and analysis process tailored to the distinct needs outlined the City. The Arcadis team brings to this assignment a dynamic toolkit that will ensure delivery of a detailed, actionable resilience plan while being flexible enough to respond dynamically to specific needs as they arise during the project.

Arcadis Activities

Activity 1: Discovery and Existing Conditions Analysis

Arcadis will refine its understanding of the City's planning context by reviewing existing municipal, county, and state planning documents, including:

- » The City's vulnerability assessment, hazard mitigation plans, and capital improvement plans.
- » Relevant publicly available data, maps, and reports.
- » Relevant policy documents and zoning.

Additionally, Arcadis will conduct key stakeholder interviews and site visits as appropriate to supplement the review. This exercise will identify gaps in existing assessments and planning documents, ensuring that current and future climate risks are fully addressed. These insights will guide subsequent phases, including scenario development, visioning, and evaluation criteria creation. Substeps include:

City's Key Requested Tasks:

- ▶ Provides a crucial tool to identify and prioritize adaptation actions based on feasibility, cost-effectiveness, and social and environmental impacts.
- ▶ Incorporates green stormwater infrastructure as a central component of adaptation strategies where applicable.
- ▶ Utilizes an objective framework with qualitative and quantitative measures to assess project benefits, community acceptance, and potential obstacles.
- ▶ Develops an implementation schedule and funding strategy to support the procurement and execution of prioritized actions.
- ▶ Ensures the plan enhances flood mitigation, biodiversity, and natural resource conservation.

1. **Gap Analysis Report.** Arcadis will deliver a report summarizing gaps in previous assessments, including specific vulnerabilities not addressed, blind spots in asset inventories, and areas requiring further data collection.
2. **Asset Risk Categorization.** Arcadis will categorize municipal assets (e.g., critical infrastructure, community assets, vulnerable populations) by exposure to climate risks, such as flooding and extreme weather events.
3. **Scenario Mapping.** Develop preliminary maps of risk exposure zones (e.g., flood zones, high-heat areas) and overlay existing infrastructure to visualize vulnerabilities spatially.

Activity 2: Community Engagement

Arcadis will collaborate with the City to engage municipal and community stakeholders throughout this task. Using a multifaceted approach, Arcadis will:

- » Maximize awareness and input on Adaptation Plan prioritization and recommendations.
- » Ensure stakeholder feedback is incorporated into all levels of plan development.

Engagement methods will be transparent, adaptable, and respectful of participants' time, with clear communication about decision-making processes. Arcadis brings extensive experience in developing public outreach plans for major resilience and infrastructure projects, including work for the City of Boston, Town of Nantucket, City of New York, New Jersey Transit, and more. Substeps include:

City Vulnerability Assessment

Key Takeaways for Adaptation Planning and Implementation

Your Vulnerability Assessment (VA) is a comprehensive study aimed at evaluating the City's exposure to climate-driven flooding and its associated impacts. This assessment serves as a foundational resource for the City's long-term resilience planning and outlines critical actions to safeguard infrastructure and communities from the escalating effects of climate change. Arcadis will incorporate the results of this study to target resilience investments toward the City's most critical and vulnerable assets.

Key Findings

- ✓ **Flood Risk Projections.** The assessment uses nine flood scenarios, including combinations of sea level rise, storm surge, and heavy rainfall, to evaluate potential impacts under various future climate conditions. These scenarios incorporate updated NOAA 2017 Intermediate-Low and Intermediate-High projections for 2040 and 2070.
- ✓ **Critical Asset Vulnerability.** The analysis reveals that essential infrastructure, including lift stations, arterial roads, fire stations, and public utilities, are particularly vulnerable to projected flood scenarios, with potential for significant service disruptions.
- ✓ **Social Vulnerability.** The VA highlights that disadvantaged communities, identified through Justice40 census tracts, face a disproportionate share of flood risk, emphasizing the need for equitable adaptation planning.
- ✓ **Groundwater and Infrastructure Challenges.** Rising groundwater levels are projected to increase flood risks and reduce stormwater system capacity, potentially exposing contaminated sites and threatening critical underground infrastructure.

Recommendations for City Action

- ✓ **Establish Adaptation Action Areas (AAAs).** Designate high-risk zones for prioritized funding and adaptation planning, in line with state resilience guidelines.
- ✓ **Regular VA Updates.** Continue to refine and update the VA as new climate data becomes available, ensuring the City's resilience strategies remain aligned with the latest science and state requirements.
- ✓ **Community and Stakeholder Engagement.** Strengthen public participation in resilience planning to ensure adaptation efforts reflect community priorities and address localized vulnerabilities.
- ✓ **Equity-Focused Resilience.** Develop targeted interventions for disadvantaged communities to reduce flood impacts and support recovery efforts.
- ✓ **Infrastructure Upgrades.** Invest in critical infrastructure improvements, including stormwater system enhancements, pump station upgrades, and flood barrier construction, to improve long-term resilience.

1. Stakeholder Mapping

- » Identify key stakeholder groups, including internal City departments, community organizations, environmental advocacy groups, and vulnerable populations (e.g., low-income households and elderly residents).
- » **Deliverable:** Stakeholder engagement plan with roles, responsibilities, and targeted outreach methods.

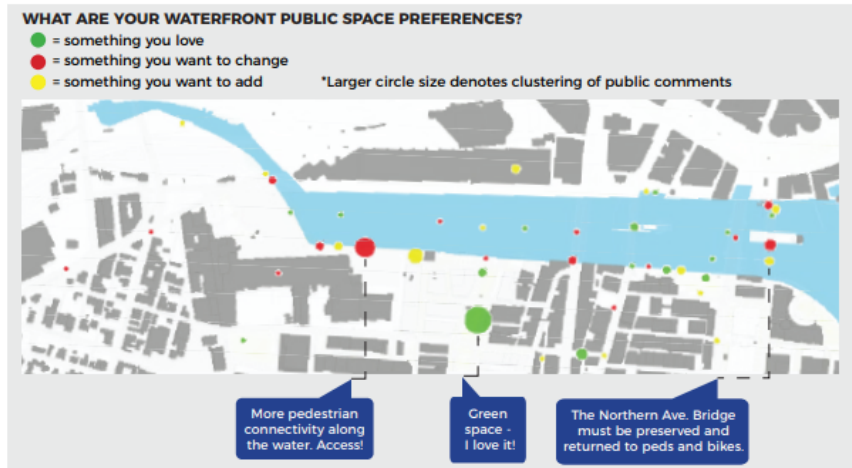
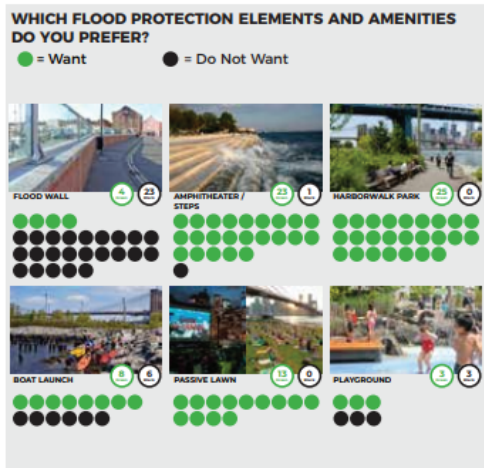
2. Engagement Tools

- » Use interactive tools such as surveys, focus groups, and workshops to collect qualitative and quantitative input.
- » **Example:** Incorporate mapping exercises during workshops for stakeholders to pinpoint areas of concern or priority.

3. Feedback Integration

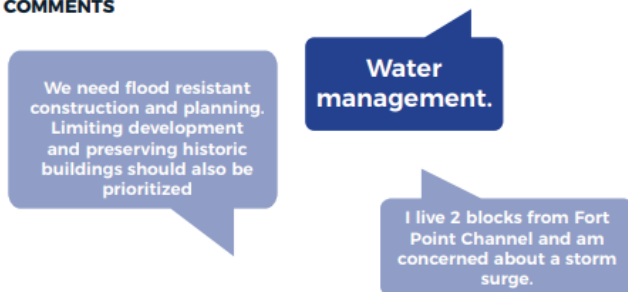
- » Develop a feedback loop to ensure stakeholder recommendations are revisited and incorporated throughout the planning process.

Our team develops fit for purpose engagement strategies based on the needs of stakeholders, always asking: "Who could affect or be affected by the outcomes of this decision? Who could affect this process?"



Open House Summary for Fort Point Channel Planning Zone, 12/11/17

COMMENTS

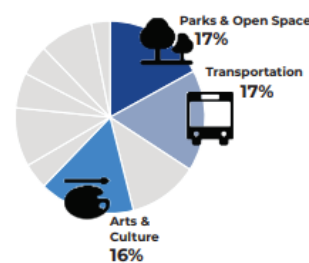


Online Survey Results for Fort Point Channel Planning Zone, 9/28/17 - 12/31/17

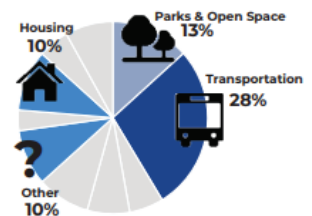
PRIORITIES

Respondents were asked to choose up to two top priorities for improvement. The following pie chart percentages indicate top categories selected for the Fort Point Channel.

RESIDENT PRIORITIES



NON-RESIDENT PRIORITIES



Arcadis routinely compiles and reports community feedback as part of sustainability planning efforts.

Activity 3: Adaptation Toolkit

Arcadis will develop an Adaptation Toolbox containing a suite of technical solutions, policies, programs, and projects for various asset types, including:

- » Power, drinking water, wastewater, and stormwater infrastructure.
- » Shoreline protection structures, dams, roads, bridges, and emergency shelters.

The toolbox will evolve based on interdisciplinary expertise and insights gained through Activities 1 and 2, and will serve as the foundation for scenario evaluations in Activity 4. Substeps include:

1. **Solution Categorization.** Divide adaptation solutions into categories such as structural (e.g., flood barriers), operational (e.g., emergency response plans), and policy-based (e.g., zoning changes).
2. **Feasibility Screening.** Conduct a high-level feasibility screening of initial solutions to eliminate options that are cost-prohibitive or technically unviable.
3. **Multi-Benefit Analysis.** Analyze potential solutions for co-benefits, such as biodiversity enhancement, water quality improvement, or economic revitalization.

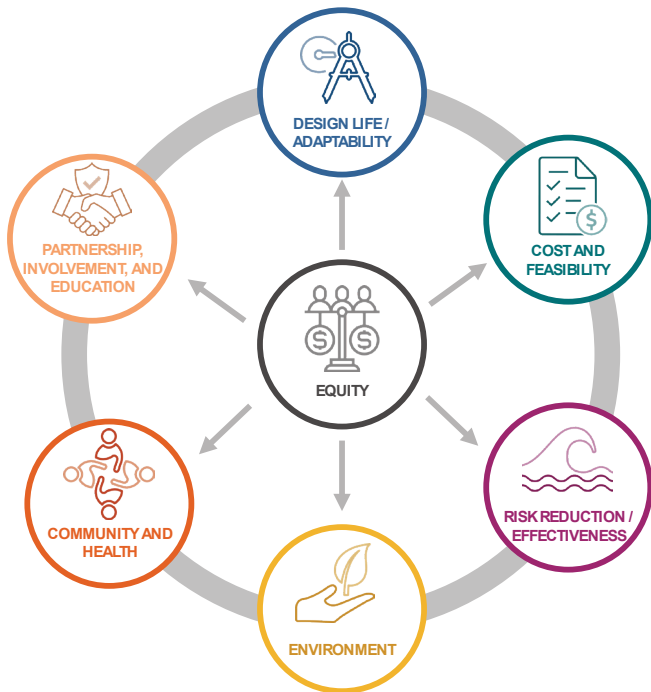
An example toolkit Arcadis has used for a project in the past is available on this public meeting board at https://miro.com/app/board/o9J_l7HgNaE=/

Activity 4: Adaptation Scenarios and Prioritization

Building on Activities 1 -3, the Arcadis team will undertake a collaborative process of adaptation scenario development, evaluation, and prioritization. This process will include several interrelated steps.

1. Evaluation Criteria and Metrics

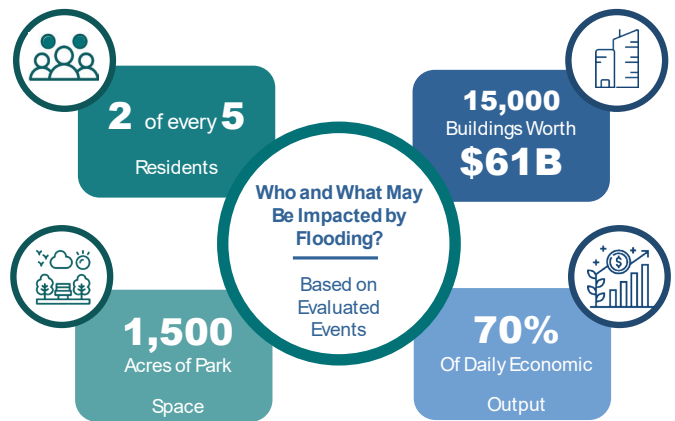
- » Establish preliminary evaluation criteria based on stakeholder input to prioritize actions that enhance flood mitigation, biodiversity, and natural resource conservation.
- » Revise evaluation criteria throughout the process to refine the selection of preferred actions City-wide.



Arcadis works with communities to develop comprehensive evaluation criteria, ensuring a well-rounded and holistic project portfolio.

2. No Action Scenario

Using inputs from the City's vulnerability assessment, Arcadis will define a No Action Scenario to illustrate the risks and consequences of maintaining the status quo. This scenario will substantiate the need for proactive adaptation.

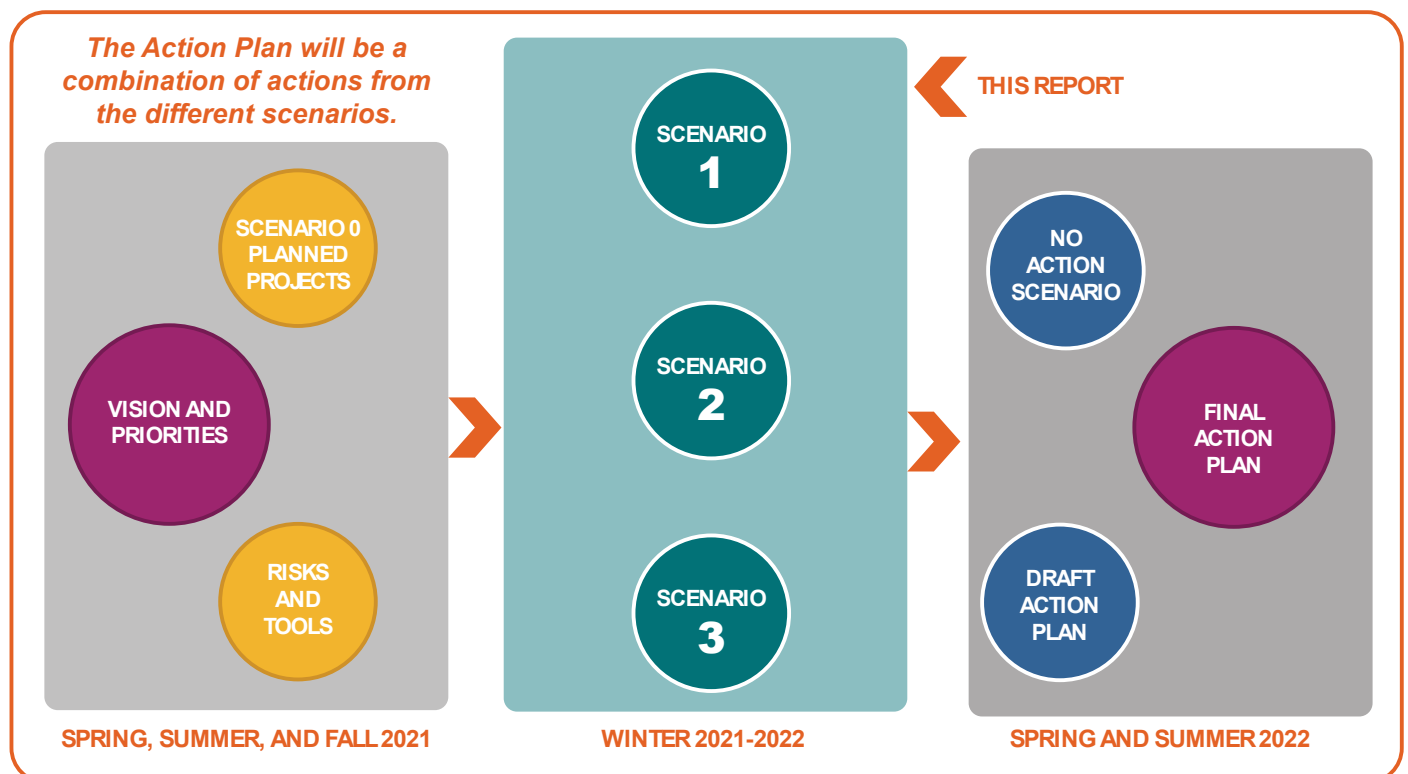


Arcadis uses infographics to compellingly illustrate the cost of inaction.

3. Alternatives Development

Arcadis will develop a series of alternative resilience actions for evaluation and discussion. These alternatives may be asset-specific or tailored to specific geographies, such as neighborhoods or Adaptation Action Areas. Arcadis will facilitate stakeholder meetings to refine prioritization processes, create a list of priority actions, and select a subset for cost estimate development. Arcadis has the ability to quantify risks under each adaptation scenario using metrics such as avoided damage costs, reduction in the number of people affected, and improved system reliability.

- » Develop a series of alternative resilience actions for evaluation and discussion.
- » Facilitate stakeholder meetings to refine prioritization processes, create a list of priority actions, and select a subset for cost estimate development.



Arcadis uses visual calendar graphics to clearly communicate project phases and deliverables.

- » Conduct detailed Benefit Cost Analysis' (BCA) for high-priority actions, incorporating direct costs, avoided costs, and ancillary benefits (e.g., economic growth, habitat restoration).
- » Provide phased prioritization by assigning priority levels to actions based on urgency (immediate, near-term, long-term) and feasibility, aligning with available funding and City capacity.

Activity 5: Implementation Schedule & Funding Strategy

Arcadis will develop an Implementation Schedule and Funding Strategy that outlines the roadmap for realizing prioritized solutions. This plan will:

- » Prioritize investment over phased periods.
- » Identify and mitigate implementation roadblocks.
- » Clarify costs and benefits of taking action during specific time periods.
- » Allocate roles and responsibilities.
- » Define implementation mechanisms, catalysts, and champions to facilitate change.

The strategy will clearly articulate how progress toward resilience goals will be measured and will include:

1. **Funding Source Identification.** Identify specific funding opportunities, such as federal grants, state resilience programs, private partnerships, or municipal bonds.
2. **Implementation Framework.** Outline timelines for permitting, design, construction, and ongoing maintenance for each priority project.
3. **Monitoring and Reporting.** Create a framework for monitoring progress on implementation, including specific KPIs (e.g., percentage reduction in flood risk, number of assets retrofitted).
4. **Phased Investment Strategy.** Develop a phased investment strategy that aligns with funding availability, urgency of risks, and capacity to implement.

Activity 6: Capacity Building and Training

To ensure long-term resilience, Arcadis will support capacity building for City staff and community stakeholders, as appropriate.

1. **Training Programs.** Identify and / or develop training programs focused on resilience best practices, climate adaptation techniques, and emergency response protocols.
2. **Workforce Development.** Identify opportunities for workforce development related to resilience projects, such as green infrastructure construction or maintenance training.

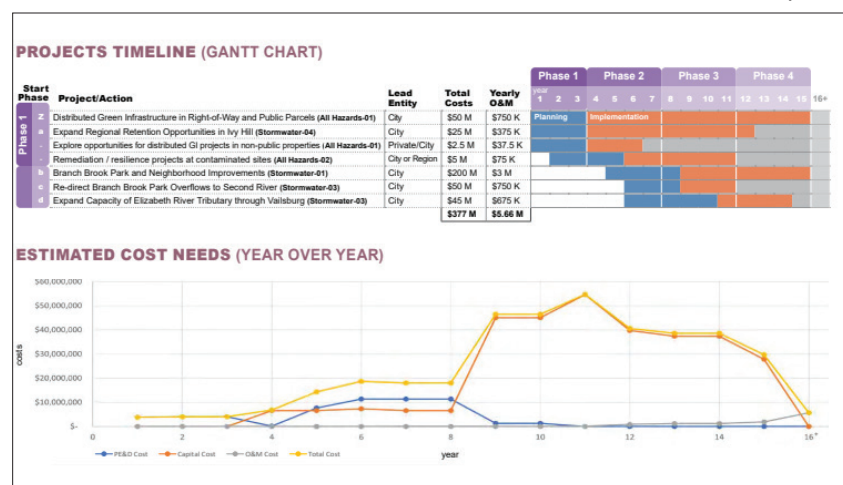
Activity 7: Technology Integration

Arcadis will integrate technology to enhance the City's ability to track and manage resilience efforts, based on the City's needs.

1. **Resilience Dashboard.** Develop a digital dashboard to track ongoing adaptation efforts, monitor risks, and communicate progress to stakeholders.
2. **Data Management System.** Establish a centralized data management system for storing and analyzing climate risk data and project outcomes.

This Adaptation Plan will provide the City with actionable strategies to enhance community resilience and address identified vulnerabilities. By building on the City's vulnerability assessment, engaging stakeholders, and prioritizing cost-effective solutions, Arcadis will deliver a comprehensive roadmap to achieve measurable climate resilience goals and long-term sustainability

The Adaptation Plan will also include a tailored funding strategy. The Arcadis team includes dedicated funding experts who understand the growing pressure and urgency cities across the country feel to provide and improve service with limited income, rising operating costs, and increased public scrutiny. Needs and priorities are also changing as transformative



Implementation Period	Area	Capital Cost Range	Annual Maintenance Cost Range
Near-term	1. 100 Acres Master Plan	\$2M to \$12M	\$0.03M to \$0.18M
	2. GE Headquarters	\$1M to \$4M	\$0.02M to \$0.06M
	3. Arcade	*	*
Mid-term	4. South Boston Manufacturing Center (by 2030)	\$3M to \$13M	\$0.05M to \$0.19M
	5. Boston Children's Museum (by 2030)	\$5M to \$6M	\$0.08M to \$0.09M
	6. Between Bridges (by 2030)	\$9M to \$10M	\$0.13M to \$0.15M
	7. Martin's Park (by 2030)	\$4M to \$5M	\$0.07M to \$0.08M
	8. South End of the Fort Point Channel (2030s)	\$34M to \$39M	\$0.51M to \$0.59M
Long-term	Additional Enhancements to Fort Point Channel	\$49.3M to \$49.5M	\$0.74M
Total		\$108M to \$139M	\$1.6M to \$2.1M

Arcadis uses integrated tabular, mapping, and graphing tools to effectively communicate the inter-relationships between projects, costs, locations, and timelines.

infrastructure projects are needed along the waterfront and the needs of vulnerable communities are considered alongside future climate risks.

We understand that the City needs to augment existing sources of funding, identify new sources, and create cost-effective budgets and capital plans while delivering impactful projects. Funding opportunities to meet such needs arise on an annual basis, through congressional and state appropriations, after presidentially declared disaster, as well as through

innovative approaches, such as district scale fees or cost sharing arrangements. Arcadis has taken a proactive role to assist our clients in developing funding strategies and obtaining project funding. Our approach to this project will incorporate key considerations related to “grant readiness” from the beginning in order to ensure that project scoping and design do not deviate from the core criteria that our experience shows to be reflective of successful funding applications.

Nature-Based Solutions for Coastal Resilience

Key Takeaways for Adaptation Planning and Implementation

Arcadis champions nature-based solutions that work in harmony with natural ecosystems to enhance coastal resilience. These solutions—such as wetlands restoration and living shorelines—provide sustainable flood protection, improve biodiversity, and strengthen ecosystem services, all while reducing the environmental impact of traditional infrastructure.

Well-planned and well-designed nature-based solutions can contribute significantly to both climate mitigation and climate adaptation, while protecting and improving the natural system.

It is not always possible to choose an exclusively nature-based solution. Compromises must be made

to make climate-related solutions as integrative as possible and to address multiple issues at once. The costs of these adjustments are often offset by reduced risk of damage, lower energy bills and maintenance costs, carbon credits, and increased quality of life. Solutions therefore need to be considered that are beneficial for nature, society, and the economy together.

Re-establishing lost or degraded coastal ecosystems, restoring riverbanks and flood plains, or bringing green into our cities, provide opportunities to give back to nature and maintain these vital environments for generations to come.



Arcadis has worked with the nation's largest and most complex urban green infrastructure programs to provide comprehensive services across the project and program life cycle including design, construction, program management, research and development, construction oversight, and planning.

The Arcadis Climate Adaptation and Resilience Planning Practice combines unparalleled technical expertise, innovative solutions, and a City-focused approach to address the growing challenges of climate change. The City can look to Arcadis as a trusted partner because of our ability to deliver actionable, data-backed strategies that integrate with the City's operations, policies, and communities. Our expert team provides exceptional value to the City in the implementation of the vulnerability assessment in the following ways:



Comprehensive Expertise, Tailored Solutions

With a global footprint and over a century of experience, Arcadis brings best practices from around the world while tailoring solutions to the local context. Arcadis offers a multidisciplinary team of climate scientists, engineers, planners, designers, economists, and engagement specialists who combine global knowledge with local insights. This ensures that the City receives tailored, site-specific solutions that align with your unique challenges, goals, and regulatory requirements, while bringing innovative solutions from national and global experts.



Proven Track Record in Implementation

Arcadis embeds implementation into every phase of the planning process. By integrating technical engineering and modeling staff within our planning teams, we ensure that strategies are not only innovative but also practical, achievable, and designed to translate into tangible actions. Experts in funding, finance, and benefit-cost analysis help accelerate the process of moving from planning to implementation — helping the City transition seamlessly to real outcomes.



Technology-Driven Innovation

Arcadis leverages cutting-edge tools such as GIS mapping, digital twins, and advanced climate modeling to deliver precise, data-driven insights. These technologies enable the City to make informed decisions, set clear priorities, and visualize the long-term benefits of their investments.



Commitment to Community-Centered Solutions

Arcadis prioritizes inclusivity by engaging stakeholders and communities at every stage of planning. We integrate equity into our solutions, ensuring that all populations, especially the most vulnerable, benefit from climate adaptation efforts. Arcadis' planners are experts in community engagement and have led dozens of successful engagement processes at the local and statewide level.

2 Implementation Planning

City's Objective: Translate adaptation strategies into actionable implementation plans that support sustainable urban development.

Our team emphasizes implementation as a core aspect of all its services, ensuring that climate adaptation strategies are not just theoretical but actionable and impactful. Across every project, the team integrates implementation-focused thinking, from initial planning through to execution, providing the City with clear, practical roadmaps to bring resilience initiatives to life. This includes prioritizing projects based on risk, cost, and feasibility, identifying funding opportunities, and aligning solutions with regulatory and stakeholder requirements.

Building on the Adaptation Plan, as well as other planning documents developed with and for the City, the Arcadis team will assist in developing a strategic roadmap for implementation, including capital improvement planning, governance and decision-making tools, and funding and financing opportunities for priority resilience and adaptation actions.

City's Key Requested Tasks:

- ▶ Develop detailed implementation plans with timelines, budgets, and performance metrics to ensure effective execution.
- ▶ Coordinate with city departments and stakeholders to facilitate seamless integration into existing municipal operations.
- ▶ Incorporate strategies for biodiversity enhancement, natural resource conservation, and green stormwater infrastructure.
- ▶ Identify funding opportunities, including grants and public-private partnerships, to support implementation.

Arcadis Activities

Activity 1: Implementation Timelines, Budgets, and Performance Evaluation

Arcadis plans for implementation as an integral part of the project from the outset. This ensures that solutions recommended through the plan are set up for success. Arcadis' proposed team's expertise as planners and implementers enables us to address technical needs while enhancing capabilities, resources, and governance structures that foster effective implementation and long-term operations. Substeps include:

1. **Identification of Priority Areas.** Confirm priority Adaptation Action Areas across the City, based on the Vulnerability Assessment and other planning materials.
2. **Implementation Action Memos.** Develop detailed Implementation Action Memos for each priority project, outlining feasibility studies, concept development, and funding strategy recommendations.
3. **Project Planning and Design**
 - » Conduct feasibility studies, cost estimation, benefit-cost analyses, and schedule development for recommended adaptation projects and programs.
 - » Examples of potential implementation actions include:
 - Marsh restoration, erosion management, and dredging projects.
 - Design and promotion of bulkheads and nature-based approaches for public and private properties.
 - Neighborhood planning studies to develop flood risk reduction strategies, identify funding sources, and prepare grant applications.
 - Program design and grant development for home elevation initiatives.
 - Technical support for City-wide critical asset mitigation efforts.

4. **Data Collection and Analysis.** Work with the City to identify and collect relevant data (e.g., past reports, plans, and designs) from internal departments and external stakeholders to support technical implementation activities.
5. **Progress Tracking and Reporting.** Track implementation progress across the Adaptation Plan and provide regular reports summarizing how each action item has been advanced.
 - » **Deliverable:** A final progress report detailing accomplishments, challenges, and next steps.

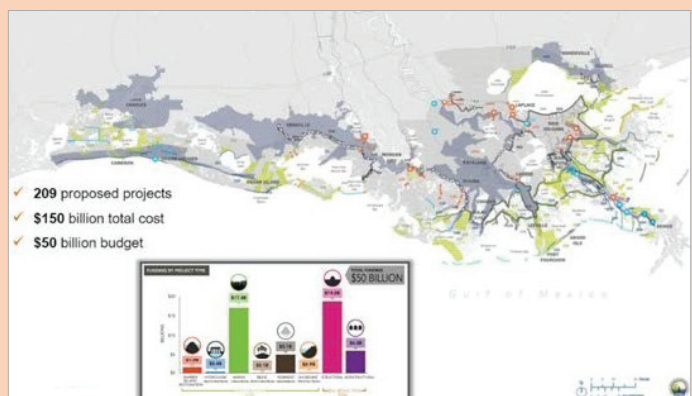
Activity 2: Stakeholder Engagement

The scope for stakeholder and community engagement associated with the above implementation actions will be developed as the actions are confirmed. We will foster a collaborative relationship with City officials and stakeholders, establishing a meeting frequency with key staff to guide project efforts in line with the scope of work. While we recommend biweekly meetings, we will identify a cadence that best accommodates City officials' capacities and schedules. We have found having a regularly scheduled check-in on the calendar helps maintain momentum, but these regular meetings may be shifted – or additional touchpoints scheduled – as needed.

In addition to engagement activities specific to implementation actions above, Arcadis will also collaborate with the City, as appropriate, to engage residents, increase community capacity around emergency preparedness and response, and continue to spread awareness of the Adaptation Plan. This could include in-person community events, as well as additional virtual calls with stakeholders to plan the events. Arcadis will provide meeting notes, materials, attendance lists, flyers, handouts, and other related documents for all engagement meetings and events. Substeps include:

Our **Project Costing Tool (PCT)** produces high-level cost estimates for large scale infrastructure and mitigation projects. Footprints of features are defined in GIS and construction cost estimates are parametrically derived from a library of unit costs for certain built features, like creating new levees or restoring natural ridges. Additional allowances (like mobilization of equipment and contractor overhead), soft costs (like planning, engineering, and design), life cycle costs (like operations and maintenance) and uncertainties (like contingencies) are applied to the construction costs. This is a tool we use in our work with the Coastal Protection and Restoration Authority (CPRA) for the State of Louisiana as we support the planning, design, and construction of various types of coastal resilience projects to combat rising sea levels along the coastal zone. The image to the left is an

example from CPRA in the challenge at hand with respect to needs compared to available funds. The PCT helps CPRA evaluate and prioritize projects with trustworthy costing data.



1. **Stakeholder Engagement Plan.** Develop a tailored engagement plan, identifying key stakeholders, meeting cadences, and outreach methods. We recommend biweekly meetings with City officials, with flexibility to adjust based on project needs and stakeholder schedules.



Photos of Arcadis team members working on site, directly with stakeholders. We believe that our team members completing detailed analyses must be fully integrated into engagement processes to ensure feedback is seamlessly assessed alongside other forms of data.

2. **Community Capacity Building.** Collaborate with the City to engage residents and increase community capacity around emergency preparedness and response. Plan in-person community events and virtual stakeholder calls to support Adaptation Plan awareness and gather input on implementation priorities.
3. **Documentation and Follow-Up.** Provide meeting notes, attendance lists, flyers, handouts, and other outreach materials for all engagement activities. Track stakeholder feedback and ensure it is integrated into the implementation process.

Activity 3: Funding and Financing Opportunities

Leveraging our national Funding Team, funding and finance services help City secure resources to realize adaptation projects. The team specializes in integrating Adaptation priorities into capital improvement plans, ensuring long-term local investments align with resilience goals. As described elsewhere in this proposal, our team also provides expert guidance

on identifying and securing federal and state grant funding, navigating complex application processes and developing innovative Benefit-Cost Analyses to maximize financial support. Additionally, the team explores innovative financing approaches, such as public-private partnerships, district scale governance and financing approaches, green bonds, and climate finance mechanisms, to unlock new funding opportunities.

Arcadis will leverage its national Funding Team to secure resources that enable the City to realize adaptation projects. By combining technical expertise with financial strategy, Arcadis empowers the City to implement cost-effective, scalable solutions that drive adaptation. Substeps include:

1. **Fit-for-Funding Assessments.** Conduct strategic assessments of recommended projects to evaluate competitiveness for various grant opportunities, including federal, state, and local funding sources, and including recommended adjustments to improve competitiveness.
2. **Capital Improvement Plan Integration.** Review the City's Capital Improvement Plan (CIP) to ensure alignment with Adaptation Plan recommendations.
3. **Economic Analysis.** Explore non-grant funding avenues, such as user fees, insurance surcharges, and public-private partnerships, to diversify funding sources.
4. **Benefit-Cost Analysis (BCA).** Develop BCAs to substantiate project cost-effectiveness for stakeholders and funders. These analyses will include direct costs, avoided costs, and ancillary benefits such as environmental restoration and economic revitalization.
5. **Innovative Financing Mechanisms.** Explore district-scale governance and financing approaches, green bonds, and climate finance mechanisms to unlock new funding opportunities.

Activity 4: Capacity Building and Training

Arcadis will assist the City in building internal capacity to sustain implementation efforts and ensure long-term resilience, as appropriate, through mechanisms like:

1. **Training Programs.** Identify and develop training programs for City staff focused on project implementation, emergency preparedness, and long-term infrastructure maintenance.
2. **Knowledge Transfer.** Provide documentation and guidance on best practices for managing and executing adaptation projects.



A Full Range of Capabilities to Support Implementation Strategy Development

Arcadis has developed dozens of implementation plans for resilience related projects across the country. Our team is adept at converting conceptual plans into real projects through a robust process of feasibility assessment, design and engineering, cost estimation and benefit cost analysis, and stakeholder engagement. We view each of these components as integral to the creation of projects that can be funded, permitted, and built. Because we offer a full suite of services, from engineering design to stakeholder engagement, the City can look to Arcadis as a complete resource to develop reliable implementation plans for the most complex projects.



Focus on Funding and Financing to Drive Implementation

Arcadis excels in helping the City unlock financial opportunities through capital improvement plans, federal and state grants, and innovative financing mechanisms like public-private partnerships. This ensures projects are not only feasible but financially achievable. Arcadis' funding experts have helped our clients capture over \$10 billion in funding for resilience and infrastructure projects nationwide.

3 Urban Forestry Plan

City's Objective: Expand and sustain a resilient urban tree canopy to reduce urban heat, enhance climate adaptation, and support stormwater management.

Arcadis employs leading edge methodologies to assess, analyze, and manage tree canopies. Urban forest management plans across the United States employ sophisticated methodologies to assess, analyze, and manage urban tree canopies. These methodologies integrate advanced technologies such as Geographic Information Systems (GIS), Light Detection and Ranging (LiDAR), and field verification techniques. The following outlines Arcadis' comprehensive approach based on best practices observed in various urban forestry initiatives:

Arcadis Activities

Activity 1: Data Collection. Develop a plan to collect data, including but not limited to the following:

1. **Remote Sensing Technologies**
 - » **LiDAR (Light Detection and Ranging):** Utilized to generate high-resolution, three-dimensional representations of urban forests, enabling precise measurements of tree height, canopy structure, and biomass.
 - » **Multispectral and Hyperspectral Imagery:** Employed to assess vegetation health, species differentiation, and land cover classification.
2. **Geographic Information Systems (GIS)**
 - » **Spatial Data Integration:** GIS platforms compile and manage diverse datasets, including tree inventories, land use, and environmental variables, facilitating spatial analysis and visualization.

City's Key Requested Tasks:

- » Develop an Urban Tree Canopy Plan that prioritizes increasing tree coverage in public spaces such as parks, swales, right-of-way, and other municipal properties, targeting areas with high heat exposure and limited shade.
- » Prioritize native species for maximum cooling, biodiversity, and low-maintenance benefits.
- » Integrate green stormwater infrastructure
- » Use GIS and heat mapping to identify priority planting areas and measure cooling benefits.
- » Develop educational resources and outreach programs to encourage tree planting and maintenance in heat-stressed areas. Guide on selecting native tree species that are resilient to local climate conditions and beneficial for urban wildlife.

3. Field Verification

- » **Ground Truthing:** On-the-ground surveys validate remote sensing data, ensuring accuracy in species identification, tree health assessments, and structural measurements. auf.isa-arbor.com

Activity 2: Data Analysis and Presentation

1. **Urban Tree Canopy (UTC) Assessments**
2. **Canopy Cover Analysis:** Determines the percentage of land area covered by tree canopies, identifying areas with low coverage for targeted planting.
3. **Ecosystem Services Valuation**
 - » **i-Tree Tools:** Quantify benefits such as air pollution removal, carbon sequestration, and stormwater runoff mitigation provided by urban trees. Wikipedia.

4. Spatial Modeling and Visualization

- » **3D Modeling:** Creates detailed visualizations of urban forests, aiding in planning and community engagement.

Activity 3: Application of Results

1. **Strategic Planning:** Review opportunities in Capital Improvement Plan for leverage.
2. **Urban Forest Management Plans:** Develop long-term strategies for tree planting, maintenance, and preservation, incorporating data-driven insights.
3. **Policy Development:** What provide text. Determine how current building regulations and City operations may need to be updated based on plan.

4. **Regulatory Frameworks:** Inform policies on tree protection, land development, and green infrastructure integration.

Activity 4: Community Engagement

- » **Participatory GIS:** Engage residents in mapping and decision-making processes, fostering stewardship and equitable distribution of urban forestry resources.

Arcadis' urban forestry team serves New York City and has helped increase NYC's canopy by over 100,000 trees.

4 CRS Watershed Management Plan

City's Objective: Maximize points under the requirements of the CRS Program for a Watershed Management Plan.

Arcadis bring extensive experience preparing watershed management plans for a variety of clients, settings, scales, and applications. We understand and have worked with the CRS and are familiar with the CRS requirements for Water Management Master Planning requirements. At the outset of this task, we will work with the City to identify watersheds for inclusion in a watershed management master planning effort.

Arcadis Activities

Our approach to this task is summarized below:

We understand the CRS manual is currently undergoing revisions. As such, the below is based on known existing requirements. The Arcadis team will update the approach, as needed, and as requirements evolve.

Activity 1: System characterization and Hydrologic & Hydraulic (H&H) modeling

Arcadis brings extensive experience in Hydrologic and Hydraulic (H&H) modeling, leveraging a wide variety of tools such as PC-SWMM, HEC-RAS, and InfoWorks ICM, among others. Our modeling approach emphasizes balancing model accuracy, complexity, and runtime to maximize benefits for decision-making. Arcadis adapts

City's Key Requested Tasks:

- ▶ Develop a comprehensive Watershed Management Plan to meet the Community Rating System manual requirements.
- ▶ Conduct hydrologic and hydraulic modeling to assess existing watershed conditions, identifying areas vulnerable to flooding and water quality issues.
- ▶ Prioritize watershed restoration projects and green infrastructure solutions to enhance resilience to climate change impacts.
- ▶ Incorporate strategies to promote groundwater recharge, improve water quality, and reduce flood risks.
- ▶ Coordinate with regional water management agencies to ensure compliance with regional policies and regulations.
- ▶ Integrate the Watershed Management Plan with other sustainability and adaptation initiatives to support holistic water resource management.

its tools and techniques to meet project needs, whether at the watershed scale or for evaluating site-specific strategies.

Our modeling approach includes watershed and drainage system characterization, model parameterization, calibration, and scenario analysis to deliver actionable results. This is supported by advanced technologies for flood detection, data visualization, and future condition assessments. Substeps include:

1. **Watershed and Drainage System Characterization.** Arcadis will begin by compiling and analyzing available GIS datasets and other publicly available or city-provided data to characterize the watershed and drainage system. This step includes:

- » Identifying key hydrologic and hydraulic features (e.g., catchments, flow paths, stormwater infrastructure).
 - » Assessing current system conditions using historical data and GIS mapping tools.
 - » Reviewing and incorporating data from previous studies, reports, and flood hazard assessments.
 - » Integrating with existing stormwater management plans and reviewing the City's existing Stormwater Management Master Plan to ensure consistency and alignment with CRS requirements.
2. **Initial Model Parameterization, Testing, Calibration, and Validation.** Arcadis will develop and refine H&H models, as needed, to achieve a balance of accuracy and practicality:
- » **Parameterization:** Establish initial model inputs, including precipitation, infiltration, flow rates, and system geometry.
 - » **Testing:** Run preliminary simulations to identify key behavior patterns and validate model logic.
 - » **Calibration:** Refine model parameters using real-world data, such as flood sensors or flood sensing algorithms (e.g., FloodScope).
 - » **Validation:** Ensure the model accurately reflects observed conditions by comparing results against historical flood data and precipitation records.
3. **Scenario Modeling.** Arcadis will conduct detailed scenario modeling to evaluate a range of storm events and identify system vulnerabilities. This includes:
- » **Storm Events:** Simulating a variety of storm conditions, such as the 10-year, 25-year, 100-year, and 5-day events, as outlined in CRS guidance.
 - » **Precipitation Data:** Using Atlas 14, radar-rainfall data, or precipitation gauge data to simulate events.
 - » **Future Conditions:** Incorporating delta change factors to account for anticipated changes in sea level and precipitation patterns due to climate change, as well as build out and expected future land use and development patterns.
 - » **Continuous Simulation:** Conducting continuous simulations to model storm volumes, peak flows, and statistical trends over time.
 - » **Open Space Analysis:** Identify flood-prone areas that could be preserved as open space to enhance floodplain functionality and earn CRS credits.
4. **CRS Compliance.** To meet CRS requirements, Arcadis can develop model results for both current and future developed conditions. These results will help the City achieve CRS credits while enhancing resilience planning and flood mitigation efforts.
5. **Results Communication and Visualization.** Arcadis will deliver model results in formats that maximize usability, public outreach, one of the key areas to earn CRS credits, and understanding of the results, including:

For Athens-Clarke County, Georgia (home of University of Georgia), Arcadis has developed and implemented their stormwater master plan starting in 1998 and we continue to assist with it. For development of the master plan and CIP, watershed analyses included both existing and future build land use conditions. Floodplain maps were also developed for future land use conditions for Planning and Zoning to regulate development in and adjacent to flood prone areas. Improvements to address flooding consisted of both structural and non-structural solutions. Developments ordinances were reviewed and updated to be consistent with the master plan findings.

