ARCADIS

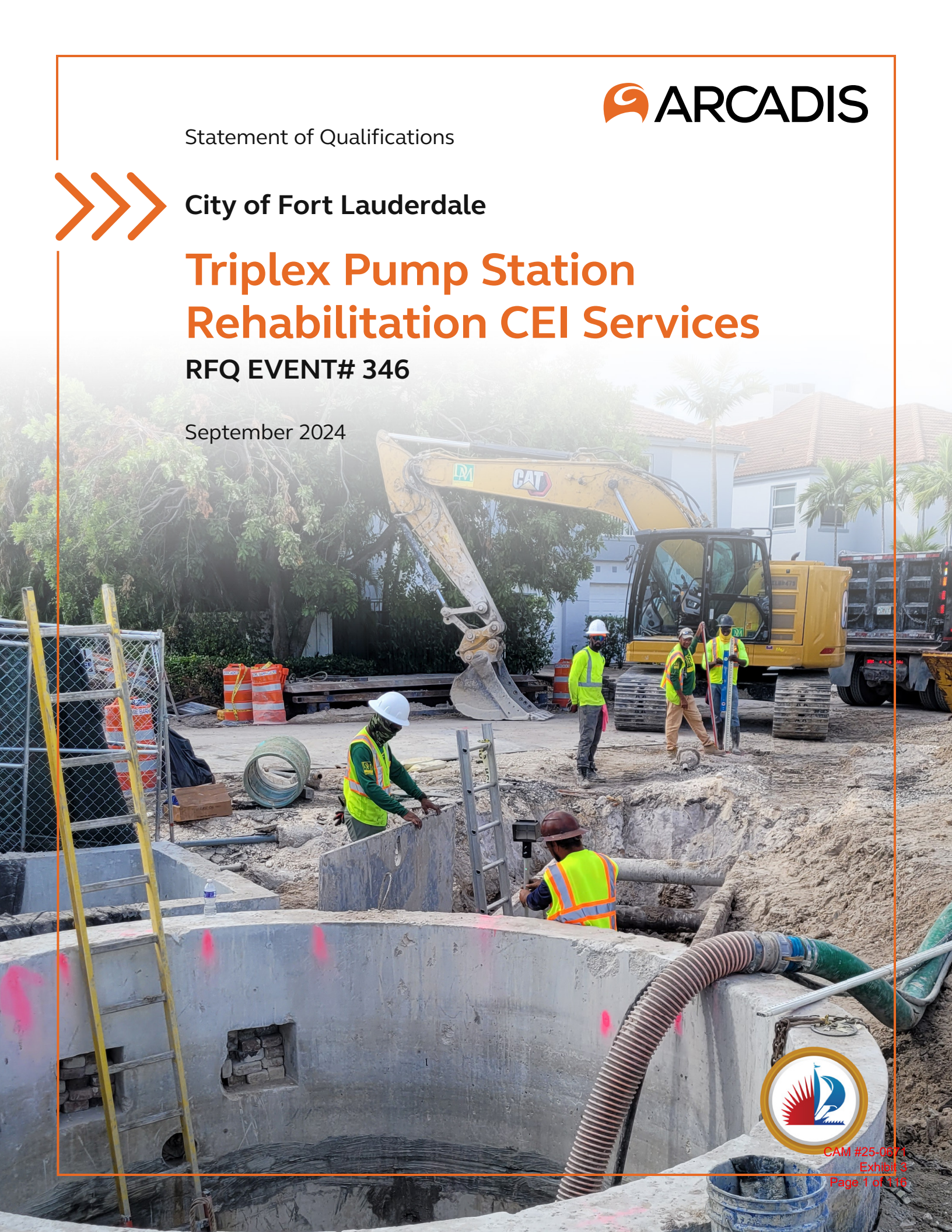
Statement of Qualifications

## City of Fort Lauderdale

# Triplex Pump Station Rehabilitation CEI Services

## RFQ EVENT# 346

September 2024



**City of Fort Lauderdale, Procurement Services Division**
**Erick Martinez, Senior Procurement Specialist**
101 NE 3rd Avenue, Suite 1650
Fort Lauderdale, FL 33301

Arcadis U.S., Inc.
150 S. Pine Island Road
Suite 315
Plantation, FL 33324
www.arcadis.com

September 23, 2024

**Request for Qualifications, RFQ Event #346 Triplex Pump Station Rehabilitation CEI Services**

Dear Mr. Martinez and Members of the Evaluation Committee:

**Arcadis U.S., Inc (Arcadis)** is pleased to submit this statement of qualifications (SOQ) to provide **Construction Engineering and Inspection (CEI) services** to the City of Fort Lauderdale (City) for these important triplex pump station projects. We stand ready to support the City in the completion of this project and assure construction occurs according to the plans and specifications, schedules and budgets are adhered to, and all projects' requirements are met. **Our Plantation, FL, office serves as home base for our proposed Construction Management and Inspection team.** This highly experienced local team will be backed by an extensive network of construction specialists and subject matter experts. **Our team also includes highly qualified subconsultants who also have local experience and resources — WIRX and Stoner & Associates.** Both Stoner and WIRX have worked with Arcadis on different projects for the City and are familiar with the City's specific requirements. This SOQ will demonstrate our Team's extensive qualifications and experience in providing CEI services for similar projects and for the City.

**Our designated Senior Construction Manager, Len Sheptock, is a Certified General Contractor and brings nearly 40 years of experience in the utilities industry, including leading the inspections of large sanitary sewer pump stations in sensitive areas.** Len is a leader and a problem solver known for his collaborative work style and will be the primary Point of Contact for the City, working on-site to ensure the City receives full value from the selected contractors.

Len will be supported by a strong inspection team who has experience with similar sanitary sewer pump station projects. **That team includes Darryl Dunn, PE who most recently provided construction management and inspection services for the City's Pump Station A-16 Relocation Project which included a new pump station, with new electrical and instrumentation equipment.** They will be able to apply their knowledge and lessons learned from that project, including the experience gained from working in congested areas within the City and ensuring the contractor is meeting all associated regulatory requirements.

**Leah Richter, PE, will serve as the Principal-in-Charge.** In this role she will provide oversight of the project and coordinate with Len to ensure adequate resources are available for successful project delivery. A Fort Lauderdale native, Leah will bring value with her 25+ years of experience overseeing the successful delivery of services and projects to numerous public utility clients in the South Florida area, including the City.

We look forward to expanding our partnership with the City as you continue to provide high-quality, sustainable and cost-effective projects to your customers. A review of our qualifications and approach will make it evident we can support the City in the administration and execution of this project, resolve any construction issues or disputes which may arise, and ensure the project delivered to you operates properly and provides lasting value to the City and your customers.

We appreciate the opportunity to submit our qualifications and look forward to continuing our partnership with the City. Please do not hesitate to contact me should you have any questions in regard to the information provided herein.

Sincerely,
Arcadis U.S., Inc.

Leah Richter, PE
Principal-in-Charge
✉ leah.richter@arcadis.com | ☎ 954.525.2499

Len Sheptock, CGC
Senior Construction Manager
✉ len.sheptock@arcadis.com | ☎ 480.635.2056

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## Section 4.2.2.

# Executive Summary

# 4.2.2. Executive Summary

Arcadis has been an active member of the **local community** since **opening our first office in Fort Lauderdale more than 30 years ago.** During this time, we have been privileged to collaborate on many local projects to help enable the vision of City and County leaders. Moreover, we have done so by supporting and working alongside local agencies in helping to **build and improve our community.** We are excited for the opportunity to apply our comprehensive and specialized expertise related to **Construction Engineering & Inspection** in support of the construction of these 8 triplex pump stations, most of them located in sensitive neighborhoods and others in close proximity to business areas.

### Our Value to the City:

*Arcadis brings a highly experienced local team, backed by an **extensive network of construction specialists and subject matter experts. Our team is familiar with City requirements and will assure you receive full value from the selected contractors.***

*A Senior Construction Manager (Len Sheptock) with more than 40 years of experience in the utility industry, including sanitary sewer pump stations in sensitive areas and a Certified General Contractor.*

*The right qualifications and approach to support the City on these projects. Our team has extensive experience working in congested, and neighborhood areas. We will be working with the City and Contractors to make sure the projects are constructed safely and meet all regulatory requirements.*

*We know coordination will be key. For example, B-4 located in the George English Park, near the boat ramps and Galleria Mall, B-11 in Commercial Blvd. and A-29 right next to a property, these will need a CEI firm that can provide support to the City in the coordination efforts with these stakeholders.*

## Firm Qualifications and Experience:

**Business Entity:** Arcadis U.S. Inc. is wholly owned by Arcadis North America, Inc., a Colorado Corporation, whose sole shareholder is Arcadis USA, B.V., a Dutch company.

**Background:** Arcadis is a leading global natural and built asset design and consultancy firm working in partnership with our clients to deliver exceptional and sustainable outcomes through the application of design, consultancy, engineering, construction management, and project management services. We are active in the fields of infrastructure, water, environment, and buildings.

**Specialty Subconsultants**

STONER SURVEYORS • MAPPERS

WIRX ENGINEERING

Arcadis has been in business under the present name for 55 years. Founded in 1888, the firm's roots began, when the organization was founded in the Netherlands as an association for wasteland redevelopment. Arcadis has evolved throughout the 20th century, expanding its global reach and range of service offerings through strategic initiatives and targeted acquisitions.

**Main Offices: Our Florida practice is supported by 350+ professionals among 9 Florida offices, including Plantation, Miami, Tampa, Orlando, Jacksonville, Pensacola, Boca Raton, Coral Gables and Tallahassee, FL.**

## Office Location that will serve this Contract: Plantation, FL

# Project Team Experience and Qualifications:

**Officers/Principals/Key Individuals and Office Locations:**

Leah Richter, PE: VP, Principal-in-Charge, Plantation, FL
Melissa Pomales, PE, PMP, ENV SP: Sr. VP and Area Leader, Plantation, FL
Chris Remme: VP, QA/QC, Richmond, VA
Len Sheptock, CGC: Senior Construction Manager, Plantation, FL
Jose Custodio, PE: Pipeline Technical Advisor, Plantation, FL
Cheriece Davidson: Inspector, Plantation, FL
Lia Dombroski: Inspection Support, Plantation, FL

## ENR 2023 Global Sourcebook Rankings

### Water Supply

- #4 Water Supply
- #1 Treatment and Desalination
- #8 Dams and Reservoirs
- #5 Transmission Lines and Aqueducts

### Sewerage & Solid Waste

- #9 Sewerage and Solid Waste
- #7 Wastewater Treatment
- #5 Sanitary and Storm Sewers

# Key Elements of the Proposal:

## Qualifications:

**Arcadis is a leader in providing construction management (CM) and Construction Engineering and Inspection (CEI) services.** Our construction personnel and professionals include construction managers, inspectors, engineers, CPM schedulers, cost estimators, certified value engineering specialists, commissioning agents, claims specialists and LEED Accredited Professionals.

## Responsiveness:

We understand a projects of this magnitude requires a flexible and agile team so qualified personnel will be available when needed. With three construction contracts running concurrently, staffing will be important to our success in delivering the projects within the same two-year period. **If needed, we have additional resources available in the South Florida area that can be deployed to make sure there is always full coverage of the construction activities. While our CM and Inspection team has a home base in our Plantation office, they will primarily be located on-site in the field observing the construction.**

## Project Understanding

Arcadis is currently providing Construction Engineering and Inspection (CEI) services to the City as part of our Continuing Services contract and is very familiar with the City's expectations on how to deal with issues that arise during the construction phase of your projects. Our Team possesses the experience, and clearly understands the significance of concurrent construction contracts to rehabilitate eight aging pump stations.

*"Arcadis provides the highest level of expertise needed for OUC's complex projects."*

- Chuck DiGerlando, Manager, Water Distribution Engineering, Orlando Utilities Commission

*"We have worked with Arcadis for years and they have always worked with us to find a way to get it done."*

- Phil Clark, Director of Utilities, City of Tavares

## Section 4.2.3.

# Firm Qualifications and Experience

# 4.2.3. Firm Qualifications and Experience

Arcadis offers the City ***forward-thinking, cost-effective and sustainable solutions*** that address today's challenges, and the community's economic and infrastructure future.

## Introduction

Arcadis U.S., Inc. is a leading global, natural and built asset design and consultancy firm working in partnership with our clients to deliver exceptional and sustainable outcomes through the application of design, consultancy, engineering, and **construction engineering and inspection services (CEI).**

**We offer the City of Fort Lauderdale the capabilities of a large, diversified firm, with a profound understanding of regional and local circumstances.** Our CEI staff are adept at solving the difficult issues that face public utilities and public works departments today, including difficult rehabilitation projects, regulatory compliances, constrained budgets, future capacity needs, customer expectations, and tight schedules. We work with our clients to overcome these challenges. This experience, coupled with our local staff, national experts, and pool of specialty subconsultants, will bring fresh ideas to the City.

With approximately 6,000 U.S. professionals and support personnel, and more than 350 staff members in the State of Florida, Arcadis has the capacity to provide the resources necessary to meet the City's objectives and comply with the Consent Order. **This contract will be managed from our office in Plantation, FL**.

### MINIMUM QUALIFICATIONS

- Firm's # of Years of Experience: Firm was incorporated in Delaware in 1967 and has provided services for more than 150 years.
- Business Structure: Corporation.
- **Licensed in the State of FL to provide professional engineering services:** Yes, Florida license documents are shown on following page engineering services.
- Business Areas: To enhance and strengthen our global reach with our expertise, we invest in capabilities and concentrate on the following 3 business areas: **Resilience - Water/Environment, Places, and Mobility.**
- **Firm has performed similar work for local governments in Southeast Florida and completed engineering for public agencies, including:** Over 15 Professional Municipal Engineering Contracts in South Florida. Arcadis has been performing CM and CEI services for public works entities for more than 30 years.
- **DBE/MBE Certification:** No, but we have engaged local, certified subconsultants for our team who will actively participate if awarded a contract.

### Arcadis At-a-Glance

Over **6,000** U.S. employees

Working in **120+** offices across the U.S.

More than **$4.2** billion in revenues

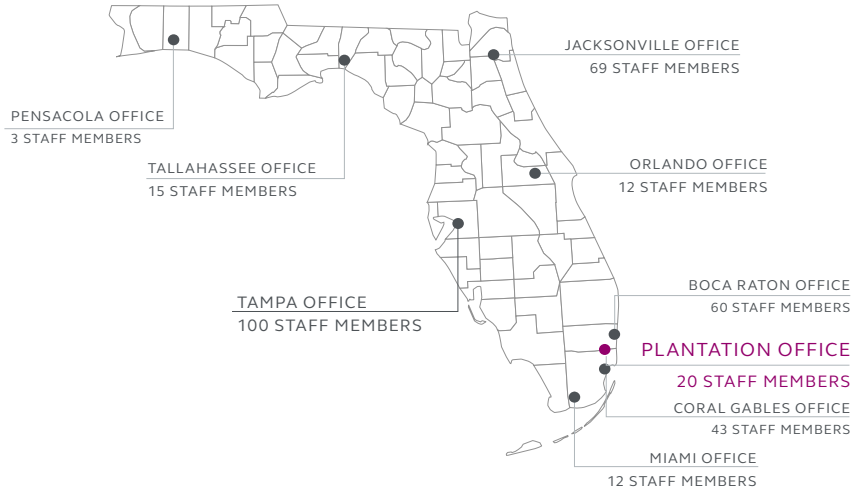
Over **350** staff members in Florida

**Firm Ownership**
Arcadis U.S., Inc., is owned 100% by Arcadis North America, Inc., a Colorado corporation

**Corporate Headquarters**
630 Plaza Drive, Highlands Ranch, CO 80129

**Organizational Structure**
Arcadis U.S., Inc. is a corporation registered in the State of Delaware, and a subsidiary of Arcadis N.V., a Dutch company (founded in 1888).

**Local Office**
150 S. Pine Island Road, Suite 315, Plantation, FL 33324

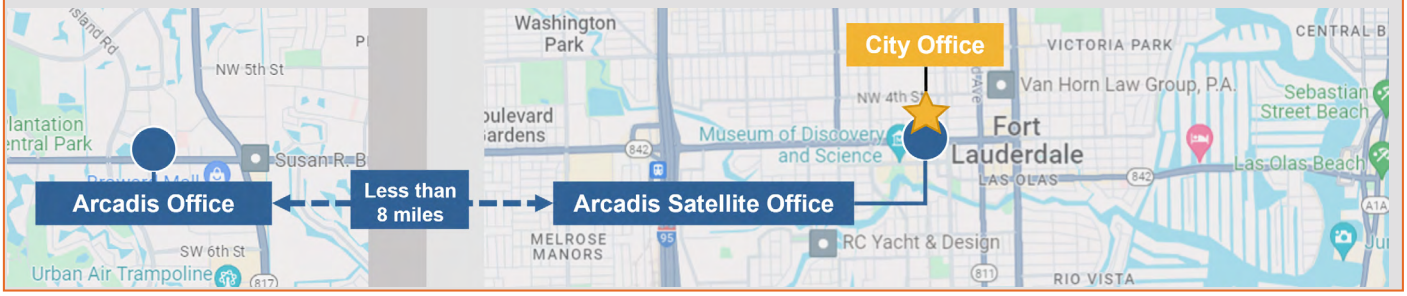



**Our Florida practice is supported by over 350+ professionals among 9 Florida offices. Arcadis has performed a thorough review of resources in the State so that local knowledge and established local relationships can be leveraged to bring the City exemplary services.**

## A Local, Responsive Office

**Arcadis' office in Plantation, is located less than 8 miles from the Project Site and the temporary City Hall Building.**

**In addition, Arcadis brings the option of a Satellite office at the 101 NE 3rd Avenue, 15th Floor. This Quest Workspace can be used by our Construction Manager and Inspectors and is less than a mile from the Project Sites.**




## Qualifications

Arcadis is pleased to submit our qualifications for the Management and Construction Engineering and Inspection (CEI) for this is for Triplex Pump Stations project and excited about the opportunity to provide these services to the City. A leader in providing construction management (CM) and inspection services, Arcadis successfully delivers critical infrastructure projects for utilities and municipalities around Florida and the nation. Our construction personnel and professionals include construction managers, inspectors, engineers, CPM schedulers, cost estimators, certified value engineering specialists, commissioning agents, claims specialists and LEED Accredited Professionals. Our CM practice specializes in the delivery of public works infrastructure projects, including distribution and collection systems, water and wastewater treatment facilities, stormwater management systems, buildings, and general civil projects. Arcadis will bring best practices gleaned from our extensive project and CM experience, delivering innovative solutions in close collaboration with City staff. We know the importance of planning, coordinating and communicating with operations and maintenance staff so the system continues to operate safely and reliably during and after construction.

Arcadis has the capacity to provide the resources necessary to meet the City's objective with this Project. We have the ability to work with accelerated schedules, respond quickly, maintain quality work, and meet budget and time constraints. Should an increase in resources be necessary, our team can draw from a resource pool of employees within Florida and nationally. In short, we have the knowledge and resources to successfully meet the needs of the City for these projects.

## CM/CEI Capabilities

Arcadis has unmatched experience and expertise in construction management (CM) and construction engineering and inspection (CEI) services for collection and conveyance systems. We have proudly partnered with the City on several projects, supporting with CM/CEI services for the delivery of the A-16 Pump Station project (completed), the 48-inch Finished Water Line project (on-going), and the recently awarded Redundant Force Main to GTL project. Our team has also performed CM and CEI work for clients across Florida including Sarasota County, Hillsborough County, Orlando Utilities Commission, and JEA. Furthermore, we bring the experience of a large, diversified team that has worked with some of the largest and most complex water and wastewater utilities and facilities in the world including New York City (Wards Island, Coney Island, Newtown Creek), Detroit (DWSD WWTP), Cleveland (NEORSD Southerly), Phoenix (91st Avenue), Washington DC (Blue Plains), and Boston (Deer Island). Our team also brings unmatched experience garnered from recent Program Management (PM/CM) engagements, including JEA's Large Diameter Pipe Replacement Program, Chicago Department of Water Management CIP, DC Water Sewer Program, ALCOSAN Wet Weather Plant Expansion Program, NYC's $4 billion Newtown Creek WWTP Upgrades Program, PRASA's Capital Improvement Program, and numerous conveyance R&R programs.

Managing the change process is one of the most challenging issues that we face as project managers. To address this, we allow out-of-the-box and creative thinking early in the process (planning and preliminary design phases), but implement a rigorous change process during the later design phases. During the process, we recommend incorporating Constructability Reviews and Value Engineering Reviews to identify potential issues and optimization opportunities, respectively, that may arise during the construction process. This approach is one of our "Keys to Success" for maintaining schedule and budget.

## Design Review / Constructability Review

Arcadis performs design reviews or constructability and value engineering reviews utilizing our team of construction managers, resident engineers and design engineers. We review everything from wet well sizing, pumps curves, clearances, SCADA materials, MOT, and overall completeness of the drawings and specifications in relation to the project objectives set forth by City of Fort Lauderdale.

Successful projects are defined not only by effective sequencing and staging of construction, but also by the protection of personnel and the surrounding community and businesses from safety issues. Our CM staff will coordinate with the City's Project Manager and support Strategic Communications staff to keep the local community updated on the progress of the construction and provide support to address community concerns.

## Construction Engineering and Inspection

A leader in providing CM and CEI services, Arcadis successfully manages multiple CM contracts for utilities in Florida and around the nation. Our construction personnel and professionals include construction managers, inspectors, engineers, CPM schedulers, cost estimators, certified value engineering specialists, commissioning agents, claims specialists and LEED Accredited Professionals.

### Fort Lauderdale – A16 PS

Arcadis served as the CEI firm for the City's A-16 Pump Station relocation Design-Build Project that included the relocation of the A-16 sanitary sewer pump station, installation of a 30-inch water main and a 12-inch force main along SE 3rd Avenue. This project involved the installation of a new wet well, including the concrete pouring for the pump station slab, new pumps, electrical and SCADA system. An issue that Arcadis brought to the City during construction was the need of a tremie for concrete given the depth of the concrete pour. Contractor was required by the team to use this, to ensure concrete integrity and avoid issues in the future.

**WTP High Service Pump CEI Services**

Arcadis was selected by the City of Hollywood to evaluate pumping system at the water treatment plant and provide design improvement to replace the various sizes of pumps, with new pumps and upgrades to the control system to provide a constant discharge pressure. Replacement of the existing water pumps is necessary to maintain water delivery reliability and improve energy efficiency by installing variable speed pumps. The rehabilitation of the pump station includes the replacement check valves and isolation valves, along with the two filter backwash pumps.


Our Water CM practice specializes in the delivery of public works infrastructure projects, including water/ wastewater treatment, distribution, and collection. Permitting and Regulatory Compliance.

Arcadis will bring best practices gleaned from our extensive project and CM experience, delivering innovative solutions in close collaboration with City staff. We know the importance of planning, coordinating and communicating with operations and maintenance staff so plant and collection and distribution systems continue to operate safely and reliably during construction.

We optimize cost, improve operability, improve the plans and specifications to obtain competitive bids and assure quality construction. Arcadis has extensive experience in the construction management of municipal utility projects and are well suited to meet your CM needs throughout this contract.

## Construction Site Health and Safety Management

Arcadis shares our clients' concern regarding the safety of their construction projects. We are committed to promoting and enforcing both construction site safety and environmental health and safety on all of our projects. While the construction contractors have the legal responsibility to provide for the safety of their employees, we routinely assist contractors and clients in maintaining a safe work environment. We follow a safety communications protocol that involves tracking of safety-related issues and providing the client with timely information on spills, incidents and accidents.

## Permitting and Regulatory Compliance

During design and throughout construction work, we monitor the contractor's compliance with all permit and regulatory compliance requirements and stipulations. We maintain logs of permits noting all expiration dates to assure timely renewals. Additionally, we assure the contractor's required reporting is performed in both timely and a correct manner.

# Value-Added Services

## Business Advisory and Utility Management

Our Global Management Consulting Practice, which leads Arcadis' Business Advisory practice, is a dedicated global team of over **2,000+ consultants** that provide management and advisory services globally, across multiple industries. We bring a business mindset to the asset intensive industries we serve and **craft effective and sustainable solutions to improve business performance.** **We deliver hundreds of projects annually in Florida, for clients that include: City of Fort Lauderdale, Broward County, City of Hollywood, Miami-Dade Water and Sewer Department, water and sewer authorities and utilities, counties and local governments, and private industries.**

Arcadis is one of the preeminent Water Management Consulting firms in the country. **We bring a range of consulting and technology experience to help our clients meet their strategic planning and management goals.**

## Asset Management

Arcadis leads the implementation of comprehensive asset management programs across the globe leveraging frameworks such as ISO 55000. We have extensive expertise applying asset management techniques and strategies for well over 50 municipal clients across the U.S., including some of the largest water utilities and seven utilities right here in Florida. **Arcadis is part of the team selected by the City of Fort Lauderdale to assist with your asset management program.**

## Digital Consulting

The digital age has seen the business world transform beyond recognition. Arcadis is leading the application of digital breakthroughs and rapidly changing complexities to help our clients harness the performance of technological shifts. We are helping our clients leverage new ways to use technology and share information, including the **implementation of enterprise-wide business intelligence tools, advanced analytics, enhanced sensors, new service delivery models, and an improved user experience.**

## Sustainable Business Practices

Sustainability is one of our core values, and we are reducing our impact on the world and improving quality of life every day. We actively take steps to reduce our environmental footprint and have reduced our total carbon footprint by 25% per full time employee over the last five years. Our goal is to achieve carbon neutral operations globally. We measure and report our progress towards our sustainability goals on a yearly basis in our Integrated Annual Report and Carbon Disclosure Project disclosure.

As a design and consultancy firm, Arcadis recognizes that the biggest impact we can have on the world is through the projects we complete for our clients. Therefore, we seek to understand each client's sustainability objectives and integrate them into each of our projects. Our goal is to deliver innovative sustainable solutions to our clients, solving their most complex challenges. **Arcadis is a Charter member of the Institute for Sustainable Infrastructure (ISI), as well as a Platinum member of ISI's Envision Leadership Circle, and a Platinum member of the US Green Building Council.** We currently employ **over 60 Envision Sustainability Professionals (ENV SPs) and over 150 LEED Certified professionals who apply their knowledge of sustainable building and infrastructure practices to our projects.** Our **National Wastewater Service Line Leader,** was part of ISI's Envision Review Board, a member of the Water Environment Federation's Envision Task Force and is a past member of the Sustainable Industry Advisory Board of Harvard University's Zofnass Program for Sustainable Infrastructure.


**Len Sheptock, Arcadis Senior Construction Manager,** assigned to the Lake Townsend Water Treatment Plant Upgrade Project in Greensboro NC, inspects the installation and operation of the New Electrical Gear in the New VFD Room and New Vertical Turbine Pumps/Motors with the CMAR Contractor.