- » **Mapping:** High-resolution flood hazard maps showing vulnerable areas, peak flow paths, inundation extents, and potential open space preservation zones.
- » **Tabular Summaries:** Statistical summaries of storm volumes, peak flows, and system capacity under different scenarios.
- » **Technical Narratives:** Clear, actionable narratives explaining model assumptions, results, and implications for decision-making.
- » **Advanced Visualization Tools:** Using tools like StormCity, Arcadis will provide 3-D video animations of flooding areas from multiple perspectives, including birds-eye, ground-level, and isometric views. Model results can also be used to “trigger” warning and response actions against pre-established flood levels.

Activity 2: Prioritization of Watershed Restoration Projects

Arcadis leverages extensive experience in supporting clients to prioritize restoration projects, encompassing green, blue-green, and gray infrastructure solutions. Our approach employs a community-driven, data-oriented benefit-cost framework to rank projects based on their effectiveness, feasibility, and co-benefits. Substeps include:

1. **Community-Driven Goal Setting and Metric Development.** Arcadis will work closely with the City and its stakeholders to define project goals and develop qualitative and quantitative metrics for prioritization. This process includes:

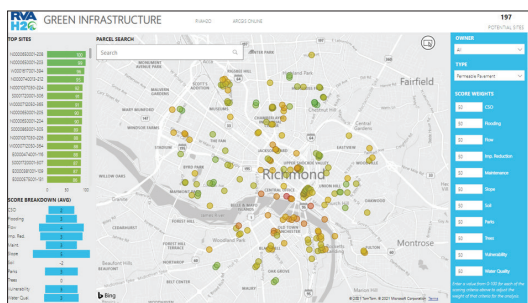
- » **Public Participation Documentation:** Arcadis will conduct workshops, surveys, and public meetings to ensure community input is documented and incorporated into planning. Please see more on engagement under Adaptation Plan Development above and Engagement below.
 - » **Metric Definition:** Arcadis will establish evaluation criteria, such as flood reduction (e.g., depth-damage functions), groundwater recharge, water quality improvement, and co-benefits like community beautification. These metrics can be established in coordination with the Adaptation Plan development process outlined above.
2. **Data-Driven Benefit-Cost Analysis.** Arcadis will apply a cost-benefit framework to evaluate potential restoration projects across multiple scales, including site-specific, neighborhood, and watershed levels. This includes:
- » **Scenario Evaluation:** We will develop and evaluate alternative restoration scenarios using parametric modeling tools to estimate costs, benefits, and trade-offs between implementation options.
 - » **Benefits Analysis:** Quantify project benefits, such as flood risk reduction, improved water quality, enhanced groundwater recharge, and community co-benefits (e.g., aesthetic improvements, recreation opportunities).
 - » **Cost Estimation:** Integrate community-specific cost curves, incorporating local construction cost data, economies of scale, and full life-cycle costs (e.g., operations, maintenance, and replacement costs).
3. **Optimization of Restoration Strategies.** Arcadis will use the data-driven metrics to develop optimized strategies for watershed restoration across varying levels of investment. This includes:
- » **Prioritization at Multiple Scales:** Rank projects based on benefits, costs, and feasibility at the site, neighborhood, and watershed scales.

4. **Development of Implementation Plan.** Arcadis will compile prioritized restoration projects into a clear implementation roadmap that supports the City's capital planning and grant application processes. This includes:
- » **Integration with CRS Activity 510:** Include strategies for addressing repetitive loss areas and mitigation opportunities.

Activity 3: Incorporate Strategies to Promote Groundwater Recharge, Water Quality, and Flood Reduction

Arcadis will leverage its global expertise and holistic approach to help the City of Pompano Beach identify and implement highly effective strategies that enhance groundwater recharge, improve water quality, and reduce flooding. Substeps include:

1. **Identification and Design of Site-Scale BMPs.** Arcadis will evaluate and recommend site-scale BMPs to promote groundwater recharge, enhance water quality, and reduce flooding.
2. **Development of Connected Stormwater Management Systems.** Arcadis will identify opportunities to design interconnected systems of multi-functional stormwater management strategies.
3. **Open Space Preservation.** Identify flood-prone areas that can be preserved as open space to protect natural floodplain functions and earn CRS credits.
4. **Coastal System Integration.** Arcadis will design stormwater solutions that account for coastal and tidewater conditions, addressing challenges such as low-gradient systems and tidal influences.
5. **Long-Term Operations and Maintenance (O&M) Considerations.** Arcadis' approach incorporates full life-cycle planning to ensure long-term functionality and sustainability of stormwater systems.
6. **Policy and Ordinance Development.** Arcadis will work with the City to identify recommendations and implement zoning, policy, and ordinance appropriate selected changes that promote watershed management and BMP adoption.



Arcadis uses advanced 3-D visualization tools to aid in project outreach and prioritization.



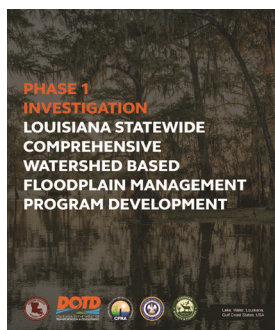


Arcadis brings a full range of site-scale BMPs, ranging from large and scale nature-based solutions, to pumping and conveyance based solutions, to a variety of levees, berms, and barriers, to provide comprehensive flood mitigation solutions.

Activity 4: Coordinate with Regional Water Management Authorities

Arcadis brings over 25 years of experience collaborating with regional water management authorities, including the South Florida Water Management District (SFWMD). Substeps include:

1. **Coordination with Regional Authorities.** Arcadis will facilitate collaboration between the City of Pompano Beach and regional water management entities such as the South Florida Water Management District.
2. **Alignment with Regional Goals and Regulations.** Arcadis will ensure that watershed management strategies and projects align with regional water management objectives and regulatory requirements.
3. **Support for Regional Project Collaboration.** Arcadis will identify opportunities for collaborative projects between the City and regional water management authorities.



Arcadis team members proposed for this project led the development of the Louisiana Watershed Initiative, including recommended watershed plans, programmatic, policy, and technical support.

Activity 5: Integrate Watershed Management Plan with Other Sustainability and Adaptation Initiatives

Arcadis recognizes that watershed planning is often siloed from other sustainability initiatives, creating missed opportunities for holistic urban resilience. Substeps include:

1. **Integration with Sustainability Goals.** Arcadis will work with the City of Pompano Beach to identify opportunities for integrating watershed management strategies with sustainability initiatives.
2. **Identification of Co-Design Opportunities.** Arcadis will assess city infrastructure, land use, and development patterns to identify opportunities for co-locating sustainability improvements with watershed management solutions.
3. **Policy Recommendations to Enhance Integration.** Arcadis will provide recommendations for policy and ordinance changes that enable better integration of watershed management with sustainability and adaptation initiatives.
4. **Alignment with Adaptation Initiatives.** Arcadis will ensure that the watershed management plan aligns with other City adaptation and resilience initiatives.

Additional Deliverables for CRS Compliance:

1. **Formal Adoption:** Ensure the watershed management plan is adopted by the City Council through ordinances or resolutions.
2. **Public Outreach Materials:** Include brochures, videos, and online tools to educate residents about flood risks and watershed strategies.
3. **CRS-Specific Documentation:** Provide high-resolution maps, technical reports, and prioritized project lists tailored to CRS requirements.
4. **Drainage Maintenance Plan:** Incorporate protocols for ongoing inspection and maintenance of drainage infrastructure.

Arcadis' comprehensive approach ensures the City meets all CRS requirements for a watershed management plan and maximizes points. By formalizing adoption, strengthening public participation, emphasizing open space preservation, and aligning with CRS documentation standards, the plan will enhance flood resilience, improve CRS scores, and support long-term sustainability.



Arcadis looks to innovative technologies and applications, like solar/green roof projects, to bridge the gap between traditionally siloed elements of sustainability planning.

The Arcadis team has supported more than 120 communities with CRS compliance.

Much of this work focused on helping jurisdictions meet CRS requirements, giving us a unique ability to identify shortcomings, reduce flood risk, improve CRS scores, and increase insurance premium discounts for residents.

Arcadis partnered with the Florida Division of Emergency Management (FDEM) and FEMA to enhance the state's participation in the National Flood Insurance Program (NFIP) and expand the number of communities enrolled in the CRS. Through this partnership, Arcadis supported over 120 Florida communities, delivering technical assistance to improve compliance with NFIP regulations and implement best practices for floodplain management. Key services provided include:

Field Community Assistance Contact (FCAC)

Visits: Conducted in-person visits to more than 120 communities, working directly with local officials to evaluate enforcement of NFIP regulations, identify compliance gaps, and develop actionable strategies for improvement.

Community Rating System (CRS) Support: Assisted communities in understanding and implementing CRS requirements, enabling them to secure lower flood insurance premiums for residents by achieving higher CRS class ratings.

Best Practices Development: Leveraged insights from field visits to identify challenges in enforcing

NFIP regulations and compiled a library of best management practices to improve floodplain management and community resilience.

Stakeholder Engagement and Capacity Building:

Worked closely with local governments, emergency managers, and floodplain administrators to build technical capacity, overseeing compliance with NFIP standards while tailoring solutions to local needs. This program strengthened floodplain management across Florida by improving compliance with NFIP regulations and encouraging communities to adopt resilience-focused policies and practices. Arcadis' extensive interaction with diverse stakeholders provided valuable insights into the challenges local governments face, enabling the development of practical, enforceable solutions that enhance long-term community resilience.



5 Energy Audits at Selected City Facilities

City's Objective: Improve energy efficiency in municipal facilities through detailed assessments and targeted recommendations.

The City has taken several important steps to reduce energy and water consumption at its buildings. The City obtained LEED Gold status for the Library and Cultural Center. Achieving LEED Gold status is a testament to the City's commitment to environmental stewardship, energy efficiency, and creating healthy, resilient spaces for the community. In reviewing the City's 2019 Sustainability Baseline and GHG Report notes, it appears the City had some difficulty obtaining and reviewing full account information from Florida Power & Light (FP&L). This is a common problem when requesting data sets from electric utility providers.

Arcadis Activities

Activity 1: Gather Information. It's essential that the Arcadis team develop a thorough understanding of the context within which we're working and have the data needed to perform energy audits. Substeps include:

1. Understand the City's primary energy, climate, and GHG goals and determine how they may have changed since the 2019 Sustainability Baseline and Goals Sustainability Strategy Workplan Phase 1 or direction from the City Commission or City Manager. This work is closely aligned with that of the Task on Greenhouse Gas Emissions.
2. Develop a multi-prong approach to request information from FP&L to allow visibility and control of the City's customer accounts, meters, and data.
3. Compile the results of this information gathering and review of data into a context memorandum.

Activity 2: Confirm Rate Schedule and Support Refunds, As Needed. Many times, electric utilities will assign a default rate schedule to a commercial customer. These rate schedules are often not the lowest cost rates available and result in the customer being billed thousands of extra dollars in demand or similar charges. The Arcadis team can support reducing costs through the following substeps:

1. Review the City's accounts and meters to determine whether the City is on the correct rate schedule.
2. Provide support in conducting a thorough review of accounts and meters to identify potential incorrect rate schedules or overages
3. Assist the City in requesting refunds from FP&L for any identified incorrect billing.

City's Key Requested Tasks:

- ▶ Perform energy audits at selected city facilities to assess current energy usage and identify efficiency improvements.
- ▶ Evaluate HVAC systems, lighting, insulation, and equipment performance.
- ▶ Recommend energy-saving measures, renewable energy integration opportunities, and potential cost savings.
- ▶ Develop a prioritized action plan for implementing energy efficiency upgrades.

There are five accounts that combined account for over 70% of the municipal energy use in the City.

Facility	Annual Electricity Use (kWh)	% of City Total
Library/Cultural Center	758,040	28.62%
Lift Station (190 N Ocean Blvd)	494,580	18.68%
City Hall Offices	334,740	12.64%
Pompano Beach Pier	167,640	6.33%
Tennis Clubhouse	110,544	4.17%

Activity 3: Scope Energy Audits. Arcadis will work with the City to identify and prioritize city facilities and assess current energy usage to identify efficiency improvements via the following substeps:

1. Verify via desktop review potential facilities to audit, prioritizing based on criteria agreed to by the city.
2. Scope which facilities and what level to conduct audit: For example: ASHRAE Level 1: Walk-through analysis for obvious savings ASHRAE Level 2: Detailed energy & cost analysis of ECMs ASHRAE Level 3: Investment-grade audit for capital-intensive retrofits.
3. Develop and agree to action plan and schedule based on the scope.

Activity 4: Conduct Audits / Evaluate Performance.

Arcadis will review and perform engineering analyses on building envelope and HVAC systems, airflows, central plans, temperature settings, control systems, etc., to support providing recommendations for energy conservation. Substeps include:

1. Develop the Energy Use Intensity (EUI) and carbon emissions intensity of the properties and establish a baseline to perform energy conservation calculations.
2. Benchmark and rank the subject properties' energy usage and compare them to similar properties and against Energy Star Portfolio Manager database.
3. As appropriate, review existing and assess opportunities for architectural and energy conservation measures (ECMs), based on the benchmarking analysis, utility records, site surveys, collected data, and energy analysis including HVAC equipment, motors, lighting systems, systems, behavioral changes, 'no/low cost' operational measures, user engagement, etc.
4. Conduct site visits, as appropriate, and as needed.

Activity 5: Develop Recommendations. The Arcadis team will develop recommended energy savings measures, through renewable energy, energy efficiency improvements, and energy integration measures through the following substeps:

1. Prioritize areas of intervention based on the outcomes of Activity 4.
2. Identify possible improvements and alternatives based on best practices and based on criteria identified in coordination with the City. Alternatives will be flagged for trade-offs and implications early on.
3. Estimate costs, savings, emissions reductions, and payback periods for each ECM.
4. Provide:
 - » A list of decarbonization measures within improved efficiency (EUI), electrification, and technology upgrade solution space.
 - » Calculations of optimum renewable energy potential on-site and/or off-site.
 - » Realistic and implementable recommendations for energy conservation measures (ECM) for the building and MEP systems (envelope, electrical, lighting and HVAC systems).
 - » Renewable energy integration options, as appropriate (e.g., solar power purchase agreements, community solar, or energy storage systems)
 - » Target goal and metrics achievement with implementation

Activity 6: Prioritized action plan for implementing energy efficiency upgrades. The Arcadis team will develop an optimized implementation action plan for the ECMs to maximize cost saving and prioritize assets in critical condition. Arcadis will provide a fully customized action plan to undertake changes to accounts serviced by FP&L, energy efficiency opportunities, renewable energy opportunities, available tax breaks and timelines for potential sunsetting, benefit-cost analysis, and potential grant

funding. Please see the Implementation Plan section above for more on this activity.

On-Site Facility Audit

Energy Systems

- HVAC:
 - » Check system sizing, runtime, and condition of air handling units
 - » Identify short cycling, leaks in ducts, dirty coils/filters, VFD performance
- Lighting:
 - » Evaluate fixture type, controls, occupancy sensors, daylighting
- Envelope:
 - » Inspect for air leaks, poor insulation, high solar heat gain
- Plug Loads:
 - » Assess IT, kitchen equipment, chargers, and any non-critical plug use
- Controls & BAS:
 - » Test for override issues, poor setpoints, and scheduling inconsistencies

The 190 N Ocean Blvd used nearly 19% of the City's energy.

The Arcadis Difference

According to the City's 2019 GHG Baseline study, the Library and Cultural Center is the largest single user of electricity. However, given the building is already LEED Gold Certified, the opportunities for energy efficiency are likely limited. The most likely feasible strategy to reduce electricity costs is installation of on site solar. Retrofitting buildings for solar can be costly, even with new tax credits. Roof racking and associated labor costs can often exceed the cost of panels. With the known available information, Arcadis would likely suggest focusing on energy efficiency targets further down the list provided in Table 4 of the City's Sustainability Baseline and Goals Sustainability Strategy Workplan Phase 1. As a company with deep facility knowledge and capacities, Arcadis could conduct loss audits in conjunction with other departments.

6 Water Audits at Selected City Facilities

City's Objective: Identify inefficiencies and conservation opportunities in municipal water usage to reduce consumption and enhance sustainability.

Addressing water loss at City facilities shares similarities with energy audits but has several distinct differences. One notable difference is that the water meters servicing these accounts are owned by a City entity, which theoretically simplifies access to and management of large datasets.

The City seeks to enhance water efficiency and sustainability across its municipal facilities. Arcadis will conduct a comprehensive water audit to identify opportunities for water use reduction, cost savings, and improved operational efficiency. The approach focuses on targeting high-priority facilities, auditing water consumption, analyzing data, and recommending actionable solutions.

Arcadis often also supports water audits as part of drought management planning and initiatives.

City's Key Requested Tasks:

- ▶ Conduct a detailed water audit at selected City facilities to identify inefficiencies and opportunities for conservation.
- ▶ Assess indoor and outdoor water usage patterns, leak detection, fixture efficiency, and potential reuse strategies.
- ▶ Provide recommendations for reducing water consumption, implementing conservation technologies, and enhancing operational efficiency.

This response assumes that access to water meter data will be simplified because the City owns these meters. We recognize that there may still be incomplete data sets or inconsistencies in meter readings. Arcadis is familiar with such circumstances and will work with the City, as needed, to address potential data collection issues.

Arcadis Activities

Activity 1: Target Facilities for Audit

Arcadis will prioritize the following facilities for water audits, as identified in the City's 2019 Sustainability Baseline and GHG Report:

- » Top 20 potable water users, ranked by volume and/or cost.
- » Facilities with high Water Use Intensity (WUI), measured in gallons per square foot.
- » Irrigation accounts, comprising 94 accounts consuming approximately 95.7 million gallons (MG) in 2019.
- » Facilities with unusual or spiking consumption patterns, potentially caused by leaks or metering issues.

Activity 2: Audit Methodology

Arcadis will employ a systematic approach to assess water use efficiency, identify inefficiencies, and detect leaks or anomalies. The methodology includes the following substeps:

1. Preliminary Data Review

- » Collect 12–24 months of utility bills (potable, reuse, and irrigation).

- » Compile building square footage and irrigated landscape areas.
- » Analyze billing anomalies, trends, and seasonal spikes.

2. Site Walk through & Fixture Inventory

- » Inspect restrooms, kitchens, locker rooms, gyms, janitor closets, and other water-using areas.
- » Identify:
 - ▶ Fixture types and flow rates (e.g., toilets, faucets, urinals, showers).
 - ▶ Leaks or continuously running fixtures.
 - ▶ Issues with automatic controls or sensor failures.

3. Irrigation System Review

- » Assess irrigation controllers for:
 - ▶ Programming accuracy and seasonal adjustments.
 - ▶ Compatibility with smart/weather-based controllers.
- » Inspect sprinkler heads for alignment, coverage, and overspray.
- » Measure irrigation zone flow rates and compare them to landscape needs.

4. Leak Detection & Meter Verification

- » Perform meter accuracy checks or install temporary submetering/loggers.
- » Use acoustic detection or pressure drop testing to locate underground leaks.
- » Cross-reference irrigation controller run times with meter readings.

Activity 3: Data Analysis & Benchmarking

Arcadis will analyze collected data to quantify water use efficiency and identify opportunities for improvement:

- » Calculate WUI (gallons per square foot per year) for each facility.
- » Compare results against industry benchmarks (e.g., GSA, AWWA).
- » Identify outliers with high indoor or irrigation water consumption.

Activity 4: Recommendations & Solutions

Arcadis will provide tailored recommendations to address identified inefficiencies:

Problem Identified	Recommended Solution
High-flow fixtures	Retrofit with WaterSense-labeled toilets, urinals, faucets, and showers.
Leaks or running fixtures	Perform immediate repairs, replace flappers/seals, or upgrade automatic shutoffs.
Over-irrigation	Replace controllers with smart/weather-based units, and adjust watering schedules.
Spray irrigation on hardscapes	Replace with drip or bubbler systems, and audit irrigation coverage zones.
Potable water used for landscaping	Assess feasibility of switching to reclaimed (reuse) water.
High WUI with unclear cause	Install submeters and log usage by system (irrigation, domestic, HVAC makeup).

Activity 5: Track KPIs and Plan Retrofits

Arcadis will track key performance indicators (KPIs) and develop a plan for water efficiency retrofits:

- » Set water use reduction goals (e.g., 10–20% reduction for high WUI sites).
- » Prioritize retrofits based on benefit-cost analysis (ROI), water usage, and facility visibility.
- » Integrate recommendations into the Capital Improvement Plan (CIP) or sustainability budget. This will support quick wins.

Activity 6: Maintenance & Follow-Up Plans

To ensure sustained improvements, Arcadis will work with the City to implement ongoing maintenance and monitoring strategies:

- » Deploy a Water Use Dashboard or utility tracking platform to monitor consumption.
- » Train Operations & Maintenance (O&M) staff on leak detection and best practices for irrigation system management.
- » Schedule re-audits for facilities every 3–5 years or after major upgrades, as well as to manage the dashboard. The Arcadis team will work with the City to develop an effective program and materials for support.

This water audit approach will provide the City with actionable insights to enhance water efficiency, reduce costs, and contribute to its broader sustainability goals. By targeting high-use facilities, identifying inefficiencies, and implementing solutions, Arcadis will support the City in achieving measurable water savings and operational improvements.



Water Audits and Field Inspections.

7 Greenhouse Gas (GHG) Inventory Update

City's Objective: Track and reduce emissions through an updated Greenhouse Gas Inventory, ensuring alignment with the City's climate goals.

The City is to be commended for their foresight and commitment to climate adaptation with your Sustainability Strategy adoption and establishment of long-term Net Zero GHG emissions, with a 45% reduction goal by 2030. Your 2021 GHG inventory will provide baseline information that will prove critical as the City seeks to update the inventory against current emissions and long term reduction goals and track progress. While the landscape around GHG emissions and inventories has vacillated significantly over the last 12 months, it's critical that cities continue to track and analyze these emissions as part of a broader landscape of both energy efficiency, cost savings, and ultimately the long term implications related to potential future regulation of emissions and contribution of emissions related to broader climate-related hazards.

Arcadis Activities

Activity 1: Understand Previous GHG Inventory and Broward County Efforts

Arcadis will collaborate with the City to review the methodologies used in the previous City Greenhouse Gas Inventory. Additionally, we will examine any work conducted under the Greenhouse Gas Reduction Fund, which supported inventories in the Broward County area. Update prior targets accordingly.

Activity 2: Municipal Emissions – Electric Meter Account Review

Arcadis will work alongside FP&L to analyze electric meter account loads and extract associated GHG data. This activity will complement ongoing Energy Efficiency Audits. By prioritizing municipal emissions, which are directly under the City's control, Arcadis will identify opportunities for cost savings and immediate impact.

Activity 3: Municipal Emissions – Vehicle Fleet Emissions

Arcadis will conduct an assessment of the City's vehicle fleet, including an analysis of Vehicle Miles Traveled (VMT) data and relevant emissions factors to calculate associated GHG emissions. Additionally, we will determine whether any electric vehicles or charging stations qualify for tax credits and assist in filing accordingly.

Activity 4: Municipal Emissions – Solid Waste Emissions

Given the City's dual approach to waste disposal—landfill and waste-to-energy—Arcadis will analyze GHG emissions from both methods using tailored approaches:

- » **Landfill Emissions:** Estimate the approximate metric tons of landfill waste, accounting for any methane capture mitigation activities at the disposal site.

City's Key Requested Tasks:

- ▶ Update the City's Greenhouse Gas Inventory to measure progress on emissions reduction goals.
 - ▶ Assess emissions from municipal operations and community-wide sources.
 - ▶ Identify key areas for emissions reduction and provide recommendations for mitigation strategies.
 - ▶ Develop a reporting framework to track and communicate progress on climate action initiatives.
- » **Waste-to-Energy Emissions:** Calculate direct GHG emissions from waste-to-energy facilities, including biogenic versus non-biogenic carbon emissions. Arcadis will recommend strategies for diverting biogenic waste, such as composting or yard waste diversion, based on extensive experience in solid waste management.

Activity 5: Community-Wide Emissions – Transportation

Transportation-related emissions are more challenging to quantify at the community level. Arcadis will collaborate with relevant transportation planning agencies to estimate VMT emissions across the City, including emissions from large fleet operations, aviation, and passenger commuting; and provide recommendations for emissions reduction.

Activity 6: Community-Wide Emissions – Residential, Commercial, and Industrial Buildings

Arcadis will analyze emissions from residential, commercial, and industrial buildings community-wide. This will include working closely with FP&L to collect and assess relevant energy consumption data energy consumption data with a breakdown of fuel sources and conversion technologies, and providing recommendations for GHG reduction. Industrial accounts will be a key focus area in this analysis.

Activity 7: Community-Wide Emissions – Carbon Sinks

Arcadis will identify opportunities to mitigate GHG emissions by enhancing carbon sinks, such as forests and green spaces, within the City. This analysis will include current initiatives and recommendations for future enhancements.

Activity 8: Develop a Climate Action Reporting Framework

Arcadis will create a reporting framework to track and communicate progress on the City's climate action initiatives. This framework will ensure transparency, accountability, and stakeholder engagement as the City advances its climate goals.

Relevant Projects

Number & Complexity of Similar Projects

On the following page we have provided several relevant projects to the scope of this contact. This is just a sample of the hundreds of projects that Arcadis completes yearly.

Previous Projects Performed for the City

Please refer to Section 3 for a listing of our completed for the City.

Litigation

Please see Section 9. Litigation for details.



Vulnerability Assessment

Fort Lauderdale, FL

The City of Fort Lauderdale currently experiences various types of flooding that impacts the daily lives of its residents. The City needs to identify and assess its critical assets to prepare for current and future flood risks. The City of Fort Lauderdale retained the Arcadis team to complete a vulnerability assessment (VA) that meets State criteria in FS 380.093. The Arcadis team was tasked with generating elevation certificates for prioritized critical government facilities, to assess roadway vulnerability, and to prepare an adaptation plan which compiles a list of City adaptation projects to address flooding risks in the future. Once the project is complete, our team will have compiled critical asset data into one central data repository for the City to use and access for the purposes of this project and future work. This project scope includes the following task:

1. Project Management

The Arcadis team uses project management best practices to manage the project successfully, including preparing and conducting project meetings throughout the project duration, initiating, planning, executing, controlling and closing out the project.

2. Acquire Background Data

Deliverables for this task include :

- A technical report to outline the data compiled and findings of the gap analysis in Microsoft Word and PDF electronic formats.
- GIS files with appropriate metadata of the data compiled.
- A summary report to include recommendations to address the identified data gaps and actions taken to rectify them.

3. Critical Asset Inventory

The Arcadis team identified all critical and regionally significant assets meeting the definitions in Section 380.093, F.S. that are impacted by flooding and sea level rise, specifying for each asset the flood scenario(s) impacting the asset.

4. Surveying and Completion of Elevation Certificates

Desirables include documentation of transmittal of the copies of the elevation certificates submitted to the Florida Department of Emergency Management.

5. Exposure Analysis

The Arcadis team performed an exposure analysis to identify the depth of water caused by each sea level rise, storm surge and flood scenario.

6. Sensitivity Analysis

The Arcadis team performed a sensitivity analysis to measure the impact of flooding on assets and to apply the data from the exposure analysis to the inventory of critical assets created in the exposure analysis task.

7. Final VA Report, Maps and Tables

Deliverables for this task include:

- Draft and final VA report that provides details on the results and conclusions, including illustrations via maps and tables, based on the statutory-required scenarios and standards in s. 380.093, F.S.
- One-hour presentation of the draft VA report to City staff for comments.



Client

City of Fort Lauderdale

Duration

2023 – 2024

Key Personnel

Carly Foster
Leah Richter
Trevor Johnson
Melissa Pomales
Melissa Hew
Heather Sprague
Krista Jankowski

- Final list of critical and regionally significant assets that are impacted by flooding.
- All electronic mapping data used to illustrate flooding and sea level rise impacts identified in the VA to include the geospatial data in an electronic file format and GIS metadata.

8. Partial Adaptation Plan

As a part of this task the Arcadis team will complete a partial adaptation plan that is consistent with the requirements of the Florida Adaptation Planning Guidebook which will include the assessment of adaptive capacities, prioritization of adaptation needs, and identification of adaptation strategies for the City's most vulnerable assets.

Sea Level Rise Strategy

Miami, FL

Arcadis was retained by Miami-Dade County as the lead consultant for the development of a county-wide sea level rise strategy.

Arcadis, in collaboration with HR&A Advisors, WSP and supported by other local partners, led the development of a first-of-its-kind, county-wide strategy that provides a comprehensive adaptation pathway to guide future investments and decision-making for reducing growing risks associated with sea level rise in Florida's most populous county and largest urban economy.

Sea levels around Miami-Dade are projected to rise an additional two feet over the next 40 years. The strategy also provides an adaptable framework to incorporate changes over time in physical conditions and vulnerability, climate risks, data and science, regulatory structures, and socio-economic factors.

Included in this effort were: vulnerability analysis of critical infrastructure (transportation, water, sewer, emergency response, and drainage infrastructure) to varying sea level rise and hazard risk scenarios, and strategies and standards to protect critical infrastructure from increased flood risk; and analysis of the economic and social impacts of sea level rise and increased flood risk on critical infrastructure, vulnerable populations, community assets, and the County's unique natural systems. In addition, the strategy included the development adaptation toolkits with proven solutions tailored to the Miami-Dade's unique geographic and hydrologic typologies, and risks.

The Arcadis team looked at existing studies from the County and regional partners to identify data gaps; performed complex spatial flood risk data analyses where gaps existed; performed technical feasibility and economic analyses of potential adaptation strategies; and innovatively engaged a wide range of stakeholders for input including from academia, the business community, government, and community groups representative of Miami-Dade's unique cultural diversity.

Multi-faceted and innovative public and stakeholder engagement and communications were the cornerstone of the strategy development. The Arcadis team led inclusive and innovative outreach efforts which included language translations of materials and presentation delivery in Spanish and Creole where possible; the use of digital tools to facilitate convenient, two-way engagement and data capture; and ensuring full geographic coverage representing Miami-Dade's communities and diversity with strategically selected locations for in-person events.

The findings of these tasks were synthesized into five district-scale adaptation approaches, which are tailored to the physical characteristics of Miami-Dade County's geographic typologies. In addition, the strategy incorporated advanced risk and adaptation visualizations, as it also serves as a critical communication piece intended to be visually appealing, understandable and relatable to all, and to educate and galvanize the need for near- and long-term action to address sea level rise and its impacts.



Client

Miami-Dade County

Duration

2019 – 2020

Key Personnel

Leah Richter
Melissa Pomales
Melissa Hew

Lastly, Arcadis identified and prioritized key actions and quick wins that represent the most impactful regulatory and policy changes, investments and planning efforts that can be pursued now to reduce future risk. These actions were aligned with the guiding principles that emerged from the community engagement process which stated that future adaptation investments must increase safety, reduce environmental pollution, be equitable, incorporate nature-based solutions, be flexible, and be aligned with other initiatives.



L-31E Levee Storm Surge Study

South Florida Water Management District, FL

Arcadis supported SFWMD with their review of existing infrastructure to improve resilience to sea level rise as part of SFWMD's Level of Service program.

The L-31E levee is approximately 18.8 miles long, begins near the Biscayne Bay coastline in the vicinity of Cutler Ridge (east of the Town of Perrine), and extends from north of the C-1 Canal south to Card Sound Road. The levee contains six concrete spillway structures, which discharge inland rainwater into Biscayne Bay and prevent salt-water intrusion from the Bay.

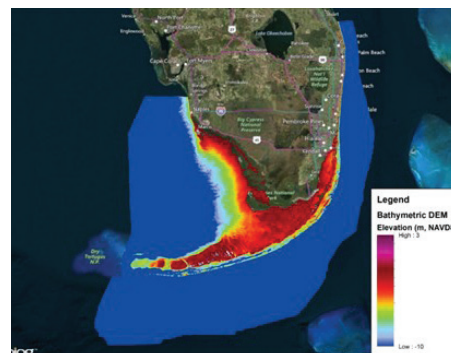
The resiliency analysis considers past, current and future sea levels downstream of the coastal gate structures in Biscayne Bay and the Miami River for a variety of storm frequencies. The Central and Southern Florida (C&SF) Project system, as it was designed by the USACE during the 1950s, did not account for future sea level rise of the magnitudes that are being experienced today along the coastline of south Florida. Preliminary investigations have demonstrated the limitations of the coastal structures, which along with extreme rainfall could affect the performance of the coastal flood protection system.

Methodology/Approach

Since the Biscayne Bay portion of Miami-Dade County is very vulnerable to sea level rise, Arcadis developed a hydrodynamic model of the Biscayne Bay region for simulating hurricane storm conditions under a range of future sea level rise scenarios. The sea level rise scenarios were derived from the Southeast Florida Regional Climate Change Compact projections.

The goals of the project included the development and calibration of a nested hydrodynamic modeling system using ADCIRC, SWAN and Delft3D to simulate hurricane storm surge and waves in Biscayne Bay and propagating along the canals leading up to SFWMD structures. The model was calibrated using USACE, NOAA, and USGS gauge data and measured high water mark information for historical hurricanes Andrew and Wilma. The calibrated model was used to simulate water level hydrographs downstream of the C&SF Project structures and in the bay for several synthetic hurricane scenarios to evaluate how the timing and magnitude sea surface response near the structures would change under potential future conditions considering 3-4-ft sea level rise. Arcadis also developed a set of recommendations and potential next steps for SFWMD. The model results are being used by SFWMD to evaluate a range of possible changes to the levee and gate structures and will support SFWMD's resilience program.

Arcadis was responsible for development of a modeling system and methodical approach to evaluate the level of protection provided by the L-31E levee near Biscayne Bay in Miami. Of particular interest was the level of protection against overtopping by hurricane-generated storm surge provided by the existing levee and the levee crest requirements needed to provide protection under future sea level conditions. The project consisted of a two-phase approach. Phase 1 consisted of compiling existing information, identifying data gaps, and developing a modeling plan. Phase 2 was comprised of implementation of the modeling plan to compute future storm surge potential in Biscayne



Client

South Florida Water Management District, FL

Duration

2021 – 2022

Key Personnel

Paul Walansky
John Atkinson

Bay and to estimate the L-31E crest elevation requirements needed to provide future protection for a range of return periods and a range of potential future sea levels.

The L-31E levee was originally designed to the Standard Project Flood and was constructed to a design crest elevation of 7.5 feet MSL. SFWMD will use the modeling plan to update the design crest elevation for the L-31E levee. The modeling system computes future storm surge potential in Biscayne Bay and estimates the L-31E levee crest elevation requirements needed to provide future protection for a range of storm surge return periods and several potential future sea levels. A variety of hurricane parameters were considered including storm track, forward speed, landfall location, and maximum wind speed.

Climate Ready Boston

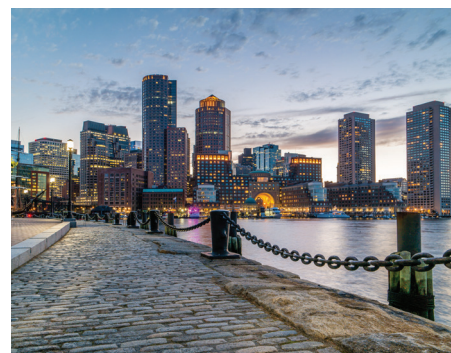
Boston, MA

Arcadis, in collaboration with Sasaki Associates and HR&A Advisors (the CRB Team), and supported by the University of Massachusetts Boston and Woods Hole Group, was selected by the City of Boston Office of the Environment to lead the technical assessment, design and communications support for the Climate Ready Boston (CRB) Initiative. Building upon the City of Boston's Climate Action Plan, CRB has been described as game changer towards the City being better equipped to face the risks exacerbated by climate change. The report has also been used as a critical communication tool: providing radical transparency related to the risk and consequences of inaction and empowering the city and its stakeholders to take specific, implementable actions.

Over the course of 2016, CRB evaluated Boston's risk and potential vulnerabilities to climate factors such as coastal and stormwater flooding associated with sea level rise, increased frequency and intensity of storms, and temperature extremes, to recommend resiliency initiatives designed to address social and built and natural environment vulnerabilities. The team worked with the City and its stakeholders to calculate and articulate the risk and develop sustainable frameworks and a roadmap to reduce that risk long term.

Relevant Features:

- Evaluation of current and potential future risks to three climate-related hazards (chronic extreme heat, frequent stormwater flooding, and acute and chronic coastal and riverine flooding) to Boston's people, buildings, infrastructure, and economy. Included a social vulnerability assessment
- Vulnerability Assessment. Developed a methodology unique to each hazard to evaluate vulnerability and potential consequences, based on the quality and granularity of data available:
- Evaluation of coastal and riverine flood risk with sea level rise included a detailed quantitative economic modeling based assessment of exposure, vulnerabilities, and potential consequences of impact. Quantified elements include expected structure damage, content and inventory loss, displacement costs, monetary effects of mental stress and lost productivity, and lost sales and revenues due to business interruption. Business interruption costs were modeled throughout Suffolk County to estimate the regional impact of lost revenues due to coastal and riverine flooding and sea level rise
- Evaluation of extreme heat included exposure and vulnerability of people, buildings, and infrastructure, with a qualitative assessment of potential consequences
- Evaluation of stormwater flooding with sea level rise included exposure and vulnerability of people, buildings, and infrastructure, with a qualitative assessment of potential consequences
- Infrastructure Advisory Group. Comprised of officials from public agencies, private organizations, and non-profit groups responsible for Boston's infrastructure, such as transportation, energy, communications, emergency services, water and wastewater, and environmental systems as well as social, healthcare, and housing institutions.
- Climate Resilience Initiatives and Implementation Roadmap. The CRB team, in coordination with stakeholders, identified policy, planning, programmatic, and financial initiatives to address the risks identified in the Vulnerability Assessment. The climate resilience initiatives fall into five layers, meant to complement each other to increase Boston's resilience: Updated Climate Projections, Prepared and Connected Communities, Protected Shores, Resilient Infrastructure, and Adapted Buildings. The initiatives are summarized in an Implementation Roadmap that captures responsibility, timing, and key milestones for each initiative
- Focus Areas. The CRB team identified eight Boston areas where the results of the Vulnerability Assessment and climate resilience initiatives are applied in more detail to illustrate the risks Boston faces and how the community can address them.



Client

City of Boston

Project Duration

2017 - Ongoing

Key Personnel

Carly Foster
Trevor Johnson
John Atkinson

Financial District & Seaport Climate Resilience Master Plan

New York City, NY

In October 2012, Hurricane Sandy hit New York City and exposed Lower Manhattan's vulnerabilities to climate change. In Lower Manhattan, the impact of Hurricane Sandy was devastating, causing two deaths and damaging thousands of buildings. It caused significant damage to transportation assets, power supply, open space, and water and sewer infrastructure. While the City has advanced numerous efforts to minimize flood risk across Lower Manhattan, the Financial District and Seaport remain vulnerable to both coastal storms and sea level rise.

NYC Economic Development Corporation (NYCEDC), in partnership with the Mayor's Office of Climate and Environmental Justice (MOCEJ), selected the Arcadis Team to develop an exciting but implementable comprehensive climate resilience strategy for the Financial District and Seaport neighborhoods – including exploring the feasibility of extending the shoreline of Lower Manhattan into the East River. Given the longer time horizon for implementation, the project is evaluating coastal defense solutions that account for sea level rise through 2100.

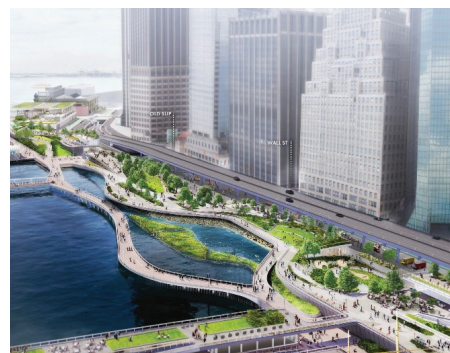
Arcadis, as prime, is leading an interdisciplinary team of designers, engineers, planners, environmental specialists, and legal counsel to develop a vision for Lower Manhattan, as well as a roadmap for implementation.

Since the Master Plan was released in 2021, the Arcadis Team has been awarded additional work for this project, including taking the conceptual shoreline extension design identified in the Master Plan to the schematic and preliminary design stages.

Key services include:

- Concept through preliminary design package for the base infrastructure (incl. shoreline extension, waterfront facilities and structures)
- Hydrodynamic and hydraulic modeling
- Drainage infrastructure modeling & planning
- Environmental permitting & coordination with key regulatory stakeholders
- Mobility studies & transportation planning
- Community outreach and engagement, including development of a web portal for virtual engagement
- Development of a new governance entity
- Stakeholder engagement at the federal, state and city level

The Arcadis Team is approaching the project through a lens of community and stakeholder engagement – developing an immersive community engagement process to inform, education, and co-create with a variety of stakeholders. This includes educating the broad public about climate change and flood risk from coastal storms and sea level rise, sharing technical analyses on the unique site conditions in the Financial District & Seaport neighborhoods that make siting the coastal defense project on land infeasible, and co-developing a set of guiding principles to inform the development and evaluation of project options.



Client

New York City Economic Development Corporation

Project Duration

2019 - 2025

Key Personnel

Mary Kimball
Shandor Szalay
John Atkinson

Prior to COVID, Arcadis supported the City in hosting an interactive community open house, leveraging virtual reality technology and large-scale maps, to communicate and engage with participants regarding flood risk.

To provide continued engagement during COVID, Arcadis supported the City in transitioning community engagement to an online platform through the development of an engagement portal unique to the master plan, a series of smaller group workshops, and virtual open houses.

In addition to community engagement, Arcadis is supporting NYCEDC with targeted stakeholder engagement with City, State, and Federal Agencies regarding design and implementation considerations, including NYCDEP, NYCDOT, NYC Parks, NYS Dept. of Environmental Conservation, and U.S. Army Corps of Engineers.

Resilient New Jersey

New Jersey

Program Support

As part of the National Disaster Resilience Competition, the United States Department of Housing and Urban Development (HUD) awarded New Jersey with funding to advance coastal resiliency planning efforts within nine counties designated Most Impacted and Distressed from Hurricane Sandy by HUD. The New Jersey Department of Environmental Protection (NJDEP) Bureau of Climate Resilience Planning is administering the Resilient New Jersey program. The program's purpose is to assist municipalities with identifying and addressing vulnerabilities related to increased coastal and riverine flood risk and other climate stressors.

Four regional teams were selected to receive Resilient NJ grant awards to participate in the comprehensive planning process. The four regions include Northeastern New Jersey (Jersey City, Newark, Hoboken, and Bayonne), Raritan River and Bay Communities (Woodbridge, Old Bridge, Sayreville, South Amboy, Perth Amboy, South River, and Carteret), Long Beach Island (Long Beach, Beach Haven, Barnegat Light, Ship Bottom, Harvey Cedars, and Surf City), and Atlantic County Coastal Region (Ventnor, Atlantic City, Longport, Margate, Northfield, Pleasantville, and Brigantine). Each of these regions will work with multi-disciplinary consulting teams to identify important community assets, assess vulnerability to future flooding along the coast and from rivers, identify actions to reduce flood risk, evaluate these options using a detailed cost-benefit analysis, and develop regional resilience and adaptation action plans.

Arcadis was selected to provide programmatic planning support for two of the four regions – Northeastern New Jersey and Raritan River and Bay Communities.

Northeastern New Jersey

Resilient New Jersey, administered through the NJDEP Bureau of Climate Resilience Planning, brings together planners, engineers, designers, and other experts to address flood-related hazards at a regional scale. Through Resilient Northeastern New Jersey (Resilient Northeastern NJ), people living and working in the region have an opportunity to help make their communities less susceptible to flooding and improve quality of life. The Resilient Northeastern NJ program is a joint effort between the New Jersey Department of Environmental Protection (NJDEP), Jersey City, Newark, Hoboken, Bayonne, Hudson County, Ironbound Community Corporation, and HOPES Community Assistance Partnership. The program will identify and implement flood risk reduction strategies to improve long-term environmental and economic resilience in the region.

Arcadis was selected to lead the Resilient Northeastern NJ program which will provide a clear vision and roadmap for reducing flood risk through deep collaboration between local and state governments and community-based organizations, along with valuable input from the public and other stakeholders. The plan will leave a legacy of regional investment and information and resource sharing to help our people and places thrive in the decades to come. The plan will be driven by best available data, technical evaluation, and inclusive and equitable engagement. It will leverage best practices to



Client

New Jersey Department of Environmental Protection (NJDEP)
Bureau of Climate Resilience Planning

Project Duration

2020 - Ongoing

Key Personnel

Carly Foster
Trevor Johnson

create social, environmental, and economic benefits and bring value to all who will share in the region's future.

Raritan River and Bay Communities

Resilient New Jersey, administered through the NJDEP Bureau of Climate Resilience Planning, brings together planners, engineers, designers, and other experts to address flood-related hazards at a regional scale. The Resilient NJ Raritan River and Bay Communities program aims to develop a roadmap to address flooding in the municipalities of Carteret, Old Bridge, Perth Amboy, South Amboy, Sayreville, South River, and Woodbridge. Arcadis was selected to lead the Resilient NJ Raritan River and Bay Communities which aims to create a watershed-based plan with a clear vision and roadmap for reducing flood risk, increasing resilience, and achieving environmental restoration to help the multi-municipal region survive and thrive.

Eastwick Flood Resilience

Philadelphia, PA

Arcadis, with project partners including OLIN, have been working with multiple stakeholders, including the Philadelphia Office of Sustainability (OOS) to advance community flood resilience in Eastwick. The work has spanned multiple contracts and scopes of work to help address multiple flood resilience and environmental challenges faced by the Eastwick community located in southwest Philadelphia.

Arcadis has supported OOS in developing applications for federal funding for planning and implementation in Eastwick, while also assisting on near-term community engagement, H&H model integration, and recommendations for near-term interim risk mitigation steps that can be taking while longer term solutions are being planned. Specific tasks have included:

Funding Support. Arcadis provided scoping and grant application development support for a successful application to FEMA's Building Resilient Infrastructure and Communities (BRIC) funding program for FY23. This funding capture was vital to undertaking next steps in the development of an integrated long-term plan for flood risk mitigation through technical analysis, H&H modeling, and community engagement.

Flood Ready Home Guide. Arcadis developed a public-facing flood ready home guide specifically tailored to homes in Eastwick. The guide provides a step-by-step process for evaluating and choosing interim flood mitigation measures based on three home types commonly found in Eastwick. The guide was based on technical assessments conducted by Arcadis' flood mitigation experts and was informed by direct engagement and input from Eastwick residents.

Model Coordination Workshops
Arcadis coordinated and facilitated a series of six workshops intended to align the various disparate modeling efforts within Eastwick with respect to technical modeling components such as boundary conditions, SLR, mesh size, and input flow data. The workshops included multiple stakeholders and associated technical support groups including the Philadelphia Airport, U.S. Fish and Wildlife Service, Federal Emergency Management Agency, U.S. Army Corp of Engineers, and Philadelphia Water Department. The workshops have resulted in a shared understanding and consistent set of modeling assumptions that form the basis for further modeling efforts to characterize, analyze, and address flood risk in Eastwick and along the Delaware estuary.

Community Engagement. Arcadis has been supporting OOS in convening small group meetings and workshops to advance conversations around flood mitigation options within Eastwick. This engagement work, among other aspects of OOS's work, has helped to build trust, rapport, and awareness among community members and will provide a solid foundation for future engagement.

Eastwick Flood Resilience Strategy.

In 2024, Arcadis and a team of partners including OLIN was selected to lead the Eastwick Flood Resilience Strategy (EFRS). The EFRS aims to inclusively engage Eastwick residents and other stakeholders in a comprehensive planning process that identifies, evaluates, and recommends a long-term flood mitigation strategy to address riverine, stormwater, and coastal flooding now and in the future.



Client

Office of Sustainability
Philadelphia, PA

Project Duration

2022 - Ongoing

Key Personnel

Trevor Johnson
Shandor Szalay

Everglades Holiday Park

Broward County, Florida



KEITH assisted the Client in redeveloping a KEITH Play project involving a \$12M expansion and site improvements of this 43-acre county park that serves millions of visitors each year. The site is located at the junction of two SFWMD canals and is part of SFWMD water conservation areas 3A and 3B. The project also included LEED “Green” design principles. KEITH successfully provided a goal of long-term protection through the implementation of solutions for stormwater management, erosion control, and pollution. The project aimed to address complex problems with severe flooding that would close down the majority of the parking areas and access to the park rendering it functionally obsolete.

As sea level rise and clear sky flooding became the norm for this already water inundated site, the team developed schemes to mitigate these flooding events and enhance the access to the park. Mitigation efforts introduced large bioswales to allow water from the parking areas to gather in vegetated areas vs back-up in the parking areas. KEITH provided the Client civil engineering, planning, landscape architecture, SUE, and construction program management services.

The KEITH Team assisted the Client in comprehensive public outreach, conceptual design, permitting, and construction phase services associated with a two-phase development. Permitting was a challenge, as the park is located within the Florida Everglades and spans flood protection levees under the jurisdiction of the Army Corp of Engineers and the South Florida Water Management District. Through constant coordination with Broward County and the concessionaire, the design and construction team were able to satisfy the needs of all stakeholders. The park was kept open throughout the construction process by constructing the project in two phases, with the first phase being utilized for the park users when the contractor moved into Phase 2 of construction.

The project had two main goals: to renovate and rehabilitate the park program elements and to allow the community safe and continuous access to the park; these goals were met with distinct and celebrated success. In 2022, Everglades Holiday Park was named as the Trip Advisors Traveler’s Choice award, as well as the Florida ACEC Engineering Excellence award and the ASCE Broward Project of the Year.



Client

South Florida Water Management District

Project Duration

2014 - 2022

Key Personnel

Sarah Landucci
Kelli Schueler
Paul Weinberg

Comprehensive Energy Management Services

Puerto Rico

The Puerto Rico Aqueduct and Sewer Authority (PRASA) is responsible for the operation of more than 125 water treatment plants, 60 wastewater treatment plants, 1,500 pump stations, 300 water wells and 70 buildings, consuming approximately 700,000,000 kWh/hour at an annual cost of over \$220 million. Faced with double digit annual escalation in electricity pricing and increasingly stringent regulations, PRASA embarked on a comprehensive island-wide energy initiative as a “green agency” for the purpose of preserving the environment and to promote a better quality of life by reducing operational energy consumption and diversifying its energy sources to reduce costs and reduce greenhouse gas emissions associated with its operations. In addition, projects would help develop local skills and capabilities associated with sustainable growth and development.

Since 2009, Arcadis provided owner’s agent services in support of PRASA’s island-wide energy initiative by providing comprehensive technical, financial and transactional consulting services. The overarching approach used to achieve PRASA’s goals was to target demand side reductions through performance contracts with energy service companies and new energy supplies through power purchase agreements with private power suppliers. Three power purchase agreements were executed to provide more than 10 MW of distributed generation. In addition, investment grade energy audits were completed at nearly 20 facilities. Construction was completed at four facilities. Energy and operational savings in excess of

\$10M/year were projected for the projects.

Arcadis has implemented a program management approach in order to successfully implement multiple energy performance-based contract (EPCs) projects and power purchase agreements (PPAs). Approaching the projects in a programmatic manner improved efficiency, ensured projects with the greatest return on investment were selected for implementation, maintained consistency across projects and facilitated contract negotiations.

Under the most recent phase of the project, Arcadis conducted detailed energy and optimization audits of the largest water and wastewater facilities across the island and worked directly with each of the five regions to identify opportunities for energy savings, review current design and operating standards, develop best practices and provide training and tools to facilitate ongoing implementation by PRASA staff at smaller facilities and integrate capital and operations activities to optimize and extend the useful life of facilities. Emphasis was placed on low or no-cost improvements and enhancements of already planned capital improvement projects. Pump and blower efficiency testing protocols were developed to assist with ongoing assessment of system performance by utility staff. Standardized questionnaires were also developed and issued to regional operations staff to allow Arcadis to effectively assess specific energy conservation measures and confidently estimate potential return on investment at plants and pumping stations employing similar technologies without conducting on-site audits.



Client

Puerto Rico Aqueduct and Sewer Authority (PRASA)

Project Duration

2009 - 2016

Key Personnel

Matthew Yonkin
Melissa Pomales
Silvia Marpicati

Term Contract for Energy-Related Professional Services

New York

Arcadis was selected by the New York State Office of Parks, Recreation & Historic Preservation (OPRHP) for an Energy Term Contract for a period of 5 years starting in 2022. Under this Contract, Arcadis is supporting OPRHP at facilities throughout New York for compliance with Climate Leadership and Community Protection Act (CLCPA) and BuildSmart 2025 goals. Individual projects are assigned as Work Orders. The following is a summary of Work Orders that Arcadis has completed or is in the process of completing under this contract:

Energy Audits. Arcadis is completing ASHRAE Level II audits at the largest buildings within each of the twenty-nine parks included in the assignment. We investigated energy intensive HVAC, building envelope, lighting and domestic hot water systems for energy reduction opportunities, provided baseline energy usage and identified HVAC system electrification opportunities. In addition, we investigated renewable energy opportunities, assessed the feasibility of installing electric vehicle (EV) charging stations and investigated measures for building decarbonization and electrification. Implementation of recommended energy conservation measures (ECMs) is discussed with OPRHP's Energy Bureau, Capital Management and each individual Park's management representatives.

PV Assessment and Maintenance. OPRHP has approximately 45 solar Photovoltaic (PV) arrays at its facilities across New York State, which vary greatly in style (i.e., pole, roof, and ground mounted systems), size (1 kW-690 kW), and age (0-11 years old). Most arrays were installed by local or regional staff. In an effort to optimize PV system

performance across its portfolio of sites and maintain high levels of performance over time, OPRHP has retained Arcadis to assess the performance of each system and identify required maintenance or repairs. For each system included in the assignment, Arcadis obtained access to the output data from the monitoring system (predominantly Enphase or SolarEdge) and prioritized the systems based on recognized issues (lack of generation, lower than expected output, no communication, etc.). Arcadis then developed a digital tool to facilitate inspections, identify deficiencies/necessary repairs, and generate an inspection report. Based on the priority list, Arcadis' inspectors visited the PV systems and reported back on findings and recommendations for repairs. Inspection reports were shared with OPRHP, which is in the process of addressing recommended actions.

Statewide PV Siting and Design. Arcadis is completing environmental assessments, preliminary siting, and conceptual designs for six sites. Once the technical, environmental, and financial feasibility of these PV systems has been evaluated and approved by OPRHP, Arcadis will undertake detailed design and construction administration services. Additionally, Arcadis is in the process of designing PV systems at five New York State Parks, which range from 475 kW to 1.5 MW. Four of the systems are ground-mount, taking advantage of the available open spaces inside the parks, while one small system is roof-mount. The scope includes civil and site coordination and improvements. Arcadis is coordinating with the electrical utility for interconnection.



Client

NYS Office of Parks/Rec

Project Duration

2022 - Ongoing

Key Personnel

Matthew Yonkin

Wind Turbine Feasibility. Arcadis completed a feasibility study to assess the viability of installing a wind turbine, or a group of wind turbines, on the shore of a lakefront Park. The wind turbines' projected output was compared to the usage of the Park's estimated electrical use after renovations of a visitor center and museum are completed, with cost analyses of options to offset a portion of the usage or to export electricity in excess of the Park's use.

HVAC Replacement and Electrification. Arcadis assessed the feasibility of replacing the heating system at a few Parks with a more efficient system. The existing fossil fuel (oil or natural gas) boiler(s) were compared to more efficient options, such as a more efficient condensing boiler, an electric boiler, or a cold climate air source heat pump that would comply with the electrification goals of OPRHP. In addition, Arcadis undertook schematic design of the recommended heating system and design or upgrade of the building monitoring system (BMS).

Flexible Technical Assistance Program

New York

For more than 20 years, Arcadis has been a pre-approved consultant under NYSERDA's FlexTech Program. Through the FlexTech Program, NYSERDA provides up to a 75% cost-share to support energy audits, energy related feasibility studies, energy management, Owner's Agent Services, and a wide range of other energy-related services. Through the Program, Arcadis has completed dozens of energy-related projects including:

- Energy auditing and load profiling.
- Temporary metering or submetering.
- Energy management systems and program development.
- Behavioral changes.
- Development and transfer of best management practices through manuals, training and education.
- Rate and tariff evaluations.
- Baseline development, benchmarking, goal setting, and KPI development.
- Technical and financial feasibility studies.
- Low-cost and no cost operational changes.
- Energy efficiency measures.
- Renewable energy measures.
- Fleet and building electrification and decarbonization.
- Incentives and grants.

Process systems evaluated include pumping, pipe/valve configuration, controls and storage; waste heat recovery or heat loss minimization; water and wastewater system optimization; compressed air system optimization; process and control optimization to reduce idling, align with rate structures, optimize throughput, or right-size for current conditions; distributed generation using combined heat and power, hydroelectric, photovoltaic or small wind; time of use/demand management; metering and energy management; HVAC, lighting and building envelope improvements; boiler and chiller optimization; fuel switching; biomass or biogas recovery and use; and other energy efficiency and water conservation measures. Sectors served include institutional, municipal, industrial, and commercial.



Client

New York State Energy Research and Development Authority (NYSERDA)

Project Duration

2001 - 2024

Key Personnel

Matt Yonkin

Comprehensive Water Audit Loss

Columbus, OH

Arcadis completed the City of Columbus' 2014 Comprehensive Water Loss Audit that included:

- An initial assessment of data validity for system production and consumption.
- Evaluation of water loss performance using the AWWA WLCC Free Water Audit Software®.
- Assessment of the City's billing system.
- Procedures and effectiveness of water loss management activities (leak detection, Pitometer areas in 13 Districts, customer meter testing and change-out).
- Determination/valuation of apparent and real losses, and system-wide and District performance indicators
- Benefit-cost analysis for candidate improvement activities.
- Development of a Non-Revenue Water Reduction Plan.

The analysis of the City's water losses indicated that significant revenues could be recovered through changeout of large commercial meters and meter rightsizing, and that some cost savings could be realized through additional activities for management of real losses.

One of the recommendations from the last water audit was to improve capabilities for water consumption reporting. The consumption

reporting system consists of data integration layer and cloud-based analytics and visualization tools. The data reporting and analytical output is structured and presented within the framework of the AWWA M36 Audit Methodology, to provide an ongoing determination of M36 data components and summarizing non-revenue water for the entire distribution system, as well as individual water service districts. The system accomplished this without the need for manual data manipulation. The reporting periods for non-revenue water data are monthly, allowing Columbus staff to analyze system non-revenue water performance on an on-going basis without the need for an extensive spreadsheet analysis. The ultimate output of the system is a water balance dashboard, which provides an updated view of production vs. consumption data facts that can be further analyzed along a number of dimensions. The dashboard represents a simplified view of the water balance that is described in AWWA M36.

In January 2020, Columbus retained Arcadis to update the previous water loss audit for CY2019 and the water balance dashboard, including two additional water service districts. The recommended Action Plan from 2014 has been partially implemented and the City is in the midst of implementing an Enhanced Metering Project including Advanced Metering Infrastructure.



Client

City of Columbus

Project Duration

2012 - 2020

Key Personnel

Gary Trachtman

Water Audit and Non-Revenue Water Assessment

Canton, OH

The Canton Water Department (CWD) provides safe and reliable drinking water to a population of approximately 120,000 people within the City of Canton corporation limits, and beyond corporation limits in portions of Hartville. Arcadis and the City of Canton have developed a holistic approach to manage nonrevenue water (NRW), by assembling key members from Canton's engineering, operations, and treatment and compliance teams. The project included:

- An assessment of data validity and data collection practices
- Evaluation of water loss performance using the AWWA Free Water Audit Software
- Determination of apparent losses, real losses, and system-wide performance indicators
- Procedures and effectiveness of water loss management activities and recommendations for improving data quality and reducing non-revenue water volumes

During Canton's water master plan project, NRW was estimated to represent 36.3% of Canton's total water supply production in 2019 and was projected to decrease to 20% by 2040 following ongoing efforts by Canton. During this project Canton acknowledged that percentage-based key performance indicators (KPIs) are not actionable.

Various data sources were collected including system asset information, operational details, maintenance data, and water sales data. Following a kickoff workshop, the AWWA M36 Methodology was applied for the Canton Water Loss Audit by using the AWWA FWAS v6.

Component validity grades and an overall data validity score (56, Tier III in 2020) was developed based on Canton's current practices and methods. This Data Validity Grade (DVG) indicated that the City should refine policies and procedures for data collection, expand ongoing mechanisms for customer meter testing, and review and evaluate improvements to active leakage control and infrastructure monitoring. Water loss audit components whose validity could be significantly improved were Volume from Own Sources, Customer Meter Inaccuracies and Billed Metered Authorized Consumption.

Actionable NRW KPIs were also calculated and benchmarking indicated that multiple KPIs were higher than median values of other utilities including the Unit Financial Indicator for apparent loss, Loss Cost Rate (\$ per connection per year), and Unit Volumetric Indicators for real and apparent losses (gallons per connection per day). Recommended actions based on these results included the need to improve supply meter calibration and accuracy testing and testing of small customer meters to more reliably quantify real and apparent losses so that the monetary value of these losses can be reliably compared with the cost to manage them.



Client

City of Canton

Project Duration

2021 - 2022

Key Personnel

Gary Trachtman

Green Infrastructure Plan

Richmond, Virginia

Arcadis is currently providing professional engineering services to the City of Richmond's Department of Public Utilities (DPU) and the Alliance for the Chesapeake Bay (Alliance) for the identification of public parcels in three priority watersheds that have the greatest potential for implementing green infrastructure (GI) and development of a tool for ranking and prioritizing projects based on specific goals and outcomes.

To identify existing publicly owned lands and parcels, an inventory of existing utilities, parcels and topography datasets were compile to analyze future planned projects that could incorporate GI and other GIS datasets. The project had several key goals:

- Reduce stormwater volume in the combined sewer system.
- Reduce impervious area and increase green space.
- Reduce amount of nitrogen, phosphorus, and sediment delivered to James River.
- Address existing drainage/flooding concerns where possible.
- Implement easily maintainable GI where possible to minimize future maintenance (since maintenance in perpetuity will be required of any GI).

A five-step process was used to develop a GI ranking tool. The steps include:

1. **Flow Availability.** Screen parcels and runoff catchments (RC) based on tributary volume.
2. **Site Availability.** Determine availability for adequate space for various GI on individual parcels within right of ways.
3. **Site Suitability.** Screen out unsuitable parcels based on existing conflicts with surface functions and subsurface structures like tress, exiting utilities, etc.
4. **Score GI Performance.** Identify sites based on estimated benefits.
5. **Select Target GIs.** Select target sites for conceptual design GI development

The tool can be used to:

- Inform future planning.
- Promote workflow discussion between departments.
- Prioritize use of GI on a parcel and project level.
- Increase green space and enhance the tree canopy.
- Improve stormwater management strategies.
- Promote Richmond as sustainability model for other cities.



Client

City of Richmond and Alliance for the Chesapeake Bay

Project Duration

2019 - 2023

Key Personnel

Dan Scrutchfield

Stormwater Master Plan

Sebastian, FL

Arcadis conducted a comprehensive analysis of the City's stormwater system infrastructure, O&M resources and practices, planned capital projects, and other information to develop a Stormwater Master Plan that is practical and feasible to implement, and complies with all regulatory requirements and local mitigation strategies in the sensitive Indian River Lagoon watershed.

Several Arcadis teams worked in parallel with City staff on discrete project elements, including documentation review, field survey, GIS, hydrologic and hydraulic modeling, water quality analysis, operations and maintenance, capital projects, financial analysis, sea level rise, regulatory and permitting, and grant funding.

Arcadis developed a detailed Stormwater Asset Inventory in ArcGIS of over 5,039 inlets, canals, ditches, outfalls, pipes, weirs, orifices, and BMPs including asset photos, condition assessments, and hydraulic attributes.

A dynamic 1D Hydrologic and Hydraulic (H&H) computer model of the City of Sebastian stormwater network was developed to evaluate the system performance in response to various wet weather conditions and identify system capacity limitations. CIP projects that improve stormwater management were identified in coordination with the City based on field investigations, model results, and future sea level rise. A 10-year financial model of the Stormwater Department was created and used in the development of the Operations and Maintenance (O&M) Plan, 10-year prioritized Capital Improvement Plan, and grant funding analyses.

The final Master Plan was presented to and accepted by the City Council, and the City is now preparing for implementation.



Client

City of Sebastian

Project Duration

2021 - 2024

Key Personnel

Melissa Hew
Melissa Pomales
Viktor Cieslik

Stormwater Master Plan

Houston, TX

Houston was founded, the City has encountered challenges with managing stormwater and flood resilience. Notable storms throughout the City's history have produced record rainfalls that have impacted residents in all parts of the City. The City of Houston is developing its first comprehensive city-wide drainage model to better understand the City's stormwater infrastructure. The goal of the Stormwater Infrastructure Model effort is to model the main drainage infrastructure throughout the City to better understand the capacity of the storm sewers, overland flow routes, and interaction with the channels and bayous. These models will allow the City to communicate flood risk to existing residents and improve planning for capital projects.

Arcadis was selected to perform detailed modelling of the City stormwater networks within the San Jacinto, Clear Creek, Armand Bayou, Luce Bayou and IAH (Greens Bayou) watersheds using InfoWorks ICM. The project included the following tasks: Data Collection, Hydrologic Model Development, Hydraulic Model Development and Validation.

The Data Collection task included detailed review and updates of the City's existing GIS system using as-built data and field reconnaissance to fill in missing data. Field reconnaissance was performed in each watershed to provide additional details on culverts and bridges as well as key stormwater network configuration.

The hydrology for the model was evaluated in two ways. For the stormwater network within the Houston City limits, rain on mesh was used to route rainfall across the surface and into the applicable stormwater inlets. For the areas outside the City limits, subcatchments were delineated and were modeled using the Basin Development Factor (BDF) hydrologic method to develop Clark Unit Hydrograph parameters for the ICM model.

Within the InfoWorks ICM models, two methods were utilized to develop the drainage network. 1D components were used for the drainage systems and 2D components were used to model above-ground flow patterns. The 1D model components included the storm sewers, unstudied channels, culverts and bridges within the watershed. The 2D model components included the roads, structures, roadside ditches and MAAPNext studied channels. The models were built using the GIS data reviewed and updated during data collection coupled with the field reconnaissance data.

The InfoWorks ICM model was validated using historic rainfall events such as Hurricane Harvey, Tropical Storm Imelda, Memorial Day and Tax Day. Model surface flooding was compared to the recorded flooding and complaints collected for each event. Once each watershed model was successfully validated, they were run for the 2-, 5-, 10-, 25-, 50-, 100- and 500-yr recurrence storms and submitted to the City.



Client

City of Houston

Project Duration

2023 - 2024

Key Personnel

Brian Bandy

Annual GHG Reporting

Palm Beach County, FL

Arcadis has been providing Professional Engineering Services for Air Quality Regulations to the Solid Waste Authority of Palm Beach County (Authority) since 2023. During our tenure we have developed the Authority's annual Greenhouse Gas (GHG) Report for their Renewable Energy Campus, which includes co-located Class I and Class III Landfills, associated flares, and a Biosolids Processing Facility. Arcadis also developed the annual GHG Report for the Authority's two inactive landfills, the Dyer Landfill and the Lantana Landfill, which are located at two separate sites within Palm Beach County.

Arcadis utilizes United States Environmental Protection Agency (USEPA) methodology and formulas to prepare the annual GHG Reports, and serves as a representative delegated by the Authority. As such, Arcadis enters the required reporting data into USEPA's internet-based Electronic Greenhouse Gas Reporting Tool (e-GGRT) for the Renewable Energy Park Facilities (PBREP Class I and Class III Landfills, flares, and the Biosolids Processing Facility (BPF), as well as the inactive Lantana and Dyer Landfills.

In 2024, EPA updated the Global Warming Potential (GWP) values used in e-GGRT. The GWPs are listed in Table A-1 of Part 98. The updated GWPs were used to develop GHG calculations associated with the 2024 GHG Reports.

Renewable Energy Park

Subpart HH calculations were used for estimating GHG emissions from the landfills. Subpart C calculations were used to estimate GHG emissions from the combustion of natural gas and landfill gas at

the BPF. The inputs required to estimate GHG emissions including capacity of the landfills, annual tonnages of landfilled materials, flare flowrates and methane readings, flare logs and downtimes, natural gas billing data etc., were obtained from the Authority. Arcadis estimated the surface area and depth of the Class I and Class III landfills utilizing topographic surveys of the landfills. To estimate the non-methane organic carbon (NMOC) correction factors for the portable gas analyzer and the continuous gas analyzer, Arcadis staff collected landfill gas samples from the Class I and Class III flares and skid and sent these samples out for laboratory analysis as required by 40 CFR 98. All methane readings from the analyzers were multiplied by the correction factors before being used in Subpart HH calculations. Equation HH-8 was utilized as it best represented the emission from the PBREP Class I and Class III landfills.

Dyer Landfill

The Dyer Landfill does not have a landfill gas collection system. Therefore, Arcadis utilized the methodology outlined in Subpart HH - Municipal Solid Waste Landfills - Calculating Methane Flux for Landfills without Gas Collection. The inputs required to estimate the GHG emissions including landfill surface area and the record of historical tonnages were obtained from the previous reports.

Lantana Landfill

The Lantana Landfill does not have a landfill gas collection system. Therefore, Arcadis utilized the methodology outlined in Subpart HH - Municipal Solid Waste Landfills - Calculating Methane Flux for Landfills without Gas Collection. The inputs required to estimate the GHG emissions including landfill



Client

Solid Waste Authority of
Palm Beach County

Project Duration

2023 - Ongoing

Key Personnel

Leah Richter
Raga Kalapati

surface area and the record of historical tonnages were obtained from the previous reports.

Additionally, pursuant to 40 CFR Part 98.2(i)(1), the reporting for Lantana landfill will be discontinued starting reporting year 2025 since the landfill's GHG emissions (Carbon dioxide equivalent, CO₂e) are less than 25,000 metric tons per year for five consecutive years. Per USEPA's response to Arcadis' inquiry, the GHG determination for 2019 through 2023 was based on previous GWPs as reported to USEPA.

Energy Audits Phase 1

Baltimore, MD

Arcadis helped our client implement a four-phased plan to meet the Net Zero GHG emissions requirements for their large portfolio of built assets.

- Stakeholder Engagement
- Community Development
- GNG Inventory & Research
- Climate risk and resilience
- Ports and waterways
- Renewable energy generation
- Stormwater runoff
- Funding and implementation strategy
- Sustainability / resilience strategy

Client Challenge

This client owns and manages 165 buildings and ports in the Baltimore, Maryland, and needed a decarbonization and Climate Change plan to meet the Net Zero GHG emissions requirements mandated by the state of Maryland.

Our Role & Solution

Arcadis implemented a four-phased plan to help our client meet the Net Zero GHG emissions requirements mandated by the Maryland Climate Solutions Now Act of 2022.

Brief Description

Meet the standards/guidelines of the Maryland Climate Solutions Now Act of 2022:

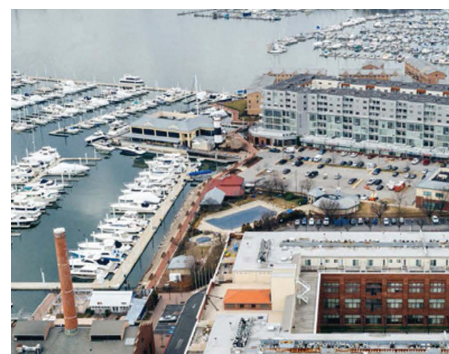
- By 2031, 60% reduction of Greenhouse Gas (GHG) emissions from the 2006 baseline.

Executive Order 01.01.2023.07:

- By 2031, reduce energy consumption in State-owned buildings by 20% from 2018 baseline.
- By 12/31/2023, final plan to meet the goal for net-zero GHG emissions by 2045.

Arcadis plan to achieve net-zero Greenhouse Gas (GHG) emissions by 2045:

- **Phase 1:** Preliminary Energy Audits and Feasibility Analysis for a sample of 5 buildings.
- **Phase 2:** Energy Audits and Feasibility Analysis for all 165 buildings.
- **Phase 3:** Energy efficiency implementation Support.
- **Phase 4:** Monitoring, Measurement & Verification (M&V) program to achieve net-zero GHG emissions by 2045.



Client

Maryland Environmental Services and Maryland Port Authority

Project Duration

2022 - Ongoing

Key Personnel

Ian Minnes

Scope 3 Emissions Inventory and Science Based Targets Setting

Confidential Multifamily Real Estate

Client
Confidential

Key Personnel
Katie Eisenbrown

Project Duration
2022 - 2023

The Challenge

Driven by market and investor expectations, our client needed to calculate scope 3 emissions and work on a decarbonization strategy that would enable public disclosure of its commitments and achievement strategies. The client was challenged with calculating and defining their scope 3 emissions and evaluate the impact on their GHG emission science-based targets.

The Solution

Determine relevance of scope 3 categories. Assess data availability across relevant scope 3 categories and determine calculation approach. Calculate Scope 3 emissions and integrated in reduction Science Based Target submission.

Review historic scope 1 and 2 GHG emissions to assess completeness inventory and accuracy for submission to the Science-Based Targets initiative.

Propose abatement options for scope 1, 2, and 3 GHG reduction, illustrating how these targets would contribute to their targets over a 10-year period.

Develop an implementation plan to achieve GHG targets including recommended timing and key projects. Evaluated potential emission reduction projects that support the achievement of the Science Based targets with a focus on energy efficiency, vehicle electrification, and on- and off-site renewable energy purchases.

Impact Delivered

Arcadis enabled the client to confirm its climate ambition over the next decade and begin the transition to a net zero future, providing more credibility, transparency and trust in their GHG emissions and targets.

Sustainability Plan

Confidential Water and Wastewater Utility

The Challenge

Client
Confidential

Key Personnel
Katie Eisenbrown

Project Duration
2022 - 2023

To formalize a water and wastewater utility's sustainability program and set goals across several subsidiaries.

The Solution

- Led stakeholder workshops to set goals and develop a three-year roadmap for the sustainability program and established several working groups.
- Completed a greenhouse gas emission inventory and set a goal to reduce GHG emission by 50% from 2019 levels by 2030, setting a science-based target to limit global warming to 1.5 degrees C.
- Drafted a vendor code of conduct, aligning the company's supply chain practices with the human rights policy.
- Supported the development of an inaugural sustainability report and other disclosures.
- Reviewed ESG governance structure and provided recommendations to enhance ESG roles and responsibilities at the board, c-suite, business functions and subsidiaries.
- Created and finalized a presentation to Executive Leadership Team and Board of Directors on the sustainability plan and goals.

Impact Delivered

- Delivered a comprehensive Sustainability Plan and a roadmap with short- and long-term actions to be implemented over three years.

Statewide Funding and Program Management **Florida**

The federal Flood Mitigation Assistance (FMA) grant program aims to reduce or eliminate flood insurance claims under the National Flood Insurance Program (NFIP). Under current FMA guidelines, the Federal Emergency Management Agency (FEMA) may contribute up to 100 percent federal cost share for Severe Repetitive Loss (SRL) properties, up to 90 percent federal cost share for Repetitive Loss (RL) properties, and up to 75 percent federal cost share for properties that are NFIP-insured but do not meet the SRL or RL definitions, thus making the program a viable option for non-structural mitigation funding. Nevertheless, the application development process requires technical expertise and strict programmatic requirements. Many communities in the past have expressed that they find the application process overwhelming and cannot dedicate much time to the program.

In response to requests for assistance to develop FMA applications throughout the state, the Florida Division of Emergency Management retained Arcadis to conduct a pilot program in which technical assistance needed to develop FEMA Non-Disaster Grants applications would be provided to communities at no charge to these communities.

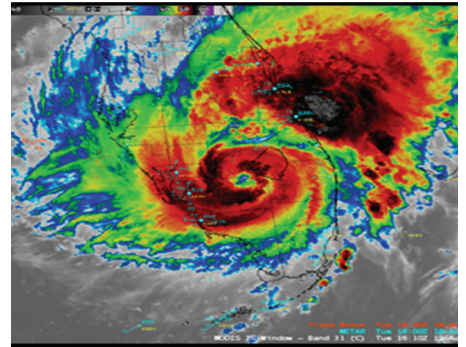
Development of a competitive application for any of FEMA's Hazard Mitigation Assistance (HMA) programs requires expertise and knowledge including:

- Understanding of the federal regulations that guide FEMA's grant programs and how they apply to application development.
- Engineering expertise to ascertain the technical feasibility of projects and develop associated scopes of work and cost estimates.

- Ability to perform a benefit-cost analysis using FEMA's prescribed software to weigh the benefits of project implementation against project cost.

Arcadis developed a streamlined, comprehensive application development process that can be modeled nationwide in a variety of communities. The process encompasses application development from cradle to grave including data collection, engineering and project scoping, cost estimating, benefit-cost analysis, environmental reviews, and application submission. Compliance with all FEMA guidance and applicable codes and standards is frontloaded. However, the most important part of the process is contact and interaction with the community and the property owners. Communication throughout application development is crucial to meeting the community's mitigation goals, properly managing community and property owner expectations, and providing all pertinent information to the application development team as early in the process as possible. Arcadis holds kick-off meetings with the community to discuss how the FMA program would assist in meeting their outstanding flood mitigation needs and to review the funding process and applicable eligibility requirements. Through this process we identify community concerns and ascertain the level of interest in the grant program. Post-kickoff, public workshops are held to educate interested homeowners about the FMA program and its requirements.

Four communities participated in the 2014 FMA pilot program. A total of 10 nationally competitive applications were developed that proposed to mitigate 235 residences against future flood risk through elevation, mitigation reconstruction or property acquisition projects.



Client

State of Florida Division of
Emergency Management

Project Duration

2008 - Ongoing

Key Personnel

Carly Foster
Jamie McMillan

Ninety-five percent of the residences included in the applications were Severe Repetitive Loss and Repetitive Loss properties as identified by FEMA and the NFIP, including a low-income housing complex that had suffered multiple losses. Final approval of the applications from FEMA is pending.

Arcadis also coordinated with the Florida Division of Emergency Management to provide the additional information typically requested as FEMA reviews these applications. The communities that were part of the pilot program were pleased with the process and the mitigation projects proposed, and the client considers the pilot project to be a success. Arcadis has been asked to conduct another round of state-wide FMA applications development in 2015.

The 10 applications developed had a total mitigation cost estimate of \$28,474,221. These applications can be resubmitted annually with minor revisions if grants are not awarded in the first year. This endeavor also served to educate communities and residents about the value of mitigation and resiliency to society, such as creating a safer community by reducing loss of life and property and enabling individuals to recover more quickly from disasters.



Section 03. References



03. References

Arcadis has earned an outstanding reputation in the industry for providing exceptional services to our clients throughout Florida. Through the services of our experienced and talented staff, we have a track record of delivering complex engineering and resilience projects resulting in a high percentage of repeat business and a long list of satisfied clients.

As requested, we have provided references for past projects in the tri-county area for comparable services recently completed. We encourage the City to contact any of our following clients to inquire about our capabilities and performance record.



Project: Vulnerability Assessment

Client/Location: City of Fort Lauderdale / Fort Lauderdale, FL

Project Scope: The City of Fort Lauderdale currently experiences various types of flooding that impacts the daily lives of its residents. The City needed to identify and assess its critical assets to prepare for current and future flood risks. The City of Fort Lauderdale retained the Arcadis team to complete a vulnerability assessment (VA) that met State criteria in FS 380.093.

Arcadis' Responsibilities: Arcadis led the development of a city-wide vulnerability assessment that included identifying all critical and regionally significant assets, performing an exposure analysis to identify the depth of water caused by each sea level rise, storm surge or flood scenario, generating elevation certificates for prioritized government facilities, assessing roadway vulnerability. In addition, Arcadis developed an adaptation plan that included an assessment of adaptive capacities, prioritization of needs and identification of adaptation strategies for the City's most vulnerable assets.

Cost:
\$160,000



Reference:

Mallory Jones, CFM, MIPM
Project Manager
mjones@fortlauderdale.gov
(954) 828-5720



Project: L-31E Levee Storm Surge Study and Modeling

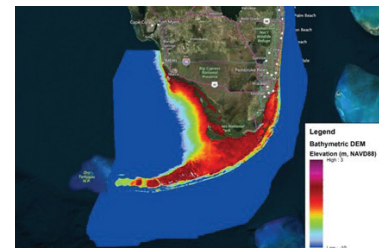
Client: South Florida Water Management District / Miami, FL

Vendor Reference Verification Form				
City of Miami Gardens Solicitation No. and Title:				
Reference for: Arcadis				
Organization/Firm Name providing reference:				
South Florida Water Management District				
Contact Name: Cleovens Guerrier		Reference date: 01/05/2024		
Contact Email: cleovensg@hotmail.com		Contact Phone: (954) 461-7083		
Name of Referenced Project: L-31E Storm Surge Modeling				
Contract No.	Date Services Provided:	Project Amount:		
4600003993-W001	03/01/2021 to 09/30/2022	\$ 285,879.00		
Vendor's role in Project: <input checked="" type="checkbox"/> Prime Vendor <input type="checkbox"/> Subconsultant/Subcontractor				
Would you use this vendor again? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Description of services provided by Vendor:				
Arcadis was responsible for development of a modeling system and methodical approach to evaluate the level of protection provided by the L-31E levee near Biscayne Bay in Miami.				
Please rate your experience with the referenced Vendor:				
1. Vendor's Quality of Service	Needs Improvement	Satisfactory	Excellent	Not Applicable
a. Responsive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Vendor's Organization:				
a. Staff expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Professionalism	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Timeliness of:				
a. Project	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Deliverables	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Project completed within budget	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Cooperation with:				
a. Your Firm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Subcontractor(s)/Subconsultant(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Regulatory Agency(ies)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Additional Comments: (provide on additional sheet if needed)				
Arcadis was very responsive during that work order and provided the District staff with a workshop on the models develop, which shows their dedication to serve the client beyond the scope of work!				
All information provided to City of Miami Gardens is subject to verification.				
Signature:		Date: 04/29/2024		

Project Scope: The South Florida Water Management, as part of its Flood Protection Level of Service Program, required analysis of past, current and future sea levels downstream of the coastal basins in Biscayne Bay for a variety of storm frequencies and the associated review of existing infrastructure to improve resilience to sea level rise.

Arcadis' Responsibilities: Arcadis was responsible for development of a modeling system and methodical approach to evaluate the level of protection provided by the L-31E levee near Biscayne Bay in Miami. Of particular interest was the level of protection against overtopping by hurricane-generated storm surge provided by the existing levee and the levee crest requirements needed to provide protection under future sea level conditions.

Cost: \$603,000



Reference:

Akin Owosina
Chief of the H&H Bureau
aowosin@sfwmd.gov
(561) 682-2924



Project: Sea Level Rise Adaptation Strategy

Client: Miami-Dade County / Miami, FL

Project Scope: Develop a comprehensive sea level rise adaptation strategy for Miami-Dade County. The overall objective was to identify implementable and financially feasible adaptation strategies over various time horizons. The project included stakeholder engagement and community outreach, adaptation strategy development, and financial strategy development.