# Summary of the Experience and Qualifications of the Senior Construction Manager

## Senior Construction Manager: Len Sheptock

**Office: Plantation, FL**

Mr. Sheptock has more than 35 years of professional program, project, construction management, engineering and general contracting experience throughout the Metro U.S. Holding a Florida Certified General Contractor's license, Mr. Sheptock brings a fresh perspective to projects, focusing on constructability, overall project costs, materials availability, sequencing of construction, risk management and contracting terms and procurement methodologies. Having experience not only in the water and conveyance markets, but also with petrochemical, healthcare, commercial properties, transit and roadways, Mr. Sheptock can apply the best practices learned on those types of projects to the utility industry, incorporating efficiencies and cost saving ideas in areas where traditional designers/constructors might not have imagined.

Some of the Projects that Mr. Sheptock has worked on are:

- ✓ Townsend Water Treatment Plant – Greensboro, NC – Senior Construction Manager responsible for construction of the $55M CMAR construction of electrical and mechanical upgrades and additions to the Townsend WTP. Also, responsible for constructability review for **(4) Water Booster Station projects in Metro Greensboro Area.**
- ✓ Valley Sanitary District Wastewater Treatment Project – Indio, CA – Senior Construction Manager responsible for the project management/claim negotiation for the $80M Design-Build construction of upgrades and additions to the Valley Sanitary District WWTP.
- ✓ Wallbox Electric Vehicle Charger Assembly Facility / EV Project – Wallbox USA, Inc., Arlington, TX – Design-Build Contractor / Senior Construction Manager responsible for development of $13M private design- build electric vehicle charger assembly/manufacturing facility project including 130K SF tenant improvement build-out, site electrical utilities, off-site improvements, MEP systems, assembly line and storage rack equipment, furniture, IT/Data and security systems, exterior signage and EV infrastructure and charging stations in parking lot.
- ✓ Standard Oil / Amoco Oil / Amoco Pipeline Capital Projects – Amoco Oil Refinery, Chicago, IL (Headquarters) Whiting IN – Project Engineer responsible for $15M design-bid-build LPG Generation Process, Storage, Fuel / Water Separation, Pumping and Shipping Facility and $30M LPG Underground Storage Cavern projects at Amoco Oil Processing Refinery / Tank Farm facility and Amoco Pipeline / Pump / Control Station projects at various locations across the upper Midwest states.
- ✓ Orange Unified School District Capital Improvement Projects – Orange Unified School District, Orange, CA – Project/Senior Construction Managers responsible for the Measure S Bond program design and construction of $39M design-bid-build new ground up 2-story 45,500 SF Science Center at El Modena High School and a $8M design-bid-build new ground up construction of Aquatic Center Water Control, Filtration & Treatment Sports Facility.
- ✓ Wanda Beverly Hills Luxury Residential / Hotel Project – Wanda Beverly Hills Properties, Beverly Hills, CA – Design / Construction Management team responsible for Owner Representation of $1B private design-bid-build 15 story twin tower mixed-use podium building project including 193 luxury residential units, 143-key 5- star hotel, rooftop pools, restaurants, ballrooms, underground parking structure, outdoor gardens, utilities and off-site infrastructure improvements.
- ✓ Maricopa County Facilities Capital Improvement Projects – Maricopa County Capital Facilities Dept. Phoenix, AZ – Program/Project Managers responsible for $25M design-build, design-bid-build and construction manager-at-risk capital facilities projects including the completion of several inter departmental county tenant improvement office/building renovation projects as well as new 911 emergency center, telecommunication center and crime laboratory ground up construction projects.
- ✓ Maricopa County Facilities Management Department Capital Projects – Maricopa County Facilities Management Dept. – Operations & Maintenance Phoenix, AZ – Project / Construction Managers responsible for $20M design-bid-build facilities management operation and maintenance detention projects including the completion of more than 50 roofing and mechanical building projects.

# CEI Project Experience

The table below highlights the experience of our firm executing the primary tasks identified in the City's scope of services. The tasks are shown across the top of the table. The projects listed down the left on the table were completed by Arcadis, and the work involved with those projects are noted with a dot on the table.

| Client and Project Name | Scope of Work | | | | | |
|---|---|---|---|---|---|---|
| | General (Owner's Agent or Representative, Progress Monitoring, Meeting Support, Public Outreach | Project Management (Schedule and Budget Reviews, Document Control, Track Submittals, RFIs, Pay Applications, Permitting/Utility Applications, Daily Reports, Confirm Record Drawings, Project Close Out | Survey Control (Calculate, Verify and Document Pay Item Quantities) | Onsite Inspection (Monitor Contractor Activities, Provide Daily Reports, Monitor Traffic Control Plans, Prepare Punch List, Project Commissioning, and Close Out | Wastewater/Water Pumping Station Rehab | A/E Services (Review Contractor's QC and H&S Plans, Develop QA Plan, Address RFIs, Change/Claims Management, Submittal Review, Record Drawings, Assemble Warranty and O&M InfoContractor's QC and H&S Plans, Develop QA Plan, Address RFIs, Change/Claims Management, Submittal Review, Record Drawings, Assemble Warranty and O&M Info |
| City of Fort Lauderdale, FL — A-16 PS Relocation CEI Services | • | • | | • | • | |
| City of Hollywood, FL — WTP High Service Pump CEI Services | • | • | | • | • | • |
| City of Sunrise, FL — Various CEI Projects | • | • | • | • | • | • |
| Port Miami, FL — Construction Management | • | • | | • | | • |
| Solid Waste Authority of Palm Beach County, FL — Solid Waste Consulting Engineer and Construction | • | • | | • | | • |
| Sarasota County, FL — CEI Projects | • | • | • | • | • | • |
| Hillsborough County, FL — Pump Station Electrical/ SCADA CEI | • | • | • | • | • | • |
| JEA, FL — Large Diameter Pipe Evaluation and Replacement Program | • | • | • | • | | • |
| SFWMD, FL — C-139 Flow Equal Basin Design | • | • | | • | | • |
| City of Atlanta, GA — Annual Contract for A/E Services and Inspection | • | • | • | • | • | • |
| Anne Arundel County, MD — On-Call Inspection Services | • | • | • | • | • | • |
| Harford, MD — Open End Engineering and Inspection Services for Water and Wastewater Projects | • | • | • | • | • | • |
| City of Greensboro, NC — 2020-2024 Townsend WTP Upgrade Electrical and Mechanical Improvements: Phase I & II | • | • | • | • | • | • |

# 1 Relocation of the A-16 Pump Station, CEI On-Call Services Contract

## City of Fort Lauderdale, Fort lauderdale, FL


**Client**
City of Fort Lauderdale

**Client Contact**
Jose Colmenares
Project Manager
954.828.6998
jcolmenares@fortlauderdale.gov

**Completion Date**
2023 – March 2024

**Total Constructed Value**
$4.6M

**Key Personnel**
Jose Custodio
Lia Dombroski
Darryl Dunn
Chris Matthews

**Relevancy**
- ☑ **Construction Engineering, Onsite-Inspections**
- ☑ **Design-Build Delivery**
- ☑ **Schedule and Budget Control**
- ☑ **Change Management**
- ☑ **Contract Administration**
- ☑ **Trenchless Installation**
- ☑ **MOT Review**
- ☑ **Construction in Environmentally Sensitive Areas**
- ☑ **Construction in High Traffic Areas**
- ☑ **Dewatering Plan Review**
- ☑ **Close Coordination with Residents and Businesses**
- ☑ **Review of Stormwater Pollution Prevention Plans**
- ☑ **Inspections of Stormwater Outfalls and Catch Basins**

Arcadis provided Construction Engineering and Inspection Services (CEI) to the City of Fort Lauderdale Public Works Department on the A-16 Pump Station Relocation project through our CEI On-Call Services contract. The project was located on SE 11th Street, close to the intersection of SE 3rd Avenue in the City of Fort Lauderdale. The relocation was needed to accommodate the new Federal Courthouse Building at this location.

Arcadis served as the City's representative, including providing on-site inspection for all construction activities. Responsibilities also included conducting Bi-weekly Progress Meetings with City staff and the Contractor to discuss project status, issues during construction, scheduling to make sure the work was completed on-time without significant delays. Arcadis also reviewed the Contractor's Pay Applications to ensure all City requirements are completed prior to issuance of payments.

The Project involved the installation of a new sanitary sewer pump station, including electrical and SCADA, installation of a 30-inch potable water main and a 10-inch sanitary sewer force main along SE 3rd Avenue (County Road) and the side streets (SE 11th Street and SE 9th Street). The crossing under the Tarpon River was done using horizontal directional drilling.

The full-time onsite inspector served as the City's eyes during the construction of the Project. This person was responsible to ensure that the pipeline and pump station were installed according to the Plans and City's and County's requirements for work under their Right of Way, especially for MOT Plans. Coordination with third party utilities, Federal Courthouse Contractor and City residents were also part of the services provided.

Given the proximity to the Tarpon River, Stormwater Pollution Prevention Controls were a key aspect of this Project to avoid contamination to the River. All stormwater outfalls around the project site were inspected by the CEI team daily (start and end of the day) to ensure the stormwater BMPs were in place.

Dewatering activities was another important aspect of the project. Our CEI Team was responsible to evaluate the dewatering method used by the Contractor daily and had stop work authority from the City if the dewatering operations were not performed according to City's and other regulatory requirements.

# 2 WTP High Service Pump CEI Services

## City of Hollywood, Hollywood, FL

*Arcadis was selected by the City of Hollywood to evaluate pumping system at the water treatment plant and provide design improvement to replace the various sizes of pumps, with new pumps and upgrades to the control system to provide a constant discharge pressure. Replacement of the existing water pumps is necessary to maintain water delivery reliability and improve energy efficiency by installing variable speed pumps. The rehabilitation of the pump station includes the replacement check valves and isolation valves, along with the two filter backwash pumps.*

### Our Role

Arcadis is the prime consulting engineer of record for the complete evaluation, design, permitting, and bidding for this 32,000 gpm capacity finished water high service pump station. The final design consists of six 400 HP variable speed horizontal split case pump, two 200 HP horizontal end suction constant speed pumps, two 15-ton HVAC units, a new roof on the electrical building, modifications to the pump discharge header, installation of floor cones inside the clearwell at the pump suction inlets, and modifications to the pump controls for variable speed pump operation for constant pump discharge pressure.

Arcadis is also providing the construction administrative services for this Contract.

### Key Challenges

During design operations reported that the pumps would cavitate at water levels in the clearwell much higher than would be expected for the configuration.

These finished water pumps are the primary source for system pressure in the water distribution system. The design required that the pump station be operational throughout construction.

### Solutions

Arcadis teamed with Clemson Engineering's Dr. David Werth to construct and test a scaled model of the pump stations pump suction pipe configuration. This model was used to confirm that the pumps would vortex. The model was also used to confirm that floor cones and insertion style grates on the pump suction piping would eliminate this operational deficiency.

The technical specifications provide a detailed sequence of construction and coordination with Owner's Operations. This was accomplished to provide a means of providing a minimum of 36,000 gpm throughout construction

**Client**
City of Hollywood

**Client Contact**
Feng Jiang
Assistant Director, Public Utilities/ Engineering
T. (954) 921-3930
E. fjiang@hollywoodfl.org

**Completion Date**
2015-2019

**Total Constructed Value**
$1.1 million (Design and Construction Services)

**Key Personnel**
Chris Matthews
Leah Richter
Jose Custodio

**Relevancy**
- ☑ **Independent Consulting Engineer**
- ☑ **Consulting Engineer's Technical Feasibility Report**
- ☑ **Facility Condition Assessment**
- ☑ **Operations Monitoring**
- ☑ **Management Financial Consulting Services**
- ☑ **Debt Issuance**
- ☑ **On Site Inspections**
- ☑ **Change Management**
- ☑ **Contract Administration**

# 3 2020-2024 Townsend WTP Upgrade Electrical and Mechanical Improvements: Phase I & II

## City of Greensboro, Greensboro, NC

Arcadis has advanced the design of the 2020 Townsend WTP Electrical Improvements: Phase II Project. One significant driver of this project was to provide "redundancy and resiliency" at the Townsend Water Treatment Plant. General improvements were categorized around electrical switchgear and stand-by power; high lift pumping; sedimentation basins upgrades; and chemical trench improvements.

Early evaluations were used to establish the basis of design and included resiliency study; standardizing plant voltage; switchgear assessment; diesel vs natural gas generators; and hydraulics evaluation to determine the type of high lift pumps to address suction side hydraulic limitations. The outcome was to provide resiliency for over 10-days off utility power; selection of vertical turbine high lift pumps; selection of a natural gas generator; standardizing plant voltage at 4160 V; and replacing existing switchgear.

Improvements under design were a new Switchgear Building; 2000 kW natural gas generator; a 12,000 gallon, second diesel fuel storage tank; four new high lift pumps; creation of VFD Rooms to provided conditioned space in the High Lift Pumping Station; and replacement of the sludge collectors in all three Sedimentation Basins.

**Client**
City of Greensboro, Greensboro, NC

**Client Contact**
Danny Briggs
Water Resources Chief Engineer
336.373.3466
danny.briggs@greensboro-nc.gov

**Completion Date**
January 2021 – July 2025

**Total Constructed Value**
$55M – CMAR

**Key Personnel**
Len Sheptock
Dennis Kachmarsky

**Relevancy**

- ☑ **Design, Engineering, RPR/ Construction, Management and Inspection**
- ☑ **CMAR Delivery Method**
- ☑ **Schedule and Budget Control**
- ☑ **Change Management**
- ☑ **Contract Administration**
- ☑ **Close Coordination with Plant Facility**
- ☑ **Review of Stormwater Pollution Prevention Plans**

# 4 Various CMS Projects

## City of Sunrise, Sunrise, FL

*Arcadis has maintained an engineering and professional consulting services contract with the City of Sunrise (City) since 2012, under which it has successfully completed approximately 60 task orders under this contract. These services have included water, wastewater and reclaimed water system planning and design, water supply and injection well permitting and design, and construction management. A few recent Construction Management Services tasks are included here.*

**Springtree Wellhead Construction, Wells 13, 14, 15 & 16 (5009WF Project Agreement 14-003-MP, P.O. No. 081414**

This project included Construction Management Services (CMS) services for the completion of the site piping and appurtenance for the conveyance of reverse osmosis concentrate and wastewater treated effluent to recently installed deep injection wells. The construction activities include: the installation of a standby treated effluent pump (400 HP) to assist with plant water pumps pressures; VFDs for the existing treated effluent pumps; piping/valving/metering system to deliver the treated effluent to the injection wells; piping/valving/metering to deliver RO reject to the injection wells, and a new diesel standby generator with fuel system.

**Springtree WWTP Deep Injection Wells Flow Delivery CMS**

This project agreement provides for the CMS for the equipping of four (4) wellheads and modifications to eight (8) other existing wells. The CMS includes Construction Administration and Non-Fulltime Project Representative Services (Inspection). The wellheads include slab on grade wellhead assemblies, well pumps, motors, water level transducers, concrete well pads, pressure gauges, flow meters, bypasses, valves, discharge piping, piping connections, instrumentation and controls (I&C), electrical, control panels, meter calibration manholes, fencing, landscaping and other appurtenances along with general site restoration.

**Nova Drive Watermain and Forcemain Improvements Project Agreement 16- 008-MP P.O. No. 088269**

CMS services related to the replacement of a potable cement asbestos water main located within the Park City residential neighborhood area within the City's service area. The water main to be replaced is within SW 86th Ave, from SW 21st Street south to Nova Drive, then east along Nova Drive to University Drive. A new aerial crossing of an existing canal is planned. The City is also planning on replacing an aged force main (consisting of cement asbestos and cast iron) from LS No. 203, south along SW 86th Ave to Nova Drive, then east along Nova Drive to University Drive.

**N.W. 44th St./Pine Island Road Water Transmission Main Improvements (5082PI) Project Agreement 16-017- MP, P.O. No. 90786**

Provide CMS services for the replacement of a 36-inch main within NW 44th St from the Springtree WTP to Pine Island Road, and a 30- inch main in Oakland Park Blvd., from NW 35th Ct., to the C-13 canal.

**Escape and Valencia Water Main Improvements (5031PI) Project**

**Agreement 16-011-MP, P.O. No. 088267**

CMS services related to the replacement of aging potable PVC water mains located in The Escape and Valencia residential neighborhood areas within the City's service area. These neighborhoods are located within the Town of Davie.

**Client**
City of Sunrise, Sunrise, FL

**Client Contact**
Guarionex De Los Santos
Project Manager
T. (954) 888-6077
E. GDeLosSantos@sunrisefl.gov

**Completion Date**
2022

**Total Constructed Value**
$18M

**Key Personnel**
Chris Matthews
Leah Richter
Lia Dombroski

**Relevancy**
- ☑ **On-site Inspection**
- ☑ **Change Management**
- ☑ **Contract Administration**
- ☑ **Independent Consulting Engineer**
- ☑ **Consulting Engineer's Technical Feasibility Report**
- ☑ **Facility Condition Assessment Operations Monitoring**
- ☑ **Management Financial Consulting Services**
- ☑ **Debt Issuance**

# 5 Bush Creek Pumping Station & Force Main Upgrades

## Harford County, MD


Arcadis provided construction management services for several projects under the Open-End Engineering Services for Water and Wastewater Projects Contract (No. 16-194) including the Force Main described below:

### Bush Creek Force Main Rehabilitation

Harford County retained the services of Arcadis Inc. to provide construction management and inspection services for slip lining of existing Bush Creek force main beneath the Bush River with 4,200 feet of 24-inch HDPE pipe material. Arcadis provided daily and weekly reports, pictures/videos, inspection of work and material, coordination of testing, and project closeout related services. Arcadis provided construction management and inspection (CMI) services on the following projects under the Contract No. 16-194.

### Force Main and Interceptor Projects

**Phase 1.** Replaced the existing 30-inch RCCP Bush Creek force main beneath the Bush Creek to provide a safe operating capacity of 29.0 mgd. The new force main is approximately 11,500 LF of 36-inch DIP and 30" HDPE with 3,500 LF of 30" HDPE that was directional drilled under Bush River at two new locations.

**Phase 2.** Installation of 4,250 LF of new 42-inch diameter gravity sewer in a new alignment along Canning House Road, connecting the new force mains to the Sod Run Interceptor Sewer. Installation of 4,100 LF of 48-inch Parallel Interceptor Sewer to accommodate the additional flows downstream from the new Bush Creek force mains.

**Phase 3.** Rehabilitation of 4,200 LF of the existing 30-inch diameter, Bush Creek force main by slip-lining and modifying the connections to allow the existing system to operate without interruption or restrictions.

### Force Main and Interceptor Challenges

The force main crosses two riparian areas with directional drilling. At the Bush Creek station, there was very little area available for the concurrent tasks of the PS rehabilitation and the force main installation. The first segment exits along Pulaski Hwy and though the county has suggested a staging area, there wasn't room to set up as a push.

After the transition to the open cut DIP segment, the contract proceeded off the shoulder of Pulaski Hwy which presented tight working site with traffic conditions. In addition, there were residential and businesses that the contractor needed to accommodate and maintain access.

**Client**
Harford County, MD

**Client Contact**
Steven D. Schulz, PE
Civil Engineer III
(O) 410.638.3300 ext 1474
(C) 443.838.2352
E. sdschulz@harfordcountymd.gov

**Completion Date**
Ongoing

**Total Constructed Value**
$30M

**Key Personnel**
Chris Matthews
Tina Laird
Patel Bhadrash
Chris Remme

**Relevancy**
- ☑ **Construction Management and Field Inspection**
- ☑ **Estimating/Change Management/ Claims**
- ☑ **Reviews (Design Reviews, Submittals, RFIs, Payment Applications, Permit Applications)**
- ☑ **Schedule Reviews**
- ☑ **Confirm Record Drawings**
- ☑ **Providing or Supervising Field Inspection Staff**
- ☑ **Meeting Support**
- ☑ **Document Control (i.e., e-Builder)**
- ☑ **Survey Control**
- ☑ **Material Testing Coordination**

# 6 Tunnel Dewatering Pump Station and Enhanced Clarification Facility

## District of Columbia Water and Sewer Authority, DC

Arcadis provided construction management services for the Tunnel Dewatering and Enhanced Clarification Facility at the Blue Plains Advanced Wastewater Treatment Plant (AWTP) in the District of Columbia. As part of the $2 billion Clean Rivers project to reduce combined sewer overflows into the district's waterways, DC Water constructed a pump station with capacity to dewater it's 23-footdiameter combined sewer storage tunnel. The project also involved construction of a treatment system for the

flows from the tunnel to attain near secondary standards before discharging to the Potomac River or combining with primary effluent for full treatment at the Blue Plains AWTP. Of this $215 million design build contract, the pump station consisted of a tunnel dewatering pump station and the enhanced clarification facility. The pump station was constructed within the tunnel main shaft, which is 132-feet in diameter and 160-feet deep. The initial pumping capacity is 250 mgd, expandable to 500 mgd with the addition of more pumps. The enhanced clarification process included fine screens, vortex grit removal, an Actiflo ballasted flocculation process, and chlorination/dechlorination.

Arcadis' scope of services included contract administration, design management and review, field office engineering, change management, resident engineering and inspections, site logistics coordination, quality assurance, material testing, claims management, start-up commissioning coordination, and United States Environmental Protection Agency grant closeouts. The design-build contract was signed in August 2013.

This design/build project consisted of:

- Deep well pump station of 160 feet below grade
- Installation of 5, 3,000 hp pumps, capable of delivering 80 million gallons per day each, with expansion up to one million gallons per day
- Enhanced clarification system with 5 trains of fines screens
- 3 grit removal systems
- 3 high-rate clarifiers using sand ballast to assist in waist removal
- Two trains of chlorine contact tanks
- Upgrades to existing plant chemical delivery were also included, consisting of ferric chloride, disinfection, dechlorination and polymer
- New plant substation
- Instrumentation and controls were integrated into the campus distributed control system
- Approximately 4,000 new control points were added to the Plant DCS system.

**Client**
District of Columbia Water and Sewer Authority (DC Water)

**Client Contact**
David Parker , PE
Vice President, Engineering
david.parker@dcwater.com

**Completion Date**
2014 - 2023

**Total Constructed Value**
$75M

**Key Personnel**
Chris Remme
Chris Matthews
Bhadrash Patel

**Relevancy**
- ☑ **Construction Management**
- ☑ **Inspection**
- ☑ **Design Reviews**
- ☑ **Constructability Reviews**
- ☑ **Cost Estimating**
- ☑ **Project Controls**
- ☑ **Scheduling**
- ☑ **Shop Drawing Review**
- ☑ **QA/QC**
- ☑ **Submittal Reviews**
- ☑ **Contractor Invoice Reviews**
- ☑ **Change Orders**
- ☑ **Data Management**
- ☑ **Community Outreach**
- ☑ **BOA/Task Order Contract with DC Water**

# 7 Sarasota County CEI Projects

## Sarasota County, FL

**Client**
Sarasota County

**Client Contact**
Rob Hesse, P.E.
Utility Operations Manager
941-275-2703
rhesse@scgov.net

**Completion Date**
2018 – Ongoing

**Total Constructed Value**
$3M

**Key Personnel**
Chris Matthews
Tina Laird
Chris Remme

**Relevancy**
- ☑ **Construction Engineering**
- ☑ **Construction Inspection Services**
- ☑ **Trenchless Construction**
- ☑ **Schedule Reviews**
- ☑ **Estimating/Change Management/ Claims**
- ☑ **Reviews (Design Reviews, Submittals, RFIs, Payment Applications, Permit Applications)**
- ☑ **Confirm Record Drawings**
- ☑ **Meeting Support**
- ☑ **Document Control (i.e., e-Builder)**
- ☑ **Survey Control**
- ☑ **Testing Services**

### State Road 45 CEI

Sarasota County entered into a Utility Work by Highway Contractor Agreement (UWHCA) with the Florida Department of Transportation (FDOT) for the FDOT SR45 (US41) Improvements Project.

The proposed FDOT work required review of 5 miles of US41 roadway improvements to locate potential utility conflicts, coordinate with 6 other utilities in the corridor, and meet a tight schedule to join the FDOT project while they were in Phase 4 preparations. **The relocation of existing County utilities included 1,400 LF of 30-inch water main, 60 LF of 12-inch water main, 850 LF of 10-inch water main, 700 LF of 18-inch force main, 1,100 LF of 8-inch force main.** Arcadis provided design, permitting and administration with field support during construction. Arcadis was able to assist the County in meeting the stringent FDOT schedule during design and working closely during construction when unforeseen conditions were encountered. **The design included trenchless construction through horizontal directional drilling (HDD) of portions of the existing mains.** Overall, the project realized savings to the County through close coordination with FDOT, the County, and Arcadis' design revisions that took advantage of field conditions. Arcadis found ways to spread costs on preliminary engineering activities realizing $100K in savings on this project.

### Clark Road CEI

Sarasota County entered into a Utility Work by Highway Contractor Agreement (UWHCA) for the Florida Department of Transportation (FDOT) Financial Project ID 201277- 3-52-01 Sarasota County 17075. The UWHCA included the relocation of a 16-inch water main under active and future ramps as well as Interstate 75 (SR 93), modifications to a 16-inch reclaimed water, and traffic fiber optic cables relocations along Clark Road (State Road 72) from Gantt Road to Hummingbird Avenue. The project limits are approximately 5,000 LF along Clark Road and professional engineering services included design, permitting, bidding, and construction phase services. The decision to enter the UWHCA required that Arcadis draft 60% alignment plans within one month of NTP for the County to meet the FDOT schedule. The bid came in at $1.2M.

Arcadis met with Robert Hess and Lori Carroll to understand the requirements and expectations of the County for construction inspections associated with FDOT projects.

# 8 Water Main CM and Inspections Phase 4

## Anne Arundel County, MD

Anne Arundel County, MD, Department of Public Works, maintains a $10 million budget for improvements to the water distribution system throughout the County. Arcadis was retained to provide construction management and inspection services for as many as 6 projects annually.

These projects staff approximately 5 inspectors on a full-time basis, one construction manager, project administrator and project manager. Recent projects include $2.5M Ft. Smallwood Road Water Transmission Main Valve Replacements, $1.5M Water Service Replacements, $1.3M Bonnet Bolt Replacements, $1M Small Diameter Replacement within the County Communities, $2.1M Fire Hydrant Replacements, $8.5M Brock Bridge Water Transmission Main Emergency, and $4M Crain Highway Water Main Clean and Line. One key to project success for this highly public project is Arcadis' public outreach services to notify residents of work, handling questions and complaints, tracking call logs and being the face of these projects for the County.