Arcadis' Responsibilities: Arcadis led the development of a county-wide strategy to guide adaptation investments and decision making for Florida's most populous county and largest urban economy, and to provide an adaptable framework to build resilience to sea level rise and other risks over the next 40 years. Included in this effort were a detailed data review and gap analysis; extensive multi-sector stakeholder engagement; vulnerability analyses of critical infrastructure under varying risk scenarios; and adaptation approaches to protect assets, communities and natural systems from increased risk from flooding and other climate hazards.

Cost: \$540,000



Reference:

Julie Dick, JD, AICP
Deputy Chief
Resilience Officer
Julie.Dick@miamidade.gov
(305) 495-4182

Experience with the City of Pompano Beach

Arcadis possesses a rich history of successful project delivery in the City. Our professional services have consistently supported the City and the Pompano Beach CRA, alongside private sector clients. This extensive local experience spans critical utility projects delivered under a water/reclaimed water treatment plant engineering services contract, and more recent contributions to landscape, urbanism, and architecture. Below we have provided past projects completed for the City.

■ Emergency Response Plan



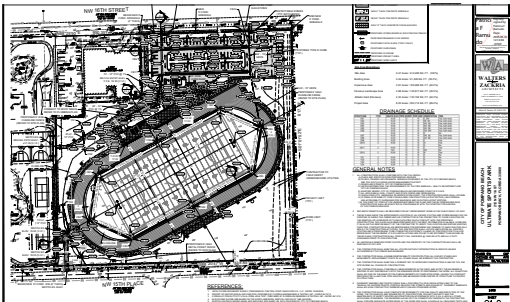
Vulnerability assessment based emergency response plan in accordance with the requirements of the Bioterrorism Act.

■ Mitchell Moore Park



Design services for a recreation center.

■ Ultimate Sports Park



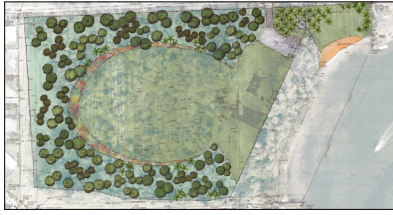
Design services for sports complex.

■ Briny Avenue Streetscape and Urban Design



A coastal road, with resilience design for flood protection and shared use.

■ Exchange Club Park



Phase 1 services included clearing and grubbing for the eradication of extensive prohibited vegetation while ensuring the preservation of the sensitive wetlands and mangrove areas. Phase 2 services included landscape design and vegetation restoration utilizing 100% Florida native plant species and incorporation of the existing tree inventory.

■ Copans Transit Operations Facility



Redevelopment of a fuel-based bus facility to an electrical bus facility, incorporating sustainability features.

■ Public Art Master Plan



Prepare a Public Art Master Plan that will include a 10-year budgeted implementation schedule with recommendations/guidelines for incorporating art in private developments.

■ Continuing Services



For more than two decades, our Local Vendor partner KEITH has been providing general engineering services to the City. Some projects completed under this contract include:

- Municipal Reclaimed Water Main Design
- Force Main Replacement Design
- Pompano Beach Branch Library Renovations
- Municipal Golf Course
- Pier renovations
- SE 8th Court Bridge Replacement
- Reuse Water Main Distribution System
- NE 4th Street Reuse Water Line Expansion
- Condition Assessments for Various City-owned Buildings and Facilities
- Pompano Beach Boulevard Water Main Design Site Plan and Permitting Services
- GO Bond Park Projects

KEITH also provides general surveying and mapping services to the City on an as-needed basis. Some geospatial projects include:

- South Cypress Road and SE 15th Court Intersection Design Survey
- SE 13th Street Force Main Design Survey
- SR A1A Survey and SUE Services from Hillsboro Boulevard to Terra Mar Drive
- Emergency Generators Design Survey for City Hall and Public Safety Building
- Santa Barbara Reuse Water Line Expansion Topographic Survey
- North Riverside Drive Directional Drill Survey and SUE Services



Section 04.

Project Team Form



04. Project Team Form

PROJECT TEAM

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

RFQ # 25-037

Name: Professional Services for Sustainability Projects

Federal I.D. # 57-0373224

PRIME

Role	Name of Individual Assigned to Project	Number of Years' Experience	Education, Degrees
Project Manager	Whitford Remer	15	JD, Environmental Law / MS, Urban & Regional Planning / BS, Geography & Political Science
Principal-In-Charge	Melissa Pomales, PE, ENV SP, PMP	21	MS, Finance / MBA / MS, Civil Engineering / BS, Civil Engineering
QA/QC	Ifetayo Venner, PE, ENV SP	24	MBA, Business Administration / MS, Environmental Engineering / BS, Civil Engineering
QA/QC	Carly Foster, AICP, CFM	17	MSP Urban Planning (Growth Management Specialization) / BS Political Sciences
Adaptation & Implementation Planning Development Lead	Trevor Johnson, AICP, MVP Certified	10	MUP, Urban Planning / MA, Historical Archaeology / BA, Anthropology
CRS Watershed Management Plan Lead	Shandor Szalay	23	MS, Water Resources Science / BS, Environmental Forest Biology
Water Audits Lead	Brian Moore, PhD	28	Post-Doctoral, Inorganic Chemistry / PhD, Environmental Engineering / MS, Environmental Engineering / BS, Civil Engineering
Energy Audits Lead	Matthew Yonkin, PE, CEM	32	MS, Management & Technology / BS, Civil Engineering
GHG Inventory Update Lead	Katie Eisenbrown	16	BS Geography, Cartography and GIS / MBA Sustainability and Entrepreneurship
Adaptation & Implementation Planning Development	Melissa Hew, CFM, WEDG	12	MS, Environmental Science / BA Environmental Studies
H&H Modeling	Brian Bandy, PE	26	BS, Civil Engineering
Water Audits	Gary Trachtman, PhD, CDT	51	MS/BS, Sanitary Engineering
GHG Inventory Update	Ian Minnes	8	MS/BS, Human Geography
GIS / Geospatial Analysis	Kristyn McClure	8	MS, Geographic Information Sciences / BS, Environmental Science

Subconsultant

Role	Company/Firm Name & Address of Office Handling the Project	Name of Individual Assigned to the Project
Urban Forestry Plan, GIS/ Civil	KEITH 301 E. Atlantic Blvd. Pompano Beach, FL 33060	Paul Weinberg, PLA; Kelli Schueler, PLA, LEED AP; Chris Phillips, PLA; Sarah Landucci, ISA
Community Engagement & Related Services	Garth Solutions 5595 Orange Dr. , Ste. 202 Davie, FL 33314	Yvonne Garth; Melissa Barnett-Christie



Section 05.

Organizational Chart



05. Organizational Chart

We assembled a team of high-quality staff with relevant experience to successfully complete any task requested under this contract. Our comprehensive organizational chart indicates reporting relationships and responsibilities of the team as well as all key personnel. Our Project Manager, Whit Remer, will be the primary point-of-contact for the City and, in coordination with our Task Leaders, will be responsible for the successful delivery of all task orders assigned under this contract. Many of our key team members have direct experience working in the municipal sector, giving us a deep understanding of the challenges and opportunities cities face. Also, team members identified on our organizational chart have worked together to develop sustainable solutions that improve quality of life for communities across Florida. With hundreds of Florida-based staff and the ability to leverage national and global staff, we will bring the right resources and people to every project.





Section 06.

Statement of Skills and Experience of Project Team



06. Statement of Skills & Experience of Project Team

Background

Arcadis is a global design, engineering, and consultancy firm that has been operating for over 135 years. With sustainability at the heart of everything we do, our focus is on maximizing our impact aimed at improving quality of life. The solutions we develop address important societal challenges around our four core business areas — resilience, places, mobility, and intelligence.

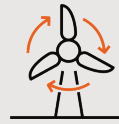
Leveraging data and technology, we have the capabilities and services to meet client demands driven by global trends such as urbanization, climate change, digitalization, evolving stakeholder expectations, and unforeseeable events.

Resilience Expertise. Recognizing the growing importance of resilience in today's world, Arcadis has become a leader in providing solutions that help communities and infrastructure withstand and recover from shocks and stresses driven by natural hazards. Arcadis offers a wide range of services to enhance resilience, including community and stakeholder engagement, risk assessment, climate adaptation planning, disaster recovery, nature-based design, funding strategies, and infrastructure protection.

Commitment to Sustainability. As a company, Arcadis is deeply committed to sustainable development. We prioritize environmentally responsible practices and work closely with clients to integrate sustainability into their projects. Arcadis actively promotes the use of green technologies, energy efficiency, and sustainable design principles to minimize the environmental impact of infrastructure development. Our planning and design processes always factor in our commitment to improving ecological functions and services that are critical for both natural populations and the surrounding communities.

Global Reach. With a presence in over 30 countries and a network of more than 36,000 employees, Arcadis operates on a global scale. This broad reach allows the company to leverage diverse perspectives, best practices, and innovative solutions from around the world. While local Project Managers and staff are assigned to deliver projects for clients, Arcadis brings this global expertise to every project, ensuring that clients receive cutting-edge solutions tailored to their specific need.

Arcadis is organized around the key needs and challenges that face society today, with four interwoven and cross-collaborating global business areas of:



Resilience

Focused on strengthening assets, communities, and businesses to face the challenges of this century and beyond.

Key offerings:

- Environmental Restoration
- Water Optimization
- Climate Adaptation
- Sustainable Operations
- Energy Transition



Places

Focused on the structures, communities, and land uses that are the context for daily life.

Key offerings:

- Advanced Industrial Facilities
- Public Facilities
- Retrofitting & Repurposing
- Architecture & Urbanism
- Smart Sustainable Buildings



Mobility

Focused on the assets and networks that move people and goods through the world.

Key offerings:

- New Mobility & Transportation Hubs
- Connected Highways
- Intelligent Rail and Transit



Intelligence and Innovation

Focused on the technology and insights that help our clients make and implement better decisions, faster, with more people at the table than ever before.

Key offerings:

- Smart Asset and Building Analytics
- Digital Transportation Technologies
- Intelligent Operations

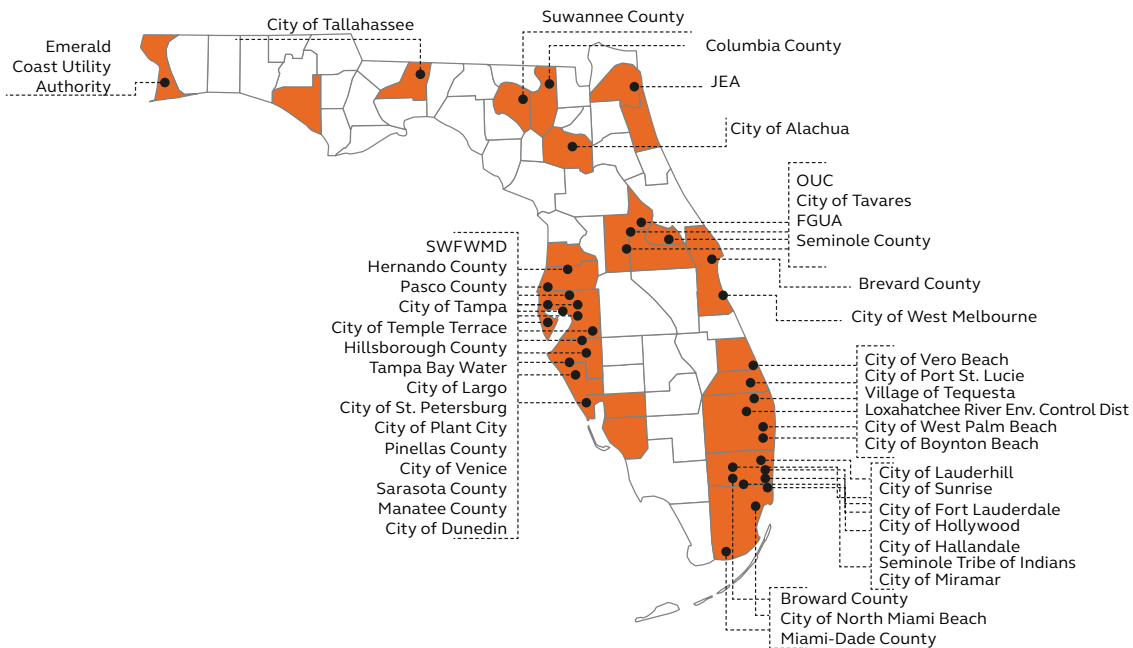
135+ YEARS EXPERIENCE



Arcadis in Florida

We are inherently Floridian and understand the needs of the State of Florida from a climate adaptation and natural hazard risk perspective, as well as holistic community and economic development, and technical point of view. For more than 30 years, Arcadis has delivered inland and coastal flood protection, floodplain management, program management, and municipal water and infrastructure projects across Florida. As shown in the figure below, in the last 5 years, we have worked with over 35 of these utilities/municipalities on continuing professional engineering services contracts. We have supported many others on singular critical projects and initiatives that will improve resilience and levels of service in Floridian communities.

Master Service Contracts Across Florida Over the Past 5 Years



Resilience in southeast Florida has living with water at its core and necessitates a thorough and local understanding of the water-related interdependence of built and natural systems and the cumulative compounding risks they face. Arcadis' local and regional experience in resilience, water management and water quality are integrated with a long history of delivering water, wastewater and stormwater solutions for many southeast Florida communities since our first office opened in Broward County more than 30 years ago. This provides an unmatched whole system understanding and approach for addressing the water resilience paradigm for the unique conditions in southeast Florida.

Our experience in southeast Florida includes a rich history of successful project delivery in the City and for numerous entities across the Tri-County area (municipalities and Counties alike). Through our legacy firms Malcolm Pirnie and IBI Group (now Arcadis), our professional services have supported the City and the Pompano Beach CRA, alongside private sector clients in the City. This extensive local experience spans critical utility projects delivered under a water/reclaimed water treatment plant engineering services contract, and more recent contributions to landscape, urbanism, and architecture, such as Mitchell Moore Park, Briny Avenue Streetscape, Exchange Club Park, the Copans Transit Operations Facility, and the City's Public Art Master Plan.

Professional Qualifications

Arcadis brings vast experience working with and delivering projects for government entities across the U.S. and in Florida. Our team is strongly represented across our 132 offices in the U.S. (nine of which are in Florida) which enables us to bring the best of our national capabilities through our local delivery teams. Our Resilience Water Business Area portfolio includes over 800 clients, many of which are government agencies, departments, or utilities (local, state or Federal).



AN EXPERIENCED TEAM...

...YOUR TRUSTED PARTNERS

Arcadis has teamed up with two firms that expand our team's capabilities in the areas of adaptation planning and implementation, engineering, urban forestry, and community and stakeholder engagement. Pompano Beach-based and key Local Vendor partner, **KEITH**, has been providing multi-disciplinary services in southeast Florida and throughout the state for more than three decades. Their focus on serving as an advocate for the communities in which they build, live, and give back to are in line with Arcadis' own purpose of improving quality of life. As a trans-disciplinary firm, KEITH provides creative solutions to each project and the community in which they serve. The firm provides resilient and sustainable design solutions for municipal agencies, private clients, and FDOT.



Our local vendor participation commitment to KEITH is 15%.

As part of our handpicked team, **Garth Solutions**, a local minority and women owned certified small business, will provide support with local outreach and engagement for any public outreach that may be required. Headquartered in Davie, FL, and DBE-certified in Broward County, Garth Solutions has been leading community outreach and engagement and public relations efforts for capital improvement projects in south Florida for over 20 years. GSI plays an integral role as the lead public outreach consultant on project engagements throughout Broward, Miami-Dade, and Collier County. For many of these projects, they often execute communication and

outreach with both internal and external stakeholders including local communities, HOAs and citizen groups, local businesses, governmental agencies, and planning boards. Over the years, this exposure and experience has enabled them to build strong relationships throughout South Florida, with an understanding of municipal and community dynamics across the region.

Arcadis has been at the forefront of climate adaptation and resilience work for many years, with a strong track record of helping clients anticipate and prepare for the impacts of climate change. Arcadis' expertise in this area is built on a foundation of environmental science, engineering, and risk assessment, as well as a deep understanding of the social and economic implications of climate change. Arcadis has been providing climate adaptation and resilience services for over two decades, helping clients across a range of sectors to develop strategies and solutions that address the challenges of a changing climate. The company's experience in this area is global, with projects in North America, Europe, Asia, and beyond. One of the key areas of Arcadis' adaptation and resilience work is in

Sustainability is our strategy.

Arcadis focuses on projects that contribute to our strategic ambitions, making deliberate bidding choices that reflect our values besides economic criteria.

According to our CEO, Alan Brookes

"We are excited to present our 2024-2026 strategy: Accelerating a Planet Positive Future."



We pursue this by addressing clients' needs as they seek their goals around decarbonization, electrification and the transition towards renewable energy sources, the on shoring of advanced industrial facilities, the need to replace and upgrade existing infrastructure whilst moving to smarter, more efficient and cleaner modes of transportation. By combining AI and the use of data and with deep asset knowledge, we at Arcadis help our clients repurpose and improve their assets. We are ideally positioned to make a positive difference building on our digital and human innovation solutions that are powered by people, embedding sustainable values into all client solutions, business operations, and people and community programs.

the assessment of climate risks and vulnerabilities. The Arcadis team has developed a suite of sophisticated tools and methodologies to assess the potential impacts of climate change on infrastructure, utilities, buildings, and communities, as well as to evaluate the risks posed by extreme weather events such as extreme heat and precipitation, flooding, sea-level rise, wind, and wildfires.

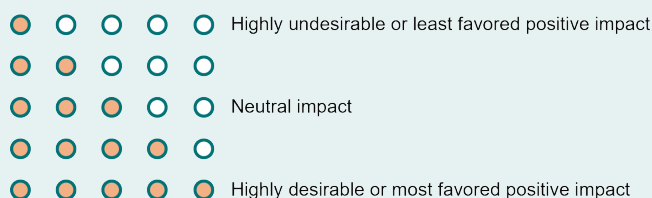
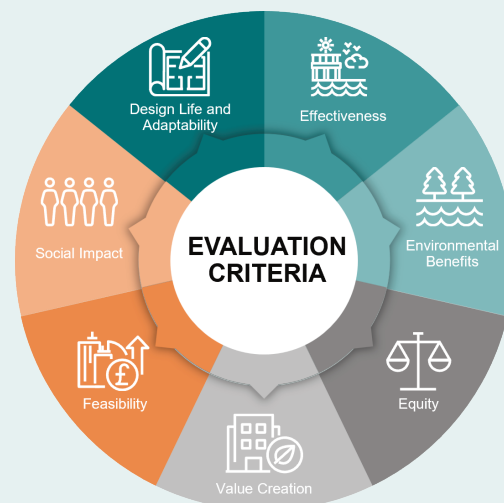
In addition to project work, Arcadis is also involved in thought leadership and advocacy on climate adaptation and resilience issues. The company has contributed to several major reports on climate impacts, and our experts are often called upon to speak at conferences and events on the topic. Overall, Arcadis has a wealth of experience in adaptation and resilience, built over many years of working with clients around the world. Our expertise in this area is grounded in a deep understanding of the science and engineering of climate change, as well as the social and economic implications of its impacts.

Arcadis has unmatched experience in delivering similar services for municipal clients. Our team will provide leading edge technical expertise, directly relevant experience, regulatory knowledge and local familiarity needed to perform the tasks of this project. Our multidisciplinary team offers a well-balanced combination of local, national and global leaders and practitioners in the areas of sustainability and resilience. We will leverage the team's collective experience and expertise to drive the success of any project under this contract.

Comprehensive Expertise, Tailored Solutions: With a global footprint and over a century of experience, Arcadis brings best practices from around the world while tailoring solutions to the local context. Arcadis offers a multidisciplinary team of climate scientists, engineers, planners, designers, economists, and engagement specialists who combine global knowledge with local insights. This ensures that each client receives tailored, site-specific solutions that align with their unique challenges, goals, and regulatory requirements, while bringing innovative solutions from national and global experts.

Proven Track Record in Implementation: Arcadis embeds implementation into every phase of service delivery. Our team ensures that strategies are not only innovative but also practical, achievable, and designed to translate into tangible actions — helping clients transition seamlessly from planning to execution.

Technology-Driven Innovation: Arcadis leverages cutting-edge tools such as GIS mapping, digital twins, and advanced climate modeling to deliver precise, data-driven insights. These technologies enable clients to make informed decisions, set clear priorities, and visualize the long-term benefits of their investments.



Each action was weighted for its performance against each evaluation criterion.

CATEGORY	CRITERIA
EFFECTIVENESS	<ul style="list-style-type: none"> ✓ Maximum level of protection (% annual chance/SLR scenario) ✓ Reduction in flood extent ✓ Avoided damage and loss ✓ Residents protected ✓ Critical assets protected
FEASIBILITY	<ul style="list-style-type: none"> ✓ Stakeholder acceptance ✓ Constructability ✓ Permitting Requirements and Regularity Considerations ✓ Affordability: Cost of Construction + Cost of Maintenance ✓ Funding Strategy
DESIGN LIFE & ADAPTABILITY	<ul style="list-style-type: none"> ✓ Design Life ✓ Performance Horizon ✓ Adaptability/Flexibility ✓ Phase-ability and Time to Implementation ✓ Maintenance Requirements
ENVIRONMENTAL BENEFITS	<ul style="list-style-type: none"> ✓ Water and Air Quality ✓ Habitat Value ✓ Human Health Benefits ✓ Mitigation of Other Climate Hazards (Heat, Stormwater)
SOCIAL IMPACT	<ul style="list-style-type: none"> ✓ Recreational ✓ Cultural ✓ Aesthetic
EQUITY	<ul style="list-style-type: none"> ✓ New and Equitable Access to Waterfront ✓ Additional Benefits for Vulnerable Populations ✓ Community Partnerships ✓ Protection of Affordable housing over the Long Term
VALUE CREATION	<ul style="list-style-type: none"> ✓ New Value Created on Sites or Adjacent Sites ✓ Capacity to Catalyze Future Funding and Investment ✓ The extent to which the project will increase quality of life and the desire to be in the area for living, work, or play purposes

Focus on Funding and Financing to Drive Implementation: Arcadis excels in helping clients unlock financial opportunities through capital improvement plans, federal and state grants, and innovative financing mechanisms like green bonds and public-private partnerships. This ensures projects are not only feasible but financially sustainable.

Commitment to Community-Centered Solutions: Arcadis prioritizes inclusivity by engaging stakeholders and communities at every stage of planning. We

integrate equity into our solutions, ensuring that all populations, especially the most vulnerable, benefit from climate adaptation efforts.

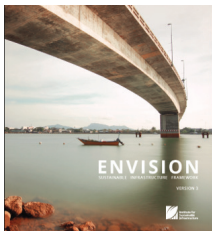
Long-Term Resilience and Sustainability: Arcadis doesn't just focus on short-term fixes; we design strategies that build capacity, knowledge, and infrastructure resilience to provide benefits for decades to come. Our emphasis on nature-based solutions, regenerative design, and climate-smart infrastructure ensures sustainable, future-ready outcomes.

By choosing Arcadis, clients gain a trusted partner committed to delivering innovative, equitable, and actionable climate adaptation solutions that not only reduce risks but also create opportunities for long-term resilience and growth. Together, we help our clients

face climate challenges with confidence and build a sustainable future.

Our team's qualifications are proven through recent nationally recognized risk and resilience planning projects, including the Miami-Dade County Sea Level Rise Adaptation Strategy, Climate Ready Boston, Resilient New Jersey, and Chicago's Climate Action Plan. Members of our team have also led efforts on these issues for local governments throughout southeast Florida, as public service or as consultants, including work with the City of Miami, the Southeast Florida Regional Climate Change Compact, the Resilient305 Initiative, the USACE Jacksonville District, South Florida Water Management District, City of Fort Lauderdale, City of Hollywood, Town of Davie, and many more.

Arcadis' leadership in sustainability is affirmed by top industry recognitions.



Arcadis supports the Port Authority of NY and NJ in achieving ambitious resiliency and sustainability goals. Our work included reviewing climate science, analyzing future risks, creating vulnerability assessment tools, developing design guidelines, and promoting natural infrastructure projects to enhance the Authority's position as a leader in climate resilience among peer organizations, as well as developing funding strategies and pursuing funding in collaboration with tenants, partners, and the Authority.



Arcadis is currently supporting the Town of Davie in the development of their Vulnerability Assessment compliant with Florida Statute 380.093. Work includes identifying critical assets to prepare for current and future flood risks; assessing adaptive capacities of the Town; prioritizing adaptation needs; identifying strategies to address the vulnerabilities of the Town's most at-risk critical assets; leading stakeholder engagement amongst Town governments, elected officials and community members; and ensuring compliance with the Resilient Florida Grant Program requirements.



City of Tarpon Springs Whitcomb Bayou: Vulnerability Assessment, Shoreline Protection & Flood Mitigation. Arcadis performed a feasibility analysis and conceptual design of several shoreline and flood mitigation alternatives for Whitcomb Bayou. Arcadis also performed a comprehensive funding analysis and developed a funding strategy to align and maximize opportunities for funding under these grant programs.



Arcadis spearheaded climate risk assessments and developed actionable resilience plans in NJ regions: Resilient Northeastern NJ and Resilient NJ - Raritan River and Bay. Following Phase 1 success, Arcadis continues Phase 2 support focusing on community engagement, project advancement, and funding strategy, targeting key grant programs, to bolster regional resilience effectively.



Ranked 1st in our industry for ESG performance by Sustainalytics



Ranked in the top 1% of firms for successfully integrated sustainable practices



Scored an A- in the CDP Climate Change questionnaire, distinguishing Arcadis as a "Leader" for its climate change policies, targets and practices

Comprehensive Skills & Services to Meet the City's Sustainability & Resilience Needs

Arcadis brings comprehensive skills and services to meet the City's sustainability and resilience needs. These include:

Adaptation Plan Development

The Arcadis Climate Adaptation and Resilience Planning Practice is dedicated to helping governments navigate the complex challenges posed by vulnerabilities such as sea-level rise, storm surge, and stormwater flooding. With a focus on innovative solutions, the team integrates science, engineering, and policy expertise to develop strategies that enhance resilience, safeguard critical infrastructure, and protect vulnerable populations. By leveraging cutting-edge technology, stakeholder collaboration, and a deep understanding of climate risks, Arcadis brings a full suite of capabilities that empowers the City to adapt and thrive in the face of a changing world —building a sustainable and resilient future for generations to come.

The City can look to Arcadis as a trusted partner because of our ability to deliver actionable, data-backed strategies that integrate with the city's operations, policies, and communities. Our expert team provides exceptional value in the following ways: Comprehensive Expertise, Tailored Solutions With a global footprint and over a century of experience, Arcadis brings best practices from around the world while tailoring solutions to the local context. Arcadis offers a multidisciplinary team of climate scientists, engineers, planners, designers, economists, and engagement specialists who combine global knowledge with local insights. This ensures that the City receives tailored, site-specific solutions that align with your unique challenges, goals, and regulatory requirements, while bringing innovative solutions from national and global experts.

Proven Track Record in Implementation

Arcadis embeds implementation into every phase of the planning process. By integrating technical engineering and modeling staff within our planning teams, we ensure that strategies are not only innovative but also practical, achievable, and designed to translate into tangible actions. Experts in funding, finance, and benefit-cost analysis help accelerate the process of moving from planning to implementation — helping the City transition seamlessly to real outcomes.

The City already has taken significant steps to address these vulnerabilities by completing a vulnerability assessment in 2025. To take advantage of this foundational work, we understand the City requires a partner adept at taking these asset inventories and risk profiles and turning them into an actionable and prioritized list of cost-effective projects, with associated funding and implementation strategies.



Climate Adaptation

- Climate Risk & Mitigation/Adaptation Planning
- D&E of Integrated Flood Resilience Solutions Stormwater & urban flooding, including conveyance & green infrastructure planning & design
- Hydraulic Design and Construction
- Dams and River Basins
- Resilient Ports & Waterways, including berths, jetties, quay walls and breakwaters
- Funding & financing support



Environment Restoration

- Lifecycle Site Eval. & Restoration Services/ Liability Advisory
- Emerging Contaminants (assessment & clean-up)
- Remedial Portfolios / PgM
- Environmental Construction Services
- Innovative & Sustainable Remedial Technologies



Energy Transition

- Investment Advisory
- Technical advisory & planning
- Environmental planning
- D&E of renewable energy assets, including EV infrastructure and hydrogen
- Generation, distribution, storage, power grid design
- EV charging, smart grids
- Project management and controls
- Program management
- Asset management support



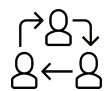
Sustainable Operations

- Non-financial risk mgt. for reliable & compliant operations
- Digital EHS
- Product Stewardship
- Environmental Consulting Services for Air, Stormwater, Surface Water, Hazardous & Solid Waste Mgmt.
- Occupational H&S
- Investor Safety & Environmental Due Diligence



Water Optimization

- Water & wastewater treatment
- Water resources planning, design & construction
- Intelligent water networks
- Compliance & Regulatory Support
- Asset management support
- Desalination
- Water for Industry



Enviro-socio Permitting

- Permitting & Impact Assessments
- Stakeholder Engagement
- Urban & Environmental Planning

Technology-Driven Innovation

Arcadis leverages cutting-edge tools such as GIS mapping, digital twins, and advanced climate modeling to deliver precise, data-driven insights. These technologies enable the City to make informed decisions, set clear priorities, and visualize the long-term benefits of their investments.

Arcadis' Climate Innovation and Technology Working Group

The name of the game is change. Arcadis recognizes that we exist within a rapidly evolving risk, technology, geopolitical, societal, and economic context. As such, we create communities of practice and working groups to enable experts from across the nation and globe to gather, research, test, and explore new ways of working. Our Innovation and Technology working group is one way that we are constantly testing and integrating new innovation into our work in order to help drive better outcomes for our clients and communities.

Commitment to Community-Centered Solutions

Arcadis prioritizes inclusivity by engaging stakeholders and communities at every stage of planning. We integrate equity into our solutions, ensuring that all populations, especially the most vulnerable, benefit from climate adaptation efforts. Arcadis' planners are experts in community engagement and have led dozens of successful engagement processes at the local and statewide level.

Long-Term Resilience and Sustainability

Arcadis doesn't just focus on short-term fixes; we design strategies that build capacity, knowledge, and infrastructure resilience to provide benefits for decades to come. Our emphasis on nature-based solutions, regenerative design, and climate-smart infrastructure ensures sustainable, future-ready outcomes.



PREPARED AND CONNECTED COMMUNITIES

Support educated, connected communities in pursuing operational preparedness, adaptation planning, and emergency response.

PROTECTED SHORES

Reduce Boston's risk of coastal and riverine flooding through both nature-based and hard-engineered flood defenses.

RESILIENT INFRASTRUCTURE

Prepare the infrastructure systems that support life in Boston for future climate conditions and create new resilient systems.

ADAPTED BUILDINGS

Create a regulatory environment and financial and other tools to promote new and existing buildings that are climate ready.

Excerpt from Climate Ready Boston. Led by Arcadis team members proposed for this project, Climate Ready Boston was a game changing adaptation plan, among the first to quantify risk directly and partner this risk communication with clear adaptations. Since its adoption, Climate Ready Boston has served as a roadmap in Boston's resilience journey.

Implementation Planning

Our team emphasizes implementation as a core aspect of all its services, ensuring that climate adaptation strategies are not just theoretical but actionable and impactful. Across every project, the team integrates implementation-focused thinking, from initial planning through to execution, providing the City with clear, practical roadmaps to bring resilience initiatives to life. This includes prioritizing projects based on risk, cost, and feasibility, identifying funding opportunities, and aligning solutions with regulatory and stakeholder requirements.

Our multidisciplinary team will work closely with the City and your communities to ensure seamless integration of adaptation measures into existing systems, while maintaining a focus on equitable, sustainable, and scalable outcomes. By embedding implementation into every phase of delivery, the team ensures that the City is equipped to translate plans into tangible, on-the-ground actions that build lasting resilience.

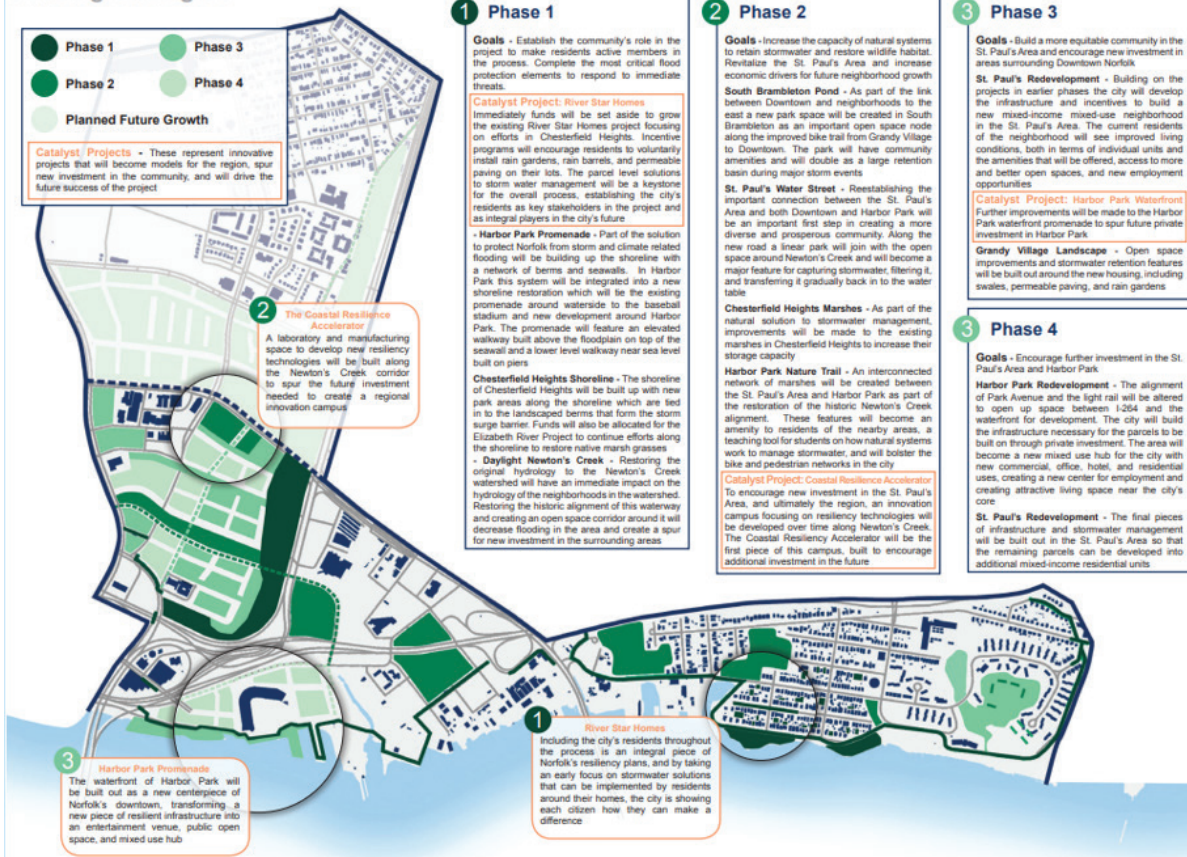
A Full Range of Capabilities to Support Implementation Strategy Development

Arcadis has developed dozens of implementation plans for resilience related projects across the country. Our team is adept at converting conceptual plans into real projects through a robust process of feasibility assessment, design and engineering, cost estimation and benefit cost analysis, and stakeholder engagement. We view each of these components as integral to the creation of projects than can be funded, permitted, and built. Because we offer a full suite of services, from engineering design to stakeholder engagement, the City can look to Arcadis as a complete resource to develop reliable implementation plans for the most complex projects.

Focus on Funding and Financing to Drive Implementation

Arcadis excels in helping the City unlock financial opportunities through capital improvement plans, federal and state grants, and innovative financing mechanisms like public-private partnerships. This ensures projects are not only feasible but financially achievable. Arcadis' funding experts have helped our clients capture over \$10 billion in funding for resilience related projects nationwide.

Norfolk Coastal Adaptation and Community Transformation Plan Phasing Strategies



Example simplified visual articulating project phasing for implementation that Arcadis created. The submittal we developed resulted in \$120M in funding. Today, significant portions of this project are complete, as shown in the view above.



Ohio Creek Watershed Project – Proposed Arcadis staff members carried this inland and coastal flood mitigation project from planning to funding to design to construction.

Urban Forestry

Our team brings to the City all the right skills and expertise to address urban forestry sustainability challenges and goals. KEITH's team of registered landscape architects and certified arborists bring a deep understanding of the City's landscape and ecological priorities. Supported by in-house geospatial capabilities, our team offers a fully integrated approach to landscape architecture and urban forestry that ensures accurate assessment and effective management of tree and palm canopy species across complex project sites.

Our professionals are well-versed in native Florida ecosystems and local permitting processes, enabling us to deliver solutions that balance preservation, mitigation, and enhancement. From field data

collection to entitlement coordination, we provide end-to-end services that support sustainable site development and long-term canopy health.

We have successfully produced detailed landscape architecture construction documents for public sector clients across South Florida, including vegetation surveys, tree disposition plans, and mitigation strategies. These documents serve as essential tools for guiding development while protecting and enhancing the natural character of each site.

By combining our technical expertise with a strong familiarity with local conditions, our team adds measurable value to any project—especially those involving complex urban forestry components within the City.



CRS Watershed Management

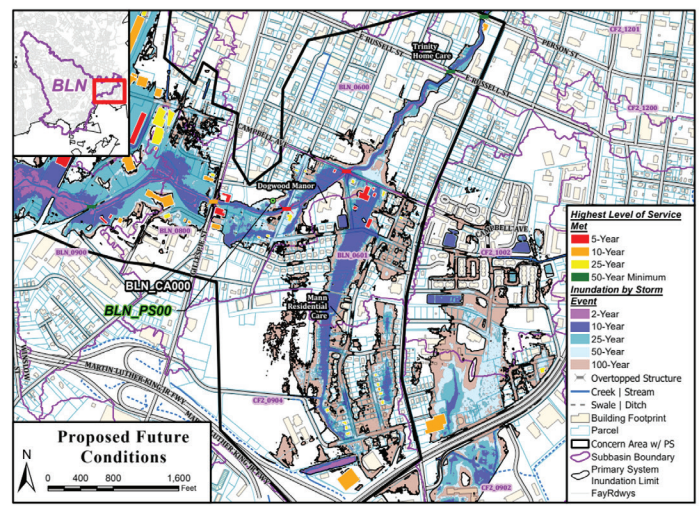
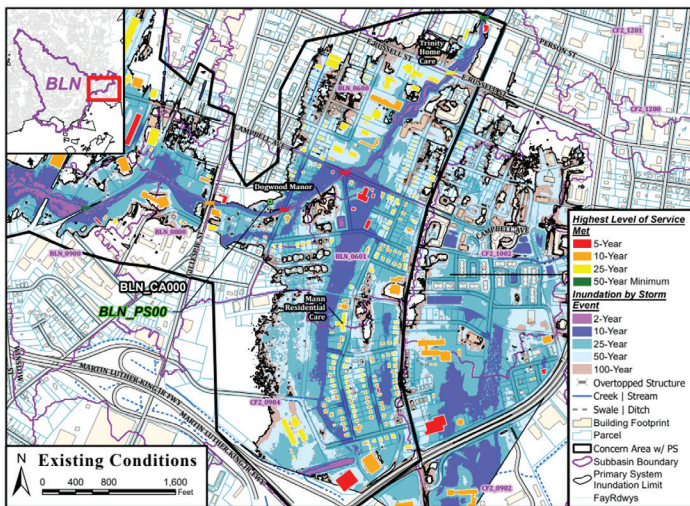
Arcadis is deeply qualified in the preparation of a variety of watershed management plans, ranging in scale from small drainage studies to area-wide plans for large watersheds. We bring novel and thoughtful approaches to this work, including state-of-the-art tools and methods for understanding and characterizing watershed conditions. Our recent experience includes the development of watershed-based stormwater and green-infrastructure master plans for communities throughout the U.S., including the City of Sebastian, Florida. We also recently completed a stormwater master plan for the City of Houston as well as DeKalb County outside of Atlanta. We have also developed several watershed plans for rapidly developing communities in the south, such as New Braunfels. Additionally, we have provided long term and on-going support for the Louisiana Watershed Initiative, a collaboration across 5-stage agencies that is providing an integrated framework for delivering flood reduction projects throughout Louisiana through CDBG-MIT and other funding sources.



LOUISIANA
WATERSHED
INITIATIVE

working together for sustainability and resilience

We use a variety of digital tools to effectively inventory, evaluate, and prioritize watershed projects that clearly map to stakeholder goals. For instance, we have developed a GIS-based support tool to automate the selection of green infrastructure sites in Richmond, VA as well as Columbus, OH. This type of tool is highly transferable to other communities, enabling us to leverage prior investments to support this work. In support of watershed characterization and project evaluation, we use a variety of hydraulic and hydrologic (H&H) modeling tools ranging from PC-SWMM to InfoWorksICM, among others, using next generation technology such as AI image recognition to assist with model calibration and verification. Our GIS and spatial data analysis experts support



As part of the Fayetteville Watershed Master Planning efforts, Arcadis modeled the primary and secondary system under several design storms to define current levels of service. The team mapped primary and secondary system model results together to enable the City to fully understand how the systems impact each other and identify areas of significant surface flooding and structure impacts (Concern Areas). Each concern area was scored based on criteria outlined by the City to quantify street flooding, structure flooding and road way overtopping. The scoring is used to define and inform the prioritization and scheduling of improvement projects.

The Blounts Creek Watershed included 136 concern areas, the majority of which were located in the highly urbanized and fully developed downtown area. To ensure that proposed solutions were resilient to climate change, the project team used future rainfall events to size proposed facilities. The future design rainfalls were created assuming a 6% increase of the total design rainfall volume based on the USGS Publication, An Evaluation of 20th Century Climate for the Southeastern United States as Simulated by Coupled Model Intercomparison Project Phase 5 (CMIP5) Global Climate Models (USGS, 2016). Proposed solutions include the use of gray and green infrastructure to provide resilience, mitigate flooding issues and improve livability for the community and its residents.

this work by integrating local and national datasets for hydrography, land use, topography, geology/physiography, and socio-economic and financial data. We have successfully employed H&H models to evaluate watershed-scale flood reduction scenarios for clients across the globe including Norfolk, London, Houston, New York, Pittsburgh, Fayetteville, and Philadelphia, among others.

We use sophisticated dashboards and parametric modeling to help our clients understand and evaluate tradeoffs among watershed-wide investment scenarios, allowing real time scenario analysis and gaming within stakeholder meetings. We also perform detailed site scale feasibility studies of potential implementation sites, allowing us to develop watershed plans that can swiftly cue up actionable implementation projects, reflecting an analysis of key implementation issues such as public acceptance and regulatory feasibility.

Another hallmark of our work is robust and authentic engagement. We engage deeply with watershed stakeholders through comprehensive outreach and engagement strategies, enabling us to craft plans that reflect the unique nature of each watershed.

Energy Audits

Arcadis is a leader in providing energy management services that create efficient and cost-effective solutions. We approach energy management by understanding our client's organizational goals and objectives (both in the short and long-term) and developing a customized energy strategy. A comprehensive evaluation of energy consumption, through an energy audit, is essential to any energy strategy. Arcadis has qualified energy subject matter experts and certified energy managers who perform energy audits and provide recommendations to reduce energy usage and costs. Arcadis understands that energy opportunities are often unique to each facility. By integrating client-provided, facility-specific input with our consistent, system-based methodology, we provide high-quality energy services across all industrial sectors. Client objectives are realized through effective organization of energy evaluation results. A comparison between facilities low/no cost Operational Measures (OMs), Energy Conservation Measures (ECMs), and Energy Supply Measures (ESMs) is critical. Arcadis' presentation of these results in clear and straight-forward graphics and tables, enables the client to establish an energy and environmental system of record, identify, prioritize and track reduction strategies and projects, and leverage best practices.

Whether we are making communities more resilient, developing liveable places or enhancing mobility, at Arcadis, we are committed to improving quality of life by accelerating the transition to net zero.

We have provided energy efficiency, electrification, and decarbonization services for a large number of publicly-owned facilities. Our energy and sustainability experts located across the globe, with a core U.S.-based energy team that have successfully worked together on more than 500 energy-related assignments in the past ten years across the U.S. and in the Caribbean. For example, Arcadis has been a long term contractor for New York Power Authority through the Statewide Energy Services Program (statewide contract), a long-term Flexible Technical Assistance contractor for the New York State Energy Research and Development Authority, and a Technical Advisor for utility-based energy programs, providing energy efficiency, electrification, and decarbonization services for a large number of publicly-owned facilities throughout New York. Our team also led and supported the development and implementation of the Puerto Rico Aqueduct and Sewer Authority's Energy Management Program which included energy audits of the largest water and wastewater treatment facilities and administration headquarters building; development and owner's representation services for the procurement of energy performance contracts (EPCs) and power purchase agreements (PPAs) for the implementation of energy reduction initiatives and installation of alternative renewable energy; and oversight and contract management of the EPCs and PPAs.

Our team has significant experience and expertise in the following areas:

- Assessing energy use and on-site operations to develop carbon and water footprints and emissions calculations;
- Conducting ASHRAE-standard energy audits including tariff and cost analyses; Developing thermal and electrical load profiles; Completing building electrification studies, including thermal conductivity testing and borehole analysis for ground-source heat pump systems; Completing thermal modeling of multi-building/district loadings; Serving as owner's engineer during bidding and construction; Identifying mission-critical systems and assessing potential impacts of decarbonization; Assessing the potential for hydrogen, hydrogen-blended, or other low carbon fuel use; Assessing the feasibility of on-site renewable electrical and

In addition, through various NYSERDA, New York Power Authority, and utility-based programs, including Mass Save, Arcadis has worked with more than 50 large customers throughout New York and Massachusetts – primarily in the municipal, industrial, and commercial sectors – to identify and implement comprehensive energy efficiency and decarbonization solutions.



thermal energy generation; Assessing the feasibility of waste heat recovery and on-site thermal storage; Leveraging digital tools to complete scenario analyses, graphically illustrate outcomes, and establish time-based, actionable decarbonization strategies.

Our in-depth knowledge and industry experience allows us to apply the most appropriate tools to develop innovative and cost-effective solutions. Areas of consideration that we assess include: equipment, processes, HVAC, instrumentation, lightning, insulation, heat recovery, cogeneration, alternative energy sources, retailing / “wheeling”, utility rate structures, among others.

We are actively involved in energy auditing, decarbonization studies, building and fleet electrification studies, renewable generation and waste heat recovery feasibility evaluations, and other clean energy initiatives for a wide range of facility types and sectors. In addition to upfront planning and strategy development, we are also able to support all aspects of implementation through permitting, grant and funding acquisition, design, construction management, startup, commissioning, and long-term asset management.

Arcadis has a tremendous depth and breadth of experience in all aspects of the work outlined in the RFQ. In addition to the significant experience that our U.S. team brings, we also have the ability to draw upon the deep expertise around heating district and decarbonization modeling that our EU colleagues have developed in response to EU regulatory drivers.

Water Audits

Arcadis has decades of experience working with water utilities, municipalities, and private sector clients around the world. Our experts are well-versed in the complexities of water systems, including:

- Water distribution networks
- Wastewater systems
- Stormwater management
- Industrial and commercial water use

Did you know?

From reducing flood risks in the Netherlands to securing clean drinking water for communities across more than 30 U.S. states. From creating a citywide sustainable legacy during and after the Paris Olympics to revolutionizing urban transit with metro systems across the globe from Sydney to Toronto, our world-changing solutions leave a positive and lasting impact.

Arcadis customizes its water audit methodologies based on client needs and priorities, ensuring scalability for audits ranging from individual facilities to entire utility networks and collaboration with clients to align audit outcomes with their financial, operational, and sustainability goals.

Our team includes the best and brightest in asset management and the water industry, generating creative concepts, developing advanced solutions to meet aggressive sustainability goals, and providing public benefits and water self-sufficiency. Arcadis houses one of the largest water industry business advisory and asset management practices in the U.S. By understanding the water cycle’s regulatory,

political, economic, and operational intricacies, our strategy and management consulting expertise helps our clients drive sustainable change.

Our team brings extensive experience in conducting comprehensive water audits for municipal, industrial, and commercial clients. This includes proven expertise in assessing water usage patterns, identifying inefficiencies, and developing actionable water conservation strategies. Our staff is skilled in performing detailed water audits to reduce consumption, minimize waste, and optimize water management in alignment with sustainability goals. We have successfully performed numerous water audits, leading to water usage efficiencies in building and facility assets, for example, as well as substantial reductions in non-revenue water and improved system performance in a utility system.

The Arcadis team brings the City the following:

- Highly experienced Geospatial analysis team with broad expertise in Geographic Information Systems (GIS) and use of satellite imagery for mapping and monitoring.
- Institute of Asset Management certified professionals and experts in ISO 55000.
- Experts with Florida experience on advanced metering infrastructure (AMI) and Internet of Things (IoT) devices to gather real-time data.
- Depth of knowledge of energy-water nexus and integrated water resource management (IWRM).
- Proficiency in American Water Works Association (AWWA) M36 guidelines and water loss auditing methodologies, including Level 1 and Level 2 audits.
- Experience with non-revenue water (NRW) assessments, including real losses (leakage) and apparent losses (meter inaccuracies, unauthorized consumption).
- Experience in validating meter accuracy, analyzing billing data, and assessing infrastructure leakage during water audits.
- Experience in advanced leak detection technologies.
- Expertise at conducting water balance analyses to quantify system losses and identify areas for intervention.
- Expertise in performing irrigation consumption audits for large landscapes, parks, and recreational fields, optimizing water application rates.
- Experience in completing water audits for industrial facilities, focusing on process water optimization, cooling tower efficiency, and wastewater minimization.
- Experience in implementing advanced metering infrastructure (AMI) data analysis as part of water audit processes to pinpoint anomalies and high-usage periods.

- Expertise in developing and implementing water audit programs for multi-facility organizations, achieving enterprise-wide water efficiency gains.
- Integrating energy efficiency and carbon reduction strategies into water system management.
- Supporting clients in achieving long-term goals like net-zero water consumption.

Arcadis offers unparalleled expertise, innovative solutions, and a deep commitment to sustainability. Through our expert-led services, we empower clients to convert sustainability and ESG initiatives into tangible organizational value. We guide strategy, enhance impact, and ensure compliance, while fostering growth, boosting efficiency, and leveraging innovation. With a global network of professionals and decades of experience in water management, Arcadis delivers water audits that optimize performance, reduce waste, and support long-term resilience for water systems that will support the City reach established goals.



Members of our proposed team recently completed the New Braunfels Utilities Water Conservation Plan, which was informed by detailed water audits and a comprehensive assessment of water usage patterns. The plan identified inefficiencies, opportunities for conservation, and strategies such as leak detection, fixture upgrades, and innovative reuse technologies. Our work included actionable recommendations to reduce water consumption, enhance operational efficiency, and promote sustainable water management practices.

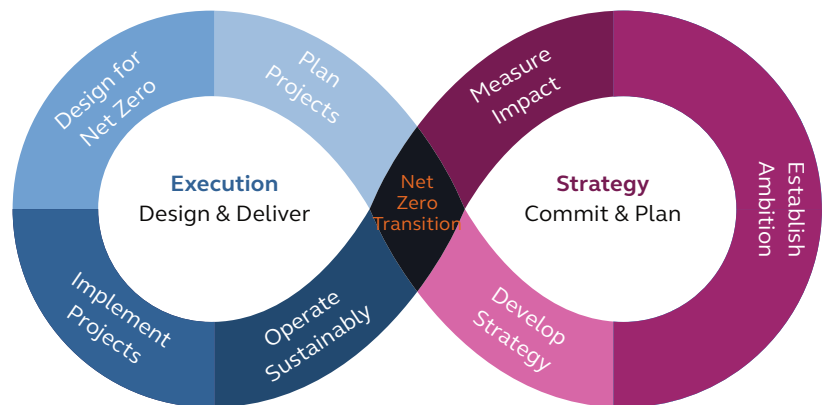
Greenhouse Gas (GHG) Inventory Update

We understand that every sustainability journey is different. A successful sustainability strategy should be the right fit for your business – focusing on your unique risks and opportunities. No matter where you are on your journey, our strategic and technical experts work together to help you identify, prioritize, implement, and evaluate critical steps at every stage of your Net Zero transition, from strategy through execution and performance monitoring.

In addition to greenhouse gas accounting, our consultants specialize in asset- and portfolio-level Net Zero initiatives. We collaborate with organizations, asset owners, and communities to help them reach net zero targets by creating a sustainable future that enhances quality of life. Our team has experience in setting net zero targets at the asset level, conducting on-site audits, performing asset energy modeling, creating detailed implementation plans, and executing deep energy retrofits. Energy is top of mind in any sustainability effort. As with other areas, alignment with on-going City-wide efforts and existing national/ international models is vital. Our work will allow the City to develop a high-level energy use and GHG inventory at multiple scales.



City of Pompano Beach Sustainability Focus Areas.



Net Zero: From Strategy to Execution

Arcadis Sustainability Advisory

We help our clients navigate increasing market and stakeholder expectations around climate change, environmental trends, and social change.

Organizations rely on our sustainability expertise and our technical and asset knowledge to create long-term value through diverse, multidisciplinary capabilities focused on strategy, performance management, and reporting.



Strategy and Governance

Sustainability Strategy and Program Design

Benchmarking, program visioning, materiality assessment, strategy/org design, sustainability goal setting, policy development.

Net Zero Strategy

GHG mitigation analysis, feasibility assessment, cost/benefit analysis, renewable electricity strategy and procurement, carbon removal strategy, program governance, value chain engagement.

Climate Risk and Reporting

Portfolio climate risk assessment, transition and physical risk strategy, climate risk disclosure, scenario analysis, transition planning, integration into enterprise risk management.



Data and Reporting

Sustainability Measurement

Measure sustainability, assess relevance, define boundaries and develop methodologies for scope 1/2/3 GHG emissions, energy/water/ waste, social and governance KPIs.

Sustainability Disclosure and Stakeholder Engagement

Report/response development (CDP, CSRD, DJSI, EcoVadis, GRESB, GRI, SASB, SFDR, SEC, etc.), stakeholder engagement, policy analysis, response readiness assessment.



Resource Stewardship

Nature and Biodiversity

Biodiversity risk assessment and strategies, nature-based solutions, goals and commitments, measurement and tracking, policy analysis, nature-related financial disclosures (TNFD).

Water Stewardship

Risk and vulnerability assessment, replenishment strategy, collective action, goals and commitments, organizational design.



Value Chain Engagement

Sustainable Supply Chain

Program design and implementation, supplier engagement/education/ capacity building, supplier data collection, goals, commitments, and strategies.

Circularity and Life Cycle Assessment

LCA and hotspot analysis, EPDs, circular thinking, materials management, waste management, zero waste, goals and commitments, measurement and tracking.

Stakeholder / Community Engagement

Successful community engagement requires an ongoing and meaningful conversation with a wide range of stakeholders throughout the planning and design process. No engagement technique is one-size-fits-all; people are diverse in how they want to converse or choose to be engaged, and so variety and innovation in engagement are key to the success of any public project.

Early in a project, Arcadis develops a detailed outreach plan that is intended to evolve in response to new information and needs as a project unfolds. The plan articulates tailored approaches that speak to the specific and diverse needs and interests of a community and provides multiple touchpoints with relevant groups. The plan also details Arcadis' proposed strategies for completing virtual engagement. Arcadis has effectively used a variety of cutting-edge virtual technologies to enable seamless transitions between in-person and remote engagement.

We combine tried-and-true public engagement techniques – community work sessions, charrettes on the island, focus groups, and interviews – with non-traditional outreach sessions, like utilizing vacant storefronts for museum exhibits, family friendly plain-air park arts + visioning activities, urban ecology walks, and virtual reality/digital outreach tools. We pay special attention to creating approaches that meaningfully engage minority and vulnerable populations based on age, race, language, health, housing, or other factors. The primary objectives of our engagement process are to leverage local knowledge, inform in a way that builds community capacity, and identify and create lasting champions for change.

The development of a feasible, funding-ready projects for the City of Pompano Beach requires stakeholder buy-in. To achieve this objective, we must ask the right questions to get at the root of the resilience-based issues for each affected party and the range of palatable and acceptable solutions. Through our engagement processes, we will shape and ask questions such as:

- What do residents and other stakeholders currently know about risk and the climate challenges that lie ahead?
- What are the regulations, ongoing plans and projects, and other factors that may influence how we pursue resilience?



Community engagement events hosted by Arcadis for resilience projects.

- What are stakeholders' tolerances for risk?
- What types of structural, non-structural, nature-based, and other resilience solutions do stakeholders want, what might be immediately off the table, and on what might they compromise?
- How do resilience solutions relate to other community priorities such as public waterfront access or recreational boating, and what tradeoffs related to these issues might be acceptable?

Bringing these questions to the table at the earliest stages of the project and continuing to ask and refine our understanding of the answers is core to our team's approach to the planning and design processes in implementing plan recommendations.



Layering Opportunities To Engage



Layering Opportunities to Engage: Arcadis will design and implement a robust, strategic, and dynamic public engagement process that utilizes multiple engagement tools to communicate and seek feedback about the project

Funding Support

Leveraging our national Funding Team, funding and finance services help City secure resources to realize climate adaptation and resilience projects. The team specializes in integrating climate priorities into capital improvement plans, ensuring long-term local investments align with resilience goals. Our team also provides expert guidance on identifying and securing federal and state grant funding, navigating complex application processes and developing innovative Benefit-Cost Analyses to maximize financial support. Additionally, the team explores innovative financing approaches, such as public-private partnerships, district scale governance and financing approaches, green bonds, and climate finance mechanisms, to unlock new funding opportunities. By combining technical expertise with financial strategy, our team empowers the City of Pompano Beach to implement cost-effective, scalable solutions that drive climate resilience.

Our Support



Funding Program Elements



Key Team Members Experience



Arcadis carefully selected a highly qualified team to meet your diverse needs. Our team is united in our commitment to vibrant, accessible, resilient and sustainable communities, with an approach rooted in place-based design and deep community engagement. We believe in social and environmental infrastructure, and multipurpose investments that provide multiple benefits, enhance the environment and ecology, and bring joy to those benefiting. Combining local, national and global talent across all services, our team members have shaped precedent-setting places across the nation, including projects such as Climate Ready Boston, Seaport and Financial District Climate Resilience Master Plan (Lower Manhattan), the Louisiana Coastal Master Plan, the Louisiana Watershed Initiative, two different regions for Resilient New Jersey, the Miami-Dade Sea Level Rise Strategy and the City of Fort Lauderdale's Vulnerability Analysis to name a few. Our integrated team is founded on established working relationships, and having worked on numerous projects together, we will seamlessly integrate our individual strengths to deliver for the City, carrying your sustainability visions and goals through implementation.



KEITH story began over 60 years ago when they first started serving in the Broward County community. KEITH has collaborated with more than 75 municipalities throughout Florida. They provide surveying and mapping, subsurface utility engineering, planning, civil engineering, traffic engineering, landscape architecture, history preservation, construction management, and virtual design and construction management, and virtual design and construction services. **Located in the heart of Pompano Beach, KEITH has a long history of dedication to the community and proven performance on a wide range of projects for the City.**

KEITH has also used cutting edge and advanced laser scanning technologies in the design and adaptation of history buildings and structures in low lying areas of South Florida. KEITH has ability to create and advance civil engineering, land surveying and landscape architecture guidelines and regulations, including corresponding illustrations.



Based in Davie, FL, **Garth Solutions, Inc. (GSI)** is a consulting firm that delivers targeted and strategic business solutions to a diverse portfolio of clients in both the public and private sectors across the U.S. and Caribbean.

GSI have 20 years of experience working on the capital improvement projects across South Florida.

Their team of 45 full-time professionals and network of available consulting subject matter experts are natural collaborators who enjoy working relationships with trusted market partners. GSI's innate ability to customize solutions to the unique dynamics and requirements of every projects, regardless of size and location, has been fundamental to delivering efficient results for their clients.

Augmenting their core in-house talent with global network of specialists promotes scalability and enables GSI to positively impact marquis projects such as Broward County Public School's \$1.4 billion capital improvement project and Las Olas Boulevard's corridor of improvements that included the construction of a state-of-the-art parking garage facility.

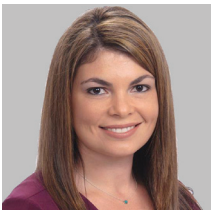
GSI plays an integral role as the lead public outreach consultant on project engagements through Broward, Miami-Dade, and Collier County. For many of these projects, they often execute communication and outreach with both internal and external stakeholders including local communities, HOA's and citizen groups, local businesses, governmental agencies, and planning boards. Over the years, this exposure and experience has enable GSI to build strong relationships throughout South Florida, with an understanding of municipal and community dynamics across the region.





Whitford Remer, AICP, ENV SP | Project Manager

Mr. Remer is a resilience and sustainability expert with direct experience of helping municipal clients reach their departmental goals. As Tampa's first Chief Resilience and Sustainability Officer, he spearheaded and funded climate and vulnerability plans, tree and heat studies, energy efficiency programs, and successfully captured more than \$75 million in state and federal funding for resilience projects. Whit is experienced with municipal CIP programs, long-range resilience planning, and has advised governments, NGOs, and private clients on strategies to reduce risk and strengthen community resilience. On the federal side, he has worked on programs under FEMA, EPA, and HUD CDBG-MIT/DR. With his legal training, planning credentials (AICP), and ENV SP certification, Whit brings a practical, policy-tuned approach that will help the City of Pompano Beach navigate resilience and sustainability complexity and unlock funding for high-impact projects.



Melissa Pomales, PE, ENV SP PMP | Principal in Charge

Mrs. Pomales is a south Florida-based licensed Professional Civil Engineer and Project Management Professional with a diverse range of experience in program and project management, asset management utility consulting and business advisory, procurement and strategic planning, feasibility analyses, funding strategies, planning, and design. She brings many years of experience working on program management for large-scale resiliency, risk, energy management, and emergency response projects in addition to managing Arcadis-led projects in the tri-county area.



Ifetayo Venner, PE, ENV SP | QA/QC

Ms. Venner is a professional engineer and Arcadis' Water Sustainability Leader. As an infrastructure sustainability technical expert she has engaged with multiple teams to compare alternatives using Envision and sustainability metrics; incorporate sustainable concepts in to planning, design, and operation; assess project, program and agency sustainability; prepare and submit documentation for 3rd party Envision verification via the Institute for Sustainable Infrastructure (ISI), and incorporate lessons learned into future efforts as a result of assessments on current projects; and has worked with agencies to update their sustainability guidelines or to identify and make programmatic changes to improve sustainability on future projects. As an Envision Certified Trainer she has trained internal Arcadis staff and staff from multiple utilities/agencies in the use of Envision. She is a past member of the ISI's Envision Review Board the Industry Advisory Board for the Harvard University Zofnass Program for Sustainable Infrastructure.



Carly Foster, AICP, CFM | QA/QC

Ms. Foster, Arcadis' Principal Resilience Planner and Director for Climate Adaptation and Water Management, possesses deep experience in Florida's resilience and sustainability initiatives, including leading municipal, regional, and statewide flood hazard planning. She has been key to the funding of more than \$6 billion in resilience-related projects and is adept at creating resilience programs that scale from individual facilities to organizations, neighborhoods, cities, regions, and the state. Her comprehensive expertise spans initial problem identification, risk quantification, stakeholder engagement, developing policy, programmatic, or physical solutions, implementation planning, benefit-cost analysis, securing funding, and managing programs, grants, and projects. She also specializes in training, capacity building, curriculum development, and post-disaster loss avoidance assessment, expertly managing projects from early goal setting through close-out and evaluation.



Trevor Johnson , AICP, MVP Certified | Adaptation & Implementation Planning Development Lead

Mr. Johnson is a senior urban and environmental planner with deep experience in climate risk and resilience and sustainability planning. He brings a wealth of experience helping coastal communities on the eastern seaboard devise and implement practical and actionable climate adaptation strategies. Mr. Johnson is currently leading Arcadis' work supporting the development of a comprehensive sustainability plan for Philadelphia's waterfront, which encompasses a broad array of issues areas such as energy and waste management.



Paul Weinberg, PLA | Urban Forestry Plan Lead

Mr. Weinberg is a multi-talented designer and team leader who has been based in South Florida since 2000. During this time, he has worked with a variety of significant public and private sector projects including urban parks, hotels, campuses, plazas, mixed-use development, entertainment districts, streetscapes, waterfront and residential projects that provide meaning and purpose to the community. He has a unique understanding of how to create immersive, authentic and memorable spaces that create place identity to bring vitality to each district. He is committed to a team-based approach that delivers creative, thought-provoking solutions tailored to the distinct character of each project. This collaboration starts with the multidisciplinary approach at KEITH and builds to include other partners, consultants, and co-collaborators.



Shandor Szalay | CRS Watershed Management Plan Lead

Mr. Szalay is a nationally recognized expert in helping agencies and communities design and implement large-scale climate adaptation, waterfront development, flood mitigation, watershed management, stormwater management programs, with an emphasis on green infrastructure and nature-based solutions, natural channel design, and stormwater resilience. He has more than 25 years of watershed management plan development experience including work for the St. Croix National Scenic River in Minnesota, the Dibamba River Watershed in Cameroon, and many watersheds along the eastern seaboard. Mr. Szalay has played a vital role in shaping some of the nation's most well-known and successful urban water management programs, including Philadelphia's Green City Clean Water Program, NYC's Green Infrastructure program, Prince George's County Maryland Clean Water Partnership, and the DC Water Clean Rivers Program.



Brian Moore, PhD | Water Audits Lead

Mr. Moore is a technical expert and global leader in water reuse. Through a unique career, he has learned the importance of return on investment and developed a unique talent for identifying water conservation opportunities that meet financial needs while also achieving client sustainability objectives. This perspective is being leveraged to help serve Arcadis' clients with their water conservation, sustainability, and pollution prevention needs. For more than the past 15 years, his projects have yielded approximately 100 billion gallons of water use reduction at sites across the globe.



Matthew Yonkin, PE, CEM | Energy Audits Lead

Mr. Yonkin has a wide range of experience in energy management services, focusing primarily on energy audits, demand-side measures, on-site generation, decarbonization, and electrification. He is also experienced with energy conservation measures for buildings systems, energy savings through industrial process improvements, renewable generation technologies, combined heat and power, performance contracting, alternative fuels, and tariff implications. He has helped assess, develop, and implement successful energy efficiency, decarbonization, and energy management programs at the facility level, portfolio level and policy level, conducting benchmarking studies, and developing and implementing measurement and verification and monitoring strategies to verify performance and identify opportunities for further improvement.



Katie Eisenbrown | GHG Inventory Update Lead

Ms. Eisenbrown is a global technical director for sustainability measurement specializing in sustainability strategy and environmental and Greenhouse Gas (GHG) resource management and public reporting. She has 16 years of experience managing GHG emissions across industries. She has supported more than 80 organizations to measure, manage and report on GHG emissions impacts and ambitions. Recent projects include Scope 3 relevance assessments, carbon accounting software evaluation and implementation support as well as methodology reviews. She has completed goal achievement strategies and investment needs for science-based targets and Net Zero targets for submission to SBTi. Ms. Eisenbrown focuses on delivering high quality inventories to lead to realistic goal achievement strategies with clear actions.



Melissa Hew, CFM, WEDG | Adaptation & Implementation Planning Development

Ms. Hew, a senior consultant with Arcadis' urban and coastal resiliency practice, is a proven leader with a strong technical background and public sector experience. She delivers robust project management and strategic advisory, specializing in leading resilience planning, climate adaptation, mitigation, and funding/grant management projects of all scales. Her success lies in her extensive experience in partnership and capacity building, alongside equitable stakeholder engagement. Ms. Hew excels at cultivating relationships with internal and external stakeholders, community partners, elected officials, and residents to advance strategic resilience goals, with project experience in areas such as watershed planning, vulnerability assessments, nature-based infrastructure, climate adaptation, sustainability, and environmental protection.



Kelli Schueler, PLA, LEED AP | Urban Forestry Plan

An experienced landscape architect and dedicated project manager with KEITH, Ms. Schueler provides planning, design and project management services for a wide variety of project types through all phases of the development process. Her knowledge of the local environment, innovative technologies and sustainable best practices is combined with a creative approach that is detail oriented, ensuring designs are implemented both efficiently and accurately. She has a wide range of project experience, but is most motivated by the opportunity to create special moments within the urban environment where hardscape and architectural elements are thoughtfully combined with green space to create impactful places of respite and community within the urban core.



Brian Bandy, PE | H&H Modeling

An experienced landscape architect and dedicated project manager, Kelli Schueler provides Mr. Bandy serves as a senior engineer leading teams to support water-resources projects and programs. He specializes in watershed improvement studies and design, stormwater engineering, floodplain management, Federal Emergency Management Agency (FEMA) floodplain/ floodway modeling, multi-purpose river basin studies, and water supply planning. His experience includes modeling tidally influenced stormwater systems consisting of open channels, storm sewer pipe networks, detention facilities, flood control gates and weirs, and stormwater pump stations. He is proficient in the use of Storm Water Management Model (SWMM) 2-D and Hydrologic Engineering Center's-River Analysis System (HEC-RAS) 2D models which more accurately represent overland flow of stormwater in many applications. He has worked with clients and stakeholders to select Best Management Practices (BMPs), including green infrastructure practices, and evaluate BMPs based on pollutant load reductions, cost and feasibility.



Gary Trachtman, PE, CDT | Water Audits

Mr. Trachtman has performed water loss audits for water systems ranging from 30,000 to 400,000 accounts and has recommended and assisted with implementation of programs for reducing and managing Non-Revenue Water. Mr. Trachtman has been a member of the AWWA Water Loss Control Committee (WLCC) for over 15 years, contributed to the 3rd, 4th and 5th editions of Manual M36 Water Audits and Loss Control Programs and peer reviewed USEPA's guidance document on Best Practices to Consider When Evaluating Water Conservation and Efficiency as an Alternative for Water Supply Expansion (2016). He serves as Chair of the WLCC's Water Audit Regulatory Practices Subcommittee, and member of the WLCC's Subcommittees on Outreach and Apparent Losses. He is also Secretary of the AWWA Customer Metering Practices Committee and contributed to the 3rd and 4th editions of AWWA Manual M22 Sizing Water Service Lines and Meters.



Ian Minnes | GHG Inventory Update

Mr. Minnes is a committed project manager, program manager and consultant with a passion for sustainability. Specializing in sustainability, particularly net zero initiatives, he adopts an integrated approach, understanding client needs and striving for first- time product excellence. With extensive experience in leading strategic projects at Arcadis, his entrepreneurial flair, networking abilities, and diverse background across public, private, and knowledge sectors enable him to excel in new environments. Utilizing his broad network, he navigates stakeholders' interests, organizational structures, and collaboration methods to curate effective teams for complex sustainability challenges. His talent for uniting diverse perspectives and promoting collaboration, alongside his multi-dimensional climate strategies, showcases his strength in unifying people and interests toward sustainable goals.



Kristyn McClure | GIS / Geospacial Analysis

Ms. McClure has over eight years of GIS experience in both the public and private sectors creating and configuring Esri WebMaps and Apps, including Experience Builder, Hub sites, Survey123, and Field Maps to facilitate transportation planning projects. She leverages geoprocessing functions and analyses data ETL and linear referencing to support transportation planning efforts. Ms. McClure developed and implemented a unified linear referencing system for the Florida Department of Transportation to include state, county, local, and private roads.



Yvonne Garth | Community Engagement & Related Services Lead

Yvonne Garth, President & CEO of Garth Solutions, Inc. (GSI), brings over 31 years of strategic leadership in public relations, marketing, and communications to complex, high-profile projects throughout South Florida and beyond. Since founding GSI in 2003, Yvonne has established the firm as a trusted partner for public and private sector clients dedicated to engaging diverse stakeholders in transformative initiatives. Under her leadership, GSI has successfully executed comprehensive outreach and communication campaigns for prominent organizations that include Broward County Public Schools, Broward County Aviation Department, and nearly all municipalities across Broward.

Yvonne's expertise spans stakeholder engagement, brand development, targeted messaging, media relations, and more. Her background includes nearly a decade as an Advertising and Public Relations Executive at a top-tier agency, where she directed strategic campaigns for global brands, laying a strong foundation for GSI's innovative approach to public sector communications.

Renowned for her ability to leverage deep community relationships, Yvonne consistently facilitates strategic partnerships and collaborations that deliver measurable results. Her commitment to public service and community engagement is exemplified by her previous roles as Commissioner and Vice Mayor for the City of Miramar, as well as Chair and Board Member for the Broward County Small Business Advisory Board, and Board Member of the Miramar Cultural Arts Trust. This blend of local insight and firsthand industry insight positions GSI as a premier communications firm adept at navigating complex, multi-stakeholder environments.

Similar projects that our team members have completed within the past five years are listed in Section 2 Technical Approach / Relevant Projects.




Section 07.

Resumes of Key Personnel



07. Resumes of Key Personnel

In this section, we have provided resumes for all key staff. Key staff are designated with the  symbol on our organizational chart in Section 5.



Whitford Remer, AICP, ENV SP

Project Manager

Whit Remer is a resilience and sustainability expert with direct experience of helping municipal clients reach their departmental goals. As Tampa's first Chief Resilience and Sustainability Officer, Whit spearheaded and funded climate and vulnerability plans, tree and heat studies, energy efficiency programs, and successfully captured more than \$75 million in state and federal funding for resilience projects. Whit is experienced with municipal CIP programs, long-range resilience planning, and has advised governments, NGOs, and private clients on strategies to reduce risk and strengthen community resilience. On the federal side, Whit has worked on programs under FEMA, EPA, and HUD CDBG-MIT/DR. With his legal training, planning credentials (AICP), and ENV SP certification, Whit brings a practical, policy-tuned approach that will help the City of Pompano Beach navigate resilience and sustainability complexity and unlock funding for high-impact projects.

Key Information

Education

- JD, Loyola University, New Orleans College of Law, 2010
- MA, Urban and Regional Planning, University of New Orleans, 2010
- BS, Geography and Political Science, Florida State University, 2007

Years of Experience

Total – 15

With Arcadis – <1 year

Relevant Skills & Qualifications

- ✓ Program/Project Management
- ✓ Sustainability
- ✓ Resilience
- ✓ Planning
- ✓ Funding / Grants Management
- ✓ Energy / Water Audits
- ✓ Vulnerability Assessments
- ✓ Adaptation Planning and Implementation
- ✓ CIP
- ✓ Stakeholder and Community Engagement

Relevant Experience

Energy and Water Audits

City of Tampa, FL

Updated the City of Tampa's Greenhouse Gas Inventory (prior version from 2009). Led the 2020 update and used the results to justify the hiring the city's first full-time energy manager. New staff lead ~\$2M solar installation, identified \$250,000 in utility account savings through a TECO (Tampa's local utility) audit, and secured over \$450,000 in IRS Direct Pay tax credits in May 2025. Collaborated with the Tampa Water Department to conduct irrigation audits of city-owned athletic fields.

Tampa Bay Regional Planning Council: Resilient Ready

Tampa Bay Area, FL

Led Tampa's inland flooding project to develop flood resilience designs across three environmental contexts: barrier islands, coastal, and inland. Tampa's inland-focused project addressed repeated flooding in a closed stormwater basin. Working with a team of landscape architects, engineering, flood professional, and planners, we developed an innovative floodable park concept, strategic home buyout plans, and a network of boardwalks and "water parks."

Vulnerability Assessment

City of Tampa, FL

As part of the Resilient Florida program, secured \$500,000 to conduct a comprehensive vulnerability assessment. Co-led development of one of the state's most detailed asset inventories and risk analysis tools. Two focus areas identified: solid waste facility access and an eroding beach that serves as a cultural resource for local Latino communities.

Urban Forest Canopy Analysis

City of Tampa, FL

Collaborated with research teams, planning staff, and natural resources divisions to update Tampa's Urban Forest Canopy Analysis. Results laid the groundwork for \$1 million in USDA Urban Forest grants and established a baseline just before significant canopy losses from Hurricane Milton.

Climate Action Plan

City of Tampa, FL

Led the development of Tampa's first Climate Action Plan—a comprehensive strategy with three core goals: Reduce Emissions, Adapt Infrastructure, and Take Care of People. The plan has been recognized as a national gold standard and helped the city secure significant grant funding for projects identified.

Urban Heat Plan

City of Tampa, FL

One of the first of its kind nationally. Secured funding from the National Academies of Sciences and partnered with Resilient Cities Catalyst to develop a design-forward urban heat intervention plan in a low-canopy, low-income neighborhood. Used the results to apply for a \$20 million EPA Community Change grant (decision pending).

Pathways to Palmetto

City of Tampa, FL

Secured multiple funding streams (BRIC, RAISE, BIL) to implement a transformative project including a new elevated seawall, a multimodal trail, storm surge protection, inland flood mitigation, improved mobility safety, and resolution of submerged property ownership issues. The project benefits a waterfront neighborhood in an industrial and historic part of Tampa.

Vulnerability Assessment

Town of Davie, FL

Resilience technical advisor for the development of a vulnerability assessment and adaptation plan for the Town of Davie. Tasks include identifying the Town's critical assets to prepare for current and future flood risks; assessing adaptive capacities of the Town; prioritizing adaptation needs; identifying strategies to address the vulnerabilities of the Town's most at-risk critical assets; leading stakeholder engagement amongst Town governments, elected officials and community members; and ensuring compliance with the Resilient Florida Grant Program requirements.

American Society of Civil Engineers Government Affairs

Washington, DC

Managed and advanced legislative and regulatory policy for the nation's largest civil engineering trade organization. Advised four teams competing for \$1 billion in federal (HUD) resilience grants on how to design infrastructure to mitigate risk and increase resilience caused by natural disasters. Represented organization at highest levels of government to advocate for sustainable infrastructure investment and risk informed planning.



Melissa Pomales, PE, ENV SP, PMP, IAM

Principal in Charge

Key Information

Education/Qualifications

- MS, Finance, Indiana University Bloomington, 2014
- MBA, Indiana University Bloomington, 2014
- MS, Civil Engineering, Cornell University, 2004
- BS, Civil Engineering, Cornell University, 2003

Years of Experience

Total – 21

With Arcadis – 19

Professional Registrations/ Certifications

- Professional Engineer – FL, PR
- Project Management Professional
- Institute of Asset Management
- Envision Sustainability Professional
- Lean Six Sigma Sensei

Relevant Skills & Qualifications

- ✓ Project / Program Management
- ✓ Asset Management
- ✓ Utility Risk & Resilience Assessments
- ✓ Financial Services
- ✓ Business Advisory
- ✓ Procurement
- ✓ Strategic Planning

Mrs. Pomales is a south Florida-based licensed Professional Civil Engineer and Project Management Professional with a diverse range of experience in program and project management, asset management utility consulting and business advisory, procurement and strategic planning, feasibility analyses, funding strategies, planning, and design. She brings many years of experience working on program management for large-scale resiliency, risk, energy management, and emergency response projects in addition to managing Arcadis-led projects in the tri-county area.

Relevant Experience

Asset Management Framework Development

Miami-Dade Water and Sewer Department, Miami, FL

Project manager for the development of an enterprise-wide Asset Management (AM) Framework to implement across water and sewer with optimized business practices, an effective technology portfolio and high-level organizational awareness for staff knowledge and training.

Hurricane Sandy Recovery and Resiliency Portfolio Project Controls

NYC Mayor's Office of Recovery and Resiliency (ORR), New York, NY

Project manager responsible for embedded team within the New York City Mayor's Office of Recovery and Resiliency charged with providing monitoring and oversight services of the recovery and resiliency program, totaling over 1,000 projects with a combined program budget of \$23 billion. Managed a team of five full-time and eight part-time (remote) employees. Supported client in development of strategy and plan for transitioning program tracking, controls and monitoring activities to internal ORR team.

Risk and Resilience Assessments and Emergency Response Plans

Puerto Rico Aqueduct and Sewer Authority, San Juan, PR

Project manager and QA/QC lead for the completion of risk and resilience assessments and emergency response plans for PRASA's 98 water systems in support of compliance with America's Water Infrastructure Act of 2018. Managed a 20+ team and coordinated with over 30 client staff members through collaborative workshops, surveys and formal review and QA/QC process.

Comprehensive Energy Management Program Development

Puerto Rico Aqueduct and Sewer Authority, Puerto Rico

Project manager for the development of PRASA's Comprehensive Energy Management Program. Managed procurement efforts for power purchase agreements and energy performance contracts. Led team in the development of due diligence and strategy development for regional operational initiatives. Supported PRASA in all interagency and stakeholder communication and engagement efforts.

Engineering Services, Water Resources Engineering City of Tallahassee, FL

Account Leader, Advisor, and QA/QC support for various task orders under this continuing services agreement, including preparation of the 20-year water Master Plan update, Wells 26 and 23 operational evaluations and Well 23 Pilot Study and Treatment Design.

Program Management Consulting/Bond Engineer Puerto Rico Aqueduct and Sewer Authority, Puerto Rico

Program manager of consulting/bond engineer annual responsibilities, including deliverables as per Master Agreement of Trust with bondholders including Asset Condition Reports, Consulting Engineering Reports, and Annual Budget and Cash Disbursement Reports. Supported bond issuances exceeding \$5 billion.

Wastewater Pump Station Asset Management and Master Plan

City of Plant City, FL

Quality assurance and capital planning task technical advisor for asset management activities and development of a wastewater pump station master plan, which included condition assessment and process evaluation of pump stations and force mains.

Asset Management Program Development and Staff Augmentation

Toho Water Authority, Kissimmee, FL

Business process mapping lead and QA/QC support for development of an asset management program, and development of standards to support operational and financial goals.

P3 for Automated Metering Infrastructure and Customer Service Optimization

Puerto Rico Aqueduct and Sewer Authority, San Juan, Puerto Rico

Project Manager and Lead Technical Consultant for the development of a public-private partnership to optimize customer services and deploy an Automated Metering Infrastructure program.

Planning, Engineering and Environmental Services for San Francisco Seawall Earthquake Safety and Disaster Prevention Program

Port of San Francisco, San Francisco, CA

Program controls leader responsible for the Seawall earthquake and resilience program, providing program-wide schedule, budget, contract administration and oversight for the development of initial \$400M+ resilience and strengthening program.

Program Management Framework Development

Los Angeles Department of Water and Power, CA

Technical Expert for the development of a framework and implementation roadmap for Program Management. Evaluated current project and program management practices for the water system, facilitated workshops and interviews with staff, and in process of developing guidelines and SOPs and implementing a pilot to assess and review the framework.

Risk and Resilience Assessments and Emergency Response Plans

City of Hollywood, FL

Technical advisor for the development and update of a risk and resilience assessment and emergency response plan for water system utilities in support of compliance with America's Water Infrastructure Act of 2018.

Risk and Resilience Assessments and Emergency Response Plans

Indian River County, FL

Technical advisor for the development and update of a risk and resilience assessment and emergency response plan for water system utilities in support of compliance with America's Water Infrastructure Act of 2018.



Ifetayo Venner, PE, ENV SP, LEED GA

QA/QC – Envision / Sustainability

Ms. Venner is a professional engineer and Arcadis' Water Sustainability Leader. As an infrastructure sustainability technical expert she has engaged with multiple teams to compare alternatives using Envision and sustainability metrics; incorporate sustainable concepts in to planning, design, and operation; assess project, program and agency sustainability; prepare and submit documentation for 3rd party Envision verification via the Institute for Sustainable Infrastructure (ISI), and incorporate lessons learned into future efforts as a result of assessments on current projects; and has worked with agencies to update their sustainability guidelines or to identify and make programmatic changes to improve sustainability on future projects. As an Envision Certified Trainer she has trained internal Arcadis staff and staff from multiple utilities/agencies in the use of Envision. She is a past member of the ISI's Envision Review Board the Industry Advisory Board for the Harvard University Zofnass Program for Sustainable Infrastructure.