**Client**
Anne Arundel County, MD
Department of Public Works

**Client Contact**
Pamela Mann, PE
Project Manager
443.336.8275
pwmann00@aacounty.org

**Completion Date**
2021 – Ongoing

**Total Constructed Value**
$10M per year

**Key Personnel**
Chris Matthews
Chris Remme
Bhadrash Patel

**Relevancy**

- ☑ **Construction Management and Field Inspection**
- ☑ **Estimating/Change Management/ Claims**
- ☑ **Reviews (Design Reviews, Submittals, RFIs, Payment Applications, Permit Applications)**
- ☑ **Meeting Support**
- ☑ **Document Control (i.e., e-Builder)**
- ☑ **Schedule Reviews**
- ☑ **Confirm Record Drawings**
- ☑ **Survey Control**
- ☑ **Materials Testing**
- ☑ **Quality control inspections**
- ☑ **Project Close-out and Turnover of Documents**

# 9 Sewer Main CMI Services - Phase 3, Open-End Agreement

## Anne Arundel County, MD

Arcadis was selected to provide construction management and inspection (CMI) services for various sewer main capital improvement projects under an on-call task order basis. The projects include the rehabilitation and improvements to the County's wastewater collection system. Projects included, but were not limited to:

- Cured-in-Place Pipe (CIPP)
- Air Release Valve (ARV)
- Rehabilitation and Replacement
- Force Mains
- Sewer Lateral Replacements
- Mini-system Rehab
- Open Trench
- Trenchless
- Clearing
- Special and Emergency Cases

The project scope also covered all areas of the County's water distribution system, including water main replacement, water main bypassing, water valve and hydrant replacement, and water main re-lining.

**EXAMPLE PROJECT**

### Bay Breeze Pump Station New Force Main Replacement

This project consisted of replacing 1,600 feet of 12" HDPE sewer force main from the Bay Breeze Sewage Pump Station to the gravity system on Columbia Beach Road. The project also consisted of installing a new manhole on Columbia Beach Road.

**Challenge/Solution:** What made this project unique, and challenging was coordinating with plant operations for shutdowns, tie-ins, and flushing, so as not to disrupt business operations in the shopping center. Another distinguishing factor in this project was working on shopping center road entrances and the ability to work safely and keep traffic congestion down.

**Client**
Anne Arundel County, MD

**Client Contact**
Lee Greenwald
Senior Project Manager
410.224.1275
pwgree40@aacounty.org

**Completion Date**
2016 – 2021

**Total Constructed Value**
$10M (annually in fee Water Mains)
$10M (annually in fee Sewer Mains)

**Key Personnel**
Chris Remme
Chris Matthews
Tina Laird
Bhadrash Patel

**Relevancy**
- ☑ **Construction Management and Field Inspection**
- ☑ **Estimating/Change Management/ Claims**
- ☑ **Reviews (Design Reviews, Submittals, RFIs, Payment Applications, Permit Applications)**
- ☑ **Meeting Support**
- ☑ **Document Control (i.e., e-Builder)**
- ☑ **Schedule Reviews**
- ☑ **Confirm Record Drawings**
- ☑ **Survey Control**
- ☑ **Materials Testing**

# 10 Water and Sewer Pipe Replacement Program (CM4E)

## District of Columbia Water and Sewer Authority, DC

Arcadis is providing construction management and related engineering services for the management of multiple construction contracts construction cost of in excess of approximately $75M over a period of seven (7) years. This Contract was task ordered based and Arcadis developed and managed twelve (12) task orders and three (3) supplemental agreements. This Contract provided Construction Management services for several key DC Water facilities such the rehabilitation of the Fort Stanton Reservoir, Brentwood Reservoir and the Bryant Street Pump Station. Arcadis also managed the construction of the 2-million-gallon St. Elizabeth's Water and installation of 4,000 LF of new watermains.

Services required will be provided throughout DC Water's water distribution and sewer collection service areas and includes the following, but are not limited thereto:

- Design reviews including biddability, constructability, cost estimates and schedules
- Assistance during the bidding phase
- Office engineering including review of all shop drawings, schedules, and other construction contractor submittals
- Preparation and negotiation of change orders, task orders, agreements
- Resident engineering and inspection services
- Quality assurance and quality control plan/program
- Material testing
- Claims avoidance, analysis, and resolution
- Inter-agency, intra-agency, utility coordination and public relations program support
- EPA grant closeout
- Coordinate & conduct meetings for program projects, operational interface
- Other services reasonably necessary to complete the work.

**The following projects were managed during this DC Water contract:**

- Rehabilitation of Fort Stanton No. 1 Reservoir
- Rehabilitation of Brentwood and Fort Stanton No. 2 Reservoir
- G-100 Local Sewer Rehabilitation 1
- Pope Branch Stream Restoration Project
- St. Elizabeth Water Tower
- Claims Support for MD Potomac Interceptor (PI) Odor Control
- Local Area Trunk Sewer Rehabilitation
- Sewers Under Buildings Sewer Rehabilitation-Phase 2
- SDWM #12A
- SDWM Replacement Bloomingdale
- Anacostia 2nd High Residential PRV Installation
- 4th High West Residential PRV Installation
- B Street/NJ Avenue Trunk Sewer Rehabilitation
- LSR Program Support
- Rehabilitation of the Upper Potomac Interceptor (UPI)

**Client**
District of Columbia Water and Sewer Authority (DC Water)

**Client Contact**
Deidre Saunders
Manager, Construction Branch
202.787.7614
Deidre.Saunders@dcwater.com

**Completion Date**
2014 - 2023

**Total Constructed Value**
$75M

**Key Personnel**
Chris Remme
Chris Matthews
Bhadrash Patel

**Relevancy**
- ☑ **Construction Management**
- ☑ **Inspection**
- ☑ **Design Reviews**
- ☑ **Constructability Reviews**
- ☑ **Cost Estimating**
- ☑ **Project Controls**
- ☑ **Scheduling**
- ☑ **Shop Drawing Review**
- ☑ **QA/QC**
- ☑ **Submittal Reviews**
- ☑ **Contractor Invoice Reviews**
- ☑ **Change Orders**
- ☑ **Data Management**
- ☑ **Community Outreach**
- ☑ **BOA/Task Order Contract with DC Water**

# 11 Orange Avenue Water Main Replacement

## Orlando Utilities Commission (OUC), Orlando, FL

*Arcadis provided construction engineering services for the replacement of approximately 4,350 LF of a 16-inch water main, maintenance of traffic (MOT) plans for the Utility Work by Highway Contractor Agreement (UWHCA) project, permitting, bidding, public outreach, and construction administration and construction inspection services. Orange Avenue is a busy corridor owned by FDOT with high traffic volume, hospitals, businesses, etc. which adds a level of complexity to the MOT and the construction sequence.*

OUC is in the process of replacing aging water distribution pipes in downtown Orlando to ensure the long-term reliability of water infrastructure and accommodate for future growth in the city. OUC entered into a UWHCA with the Florida Department of Transportation (FDOT) for relocation of an existing 16-inch water main, as part of a roadway improvement project in downtown Orlando. The existing cast iron water main along State Road (SR) 527 (Orange Avenue) was originally constructed in 1948. Arcadis provided professional engineering services, including design of replacement water main, MOT plans for the UWHCA project, permitting, bidding, public outreach, construction administration and construction inspection services for this water main relocation project.

The stretch of Orange Avenue between Grant Street to Annie Street is one of the busiest traffic corridors in downtown Orlando, as it cuts through the heart of a newly revamped south downtown (SODO) area. The SODO area is a vibrant, mixed-use, multi- modal neighborhood, with shops, multi-story housing, a sprawling Orlando Health Medical Campus and a commuter train station. As a results, the corridor owned by FDOT, experiences high traffic volume from hospitals, businesses, and residents etc. This high traffic volume added a level of complexity to the MOT and the construction sequence for the project. Additionally, OUC wanted to minimize the impact of construction activities on the area businesses, which added another complexity to the project as it required that public notifications are timely disbursed to the affected parties informing them about the ongoing and upcoming activities.

Arcadis is the design engineer for OUC's program for replacing aging and deteriorating water mains within its service area. Under this program, OUC requested Arcadis to provide professional engineering services for the relocation of the existing water main along Orange Avenue. Arcadis completed the design of approximately 155 LF of 20-inch water main, approximately 4,400 LF of 16-inch ductile iron (DI) water main; 1,860 LF of 12-inch DI water main and several smaller sized pipes.

**Client**
Orlando Utilities Commission (OUC)

**Client Contact**
Natalie Urick, PE
Senior Engineer
321.230.6694
nurick@ouc.com

**Completion Date**
2020 – Ongoing

**Total Constructed Value**
$11.3M

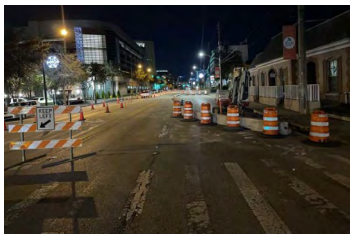
**Key Personnel**
Chris Matthews

**Relevancy**
- ☑ **Construction Management**
- ☑ **Construction Inspection Services**
- ☑ **Design Services for Replacement Water Main**
- ☑ **MOT Plans for the UWHCA Project**
- ☑ **Permitting, Bidding, Public Outreach**
- ☑ **Construction Administration**

The design services also included coordination with electrical improvements along the Orange Avenue corridor between Kaley Street and Annie Street. Also installing a medium voltage distribution electrical duct bank (12.5 KV) to include 5,000 LF of conduit (design by a third party).

### Maintenance of Traffic (MOT)

Arcadis provided MOT services for the entire project with portions of night work and lane closures; bidding assistance; and permitting support.



### Construction Management

Arcadis is currently providing full construction management and inspection services during construction, covering both day and night shifts.

### Congested Right-of-Way/Utility Corridors

Orange Avenue has been one of the long-established major roadways running through a crowded downtown. As a result, the utility corridor has a number of existing utilities from such as electrical, wastewater force mains, gas line, cable and telecommunication fiber lines.

### Permitting

FOOT Project required obtaining the Right-of-Way Utility Permit from the FOOT for water and electric replacement. FDEP Multiple permits were obtained from the Florida Department of Environmental Protection (FDEP), including:

- General Potable Water Permit needed for the installation of the new water main
- Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components into Operation

**City of Orlando**

City of Orlando's Engineering permit was obtained to modify our conformed drawings to show the limits of restoration within the City's ROW as per their Engineering Standards manual. We also submitted a modified cost sheet along with the drawings.

### Public Outreach

Arcadis also assisted OUC with public engagement, by providing materials needed for the public meeting, addressing public questions. During the ongoing construction phase of the project, it is very important to provide advance notice of the construction schedule with details on road closures to the area residents and businesses.

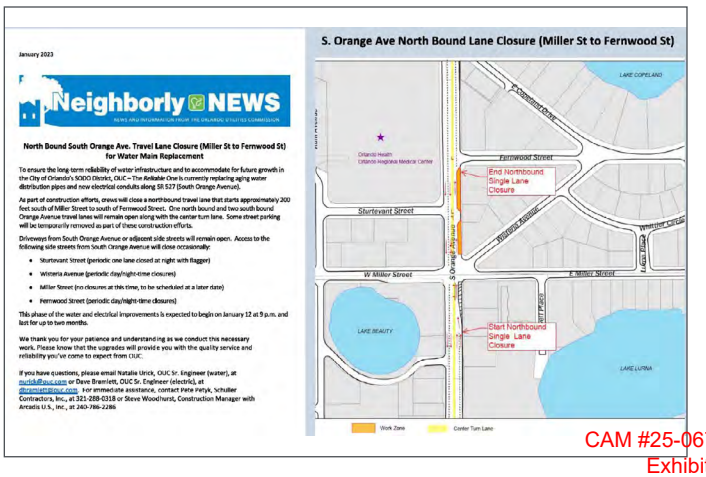
Arcadis worked with OUC for a proactive approach by preparing a newsletter known as "Neighborly News," which provides details on the work schedule of the construction crews, nighttime construction activities, lane closures etc. Arcadis also developed maps to be included in the newsletter that identify the limits of the construction work area and provided visual representation of the upcoming lane closures. Arcadis worked with the contractor to distribute the newsletter. The newsletter was positively received by the area residents and businesses.

### Project Success Factors

Throughout the design and now in construction, our team actively engaged the client through regular meetings (in person and virtual). Due to frequent communication, we were able to alert OUC to situations before issues arose - for this reason, our team has developed a high level of trust among OUC staff.

### Maintaining Budget, Schedule and Quality

The design of the project was completed within budget, on schedule and to OUC's satisfaction. As a result, OUC hired Arcadis to provide full time construction services on the project.


January 2023

Neighborly NEWS

NEWS AND INFORMATION FROM THE ORLANDO UTILITIES COMMISSION

**North Bound South Orange Ave. Travel Lane Closure (Miller St to Fernwood St) for Water Main Replacement**

To ensure the long-term reliability of water infrastructure and to accommodate for future growth in the City of Orlando's SODO District, OUC – The Reliable One is currently replacing aging water distribution pipes and new electrical conduits along SR 527 (South Orange Avenue).

As part of construction efforts, crews will close a northbound travel lane that starts approximately 200 feet south of Miller Street to south of Fernwood Street. One north bound and two south bound Orange Avenue travel lanes will remain open along with the center turn lane. Some street parking will be temporarily removed as part of these construction efforts.

Driveways from South Orange Avenue or adjacent side streets will remain open. Access to the following side streets from South Orange Avenue will close occasionally:

- Sturtevant Street (periodic one lane closed at night with flagger)
- Wisteria Avenue (periodic day/night-time closures)
- Miller Street (no closures at this time, to be scheduled at a later date)
- Fernwood Street (periodic day/night-time closures)

This phase of the water and electrical improvements is expected to begin on January 12 at 9 p.m. and last for up to two months.

We thank you for your patience and understanding as we conduct this necessary work. Please know that the upgrades will provide you with the quality service and reliability you've come to expect from OUC.

If you have questions, please email Natalia Urick, OUC Sr. Engineer (water), at nurick@ouc.com or Dave Brenizet, OUC Sr. Engineer (electric), at dbrenizet@ouc.com. For immediate assistance, contact Pete Petyk, Schuller Contractors, Inc., at 321-288-0318 or Steve Woodhurst, Construction Manager with Arcadis U.S., Inc., at 240-786-2286

S. Orange Ave North Bound Lane Closure (Miller St to Fernwood St)



CAM #25-0671
Exhibit 3
Page 26 of 116

## Section 4.2.4.

# Qualifications of the Project Team

# 4.2.4. Qualifications of the Project Team

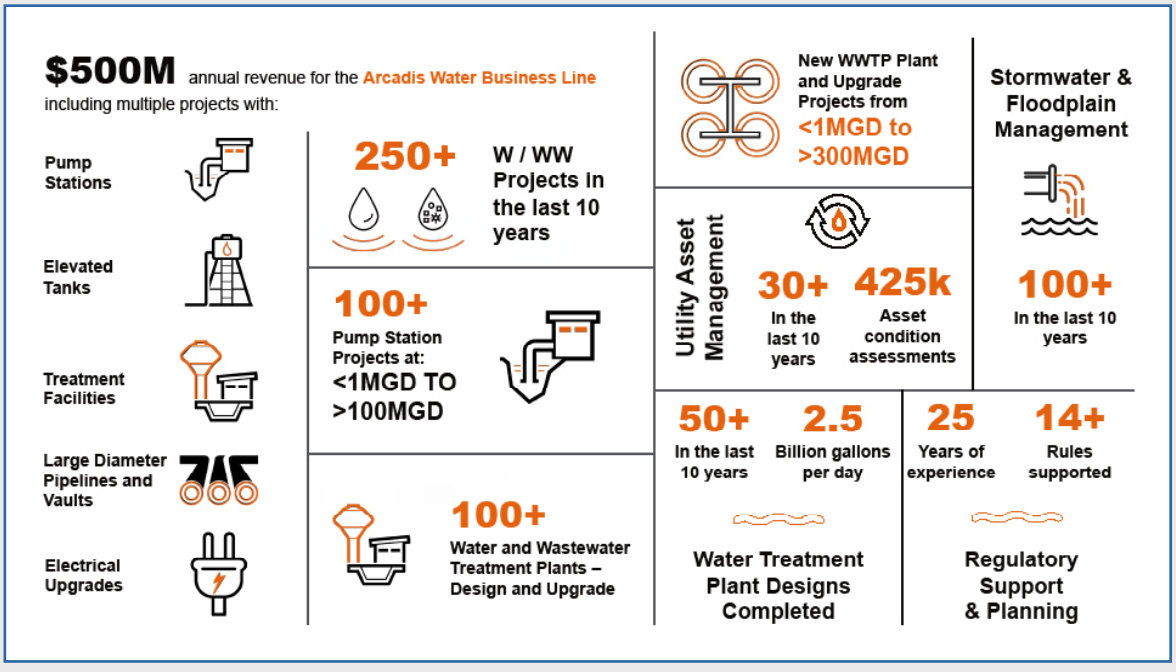
Arcadis understands the importance of selecting the right individuals to work on the team that will deliver this project to you and our core philosophy as a firm is centered around “client focus”. Our goal is to present a team to you that combines the strongest of our local staff who are supported by the best and brightest technical experts from throughout the country. The result: A team led by staff based in Plantation, FL, who are only minutes from you, who will be on-site daily, and who will serve as the City’s representative, acting as your eyes and ears in the delivery of this important project. That local team is backed by additional resources within Florida and nationally who are available to provide support in the event it is needed.

## Organizational Chart of Proposed Key Personnel

Arcadis’ singular emphasis on client focus places your needs, visions, and objectives as the driver in everything we do. The people selected and the way we have structured our team for this proposal is based solidly upon our direct knowledge and experience of your preferences for how projects are delivered, your expectations of the quality of work you receive, and the degree of responsiveness and sophistication in the level of service we provide as your consultant. We include a highly experienced Construction Manager, Len Sheptock, who will be supported by local inspection staff, each with the requisite experience needed for this project. Inspectors have been identified for the near-term project of the first two pump stations, and other inspectors for subsequent construction packages as they are released.

*Just like any professional consultants, your project will be provided with personnel that will give the maximum benefits.*

Additional inspection staff is identified on the Organizational Chart and these are resources who can be brought on board if there is an increase in construction activity that would require additional oversight or to fill in for other inspectors if needed. The CM/CEI team will be supported by our subconsultants and subject matter experts (SMEs) within Arcadis. The subconsultants are available to provide QA/QC in the areas of geotechnical engineering and surveying. The SMEs are experts in the areas of ump station rehabiliation, pump installation, electrical and control systems.



# Organizational Chart

**Legend:**
[1] Florida PE

**Project Manager**
City PM

**Principal-in-Charge**
Leah Richter, PE[1]

**Senior Construction Manager**
Len Sheptock, CGC

**QA/QC**
Chris Remme, CCM, CCP, PSP

**Health and Safety**
Aaron Svitana

## Project Services

### Inspectors


Cheriece Davidson


Eric Diaz


Andrew Cooper


Jeff Luetjen


Bryce Kaufman


Jerald Boles


Joshua Roberts, PE


Richard Espinosa

### Cost Estimating / Constructability


Darryl Dunn, PE


Chris Matthews, PE[1], CGC

### Project Administration / Document Control


Tina Laird

### Scheduling / Project Control


Bhadrash Patel

### Subcontract Services

**Geotechnical Engineering / Material Testing**
WIRX Engineering, LLC

**Surveying**
Stoner and Associates

## Project Support

### Environmental Compliance


Chris Tilman, PE[1], BCEE

### Pump Station Technical Advisors


Brian Duane, PE[1]


John Scioscia, PE

### Contract Solutions


Roy Cooper, PE

### Pipeline Technical Advisor


Jose Custodio, PE[1]

### Inspection Support


Lia Dombroski

The core team consisting of our contract manager and construction manager will be supported by a very accessible leadership team and technical experts. Brief bios of those individuals are included below.

## Arcadis Key Personnel


### Leah Richter, PE | Principal-in-Charge

Ms. Richter has a diverse 25 year background in program management, business advisory and financial consulting services and civil engineering. She specializes in assisting municipal clients in South Florida with managing their planning, operational and capital program needs. Her experience includes project management and delivery, vendor procurement, contract compliance, regulatory permitting, public outreach, annual reporting to bondholders/trustees, litigation support services, environmental compliance and operation and maintenance evaluation. She currently serves as the Principal-in-Charge for the City of Hollywood. She is also the Southeast Florida Operations Leader and is located in our Plantation office, just minutes from the City and available to provide a rapid response to any request. Ms. Richter will serve as the Contract Manager and Principal-in-Charge for this contract, making sure the required resources are available when needed and the City is happy with how the team is performing.


### Chris Remme, CCM, CCP, PSP | QA/QC

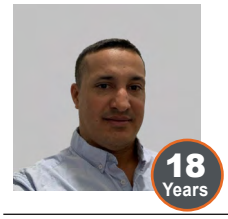
Mr. Remme has been a program and construction management professional for 38 years with experience in multi-project and capital improvement programs consisting of heavy/civil, water and wastewater facilities, transit and building projects throughout the United States. He is also a Certified Construction Manager (CCM) with the Construction Management Association of America (CMAA), and a Certified Cost Professional (CCP) and Planning and Scheduling Professional (PSP) with the Advancement of Cost Engineering International (AACEI). Experienced in various contract deliveries, such as design-bid-build, design build and Private Public Partnerships. Experienced in providing Critical Path Method (CPM) scheduling, budgets and cost estimating, and claims resolution services. Proven technical capabilities in value engineering, constructability reviews and quality control.


### Len Sheptock | Senior Construction Manager

Mr. Sheptock has more than 35 years of professional program, project, construction management, engineering and general contracting experience throughout the Metro U.S. Holding a general contractor's license, Mr. Sheptock brings a fresh perspective to projects, focusing on constructability, overall project costs, materials availability, sequencing of construction, risk management and contracting terms and procurement methodologies. Having experience not only in the water and conveyance markets, but also with schools, healthcare, commercial properties, transit and roadways, Mr. Sheptock can apply the best practices learned on those types of project to the utility industry, incorporating efficiencies and cost saving ideas in areas where traditional designers/constructors might not have imagined.


### Richard Espinosa, PE | Inspector

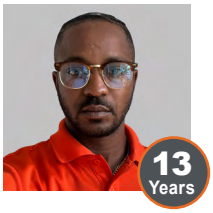
Mr. Espinosa has more than 30 years of experience as Senior Construction Manager, General Superintendent, Senior Project Manager, and Professional Engineer. He has also proven track record in managing large-scale infrastructure projects, including water, wastewater, and energy utilities, and have extensive experience in nuclear power plants and industrial construction.




### Eric Diaz | Inspector

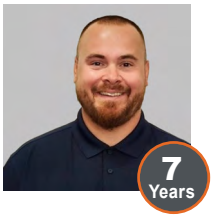
Mr. Diaz has 18 years of experience as a survey technician, construction foreman, field inspector, and construction superintendent. He is NCCER certified and Procore Superintendent certified. His background includes depth of experience in Heavy Sitework, Civil, Buildings and Treatment Plants.

## Arcadis Key Personnel



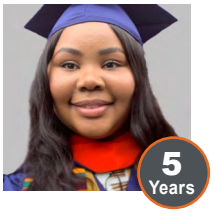

### Jerald Boles | Inspector

Mr. Boles is from Atlanta, Georgia and has been working with Arcadis for about 5 months. He is a dedicated skilled Water Distribution Operator and Nassco certified with over 10 years of experience in the installation, maintenance, and repair of water distribution systems. He is a OSHA 30 certified and committed to ensuring compliance with safety regulations and delivering high-quality work on every project. He possesses strong teamwork and communication skills, with a proven ability to collaborate effectively with engineers, project managers, and fellow workers to complete projects on time and within budget. He is passionate about contributing to community infrastructure improvement and ensuring reliable access to clean water.



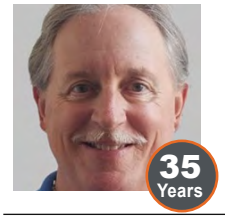

### Andrew Cooper | Inspector

Mr. Cooper has more than 7 years of experience in the construction industry, especially with water and wastewater treatment facilities including lift stations. He has a certificate on Construction Management, is a Florida Stormwater licensed, Trench Safety Licensed and posses a confined space certification. He is very knowledgeable in construction management including reviews of RFIs, change order requests, scheduling, daily reports, schedule of values and pay applications.




### Cheriece Davidson | Inspector

Cheriece Davidson brings 5 years of construction management and inspection experience in utility, industrial and commercial projects. She also has experience in project documentation with various software platforms, monthly reporting, change management and CPM scheduling experience. She has a B.S. in Civil Engineering, Howard University in DC and a M.S. in Construction Management from Columbia University in NY. Her project experience in industrial and commercial projects provides her with the skills to provide high quality inspection services on this project.

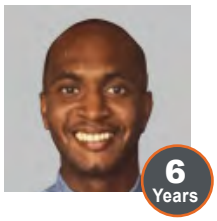



### Jeff Luetjen | Inspector

Mr. Luetjen has 34 years of experience performing all types of utility project inspections, including water, wastewater, reclaimed water, stormwater, and roadway improvement type projects. Prior to joining Arcadis, Mr. Luetjen worked directly for the Sarasota County Utilities Department.


### Bryce Kaufman | Inspector

Mr. Kaufman has 35 years of experience performing all types of utility project inspections, including water, wastewater, reclaimed water, stormwater, and roadway improvement type projects. Prior to joining Arcadis, Mr. Kaufman worked directly for the City of Sarasota Utilities Department.




### Joshua Roberts, PE | Inspector

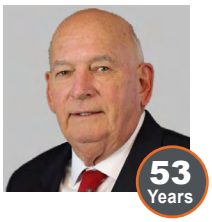
Mr. Roberts is a Project Civil Engineer with professional experience in the project management, design, and construction management of various wastewater and water resource design projects. Mr. Roberts's engineering background includes inspection and condition assessment of marinas and water control structures, cost estimating, flood studies, pump station design, economic analysis, port feasibility studies, port reconstruction, retaining wall design, wetland restoration, reservoirs, stormwater treatment areas, flow equalization basins, public recreation area design and specifications. Niche expertise in water resources planning and design, local knowledge of South Florida Hydraulics and Hydrology, and familiarity with relevant regulatory and environmental requirements.

## Arcadis Key Personnel


### Aaron Svitana | Health and Safety

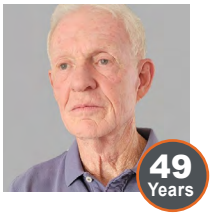
Mr. Svitana has over 25 years of client-focused professional experience throughout the U.S. managing large-scale remedial investigations and large-scale multi-million-dollar remedial construction projects as well as passionately stewarding a positive, proactive and effective health and safety culture for those projects and project teams.

Currently, he serves as Arcadis Water Business Area H&S Director.




### Chris Matthews, PE | Cost Estimating / Constructability

A licensed professional engineer and general contractor, Mr. Matthews has performed as a project manager, construction manager, and engineer of record for multiple public and private water infrastructure projects during his 50-year career. Mr. Matthews has worked for more than 20 years on the Engineers Joint Contract Documents Ye53 Committee and has served three times as the chairman. He is currently an ACEC Delegate to the EJCDC, a Life ars Director of the Associated General Contractors of America and has held general contractor licenses in twelve states. Mr. Matthews is the Arcadis construction area manager for Florida and is therefore involved in all of our Florida projects including Sarasota County's SR45 UWHCA, Clark Road UWHCA, and the Center Road DIW MIT.