Key Information

Education/Qualifications

- MBA, Business Administration, University of South Florida, 2008
- MS, Environmental Engineering, Stanford University, 2000
- BS, Civil Engineering, McGill University, 1998

Years of Experience

Total – 24

Professional Registrations/Certifications

- Professional Engineer – CT, FL, TX
- Envision Sustainability Professional Credential (ENV SP)
- Leadership in Energy and Environment – LEED

Relevant Skills & Qualifications

- ✓ Sustainability
- ✓ Planning
- ✓ Design & Engineering
- ✓ Adaptation and Implementation Planning
- ✓ Water / Wastewater / Reuse
- ✓ Energy Management
- ✓ Water Audits

Relevant Experience

Sustainable Infrastructure Guidelines

The Port Authority of New York & New Jersey, New York City, NY

Technical lead for this project to update the Port Authority's Sustainable Infrastructure Guidelines and sustainability rating system and tools to reflect advances in sustainability and to align it with the Envision rating system which was released since the last SIG update. To establish a baseline from which to develop the updated SIG, assessed the 2011 SIG with respect to current practice and historical project performance; conducted workshops with SIG users to obtain feedback; reviewed project, planning, construction, stakeholder engagement and sustainability guidelines, practices, and initiatives across the agency, and conducted interviews with multiple infrastructure agencies. Conducted an assessment of the sustainability performance for typical PA projects and provided, scored and prioritized recommendations to enhance sustainability performance across multiple elements of sustainable infrastructure design. Developed updated SIG with multiple elements including a manual, checklist, calculation and documentation templates, credit coversheets, and case studies.

Sustainable Water Infrastructure Project

City of Santa Monica, CA

Technical advisor and reviewer for the Envision portion of this project to enhance water self-sufficiency and resilience for the City. This project included a new 1-mgd advanced treatment facility to recycle wastewater for reuse, including indirect potable reuse via aquifer recharge; a new 0.5-mgd stormwater reuse facility; and a new 1.5-MG stormwater harvesting tank. The Envision Framework was used to

enhance and document project sustainability. Arcadis was responsible for Envision related coordination and development of the submittal for independent verification with the Institute for Sustainable Infrastructure. The project received an Envision Platinum Award.

Huntington Levee

Fairfax County, VA

Technical Advisor and Envision Sustainability Professional Credential (ENV SP) for this project to build a levee and pump station for flood protection for the Huntington area. Responsible for coordinating with Fairfax County and Arcadis staff to implement sustainability principles into the design, developing and reviewing the documentation required for pursued credits, and to file the completed application with the Institute for Sustainable Infrastructure. This project received a Bronze Envision Award.

Upper Proctor Creek Capacity Relief Project

City of Atlanta, GA

Lead Envision Sustainability Professional for this project to provide engineering and design support to the City of Atlanta's Department of Watershed Management for Phase 2 of a capacity relief project in the upper portion of the Proctor Creek Basin. The project will provide capacity relief to some combined sewer trunks by diverting stormwater in the upper basin into a sewer capacity relief facility at the future Mims Park. The city intends to apply for an Envision award for this project. ENV SP Lead responsible for coordinating with city staff and design team to implement sustainability principles into the design, develop the documentation required for pursued credits, and to file the completed application with the Institute for Sustainable Infrastructure.

Colvin Run II – Value Engineering

Fairfax County, VA

Sustainability Technical Lead to conduct a sustainability review of the project and recommend project and programmatic improvements to enhance the project sustainability and that of the County's future watershed projects. Presented on Envision to the client and project teams, assessed the baseline product sustainability using Envision, identified where the project and the County's watershed projects were doing well and where there was room for improvement with respect to sustainability. Provided the County with a list of actions

that could readily be implemented to enhance sustainability and improve Envision scoring, as well as another list of stretch actions that could be implemented in the longer term.

Sheldon Avenue Stormwater Infrastructure and Roadway Improvements

New York City Department of Design and Construction (NYDDC), Staten Island, NY

Arcadis provided construction administration services for this project to convert some residents from septic to sanitary sewer and to install a stormwater Best Management Practices. Sustainability Lead responsible for coordinating with NYDDC and Arcadis staff to assess the sustainability of the project as it related to the Envision rating system, develop documentation required for pursued credits, to file the completed application with the ISI for Envision Verification, and identify lessons learned and next steps for sustainability improvement in future NYDDC projects. This project received a silver award.

Richland Creek WTP

Paulding County, GA

Technical Advisor/ENV SP for this project which includes the design of a 60 mgd river intake, an 18 mgd water treatment plant, as well as an associated pipeline, reservoir, and reservoir intake. Responsible for guiding the team in the use of the Envision Rating tool to incorporate sustainability principles in to design and to ultimately submit the project for accreditation.

Hamlin Water Reclamation Facility Phase 1

Orange County Utilities, Orlando, FL

Project manager and design leader for this project to construct a new WRF, designed to meet advanced wastewater treatment standards and master planned to allow for an ultimate buildout capacity of 15 mgd. The new WRF contains several process elements, including headworks with odor control, BNR treatment train with process air blower system, secondary clarifiers, RAS/WAS pump pumping, tertiary filters, chlorine contact tanks, chemical feed systems, sludge holding and thickening with odor control. Services included process design and master planning, preliminary design, detailed design, permitting, and engineering services during bidding, construction, and start-up.



Carly Foster, AICP, CFM

QA/QC

Ms. Foster, Arcadis' Principal Resilience Planner and Director for Climate Adaptation and Water Management, possesses deep experience in Florida's resilience and sustainability initiatives, including leading municipal, regional, and statewide flood hazard planning. She has been key to the funding of more than \$6 billion in resilience-related projects and is adept at creating resilience programs that scale from individual facilities to organizations, neighborhoods, cities, regions, and the state. Her comprehensive expertise spans initial problem identification, risk quantification, stakeholder engagement, developing policy, programmatic, or physical solutions, implementation planning, benefit-cost analysis, securing funding, and managing programs, grants, and projects. She also specializes in training, capacity building, curriculum development, and post-disaster loss avoidance assessment, expertly managing projects from early goal setting through close-out and evaluation.

Key Information

Education/Qualifications

- MSP Urban Planning Florida State University (Growth Management Specialization)
- BS Political Sciences Florida State University

Years of Experience

Total – 21

With Arcadis – 16

Professional Registrations/ Certifications

- Certified Planner (AICP)
- Certified Floodplain Manager (CFM)
- FEMA Hazus Practitioner
- FEMA Hazus Professional

Relevant Skills & Qualifications

- ✓ Resilience
- ✓ Funding / Grants Management
- ✓ Vulnerability Assessments
- ✓ Adaptation and Implementation Planning
- ✓ Risk Assessments
- ✓ Stakeholder / Community Engagement
- ✓ Strategic Planning
- ✓ Benefit-Cost Analysis

Relevant Experience

Public Facilities Flood Mitigation Initiative

Florida Division of Emergency Management

Project lead for the development of manual, workshop and training materials, State Hazard Mitigation Plan update, and proposed siting and prioritization criteria to mitigate public facilities in the state of Florida against flood hazard. Led coordination at the state level to fund and implement mitigation projects for state-owned facilities. Conducted four workshops with more than 150 participants.

NFIP / CRS Pilot

Florida Division of Emergency Management

Pilot program on behalf of Florida to expedite completion of pre-requisite requirements for entry into the Community Rating System. Responsibilities included evaluation of floodplain and floodplain development, review of policy and compliance, workshops, reporting, and evaluation close out. Included technical assistance to communities. Evaluated and supported community compliance with the National Flood Insurance Program and the flood provisions of the Florida Building Code through field evaluations, review of policy, permits, and elevation certificates, as well as workshops and interviews with community floodplain management stakeholders.

Vulnerability Assessment

City of Fort Lauderdale, FL

Technical Advisor for the development of a Resilient Florida funded vulnerability assessment and adaptation plan for the City of Fort Lauderdale. Tasks included identifying City critical assets to prepare for current and future flood risks; assessing adaptive capacities of the City; prioritizing adaptation needs; and identifying strategies to address the vulnerabilities of the City's most at-risk assets.

Loss Avoidance Assessment Methodology and Deployment

Florida Division of Emergency Management, FL

Project and technical lead in the development of Florida's publicly released system and strategy for loss avoidance assessment for flood and wind mitigation projects. Project lead conducting loss avoidance assessment of 150 flood mitigation projects throughout the state of Florida within the damage swath of TS Debby. Project lead in loss avoidance assessment for severe storms and wind events that occurred in 2014. The effort demonstrated that 33 projects costing \$18 million (in 2015 dollars) prevented over \$24 million in loss.

Residential Construction Mitigation Grant Program Development

Florida Division of Emergency Management

Project lead for the development of a residential construction mitigation grant program for the State of Florida.

Land Use Assessment and Local Mitigation Strategy Enhancement

Multiple counties, State of Florida

Lead planner to execute enhanced risk assessments, refined project scopes, and companion land use development recommendations as outlined in 44 C.F.R. §201.6(c)(2)(ii)(A), (B) and (C). Selected deliverables included: 1) A ranked inventory of current and future structures, landmarks, infrastructure, and critical infrastructure located in hazardous areas and structurally vulnerable to wind-related hazards, 2) Calculations of potential dollars lost in current and future development scenarios. 3) A land use map which is expected to minimize these damages and recommendations for changes to the Comprehensive Plan and future land use map. 4) Preliminary Project Scopes that resulted from the identification of vulnerabilities and strategies to address them, as well as fund source identification.

\$120-Million Winning National Disaster Resilience Competition Application

Norfolk, VA

Benefit cost analysis team lead and planner to support Norfolk in developing environmental, social and economic development solutions that support adaptation to sea level rise and prevent repetitive loss in low to moderate income areas of the community.

Louisiana Watershed Initiative

Council on Watershed Management, LA

Project manager in the program development and rethinking of floodplain management in the state of Louisiana. Development of extensive statewide engagement strategies, facilitation of the five agency Watershed Council (DOTD, GOHSEP, CPRA, OCD, LDWF), development and facilitation of technical advisory groups on policy, planning, data and project evaluation, administrative support and subject matter expertise to public relations and engagement technical advisory groups. Program documentation development, development of recommendations for the program and related agency activities. Evaluations and recommendations to leverage and streamline funding. Implementing Phase I implementation roadmap, developed and supported implementation of the statewide listening tour.

Expanding Boston's Capacity to Build Coastal Resilience Infrastructure

Innovation Network for Communities, South Boston, MA

Supported the development and analysis of implementation strategies for a district level plan to address sea level rise and recurrent flooding in the Seaport District of Boston. Worked directly with the client and stakeholders, including property owners and the City of Boston, to frame and refine financial, regulatory and governance approaches for funding and shoreline infrastructure to reduce coastal flood risk.

Pensacola Bay Basin Flood Mitigation Action Plan

Escambia County and City of Pensacola, FL

Strategic guidance and QA/QC for development of action plan and fund source application. Staff were able to pull together various local agency and public stakeholders to build consensus around long term significant flood issues. Historic flood models QA'd and gap analyses completed, all prior mitigation plans and proposals reviewed. Several public workshops completed. Innovative solutions proposed, including both green and grey solutions, and preliminary funding plan developed.

Hazard Mitigation and Emergency Management Program Support – 404, PDM, FMA

Columbia County and Calhoun County, Florida

Provided directional support for mitigation program development, implementation, tracking, and evaluation. Goal setting, Community outreach.



Trevor Johnson, AICP

Adaptation & Implementation Planning Development Lead

Mr. Johnson is a senior urban and environmental planner with deep experience in climate risk and resilience and sustainability planning. He brings a wealth of experience helping coastal communities on the eastern seaboard devise and implement practical and actionable climate adaptation strategies. Mr. Johnson is currently leading Arcadis's work supporting the development of a comprehensive sustainability plan for Philadelphia's waterfront, which encompasses a broad array of issues areas such as energy and waste management.

Key Information

Education/Qualifications

- MUP, Urban Planning, Harvard University Graduate School of Design, 2014
- MA, Historical Archaeology, University of Massachusetts – Boston, 2010
- BA, Anthropology, Bard College, 2007

Years of Experience

Total – 14

With Arcadis – 6

Professional Registrations/ Certifications

- American Institute of Certified Planners (AICP)

Relevant Skills & Qualifications

- ✓ Resilience
- ✓ Adaptation and Implementation Planning
- ✓ Funding / Grants Management
- ✓ Strategic Planning
- ✓ Risk Assessments
- ✓ Stakeholder / Community Engagement
- ✓ Coastal and Flood Management Strategies

Relevant Experience

Vulnerability Assessment and Adaptation Plan

City of Fort Lauderdale, FL

Quality Control Lead for the development of a vulnerability assessment and adaptation plan for the City of Fort Lauderdale. Tasks include identifying City critical assets to prepare for current and future flood risks; assessing adaptive capacities of the City; prioritizing adaptation needs; and identifying strategies to address the vulnerabilities of the City's most at-risk assets.

Resilient New Jersey, Northeastern New Jersey & Raritan River and Bays Communities

New Jersey Department of Environmental Protection, NJ

Resilience planner for regional resilience plans for two regions of the Resilient New Jersey initiative. Supported teams technical risk analysis, watershed planning and community engagement contributing to the development of near- and long-term strategies for community adaptation and resilience.

Sustainability and Resilience Plan for the Central Delaware Waterfront

Delaware River Waterfront Corporation, Philadelphia, PA

Project manager for the development of a comprehensive sustainability and resilience plan for the Central Delaware Riverfront. Coordinating subject matter experts throughout Arcadis to provide benchmarking, implementation planning for climate adaptation, energy use, waste reduction, stormwater management and other issue areas.

Portsmouth Va Data and Equity Driven Flood Resilience Strategy

City of Portsmouth, VA

Quality Control Lead for the development of the City's data-driven and equity-driven flood resilience strategy, a citywide approach to managing and responding to near- and long-term flood risks from rainfall and coastal storms. Advise teams of engineers, planners, and community-engagement specialists to ensure accuracy and quality of process.

Building Resilience in the Commonwealth's Designated Port Areas

Massachusetts Office of Coastal Zone Management, MA

Project director for study of coastal flood risks and resilience opportunities in two port areas. Directed a team of engineering and resilience experts in assessing flood risks to water dependent industrial uses and developing resilience and risk reduction strategies aligned with infrastructure and operational. Led engagement of stakeholders municipal leaders, property owners and tenants

Resilient Wilmington

City of Wilmington, DE

Project Director for citywide and neighborhood studies and implementation planning to address flood risks and resilience opportunities. Working closely with City leadership, directed a multidisciplinary team of engineering and resilience experts in assessing flood and other climate risks to the City. Directed teams in the development of detailed action plans for engaging stakeholders and community members in the process of implementing recommendations of the Resilient Wilmington study. Directed focus area feasibility studies for flood resilience infrastructure in South Wilmington and supported federal grant applications for the areas affecting by flooding from the Brandywine River.

Coastal Resilience Solutions for East Boston and Charlestown (Phase II)

City of Boston, MA

Project manager for plan to develop coastal resilience solutions for two waterfront neighborhoods in the City of Boston. Lead a multidisciplinary team of professional planners, engineers, designers, and community engagement specialists to develop a comprehensive strategy to build resilience to coastal flooding and sea level rise. Final deliverables will include detailed risk assessments, resilience and adaptation scenarios, and a detailed action plan.

Nantucket Coastal Resilience Plan

Town of Nantucket, MA

Project manager for island-wide coastal resilience plan for the Town and County of Nantucket. Lead a multidisciplinary team of professional planners, engineers, designers and community engagement specialists to develop strategies for community adaptation and resilience to address flooding and coastal erosion risks. Final deliverables include risk assessments, resilience and adaptation scenarios, and an action plan.

Flood Resilience and Adaptation Guide for Small Communities

Embassy of the Kingdom of Netherlands, Washington, DC

Project manager and lead author for a resilience and adaptation guide intended for decision-makers in small U.S., communities with limited resources. The guide presents a suite of approaches, ranging from low-cost easy-to-implement options to more complex long-term strategies, that communities may use to reduce inland and coastal flood risk. The guide also offers a planning and assessment framework for evaluating suitable alternatives. The guide was developed in partnership with the American Flood Coalition.

Resiliency Assessment and Strategies

New England Aquarium, Boston, MA

Project manager for comprehensive climate risk vulnerability assessment and development of conceptual risk mitigation strategies. Managed team of engineers, architects and resilience specialists to provide a long-term plan for climate hazards mitigation while meeting client objectives for operational continuity, waterfront access and safety of sea life.

Expanding Boston's Capacity to Build Coastal Resilience Infrastructure

Innovation Network for Communities, South Boston, MA

Served as project planner for the development and analysis of implementation strategies for a district level plan to address sea level rise and recurrent flooding in the Seaport District of Boston. Worked directly with the client and stakeholders, including property owners and the City of Boston, to frame and refine financial, regulatory and governance approaches for funding and constructing shoreline infrastructure to reduce coastal flood risk.



EDUCATION

2000
B.S., Landscape Architecture
Michigan State University

YEARS OF EXPERIENCE

Industry: 25 years
KEITH: 7 years

PROFESSIONAL REGISTRATIONS

LA6666804, Professional Landscape Architect (PLA), Florida
Council of Landscape Architecture Registration Boards (CLARB) Certified

PROFESSIONAL AFFILIATIONS

Urban Land Institute (ULI) Member
American Society of Landscape Architects (ASLA) Member
American Resort Development Association (ARDA) Member
Riverwalk Trust Board Member
MSU Landscape Architecture Advisory Board Board Member

PROFILE

Paul Weinberg is a multi-talented designer and team leader who has been based in South Florida since 2000. During this time, Paul has worked with a variety of significant public and private sector projects including urban parks, hotels, campuses, plazas, mixed-use development, entertainment districts, streetscapes, waterfront and residential projects that provide meaning and purpose to the community. He has a unique understanding of how to create immersive, authentic and memorable spaces that create place identity to bring vitality to each district. Paul is committed to a team-based approach that delivers creative, thought-provoking solutions tailored to the distinct character of each project. This collaboration starts with the multi-disciplinary approach at KEITH and builds to include other partners, consultants, and co-collaborators.

RELEVANT PROJECT EXPERIENCE

DC Alexander Park, Fort Lauderdale, FL: Principal-in-Charge. KEITH is assisting the Client in developing a KEITH Play project that includes the visioning and redevelopment of an oceanfront park nestled in a unique 1+ acre spot on Fort Lauderdale's beachfront near the Fort Lauderdale Aquatic Center and International Swimming Hall of Fame. KEITH is providing services to the Client including survey/SUE, planning, civil and traffic engineering, landscape architecture, and construction observation. The KEITH Team assisted the Client with public engagement, turtle-compliant lighting, carefully planned stormwater infrastructure, shoreline habitat analysis, and practical and creative applications of stormwater mitigation practices resulting in a design that reflects and embraces the social and economic needs of the community. This award-winning project through its context - historic and present, its users, and the needs of the community - balances 'design for people' and 'design with nature' and is a testament to the value of comprehensive research, exploration, and analysis phases.

The Adderley Sistrunk Redevelopment, Fort Lauderdale, FL: Principal. KEITH assisted the Client in developing a KEITH Life project that includes the transformation of a neighborhood involving resilient planning requiring many facets to be considered ensuring the project can stand the test of time setting the tone for future development in the community while paying homage to one of the neighborhood icons, Cannonball Adderly, a famous American jazz musician. The project also includes public art, programming, 417 rental units, 8,861-SF of retail, 5,650-SF restaurant, and a 500+ space garage. KEITH provided full services to the Client including civil engineering, survey/SUE, planning, landscape architecture, and construction management. The KEITH Team assisted the Client in successfully blending a desire for public art, market rate housing, commercial opportunities, infrastructure improvements to mitigate stormwater, and water/sewer improvements to take a once blighted city block and turn it into a development opportunity further enhancing the ongoing resurgence of the corridor.

John Knox Village Stormwater Management Plan, Pompano Beach, FL: Landscape Architect. KEITH assisted the Client in the development of a KEITH Life project consisting of a senior residential facility, formal and semi-formal gardens, and surface parking. KEITH provided full services to the Client including civil engineering, survey/SUE, planning, landscape architecture, and CEI. Additional KEITH services included the estimated engineering design for Phase I projects, engineering for coordination and deliverable review, stormwater modeling, permitting, water distribution, and wastewater collection plan.



Shandor Szalay

CRS Watershed Management Plan Lead

Mr. Szalay is a nationally recognized expert in helping agencies and communities design and implement large-scale climate adaptation, waterfront development, flood mitigation, watershed management, stormwater management programs, with an emphasis on green infrastructure and nature-based solutions, natural channel design, and stormwater resilience. He has more than 25 years of watershed management plan development experience including work for the St. Croix National Scenic River in Minnesota, the Dibamba River Watershed in Cameroon, and many watersheds along the eastern seaboard. Mr. Szalay has played a vital role in shaping some of the nation's most well-known and successful urban water management programs, including Philadelphia's Green City Clean Water Program, NYC's Green Infrastructure program, Prince George's County Maryland Clean Water Partnership, and the DC Water Clean Rivers Program.

Key Information

Education/Qualifications

- MS, Water Resources Science, University of Minnesota, 1999
- BS, Environmental Forest Biology State University of New York, 1994

Years of Experience

Total – 23

With Arcadis – 2

Relevant Skills & Qualifications

- ✓ Watershed Management
- ✓ Resilience
- ✓ Coastal
- ✓ Policy Analysis
- ✓ Program Development
- ✓ Project / Construction Management
- ✓ H&H Modeling
- ✓ Green Infrastructure
- ✓ Nature-Based Solutions

Relevant Experience

Watershed-Based Management Plans for Coastal Watersheds

Southwest Connecticut Planning Agency, CT

Project manager for the development of three watershed-based plans for three-watershed-based plans for coastal watersheds in southwest Connecticut.

Watershed Management Plan

Dibamba River, Cameroon

Worked as part of an interdisciplinary team to develop a watershed management plan for the Dibamba River, a coastal river near the City of Doula, Cameroon. Led a review of existing watershed and river conditions, facilitated workshops and training in watershed management, developed a series of recommendations for improved watershed management that were adopted by the Doula City Council, and developed strategies for incorporating waste reduction and water usage into watershed management efforts.

Lake Wallenpaupack Watershed-Based Management Plan

Pike County, PA

Project manager for the development of three-watershed-based plans for coastal watersheds in southwest Connecticut.

Vermillion River Watershed and Stream Corridor Assessment

Vermillion River, MN

Project manager for the development of three watershed-based plans for three-watershed-based plans for coastal watersheds in southwest Connecticut.

Resiliency and Climate Adaptation Support**Office of Sustainability, Philadelphia, PA**

Project lead for several engagements related to climate adaptation and mitigation including development of a city-wide property level climate mitigation program, development of a FEMA BRIC application (funded) for a resilience planning in the Eastwick neighborhood of South Philadelphia, evaluating the efficacy of various floodproofing and flood mitigation measures in Philadelphia neighborhoods, conducting community engagement around flood mitigation alternatives, and convening technical model coordination workshops to promote cross-agency collaboration on hydraulic modeling.

Strategic Plan for Stormwater**Pittsburgh Water and Sewer Authority, Pittsburgh, PA**

Project manager. Led a multi-disciplinary team of urban planners, hydrologists, landscape architects and engineers to devise a comprehensive vision and strategy for stormwater investments in the City of Pittsburgh. The project prioritized investments in stormwater to meeting regulatory mandates and flood mitigation objectives. The plan separated the city into distinct typologies and devised a replicable stormwater investment strategy for each typology. The plan also provided recommendations for the formation of a joint task force for combatting flooding, outlined a policy framework for establishing a city-wide level of service, and provided long range cost estimates for implementing recommended improvements.

Green Cities Clean Waters Program**Philadelphia Water Department, PA**

Project lead for the development of various elements of a \$2 billion wet weather program, including green infrastructure O&M, stormwater credit design assistance, and comprehensive stormwater code update. Led individual BMP and stream restoration designs and several stormwater masterplans, many of which included significant public outreach and/or stakeholder engagement components.

Flood Resilience Plan for Eastwick**Office of Sustainability, Philadelphia, PA**

Project and technical lead for the development of a FEMA-funded Flood Resilience Plan for the Eastwick neighborhood of Philadelphia. Provided technical oversight for the development and refinement of a PC-

SWMM model, which was used to iteratively evaluate flood resilience measures for reducing riverine, stormwater, and coastal flooding. The plan will provide a long-term strategy for managing recurring riverine, coastal, and stormwater flooding within the highly vulnerable community of Eastwick, located in Southwest Philadelphia. The plan includes a robust community-engagement effort, technical engineering feasibility evaluation of identified flood resilience measures including levees, land swaps, buy-outs, and nature-based solutions. Additionally, the scope of work includes the development of a detailed implementation plan, as well as a FEMA BRIC grant application for a selected high priority implementation project.

Lower South Philadelphia Transportation Resilience Plan On-call Services**The Philadelphia City Fund, Philadelphia, PA**

Project manager responsible for the provision of technical services, including transportation planning and engineering, climate technical services, economic analysis, stakeholder engagement, urban design, and funding support for the development of a Transportation Resilience Plan for Lower South Philadelphia.

Hydraulic, Permitting, and Engineering Studies for Delaware River Waterfront Sites**Various Clients, Philadelphia, PA**

Project lead for the successful completion of several hydraulic, permitting, and engineering studies to assess the impacts of flooding on proposed development sites, facilitate permitting of waterfront development measures, and evaluate the potential for relocation or enhancement of water and sewer infrastructure associated with proposed development projects. Facilitated productive dialogue among private developers and public agencies regarding cost-sharing, engineering feasibility, coordination, and other topics, provided technical direction to technical teams responsible for preparation of permitting documents, hydraulic modeling studies, and alternatives analysis for infrastructure relocation efforts.

Stream Restoration and Wetland Projects**City of Philadelphia, PA**

Project lead. Led the design of several large-scale stream restoration and wetland creation projects in the City of Philadelphia. Responsible for all aspects of design, including site assessments, engineering design, permitting, and H&H modeling.



Brian Moore, PhD

Water Audits Lead

Mr. Moore is a technical expert and global leader in water reuse. Through a unique career, he has learned the importance of return on investment and developed a unique talent for identifying water conservation opportunities that meet financial needs while also achieving client sustainability objectives. This perspective is being leveraged to help serve Arcadis' clients with their water conservation, sustainability, and pollution prevention needs. For more than the past 15 years, his projects have yielded approximately 100 billion gallons of water use reduction at sites across the globe.

Key Information

Education

- Post-Doctoral, Inorganic Chemistry, University of Alicante, 2002
- PhD, Environmental Engineering (Major), Fuel Science (Minor), Pennsylvania State University, 2000
- MS, Environmental Engineering, Pennsylvania State University, 1996
- BS, Civil Engineering, Pennsylvania State University, 1995

Years of Experience

Total – 28

With Arcadis – 9

Licenses & Certifications

- Lean Six Sigma Certified, Black Belt

Relevant Skills & Qualifications

- ✓ Water Balance
- ✓ Industrial and Municipal Water Treatment and Conveyance
- ✓ Planning
- ✓ Design & Engineering
- ✓ Water Audits
- ✓ Sustainability
- ✓ Water Reuse

Relevant Experience

Water Use Reduction

Confidential Client, California

Provided consulting services for the development of a detailed water balance and water conservation strategy. Developed water balance using historical site water flow data and data collected by Arcadis using clamp-on ultrasonic flow meters. Employed collaborative Water Kaizen Blitz® (WKB) approach for developing water efficiency solutions to meet client's 40 percent water use reduction goal. Identified 15 water efficiency projects, of which 13 were recommended for implementation, and which would reduce site water use by 31 percent. Developed a conceptual (recycle) solution that would (when coupled with the WKB projects) to achieve 46 percent overall water use reduction while also addressing discharge compliance risks.

Framework for Industrial Water Reuse (Water Environment & Reuse Foundation (WE&RF)-14-04)

Confidential Client, New York

Principal Investigator. Responsible for a research project funded through WE&RF and focused on developing a framework to help industry with industrial water conservation. The project included a background discussion on the financial drivers for investments within industrial operations. The report also outlined approaches to correctly account for all cost benefits in a water project, as well as a novel approach for identifying cost effective water conservation opportunities. The report also identified potential barriers, as well as providing guidance on how to avoid or overcome these barriers. The project also included several case study examples from industrial partners involved in the project.

Reduce, Reuse, Recycle at Large Manufacturing Site in Midwest United States

Confidential Client, Confidential Location

Led the conception and development of a water use reduction approach for one of client's largest and most complex manufacturing sites. Responsible for identifying the opportunity at the site, as well as developing the concept to facilitate reuse and recycle at the site. Subsequently developed a strong and robust business case for

the project, which was presented to the CEO to secure funding and drive the project. Design was completed this multiphase project, with construction underway. Prior to the design stage of the project, led a water kaizen blitz event at the site to identify opportunities to reduce water usage. During site and design team execution of the project, provided technical support and oversight to the project. Upon completion the project will save an estimated \$2.5 million/year as well as reducing the site's water usage by 55 to 70 percent, which will also have a significant impact on client's overall water reduction progress.

Wastewater Recycle

Automotive Assembly Plant, Silao, Mexico

Technical Lead responsible to help client manage water availability challenges at their assembly plant. Led the technical development of the recycle approach/solution. A key challenge faced in these types of projects is the risk of hardness scaling and/or silica fouling on membranes at the recycle plant. Developed an innovative holistic solution utilizing the existing (incoming) water purification equipment to sufficiently pre-treat the water such that hardness and silica levels were managed up-front, mitigating challenges they can cause in a recycle system. Influent wastewater had been characterized by highly variable chemical oxygen demand (COD) levels, historically creating challenges to biological treatment. These COD challenges were mitigated through upstream projects and repurposing of existing treatment assets. Existing infrastructure was further leveraged at the wastewater plant to further drive down costs and optimize performance for the wastewater recycle system. While the production increase at the plant increased water needs by 40 percent, this wastewater recycle project allowed the plant to actually decrease their well water withdrawal by 44 percent.

Water Kaizen Blitz (WKB) at Multiple Industrial Facilities

Multiple Locations

Led numerous WKB events have been performed for Arcadis's industrial clients. The WKB is a highly collaborative process based on lean manufacturing and designed to identify financially viable water conservation and recycle opportunities for industrial facilities.

As is typical with the WKB process, each of these WKB events involved between one and three teams (depending on the size of the site). Each of the teams is carefully structured, comprised of client site employees as well as Arcadis team of industrial water conservation and recycle experts. Each WKB team is carefully built, covering six

specific roles designed to provide a very broad knowledge. Each WKB event follows a specific recipe, built upon collaboration and outside the box thinking, with the goal to drive innovation. During each WKB event anywhere from 10 to more than 50 water conservation and recycle opportunities are identified. In each WKB, all opportunities are sufficiently fleshed out to enable development of project descriptions and corresponding capital cost estimates, as well as estimates for annual water savings, operating cost savings and project payback period. A summary of results from recent WKBs demonstrated the power of the WKB method and the significant extent of water and financial savings opportunities provided. A number of these sites were already deemed water efficient, but the WKB team was able to find opportunities to reduce water use yet further.

Water Reduction Commitment (EcoWater)

Confidential Client, Niskayuna, New York

Led WKB initiative, which is a cost-benefit-focused program for identifying water reduction opportunities at manufacturing sites. On average, the events identified opportunities to reduce the site's water use by 20-50 percent solely through opportunities each having less than a two-year payback. Led 20 WKB events at the confidential industrial client's largest sites (and across multiple confidential industrial client businesses). The WKB events yielded more than \$12 million of annual cost savings opportunities as well as significant water savings opportunities with <two-year paybacks. Other key contributions included the strategic development of the confidential industrial client's fourth ecomagination commitment to reduce freshwater consumption by 25 percent by 2015. The client achieved 46 percent water use reduction within five years of the goal launch with most of this reduction coming from financially favorable projects. Identified, led, or contributed to. Prior to leaving the confidential industrial client, also assisted in development of the confidential industrial clients recently announced next generation water goal.



Matthew Yonkin, PE, CEM

Energy Audits Lead

Mr. Yonkin has a wide range of experience in energy management services, focusing primarily on energy audits, demand-side measures, on-site generation, decarbonization, and electrification. He is also experienced with energy conservation measures for buildings systems, energy savings through industrial process improvements, renewable generation technologies, combined heat and power, performance contracting, alternative fuels, and tariff implications. He has helped assess, develop, and implement successful energy efficiency, decarbonization, and energy management programs at the facility level, portfolio level and policy level, conducting benchmarking studies, and developing and implementing measurement and verification and monitoring strategies to verify performance and identify opportunities for further improvement.

Key Information

Education/Qualifications

- MS, Management & Technology, Rensselaer Lally School of Management, 2004
- BS, Civil Engineering Union College, 1994

Years of Experience

Total – 32
With Arcadis – 30

Professional Registration/Certifications

- Professional Engineer – NY
- Certified Energy Manager – US

Relevant Skills & Qualifications

- ✓ Energy Management
- ✓ Energy Audits
- ✓ Renewable Energy
- ✓ Decarbonization
- ✓ On-Site Generation
- ✓ Alternative Procurement
- ✓ Project / Program Management

Relevant Experience

Flexible Technical Assistance Program

NYSERDA / Statewide New York

Project manager or technical lead on over a two dozen energy efficiency studies within the municipal and industrial sectors. All studies were cost-shared up to 50% by the New York State Energy Research and Development Authority. Energy conservation measures that have been evaluated include pumping systems, aeration systems, solids handling processes, disinfection systems, media and membrane filtration systems, hydroelectric generation, biogas-fired electricity generation, HVAC systems, lighting improvements, geoechange, photovoltaic electricity generation, and demand reduction measures.

Statewide Energy Master Plan

New York Power Authority and Canal Corporation, Statewide New York

Program manager for development of Statewide Energy Master Plan to support compliance with BuildSmart 2025 goals and the Authority's internal sustainability goals to lead by example. Program includes more than 170 buildings across two dozen campuses. Work includes completion of ASHRAE audits at 60 buildings, assessment of the technical and financial feasibility of distributed solar generation and building electrification, development of a strategy for deployment of electric vehicle chargers to support fleet conversion, and development of a metering strategy to more effectively monitor energy use and track ongoing performance.

Statewide Energy Efficiency Services

New York Power Authority / Statewide New York

Program Manager and technical advisor for Statewide program to support NYPA with meeting the energy efficiency needs and goals of other governmental and municipal entities throughout New York. To date, work has included ASHRAE Level II energy audits and lighting assessments of 3.1 million square feet; design and implementation services for building HVAC system upgrades;

feasibility studies, including thermal conductivity testing, for two potential geothermal ground source heat pump projects; Planning, lighting studies, design, and construction management of streetlighting retrofit projects for four municipalities encompassing nearly 4,000 fixtures.

Portfolio-Wide Assessment of Solar

Confidential Client, Throughout U.S.

Technical lead for the assessment, prioritization, and strategy development for deployment of solar at dozens of covered and uncovered parking facilities throughout the U.S. Analysis included review of tariffs and rates, conceptual layout of arrays (ground-mounted, roof-mounted, and canopy-mounted), and techno-economic modeling to determine overall feasibility. Other services included: site prioritization and implementation strategy, level II energy audits and lighting assessments of 3.1 million square feet; design and implementation services for building HVAC system upgrades; planning, lighting studies, design, and construction management of streetlighting retrofit projects for four municipalities encompassing nearly 4,000 fixtures.

Bus Fleet Electrification

New Jersey Transit Authority, NJ

Technical advisor for feasibility study to support NJTA's sustainability efforts. Work included financial and technical evaluation of retrofitting or expanding an existing bus garage to accommodate electrification of a portion of the bus fleet. Assessment of rate impacts, load profile, and infrastructure upgrades, including the development of operations and maintenance and capital costs to support the financial evaluation, were completed.

Transactional Support Services for Renewable Natural Gas Project

City of Dayton, OH

Technical advisor supporting technical and financial analysis of potential partnership models for digester gas clean-up and sale as Renewable Natural Gas. Responsible for developing RFQs, reviewing and shortlisting respondents, developing RFPs, reviewing and analyzing proposals to assess overall feasibility and identify the most beneficial alternative for the City.

Technical Support for Large Scale Renewables Development

NYS Office of Renewable Energy Siting, New York

Program manager to support recently formed Office of Renewable Energy Siting with pre-application fieldwork, comprehensive application review, and permit

development for all new renewable energy projects greater than 25 MW proposed to be constructed within New York State.

WRRF Baseline and Energy Assessment

NYSERDA, Statewide

Technical advisor for a statewide program that assessed readiness of New York's largest WRRFs to undertake integrated capital and energy planning. Forty-four of the largest WRRFs in the State participated, with Arcadis having direct responsibility for 20 of them and Program Management responsibility for the remaining. Work included assessment of current planning processes, review of capital plans and existing energy studies, and completion of high-level walkthrough audits to identify energy efficiency or renewable generation opportunities.

Evaluation of Cogeneration System Ownership

PWD Northeast WPCP, Philadelphia, PA

Technical advisor supporting technical and financial analysis of potential ownership models for digester gas-to-electricity combined heat and power project. Analysis was completed to assist owner in determining most beneficial course of action factoring in costs, risks, environmental benefits, and complexity.

High-Level Assessment of Feasibility of Anaerobic Digestion

The Metropolitan District, Hartford CT

Technical lead for a fast-tracked assessment of the technical and financial feasibility of integrating anaerobic digesters into the current solids management strategy to capitalize upon recently promulgated organics management regulations in Connecticut. Scenarios that were evaluated included management of current solids streams as well as import of additional feedstocks (organics and additional sludge) with beneficial recovery of biogas for displacement of natural gas use for incinerators, generation of electricity for on-site use, or production of renewable biogas for direct inject into the natural gas grid.

Comprehensive Energy Management Program Development

Puerto Rico Aqueduct and Sewer Authority, Puerto Rico

Technical lead for the development of a Comprehensive Energy Management Program including energy audits, identification of consumption reduction and energy diversifications opportunities, and development and implementation of power purchase agreements and energy performance contracts.



Katie Eisenbrown

GHG Inventory Update Lead

Ms. Eisenbrown is a global technical director for sustainability measurement specializing in sustainability strategy and environmental and Greenhouse Gas (GHG) resource management and public reporting. She has 16 years of experience managing GHG emissions across industries. She has supported more than 80 organizations to measure, manage and report on GHG emissions impacts and ambitions. Recent projects include Scope 3 relevance assessments, carbon accounting software evaluation and implementation support as well as methodology reviews. She has completed goal achievement strategies and investment needs for science-based targets and Net Zero targets for submission to SBTi. Ms. Eisenbrown focuses on delivering high quality inventories to lead to realistic goal achievement strategies with clear actions.

Key Information

Education & Qualifications

- BS Geography, Cartography and GIS, University of Wisconsin, 2007
- MBA Sustainability and Entrepreneurship, Leeds School of Business, University of Colorado, 2016

Core skills

- GHG Inventory Management
- Data collection and Analysis
- GHG Training

Years of experience

Total – 16

Relevant Skills & Qualifications

- ✓ Sustainability
- ✓ GHG Inventory
- ✓ Net Zero
- ✓ Planning
- ✓ Energy Audits
- ✓ Strategic Planning

Project Experience

GHG Inventory Evaluation

St. Louis, MO

Project manager, lead evaluation of current GHG inventory practices and recommended enhancements to allow for adequate goal tracking and prepare for third party verification.

Center for Corporate Climate Leadership

Washington, DC

Project manager provides support to EPA's Center for Corporate Climate Leadership, which provides GHG management resources to organizations. Provide updates of emission factor lists, calculation tools, and other resources. Provided support to the Climate Leadership Awards program.

GHG Inventory Calculator

Washington, DC

Project staff that updated a Simplified GHG Emissions Calculator for use by small businesses. Reviewed the submitted inventories for data quality and approved the inventory process.

Energy Opportunity Assessment

Builder and construction management firm, New York City, NY

reviewed and compiled surveys and created a summary of recommendations.

Net Zero Investment Needs Assessment

St. Louis, MO

Project manager identified pathway to achieve Net Zero by 2040 including capital and operating expense estimates to meet the target.

Science-based Target (SBT) Goal Setting and Achievement Roadmap

San Jose, CA

Project manager developed and submitted a SBT approved by the Science Based Targets initiative, then developed a goal achievement roadmap with level of investment required to achieve the SBT as well as carbon neutral commitment.

GHG Performance Metrics Development

Phoenix, AZ

Project manager lead methodology review and implementation for GHG emissions intensity development and tracking for a regional electric utility. Developed strategy for communicating the benefits of electric vehicles and the impacts on the electric utility and the global environment.

Renewable Energy Procurement

Confidential apparel company, United States

Technical staff supported onsite solar procurement, defined requirements, developed request for proposal, reviewed bid responses and made recommendations based on best fit.

Climate Adaptation Strategy Refresh

Apparel company, United States

Task lead led development of energy efficiency and renewable energy opportunity assessments as part of the broader refresh of the climate adaptation strategy, providing expertise in GHG accounting, energy efficiency, renewable energy, data analysis within the company's operations and up the supply chain.

Supply Chain Sustainability Strategy

Food and beverage company, United States

Project staff conducted maturity assessment and current state assessment through interviews and manufacturing site visits. Developing a roadmap through stakeholder engagement including actions and strategies as they relate to goals.

GHG Inventory

Electric Utility, Phoenix, AZ

Technical support for data collection and emissions calculations for scope 1, 2 and 3 emissions, for all relevant sources under equity control including power plant and mining operations.

GHG Inventory and Goal Setting

Regional grocery store, Phoenix, AZ

Project manager led development of first annual GHG inventory including scope 1, 2 and 3 emissions. Developed GHG reduction goal for over 200 stores and offices nationwide.

GHG and waste inventories and GRI reporting

Financial institution, Charlotte, North Carolina

Task manager that completed emissions and waste calculations for global facilities for inclusion in 3rd party assured corporate inventories. Gathered and organized information for GRI reporting.

Inventory and CDP supply chain

Nuclear energy company, Cranberry Township, Pennsylvania

Project manager that completed corporate GHG inventory and quantitative questions of their CDP Supply Chain response.

GHG Inventory and Communication

Consumer health products, Pleasanton, California

Project manager that completed GHG inventory and provided year over year comparison graphics. Identified relevant GHG emissions and relevant information updates for customer's website. Acted as a liaison with Climate Counts to complete the Climate Counts scorecard.

GHG Inventory

WSP Group, London, United Kingdom

Project staff that reviewed data from WSP business units and completed GHG emissions calculations and intensity metrics for inclusion in WSP Group's annual report using the Inventory Management System (IMS) developed by WSP.