### Darryl Dunn, PE | Cost Estimating / Constructability

Mr. Dunn has a wide range of knowledge in the management and execution of construction projects for owners. He served as a Program & Project Construction Manager (PCM) for 24 years managing owner's pre-construction and construction phase projects primarily focused on water and wastewater projects including treatment plants, pump stations and pipelines. Prior to his Construction Management career, he spent 18 years in general engineering- planning, directing, and performing civil engineering and design work pertaining to new, improvement or renovation infrastructure projects including roadways, site plans, storm drainage and erosion control, buildings and structures, water and sewer utilities, pump stations and force mains, water and wastewater treatment plants.


### Chris Tilman, PE, BCEE | Environmental Compliance

Mr. Tilman provides professional engineering and consulting services in several civil engineering disciplines. He specializes in assisting municipal and industrial clients in South and Central Florida with various site/civil infrastructure and permitting projects. His 27 years of experience includes project management and delivery, site/civil design, mathematical modeling, regulatory permitting and compliance, and operation and maintenance evaluations. Mr. Tilman currently serves as the Water and Wastewater Utility Technical Lead on the Miami Dade County Water and Sewer Department and works on several other civil engineering projects.

## Arcadis Key Personnel


### Tina Laird | Project Administration / Document Control

Ms. Laird has 29 years of experience working in the construction industry as a professional Project Administrator, Assistant Project Manager and Certified Project Manager. She has worked for Nineteen years at Arcadis. This time included field assignments primarily on water and wastewater treatment facilities. For the past 16 years, she has assisted on multiple projects rotating between the different projects during each week. Her goal for each project is to provide the Client with superior program/construction management services. Ms. Laird is proficient in using Contract Manager software such as Orion, Oracle and Primavera. She supports the Project Managers, Construction Managers and Inspectors with several project control related tasks including invoicing, projects costs, project set up, contracts, subcontracts, construction documents of all types.


### Brian Duane, PE | Pump Station Technical Advisors

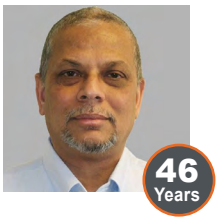
Mr. Duane's experience includes the design of more than 50 water and wastewater pumping facilities with capacities over 1,000 mgd. He is a technical expert in hydraulics, pumping systems and the design of mechanical process systems, and he routinely assists with start-up and troubleshooting of mechanical systems. Throughout his career, he has partnered with clients to provide cost-effective solutions that are functional, practical, maintainable, and constructible. He offers exceptional value to clients based on his proven track record of practical design; history of successful project execution and completion; and understanding of the client's needs during the construction, start-up and post-construction


### John Scioscia, PE | Pump Station Technical Advisors

Mr. Scioscia has over 45 years of experience in pre-design analysis, design, and construction administration of water and wastewater facilities. Mr. Scioscia's experience encompasses advanced hydraulics, analysis of water supply and distribution systems, collection systems, water/sewer facility feasibility and condition assessments, planning and analysis.


### Roy Cooper, PE | Contract Solutions

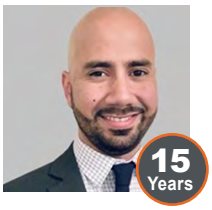
Mr. Cooper leads Arcadis's construction claims services in North America. He has more than 34 years of construction experience, including the analysis and review of complex construction claims from the beginning stages through trial support and expert testimony. He has led large-scale claims evaluation assignments of almost every type, including the evaluation of schedule impacts, cost impact analysis, mediation, and claims negotiation. He has also been qualified as an expert on both horizontal and vertical project types. Prior to joining Arcadis, he was a project superintendent and engineer on high-profile projects, several of which he was responsible for all aspects of construction.




### Bhadrash Patel | Scheduling / Project Controls

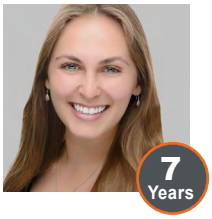
Mr. Patel has 46 years of experience in the field water and wastewater, airport engineering, chemical industry and highway engineering, urban roadway construction & planning and structural design. He serves in the role of project controls and planning lead and technical supports responsible for various work products, master schedules, capital improvement schedules, project schedule, time impact analysis, claims, cost estimator, contract administrator, network administration, document control (CM14) administration, contract administration and primavera project controls (P6) administration. He has a strong background in project controls and claims analysis in water, wastewater, environmental, chemical and transportation construction sectors.

## Arcadis Key Personnel




### Jose Custodio, PE | Pipeline Technical Advisor

Mr. Custodio is a professional engineer registered in the states of Florida and Puerto Rico, with background in utilities engineering and construction management. Work experience includes planning, design, procurement, construction management of several Capital Improvements Program (CIP) projects for different municipalities in the State of Florida and for the Puerto Rico Aqueduct and Sewer Authority (PRASA).




### Lia Dombroski, EIT | Inspection Support

Ms. Dombroski has 7 years of civil and environmental engineering experience serving municipal and government clients in the water and wastewater industry. She has a background in engineering design and construction of transmission, distribution, collection, and pumping systems involving project planning, permitting, construction management, community engagement, and quality assurance. She has led and conducted the condition assessments of large-scale infrastructure including water/wastewater treatment and distribution/ collection systems, renewable energy facilities, and port facilities. She is experienced in report writing focusing on local legislation, regulatory requirements, technical evaluations, capital improvement programs, and financial obligations. Her strengths in construction management include communication, organization, documentation, maintaining site safety, and implementing project controls.

# Resumes

# Leah Richter, PE

## Principal-in-Charge

Ms. Richter currently serves as Arcadis's Southeast Florida Operations Leader and is located in Plantation office, just minutes from the City to provide rapid response to any request. She has a diverse background in civil engineering, program management, business advisory and financial consulting services. Also, she specializes in assisting municipal clients in South Florida with managing their planning, operational and capital program needs. Her experience includes project management and delivery, vendor procurement, contract compliance, regulatory permitting, public outreach, annual reporting to bondholders/trustees, litigation support services, environmental compliance and operation and maintenance evaluation. She serves as the Contract Manager or Principal-in-Charge for several contracts and projects with the City including General Water and Wastewater Professional Engineering Services and Lead and Copper Rule Revisions Compliance Program, as well as Project Manager for the Miami Dade County Water and Sewer Department Bond Engineering contract.

### Education/Qualifications

- MS, Civil Engineering, Florida Atlantic University, 2002
- BS, Environmental Engineering, University of Florida, 1997
- Program Management, Academy – Leading Complexity University of Oxford – Said Business School

### Years of Experience

Total – 25

### Professional Registration/ Certifications

- Professional Engineer – FL

## Relevant Experience

**General Water and Wastewater Professional Engineering Services Continuing Contract**

City of Fort Lauderdale, Fort Lauderdale, FL

Served as Contract Manager for the full breadth of services Arcadis provided as the City's Professional Engineer for water and wastewater services throughout the City. Activities and projects to date have included High Service Pump Station Boost, Overhead, Drainage and Recycle, 48/54-inch Finished Water Pipeline from Prospect to Fiveash Design/ Construction Management Services, and Lime Softening Residuals Evaluation.

**Lead and Copper Rule Revision (LCRR) Compliance Program**

City of Fort Lauderdale, Fort Lauderdale, FL

Served as Project Officer supporting the City through the development of a Compliance Program making sure that all requirements are met in accordance with the LCRR. Activities include the development of the initial lead service line inventory and the development of the necessary work plans for the LCRR Compliance Program that will capture the City's strategy for improved data management, public education and outreach, customer tap sampling, school/childcare facility sampling, corrosion control evaluation, and lead service line replacement.

**Construction Engineering Inspection Services Contract**

City of Fort Lauderdale, Fort Lauderdale, FL

Served as Principal-in-Charge for the full breadth of services Arcadis provided under Construction Engineering and Inspection (CEI) Services Contract for the City, including the near complete A-16 Pump Station (PS) replacement project. Arcadis has provided full time CEI services throughout the project which consists of replacement of the A-16 PS, as well as construction of new gravity sanitary sewer, forcemain, and watermain, implemented through a design-build delivery method.

**Water System Engineering Services Contract**

City of Hollywood, Hollywood, FL

Project Officer and Contract Manager responsible for the full breadth of services Arcadis provided as the City's Engineer of Record for the City's Water Treatment Plant and water distribution system. Activities and projects have included numerous capital improvement design and construction projects, feasibility studies, condition assessments, asset management and master planning activities. Responsible for the development of a risk and resilience assessment in accordance with the requirements of America's Water Infrastructure Act completed on March 31, 2020.

**Palm Beach Renewable Energy Facility - Owner's Representative and Design Criteria**

Professional Solid Waste Authority of Palm Beach County, West Palm Beach, FL

Principal-in-Charge and Project Manager responsible for the planning, permitting, procurement, financing, public outreach, and conceptual design for the overall implementation of the new 3,000 ton per day (tpd) mass burn waste-to-energy (WTE) facility adjacent to the Authority's existing 2,000 tpd waste-to-energy facility. Key activities included development of procurement documents for the design-build-operator, development of application documents required under the Power Plant Siting Act and Prevention of Significant Deterioration program, development of a design criteria package to be used during the procurement process, development and implementation of an extensive public outreach program, negotiation of Power Purchase Agreement, detailed design review, construction and acceptance testing monitoring, and overall program management activities to support the development of this $672 million capital project. Construction was completed in 2015 and Arcadis served as Consulting Engineer overseeing the operations and contractual performance.

**Solid Waste Visioning and Strategic Planning**

Broward County, Broward, FL

Deputy Project Manager for the visioning and strategic planning undertaken upon the expiration of the interlocal agreement between the County and the member cities for solid waste. Broward County was approaching a critical turning point in which the management of their solid waste which would require stakeholder alignment and business/financial analyses to determine the next generation of solid waste management. In support of the County and building from decades of working with the County as their Owner's Agent for their solid waste management system, Arcadis facilitated a "Trash Summit" to bring city managers, mayors, and other key stakeholders together to review the past, present, and potential future scenarios for the district.

**New Renewable Energy Facility**

West Palm Beach, FL

Principal-in-Charge and Program Manager for the planning, permitting, procurement, financing, public outreach and conceptual design for the overall implementation of a new 3,000-tpd WTE facility adjacent to the authority's existing North County Resource Recovery Facility. Key activities included development of a request for qualifications and request for proposals of a design-build-operator, development of application documents required under the Power Plant Siting Act, development of a design criteria package to be utilized during the procurement process, development and implementation of an extensive public outreach program and overall program management activities to support the development of this estimated $700 million capital project, the first of its kind in more than 15 years.

**Resource Recovery Facility (RRF) Condition Assessment**

Montgomery County, Wheaton, MD

Principal-in-Charge and Quality Assurance/Quality Control responsible for comprehensive condition assessment of the County's existing RRF including detailed site visits utilizing 'Fulcrum' tablet-based data collection tool, gap analysis between existing and required future performance criteria, and supporting detailed cost estimates to repair and/or retrofit to achieve necessary objectives.

# Chris Remme, CCM, PSP, CCP

## QA/QC

Mr. Remme has been a Program and Construction Management Professional for 38 years with experience in multi-project and capital improvement programs consisting of heavy/civil, water and wastewater facilities, transit and building projects throughout the United States. He is also a Certified Construction Manager with the Construction Management Association of America and a Certified Cost Professional and Planning and Scheduling Professional with the Advancement of Cost Engineering International. He has an experienced in client management, business planning, proposal development and project financial management as well as in deploying management plans and communications to all stakeholders on multi-project programs. He is a Leader in staff development, retention, training and support. Also, promoted health and safety for all employees and project team members. Managed programs with multiple sites, project types, designers and contractors, program planning and scheduling of interconnecting systems/processes between projects. Experienced in various contract deliveries, such as design-bid-build, design build and Private Public Partnerships. Experienced in providing Critical Path Method (CPM) scheduling, budgets and cost estimating, and claims resolution services. Proven technical capabilities in value engineering, constructability reviews and quality control.

### Education/Qualifications

- BS, Construction Management, North Dakota State University - Main Campus, 1986

### Years of Experience

Total – 38

### Professional Registration/ Certifications

- Certified Construction Manager
- Planning & Scheduling Professional
- Certified Cost Professional

## Relevant Experience

**Construction Management Services for Water and Wastewater Projects**
Harford County Department of Public Works, Harford County, MD

Principal-in-Charge for this multi-year construction management contract for the County. The Projects consists of various water and wastewater capital improvement projects and transportation (road/bridge) projects on as-required basis for Harford County, Maryland. Scope of services include pre-construction services in the areas of master and pre-bid CPM scheduling, cost estimating, constructability reviews, contractor pre-qualification support, bid phase and contractor award support. Construction phase Construction Management (CM) services include full time onsite management and inspection of various projects in the Capital Improvement Program. Services included are schedule management, cost management, change management, document management, project communications and issue/claims resolution services.

**Construction Management Contract 4E**
District of Columbia Water and Sewer Authority, Washington, DC

Served as Program Manager providing full construction management services on this $80 million program.

This was a task order-based contract for a four-year term which extended by four years to manage added projects by the client. Managed each task order for scope development, staffing plans and the financial metrics. Was instrumental in developing a comprehensive quality assurance plan for these services, which is updated regularly during the program. The quality assurance plan provided best practices for all the services being provided under this agreement and is shared with all staff members as services a management guide of procedures, quality references and forms. Developed program and project dashboard reports to streamline, consolidate and simplify the data information being reported each month on such as large program for DC Water. The program consists of multiple construction contracts to rehabilitate and/or replace water and sewer pipelines, pumping stations, and storage facilities.The scope of services includes design reviews including biddability, constructability reviews, cost estimates and schedules, office engineering including review of shop drawings, schedules, and other construction contractor submittals, change management process, including preparation and negotiation of change orders, task orders and agreements, and claims avoidance/mitigation procedures, resident engineering, inspection services, and materials testing, inter-agency, intra-agency, utility coordination and public relations program support.

**Consulting, Design and Project/Construction Management Services**

Prince William County Service Authority, Prince William County, VA

Client Account Leader for the Service Authority (SA) for the consulting and management services performed by Arcadis. Responsible for developing task order scopes, staffing plan, fees, quality, and project management. Project/construction management experience for SA has been on thefollowing projects:

- Colchester Interceptor Sewer Improvements Project (IFB)
- Montclair/Four Seasons Water Systems Improvement Project (DB)
- Unity Reed Booster Pump Station Improvement Project (IFB)
- Wellington Operations Center Project (IFB)

Also, led the development of standard CPM scheduling specifications for the Service Authority's construction projects. Managed and assisted the Service Authority in developing design build Contract documents for the Montclair/Four Seasons Water System Improvements project and is the project manager for this contract providing construction management services from design through construction. Also, managed and provided pre-construction related construction management services such as constructability reviews, independent cost estimates, per-bid CPM schedules, community outreach support, bid phase management and project delivery strategies and analysis. Managed the independent cost estimates for the following:

- Heritage Hunt Wastewater Pump Station and Force Main Project
- Sewer Pump Stations Bundled and Force Main project
- Montclair/Four Seasons Water Systems Improvement Project (GMP)
- Occoquan River Crossing Transmission Main Project

**Lee Hall Maintenance & Operations Facility**

Newport News Waterworks, Newport News, VA

Project Manager responsible in charge for the design phase, bid phase and construction phase of this multi-use facility for the Water Works Department of Newport News. The building consists of 105,000 square-feet of space. This new building houses the Facilities and Watershed Maintenance, Distribution Operations and Equipment Maintenance Divisions, that will have a combined work force of approximately 194 employees. The project included workshops for fleet and special equipment operations and maintenance, meter testing, repair, and maintenance, mechanical, electrical, machine, electronics and instrumentation, roads and grounds maintenance and watershed operations. In addition to the trade shops, the facilities also include locker rooms, administrative offices for three Divisions, training facilities, records rooms, technical libraries and all material and supply warehouse/storage facilities. Project/Construction Management services provided as responsible in charge included design reviews, conducting design progress meetings, and facilitating value engineering studies. Managed the cost estimates at each design submittal and reviewed with the Owner to determine any budget and scope changes, organized and conducted constructability reviews and implemented suggested changes into the documents. Also developed the master schedule and updated the schedule monthly, developed a management information system for team communication, managed the bid phase with the City, and was the onsite construction manager in charge and had a staff of inspectors.

# Len Sheptock, CGC

## Senior Construction Manager

Mr. Sheptock has more than 35 years of Professional Program, Project, Construction Management, Engineering and General Contracting experience throughout the Metro United States. He is an accomplished Project/Construction Management and General Contracting Professional with expertise and technical knowledge in all areas of:

- Program, Project and Construction Management
- General Contracting and Construction
- Project Engineering, Design Management and Contract Procurement
- Facilities Operations, Administration and Corporate Management

His career has afforded him the opportunity to participate in all phases of:

- Project Planning, Development, Entitlement, Programming, and Assessments
- Scope Development, Scheduling, Budgeting, and Cost Estimating
- Risk Management, Constructability Reviews, and Value Engineering
- Consultant/Contractor Bid Procurement, Analysis, Negotiation, and Selection
- Construction Quality Assurance, Cost Control, Safety, Claims, and Closeout

Mr. Sheptock has been responsible for key management roles in the following market sectors:

- Water/Treatment, Conveyance, Aquatic, Environmental, and Municipal
- Schools, Education, Healthcare, Federal Housing, and Historic Restoration
- Mixed-Use Luxury Residential/Hotel, Commercial, Retail, and Private Industry
- Oil/Gas, OSHA Hazmat Remediation, Industrial, Electric Vehicle (EV) Charging Infrastructure, Operations Facilities, Transit, Airport, and Roadway

### Relevant Experience

**Townsend Water Treatment Plant (WTP)**
City of Greensboro, Greensboro, NC

Senior Construction Manager responsible for construction of the $55 million Construction Manager at Risk construction of upgrades and additions to the Townsend WTP. The 20-month project maintains the continued delivery of water for the Greensboro area system through major plant improvements which enhance the plant's redundancy and resiliency, including new switchgear building, new natural gas generator, new high lift pumps, new chemical trenches and sedimentation basin improvements.

### Education/Qualifications

- BS, Civil Engineering, University of Illinois
- BA, Biological Sciences, Lehigh University

### Years of Experience

Total – 35

### Professional Registration/ Certifications

- Licensed Dual Residential/ Commercial General Contractor – AZ
- Program, Project and Construction Management Training; Supervisory Stewardship Training
- Alternate Delivery Methods Training (Design-Bid-Build, Design-Build, Construction Management at Risk)
- Occupational Safety and Health Administration (OSHA) Site Supervisor Safety Training Certification; First Aid, CPR Certification
- United States Green Building Council, Leadership in Energy and Environmental Design Corporate Member
- Construction Management Association of America Corporate Member
- Division of State Architects, FTA Policies and Procedures

**Valley Sanitary District WTP**
Indio, CA

Senior Construction Manager responsible for the project management/claim negotiation for the $80M Design-Build construction of upgrades and additions to the Valley Sanitary District Wastewater Treatment Plant.

**Wallbox Electric Vehicle Charger Assembly Facility/ EV Project**
Wallbox USA, Inc., Arlington, TX

Design-Build Contractor / Senior Construction Manager responsible for development of $13M private design-build electric vehicle charger assembly/manufacturing facility project including 130,000 SF tenant improvement build-out, site electrical utilities, off-site improvements, MEP systems, assembly line and storage rack equipment, furniture, IT/Data and security systems, exterior signage and EV infrastructure and charging stations in parking lot.

**Standard Oil/Amoco Oil/Amoco Pipeline Capital Projects**
Amoco Oil Refinery, Chicago, IL (Headquarters) Whiting, IN(Refinery)

Project Engineer responsible for $15 million design-bid-build LPG Generation Process, Storage, Fuel/Water Separation, Pumping and Shipping Facility and $30 million LPG Underground Storage Cavern projects at Amoco Oil Processing Refinery / Tank Farm facility and Amoco Pipeline / Pump / Control Station projects at various locations across the upper Midwest states.

**Orange Unified School District Capital Improvement Projects**
Orange Unified School District, Orange, CA

Project/Senior Construction Managers responsible for the Measure S Bond program design and construction of $39 million design-bid-build new ground up 2-story 45,500 SF Science Center at El Modena High School and a $8 million design-bid-build new ground up construction of Aquatic Center Water Control, Filtration & Treatment Sports Facility.

**Wanda Beverly Hills Luxury Residential/ Hotel Project**
Wanda Beverly Hills Properties, Beverly Hills, CA

Design/Senior Construction Management team responsible for Owner Representation of $1 billion private design-bid build 15 story twin tower mixed-use podium building project including 193 luxury residential units, 143-key 5- star hotel, rooftop pools, restaurants, ballrooms, underground parking structure, outdoor gardens, utilities and off-site infrastructure improvements.

**Maricopa County Facilities Capital Improvement Projects**
Maricopa County Capital Facilities Dept.
Phoenix, AZ

Program/Project Managers responsible for $25 million design-build, design-bid-build and construction manager-at-risk capital facilities projects including the completion of several inter departmental county tenant improvement office/building renovation projects as well as new 911 emergency center, telecommunication center and crime laboratory ground up construction projects.

**Maricopa County Facilities Management Department Capital Projects**
Maricopa County Facilities Management Dept. – Operations & Maintenance Phoenix, AZ

Project / Construction Managers responsible for $20 million design-bid-build facilities management operation and maintenance detention projects including the completion of more than 50 roofing and mechanical building projects.

# Cheriece Davidson

## Inspector

Ms. Davidson brings 5 years of construction management and inspection experience in utility, industrial and commercial projects. She also has experience in project documentation with various software platforms, monthly reporting, change management and CPM scheduling experience. She has a B.S. in Civil Engineering, Howard University in DC and a M.S. in Construction Management from Columbia University in NY. Her project experience in industrial and commercial projects provides her with the skills to provide high quality inspection services on this project.

### Education/Qualifications

- MS, Civil Engineering, Columbia University
- BS, Civil Engineering, Howard University

### Years of Experience

Total – 7

### Relevant Experience

**Blue Horizon Engineering**

Served as Operations Manager.
Responsibilities:

- Determined the project deliverables and specifications, including the project scope, necessary project resources, and estimated labor needed by collaborating with Clients, Engineers, and Architects.
- Acquired the appropriate licenses and permits from the corresponding authorities and ensure construction is up to code.
- Negotiated with Contractors and External Vendors to negotiate profitable contracts and allocate responsibilities.
- Determined needed resources (manpower, equipment and materials) from start to finish with attention to budgetary limitations.
- Managed construction schedule and activities and issue detailed progress reports as needed regarding costs and timelines.
- Made sure work is done in compliance with all relevant building and safety codes.

Managed General Contractors and Construction Workers and give guidance as needed to maintain high-quality project performance.

**BIM Designs Inc.**

Served as Business Development Manager.
Responsibilities:

- Planned, scheduled, and coordinated construction project activities to meet
- deadlines by leading kick-off meetings, pull planning sessions and weekly coordination meetings with client.
- Managed up to 15 commercial construction projects simultaneously and coordinated daily work activities of crewmen, site subcontractors and trade agents on four commercial projects totalling $8 million dollars.
- Increased productivity up to 20%, allowed workers to provide input into the Work processes including scheduling responsibilities, completing jobs, and using experiences to complete tasks.

- Prepared progress reports including cost, status, quality performance, project issues and resolution and secures Change Authorizations, as required.
- Monitored project costs and quality to ensure the profitability and technical performance of the project and develop innovative actions to correct variances to scope, budget and/or schedule.

**Tesla Inc.**

Served as Project Manager.
Responsibilities:

- Issued proposals and purchase orders during procurement, tracked delivery dates of materials and established communication and coordination between contractors and internal teams.
- Reviewed and approved construction bids and change orders. Provide support as needed to the contractor during pre-construction and construction phases.
- Developed and maintained a tracking system for the budget, schedule, Request for Information and change orders to ensure project was on scheduled completion.
- Facilitated contractor site walk throughs to help define the scope for construction, engineering and cost.
- Provided site reports and sketches for additional clarity post system walkdown.
- Met with permitting personnel and inspectors to understand jurisdictional approval requirements and opportunities for timeline reduction.
- Tracked and managed status of City and Tesla approvals.

**STV Inc.**

Served as Project Engineer.
Responsibilities:

- Provided technical support for development of traffic engineering criteria for design projects, utilized AutoCAD and MicroStation to perform engineering designs.
- Utilized DOT manuals of conventional design standards to cross check Engineer's initial design to provide insight and recommendations for adaptations of engineering alternatives.
- Collaborated with Senior Engineers, Project Managers and Contractors for design review by executing quality check processes in weekly team meetings, performed design calculations for grading, drainage, pavement, and alignment improvement.

# Eric Fernandez

## Inspector

Mr. Fernandez has 18 years of experience as a Survey Technician, Construction Foreman, Field Inspector, and Construction Superintendent. He is National Center for Construction Education and Research Certified certified and Procore Superintendent certified. His background includes depth of experience in heavy sitework, civil, buildings and treatment plants.

### Education/Qualifications

- Inspections, Piping, Quality Control, testing, Electrical, Civil Supervision, Haskell University, 2024
- Construction Site Layout, KBR Training Center, 2016
- General Construction Supervision, PCL Training Center, 2015

### Years of Experience

Total – 18

### Professional Registration/ Certifications

- National Center for Construction Education and Research Certified – License # 5548062
- Procore Superintendent Certified – Certificate # nrpqoed7b9x5

### Relevant Experience

**Fort Pierce Utility Authority (FPUA) Mainland Water Reclamation Facility**
City of FPUA, Fort Pierce, FL

Piping Superintendent responsible for supervising and directing all operations within the piping discipline, reviewed and approved all requisitions, field purchase orders, invoices, and other significant documents. Also coordinated the activities of subcontractors. Assisted in the activities of the Project Manager/Engineer in their duties. Validated assigned construction performance is following specifications and within schedules and budgets. Responsible for installing 16-feet (ft.) c900 piping lines 42 inches. The 24-ft. cast iron connected all reclaim water storage tanks aquanereda basins, chlorine contact basins, headworks and future sludge buffer tank. Assisted with the injection wells and influent equalization tank. In addition, assisted with the installation of all stormwater lines and the building of the aerated sludge tank with the blower building and the grit removal building.

**Miami Dade North and South District Wastewater Treatment Plant**
City of Miami Dade Water and Sewer Department, Miami Dade, FL

Construction Superintendent supervised all crafts on job sites at North and South plants traveling between both plants and attending owners' meetings. Also, supervised all related work (Safety, Quality Control, Surveyors-Engineers, Carpenters, Rodbusters, Concrete Finishers, Millwright, Iron Workers, Electricians, Pipe Fitters, Concrete Finishers, Laborers, Laborers, Dirt Work, and Rigging). Attended the post-award review meeting to receive project information and details for preplanning before construction, participated with the Project Manager in preparing a schedule of construction activities and their sequence, the organization structure, staff selection, and the manpower and construction. Directed and controlled the total construction project to meet specifications and within the allotted time schedule in an efficient manner to produce the expected profit, assisted the activities of the Project Manager/Engineer in their duties including prompt shipment of materials and permanent equipment, in obtaining approvals of shop drawings and material samples. Also, coordinated the activities of Subcontractors to permit them to perform their work effectively and to integrate it with project schedules and progress.

**Maintenance and Operations Building**

Industrial Client, Channelview, TX

Assistant Superintendent who oversaw several crafts (Surveyors-Engineers, Carpenters, Rodbusters, Concrete Finishers, Millwright, Iron Workers, Electricians, Pipe Fitters, Concrete Finishers, Laborers, and Dirt Work), responsible for upcoming field tasks, to include planning, scheduling, calculations, materials, and equipment necessary for site construction, tilt walls, survey control, set and plumb steel, masonry, pour foundations, dirt moving, cable trays-underground duct banks, pipe racks, underground pipe, and various building systems layout. Also, responsible for building maintenance and operations building for employees and personnel offices. This includes five warehouses over 100 ft by 100 ft and three floors high, two parking lots, an eight-floor tower with a 96-ft bridge across the main street. Also, more than 8 miles of roadway and sidewalks; 30 ft by 50 ft first aid clinic for Red Cross and a Chemical Facility to make plastics and pharmaceuticals drugs and coatings. Made sure that the work is performed to client quality standards, and fully meets the intent and specific requirements of the contract. In addition, responsible to sign off on start-up authorization for pumps and rotating equipment.

Industrial Client, Freeport, TX

As Field Inspector, read blueprints and specifications, recommended adjustments to the assembly or production process, inspected, tested, or measured materials, measured products with calipers, gauges or micrometers, and operated electronic inspection equipment and software. Also, responsible for living quarters, consisting of more than 60 offices with utilities and three warehouses more than 150 ft by 100 ft with some over six floors high, and parking place for 2000 cars and three trains for gas liquefaction.

Industrial Client, Houston, TX

Construction General Foreman responsible for making sure Crew Members are properly trained, oversaw several crafts performance (Surveyors-Engineers, Carpenters, Rodbusters, Masonry, Concrete Finishers, Millwright, Iron Workers, Electricians, Pipe Fitters, Concrete Finishers, Laborers, and Dirt Work) and offer input and expertise, making sure that their work is accurate, and led four foreman and more than 50 employees. Also, responsible for living quarters and three warehouses more than 150 ft by 100 feet with some more than six floors high, and parking place for 2000 cars and three trains for gas liquefaction.

Industrial Client, Houston, TX

Field Inspector responsible for coordinating and supervising all tasks until finished, advised clients about the design and construction responsible for all crafts on site. Assisted the Quality Check Department to check all construction drawings, check out foundations, material and steel. Oversaw and conducted inspections before the placement of all underground utilities elect cables, pipe pressure lines, duct banks, concrete rebar, and responsible to sign off on pour cards. Also, responsible for housing and offices, four buildings 150 ft by 120 ft, two floors high with deep foundations/set up four generator units with their transformers cooling towers and filter houses.

Commercial Client, Rosenberg, TX

Surveyor Crew Chief responsible for monitoring operations to maintain meeting production standards to the assembly or production process, inspecting, testing, or measuring materials or products being build. Performed inspections before any concrete is placed into foundations and responsible to sign off on pour cards, Coordinated and supervised all survey work leading 17 employees. Also, responsible for setting a 40-ft tall silo, building living quarters, office buildings, control room, two warehouses size 200 ft by 180 ft, setting tilt walls, masonry and steel towers.

Commercial Client, Tampa/St. Petersburg, FL

Responsible for Power Plant 0.3 trains with stacks more than 80-ft high, also a Cooling Tower 1000 ft long, four floors high 0.3 Steam Turbines, with generators and filter houses. Also, responsible for the maintenance quarters for employees and control room for subs, offices, and a 60 ft by 80 ft control room, two floors high, with parking for 60 cars 0.3 miles of roadway and sidewalk.

# Joshua Roberts, PE

## Inspector

Mr. Roberts is a Project Civil Engineer with professional experience in the project management, design, and construction management of various wastewater and water resource design projects. Mr. Roberts's engineering background includes inspection and condition assessment of marinas and water control structures, cost estimating, flood studies, pump station design, economic analysis, port feasibility studies, port reconstruction, retaining wall design, wetland restoration, reservoirs, stormwater treatment areas, flow equalization basins, public recreation area design and specifications. Niche expertise in water resources planning and design, local knowledge of South Florida Hydraulics and Hydrology, and familiarity with relevant regulatory and environmental requirements.

### Education/Qualifications

- MBA, Operations Management, Florida Atlantic University, 2021
- MS, Civil Engineering, Florida Atlantic University, 2019
- BS, Civil Engineering, Florida Atlantic University, 2016

### Years of Experience

Total – 6

### Professional Registration/ Certifications

- Professional Engineer – FL, SC
- Project Management Professional (PMP)

## Relevant Experience

**C-43 Basin Storage Reservoir**

South Florida Water Management District, Labelle, FL

Responsible for developing surface water and groundwater plans, Townsend Canal improvements, basis of design report, and storm preparedness plan. The C-43 Basin Storage Reservoir is one of the features of the Comprehensive Everglades Restoration Plan (CERP) Acceler8 projects. This project included design of an above ground reservoir with a total storage capacity of approximately 170,000 acre- feet located in the C-43 Basin in Hendry County. The design of the reservoir covered 20,000 acres with water levels fluctuating up to 25 feet above grade. The goal of the project was to capture excess runoff from the C-43 Basin and Lake Okeechobee flood control discharges by pumping into the proposed reservoir. The reservoir also provides environmental water supply deliveries to the Caloosahatchee Estuary, water quality benefits to reduce salinity and nutrient impacts of runoff to the estuary, water supply benefits, and flood attenuation.

**C-139 Flow Equalization Basin Design**

South Florida Water Management District, Hendry County, FL

Assistant Project Manager responsible for coordination of the design of a Flow Equalization Basin from the Conceptual Design through Ready to Advertise plans and specifications. The C-139 FEB project consists of 11,000 acre-foot of water storage including perimeter embankments, interior berms, 690 cfs inflow pump station, internal inflow and outflow canals, out-flow structure, access roadway, canal improvements, land leveling and a gravity seepage structure. The design included the site civil layout which includes a roadway relocation, demolition of existing structures, utility relocation, and erosion protection measures. The C-139 FEB is intended to assist in managing source basin runoff by attenuating peak flows and temporarily storing a portion of stormwater runoff prior to it being conveyed to STA-5/6. This project included permitting with the FDEP and USACE.

**Port Arthur and Vicinity Project Contract PAV04 Design-Build Request for Proposal Development**
USACE Galveston District, Port Arthur, TX

Assistant Project Manager responsible for coordination of the Design Quality Control Plan, detailed project schedule, Civil Design using Open Roads, preparation of the Design Documentation Report, design of temporary flood protection, 35% design calculations and engineering plans. Also responsible for assisting with the preparation of the design-build request for proposal and construction phase services for this project that includes raising 2.5 miles of existing levees, 2.0 miles of floodwalls and installation of fronting protection at three pump stations.

**Hillsboro Mile Wastewater System Improvements**
Broward County Water and Wastewater Services
Hillsboro Mile, FL

Staff Engineer responsible for field inspections, including checking and analyzing that the project was built as designed, deciding questions of methods of execution when unforeseen obstacles arose such as unpredicted utilities. Answered questions of methods of execution concerning backfilling procedures and confirmed density test results. Witnessed, performed, and analyzed pressure test on the force main to ensure the construction was precise. Determining the suitability of materials, such as backfill and pipe materials, assisted in drafting and verifying the plans and design. Designed scopes of work for various change orders that occurred in the field that included pipe system layout and backfill procedures. The system included the replacement of 15,555 linear feet of sanitary sewer gravity pipe, 53 maintenance access structures, 270 sanitary sewer laterals, 22,845 linear feet of sanitary sewer force main, and upgrading pumps in 2 sanitary sewer lift stations. This improvement also involved the milling and resurfacing of pavement for 3 miles.

**Margarita Channel Flood Wall**
U.S. Army Corps of Engineers, San Juan, PR

Staff Engineer responsible for conducting simulations of the area using the United States Environmental Protection Agency's (EPA) Storm Water Management Model (SWMM) software. With this software, planned, designed, and analyzed the stormwater runoff in the area and proposed an effective solution to the flooding in the area. Evaluated different stormwater management strategies and methods for different storm events and supplied the most efficient solution. This project consisted of a u-channel structure that will mitigate flooding in the area. The structure was placed in a canal and includes the addition of new maintenance access structures and determining the effectiveness of existing maintenance access structures.

**Happy Hollow Charter School**
Happy Hollow, Delray Beach, FL

Staff Engineer responsible for field inspections; including checking and analyzing that the project was built as designed. Collaborating with contractors to ensure that there were not any mistakes with the design plans. Analyzed and investigated shop drawings to confirm that construction was executed properly; answered questions of methods of execution concerning backfilling procedures and confirmed density test results. Witnessed, performed, and analyzed pressure test on the force main to ensure the construction was precise. Witnessed, performed, and analyzed field testing of the lift station to validate the operation of the equipment. The construction of this school included the installation of concrete water main pipes, polymerizing vinyl chloride force main pipe, and incorporating a lift station pump. This improvement also involved the milling and resurfacing of pavement.

# Jerald Boles

## Inspector

Mr. Boles is from Atlanta, Georgia and has been working with Arcadis for about 5 months. He is a dedicated skilled Water Distribution Operator and National Association of Sewer Service Companies certified with more than 10 years of experience in the installation, maintenance, and repair of water distribution systems. He is Occupational Safety and Health Administration 30 certified and committed to ensuring compliance with safety regulations and delivering high-quality work on every project. Also, he possesses strong teamwork and communication skills, with a proven ability to collaborate effectively with Engineers, Project Managers, and fellow workers to complete projects on time and within budget. In addition, he is passionate about contributing to community infrastructure improvement and ensuring reliable access to clean water.

### Education/Qualifications

- Gwinnett Technical College, Current
- Georgia Perimeter College, 2008

### Years of Experience

Total – 10

### Professional Registration/ Certifications

- Water Distribution License – WD016813
- GSWCC Level 1B Certified Inspector – 0000096780
- National Association of Sewer Service Companies Certification
- Occupational Safety and Health Administration 30 Certification

## Relevant Experience

**Dekalb County Construction Management Services – Water and Sewer Inspection**

REEVES & Associates

As a Full-time Inspector, oversaw the Dekalb County Water & Sewer System which includes closed-circuit television, acoustic testing, smoke testing, point repairs, and pipe lining. Other responsibilities include:

- Replacement of water meters, valves, fire hydrants, service lines and small diameter watermains.
- Observed and documented work being performed on the daily basis and prepared the daily report on Dekalb County's SharePoint web portal including field photos.
- Prepared weekly quantity tracking reports for DWM.
- Verbally communicated with the contractor about the plans/drawings and specifications of the specific project.
- Compiled information received from the field inspectors and track the daily work progress on the drawings and plans.
- Interpreted blueprints and specifications for contractor and discuss deviations from specified construction procedures to maintain compliance with regulations governing construction documents.

**DeKalb County Construction Management Services – Annual Water and Sewer Inspection**

R&C Infratech Engineering, Inc., Decatur, GA

As a Full-time Field Inspector, oversaw the Water Meter Replacement Program located in the City of Decatur which includes field assessment and survey and replacement of water meters, valves, fire hydrants, service lines and small diameter watermains, as well as the associated restoration work of the impacted landscape, driveways, sidewalks, curbs, and gutters. Observed and documented work being performed on the daily basis and prepared the daily report on the County's sharepoint web portal including field photos. Other responsibilities include:

- Prepared weekly quantity tracking reports for DWM.
- Provided construction inspection on water/wastewater infrastructure projects and physical inspections of sewer lines.
- Verbally communicated with the contractor about the plans/drawings and specifications of the specific project.
- Compiled information received from the field inspectors and track the daily work progress on the drawings and plans.
- Interpreted blueprints and specifications for contractor and discuss deviations from specified construction procedures to maintain compliance with regulations governing construction documents.
- Familiarized DeKalb County DWM Water and Sewer Design Standards.

**Positive Plumbing, Atlanta, GA**

As a Field Technician performed the following field tasks:

- Maintenance and repair of water meters
- Performed all on site installation, repairs.
- Performed troubleshooting.
- Identified all issues to suggest and implement solution.
- Tested meters and hydrants to make sure they work properly.

**T&J Industries**

As a Field Technician, performed the following field tasks:

- Operated vehicle and machinery in a safe manner.
- Used field automation systems.
- Made water taps to renew water service Installations of water valves and fire hydrants.
- Operated efficiently to conclude all on site installation, repair, maintenance, and test activities.
- Installed water meters, fire hydrants, and sewer taps
- Installed water pipes underground
- Replaced water valves
- Heavy Machinery Operator; Bobcat, Front End Loader, etc.
- Operated efficiently to conclude all on site.
- Installation, repair, maintenance, and test activities.
- Made sure that the work progress accurately follows the agenda.
- Performed troubleshooting and strive to resolve issues.
- Produced frequent service reports.
- Operated vehicle in a safely manner and use field automation systems.

# Andrew Cooper

## Inspector

Mr. Cooper has more than 7 years of experience in the construction industry, especially with water and wastewater treatment facilities including lift stations. He has a certificate on Construction Management, is a Florida Stormwater licensed, Trench Safety Licensed and possess a confined space certification. He is very knowledgeable in construction management including reviews of RFIs, change order requests, scheduling, daily reports, schedule of values and pay applications.

### Education/Qualifications

- BS, Business Administration, Wesley College

### Years of Experience

Total – 7

### Professional Registration/ Certifications

- Construction Management Certificate – Columbia University
- Florida Storm Water License, Trench Safety License, and Traffic Control – PA
- Confined Space – PA

## Relevant Experience

**Reservoir and Creek Expansion to Wastewater Treatment Plant (WTP)**
Media, PA

Construction Manager who planned and managed the creek expansion from reservoir to WTP. The reservoir was located 1.5 miles (mi.) away and in a different town that had an easement through a little creek that would flood anytime we would open the gates. Coordinated with local townships and the team to expand the creek to 50 feet (ft.) wide and 15 ft. in depth. The banks of the creek needed to be reinforced with concrete anchors and rock to make sure there is no future erosion. Replaced flood gates at the reservoir dam to be remote and not manually operated. Also, replaced pumps at the WTP to be able to pull and keep up with the water flow now coming down from the reservoir. Install gating and signs for safety precautions. In addition, coordinated with Department of Environmental Protection to preserve all wildlife will project was taking place and afterwords.

**Water Treatment Expansion**
Media, PA

Superintendent/Construction Manager tasked with needing to build a new Clarifier to handle the new demand and flow. Also, tasked with coordinating the installation of new control panel and switch boards. Responsible for the installation of new pumps and switching the system over from manual to automatically controlled, and installation of new underground piping installed, and bypasses added to allow the system to be worked on and not disrupt the flow.

**Montgomery Ave 24-Inch (in.) Main Replacement**
Montgomery County, PA

Superintendent responsible for replacing 7 mi. of 24-in. cast iron pipe with ductile iron pipe. Responsible for coordination with the county and city inspectors and residents on night work and 24-hour work. Also, responsible for the ordering of material and contractor implementation where needed to complete work on time and under budget. Coordinated with the local Fire Marshal on where the township wanted the new fire hydrants installed and inspected for testing.

Performed on the spot offsets and duct under of existing utilities such as gas, electric, telephone and sewer. Contracted out restoration and scheduled that to be done as we went and completed sections of the project.

### State Road 48-In. Main Replacement

**Springfield, PA**

Superintendent responsible for the installation of the 48-in. transmission water main. Kept the as built drawings onsite with redline drawings. Coordinated with construction department to create the as-builts. Also, responsible for ordering material and following our specifications and safety guidelines. Created new taps, fire hydrants, decontamination of water main, and installed blow offs and Automatic Air Release Valves, also chlorine injection points.

# Richard Espinosa

## Inspector

Mr. Espinosa has more than 30 years of experience as a Project Controls Manager for new design and construction projects.
His expertise is in establishing controls and operating policies that identify, monitor, and mitigate risk factors that could impact the delivery of a project. Also, he was selected for the Project Controls Manager position because of his expertise in implementing and monitoring the integrated schedule/cost controls for multi-year, multi-billion-dollar capital projects. He excels at managing and maintaining multiple project schedules simultaneously in various phases of program, design, and delivery. He is an expert in the development and monitoring of critical path schedules, schedule and cost performance forecasting, cost estimating, assessment of project changes to the project baseline configuration, and consistent and timely progress reporting. He is a promoter of open communication and collaboration between all parties to make sure that projects are completed with minimal disruptions and delays.
Throughout the life of a project, he makes sure that all project control protocols follow client standardization, procedure development.

### Education/Qualifications

- BS, Business Administration, University of La Verne

### Years of Experience

Total – 30

## Relevant Experience

**Regional Connector Transit Corridor**
Los Angeles County Metropolitan Transportation Authority, Los Angeles, CA

Project Controls Manager responsible for all cost and scheduling efforts for the 1.9-mile Metro Regional Connector Project. Primary responsibility was scheduling, including continued development of the program master schedule, which includes real estate acquisition, third-party relocations, the design-build of Light Rail Transit (LRT) facilities and systems. Other responsibilities included review of the Design-Build Contractor's schedule, review of schedule of values, review of monthly payment estimates, analysis of contract schedule delays and opportunities. Actively participated in monthly project risk assessment and consistently prepared and maintained monthly cost and schedule reports.

**Sound Transit Commuter Rail Project and the Sound Transit Light Rail Project**
Central Puget Sound Regional Transportation Authority, Seattle, WA

Responsible for project controls management oversight. Taks included reviewing project control policies and procedures and their implementation, assessing Sound Transit's technical capacity and capability to complete the projects; and monitoring schedule status related to contract procurement, real estate, engineering design, construction, start-up and testing.

**Metro Gold Line Foothill Extension Phase 2A**

Metro Gold Line Foothill Extension Authority, Monrovia, CA

Project Control Manager responsible for cost and scheduling effort including developing and maintaining the program master schedule to identify the schedule interfaces with program funding, contract procurement, supplemental environmental impact report, real estate acquisition, third party utility relocations, Burlington Northern Santa Fe Railroad re-alignment shared corridor, and the design/build of LRT facilities and systems. Other responsibilities included development of design-build contract scheduling specification, calculation of contract liquidated damages, preparation of monthly cost/schedule reports, review of Engineers Estimate, estimate of design/build contract durations, and preparation of the baseline program schedule. Also, identified construction staging and access interfaces. Coordinated procurement and delivery of Metro furnished materials and equipment to identify material availability to plan Contractor installation windows. In addition, reviewed the design-build contractor schedule submittals and request for payment to make sure deliverables were completed on time.

**Sunset Ave Grade Separation**

Alameda Corridor East Construction Authority, City of Industry, CA

Project Control Manager responsible for review of contractor schedule submittals and request for payment to make sure deliverables were completed in accordance with the contract specifications and quantities in place, analyzed time impacts and contractor schedule claims as a result of the issuance of change orders, monitored and recorded daily field labor, equipment, and materials; prepared fair cost estimates for change orders, and negotiated change orders, prepared cost forecasts and assess contract performance. Also processed Contractor submittals and Requests for Information (RFIs) for review by the Construction Manager, Designer, City of Industry, Los Angeles County Sanitation District and Los Angeles County Department of Public Works (LACDPW). Upon approval of all submittals and RFI's which were within the jurisdiction of the Union Pacific Railroad (UPRR), coordinated secondary reviews with the UPRR Representative for UPRR approval. Also, was responsible for coordinating punch list walks and documenting punch list items identified by the Construction Manager, UPRR, LACDPW and City of Industry. Verified and documented the acceptance of all punch list items identified and prepared and documented meeting minutes for weekly contractor coordination meeting and readiness review meetings.

# Bryce Kaufman

## Inspector

Mr. Kaufman has 35 years of experience performing all types of utility project inspections, including water, wastewater, reclaimed water, stormwater, and roadway improvement type projects. Prior to joining Arcadis, he worked directly for the City of Sarasota Utilities Department.

### Education/Qualifications

- Associate in Arts, Manatee Junior College, 1983
- High School Degree, Sarasota High School, 1981

### Years of Experience

Total – 35

### Professional Registration/ Certifications

- Stormwater Management Inspector
- Intermediate Maintenance of Traffic Certification
- Florida Department of Environmental Protection (FDEP) Level 1 (A) Distribution System Operator, License #0015740
- FDEP Level A Wastewater Collection Technician

### Relevant Experience

**City of Sarasota Utilities Department**
City of Sarasota, Sarasota, FL

Project Manager/Senior Utilities Engineer for the utilities portion of the Capital Improvement Program (CIP) projects. Helped to design, permit, approve pay application, and manage construction for the projects. Some of the major projects included were: (1) 10th and 14th Streets Roundabout Project, all utilities were replaced; (2) US 41 and Fruitville Road Roundabout Project, all utilities were replaced; (3) West Area Multi-Use Recreational Trail at Coon Key Project. 2,500-feet (ft.) of 16-inch (in.) water main; (4) Cocoanut Avenue 24-in. Force Main Replacement Project, Phase 1 2,300-ft. of 24-in. Force Main; (5) Cocoanut Avenue 24-in. Force Main Replacement Project, Phase 2A, 500-ft. of 24-in. Force Main under railroad; (6) Bayfront Force Main Replacement Project, 1,000-ft. of 4-in. Force Main; (7) Gulfstream and Ringling 16-in. Water Main Replacement Project, 800-ft. of 16-in. water main; (8) Main and Orange Roundabout Project. All utilities were replaced; (9) 1st Street Streetscape Project, all utilities were replaced.

**City of Sarasota Utilities Department**
City of Sarasota, Sarasota, FL

Supervisor of Inspection Services/Utilities Engineer who managed all the development projects including utility construction permitting, Florida Department of Health/Florida Department of Environmental Protection and Florida Department of Transportation permitting, shop drawing review, easement approval, backflow approval and inspection services. Also, supervised the inspection services for all utility and CIP Projects.

**City of Sarasota Utilities Department**
City of Sarasota, Sarasota, FL

Construction Inspector responsible for completing the utility cost estimation, sewer cut sheets, right-of-way permitting approval, city forces' stake out and design, inspection, and project management for major projects. Some of the major projects included were: (1) Effluent Transmission Main, 25 miles (mi.) of 36-in. reinforced concrete cylinder pipe from the plant to Hi-Hat Ranch; (2) Wastewater Collection System, various sewer mains replaced and Lift Station 7 replacement; (3) Ringling Causeway Force Main replacement, 2 mi. of 14-in. Force Main replacement; (4) City Wide Wastewater Replacement Project various sewer mains and Lift Station 10 rehabilitation.

**City of Sarasota Utilities Department**

City of Sarasota, Sarasota, FL

Engineering Technician who surveyed, designed, permitted, provided bidding requirements and inspection for contract and in-house projects. Some of the projects included were: (1) Golden gate point Watermain Replacement, 12-in. watermain crossing Gulfstream Avenue; (2) 2001 Watermain Replacement Project, various watermains throughout the city; (3) Hansen Street Utility Project, water and sewer provided to annexed new properties; (4) Siesta Key Utility Project, water replacement and sewer replaced and new lift station design; (5) Lift Station 52 Force Main Replacement, 5,000-ft. of 12-in. Force Main replacement; (6) Osprey Avenue Force Main, 2,800-ft. of 8-in. Force Main replacement; (7) Wastewater Collection, design and modify four existing lift stations.

# Jeff Luetjen

## Inspector

Mr. Luetjen has more than 36 years of experience performing all types of utility project inspections, including water, wastewater, reclaimed water, stormwater, and roadway improvement type projects. Prior to joining Arcadis, he worked directly for the Sarasota County Utilities Department.

### Education/Qualifications

- High School Diploma

### Years of Experience

Total – 36

### Professional Registration/ Certifications

- Advanced Maintenance of Traffic
- Earthworks Level 1 and 2
- Concentrated Course in Construction Contracts
- Practical Construction Law
- Asphalt Inspection/ Maintenance
- Bloodborne Pathogens
- Pipeline Installation
- Kennedy Valve Product Seminar
- Trenching and Excavation Safety
- Introduction to Blueprint Reading

### Relevant Experience

**Construction Phase Support Services for Water Main Replacement**
City of Tampa, Tampa, FL

Full-time Senior Inspector to support the City of Tampa CAD Construction Management Documentation Team for approximately six months. Inspection services included daily site inspections confirming work in compliance with City standards, daily reports, and measurement for payment of work-in-place during installation of new valves and fire hydrants throughout the City of Tampa area by Dallas 1.

**Cocoanut Avenue Force Main Replacement Project**
City of Sarasota, Sarasota, FL

Project involved installation of over 10,000 feet (ft.) of 24-inch (in.) force main, including 5,000 ft. by HDD, as well as construction sequencing through downtown Sarasota to accommodate activity schedules, railroad crossing design, and trenchless installation on the wastewater treatment facility to connect the new force main to the headworks. Phase I which has been completed consists of 405 ft. of 36-ft. steel casing with 1040-ft. of 24-in. C-905 Fusible Polyvinyl Chloride installed through the casing and direct bury and 1310 ft. of 30-im. DR-11 High-Density Polyethylene installed by HDD.

**Kings Point Potable Water Valve Replacement and Installation Project**
County of Hillsborough, Hillsborough, FL

Inspection services included performing daily site inspection, confirmation of work completed in compliance with County standards, daily reports, and measurement for payment of work-in-place during the installation of 116 new/replacement valves and 15 fire hydrant replacements.

**South Pasco Caustic**
Tampa Bay Water, Tampa, FL

Responsible for pre-construction review.

# Chris Matthews, PE, CGC

## Cost Estimating/Constructability

Mr. Matthews has designed and built multistory commercial buildings, heavy industrial projects, and wastewater treatment systems. He has 54 years of design-build projects which span from corporate headquarters for international organizations to the ultra-pure water insulation system for Sandia National Laboratory's Fast Breeder Reactor. He has worked for 20 years on the Engineers Joint Contract Documents Committee (EJCDC) and twice served as Chairman. He is currently an American Council of Engineering Companies Delegate to the EJCDC, a Life Director of the Associated General Contractors of America and has held general contractor licenses in 12 states. He has owned and operated multiple private wastewater utility companies and is an Engineering Expert Witness, who has worked on many cases of contract litigation and mediation, and holds a US patent for specialized concrete forming systems. He has authored articles and papers on public-private-partnerships (P3) used for the wastewater market in the US. He has assisted the EJCDC develop the first Program Management Standard Contract Document for P3s in the US. Included in his design build experience is the installation of low-pressure collection systems serving thousands of residential and commercial customers. These systems in central Alabama traversed hundreds of feet in elevation changes.

### Education/Qualifications

- BS, Mechanical Engineering, University of Alabama, 1973

### Years of Experience

Total – 54

### Professional Registration/ Certifications

- Professional Engineer – AL, FL, GA, LA, MD, MS
- Certified General Contractor – FL
- Certified Mechanical Contractor – FL
- Expert Witness, American Council of Engineering Companies Certification

## Relevant Experience

**City of Atlanta Architectural/Engineering Task Order Contract**
City of Atlanta, Atlanta, GA

Area Manager for the construction management for multiple field tasks issued under the city's architectural/engineering contract.