Carbon Intensity of Delivered Electricity

Phoenix, AZ

Project manager provides guidance for developing a delivered electricity factor based on The Climate Registry's Electric Power Sector protocol, for tracking progress against goal and for customer knowledge. This work includes stakeholder engagement to develop a policy and procedure for adequately tracking renewable electricity



Melissa Hew, CFM, WEDG

Adaptation & Implementation Planning Development

Ms. Hew, a senior consultant with Arcadis' urban and coastal resiliency practice, is a proven leader with a strong technical background and public sector experience. She delivers robust project management and strategic advisory, specializing in leading resilience planning, climate adaptation, mitigation, and funding/grant management projects of all scales. Her success lies in her extensive experience in partnership and capacity building, alongside equitable stakeholder engagement. Ms. Hew excels at cultivating relationships with internal and external stakeholders, community partners, elected officials, and residents to advance strategic resilience goals, with project experience in areas such as watershed planning, vulnerability assessments, nature-based infrastructure, climate adaptation, sustainability, and environmental protection.

Key Information

Education/Qualifications

- MS Environmental Science Water Resource Management & Assessment Towson University 2014
- BA Environmental Studies Tulane University 2011

Years of Experience

Total – 12
With Arcadis – 3

Professional Registrations/ Certifications

- Certified Floodplain Manager (CFM)
- WEDG Associate (WEDG)

Relevant Skills & Qualifications

- ✓ Resilience
- ✓ Planning
- ✓ Funding / Grants Management
- ✓ Vulnerability Assessments
- ✓ Adaptation and Implementation Planning
- ✓ Risk Assessments
- ✓ Stakeholder / Community Engagement

Relevant Experience

Vulnerability Assessment

Town of Davie, FL

Project Manager for the development of a vulnerability assessment and adaptation plan for the Town of Davie. Tasks include identifying the Town's critical assets to prepare for current and future flood risks; assessing adaptive capacities of the Town; prioritizing adaptation needs; identifying strategies to address the vulnerabilities of the Town's most at-risk critical assets; leading stakeholder engagement amongst Town governments, elected officials and community members; and ensuring compliance with the Resilient Florida Grant Program requirements.

Vulnerability Assessment

City of Fort Lauderdale, FL

Project Manager for the development of a Resilient Florida funded vulnerability assessment and adaptation plan for the City of Fort Lauderdale. Tasks include identifying City critical assets to prepare for current and future flood risks; assessing adaptive capacities of the City; prioritizing adaptation needs; and identifying strategies to address the vulnerabilities of the City's most at-risk assets.

Grant Management and Funding Support

City of St. Petersburg, FL

Provided grant management and hazard mitigation funding support including annual FEMA Flood Mitigation Assistance (FMA) grant management to elevate repetitive loss properties along nearby Tampa Bay. Liaised with FEMA, FDEM and other agencies as needed for grant applications, and advised on other state and federal funding programs for City projects.

AWIA Risk and Resilience Assessment

City of Hollywood, FL

Conducted and developed a risk and resilience assessment in accordance with the requirements of the 2020 Water Infrastructure Act.

Resilience Program Manager

City of Miami Office of Resilience & Sustainability, FL

Co-author of Miami's first Climate Ready Strategy to reduce risks of flood, heat and storms over the next 40 years, and maximizing co-benefits. Created policies and recommended policy amendments to mitigate climate risks including policies for the adoption of updated SLR projections for City projects, futureproofing infrastructure, and enhancing natural ecosystems and biodiversity. Provided technical expertise for the analysis, planning and preparation for sea level rise and other climate hazards, and led community workshops, public meetings, design charrettes, and other events on these topics. Led public engagement efforts for Miami Forever Bond. Worked closely with City's floodplain administrator on enhancing the Community Rating System (CRS) program. Managed, engaged and built relationships with internal and external stakeholders, community partners, elected officials, community organizations, and residents to achieve programmatic and strategic goals for CRS. Co-developed and managed the City's flood reporting tool, synthesized data from tool to address stormwater maintenance and operation and secure grant funding. Developed vulnerability assessment criteria for the City's critical infrastructure and assets to 1) establish the baseline condition of critical infrastructure and assets, 2) determine the impacts of current and future climate risks on this infrastructure, 3) understand community needs for new infrastructure and 4) develop a process so that retrofitted and new infrastructure withstands future climate impacts.

Resilience Planning and Vulnerability Assessment Project Management

City of Portsmouth, VA

Leading the development of a data-driven and equity-driven flood resilience plan that will provide key actions for the City to improve its resilience posture. Client point of contact for resilience planning and vulnerability assessment engagement. Providing strategic task project management for development of an asset inventory, conducting a flood risk and vulnerability assessment, identifying flood hazards (including sea level rise, precipitation and storm surge), development of a resilience toolkit and adaption strategies, social vulnerability analysis, and development of an adaption action plan. Developing inclusive community engagement and outreach strategy and leading stakeholder engagement for the City's flood resilience plan development. Providing ongoing services to address the City's increasing risk from coastal storms, tidal flooding and other hazards, including comprehensive FEMA BRIC grant management services.

Compact Climate Assessment Tool (C-CAT)

Southeast Florida Regional Climate Change Compact, FL

Co-developed C-CAT with City of Miami, Compact and other partners. C-CAT provides local governments in southeast Florida with a means for prioritizing climate actions and enhancing public communication on progress of priority actions for reducing emissions, advancing adaptation and integrating equity.

Shoreline Adaptation and Protection Alternatives Analysis & Funding Strategy

Tarpon Springs, FL

Provided project leadership and project management support across engagement deliverables for various resilience planning initiatives and competitive grant funding efforts. Provided subject matter expertise for technical feasibility analyses of several shoreline and flood mitigation alternatives for Whitcomb Bayou (increasing vulnerability from tidal, storm surge and heavy precipitation flood hazards). Conducted analysis of technical/engineering solutions, level of protection, community preferences, and regulatory feasibility of alternatives. Developed strategy to align selected alternative(s) with appropriate federal and state resilience/hazard mitigation funding programs for implementation.

Private Property Climate Risk Assessment

Nationwide

Research lead for the development of various climate risk assessments for a private property portfolio. The climate risk assessment included analysis of heat, drought related water stress, wildfires, earthquakes, hurricanes, tornados, flood, and sea level rise on various privately owned structures. The assessment outlined asset level risk concerns and identified major impacts caused by climate hazards.

Coastal Jefferson Long-term Hurricane Ida Economic Recovery

Jefferson Parish, LA

Provided project management and strategic advisory support for strategy development, key stakeholder engagement with elected officials and business community, case study analysis, and study framework. Led client conversations on engagement strategies and stakeholder survey development to inform plan framework development.



KELLI SCHUELER, PLA, LEED AP

Landscape Architect



PROFILE

An experienced landscape architect and dedicated project manager, Kelli Schueler provides planning, design and project management services for a wide variety of project types through all phases of the development process. Her knowledge of the local environment, innovative technologies and sustainable best practices is combined with a creative approach that is detail oriented, ensuring designs are implemented both efficiently and accurately. Kelli has a wide range of project experience, but is most motivated by the opportunity to create special moments within the urban environment where hardscape and architectural elements are thoughtfully combined with green space to create impactful places of respite and community within the urban core.

EDUCATION

2003
B.S., Landscape Architecture
Oklahoma State University

YEARS OF EXPERIENCE

Industry: 19 years
KEITH: 7 years

PROFESSIONAL REGISTRATIONS

LA6667565, Professional Landscape Architect (PLA), Florida
2959, Professional Landscape Architect (PLA), Texas

RELEVANT PROJECT EXPERIENCE

River Oaks Tree Disposition Project, Fort Lauderdale, FL: Landscape Architect. KEITH, as subconsultant to Ric-Man Construction, is assisting the Client in developing a KEITH Life project including the development of a roadway infrastructure project involving water and sewer upgrades impacting multiple streets in the River Oaks neighborhood of Fort Lauderdale, FL. KEITH provides services to the Client including landscape architecture/arborist, survey, and construction program management. The KEITH Team is assisting the Client in special purpose tree survey, tree inventory and appraisal by in-house Certified Arborist, tree disposition plan including location, size, and quality of trees on site, street tree planting plans, permitting, and construction observation. The project, once completed, will serve to improve the quality and longevity of the streets, sewers, and trees of the community.

DC Alexander Park, Fort Lauderdale, FL: Landscape Architect. KEITH is assisting the Client in developing a KEITH KEITH Play project that includes the visioning and redevelopment of an oceanfront park nestled in a unique 1+ acre spot on Fort Lauderdale's beachfront near the Fort Lauderdale Aquatic Center and International Swimming Hall of Fame. KEITH is providing services to the Client including survey/SUE, planning, civil and traffic engineering, landscape architecture, and construction observation. The KEITH Team assisted the Client with public engagement, turtle-compliant lighting, carefully planned stormwater infrastructure, shoreline habitat analysis, and practical and creative applications of stormwater mitigation practices resulting in a design that reflects and embraces the social and economic needs of the community.

Youth Sports Complex, Pompano Beach, FL: Landscape Architect. KEITH assisted the Client in the development of this KEITH Play project that includes several multi-purpose pitches, clubhouse with concessions, restrooms, storage, offices, landscaped walking paths, preservation of several mature canopy trees to provide a park experience that affords ample shade, and a 180-space parking lot in the 10-acre complex. KEITH, as prime consultant, provided full services to the Client throughout all design phases including public outreach, planning, design development and site plan approval, and ultimately permitting and construction observation.

Annie Adderly Gillis Park, Pompano Beach, FL: Landscape Architect. KEITH, under its continuing services contract with the city, assisted the Client in developing a KEITH Play project that included the development of a small park serving the local community integrating historically important elements and providing flexibility to create larger gathering spaces for events ensuring that, when not being used for events, the day-to-day visitor feels comfortable in the space. KEITH provided full services to the Client including civil engineering, survey, planning, and landscape architecture.

KEITH Team assisted the Client with integrated drainage plans allowing a resilient approach to infrastructure creating a functioning park with plaza, playground, fitness areas, signage, and special events lawn.

North Pompano Park Improvements, Pompano Beach, FL: Landscape Architect. KEITH assisted the Client in developing a KEITH Play project that includes several multi-purpose sports fields, concession stands, restrooms, sports and site lighting, walking paths, parking, dog park, and artificial turf and natural sod enhancements at the 20-acre site that is home to the Pompano Eagles youth football team. KEITH, utilizing a multi-disciplinary team, provided full services to the Client including civil engineering, survey/SUE, landscape architecture, planning, arborist services, tree disposition, and construction management from the early planning stages. The completed improvements continue to provide an activity destination for the community.

Fort Lauderdale Police Headquarters, Fort Lauderdale, FL: Landscape Architect. KEITH, as subconsultant to AECOM, assisted the Client in the development of a KEITH Facility project including the demolition of existing buildings and the design and construction of a new Police Headquarters. KEITH provided full services to the Client including civil and traffic engineering, survey/SUE, utility coordination, planning, landscape architecture, and construction program management. The new headquarters, built in phases, began with the parking garage, firing range, and perimeter landscape buffers to neighboring residents. Phase two included initial site development, SW 13th Avenue extending up to the existing fleet maintenance facility, restriping of existing surface parking, and replacement of the radio tower. Demolition of outparcel buildings and construction of the new facility, including central plant, were phase three. Lastly, demolition of the old facility and a portion of the fleet maintenance facility followed by final site development including extension of SW 13th Avenue to Broward Boulevard, the creation of a linear park along Broward Boulevard, and the removal of all remaining surface parking and outparcel buildings.



Brian Bandy, PE

H&H Modeling

Mr. Bandy serves as a senior engineer leading teams to support water-resources projects and programs. He specializes in watershed improvement studies and design, stormwater engineering, floodplain management, Federal Emergency Management Agency (FEMA) floodplain/ floodway modeling, multi-purpose river basin studies, and water supply planning. His experience includes modeling tidally influenced stormwater systems consisting of open channels, storm sewer pipe networks, detention facilities, flood control gates and weirs, and stormwater pump stations. He is proficient in the use of Storm Water Management Model (SWMM) 2-D and Hydrologic Engineering Center's-River Analysis System (HEC-RAS) 2D models which more accurately represent overland flow of stormwater in many applications. He has worked with clients and stakeholders to select Best Management Practices (BMPs), including green infrastructure practices, and evaluate BMPs based on pollutant load reductions, cost and feasibility.

Key Information

Education/Qualifications

- BS, Civil Engineering, Georgia Institute of Technology, 1995

Years of Experience

Total – 26

With Arcadis – 22

Professional Registrations/ Certifications

- Professional Engineer – GA

Relevant Skills & Qualifications

- ✓ H&H Modeling
- ✓ Water Resources
- ✓ Water Quality
- ✓ Stormwater
- ✓ SWMM 2-D
- ✓ HEC-RAS 2D
- ✓ Conveyance
- ✓ Floodplain Management

Relevant Experience

Brooklyn, Hunnicutt, and West Fork Trail Creek Floodplain Mapping Athens-Clarke County, GA

Project Water Resources Engineer/Task Manager. Hydrologic and hydraulic (H&H) analysis, QAQC, and task management. Project involves detailed study and limited detail study of three previously studied streams and their tributaries per FEMA requirements. Associated tasks include preparation of work maps and LOMR package for submittal to FEMA.

Canal Conveyance Capacity Program

South Florida Water Management District, Central and South, FL

Reviewed H&H sections of reports from numerous consultants identifying segments of District canals that are functionally deficient and recommended remedial measures that will restore the system to its design conveyance capacity. Identified needs for maintenance and improvements, developed capital projects to address deficiencies, and provided a means for archiving and retrieving canal data and information.

Program Management and Engineering Support Services

South Florida Water Management District, West Palm Beach, FL

Managed team working together with District staff to develop the Canal Conveyance Capacity Program (CCCP), which includes more than 1,600 miles of canals 1,000 miles of levees and berms. Performed reviews of hydraulic studies and hydraulic models utilizing HEC-HMS and HEC-RAS to develop H&H modeling standards and policies for the District to evaluate and prioritize canal maintenance regarding dredging and scour repair.

Engineering and Construction Project Management

South Florida Water Management District, West Palm Beach, FL

Managed team to support the District with their hydraulic control structures program. The District is responsible for managing more than 50 weirs, 100 spillways, 700 culverts 60 stormwater pump stations. Our team worked with District staff to develop policies for H&H analysis when these structures are modified or replaced.

Mecca Flow Equalization Basin Design

South Florida Water Management District, Palm Beach Gardens, FL

Technical Lead responsible for hydrologic and hydraulic design of Flow Equalization Basin. Tasks included development of an unsteady flow HEC-RAS model of the C-18 canal, development of a FLO-2D model of the area for dam break modeling and inundation zone mapping, hydraulic calculations to estimate wave runup for embankment design, reservoir operational modeling in HEC-ResSim, hydraulic design of emergency spillway and other project culverts. Participated in meeting with SFWMD to coordinate approach and address comments.

Minimum Flows and Levels (MFLs) Peer Review and Impacts Assessment

Orlando Utilities Commission, Orlando, FL

Project Manager for a team that reviewed the draft Minimum Flows and Levels developed by the Saint Johns River Water Management District (SJRWMD) for Lake Hiawassee. The District modeled the lake using the Streamflow Synthesis and Reservoir Regulation (SSARR) model. We independently replicated the Districts' SSARR model results and MFL statistics, developed a separate HEC-5 model to check the water balance and added the surficial aquifer to the HEC-5 model to better represent the groundwater surface water interchange. A sensitivity analysis of model parameters was also performed to test the model. Findings of the study were documented in a summary report. Arcadis also used the ECF regional groundwater flow model to estimate impacts on MFLs due to proposed future groundwater withdrawals. Lakes that were examined include Lake Avalon, Johns Lake, Lake Sylvan, Lake Hiawassee and Lake Prevatt.

Stormwater Drainage System Hydrologic and Hydraulic Modeling

City of Portsmouth, VA

Technical Leader providing oversight and review of hydrologic and hydraulic model development to evaluate the City's stormwater conveyance capacity and support the Portsmouth-Chesapeake Joint Land Use Study (JLUS), which includes the following areas: Norfolk Naval Shipyard including the Scott Center Annex, Portsmouth Naval Hospital, Lincoln Military Housing including New Gosport and Stanley Court, Naval Supply Center – Craney Island, and the United States Coast Guard Base. Developed a PCSWMM 2D model for the tidally influenced study area to inform the JLUS about current and future impacts of rainfall and sea level conditions. The 10-year and 100-year simulated to assess the current stormwater conveyance capacity. Identified areas with insufficient conveyance capacity under current and projected sea-level rise conditions. Provided recommendations for future study to develop solutions to mitigate flooding.

North Carolina Floodplain Mapping Program

State of North Carolina, Caswell County, NC

Managed and assisted in development of detail and limited detail hydraulic models of rivers and streams in Caswell County. Managed field surveys and formatting for model input of 286 miles of river channels and dozens of hydraulic structures including bridges, culverts, levees and dams, HEC-RAS modeling of 73 miles for detailed study in riverine reaches, HEC-RAS modeling of 213 miles for limited detail study in riverine reaches and re-delineation of 281 miles of riverine reaches. Also managed production of Digital Flood Insurance Rate Maps for 567 miles of riverine reaches in accordance with FEMA standards. These studies included use of Light Detection and Ranging (LIDAR) information, aerial imagery, and other geographic information system (GIS) data. Based on survey data developed HEC-RAS models to determine base flood elevations (BFEs) for the 2-, 10-, 50-, 100-, and 500-year floods. In addition, the regulatory floodway was computed. Tabulated results showing base flood elevations and generated hydraulic profiles of the floodplain. Generated floodplain shape files for mapping. Provided support for public meetings and workshops to review updated mapping.



Gary Trachtman, PE, CDT

Water Audits

Mr. Trachtman has performed water loss audits for water systems ranging from 30,000 to 400,000 accounts and has recommended and assisted with implementation of programs for reducing and managing Non-Revenue Water. Mr. Trachtman has been a member of the AWWA Water Loss Control Committee (WLCC) for over 15 years, contributed to the 3rd, 4th and 5th editions of Manual M36 Water Audits and Loss Control Programs and peer reviewed USEPA's guidance document on Best Practices to Consider When Evaluating Water Conservation and Efficiency as an Alternative for Water Supply Expansion (2016). He serves as Chair of the WLCC's Water Audit Regulatory Practices Subcommittee, and member of the WLCC's Subcommittees on Outreach and Apparent Losses. He is also Secretary of the AWWA Customer Metering Practices Committee and contributed to the 3rd and 4th editions of AWWA Manual M22 Sizing Water Service Lines and Meters.

Key Information

Education/Qualifications

- MS, Sanitary Engineering, New York University, 1972
- BS, Sanitary Engineering, Northeastern University, 1969

Years of Experience

Total – 51

With Arcadis – 12

Professional Registrations/ Certifications

- Professional Engineer - NY
- Construction Documents Technologist (CDT) – Construction Specifications Institute

Relevant Skills & Qualifications

- ✓ Water Audits
- ✓ Water Loss
- ✓ Non-Revenue Water
- ✓ Water Conservation Measures
- ✓ Metering
- ✓ Distribution Systems
- ✓ Water Balances

Relevant Experience

Non-Revenue Water Program Review, Updated 2017 to 2020 Non-Revenue Water Trends, and Leakage Component Analysis

New Braunfels Utilities, New Braunfels, TX

Technical lead for collaborative workshops with NBU's NRW management team, and analyses and preparation of technical memoranda providing an overview of national best practices for analyzing NRW, documenting NBU's recent NRW performance and control measures implemented to-date, and recommendations for improving data quality and ultimately reducing NBU's NRW volume consistent with the Texas Water Development Board's regional planning goals for water use efficiency. Led preparation of a technical memorandum presenting the results of a Leakage Component Analysis (WRF Project 4372 Methodology) for CY2019 real losses and the potential for economically reducing losses by (1) reducing the time to locate and repair leaks, (2) increasing the frequency and coverage of leak surveys, and/or (3) implementing proactive pressure management. Assisted with development of a Standard Operating Procedure (MS Excel®-based) that outlines the data sources for and calculations performed to obtain the key performance indicator trends analyzed in the technical memorandum. Both the Texas Water Development Board Water Loss Audit and AWWA Free Water Audit Software were updated using these data sources and calculations so as to present the identified trends and recommendations for improved water loss auditing and NRW performance going forward.

Water Supply Studies

Birmingham Water Works Board, AL

Project Manager. Assisted BWWB with development of its Drought Management Plan and performed an assessment of BWWB's Long Term Water Resources Needs. Identified three elements of water use efficiency that may have already affected existing demands for water and/or could reduce future water demand –

progress made by the Board's Water Loss Reduction Initiative, implementation of conservation programs (including conservation-oriented rate structures) and increasing use of water-efficient fixtures in existing and new construction. Prepared a high-level review of other potential elements of an overarching water use efficiency program that would include potential conservation and water rate-based initiatives.

Led workshops with BWWB staff to develop an appropriate mix of program elements to achieve the desired objective of reducing future water demand of raw water and potable water customers, based on assumptions of market penetration of individual potentially implementable elements. Background information examined included programs developed and implemented by State and regional agencies and/or by other water systems in the United States similar in size to BWWB's system, and the results of research conducted by regulatory agencies and other water industry organizations such as the United States Environmental Protection Agency (USEPA) WaterSense Program, American Water Works Association Research Foundation (AwwaRF), and the Alliance for Water Efficiency.

Water Audit and Non-Revenue Water Assessment City of Canton, OH

Technical lead for assessment of Canton's recent NRW performance and implemented control measures, overview of national best practices for conducting a water loss audit, and development of recommendations for improving data validity and reducing Canton's NRW volume. Conducted workshops with Canton's NRW management team and conducted a sensitivity analysis of NRW apparent losses based on available customer meter accuracy testing results. AWWA's Free Water Audit Software v6 was utilized in a collaborative data validity grading exercise. Results of analyses and recommendations were presented in a technical memorandum.

Assessment of Performance Indicators for Non-Revenue Water Target-Setting and Progress Tracking American Water Works Association, Denver, CO

Project manager and co-author for peer-reviewed TEC Grant-funded project to evaluate potential NRW performance indicators and recommend those which reliably assess utility water efficiency standing, provide the ability to track changes in utility performance and a basis to assess cost effectiveness of loss control activities, serve as a workable means to set water and revenue loss goals and targets that can be effectively used to verify measurable reductions in real and apparent

losses, and compare standing and progress with peer utilities and benchmark "best-in-class" utilities to provide for meaningful best practice advancement. Project included a survey of selected regulatory agencies and compilation of their approach to selecting suitable performance indicators and monitoring and reporting of utility water loss performance.

Water Meter Technical Review DeKalb County, GA

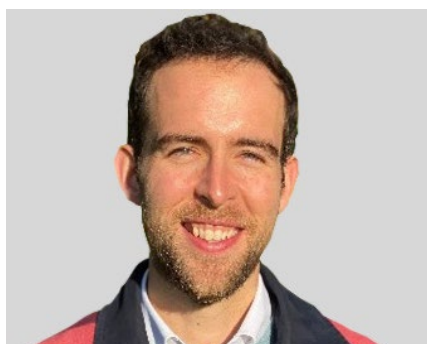
Technical lead for assessment and technical comparison of various mechanical (positive displacement) and static (ultrasonic and magnetic) 3/4" and 1" residential water meters that are compatible with DeKalb County's existing Sensus FlexNet® Advanced Metering Infrastructure (AMI) system and that best meet the County's metering and AMI goals. Compared the functional characteristics of existing installed meters in DeKalb County and alternate meters that met minimum criteria established by DeKalb County and the project team. Also compared operating characteristics of these meters, such as flow range, operating pressure, head loss, and accuracy at different flow rates. Qualifying meters were bench tested via coordination with Department of Watershed Management (DWM) metering staff and local vendor representatives. Bench tests confirmed the compatibility of selected meters with DeKalb County's AMI infrastructure through connection to a radio endpoint as well as determined the workability of each selected meter in a simulated field setting. A life cycle cost analysis was performed to outline the various costs of each meter at stages throughout its service life. Warranty and life expectancy comparisons were also conducted for these meters within the life cycle cost analysis.

Research Project 4695 – Guidance for Implementing an Effective Water Loss Control Plan Water Research Foundation – Denver, CO

Principal investigator for developing a peer-reviewed Guidance Manual and Decision Frameworks to help North American water utilities develop an actionable, cost-effective and defensible water loss reduction and control plan.

Water Loss Reduction Plan Support Washington Suburban Sanitary Commission, Laurel, MD

Technical Lead for assistance to identify potential additional steps to help quantify distribution system water loss, determine the effectiveness of current water loss management practices and their associated costs, and identify appropriate near- and long-term water loss goals for WSSC for inclusion in the 2016 Water Loss Reduction Plan. Deliverables included a Water Loss Management Roadmap.



Ian Minnes

GHG Inventory Update

Key Information

Education/Qualifications

- MS, Human Geography: Environmental Geography Track, University of Amsterdam
- BS, Human Geography & Urban Planning: International Development Studies & Environmental Geography specialization, University of Amsterdam

Years of Experience

Total – 8
With Arcadis – 5

Relevant Skills & Qualifications

- ✓ Sustainability
- ✓ GHG Inventory
- ✓ Net Zero Strategies
- ✓ Planning
- ✓ Energy Audits
- ✓ Strategic Planning
- ✓ Energy Management & Diversification

Mr. Minnes is a committed project manager, program manager and consultant with a passion for sustainability. Specializing in sustainability, particularly net zero initiatives, he adopts an integrated approach, understanding client needs and striving for first- time product excellence. With extensive experience in leading strategic projects at Arcadis, his entrepreneurial flair, networking abilities, and diverse background across public, private, and knowledge sectors enable him to excel in new environments. Utilizing his broad network, he navigates stakeholders' interests, organizational structures, and collaboration methods to curate effective teams for complex sustainability challenges. His talent for uniting diverse perspectives and promoting collaboration, alongside his multi-dimensional climate strategies, showcases his strength in unifying people and interests toward sustainable goals.

Relevant Experience

Energy Audits Phase I

Maryland Environmental Service/Maryland Port Authority, Baltimore, MD

Meet the standards/guidelines of the Maryland Climate Solutions Now Act of 2022:

- By 2031, 60% reduction of Greenhouse Gas (GHG) emissions from the 2006 baseline Executive Order 01.01.2023.07
- By 2031, reduce energy consumption in state-owned buildings by 20% from 2018 baseline
- By 12/31/2023, final plan to meet the goal for net-zero GHG emissions by 2045

Arcadis plans to achieve net-zero Greenhouse Gas (GHG) emissions by 2045:

- Phase 1: Preliminary Energy Audits and Feasibility Analysis for a sample of five buildings
- Phase 2: Energy Audits and Feasibility Analysis for all buildings
- Phase 3: Energy efficiency implementation Support
- Phase 4: Monitoring, Measurement & Verification to achieve net-zero GHG emissions by 2040

Energy and Sustainability Strategy

New York City Economic Development Corporation, Financial District, NY

Energy and Sustainability Analyst. Responsible for conducting research to support and develop the Energy and Sustainability Strategy for the Financial District (FiDi) Coastal Resilience Master Plan Project in New York. Supported the development of the Energy and Sustainability Toolkit, which contained technical analysis on suitable measures to mitigate the emissions of operational and embodied carbon in FiDi.

Thermal Decarbonization Assessment for the DOTH District 5 Facility in Riverdale – Cook County

Honeywell

As the project manager overseeing the creation of a thermal decarbonization assessment for the Riverdale facilities, this includes conducting a comprehensive evaluation focused on removing Greenhouse Gas (GHG) scope 1 emissions originating from Natural Gas and Propane. Additionally, I am tasked with developing an implementation plan for future design and construction projects that align with the goals of the Cook County Clean Energy Plan.

Integral Sustainability and Densification Strategy

RAI Convention Centre, Amsterdam, The Netherlands

As a consultant working on a strategy for The RAI Amsterdam Convention Centre, a multifunctional conference and exhibition center located in an area of 25 acres within Amsterdam, on how the RAI can become futureproof and transition parallel with the goals of Amsterdam on sustainability. Guided the RAI through an integrative strategy on densification and the energy transition. The following question is addressed in the project: "How can the RAI - parallel with the already existing renovation plans - become more sustainable and integrate different energy concepts into an Urban Energy System that will make the area future-proof, add value to (the energy transition of) Amsterdam as a whole and contribute to the connection with society."

Seven Square Endeavour (7SE)

Seven Square Endeavour, Rotterdam, The Netherlands

As Program Manager, was part of the program team of Seven Square Endeavour, a public-private partnership with the goal of making the Schouwburgplein and surrounding area in Rotterdam integrally sustainable to achieve a climate-neutral square by 2030. Expertise: conducting strategic studies, such as preparing and leading the design / business case for a CO2-neutral energy system, conducting feasibility studies and business cases for green roofs and other climate-adaptive area-based measures, such as an underground water buffer and multi-stakeholder management.

Transition Vision Heat Enschede

Municipality of Enschede, The Netherlands

As a consultant, supported the Project Leader in drawing up a Transition Vision for heating the built environment, in accordance with the agreements in the Climate Agreement, for the municipality of Enschede. Ian organizes and supervises sessions, resident participation, and the governing process (also with the housing corporations). The goal is to work with important stakeholders to arrive at a supported timetable for a carbon neutral and natural gas-free Enschede.

Transition Vision Heat Zeeland

Municipality of Vlissingen, Tholen, Schouwen-Duiveland and Veere

As Project Leader responsible for the preparation of four Transition visions for heating the built environment, in accordance with the agreements in the Climate Accord, for four municipalities in Zeeland (Vlissingen, Tholen, Schouwen-Duiveland and Veere). The official organizations and stakeholders from the four municipalities are working on four heat visions with a strong governmental focus. All of this has a provincial basis. Regular coordination with the municipal councils and residents. Supervising work sessions with important stakeholders to arrive at a supported timetable for carbon neutral gas-free neighbourhoods in the four municipalities.

Risk Dialogues, Climate Adaptation Strategies and on Climate Adaptation

Various cities in the Netherlands

A role as Consultant. projects in line with the ambitions of the Delta Plan Spatial Adaptation. Stress tests revealed heat stress, flooding, drought and waterlogging. Ian worked on conducting risk dialogues with 'vulnerable' parties, resulting in a climate adaptation strategy and implementation agenda with measures.

ESG Due Diligence

Confidential Client, South Dakota

Responsible for leading a ESG Due Diligence program for a confidential investor looking to invest in clean energy technologies on an existing site. The assessment focuses on analyzing existing information, interviews with the target and a site visit to identify any potential ESG related risks formulated in a red flag diligence report. The assessment is also focusing on permitting compliance and Regulatory Credits.



Kristyn McClure

GIS / Geospacial Analysis

Key Information

Education/Qualifications

- MS, Geographic Information Sciences, Florida State University, 2017
- BS, Environmental Science, Florida State University, 2016

Years of Experience

Total – 8

With Arcadis – 1

Relevant Skills & Qualifications

- ✓ Geospacial Analysis
- ✓ GIS Mapping
- ✓ ESRI WebMaps

Ms. McClure has over eight years of GIS experience in both the public and private sectors creating and configuring Esri WebMaps and Apps, including Experience Builder, Hub sites, Survey123, and Field Maps to facilitate transportation planning projects. She leverages geoprocessing functions and analyses data ETL and linear referencing to support transportation planning efforts. Ms. McClure developed and implemented a unified linear referencing system for the Florida Department of Transportation to include state, county, local, and private roads.

Relevant Experience

GIS Coordinator, Senior Permit Lead

Florida Department of Environmental Protection, Tallahassee, FL

Oversaw GIS operations, including collecting and evaluating geographic data and authoring project maps. Created and maintained Operations Dashboard linked with Field Maps to monitor and inform the public of algae blooms. Reviewed and processed State 404 permit applications and wrote regulatory permits for environmental, ecological, and public enhancement of the Everglades in South Florida. Managed project files and tracked tasks and progress using Microsoft Access, Oculus, and Microsoft SharePoint. Coordinated with state and federal agencies and other project stakeholders to establish appropriate permit language and conditions, including planning coordination meetings and site visits.

Unified Linear Referencing System (Unified LRS)

Florida Department of Transportation (FDOT), Tallahassee, FL

GIS Analyst. Created and configured many Esri WebMaps and Apps, including Experience Builder, Hub sites, Dashboard, Survey123, and Field Maps, to facilitate FDOT transportation planning projects. She designed map layouts for data visualization in transportation plans and grant applications. She assisted with the development and implementation of a unified linear referencing system (LRS) for the state of Florida to include state, county, local, and private roads. Kristyn used an Esri Hub site to create a public-facing website for the Unified LRS project, using CSS/HTML to promote and provide updates on the Unified LRS project, host project deliverables, and share/receive data from local entities. She also developed a WebApp for FDOT district offices to submit LRS edits using the Smart Editor widget, and maintained, updated, and submitted annual ARNOLD (All Roads Network of Linear-Referenced Data), an LRS network for all public highways, to the Federal Highway Administration.

Roads & Highways Migration

South Carolina Department of Transportation (SCDOT), Columbia, SC

GIS Analyst. Assisting with the migration of SCDOT's current linear referencing system (LRS) to the Esri Roads & Highways LRS platform. She has assisted with various tasks including inventory of existing data, data standardization and transformation, and LRS geoprocessing functions like Create Route Events and Locate Features Along Routes. She is currently working on a pilot study to determine whether manual calibration of measures is necessary to maintain data integrity, or if existing automated calibration can be leveraged.

Multi-Application Geographic Information Center (MAGIC)

Nevada Department of Transportation (NDOT), Carson City, NV

Served as Use Case Champion for the capturing of a yearly snapshot of pavement data from EAMS (Agile Assets) and using a series of dynamic segmentation processes to make the data into a spatial yearly snapshot. The snapshot data is stored in the Geospatial Data Warehouse and accessed through a Query Engine developed using Esri's ExperienceBuilder. The web application interrogates and returns data from the pavement snapshots to the user as a PowerBI report. The user interface is a series of cascading filters configured using the Filter widget whereby the user selects the desired filter parameters and a data report is generated on the selected parameters.

WestTN Planning BlueOval City

Tennessee Department of Economic & Community Development (TDEC), Nashville, TN

GIS Analyst. To facilitate the Ford Motor Company's announcement of a large-scale battery and vehicle manufacturing facility in western Tennessee, a massive planning project was developed by TDEC to support the associated increase of jobs, residents, and traffic. Kristyn leveraged ArcGIS Hub sites to create a website for the WestTN Planning project. Available to the public, the site houses several informative WebMaps as well as critical project documentation and public meeting schedules.



YVONNE GARTH

PRESIDENT & CEO



PROFESSIONAL BIO

Yvonne Garth, President & CEO of Garth Solutions, Inc. (GSI), brings over 31 years of strategic leadership in public relations, marketing, and communications to complex, high-profile projects throughout South Florida and beyond. Since founding GSI in 2003, Yvonne has established the firm as a trusted partner for public and private sector clients dedicated to engaging diverse stakeholders in transformative initiatives. Under her leadership, GSI has successfully executed comprehensive outreach and communication campaigns for prominent organizations that include Broward County Public Schools, Broward County Aviation Department, and nearly all municipalities across Broward.

Yvonne's expertise spans stakeholder engagement, brand development, targeted messaging, media relations, and more. Her background includes nearly a decade as an Advertising and Public Relations Executive at a top-tier agency, where she directed strategic campaigns for global brands, laying a strong foundation for GSI's innovative approach to public sector communications.

Renowned for her ability to leverage deep community relationships, Yvonne consistently facilitates strategic partnerships and collaborations that deliver measurable results. Her commitment to public service and community engagement is exemplified by her previous roles as Commissioner and Vice Mayor for the City of Miramar, as well as Chair and Board Member for the Broward County Small Business Advisory Board, and Board Member of the Miramar Cultural Arts Trust. This blend of local insight and firsthand industry insight positions GSI as a premier communications firm adept at navigating complex, multi-stakeholder environments.

YEARS IN INDUSTRY

33 YEARS

YEARS WITH GSI

23 YEARS

EDUCATION

B.S., JOURNALISM & MARKETING

University of Maryland (1992)

WHY YVONNE?

VETERAN LEADERSHIP

Over 31 years of experience leading programs for high-profile clients.

CAMPAIGN EXECUTION

Proven track record in grassroots and digital campaigns that drive awareness and stakeholder support.

STRATEGIC NETWORK

Deep relationships with decision-makers across Florida municipalities and business sectors.

ENGAGEMENT INNOVATION

Develops creative strategies that translate complex projects into clear community narratives.

PUBLIC INSIGHT

Former Commissioner and Vice Mayor of Miramar with deep knowledge of public sector operations and needs.

RELEVANT EXPERIENCE

- Broward County Public Schools, SMART Bond Program | Fort Lauderdale, FL
- Town of Davie Water Resiliency Assessment | Davie, FL
- City of Hollywood New Police Headquarters | Hollywood, FL
- FLL Airport New Runway and T4 Expansion | Fort Lauderdale, FL
- FLL Airport Part 150 Noise Compatibility Planning Study | Fort Lauderdale, FL
- Las Olas Beach Park Project | Fort Lauderdale, FL
- Naples Airport Authority, Marketing & Public Relations | Naples, FL
- Sole Mia Local Preference Office, | North Miami, FL

SKILLS & EXPERTISE



TEAM LEADERSHIP



COMMUNICATION STRATEGY



STRATEGIC PARTNERSHIPS



PROGRAM MANAGEMENT



COMMUNITY OUTREACH



STAKEHOLDER ENGAGEMENT



EVENT MANAGEMENT



MEETING FACILITATION



Section 08.

Office Locations



08. Office Locations

With approximately 7,000 U.S. professionals and support personnel, and **more than 400 staff members in the State of Florida**, Arcadis has the capacity to provide the resources necessary to meet the City's objectives for this project and comply with the Consent Order. **This contract will be managed from our office in Plantation, FL.**

Prime Office Location

150 S. Pine Island Rd., Suite 315
PLANTATION, FL 33324 | PH: (954) 761-3460
24 Staff Members

Tri-County Support Offices

7000 North Federal Hwy.
BOCA RATON, FL 33487
 PH: (561) 393-6555
85 Staff Members

2811 Ponce de Leon Blvd., Ste. 200
CORAL GABLES, FL 33134
 PH: (888) 492-2762
61 Staff Members

Arcadis at a Glance

Worldwide



36,000 +
Staff



30+
Countries

United States



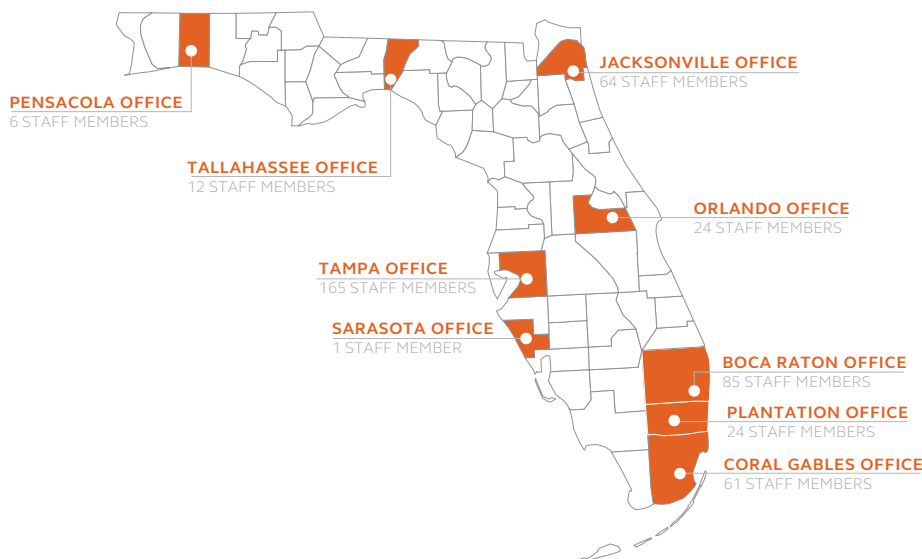
7,000 +
Staff



130 +
Offices



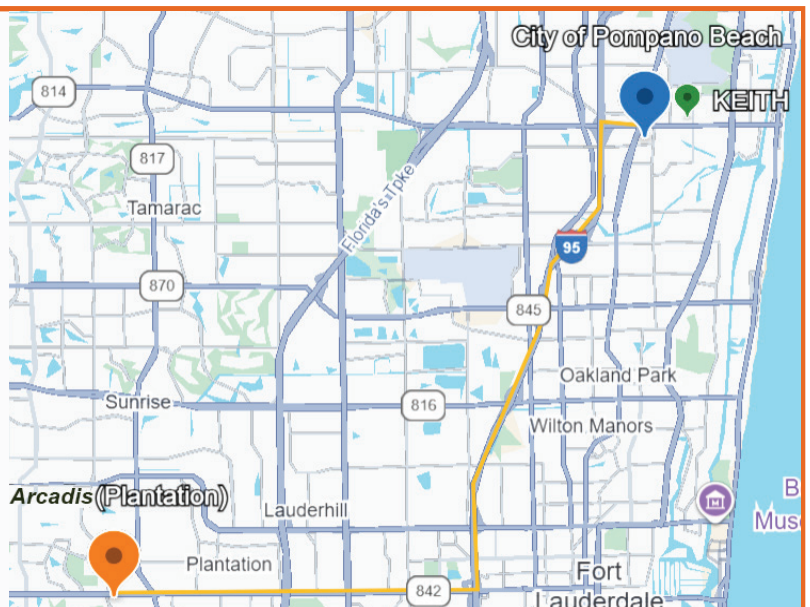
Arcadis Generates
Over \$5 Billion in Revenues



Our Florida practice is supported by over 440+ professionals among 9 Florida offices. Arcadis has performed a thorough review of resources in the State so that local knowledge and established local relationships can be leveraged to bring the City exemplary services.

A Local, Responsive Team

Arcadis' Plantation (Broward County) office is a short 25 minute drive from the City's offices. Our key subconsultant partner and local City of Pompano Beach vendor KEITH, is located within 1 mile (5 minute drive) from the City's offices. The Arcadis team is **committed** to respond quickly and efficiently to all of the City's needs under this contract.





Section 09. Litigation



09. Litigation

Arcadis U.S., Inc., and its related and affiliated North American entities (collectively, “Arcadis”), has various legal proceedings pending at any given time. Such claims are disputed and not reasonably expected to be adversely determined, applicable insurance is available, and/or such claims are not reasonably expected to materially impact the financial condition or the operations of Arcadis, nor will they affect Arcadis’ ability to fully perform the applicable services. These occurrences represent a nominal percentage of Arcadis’ total projects at a frequency understood to be commensurate with or below industry standards for companies of similar size doing projects of similar type and volume. Please see attached Litigation History.