**Sod Run Wastewater Treatment Plant (WWTP)**
Harford County, Harford County, MD

Construction Manager for Enhanced Nutrient Removal (ENR) addition at the Sod Run WWTP which was rated at 20-million gallon per day (mgd) dry-weather flow and 50-mgd wet-weather flow. The ENR program was implemented in new facilities to meet the new and future waste load allocation for its discharge into Bush River. The scope of work for the program Harford included total phosphorus and nitrogen control improvements, new methanol addition facility, effluent filtration addition, main plant switchgear improvements, final clarifier upgrades, aeration system upgrades, return activated sludge pumping upgrades, bio-augmentation and new fermentation tanks and pumping facilities.

**Construction Management and Inspection (CMI)**
Anne Arundel County, Annapolis, MD

Project Manager for open-ended CMI of various water distribution system improvements including repairs, replacement, and lining.

**Nova Drive Water Main and Force Main**
City of Sunrise, Sunrise, FL

Performed CMI. Arcadis provided services for the preparation of construction documents and associated permits for the replacement of more than 10,000 LF of existing 10-inch (in.) asbestos Force Main and 12-in. asbestos water main piping within the neighborhood of Park City and right-of-way of Nova Drive. The work involved a new aerial crossing of an existing canal adjacent Nova Drive.

**Bush Creek Pumping Station and Force Main**
Harford County, MD

Construction Manager responsible for the construction management for the improvements to the existing Bush Creek Pump Station, Force Main, and the up-stream and downstream gravity sewers.

**Broadneck Water Reclamation Facility (WRF) ENR Upgrade**
Anne Arundel County, Churchton, MD

Project Manager for nutrient reduction addition at the Broadneck Water Reclamation Facility. Broadneck is rated at 2-mgd dry weather flow and 10-mgd wet-weather flow. The nutrient reduction program implemented in new facilities to meet the new and future waste load allocation for its discharge into the Chesapeake Bay.

**Watershed Operations Building and Storage Yard**
Peyton Center WSM, Atlanta, Georgia, GA

Project Manager for the City of Atlanta's new Watershed Operations Building and Storage Yard under a fast-track design-build delivery. This project included the preparation of bridging documents, space planning, monitoring the Leadership in Energy and Environmental Design progress, selecting a design-build contractor and monitoring the construction of the new facility of all existing equipment at each intersection were completed and uploaded to a city accessible database. Responsibilities included coordinating architectural/engineering services throughout the project.

**Anne Arundel County Patuxent WRF**
Anne Arundel County, Crofton, MD

Project Manager in the Arcadis' contract consisted of construction management and inspection services during the construction of all necessary modifications to expand the Patuxent (WRF) facility from 7.5-mgd to 11.6-mgd.

**Schneider Electric Engine Control Module**
City of Atlanta, Atlanta, GA

Project Manager for this design-build, Energy Conservation Project which implemented several process changes to the South River and Utoy WRF for the City of Atlanta. This project involved the design and construction management of changes to several processes at these plants. The major changes included the rehabilitation of two 100-foot diameter digesters and associated equipment, installation of new ultraviolet disinfection units, installation of new thickener units and installation of ammonia based automatic control systems for aeration basins.

**Water Distribution System Improvements**
City of Annapolis, Annapolis, MD

Project Manager responsible for the quality assurance and construction contract administration on the five-year Task Order Contract for water distribution repairs and improvements. Projects included location, investigation and replacement of water mains and appurtenances throughout the County Distribution System. The sum of task values was up to $1.2 million per year.

**Wastewater Collection System Improvements**
City of Annapolis, Annapolis, MD

Project Manager responsible for the quality assurance and construction contract administration on the five-year Task Order Contract for wastewater collection system repairs and improvements. Projects included location, investigation and replacement of collection system appurtenances throughout the County Collection System. The sum of task values was up to $1.1 million per year.

# Darryl Dunn, PE

## Cost Estimating/Constructability

Mr. Dunn has served as a Program Manager and Project Construction Manager (PCM) as Owner's Agent for 24 years managing owner's pre-construction and construction phase projects primarily focused on water and wastewater projects including treatment plants, pump stations and pipelines. Prior to his construction management career, he spent 18 years in general engineering including planning, directing, and performing civil engineering and design work pertaining to new, improvement or renovation infrastructure projects including roadways, site plans, storm drainage and erosion control, buildings and structures, water and sewer utilities, pump stations and Force Mains, water and wastewater treatment plants. His construction management experience includes bid phase services, constructability reviews, establishing site construction management offices, hiring staff, implementing document control platforms, communication and execution plans, administering construction contracts, conducting meetings, change and schedule management, quality assurance/quality control oversight, startup, commissioning plans, closeout and turnover of his projects.

### Education/Qualifications

- Engineering Coursework, West Georgia College and DeKalb Community College, 1977

### Years of Experience

Total – 49

### Professional Registration/ Certifications

- Professional Engineer – GA

### Relevant Experience

**Pump Station A-16**
City of Fort Lauderdale, Miami, FL

Lead Inspector who provided construction management services for the installation of approximately 2,000 linear feet (LF) of 30-inch (in.) High-Density Polyethylene (HDPE) watermain and 3,000-LF of 10-in. HDPE Force Main along SE 3rd Avenue. This project was part of the relocation of the A-16 Pump Station on SE 11th Street. The project included two horizontal directional drilling (HDD) segments under the Tarpon River.

**Everglades Pump Station Monitoring Panel Replacement Project**
South Florida Water Management District, Fort Lauderdale, FL

Senior Project Construction Manager for the replacement of engine monitoring panels and devices with modern electronic equipment for five Everglades Canal Pump Stations with multiple engine-driven pumps originally installed in 1952.

**Cox Creek Water Reclamation Facility (WRF) Upgrade Project**
Department of Public Works, Anne Arundel County, MD

Senior PCM for the $110 million multiphase, multiyear upgrade of the 30-million gallon per day WRF to Biological Nutrient Removal with up to 400% sludge return and including owner-purchased submerged bio-reactor membranes.

**Mayo WRF Conversion Project**
Department of Public Works, Anne Arundel County, MD

Senior Project Construction Manager for this unique $40 million Mayo WRF project which de-commissioned the existing non-functioning wastewater treatment plant and installed 5mi. of 24-inch HDD force main to the Annapolis WRF Decommissioning the existing faulty treatment plant removed a decades-long sewer moratorium on the Mayo peninsula.

**Jennifer Road Pump Station Replacement**
Department of Public Works, Anne Arundel County, MD

Senior Project Construction Manager for the new larger capacity replacement pump station built on the extremely tight site of an existing pump station including a mile-long 18-inch force main and bounded by busy arterial roadways on two sides and a sensitive environmental area on another.

**Mason Farm Wastewater Treatment Plant (WWTP) Upgrade**
Chapel Hill, NC

Senior Project Construction Manager for the $40 million upgrade including a new biological filter building, new influent pump station, new 13.3KV power service and re-powering all operating equipment onsite. Interestingly, the project included an early completion bonus after meeting an interim milestone.

**Brooks Road Pump Station**
Gwinnett County, GA

Project Construction Manager for the $25 million construction of a new pump station designed to accommodate 50-mgd of flow but equipped initially for 6-mgd.

**Water Independence Program**
Rockdale County, GA

Program/Project Construction Manager for this $65 million project to design and construct all new water supply, treatment and distribution facilities when its water supply contract with an adjacent county was to expire. The County was squeezed with only 30 months to develop, design and construct its facilities.

**Shenango Water Treatment Plant (WTP)**
Sharon, PA

Project Construction Manager for the new $25 million Shenango WTP built on the banks of the Shenango River. The project comprised construction of a complete new water treatment plant and new raw water intake on the site of the existing water treatment plant- some parts of which were constructed in 1898.

**WTP Upgrade**
Allentown, PA

Project Construction Manager for the $20 million upgrade and renovation project to demolish the 10-mgd treatment train and re-purpose all its facilities and upgrade the 20-mgd train to 30-mgd. The WTP was originally built in 1927 and upgraded in 1975.

**Klines Island WWTP Upgrade**
Allentown, PA

Project Construction Manager for the $25 million plant upgrade project to demolish existing Imhoff tanks originally built in 1927, construct new 150-foot-diameter Clarifiers, and return sludge pump station, new primary clarifier sludge collectors and new headworks equipment.

**Blue Plains AWTF Expansion**
Washington, DC

Resident Engineer for the 50-mgd filter expansion at the Blue Plains AWTF on the banks of the Potomac River in Washington, DC including installation of 160 concrete displacement piles.

**Water and Wastewater Design Contract**
U.S. Naval Submarine Base, Kings Bay, GA

Design/Project Engineer for many of the 150 contract supplements developing designs and drawings for the 10%, 30%, 60%, 90% and Final design packages, providing responses to ROICC review comments, and implementing changes to the documents pertaining to the review comments. Design engineer for improvements to the Base Area Wastewater Treatment Plant and spray irrigation system, Waterfront Wastewater Treatment Plant, Base Area Water Treatment Plant, the two deep raw water wells, and the Waterfront Booster Pump Station. Project engineer for the Industrial Waste Treatment Facility designed to recover solvents and receive acidic and alkaline waste products from the various maintenance operations at the base. The discharge from the facility is sent to the Waterfront Wastewater Treatment Plant which was upgraded to handle the industrial waste discharge impact on its biological processes. The project won the GWPCA award for design in 1991.

# Aaron Svitana

## Health and Safety

Mr. Svitana has more than 25 years of client-focused professional experience throughout the United States managing large-scale remedial investigations and large-scale multi-million-dollar remedial construction projects as well as passionately stewarding a positive, proactive and effective health and safety culture for those projects and project teams. Currently, he serves as Arcadis Water Business Area Health and Safety (H&S) Director. He has also served as the Arcadis H&S Coordinator for two multi-national Oil & Gas and one multi-national chemical market sector client teams maintaining uniform implementation of Operational Excellence and Health, Safety, and Environment processes across the accounts and stewarding and delivering incident free operations.

### Education/Qualifications

- BS, Geoscience, Franklin and Marshall College, 1992

### Years of Experience

Total – 29

## Relevant Experience

### H&S, Client and Operations Management Experience

**Multiple Clients, Various Locations**

Primary account team H&S Leader responsible for overall account team H&S performance. Performed semi-autonomously under the lead of the Global or National Account Leader to achieve Arcadis and client-required goals and metrics. Typical responsibilities include:

- Visible and active stewardship of Arcadis and client H&S culture.
- Identified, developed and mentored account-specific H&S support team fluent in client and ANA H&S requirements; teams range in size from two to 10.
- Performed gap analysis of client-specific requirements and ANA standards, developed client-team specific standards to address gaps and developed/deployed training and competency programs.
- Identified opportunities for digital innovation and collaborate with internal account team and digital enablement resources to develop and deploy tools
- Collaborated with Corporate H&S resources to incorporate lessons learned and best practices from account team and apply to ANA standards or processes and vice versa.
- Primary point of contact with client leadership for H&S matters.
- Regularly participated and presented at client-hosted conferences and forums
- Participated in client-sponsored workshops and/or committees for the development of client-specific programs/processes.
- Conducted and/or facilitated internal audits and assessments and provides lead support of external client audits.

- Developed annual and periodic performance metrics and focus areas and drives the communication campaign and implementation of those metrics/programs.
- Supported business development and other client-facing initiatives.
- Led safety meetings and stand ups/stand downs.
- Participated in or facilitates loss/near loss investigations.
- Reviewed H&S data and metrics and develops action plans and initiatives based on data trends and analysis.
- Developed and managed programmatic H&S budgeting.

# Bhadrash Patel, PSP

## Scheduling/Project Controls

Mr. Patel has 48 years of experience in the field water and wastewater, airport engineering, chemical industry and highway engineering, urban roadway construction & planning, and structural design. He has worked with technical and managerial responsibilities as a Senior Project Control Specialist, Project Engineer, Resident Engineer, Senior Construction Inspector, Construction Manager, and Consultant on assignments for a wide variety of civil engineering, pump stations, wastewater treatment plants (WWTP), airports, cargo buildings, bridges, chemical and utility projects. He serves in the role of Project Controls and Planning Lead and Technical Support responsible for various work products, master schedules, capital improvement schedules, project schedule, time impact analysis, claims, cost estimation, contract administration, network administration, document control (CM14) administration, contract administration and primavera project controls (P6) administration. He has a strong background in project controls and claims analysis in water, wastewater, environmental, chemical and transportation construction sectors. He has been responsible for preparation of engineering analysis, reports and negotiations of delay claims and project schedules.

### Education/Qualifications

- BS, Civil Engineering, Sardar Patel University, 1977

### Years of Experience

Total – 48

### Professional Registration/ Certifications

- Project Scheduling Professional
- Primavera P6 103
- MS SQL
- Sybase InfoMaker
- Power BI Publisher

## Relevant Experience

**Data Center Project**
Confidential Client, SC

Project Controls Specialist for a time-sensitive $495 million data center project. Performed the project control and master scheduling on various data center projects. Responsible for the review and implementation of time impact on the schedule, risk management and earned values analysis of various projects. Also, responsible for monitoring progress on site in accordance with the project schedule. Provided independent recovery schedule, cost, and time impact analysis of construction changes on multimillion-dollar projects.

**Sod Run WWTP**
Harford County, Aberdeen, MD

On-site Certified Critical Path Method (CPM) Scheduler/Project Planner/ Management Information System (MIS) Manager for a $65 Million program. Managed construction of SCADA System coordination and installations. Also, assisted in inspection work during the plant construction.

**Blue Plains Advanced WWTP**
DC Water and Sewer Authority, Washington, DC

Project Controls Specialist/CPM Scheduler/Cost Estimator/MIS Manager/Change Management Administrator.

Worked on several projects including lead service replacement, small and large diameter mains, elevated water towers, wastewater pump stations, heating, ventilation, and air conditioning rehabilitation, bio-solids, extracellular fluid enhancement, odor control, filtration facility rehabilitation, metal salts, 69 KV electrical upgrade, roof replacements, grit and screen rehabilitations, Cl2 building upgrade, methanol system rehabilitation, secondary treatment facility upgrades, nitrification project, raw wastewater pump station, denitrification, large-diameter influent main sewer, electrical and mechanical upgrades, site runoff pump station, filtration and disinfection, switchgear replacements. Performed the control and implementation of a change management information system and document control process for the DC Water and Sewer Authority's $1.6 billion Capital Plan. Responsible for project controls, master schedule, recovery schedule, review and approve schedule, monitor work in accordance with the plan, review and approve the payment requisition, review and implementation of change management process, quality control, and assurance, negotiating contract changes, preparing change documents for the client, and review of schedules including but not limited to payment requisition. Performed on DC Water's Capital Improvement Master Schedules and the Advisory Committee for the implementation of P6 and CM14. Provided independent cost and time impact analysis of construction changes on the multiphase, multimillion-dollar projects at Blue Plains. The system is based on Primavera P6 and Contract Manager software systems (CM13).

**Capital Improvement Program**

Washington Suburban Sanitary Commission (WSSC), Laurel, MD

Prepared and provided CPM scheduling services for WSSC and created the master schedule for program management in P6 to track and monitor 184 projects in 20 years' worth of budget plan on a single dashboard. Provided and created tracking tools to monitor resources and financial projections. The schedule can provide information on the web and can be updated by individual project managers. The system was based on Primavera P6 Systems.

**Atlanta Water Treatment Plant and Pump Station**

Cobb County Water System, Atlanta, GA

Project Schedule Reviewer/Analyst/Claims Evaluator for schedule and time delays to the Atlanta Sewage Treatment Plant's new high-pressure pump station, Cobb County influent lift station recovery, and clear well projects.

**Contract REG-024C, REG-026, REG-027**

New York City Department of Environmental Protection (NYCDEP), New York, NY

CPM Scheduler/Claim Analyst/Claims Negotiator/Contract Administrator/MIS Administrator for the Contract Management System for REG-026, REG-027 and REG-024C SCADA projects. Installed, configured, customized, and assisted with the development and implementation of a MIS and training for the SCADA systems. The system was based on Primavera P3, P6 and Contract Manager software systems. The implementation included submittal and acceptance of procedures for managing the SCADA construction of projects, software training for NYCDEP project management managers, engineers and contractors and web-based applications.

**Pumping Station Rehabilitation Program and Design Management**

DC Water and Sewer Authority, Washington, DC

Developed master program management schedule for the implementation design and coordination. Also, prepared development and implementation of a MIS for design management contract. The project included the rehabilitation of three combined sewer overflow pumping stations, three sanitary pumping stations, and fifteen stormwater pumping stations.

# Tina Laird, CPM

## Project Administration/Document Control

Ms. Laird has 29 years of experience working in the construction industry as a Professional Project Administrator, Assistant Project Manager and Certified Project Manager. She has worked for 19 years at Arcadis. This time included field assignments primarily on water and wastewater treatment facilities. For the past 16 years, she has assisted on multiple projects rotating between the different projects during each week. Her goal for each project is to provide the client with superior program/construction management services. She is proficient in using Contract Manager software such as Orion, Oracle and Primavera. She supports the Project Managers, Construction Managers and Inspectors with several project control related tasks including invoicing, projects costs, project set up, contracts, subcontracts, construction documents of all types.

### Education/Qualifications

- Fleet Business School

### Years of Experience

Total – 29

### Professional Registration/ Certifications

- Certified Project Manager

### Relevant Experience

**Patuxent Water Reclamation Facility (WRF) Expansion**
Anne Arundel County, Crofton, MD

Project Administrator for a $45 million expansion and upgrade of the Patuxent WRF. This facility had a 6-million gallon per day (mgd) dry-weather flow and later expanded to 9-mgd. The project added an influent pump station, aeration basin, clarification, digestion, effluent pump station and expanded existing filters. The scope of work for the program also included main plant switchgear and generator improvements, return activated sludge pumping upgrades, and expansion of solids handling facilities.

**Maryland City Wastewater Treatment Plant Expansion**
Anne Arundel County, Maryland City, MD

Project Administrator for the $30 million expansion and upgrade of the Maryland City WRF. Services included setting up the database, attending weekly and monthly progress meetings. Also, distributed all documentation to all project team members.

**Broadneck WRF Enhanced Nutrient Removal (ENR) Upgrade**
Anne Arundel County, Annapolis, MD

Project Administrator for the $17.3 million nutrient reduction addition at the Broadneck WRF. Handled the logging, tracking and distribution of submittals requests for information, requests for proposal, change orders as well as working with the Construction Manager in developing and distributing the monthly reports and weekly reports sent to the client.

**Broadwater WRF ENR Expansion Phase 2 Upgrade**

Anne Arundel County, Annapolis, MD

Project Administrator for the $5.5 million wastewater facility expansion/upgrade project. Responsible for all document control, monthly progress reports, attending weekly and monthly progress meetings, and distributing meeting minutes.

# Chris Tilman, PE, BCEE, CDT

## Environmental Compliance

Mr. Tilman provides professional engineering and consulting services in several civil engineering disciplines. He specializes in assisting municipal and industrial clients in South and Central Florida with various site/civil infrastructure and permitting projects. His 27 years of experience includes project management and delivery, site/civil design, mathematical modeling, regulatory permitting and compliance, and operation and maintenance evaluations. He currently serves as the Water and Wastewater Utility Technical Lead on the Miami Dade County Water and Sewer Department and works on several other civil engineering projects.

### Education/Qualifications

- MS, Engineering Management, Troy University, 1997
- BS, Civil Engineering, Auburn University, 2000
- BS, Environmental Science, Auburn University, 1994

### Years of Experience

Total – 27

### Professional Registration/ Certifications

- Professional Engineer – AL, FL, GA
- Board Certified Environmental Engineer
- Construction Documents Technologist

### Relevant Experience

**Fiscal Year (FY) 2022 Annual Report**

Miami-Dade County Water and Sewer Department, Miami, FL

Water and Wastewater Operations Engineer responsible for developing an annual report documenting the physical inspection of one-third of the department's water and sewer system assets, reviewing the Department's FY 2022 financial information, conducting staff interviews, reviewing customer and sales data, assessing the department's initiatives, operations, and strategic programs, as well as the department's achievements and challenges; and preparing recommendations for required repairs, replacements, and improvements for consideration within the department's Multi-Year Capital Improvement Plan.

**Hamlin Wastewater Treatment Plant (WWTP) Design**

Orange County Utilities Department, Orlando, FL

Site/Civil Design Engineer responsible for the site civil and stormwater system design and Environmental Resource Permit for a new $113 million 5.0-million gallon per day WWTP on a 50-acre (ac.) site. The stormwater design included three retention ponds designed to hold the runoff from a 100-year, 24-hour storm event, and had to account for the groundwater effects resulting from operations of adjacent Rapid Infiltration Basins. Project work included analysis of historical site data, coordination with Florida Department of Environmental Protection, South Florida Water Management District, and Orange County Utilities, preparation of engineering calculations and drawings, groundwater studies using Green-Ampt groundwater infiltration calculations, 2D and 3D modeling for hydraulic/hydrologic flow routing and recovery analysis, permitting, and supporting documentation.

**Dimick Road and Potter Road Improvements**

City of Boynton Beach, Boynton Beach, FL

Engineer of Record responsible for the preparation of the engineering drawings, specifications, and South Florida Water Management District Environmental Resource Permits permitting and Florida Department of Transportation Right of Way permitting for flood damage reduction improvements in an older 10-ac. neighborhood on the Lake Worth Lagoon in the City of Boynton Beach. Project work included analyzing historical rainfall and tidal elevation data, widening three existing residential streets from 8-foot to 10-foot travel lanes, adding curbing, modifying driveways, relocating and modifying water, wastewater, gas, power, and Community Antenna Television utility services, retrofitting and redesigning an inlet-and-pipe collection system to optimize flow through three existing outfalls, analyzing and designing coastal structures, performing an alternatives analysis for various design options, and 2D hydraulic and hydrologic modeling to simulate inline valve operations in all outfalls and tidal influences from the Lake Worth Lagoon.

# Brian Duane, PE

## Pump Station Technical Advisor

Mr. Duane's experience includes the design of more than 50 water and wastewater pumping facilities with capacities more than 1-million gallon per day (mgd). He is a Technical Expert in hydraulics, pumping systems and the design of mechanical process systems, and he routinely assists with start-up and troubleshooting of mechanical systems. Throughout his career, he has partnered with clients to provide cost-effective solutions that are functional, practical, maintainable, and constructible. He offers exceptional value to clients based on his proven track record of practical design, history of successful project execution and completion, and understanding of the client's needs during the construction, start-up and post-construction project phases.

### Education/Qualifications

- BS, Mechanical Engineering, Georgia Institute of Technology, 1981

### Years of Experience

Total – 43

### Professional Registration/ Certifications

- Professional Engineer – GA, TX

## Relevant Experience

**Elm Fork Water Treatment Plant (WTP) Pump Station 1**
Dallas Water Utilities, Dallas, TX

Technical Advisor for the 160-mgd high-service pump station (four 40-mgd horizontal split case pumps with 2,750 horsepower [Hp] motors) and 220-mgd raw water pump station. Project included scale hydraulic modeling of suction piping at Clemson Engineering Hydraulics.

**Hollywood Water Treatment Plant (WTP) High Service Pump Station**
City of Hollywood, Hollywood, FL

Design Engineer for the preliminary design and Technical Advisor for the final design of 57.6-mgd firm capacity pump station that included six 8,000-gallons per minute, 400-Hp horizontal split case pumps with variable frequency drives (VFDs). Project included scale hydraulic modeling of the clear wells at Clemson Engineering Hydraulics to verify suction intake conditions.

**Richland Creek River Intake and Reservoir Pump Stations**
Paulding County, Dallas, GA

Technical Advisor during the construction of a 64-mgd raw water intake and pump station on the Etowah River and 36-mgd reservoir intake and pump station. The raw water intake consisted of half-barrel intake screens with air-burst cleaning system and four 16-mgd, 1,500-Hp, wet well mounted vertical turbine pumps. The reservoir pump station consisted of a tower style intake structure with three 9-mgd, 400-Hp, wet well mounted vertical turbine pumps.

**Southeast Louisiana Pump Station #13**
United States Army Corps of Engineers, Algiers, LA

Technical Advisor/Mechanical Quality Control Reviewer for the pump station with three axial flow pumps, six mechanical bar screens, and three standby emergency generators for pump operation during power outages. Each pump was rated for 388-mgd (600-cubic feet per second [CFS]) at a Total Dynamic Head (TDH) of 23.5 feet [ft.] and powered by 3,000 Hp motors driving the pumps through an in-line planetary gearbox. The pumps take suction from a Hydraulic Institute (HI) 9.8 compliant intake through formed suction intakes (Type 10). The intake was hydraulically proven in a Froude-scale hydraulic model at Clemson Engineering Hydraulics.

**Lake Huron WTP Low Lift & Wash Water Pump**
Great Lakes Water Authority, Detroit, MI

Technical Advisor/Quality Control Reviewer for the evaluation/replacement of two 1,250-Hp, 100-mgd low lift vertical turbine pumps, and two 2,250-Hp, 200-mgd low lift vertical turbine pumps and four 900-Hp, 50-mgd vertical turbine wash water pumps. All pumps were driven by synchronous motors.

**Potomac Raw Water Pump Station**
Loudoun Water, Leesburg, VA

Technical Advisor during the construction, start-up, and commissioning of a 40-mgd raw water pump station and intake on the Potomac River. The intake consisted of 16 half-barrel, 1-millimeter intake screens with flushing and air burst support systems. The pumping station sits on top of a 100-ft. deep, 29-ft. finished diameter shaft connected to the river via a 12-ft. diameter tunnel. Four 900-Hp vertical turbines lift water from the Potomac River and convey it to Loudoun Water's Trap Rock Water Treatment Facility.

**Henry F. Sliwinski WTP**
Frederick Water, Frederick County, VA

Technical Advisor/Mechanical Quality Control Reviewer for the design of the new 8-mgd direct membrane filtration with chlorine disinfection WTP. The high service pumps were three vertical turbine pumps in suction barrels/cans. The six stage pumps were rated at 4-mgd with a TDH of 565-ft. and powered by 600 Hp motors.

**Cornish Creek WTP Upgrade**
Newton County Water Resources, Newton County, GA

Performed preliminary engineering review of the raw water pumping system and quality assurance review of the high service pumping system for the $130 million WTP upgrade.

**Holmes Run Pump Station Rehabilitation Design**
Fairfax County, Fairfax, VA

Quality Assurance/Quality Control/Technical Advisor for the project including the generation of a BIM 3D facility and asset model. Major upgrades included the addition of four VFDs with passive harmonic filters for the 150-Hp pump motors, automatic transfer switch, generator docking station, temporary load bank connection and standby generator.

**C-139 Flow Equalization Basin and G-550 Pump Station**
South Florida Water Management District, Clewiston, FL

Pump Station Lead during preliminary design and Technical Advisor during final design and construction of a 450-mgd (690-CFS) pump station utilized during high flow events to convey wet weather flows to a flow equalization basin preventing the discharge of untreated water into the Florida Everglades. The pump station included a HI 9.8 compliant intake channels and pump intakes, six flex rake screens, six vertical line shaft axial flow pumps (74-mgd) and an emergency generator.