Updated Q1 2025								
 The following is a summary of all litigation for the preceding five years. Such claims are disputed and not reasonably expected to be adversely determined, applicable insurance is available, and/or such claims are not reasonably expected to materially impact the financial condition or the operations of Arcadis.								
Litigation Five-Year History: Arcadis U.S., Inc. and All Affiliates								
Plaintiff	Defendant (Arcadis Affiliate)	Date Suit Filed	Nature of Incident	Type of Claim	Jurisdiction	Business Line	Government Claim (Y/N)	Resolution 1 = Case Ongoing 2 = Dismissal 3 = Resolved/Settled 4 = Judgment 5 = N/A
Tsai et al.	Arcadis U.S., Inc.	Feb-25	Plaintiffs claiming damages related to work performed at East Palestine, OH derailment of Norfolk Southern Railway Company.	Prof. Liability	Cuyahoga Co., OH	Env	N	1
Hickman et al.	Arcadis U.S., Inc.	Feb-25	Plaintiffs claiming damages related to work performed at East Palestine, OH derailment of Norfolk Southern Railway Company.	Prof. Liability	Franklin Co., OH	Env	N	1
Taylor et al.	Arcadis U.S., Inc.	Feb-25	Plaintiffs claiming damages related to work performed at East Palestine, OH derailment of Norfolk Southern Railway Company.	Prof. Liability	Franklin Co., OH	Env	N	1
Schuller Contractors, Inc.	Arcadis U.S., Inc.	Jan-25	Plaintiff claim personal injury due to negligent traffic pattern direction in construction zone.	Prof. Liability	Orange Cnty, FL	Water	N	1
Jones, Joseph	Arcadis Canada Inc.	Dec-24	Plaintiff and former employee claims wrongful dismissal and breach of contract.	Employment	Ontario Canada	Corp	N	1
Vassiliou, Andreas	Arcadis U.S., Inc.	Dec-24	Former employee seeks damages due to loss of time.	Employment	Queens Cnty, NY	Corp	N	1
Jahangiri, Jay	Arcadis U.S., Inc.	Dec-24	Plaintiff and former employee claims discrimination and wrongful termination.	Employment	California	Corp	N	1
Jones, Joseph	Arcadis Canada Inc.	Dec-24	Employment action filed by Plaintiff and former employee.	Employment	Canada	Corp	N	1
Kayani, Iqra	Arcadis U.S., Inc.	Dec-24	Plaintiff claims wrongful termination in violation of the California Fair Employment and Housing Act (“FEHA”), as well as Title VII of the Federal Civil Rights Act.	Employment	California	Corp	N	1
Kessler, Jayne	Arcadis U.S., Inc. (FKA The Rise Group, LLC)	Nov-24	Plaintiff claims personal injury at project site.	General Liability	Cook County, IL	Places	N	1
Benjamin, Sarah	Arcadis U.S., Inc.	Oct-24	Plaintiff claims discrimination and wrongful termination in violation of the California Fair Employment and Housing Act (“FEHA”).	Employment	California	Corp	N	1
Pollard, Angela	Arcadis U.S., Inc.	Aug-24	Plaintiff claiming damages for negligence on performance of indoor assessment.	Prof. Liability	Dallas, TX	Env	N	1
Caycedo, Juan	Arcadis Inc.	May-24	Former employee of IBI seeks injunctive relief from post-employment restrictions, allegedly due to Arcadis Inc.’s breach of contract.	Breach of Contract	Delaware	Env	N	1
CPL Architects, Engineers, Landscape Architect, D.P.C.	Arcadis U.S., Inc.	Apr-24	Plaintiff claiming breach of contract.	Prof. Liability	Gwinnett	Mobility	N	3
O'Dwyer, Aidan	DPS Holding Company LLC	Mar-24	Former employee litigation.	Employment		Corp	N	3
Vettes, Patricia	DPS Holding Company LLC	Mar-24	Former employee litigation.	Employment		Corp	N	1
Belanger, David	Arcadis U.S., Inc.	Jan-24	Plaintiff claims personal injury for failure to maintain safe work area.	General Liability	Juneau, AK	Places	N	1
Wit-O'S Seafood LLC	Arcadis U.S., Inc.	Feb-24	Plaintiff claiming damages due to flawed water testing methodology.	Prof. Liability	Iberville Parish, LA	Env	N	1
Everett, et al.	Arcadis U.S., Inc.	Jan-24	Plaintiff claiming discrimination and retaliation arising out of GDOT District 7 MEI contract.	Other	N. District Atlanta	Mobility	N	3
Walbridge	Arcadis G&M of North Carolina, Inc.	Jan-24	Plaintiff alleges project did not meet design requirements and claiming damages for redesign.	Prof. Liability	TBD	Places	N	3
Sicilian, Paul	Arcadis U.S., Inc. / Elevated Solutions JV	Nov-23	Plaintiff claiming personal injury caused by exposure to epoxy.	General Liability	Cook County, IL	Mobility	N	1
Calderon, Efran	Arcadis Caribe, P.S.C.	Sep-23	Former employee claiming dismissal without cause.	Employment	Bayamon, San Juan	Corp	N	3
Olmet, Keith	DPS Advanced Technology Group, Inc.	Aug-23	Plaintiff claiming unlawful discriminatory practice.	Employment	NY State Division of Human Rights	Corp	N	3
Romero and Olmos	Arcadis U.S., Inc.	Sep-23	Motor vehicle accident between Plaintiffs and Arcadis vehicle operated by employee.	General Liability	Middlesex, NJ	Env	N	1
Kirk and Kirk	Arcadis U.S., Inc.	Aug-23	Motor vehicle accident occurred within Arcadis construction work zone on client's project. Arcadis employee witnessed accident and provided a statement. Arcadis was served as a third-party defendant.	Prof. Liability	Nassau County, NY	Env	N	1
Hiestand	Arcadis U.S., Inc. / Elevated Solutions JV	Aug-23	Plaintiff claims personal injury for failure to maintain safe work area.	General Liability	Cook County, IL	Mobility	N	1
Beach and Beach	Arcadis U.S., Inc.	Jul-23	Employee driving an Enterprise rental vehicle and was allegedly involved in a motor vehicle accident with the Plaintiffs.	Auto	Camden, NJ	Env	N	1
Robert Rivers	Arcadis CE	Jun-23	Plaintiff claiming personal injury at project site due to trip and fall.	General Liability	New York	Water	N	1
GS Labs LLC	Arcadis U.S., Inc.	May-23	Plaintiff filed demand and is seeking reimbursement from Cigna for COVID testing provided under Arcadis U.S., Inc.'s self-funded health plan (Cigna).	Employment	Colorado	Corp	N	1
Arcadis US	USACE NDNOOS	Apr-23	Appeal before Armed Services Board of Contract Appeals of COFD's decision denying Plaintiff's claim regarding differing site conditions/cardinal change under Contract Order No. WD912DR18F0688	Appeal	ASBCA	Env	Y	1
Jean, Javon	Arcadis U.S., Inc.	Feb-23	Plaintiff claiming personal injury at property allegedly owned by Arcadis in NY. Arcadis does not own the property. Subsequent third party action filed by Defendant Alliance Energy against Arcadis seeking indemnification and defense.	General Liability	Kings Cnty, NY	---	N	1
Mello Construction (Shop & Shop)	Arcadis of NY, Inc.	Jan-23	Third party complaint seeking indemnification and defense due to allegations of personal injury on job site.	General Liability	New York	Env	N	1
Ducio, Mark	Arcadis U.S., Inc.	Jan-23	Plaintiff is alleging violations of Federal, State and Local laws and seeking damages.	Prof. Liability	Fed. Dist. Ct. - S.D. Fla	Env	N	1
Marrero, San Juanita	Arcadis U.S., Inc.	Sep-22	Employee driving an Arcadis-owned vehicle was allegedly involved in a motor vehicle accident with the Plaintiffs.	Auto	Nueces, TX	Env	N	3
Byrkiatt, Anthony	Arcadis U.S., Inc.	Sep-22	Plaintiff and former Arcadis employee alleges non-payment of overtime wages.	Employment	Northern District, IL	Corp	N	2
Garnett, Brian	Arcadis U.S., Inc.	Aug-22	Plaintiff alleges insufficient surveying services provided by Chesapeake Bay Site Solutions, Inc. owned by former Arcadis employee.	Prof. Liability	Virginia Beach, VA	Water	N	2
Griffin, et al.	Arcadis U.S., Inc.	Aug-22	Plaintiff alleges breach of fiduciary duty, interference with contract, implied contractual indemnity, and unfair competition.	Other	Los Angeles Cnty, CA	Places	N	1
Hyland, Kevin	Arcadis U.S., Inc.	Jun-22	Plaintiff alleges personal injury at project site.	General Liability	Mahoning County, OH	Water	N	3
Asif, Mahmood	Arcadis Canada Inc.	Apr-22	Plaintiff claiming personal injury at project site.	General Liability	Canada		N	1
Tompkins	Arcadis U.S., Inc.	Apr-22	Plaintiff alleges negligence at project site resulting in serious injury.	Prof. Liability	Allen Cnty, IN	Water	N	1
Ayala-Hinkle, Prince	Arcadis U.S., Inc.	Apr-22	Plaintiff alleges negligence at project site resulting in physical, mental, and emotional well-being.	Prof. Liability	Sacramento Cnty, CA	Env	N	1
University Spine	Arcadis U.S., Inc.	Mar-22	Plaintiff seeks recovery from employee medical plan after out-of-network procedure.	Other	Passaic Cnty, NJ	Corp	N	1
Commonwealth Edison	Arcadis U.S., Inc.	Feb-22	Plaintiff filed claim for damages due to utility strike.	General Liability	Cook County, IL	Env	N	3
Tucker, Jerry	Arcadis U.S., Inc.	Nov-21	Plaintiff alleges personal injury due to trip and fall at Hillary Avenue project site.	General Liability	Morris Cnty, NJ	Env	N	3
BHC	Arcadis U.S., Inc. / Arcadis CE	Nov-21	Plaintiff claim is for damages and injunctive relief alleging Defendants were substantial factors causing and/or contributing to the Woolsey Fire in 2018.	Prof. Liability	Los Angeles Cnty, CA	Env	N	2
Brice Environmental Services Corp.	Arcadis U.S., Inc.	Sep-21	Plaintiff claims Arcadis' use of soil washing technology infringed on patent.	Other	USDC AK	Env	N	3
AG3 Group, LLC	Arcadis U.S., Inc.	Sep-21	Alleged cyber incident claiming Arcadis systems were compromised causing misdirected wire transfer.	Other	Bexar	Water	N	3
Holmes/Cleveland	Arcadis U.S., Inc.	Sep-21	An Arcadis employee was allegedly involved in a motor vehicle accident with the Plaintiffs.	Auto	Ouachita Parish, LA	Water	N	2
Sondhi, Rajiv	Arcadis U.S., Inc.	Aug-21	Former employee discrimination dispute related to employment agreement and benefits (EEOC).	Employment	Highlands Ranch, CO	Corp	N	3
Edgewater Pearl Cond Assoc.	Arcadis U.S., Inc.	Aug-21	Plaintiff alleges negligence in consulting related to contamination of soils.	General Liability	Bergen Cnty, NJ	Env	N	1
Greenberg, Solomon	Arcadis U.S., Inc.	Jul-21	Plaintiff alleges injury due to trip and fall.	General Liability	Palm Beach Cnty, FL	Infra	N	2

The following is a summary of all litigation for the preceding five years. Such claims are disputed and not reasonably expected to be adversely determined, applicable insurance is available, and/or such claims are not reasonably expected to materially impact the financial condition or the operations of Arcadis.

Litigation Five-Year History: Arcadis U.S., Inc. and All Affiliates

Plaintiff	Defendant (Arcadis Affiliate)	Date Suit Filed	Nature of Incident	Type of Claim	Jurisdiction	Business Line	Government Claim (Y/N)	Resolution 1 = Case Ongoing 2 = Dismissal 3 = Resolved/Settled 4 = Judgment 5 = N/A
B.L. Harbert Int'l, LLC	Arcadis U.S., Inc.	Jul-21	Plaintiff alleges refusal to amend contract due to change orders impacting contract price and completion date.	Breach of Contract	Jefferson Cnty, AL	Infra	N	2
Beer, Robert	Arcadis U.S., Inc.	Jun-21	Former Arcadis employee was allegedly involved in a motor vehicle accident with Plaintiff	Auto	Allegheny County, PA	Env	N	3
NYCDEP	Arcadis of NY / AECOM JV	Jun-11	Plaintiff alleges damages due to schedule delays, breach of contract and design errors	Breach of Contract	New York, NY	Water	N	1
Cameron et al.	Arcadis U.S., Inc. / Arcadis GSM of NC	Jun-21	Plaintiffs as employees of the City of Durham's Waste Management Department alleged exposure to hazardous levels of arsenic and lead	Prof. Liability	Durham, NC	Env	N	3
Davis, Andrew	Arcadis U.S., Inc.	May-21	Software development ownership litigation	Other	Austin, TX	Env	N	3
Sanchez, Adrian	Arcadis U.S., Inc.	May-21	Plaintiff alleges discrimination (EEOC)	Employment	New York, NY	Corp	N	2
Aguirre, Jacquelyn	Arcadis U.S., Inc.	Apr-21	Plaintiff alleges wrongful death due to failure to maintain premises in a safe condition	Prof. Liability	Fresno, CA	Infra	N	2
Helwig, Tonya	Arcadis U.S., Inc.	Apr-21	Plaintiff alleges a personal injury due to a slip and fall	General Liability	Philadelphia, PA	Env	N	3
Bagley	Arcadis U.S., Inc.	Feb-21	The estate of Justin Bagley alleges wrongful death claims	General Liability	Clayton County, GA	Infra	N	1
Gonzalez	CTR Joint Venture	Dec-20	Plaintiff alleges personal injury as a result of a fall from bicycle in construction zone	General Liability	Cook County, IL	Water	N	3
Gallagher	Arcadis U.S., Inc.	Oct-20	Plaintiff alleges personal injury due to failure to maintain premises in a safe condition	General Liability	San Diego, CA	Infra	N	3
Peretz	Arcadis U.S., Inc. / Arcadis CE	Oct-20	Plaintiff alleges failure to maintain premises in a safe condition.	General Liability	New York, NY	Water	N	3
Hunter/Patterson	Arcadis U.S., Inc.	Sep-20	Plaintiff alleges negligence against Arcadis, as GDOT's contractor, regarding incident related to automobile accident	Prof. Liability	Fulton Cnty, GA	Infra	N	3
City of San Diego	Arcadis U.S., Inc.	Aug-20	Third party complaint claiming contribution and indemnification in connection with underlying personal injury claim (Heather Myers v The City of San Diego)	General Liability	San Diego, CA	Infra	N	3
K.K. Machine Co., Inc.	Arcadis U.S., Inc.	Jul-20	Plaintiff claims negligence resulting in structural damages to business property during adjacent sewer project	Prof. Liability	Queens Cnty, NY	Water	N	1
Mehl, Sarah	Arcadis U.S., Inc.	Apr-20	Former employee alleges wrongful termination and disability discrimination	Employment	San Francisco, CA	Corp	N	3
Arcadis Canada Inc.	Altra Development Corp.	Mar-20	Statement of Claims filed for payment of invoices	Breach of Contract	Ontario	---	N	3
Stryker Demolition	Arcadis U.S., Inc.	Mar-20	Plaintiff claims breach of contract and unjust enrichment	Breach of Contract	DE	Env	N	3
Posley, Donetta	Arcadis U.S., Inc.	Mar-20	Plaintiff claims negligence against Arcadis as engineer of record regarding incident related to automobile accident	Prof. Liability	Duval County, FL	Infra	N	3
Johnson, Robert	Arcadis of NY Inc.	Feb-20	Plaintiff filed suit against the City of New York for personal injury and Arcadis is now a separately named Defendant	General Liability	Queens Cnty, NY	Env	N	3
Black, Malee	Arcadis Design & Consultancy	Feb-20	Plaintiff alleges injury by Defendant (employee) driving rental car	Auto	Union Cnty, NJ	Env	N	3
City of Chicago	The Rise Group and Arcadis US	Feb-20	Client's 3rd party claim for contribution in underlying claim against client for negligence (Hernandez v. CTR JV)	General Liability	Cook Cnty, IL	Water	N	3

ARCADIS Confidential

*Without Prejudice
Page 2 of 2



Section 10.

City Forms & Other Required Information



10. City Forms & Other Requested Information

In this section we have provided:

- T1_T2 Form
- Proposer Information Form
- Vendor Certif. Scrutinized Companies Form
- Reviewed and Audited Financial Statements (*confidential*)
- Insurance Certificates



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 my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

and/or

_____ 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.

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 my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

and/or

_____ 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

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.

05/22/2025

Date

Melissa Pomales, PE

Bidder/Proposer (Print Name)

Arcadis U.S., Inc.

Name of Prime Company/Firm



Bidder/Proposer (Signature)

COMPLETE THE PROPOSER INFORMATION 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 FOR THE RFQ IN THE EBID SYSTEM.

PROPOSER INFORMATION PAGE

RFQ 25-037, Professional Services for Sustainability Projects
(number) (RFQ name)

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 RFQ. I have read the RFQ 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) Melissa Pomales, PE Title Senior Vice President

Company (Legal Registered) Arcadis U.S., Inc.

Federal Tax Identification Number 57-0373224

Address 150 S. Pine Island Road, Suite 315

City/State/Zip Plantation, FL 33324

Telephone No. (954) 761-3460 Fax No. N/A

Email Address melissa.pomales@arcadis.com

REQUESTED INFORMATION BELOW IS ON THE ATTRIBUTES TAB IN THE EBID SYSTEM. PROVIDE THIS INFORMATION ELECTRONICALLY.

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: Arcadis U.S., Inc.

Vendor FEIN: 57-0373224

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



VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: Arcadis U.S., Inc.

Vendor FEIN: 57-0373224

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 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



Arcadis U.S., Inc. and Subsidiaries

**Consolidated Financial Statements
December 31, 2023 and 2022**

Arcadis U.S., Inc. and Subsidiaries

Index

December 31, 2023 and 2022

	Page(s)
Report of Independent Auditors	1–2
Consolidated Financial Statements	
Statements of Financial Position.....	3
Statements of Comprehensive Income.....	4
Statements of Changes in Equity.....	5
Statements of Cash Flows	6
Notes to Financial Statements	7–23



Report of Independent Auditors

To the Management and Board of Directors of ARCADIS U.S., INC. and Subsidiaries

Opinion

We have audited the accompanying consolidated financial statements of ARCADIS U.S., INC. and its subsidiaries (the “Company”), which comprise the consolidated statements of financial position as of December 31, 2023 and 2022, and the related consolidated statements of comprehensive income, changes in equity and of cash flows for the years then ended, including the related notes (collectively referred to as the “consolidated financial statements”) which, as described in Note 1b to the consolidated financial statements, have been prepared on the basis of accounting principles generally accepted in the European Union.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the European Union.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the Auditors’ Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Basis of Accounting

As discussed in Note 1b to the consolidated financial statements, the Company prepares its consolidated financial statements on the basis of accounting principles generally accepted in the European Union, which differs from accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Responsibilities of Management for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the European Union, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company’s ability to continue as a going concern for at least, but not limited to, twelve months from the end of the reporting period, disclosing, as applicable, matters related to going concern and using the going



concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Auditors' Responsibility for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters, that we identified during the audit.

PricewaterhouseCoopers LLP

Salt Lake City, UT
April 26, 2024

Arcadis U.S., Inc. and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2023 and 2022

<i>(amounts in thousands)</i>	Note	2023	2022
Assets			
Current assets			
Cash and cash equivalents		\$ 15,799	\$ 28,782
Amounts receivable, net	2	411,177	347,048
Related party receivables	13	136,666	146,486
Related party - income taxes receivable		36,426	-
Other current assets		9,127	11,762
Total current assets		609,195	534,078
Property and equipment	4	21,363	17,950
Right-of-use assets	5	27,364	28,595
Deferred tax assets	9	13,456	30,183
Goodwill and intangible assets	6	275,098	275,151
Other noncurrent assets		12,886	10,964
Total assets		\$ 959,362	\$ 896,921
Liabilities and Stockholder's Equity			
Current liabilities			
Accounts payable		\$ 141,409	\$ 135,792
Accrued expenses		111,376	106,040
Related party - income taxes payable		-	33,569
Billings in excess of cost		127,018	99,118
Current portion of lease liabilities	5	11,705	12,635
Other current liabilities		2,649	2,120
Total current liabilities		394,157	389,274
Deferred compensation		11,548	9,700
Lease liabilities	5	21,127	22,741
Other noncurrent liabilities		637	2,445
Total liabilities		427,469	424,160
Stockholder's equity			
Preferred stock, \$0.01 par value			
Authorized, 1,000 shares; none issued		-	-
Common stock, \$0.01 par value			
Authorized, 9,000 shares; issued 387 shares		-	-
Additional paid-in capital		371,712	371,665
Retained earnings		160,181	101,096
Total equity		531,893	472,761
		\$ 959,362	\$ 896,921

The accompanying notes are an integral part of these consolidated financial statements.

Arcadis U.S., Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income
Years Ended December 31, 2023 and 2022

<i>(amounts in thousands)</i>	Note	2023	2022
Gross revenue	7	\$ 1,683,433	\$ 1,500,595
Materials, services of third parties and subcontractors		<u>595,515</u>	<u>532,156</u>
Net revenue from services		1,087,918	968,439
Personnel costs	8	783,365	706,012
Other operating expenses	8	143,860	129,877
Depreciation and amortization expense	4,5,6	<u>18,538</u>	<u>21,356</u>
Income from operations		142,155	111,194
Other income (expense)			
Interest income		4,606	2,145
Interest expense		<u>(970)</u>	<u>(1,023)</u>
Income from operations before provision for income taxes		145,791	112,316
Provision for income taxes	9	<u>26,706</u>	<u>30,751</u>
Profit and comprehensive income		<u>\$ 119,085</u>	<u>\$ 81,565</u>

The accompanying notes are an integral part of these consolidated financial statements.

Arcadis U.S., Inc. and Subsidiaries
Consolidated Statements of Changes in Equity
Years Ended December 31, 2023 and 2022

<i>(amounts in thousands)</i>	Common stock		Additional Paid-in Capital	Retained Earnings	Total
	Shares	Amount			
Balances at January 1, 2022	387	\$ -	\$ 371,605	\$ 99,531	\$ 471,136
Profit and comprehensive income		-	-	81,565	81,565
Dividends		-	-	(80,000)	(80,000)
Stock exercises and excess tax benefit		-	60	-	60
Balances at December 31, 2022	387	-	371,665	101,096	472,761
Profit and comprehensive income	-	-	-	119,085	119,085
Dividends	-	-	-	(60,000)	(60,000)
Stock exercises and excess tax benefit	-	-	47	-	47
Balances at December 31, 2023	387	\$ -	\$ 371,712	\$ 160,181	\$ 531,893

The accompanying notes are an integral part of these consolidated financial statements.

Arcadis U.S., Inc. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2023 and 2022

<i>(amounts in thousands)</i>	Note	2023	2022
Cash flows provided by operating activities			
Profit and comprehensive income		\$ 119,085	\$ 81,565
Adjustments to reconcile profit and comprehensive income to net cash provided by (used in) operating activities			
Allowance on receivables		(1,745)	(2,430)
Depreciation and amortization	4,5,6	18,538	21,356
Deferred income taxes		16,727	(47,210)
Interest expense leases		836	964
Changes in assets and liabilities			
Accounts receivable		(62,384)	(16,029)
Related party receivables		9,820	(13,779)
Other current assets		2,635	(2,909)
Other assets		(1,922)	4,594
Accounts payable		5,617	7,751
Accrued expenses		5,461	(231)
Billings in excess of cost		27,900	1,982
Income taxes payable		(69,948)	44,863
Deferred compensation		1,848	(2,824)
Other liabilities		(1,279)	(8,347)
Net cash provided by operating activities		<u>71,189</u>	<u>69,316</u>
Cash flows from investing activities			
Capital expenditures	4,6	(10,701)	(5,398)
Proceeds from sale of property and equipment	4	365	83
ARCADIS cash pooling alignment	13	-	35,000
Net cash provided by (used in) investing activities		<u>(10,336)</u>	<u>29,685</u>
Cash flows from financing activity			
Payment of dividends	13	(60,000)	(80,000)
Principal payments on lease obligations	5	(13,836)	(16,204)
Net cash used in financing activity		<u>(73,836)</u>	<u>(96,204)</u>
Net change in cash and cash equivalents		(12,983)	2,797
Cash and cash equivalents			
Beginning of year		<u>28,782</u>	<u>25,985</u>
End of year		<u>\$ 15,799</u>	<u>\$ 28,782</u>

The accompanying notes are an integral part of these consolidated financial statements.



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
09/23/2024

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 Aon Risk Services South, Inc. Franklin TN Office 501 Corporate Centre Drive Suite 300 Franklin TN 37067 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): 800-363-0105 E-MAIL ADDRESS:														
INSURED Arcadis U.S., Inc. 630 Plaza Drive Suite 200 Highlands Ranch CO 80129 USA	<table><tr><th>INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A: Twin City Fire Insurance Company</td><td>29459</td></tr><tr><td>INSURER B: Hartford Fire Insurance Co.</td><td>19682</td></tr><tr><td>INSURER C: Hartford Casualty Insurance Co</td><td>29424</td></tr><tr><td>INSURER D: Endurance American Insurance Company</td><td>10641</td></tr><tr><td>INSURER E: Hartford Accident & Indemnity Company</td><td>22357</td></tr><tr><td>INSURER F:</td><td></td></tr></table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Twin City Fire Insurance Company	29459	INSURER B: Hartford Fire Insurance Co.	19682	INSURER C: Hartford Casualty Insurance Co	29424	INSURER D: Endurance American Insurance Company	10641	INSURER E: Hartford Accident & Indemnity Company	22357	INSURER F:	
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INSURER D: Endurance American Insurance Company	10641														
INSURER E: Hartford Accident & Indemnity Company	22357														
INSURER F:															

COVERAGES **CERTIFICATE NUMBER:** 570108353250 **REVISION NUMBER:**

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.

Limits shown as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input checked="" type="checkbox"/> LOC OTHER:			20ECSOL5318 SIR applies per policy terms & conditions	10/01/2024	10/01/2025	EACH OCCURRENCE	\$1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,000
							MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$1,000,000
							GENERAL AGGREGATE	\$2,000,000
							PRODUCTS - COMP/OP AGG	\$2,000,000
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			20 UEN OL5319	10/01/2024	10/01/2025	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
							BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000			20XHUOL5322 Umbrella	10/01/2024	10/01/2025	EACH OCCURRENCE	\$1,000,000
							AGGREGATE	\$1,000,000
E	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A	20WNOL5323 AOS 20WBROL5321 MA, WI	10/01/2024	10/01/2025	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER	
A					10/01/2024	10/01/2025	E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE-EA EMPLOYEE	\$1,000,000
							E.L. DISEASE-POLICY LIMIT	\$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Evidence of Insurance.

CERTIFICATE HOLDER

Arcadis U.S., Inc.
630 Plaza Drive, Suite 200
Highlands Ranch CA 80129 USA

CANCELLATION

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

Aon Risk Services South Inc.

Holder Identifier :

570108353250

Certificate No :





CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
05/17/2024

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 Aon Risk Services South, Inc. Franklin TN Office 501 Corporate Centre Drive Suite 300 Franklin TN 37067 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (800) 363-0105 E-MAIL ADDRESS:														
INSURED Arcadis U.S., Inc. 630 Plaza Drive Suite 200 Highlands Ranch CO 80129 USA	<table border="1"><tr><th>INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A: Indian Harbor Insurance Company</td><td>36940</td></tr><tr><td>INSURER B:</td><td></td></tr><tr><td>INSURER C:</td><td></td></tr><tr><td>INSURER D:</td><td></td></tr><tr><td>INSURER E:</td><td></td></tr><tr><td>INSURER F:</td><td></td></tr></table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Indian Harbor Insurance Company	36940	INSURER B:		INSURER C:		INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #														
INSURER A: Indian Harbor Insurance Company	36940														
INSURER B:															
INSURER C:															
INSURER D:															
INSURER E:															
INSURER F:															

COVERAGES

CERTIFICATE NUMBER: 570105766919

REVISION NUMBER:

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. Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL NSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION						EACH OCCURRENCE AGGREGATE
	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 <input type="checkbox"/> N / A						PER STATUTE <input type="checkbox"/> OTHER <input type="checkbox"/> E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT
A	Contractors Pollution Liability			US00101061E024A Professional & Pollution SIR applies per policy terms & conditions	06/01/2024	06/01/2025	Each Claim \$2,000,000 Annual Aggregate \$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Evidence of Insurance. For Professional Liability coverage, the Aggregate Limit is the total insurance available for claims presented within the policy period for all operations of the insured. The Limit will be reduced by payments of indemnity and expense.

CERTIFICATE HOLDER**CANCELLATION**

Arcadis U.S., Inc. 630 Plaza Drive, Suite 200 Highlands Ranch CO 80129 USA	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>Aon Risk Services South Inc</i>
--	---

Holder Identifier :

Certificate No : 570105766919



ADDITIONAL REMARKS SCHEDULE

Page _ of _

AGENCY Aon Risk Services South, Inc.		NAMED INSURED Arcadis U.S., Inc.	
POLICY NUMBER See Certificate Number: 570105766919			
CARRIER See Certificate Number: 570105766919	NAIC CODE	EFFECTIVE DATE:	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER	
INSURER	
INSURER	
INSURER	

ADDITIONAL POLICIES

If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
	OTHER						
	Claims-Made						
	Professional Liability						
	and Contractors						
	Pollution Liability						

About Arcadis

Arcadis is the leading global design and consultancy firm for natural and built assets. Applying our deep market sector insights and collective design, consultancy, engineering, project and management services we work in partnership with our clients to deliver exceptional and sustainable outcomes throughout the lifecycle of their natural and built assets. We are more than 36,000 people, active in over 30 countries that generate over \$5 billion in revenues. We support UN-Habitat with knowledge and expertise to improve the quality of life in rapidly growing cities around the world.

www.arcadis.com

Supporting our clients in their quest to become Fit-for-Future.

Utilities must plan for unprecedented scenarios while navigating a changing workforce, but where should leaders focus?

Use the QR code below to explore the five fundamentals of becoming a fit-for-future water utility and the common thread that unites them.



Arcadis. Improving quality of life

EXHIBIT “B”

EXHIBIT B

INSURANCE REQUIREMENTS : RFQ25-037 – PROFESSIONAL SERVICES FOR SUSTAINABILITY PROJECTS

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. **Such policy or policies shall be issued by United States Treasury approved companies authorized to do business in the State of Florida. The policies shall be written on forms acceptable to the City's Risk Manager, meet a minimum financial A.M. Best and Company rating of no less than Excellent, and be part of the Florida Insurance Guarantee Association Act. No changes are to be made to these specifications without prior written approval of the City's Risk Manager.**

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.

A. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440, regardless of the size of the company (number of employees) or the state in which the work is to be performed or of the state in which Contractor is obligated to pay compensation to employees engaged in the performance of the work. 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.

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 Contractor's negligent acts or omissions in connection with Contractor'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
\$2,000,000 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	
___ CG2010	ongoing operations (or its' equivalent)
___ CG 2037	completed operations (or its' equivalent)
___ sexual abuse/molestation	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	<input type="checkbox"/> Minimum \$10,000/\$20,000/\$10,000
XX owned	(Florida's Minimum Coverage)
XX hired	
XX non-owned	

C. Employer's Liability. 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.

D. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONTRACTOR, the CONTRACTOR 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. 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.

Please note that Florida Statue Section 255.05 requires contractors who enter into a contract with the City to purchase a payment and performance bond when the contract is in excess of \$200,000.



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
08/19/2025

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 Aon Risk Insurance Services West, Inc. Denver CO Office 200 Clayton Street, Suite 800 Denver CO 80206 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): 800-363-0105 E-MAIL ADDRESS:														
INSURED Arcadis U.S., Inc. 630 Plaza Drive, Suite 100 Highland Ranch CO 80129 USA	<table><tr><th>INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A: Hartford Accident & Indemnity Company</td><td>22357</td></tr><tr><td>INSURER B: Twin City Fire Insurance Company</td><td>29459</td></tr><tr><td>INSURER C: Hartford Fire Insurance Co.</td><td>19682</td></tr><tr><td>INSURER D: Hartford Underwriters Insurance Company</td><td>30104</td></tr><tr><td>INSURER E: Hartford Casualty Insurance Co</td><td>29424</td></tr><tr><td>INSURER F: Endurance American Insurance Company</td><td>10641</td></tr></table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Hartford Accident & Indemnity Company	22357	INSURER B: Twin City Fire Insurance Company	29459	INSURER C: Hartford Fire Insurance Co.	19682	INSURER D: Hartford Underwriters Insurance Company	30104	INSURER E: Hartford Casualty Insurance Co	29424	INSURER F: Endurance American Insurance Company	10641
INSURER(S) AFFORDING COVERAGE	NAIC #														
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COVERAGES**CERTIFICATE NUMBER: 570114987489****REVISION NUMBER:**

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.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/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 Liability GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			20ECSOL5969 SIR applies per policy terms & conditions	06/01/2025	06/01/2026	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000
C	AUTOMOBILE LIABILITY			20 UEN OL5968 AOS	06/01/2025	06/01/2026	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000
D	<input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY			20 UEN OL5973 HI	06/01/2025	06/01/2026	BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
E	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000			20XHUOL5972	06/01/2025	06/01/2026	EACH OCCURRENCE \$1,000,000 AGGREGATE \$1,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			20WNOL5971 AOS	06/01/2025	06/01/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
B	ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	20WBROL5970 MA, WI	06/01/2025	06/01/2026	E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE-EA EMPLOYEE \$1,000,000 E.L. DISEASE-POLICY LIMIT \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: RFQ25-037 Professional Services for Sustainability Projects
City of Pompano Beach is included as Additional Insured in accordance with the policy provisions of the General Liability policy. A Waiver of Subrogation is granted in favor of Additional Insured in accordance with the policy provisions of the General Liability policy.

CERTIFICATE HOLDER**CANCELLATION**

City of Pompano Beach 100 W. Atlantic Blvd. Pompano Beach FL 33060 USA	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>Aon Risk Insurance Services West, Inc.</i>
--	--

Holder Identifier : FGH1

Certificate No : 570114987489



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO CERTIFICATE HOLDER(S)

This policy is subject to the following additional Conditions:

- A.** If this policy is cancelled by the Company, other than for nonpayment of premium, notice of such cancellation will be provided at least thirty (30) days in advance of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.
- B.** If this policy is cancelled by the Company for nonpayment of premium, or by the insured, notice of such cancellation will be provided within (10) days of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.

If notice is mailed, proof of mailing to the last known mailing address of the certificate holder(s) on file with the agent of record or the Company will be sufficient proof of notice.

Any notification rights provided by this endorsement apply only to active certificate holder(s) who were issued a certificate of insurance applicable to this policy's term.

Failure to provide such notice to the certificate holder(s) will not amend or extend the date the cancellation becomes effective, nor will it negate cancellation of the policy. Failure to send notice shall impose no liability of any kind upon the Company or its agents or representatives.



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO CERTIFICATE HOLDER(S)

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- A.** If this policy is cancelled by the Company, other than for nonpayment of premium, notice of such cancellation will be provided at least thirty (30) days in advance of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.
- B.** If this policy is cancelled by the Company for nonpayment of premium, or by the insured, notice of such cancellation will be provided within (10) days of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.

If notice is mailed, proof of mailing to the last known mailing address of the certificate holder(s) on file with the agent of record or the Company will be sufficient proof of notice.

Any notification rights provided by this endorsement apply only to active certificate holder(s) who were issued a certificate of insurance applicable to this policy's term.

Failure to provide such notice to the certificate holder(s) will not amend or extend the date the cancellation becomes effective, nor will it negate cancellation of the policy. Failure to send notice shall impose no liability of any kind upon the Company or its agents or representatives.



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO CERTIFICATE HOLDER(S)

This policy is subject to the following additional Conditions:

- A.** If this policy is cancelled by the Company, other than for nonpayment of premium, notice of such cancellation will be provided at least thirty (30) days in advance of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.
- B.** If this policy is cancelled by the Company for nonpayment of premium, or by the insured, notice of such cancellation will be provided within (10) days of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.

If notice is mailed, proof of mailing to the last known mailing address of the certificate holder(s) on file with the agent of record or the Company will be sufficient proof of notice.

Any notification rights provided by this endorsement apply only to active certificate holder(s) who were issued a certificate of insurance applicable to this policy's term.

Failure to provide such notice to the certificate holder(s) will not amend or extend the date the cancellation becomes effective, nor will it negate cancellation of the policy. Failure to send notice shall impose no liability of any kind upon the Company or its agents or representatives.



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO CERTIFICATE HOLDER(S)

Policy Number: 20WNOL5971

Endorsement Number:

Effective Date: 06/01/2025

Effective hour is the same as stated on the Information Page of the policy.

Named Insured and Address:

ARCADIS U.S., INC.

630 PLAZA DR STE 200

LITTLETON

CO

This policy is subject to the following additional Conditions:

- A. If this policy is cancelled by the Company, other than for non-payment of premium, notice of such cancellation will be provided at least thirty (30) days in advance of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.
- B. If this policy is cancelled by the Company for non-payment of premium, or by the insured, notice of such cancellation will be provided within ten (10) days of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.

If notice is mailed, proof of mailing to the last known mailing address of the certificate holder(s) on file with the agent of record or the Company will be sufficient proof of notice.

Any notification rights provided by this endorsement apply only to active certificate holder(s) who were issued a certificate of insurance applicable to this policy's term.

Failure to provide such notice to the certificate holder(s) will not amend or extend the date the cancellation becomes effective, nor will it negate cancellation of the policy. Failure to send notice shall impose no liability of any kind upon the Company or its agents or representatives.



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
08/19/2025

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 Aon Risk Insurance Services West, Inc. Denver CO Office 200 Clayton Street, Suite 800 Denver CO 80206 USA	CONTACT NAME: PHONE (A/C, No. Ext): (866) 283-7122 FAX (A/C, No.): (800) 363-0105 E-MAIL ADDRESS:														
INSURED Arcadis U.S., Inc. 630 Plaza Drive Suite 200 Highlands Ranch CO 80129 USA	<table><tr><th>INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A: Indian Harbor Insurance Company</td><td>36940</td></tr><tr><td>INSURER B:</td><td></td></tr><tr><td>INSURER C:</td><td></td></tr><tr><td>INSURER D:</td><td></td></tr><tr><td>INSURER E:</td><td></td></tr><tr><td>INSURER F:</td><td></td></tr></table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Indian Harbor Insurance Company	36940	INSURER B:		INSURER C:		INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #														
INSURER A: Indian Harbor Insurance Company	36940														
INSURER B:															
INSURER C:															
INSURER D:															
INSURER E:															
INSURER F:															

COVERAGES**CERTIFICATE NUMBER:** 570114987518**REVISION NUMBER:**

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. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION						EACH OCCURRENCE AGGREGATE
	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 <input type="checkbox"/> N/A						PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT
A	Contractors Pollution Liability			US00101061E025A Professional & Pollution SIR applies per policy terms & conditions	06/01/2025	06/01/2026	Each Claim Annual Aggregate \$1,000,000 \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: RFQ25-037 Professional Services for Sustainability Projects

CERTIFICATE HOLDER**CANCELLATION**

City of Pompano Beach 100 W. Atlantic Blvd. Pompano Beach FL 33060 USA	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>Aon Risk Insurance Services West, Inc.</i>
--	--

Holder Identifier : @

Certificate No : 570114987518



ADDITIONAL REMARKS SCHEDULE

Page _ of _

AGENCY Aon Risk Insurance Services West, Inc.		NAMED INSURED Arcadis U.S., Inc.	
POLICY NUMBER See Certificate Number: 570114987518		EFFECTIVE DATE:	
CARRIER See Certificate Number: 570114987518	NAIC CODE		

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 **FORM TITLE:** Certificate of Liability Insurance

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER	
INSURER	
INSURER	
INSURER	

ADDITIONAL POLICIES

If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
	OTHER							
	<input type="checkbox"/> Claims-Made							
	<input type="checkbox"/> Pollution Liability							
	<input type="checkbox"/> and Contractors							
	<input type="checkbox"/> Professional Liability							

This endorsement, effective 12:01 a.m., June 1, 2025 forms a part of Policy No. US00101061EO25A issued to Arcadis North America, Arcadis U.S. Inc., CallisonRTKL Inc. by Indian Harbor Insurance Company.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

POLICY CANCELLATION – NOTICE TO DESIGNATED ENTITIES

This endorsement modifies insurance provided under the following:

PROFESSIONAL, ENVIRONMENTAL AND NETWORK SECURITY LIABILITY POLICY – ARCHITECTS, CONSULTANTS AND ENGINEERS

Section XI. OTHER CONDITIONS, Paragraph A. Cancellation is amended by the addition of the following:

In the event that the Company cancels this Policy for any statutorily permitted reason other than non-payment of premium, the Company agrees to provide thirty (30) days' notice of cancellation of this Policy to any entity with whom the NAMED INSURED agreed in a written contract or agreement would be provided with notice of cancellation of this Policy, provided that:

1. The Company receives, at least fifteen (15) days prior to the date of cancellation, a written request from the NAMED INSURED to provide notice of cancellation to entities designated by the NAMED INSURED to receive such notice and;
2. The written request includes the name and address of each person or entity designated by the NAMED INSURED to receive such notice.

This endorsement does not apply to non-renewal of the Policy, cancellation at the INSURED'S request, or to cancellation of the Policy for non-payment of premium to the Company or to a premium finance company authorized to cancel the Policy. Furthermore, nothing contained in this endorsement shall be construed to provide any rights under the Policy to the entities receiving notice of cancellation pursuant to this endorsement, nor shall this endorsement amend or alter the effective date of cancellation stated in the cancellation notice issued to the NAMED INSURED.

All other terms and conditions of the Policy remain unchanged.