**Geist Reservoir Quarry Pump Station**
Citizens Energy Group, Indianapolis, IN

Technical Advisor/Quality Control Reviewer for the design of a 100-mgd intake structure with coarse bar screens and a 230 ft. deep 7-ft. diameter vertical drop shaft that connects to an 8-foot diameter horizontal tunnel to convey raw water from the Geist Reservoir to the bottom of the converted quarry. The pump station consisted of four 48-inch diameter vertical drop shafts from the top of the quarry wall 230 ft. down to the bottom of the quarry to tying into an 8 ft. diameter horizontal tunnel to withdraw water from the bottom of the quarry. Each vertical drop shaft is equipped with a 600 Hp vertical turbine pump operated on VFDs and a pressure regulating valve to deliver a minimum of 10-mgd each across the entire 230 ft. range of static head conditions.

# John Scioscia, PE

## Pump Station Technical Advisor

Mr. Scioscia has more than 45 years of experience in pre-design analysis, design, and construction administration of water and wastewater facilities. His experiences encompass advanced hydraulics, analysis of water supply and distribution systems, collection systems, water/sewer facility feasibility and condition assessments, planning and analysis. He is also knowledgeable in performing condition and hydraulic assessments and analysis of pumping and gravity systems, water and wastewater treatment process and distribution with the aid of hydraulic models or computational fluid dynamics to evaluate fluid motion to improve pump performance, water distribution and treatment process. His experience in water and wastewater system hydraulic and transient analysis consists of the use of CAD models that include InfoWater (MSX, 2D, UDF), InfoWorks (CS, ICM, WS, SE), WaterGEMS, SewerGEMS, AFT Fathom, AFT Impulse, EPANET, Synergy, Piccolo, InfoSMMM, Storm Water Management Model, H20MAP, H20MAP SWMM, and KYPIPE.

### Education/Qualifications

- MS, Civil Engineering, New Jersey Institute of Technology, 1990

### Years of Experience

Total – 45

### Professional Registration/ Certifications

- Professional Engineer – DE

## Relevant Experience

**Windsor Woods, Princess Anne, The Lakes Stormwater Improvement Project**

City of Virginia Beach, Virginia Beach, VA

Design Lead for a progressive design-build project that consisted of two stormwater pump stations, the Lake Windsor and North London Bridge Creek Pump Stations, with each pump station having a total pumping capacity of 800-cubic feet per second (CFS) and 1,400-CFS, respectively. In addition to the pump stations, the project included three tidal gates, flood barriers, and water level sensors. The design included the development of a control scheme for the operation of the pump stations based on storm events ranging from 10 years to 100 years and integrating tidal gates to control tidal influence before and during storm events maintain appropriate water levels and prevent flooding within the pump stations respective drainage areas.

**Tri-County Water Treatment Plant (WTP)**

New Jersey American Water, Delaware River, NJ

Lead Hydraulic Engineer/Process Engineer responsible for designing the raw water system that included a raw water pump station and intake in the Delaware River to deliver 50-million gallon per day (mgd) raw water to the reservoir located at the WTP site. Performed hydraulic and transient analysis of the raw and finished water pumping to include pump selection and operation.

**Wayne Mason Raw Water Pump Station & Transient Analysis**

Gwinnett County Department of Water Resources, Gwinnett County, GA

Senior Technical Lead who performed a transient analysis of the raw water transmission mains from the Wayne Mason Raw Water Pump Station to the Lanier Filtration Plant and recommended mitigation options to address transient conditions identified from the analysis. The raw water transmission main consisted of a 48-inch (in.) and 72-in. diameter pipe that conveys a total pumping capacity of 216-mgd. Part of the transient analysis was to determine the closing time of the 30 in. ball valves at each pump following an immediate pump stoppage. The transient analysis recommended the use of a 5,000-gallon spherical surge tank at the pump station would mitigate the pressure waves in the section of the 78-in. transmission main between the existing surge tank and the pump station and prevent adverse transient conditions from occurring throughout the 48-in. and 72-in. transmission mains.

**Adamsville Pump Station**

City of Atlanta, Atlanta, GA

Project Manager/Lead Process Mechanical responsible for developing 50% design-build contract bridging. Worked on the documents to increase the firm pumping capacity to 45-mgd (75-mgd total) and improve the reliability of the existing pump station. The project included adding a new 30-mgd horizontal split case pump powered by a variable frequency drive (VFD), a dedicated 36-in. suction and 42-in. discharge pipes and associated appurtenances, a new structure adjacent to the existing pump station to house Pump No. 4, and replacing discharge pipes at Pump No. 1 to 3, and added a new VFD on Pump No. 3.

Los Angeles Metro Regional Connector Downtown Project Tunnel Dewatering Pump Station

Metropolitan St. Louis Sewer District, St. Louis, MO

Technical Project Lead/Transient Analysis/Design who performed a transient analysis and design of pump station and Force Main to increase flow to the Lemay Wastewater Treatment Plant or the Enhanced High-rate Clarification System. The pump station consisted of nine pumps in a cavern-style structure approximately 260 feet (ft.) below ground. The suction line for the pump is an 84-in. diameter steel pipe connected to the tunnel via an 84-in. connecting tunnel. The pump discharge pipes rise 450 ft. to a 54 in. diameter manifold pipe that connects to a dual 54-in. and 24-in. Force Main. The current design capacity of the pump station was 100-mgd with an expansion capacity of 150-mgd. The transient analysis consisted of evaluating numerous operating conditions that would result in potential transients in the piping system and developing an implementation plan to mitigate transients. The requirements for transients included a sudden pump stoppage, starting and starting of pumps, valve closure, and flow diversion.

**Bellwood Quarry Pump Station/Intake**

City of Atlanta, Atlanta, GA

Technical Lead/Process Mechanical who performed hydraulic analysis for the Bellwood Quarry intake system and pump station. The hydraulic analysis included sizing the tunnel between the Chattahoochee River intake to the Bellwood Quarry and from the Bellwood Quarry to the Hemphill Reservoir, 30-miles. The Bellwood Quarry Pump Station hydraulic analysis included the selection of pumps that would be installed at approximately 500 ft. below grade inside of individual shafts that would have the required capacity to pump a total of 180-mgd at varying heads between 180 ft. to 450 ft. Pump selection included a review of the various available pump technology, including submersible pumps, vertical turbine pumps, and inverted submersible pumps.

**Surge Analysis for Newtonian and Non-Newtonian Fluid**

Confidential Client, Calgary, Canada

Project Manager involved in performing surge analysis for Newtonian and non-Newtonian fluid for oil/sand mining operations associated with place trailing. Various projects consisted of multiple pump stations and piping networks for differing delivery points. The evaluation also consisted of hydraulic analysis to develop the pump design point, system head curve, and pipe size. Identified critical issues in the piping network for the installation of air release and vacuum valves. Performed transient analysis that evaluated various operating conditions that would result in potential transients in the piping system and developed an implementation plan to mitigate transients. The requirements for transients included a sudden pump stoppage, starting and starting of pumps, valve closure, and flow diversion.

# Roy Cooper, PE

## Contract Solutions

Mr. Cooper leads Arcadis' construction claims services in North America. He has 36 years of construction experience, including the analysis and review of complex construction claims from the beginning stages through trial support and expert testimony. He has led large-scale claims evaluation assignments of almost every type, including the evaluation of schedule impacts, cost impact analysis, mediation, and claims negotiation. He has also been qualified as an expert on both horizontal and vertical project types. Prior to joining Arcadis, he was a project superintendent and engineer on high-profile projects, several of which he was responsible for all aspects of construction.

### Education/Qualifications

- MBA, University of Connecticut, 1998
- BS, Civil Engineering, Michigan Technological University, 1988

### Years of Experience

Total – 36

### Professional Registration/ Certifications

- Professional Engineer – CT, FL, LA, MD, NJ, NY, RI, TX

## Relevant Experience

**Critical Path Method Scheduling Training**

Tennessee Department of Transportation (TDOT) – Construction Division, TN

Arcadis worked closely with TDOT to provide a CPM scheduling training and workshop for TDOT construction employees. The training focused on growing the TDOT employee's understanding of a CPM schedule baseline review, update review, and delay analysis conforming to TDOT specifications. This training helped the department's construction division have a better understanding of both how to use the schedule as a method of communication with the contractor, and how to determine some potential delays.

**US 27, SR 29**

Tennessee Office of the Attorney General, Chattanooga, TN

Project Executive/Testifying Expert who provided services to the client regarding a dispute on a road widening project in Chattanooga. The project was the largest contract ever led by the department. The contractor made a $14.6 million differing site condition claim. The contractor claimed it encountered differing site conditions during the installation of several large retaining walls along each side of the roadway widening. The contractor alleged that because of the differing site conditions, it was forced to mobilize different, more expensive equipment and incurred additional cost as part of performing the work. Assessed the contractor's alleged damages and presented in mediation on behalf of the client. The case settled during mediation.

**US 51, SR 3**

Tennessee Office of the Attorney General, Memphis, TN

Provided expert services regarding a dispute on a $15 million road and bridge project in Memphis, Tennessee. The contractor made a $5 million delay and direct cost claim. The contractor claimed it encountered utility delays, abnormal folding and additional cost because of TDOT's changes to the substructure piles. Evaluated and assessed the technical issues, schedule delays and alleged damages. The matter settled in mediation.

**I-65, Davidson County**

Tennessee Office of the Attorney General, Nashville, TN

Project Executive/Testifying Expert who worked on the dispute on a road and bridge project. The contractor made a $2.5 million delay claim and a 1,379-day time extension request. Provided an assessment of the issues and delays on the project along with the contractor's alleged damages and provided expert testimony at trial.

**I-440 Widening and Improvement Design-Build Project**

TDOT – Construction Division, TN

Provided claims avoidance and risk management consulting to the design review team and senior leadership at TDOT on this major project in Nashville. Regularly consulted with team and TDOT as project issues arose. Provided CPM training to TDOT personnel as part of this project.

**Shreveport Convention Center**

Long Law Firm, Shreveport, LA

Provided claims and schedule analysis for the architects of a $67 million convention center in Shreveport, Louisiana. Provided an analysis of the contract provisions, project delays and their causes. Analyzed the contractor's claims that it accelerated. Assessed for accuracy the damages section of the contractor's claim. The contractor submitted delay and acceleration claims totaling $1.4 million.

**University of Albany Dormitory**

Couch White, LLP, Albany, NY

Testifying Expert who evaluated the contractors planned and actual sequence of construction, assessed its actual productivity losses and damages incurred. The law firm of Couch White contacted Arcadis regarding a dispute on the CD Perry $3 million pile driving contract on the construction of a new 500 bed dormitory at the University of Albany. The contractor CD Perry made a $1.3 million claim against the general contractor LeChase. The claim alleged that Perry was forced to work disrupted by LeChase and forced to work in uncontemplated extreme winter conditions.

**Corning Homes**

Couch White, LLP, Albany, NY

Testifying Expert who evaluated the contractors claim and assessed its actual productivity losses and damages incurred. The law firm of Couch White contacted Arcadis regarding a dispute on the $3.5 million site work contract on the $25 million Corning Homes development in Albany. The contractor August Bohl Contracting made a $850,000 claim against the general contractor, LA Sawyer. The claim alleged that Bohl was forced to work with substandard soils and as a result was forced to perform additional and rework without being compensated.

**Moe Road**

August Bohl Contracting, Clifton Park, NY

Testifying Expert who evaluated the contractor's claim and assessed its actual productivity losses and damages incurred. The law firm of Couch White contacted Arcadis regarding a dispute on the $2.6 million reconstruction of Moe Road contract in Clifton Park, New York. The contractor, August Bohl Contracting, has made a $750,000 claim against the owner, the Town of Clifton Park. The claim alleged that the town failed to properly coordinate the relocation of certain utilities required for the reconstruction of the road. Bohl was issued a time extension because of the late relocations, but was forced to work around the utility relocations, causing its productivity losses.

**Sikorsky Bridge Replacement**

Connecticut Department of Transportation (CTDOT), Stratford, CT

Performed reviews of the monthly schedule updates as the construction progressed. Under an on-call contract with CTDOT, Arcadis evaluated a time request by the contractor that constructed the new $87 million, Sikorsky Bridge. The contractor requested a two-year time extension for alleged differing site conditions affecting the dewatering of the pier cofferdams and design conflicts in the pier cap reinforcing steel.

# Jose Custodio, PE

## Pipeline Technical Advisor

Mr. Custodio is a professional engineer registered in the states of Florida and Puerto Rico, with background in utilities engineering and construction management. Work experience includes planning, design, procurement, construction management of several Capital Improvements Program (CIP) projects for different municipalities in the State of Florida and for the Puerto Rico Aqueduct and Sewer Authority (PRASA).

### Education/Qualifications

- ME, Construction Engineering, Polytechnic University of PR, 2013
- BS, Civil Engineering, Polytechnic University of PR, 2010

### Years of Experience

Total – 15

### Professional Registration/ Certifications

- Professional Engineer – FL, PR
- OSHA – 30 Hrs. Construction Industry
- Florida Department of Environmental Protection Agency (FDEP) – Qualified Stormwater Management Inspector
- American Water Works Association

## Relevant Experience

**Consent Order Project - 30-inch Force Main A-Repump Station to GTL Wastewater Treatment Plant**
City of Fort Lauderdale, FL

Design-Build Project – Responsible of managing the design and performed construction management of the project through final completion and close-out to comply with the FDEP Consent Order deadline and avoiding penalty fees to the City. Project consisted of the trenchless repair/rehabilitation of approximately 20,000 LF of 30-inch diameter force main located along the Fort Lauderdale Downtown area. In addition to the typical open-cut installation, various trenchless methods were used like horizontal directional drilling and compression fit. The construction cost of the project was $15,500,000.

**Consent Order Project - East Las Olas Blvd 12-inch Force Main Replacement – Pipe Bursting**
City of Fort Lauderdale, FL

Design-Build Project - Responsible of managing the construction of the project through final completion and close out to comply with the FDEP Consent Order deadline and avoiding penalties fees for the City. Project consisted of the replacement of approximately 2,300 LF of 12-inch diameter force main with a 16-inch diameter HDPE force main along Las Olas Blvd corridor. Along with the open-cut method, the trenchless method of pipe bursting was used for this project. The construction cost of the project was $1,350,000.

**PRWC Southeast Wellfield and Water Production Transmission Main (Segment 3)**
Polk County, FL

CMAR Project - Responsible for the 60% design of approximately 6 miles of a DIP/HDPE water transmission line near Lake Hamilton. The diameter of the new main is 30-inch and is part of the program to identify new water sources for the Water Cooperative.

**Central New River Water Main Crossing**

City of Fort Lauderdale, FL

Design-Build Project – Responsible for the design of approximately 600 LF of a 20-inch subaqueous water main crossing under the New River Canal in Downtown Fort Lauderdale using Horizontal Directional Drilling. The project required permits from USACE, FDEP and Broward County.

**Bermuda Riviera Small Water Mains Improvements**

City of Fort Lauderdale, FL

Responsible of managing the design, and bidding phase of the project. Project consisted of the replacement of aging and undersized infrastructure (approximately 24,000 LF of 2, 4 and 6-inch diameter cast iron water mains) with an 8-inch diameter HDPE water main, replacement of fire hydrants, 500 service connections and relocation of water meters located in private property within the neighborhood. The installation methods used were open-cut trench for the tie-ins to existing system, and a combination of pre-chlorinated pipe bursting and horizontal directional drilling for the new water main. The construction cost of the project is $3.8 million.

**SSES and CMOM Plans for Town of Bay Harbor Islands**

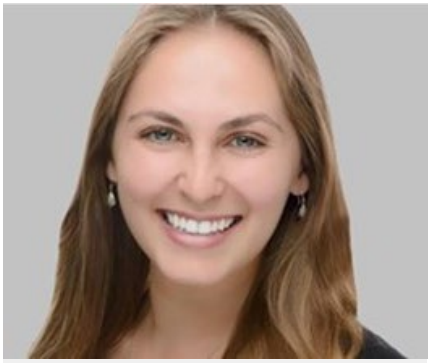
Town of Bay Harbor Islands, FL

As the public works director – town engineer, was responsible for the preparation of the Sewer System Evaluation Survey (SSES) and Capacity Management, Operation and Maintenance (CMOM) Reports for submittal to Miami-Dade County on an annual basis. Directed staff in performing night flow monitoring, visual inspection of sanitary sewer manholes, contracted smoke testing and CCTV services to determine I&I sources in the system.

**PRASA's Capital Improvements Program**

PRASA, Island wide, PR

Served as a project manager for the PRASA's Capital Improvements Program in Puerto Rico managing utility infrastructure projects from Planning to Construction Phase.



# Lia Dombroski, EIT

## Inspection Support

Ms. Dombroski has seven years of Civil And Environmental Engineering experience serving municipal and government clients in the water and wastewater industry. She has a background in engineering design and construction of transmission, distribution, collection, and pumping systems involving project planning, permitting, construction management, community engagement, and quality assurance. She has led and conducted the condition assessments of large-scale infrastructure including water/wastewater treatment and distribution/collection systems, renewable energy facilities, and port facilities. Also, she is experienced in report writing focusing on local legislation, regulatory requirements, technical evaluations, capital improvement programs, and financial obligations. Her strengths in construction management include communication, organization, documentation, maintaining site safety, and implementing project controls.

### Education/Qualifications

- BS, Environmental Engineering, College of Environmental Science and Forestry, 2016

### Years of Experience

Total – 7

### Professional Registration/ Certifications

- Engineering Intern – FL

## Relevant Experience

**Pump Station A-16 Upgrades**

City of Fort Lauderdale, Fort Lauderdale, FL

Lead Inspector of Construction Engineering and Inspection services for the relocation of wastewater Pump Station A-16. Served as the City's Representative for the design-build project involving the installation of approximately 1,200 linear feet (LF) of 30-inch (in.) High-Density Polyethylene (HDPE) water main and 2,200 LF of 10-in. HDPE force main along SE 3rd Avenue, the construction of a new submersible duplex wastewater pump station and gravity sewer system, as well as the abandonment of the existing pump station, gravity sewer, force main, and water mains. Oversaw all construction activities including installation of the two horizontal directional drilling segments under the Tarpon River. Acted as an extension of the City's Project Management Staff by monitoring construction activities, performing on-site inspections, and maintaining detailed accurate records of the contractor's daily operations. In addition, implemented project controls in accordance with the plans, specifications, permits, and special provisions of the contract documents.

**Nova Drive Water Main & Force Main Improvements**

City of Sunrise, Sunrise, FL

Provided construction management services for the replacement of approximately 7,000 LF of water mains and approximately 5,000 LF of force mains ranging in size and material. Oversaw daily construction activities including the installation of new 12-in. ductile iron pipe (DIP) water mains and force mains, valves, hydrants, and service connections; the abandonment of the existing water and sanitary sewer systems and appurtenances; removal and replacement of aerial pipe crossings; roadway milling and resurfacing; and overall project site restoration.

Coordinated closely with the City and Contractor to provide conflict resolution and solutions to unforeseen field conditions. Also, reviewed and processed daily reports, shop drawings, requests for information, change orders, pay applications, record drawings, project closeout documentation, and other administrative and technical submittals throughout construction.

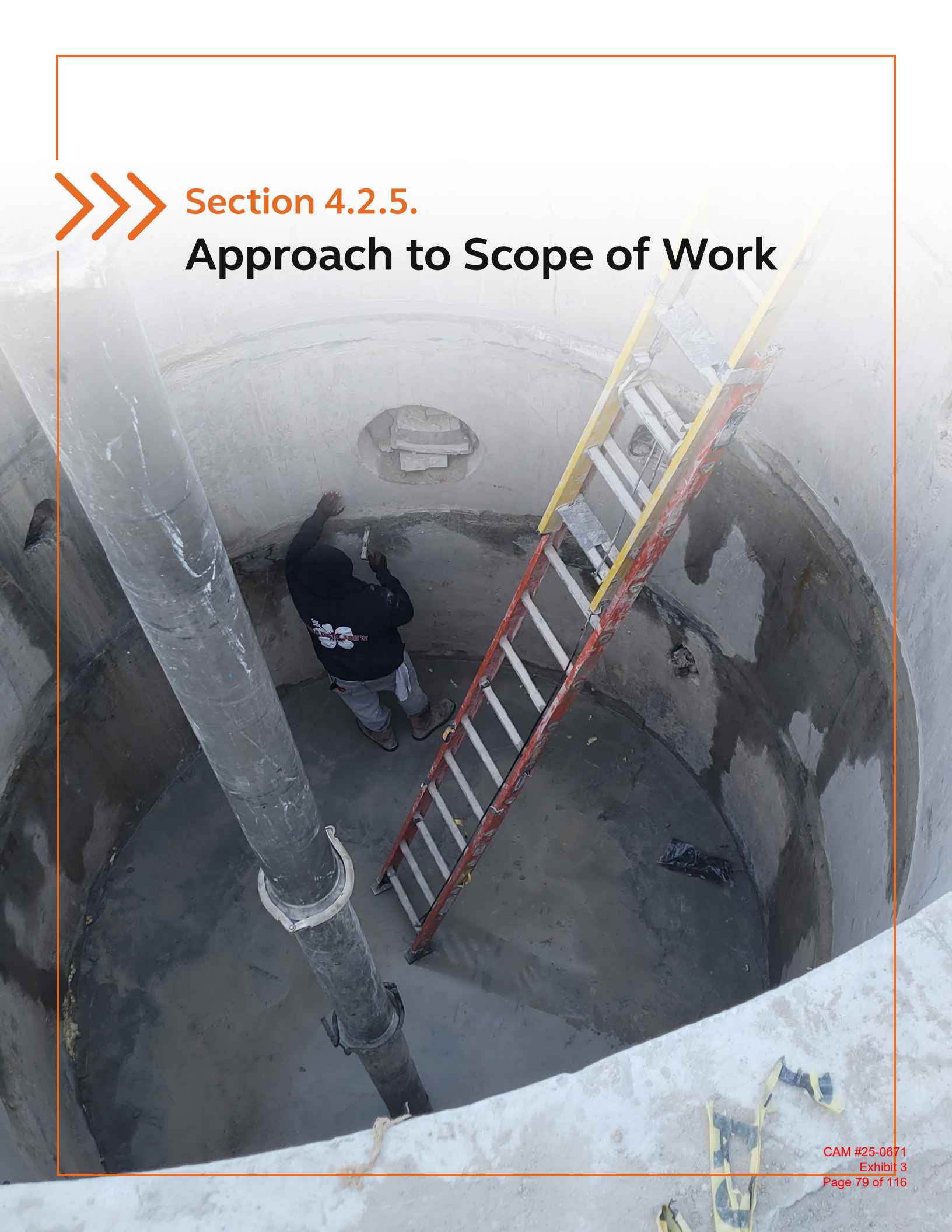
**East Sunrise Water Main Improvements**

City of Sunrise, Sunrise, FL

Provided construction oversight and engineering services for the installation of approximately 32,000 LF of 8-in. to 12-in. DIP water mains and appurtenances, including the abandonment of the existing water system, construction of drainage and roadway improvements, and project site restoration.

## Section 4.2.5.

# Approach to Scope of Work



# 4.2.5. Approach to Scope of Work

Arcadis welcomes the City of Fort Lauderdale's solicitation seeking qualifications to provide construction engineering, and inspection services related to the eight wastewater Triplex Pump Station Rehabilitation projects listed in the Request For Qualifications (RFQ). Arcadis is uniquely qualified to provide the services requested as we are engineers, designers, builders, and construction managers of similar projects and programs in Florida, in the U.S. and around the world.

Arcadis' goal for every project is a fully satisfied client. We understand that the critical element in successful projects is people. Therefore, we staff our projects, so our clients receive excellent technical expertise delivered through a responsive local leadership team. **Principal-in-Charge, Leah Richter,** will be responsible for properly staffing all projects and assignments under this contract to assure the right team is assembled and ready to serve the City of Fort Lauderdale.

## Understanding the City's needs, goals, and objectives

Arcadis is a natural fit for the services requested and for the project. We have worked in the CEI model as collaborative partners implementing highly technical and complex construction projects as trusted agents for Owners, including the City.

Arcadis has an abundance of resources that align with your requested services of project management, CEI services.

We believe our goals for the project mirror the City's goals but these can be developed further as we move toward commencement of services. These goals are:

- **Safety for all, including the public**
- **Be agile enough to adequately cover multiple sites, perhaps simultaneously**
- **Complete the project on-time, within budget**
- **Minimize disturbances and surprises**
- **Place the City of Fort Lauderdale in control of its project**

Arcadis believes that our delivery methods will address these goals through the consistent accomplishment of objectives using tools, systems and protocols designed to put the City in control of project Time, Cost, Quality, Risk and Safety.

## Understanding of Technical Scope and Approach to Accomplishing the Work

The City desires to outsource management and delivery of its wastewater pump station rehabilitation project to highly qualified engineering companies. The RFQ contains certain specific criteria and questions that indicate the City is looking for innovative, resourceful firms with depth of experience and expertise to handle the project. Those specific criteria and questions focus on our understanding of the scope of work, our approach to it, workload and scalability, problem-solving capabilities, schedule management, and technological capabilities.

This proposal will show that Arcadis is an outstanding engineering, design and construction firm with stellar experience and expertise, and has practically unlimited innovative capabilities of delivering any size and type of project.

**Arcadis is currently providing Construction Engineering and Inspection (CEI) services to the City as part of our Continuing Services contract and is very familiar with the City's expectations on how to deal with issues that arise during the construction phase of your projects.**

Arcadis will bring the best practices of our extensive CEI and inspection experience, delivering innovative solutions in close collaboration with City staff.

We know the importance of planning, coordinating and communicating with City Project Managers, operations and maintenance staff so related systems continue to operate safely and reliably during construction.

**The services requested by the City are natural subsets of Arcadis' robust Construction Management/CEI Practice.**

Arcadis implements all the comprehensive tools, systems and protocols to keep stakeholders informed, resolve construction issues at the lowest level possible in the field, and to maintain project momentum going forward to successful completion.

## Construction Management and CEI Methodology for Delivery

Arcadis has extensive experience in the construction management and inspection of municipal utility projects and are well suited to meet your CEI needs throughout this contract.

**As project and construction managers, we optimize cost, improve operability, improve the plans and specifications to obtain competitive bids, and facilitate quality construction.**

Arcadis will provide the appropriate mix of technical services and staffing with high-performing individuals so that the project will be delivered consistent with project goals.

Achievement of project goals requires accomplishment of project objectives including control of time, cost, quality, risk, and safety. Following are characteristics of typical Arcadis project delivery accomplishments:

### Total Quality Assurance

Arcadis focuses on Total Quality Assurance across all aspects of a project including the management, administration, execution and construction inspection elements. We implement many tools, systems and protocols to assure that all the moving parts of the project are executed with equally high excellence. This mindset guides our performance in the office as well as in the field.

Agility and performance are valuable commodities for Arcadis project team members in fulfilling our Corporate vision and mission and provide to you, the owner, confidence that your project is in the hands of professionals that care about your project as if it were our own.

### Minimizing Delays

A “Baseline” schedule is created at the outset of the project and then updated monthly to reveal actual progress. The updated schedule is then used frequently each week to compare the two-week lookahead to the project CPM schedule. They should coincide closely.

Schedule slippage is a common malady in construction project performance. Contractors are always on the lookout for opportunities to shift responsibility of delays onto the owner, making management and control of progress very important. Arcadis implements requirements for Critical Path Method (CPM) schedules where possible on individual projects. This allows accurate determination of construction and administration progress and also allows analysis of delays and responsibility. Having an overall CPM schedule in-hand also allows comparison of a contractor’s two-week lookahead with activities shown for the same time period. This type of activity is executed on a weekly or bi-weekly basis as a component of regularly scheduled coordination or progress meetings.

Time and cost are inextricably linked in project management and execution. **When schedules are managed and controlled through frequent review and analysis, momentum is maintained, completion occurs on-time, and costs are kept in line with projections.** When schedules slip, momentum and progress are lost, time frames are extended and added costs can be incurred, not only for the contractor, but for the Owner as well.

### Scheduling Methodology (Timeline)

Arcadis recommends CPM progress schedules for all but the smallest of construction projects and Arcadis requires it for its own projects for construction. A project CPM progress schedule shows the contractor’s detailed plan for executing the work and it is the driving force behind maintaining the momentum required to complete the project on-time. It is noted that the advance specification 01300- Submittals and Progress Schedule does not require CPM schedules for construction progress, nor a defined Work Breakdown Structure (WBS) for the project. Most contractors provide CPM schedules because of easy access to upgraded scheduling applications such as MS Project. Arcadis recommends requiring project CPM schedules for the eight listed projects. This will greatly benefit management of individual project.

Arcadis also recommends a programmatic approach to the group of eight projects cited in the RFQ by creating a program schedule showing all eight projects. This will show you, the owner, the status of all the projects and if any coordination among the pump stations is needed for capacity purposes during the construction period.

**Arcadis is proficient in scheduling and analysis of CPM schedules using Primavera P6, the most powerful scheduling tool in the industry.**

# Administration and Communication

Contract administration and communication are interrelated when it comes to project execution and coordination as these are key for management of the project. Arcadis has many management procedures and platforms for keeping everyone informed and for providing necessary day-to-day organization through established procedures. Arcadis will implement ***Portfolio Insights,*** an electronic web-based project control platform, that will streamline communications and enhance administration of the construction contract. This includes tracking status and turnaround times for technical submittals for review, meetings, reports, requests, and correspondences.

### Construction Administration

Construction administration comprises the overall planning, coordinating, executing, and staffing the projects to adequately administer the construction contract requirements for the project with the goal of managing time, cost, quality, risk, and safety for successful delivery.

What better way to accomplish this goal than the application of solid project management techniques to the construction phase. Many of the techniques and procedures implemented by Arcadis are as prescribed by the Construction Management Association of America (CMAA), the largest construction management organization in the country.

Arcadis will staff the project with the appropriate mix of personnel that will provide the necessary level of technical oversight and control for compliance, keep stakeholders informed, resolve issues at the lowest level possible in the field, control schedules and costs. This includes implementing electronic web-based platforms to expedite communications and processes such as technical submittals, RFIs, meetings, reporting and correspondences; the rigorous day-to-day presence onsite to observe work at the point of construction; and implementing the management techniques necessary for control of schedules and costs.

This work will also involve performing true third-party services during construction for projects where Arcadis is not the designer. We believe a successful project requires a team effort and cannot be accomplished by a random set of individual players. Rather, a successful project results from a united effort to assist each other, facilitating a "win-win" situation for all parties.

Our experience in coordinating team efforts has been a primary component of our successful track record. Our approach is to be collaborative with both the designer and the contractor, while always keeping our client at the forefront of our inspection and decision-making processes. While we can certainly hold the engineer's or contractor's feet to the fire when necessary, projects go more smoothly and are more successful where a collaborative environment exists, not a combative one.

# Controlling Costs

Cost effectiveness begins at the outset of projects, but effectiveness can continue in the construction phase with useful and innovative tools.

Arcadis recommends several cost control tools including special attention on Schedule of Values progress claims for the Payment Application, implementation or continuation of a risk register and associated risk management, effective change management with skilled contractor negotiations and cost estimating, and constructability review.

It is noted in the advance specifications, there are 41 Bid Items in the Bid Form. This will form the Schedule of Values to be reviewed for Payment Applications each billing period. Inspectors will carefully analyze claimed percent-completions for each Schedule of Values item to provide the most accurate progress payments possible.

Risk Registers can be effective in managing risks which can directly affect costs. Arcadis can continue the design phase risk register, or develop its own, to focus on and determine how to manage them to assure that "unknowns" don't surprise us and result in added costs.

Constructability Review is another tool for improving project execution and cost control. Arcadis conducts Constructability Reviews as a contractor would prepare a change order list during the bid phase. We have included some constructability commentary in the following Technical Understanding section.

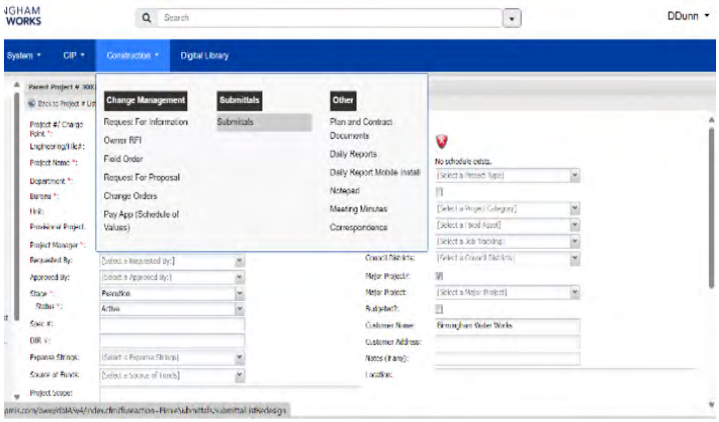
Change Management is important for controlling how changes are identified, validated, negotiated and processed. Arcadis construction managers are skilled at interpreting the contract documents and coordinating with design engineers to assure that a change is indeed a change. Our managers are skilled at how to approach costing and negotiating changes to provide the best outcome.

Arcadis has a strong cost management approach to project development including expert cost estimating based on ENR commodity indices, regional price adjustments and real-time estimating scenarios as Arcadis is a builder and constructor.

Also important to cost control is schedule management. As explained above in **Minimizing Delays,** time and cost are inextricably linked. **When project momentum is maintained through effective schedule management, cost estimates fall within the original estimate assumptions and projects can be completed within budget.** Also as explained above, delays in momentum can result in added costs - responsibility of which can be determined through effective schedule and delay analysis.

## Effective Document Control

Arcadis will also use our ***Portfolio Insights*** platform, to issue, record and track administrative project documents. This tool is essential for assurance that the project is executed properly and for future references. Project documentation includes meetings, letter, emails, reports, and change documents. Our platform streamlines processing procedures, tracking documents and issuing notifications which facilitates effective communication and coordination. All types of documents are retained within the platform until the end of the project when all will be gathered for turnover to you, the Owner.




Arcadis will make this system available to the City's team to review project documents, including daily reports, meeting minutes, submittals, requests for information, change orders, requests for payment, and contract costs. It keeps the flow of approvals and payments moving. ***Portfolio Insights*** is interactive and provides for the cross-utilization of data.

## Problem Resolution

Every construction project has issues and problems that must be addressed in a timely fashion and with high confidence of technical resolution. These issues and problems can range from miniscule to major with catastrophic implications. Arcadis' approach to issues and problems at the point of construction is to resolve them at the lowest level possible in the field before taking the issues up the chain of management. This requires experienced and knowledgeable onsite personnel to work shoulder-to-shoulder to resolve minor issues, e.g. an inspector and a trade foreman or site superintendent. When successfully resolved and the specific design intent is met, it is explained to others and it becomes documented in a number of project document types. If an issue cannot be resolved with onsite collaboration, the issue will be kicked up the chain for resolution. Arcadis implements a problem resolution matrix in the project documentation to show how this works.

## Construction Inspection

Arcadis has 'deep bench strength' of highly qualified Resident Engineers (REs) and Construction Inspectors that can be mobilized for short or long-term assignment in the field in order to oversee problematic construction, to provide timely resolution of construction problems, and to provide continuity of services across many projects at the same time. These engineers, referred to as Resident Engineers (REs), are typically more qualified for the technical side of design and construction. Many of Arcadis' REs are Professional Engineers (PEs) and may function interchangeably as design engineers.

Our deep bench of resources will allow the City to always have "eyes" on the project. For example, for A-16 PS City Project, we provided inspections to cover both day-time and night-work without any staffing issue. Some agencies, like FDOT for Pump Station B-11, night work would be required, and our staff is available to cover both day and night work as well.

### Inspection Services

Construction Inspection is at the heart of Arcadis' Construction Services offering. Qualified inspectors are at the point of construction continuously every day witnessing that construction is as designed and specified. To do so, inspectors must be highly knowledgeable of the contract documents in order to make certain that the construction work is being done in compliance with the documents.

Construction Inspectors are an intrepid, resourceful and deliberate group of people that choose to be at the point of construction for you, the client, sometimes under less-than-ideal environmental conditions, to make certain that construction is proceeding according to its design intent. Arcadis has such a group of people. For example, for the City, we are currently covering 24-hours operations without any issues.

These Inspectors observe construction as it progresses and they document their observations thru Daily Reports to keep everyone informed, but also, to serve as a record of the details and sequences of construction as it occurred. Inspectors also must work shoulder to shoulder with trade labor in the field to accomplish the work as specified and to resolve problems in the field at the lowest level possible.

## Startup and Commissioning

Except for the existing pump station structures, this project is all new with all new mechanical, electrical and instrumentation equipment. Therefore, the startup and commissioning requirements and efforts are the same as for new facilities.

Startup and Commissioning is the predecessor to a smooth project closeout. Arcadis' sustainable solution extends not only to the construction elements of the project, but also to the startup and commissioning of the facility to assure long and reliable operation. Arcadis excels at planning and monitoring all the specified testing and commissioning procedures required to put the facilities in service. The field team assigned to this project are well experienced in facility testing, startup and commissioning procedures and they possess all the necessary tools, systems and protocols to adequately monitor and record equipment operational data. This data will be turned over to the City for asset management purposes.

## Safety

Nothing can negatively impact construction momentum more than an injury or death on a project site.

Construction contractors and Owners must have their own safety programs, and Arcadis has its own called **TRACK to Zero.**


Arcadis field staff are very knowledgeable in our Safety program and it is taken very seriously. The health and welfare of others onsite are not excluded from this program as our field staff are authorized to point out potential safety violations when observed. ***And in the case of an imminent danger situation, ANYONE must stop the immediately to prevent an injury or worse.*** Our safety program also solicits reporting of construction site safety behavior by tracking 'Near Misses' and 'Close Calls'. This protocol helps keep the safety mindset at the forefront of daily staff activity. Further details of our safety program follows in the Commitment to Safety Section.

### Commitment to Safety

Safety is at the forefront of every Arcadis job to protect our most valuable asset- our people. Arcadis is committed to providing a healthy and safe work environment for our employees, subcontractors, clients, and visitors.

A safe construction program does not happen by accident but rather requires a totally trained behavior by all project participants. Our approach will be to work proactively with the City and the Contractor(s) to keep health and safety priority one at the forefront of every project — **Arcadis Fundamental Health and Safety Principle No. 1: Demonstrate Health and Safety Stewardship Daily.** We train our site staff in safe behaviors and we will assist the City in monitoring the site for unsafe construction practices to the Contractor's attention and advising the City to mitigate health and safety related risks.

We approach each project with the understanding that:

## Safety Commitments


1. Our work is never so urgent or important that we cannot take the time to do it safely.
2. All injuries are preventable.
3. Everyone is obligated to refuse unsafe work.
4. Everyone is obligated to raise concerns about the hazards seen.
5. All levels of supervision are accountable for safety performance.
6. Employee and contractor commitment is essential for safety performance.
7. Excellence in safety leads to excellence in business.
8. Safety attitude off the job is as important as being on the job.

# Technical Understanding of the Project Construction

The RFQ describes the overall project as rehabilitation of eight existing wastewater pump stations including stations A-20, A-22, A-23, A-27, A-29, A-31, B-4 & B-11- within a two-year period.

The first construction package has been released for pump stations B-4 and A-20 and the specified contract period for that construction contract is two-years. The timeline for release of other construction packages is unknown at this time. But for all eight pump stations to be completed within the two-year period, other pump station projects may not be as extensive or perhaps the pump stations are smaller.

In any case, all eight pump stations could be under construction concurrently. This will require a flood of Inspection staff to adequately cover all projects.

Rehabilitation details of this first construction package include complete gutting of the stations, installation of new equipment and new site and facility improvements as follows:

## Pump Station B-4 located at E Sunrise Blvd and Bayview Dr.

The work at pump station B-4 requires shutting down the station and to bypass pump around the facility to allow complete gutting and replacement of all equipment inside the station structure.

The demolition site plan of the Contract Drawings shows excavation and removal of sections of existing 12” and 16” force main and other work on the top deck of the station itself including removal and replacement of manhole frames and coves, hatch frames, ladder, gratings and covers; removal of an odor control unit and ozone generator; and relocation of an existing tree.

The mechanical demolition drawings show complete demo of all operating equipment and appurtenances down to bare concrete. The new mechanical drawings show replacement with new submersible pumps mounted dry-pit to replace the existing driveshaft-driven pumps, new piping and valves, new ventilation systems, new ladders and handrails. The isometric views on the drawings are a nice touch.

The new site plans show a new magnetic flowmeter, vault and bypass piping, a new emergency generator and enclosure, new manhole frames and covers, new hatch covers and grates, and instruction to clean, video and apply a lining for the influent sewer.

The electrical drawings show a new FPL transformer, meter socket and service feed, new panels including a breaker interface panel (BIP) and lift station control panel (LSCP), a new 200KW emergency generator, fuel tank and enclosure. Working with FPL can be tricky and long lead times may develop. Therefore, Arcadis will make provision of the new transformer and service an early priority in our communications and coordination to assure little or no impact to the project schedule, especially of there has been little coordination of it during the design phase.

### Constructability Concerns

The site drawings do not definitively show the limits of construction. The project is at George English Park owned by the City and it is very busy. Care and vigilence will be required to prevent accidents and to allow free use of the nearby boat ramp while perfoming the required excavations. E&SC and BMPs are not shown on the site drawings.

The electrical drawings appear to show a new FPL transformer and a new power service ductbank to the new meter socket. However, the transformer is fed from underground so how the new ductbank is to be incorporated in the new transformer setup is not shown nor if the existing ductbank(s) get demolished or not. The existing service ductbank will probably interfere with the new one.

Section cut of the new service ductbank is not shown on the drawings.

Sheet 37, show if the drywell area is classified or not.

## Pump Station A-20 located at NE 15th Ave & 11th St.

The work at pump station A-20 requires shutting down the station and to bypass pump around the facility to allow complete gutting and replacement of all equipment inside the station structure.

Similar to PS B-4, the demolition site plan shows removal of a section of existing 14" force main, removal and replacement of a manhole frame and cover, removal and replacement of a hatch cover and demolition of the concrete pad around the hatch cover entrance. It is noted that the manhole frame and cover to be replaced is in the roadway. The mechanical demo drawings show complete demo of all operating equipment and appurtenances down to bare concrete. The structure is quite compact so demolition and removal will be difficult.

The mechanical drawings show replacement with new submersible pumps mounted dry-pit to replace the existing driveshaft-driven pumps, new piping and valves, new ventilation systems, new ladders and handrails. Major work is required to replace the existing wall pipes for new suction piping.

The new site plans show much site rehab work to be performed in the roadway of NE 11th St. including a new magnetic flowmeter vault and bypass piping, relocation of the existing air release valve and vault, video, clean and apply lining for 100+' of influent sewers in two locations, installation of a 6" vent pipe, and installation of a portable generator.

The electrical drawings show demolition of existing boxes and panels on the exterior of the station entrance manway and replacement with a new LSCP, new service panel and new portable generator.

### Constructability Concerns

The site drawings do not definitely show the limits of construction. E&SC and BMPs are not shown on the site drawings.

Work may not be adequately shown for running a new service ductbank to the new panels. Section cut of the new service ductbank is not shown on the drawings.

## Remaining Pump Stations A-22, A-23, A-27, A-29, A-31 & B-11

Two more construction packages will be released for the remaining pump stations. These two packages along with the first package already released must be completed within the same two-year period. Details of the completed scope of construction work for those stations are unknown at this time but it is assumed that the work is similar but probably on a lesser scale in order to complete all eight within the same two-year period. If the scope is appreciably different with regard to technical aspects, Arcadis certainly has the expertise available to address those aspects.

# Knowledge of the Site and Local Conditions

## Local, County, State Regulations

Our work for the City will be led by staff from our office in Plantation Florida, from which we are within close proximity to the City and Project site and can quickly respond to issues as they arise. Arcadis also maintains offices in Miami, Coral Gables, Boca Raton, Tampa, Orlando, Sarasota, Jacksonville, Pensacola, and Tallahassee. Our staff have worked for numerous Florida communities including the City of Fort Lauderdale to expand and improve their utilities in all respects.

Our team has extensive knowledge of site conditions in the area (having provided CEI services for the pump station A-16 relocation and we are well aware of the City's requirement for specific work. For example, this project may require night-work in some areas and we know that a Noise Management Plan shall be submitted to the City Manager's office for approval in advance. No night-work can commence without a Noise Management Plan approved by the City Manager.

Maintenance of Traffic (MOT) will be important for all sites to avoid impacts to nearby users. However, it will be critical in areas like NE 11th Street where much of the site for PS-20 lies in the roadway, and B-11 due to proximity to FDOT intersection. Excavation in the roadway will require addressing vehicular and pedestrian traffic during the term of construction. For example, for B-11 Pump Station work, Florida Department of Transportation (FDOT) will be very involved due to the proximity of the site to the intersection of Commercial Blvd. and Bayview Drive. FDOT is very strict in their requirements for MOTs and Lane Closures and they might require night work in this location. Typically, a Pre-Construction Meeting with the FDOT Inspector Onsite will be needed to discuss the project and their requirements for permit approval.

# Detailed Project Delivery Services

Arcadis is committed to success! We bring a proven track record and a highly experience team to your force main project. To further strengthen our pursuit of success we will strive to identify issues early, apply lessons learned, maintain project momentum, and serve in your best interest.

To further represent our overall approach, read on to find further details of our tools, systems and protocols we will be implementing on your force main project.

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## Delivery Thru Execution

Arcadis' integrated CEI Project Delivery system comprises contract administration, resident engineering and inspection. Arcadis is uniquely qualified to provide the following CEI services:

### Construction Management Plan

Arcadis implements a Construction Management Plan (CMP) on all its construction project that define how the construction contract will be administered including:

- Contact information
- Site emergency procedures
- Submittal and RFI procedures
- Roles and responsibilities
- Communication procedures
- Pay request and schedule update procedures
- Problem resolution matrix

The CMP will be coordinated with the construction contract, the drawings and specifications and the planned approach to the job. Thus, a well-integrated system for project management is established and communications and methods of information management are described. This will be integrated and consistent with the contract documents and will support the development of a job record and documentation system. Comprehensive records will minimize contractor claims and will save research time if claims are made.

**Preconstruction Conference:** Arcadis will conduct a preconstruction conference with the contractor and key stakeholders to outline the required administrative procedures and contractual terms, and to review the contractor's strategy for procurement and construction.

We would focus on the conformance of those strategies to the schedule milestones. The CMP would be distributed and discussed at the preconstruction conference.

**Document Control:** ***Portolio Insights***, document control platform that streamlines communications, requests and submittals. All project participants will be invited to use this platform and training will be provided as necessary. Status of any type of documentation at any given time in the contract.

**Construction Progress Meetings:** Arcadis will chair and provide minutes for regular construction progress and coordination meetings. For best results, we recommend weekly meetings, but that frequency can be changed depending on the complexity and speed of the project.

We also take this opportunity to analyze the contractor's plan for the next couple of weeks ahead. This is done for coordination with any owner activities, but also, to compare the lookahead schedule to the project schedule for compliance. The two should compare favorably.

Field issues and problems will be discussed as well as any administrative conditions such as submittals, RFIs, and change requests.

**Construction Administration:** Arcadis' construction managers will coordinate with City PM to assure construction is proceeding according to City requirements; that contract requirements are being met; and to inform all of project status and issues.

Administration occurs continuously during the contract duration by the CM, admin staff, and inspectors to make certain that the contractor is meeting all construction and administrative requirements.

**Construction Resident Inspection:** Our resident engineers and inspectors will work shoulder-to-shoulder with the contractor to make certain that the work performed is in conformance with the contract documents, approved shop drawings and any approved changes. The resident inspector will conduct and record on-site observations of the engineer and work in progress with such frequency as necessary to verify accuracy and quality of installation and materials installed; prepare daily inspection reports providing a log of activities in progress and completed, including an accounting of labor and equipment, noting discrepancies, discussions inspections, test results, weather, and other pertinent information. Photo document the work progress; reject any portion of the work and transmit to City, engineer and contractor a notice of non-conforming work when it is in the opinion of the CM, City, or engineer that such work does not conform to the requirements of the contract documents.

The contractor's work zone traffic control plan will be reviewed and any issues reported to the City.

On a recent project for another client, an Arcadis inspector identified an issue the contractor was having with another contractor's inability to locate utilities in a timely manner, and often times were mismarked. Our inspection team kept the client alerted of the issue and helped identify areas of concern. Further, the CM noted these concerns in the monthly meetings and assisted in the collaboration of discussions with the contractor, client and the gas and electric company to resolve the issue.

**Review of Contractor's Payment Requisitions:** Arcadis will review contractors' monthly payment requisitions and recommend payment on the basis of work completed.

Payments shall not be authorized before the project schedule is updated, material quantities counted and deficient work corrected. Arcadis will report on the monies invoiced and remaining throughout the project.

**Field Testing, Start-up and Commissioning:** Arcadis will coordinate with the contractor to develop an overall startup and commissioning plan, including a schedule of activities for turnover of the project with the contractor and the City operations staff. Arcadis will observe and document all tests of materials and equipment, oversee and coordinate training sessions for City operating personnel.

## Monitor & Control

Arcadis will implement proven processes to monitor project progress and against the plan and taking corrective action where necessary.

Process for review of work, rejection of defective work, inspections, and tests:

Conduct on-site observations of the work in progress to make certain that it is in general conformance with contract requirements. Identify and report to the City work that is unsatisfactory, faulty or defective or does not conform to the contract documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made.

1. Verify that tests, equipment, system startups, and operating and maintenance training are conducted in the presence of appropriate personnel and that the contractor maintains adequate records thereof; and observe appropriate details relative to the test procedures and startups.
2. Verify that equipment delivered is per the approved shop drawing.
3. Verify that equipment is stored per the manufacturer's recommendations.
4. Accompany visitors representing public or other agencies having jurisdiction over the project and record the visits.
5. With input from Arcadis' project manager, the City and the engineer, evaluate the contractor's suggestions for variations from the contract plans and specifications.
6. Inspect environmental measures including control of discharged water and direct contractor to take whatever actions may be required to fully comply with approved sediment and/erosion control plan.

**Change Management and Change Order Resolution:** Changes occur on any project so change management is vitally important for control of costs and schedule. These changes usually occur as a result of unknown conditions or interferences too small or too complex to be recognized during design.

**We often come across as-built situations which prohibit work to proceed as planned. When working underground, one must "expect the unexpected." We use our experience to make sound recommendations to the client. These constraints and differing conditions affect contractor schedules and require us to be flexible in our workload, as well as respoonding to stakehold concerns.**

Arcadis approaches changes with care and deliberation. Some changes are straightforward and valid but others can be much more complex and elusive. Upon receipt of a change request, we analyze it to clarify and detail what is the change and why is it a change to the contract. After discussing it with the design engineer and you, the Owner, to develop an approach for resolving the matter, we get a comparative cost estimate from our cost estimating team. The CM will analyze the estimate and schedule a negotiating session with the contractor's PM. This may require several meetings to resolve if it is a complex issue. But after preliminary agreements are reached, we inform and discuss with you and the design engineer for appropriateness. We are then able to forge an approach to a final resolution of cost and time.

**Schedule Monitoring:** After establishment of a baseline schedule at the outset of the project, we will analyze the contractor's required monthly updates for progress and status against a set of technical key performance indicators (KPIs). If progress is shown to be falling behind schedule, we request a recovery plan capable of getting the project back on track.

Lookahead schedules required at each periodic coordination meetings will be compared to the same time period on the project schedule another indicator of progress.

## Time and Schedules.

The progress schedule and two-week lookahead schedules for each project in combination with the program schedule of all eight projects will be monitored for staffing purposes.

If one of the three construction contracts suffers a delay, the delay will be handled at the project level by the CM and inspection team. The result of that delay resolution must then inform the program schedule in order to address the entire program.

**Site Safety Monitoring:** Arcadis has made a significant commitment to delivering safe, environmentally compliant construction projects. The enforcement of OSHA and company regulations is of utmost importance to any project we manage because the safety of all personnel at the site is a paramount objective. Therefore, before a project begins, we produce a written project-specific Health and Safety Plan (HASP) for Arcadis staff. Safety of construction personnel at the construction site is the sole responsibility of the contractor. We will periodically monitor the site for general compliance with the contractor's safety plan and report any observed violations to the contractor and the City.

The contractor has its own safety program but we observe the contractor's performance and warn of activities that might be OSHA violation or violation of their own safety program.

**Arcadis is concerned for the safety of all stakeholders in our projects and for this reason will plan to use a "stop work" order for the contractor if warranted by significant unsafe conditions.**

## Project Closeout

Arcadis has an excellent record of completing projects, including the completion of punchlist work, resolution of outstanding change orders, full warranty activation, and compliance with all requirements of the Owner. We will maintain complete records for the project. These records will be turned over to the City as the official record file. All construction files, copies of warranties, guarantees and insurance certificates, the daily construction log, record drawings, and the conformed and posted contract specifications will be transmitted to the City upon contract closeout.

We focus on the closeout phase from the very beginning of a project because we know that punch lists items, corrections, equipment adjustments, certifications, and other details extend the project completion time. Closeout will include the following:

- Punchlist inspection and guarantee inspections.
- Administrative punch list item review and confirmation of completion.
- Substantial completion inspection.
- Final inspection of all work, controlled inspections and follow-up inspections.
- Scheduling final integrated equipment and system checks.
- Operations and maintenance procedures training for staff as appropriate.
- Review and acceptance of “As-Built” drawings.
- Final delay analysis and final extension of time report.
- Certificate of substantial completion.
- Completion of punchlist work.
- Final waivers of lien from contractors
- Guarantees/warranties.
- Final applications for payment.
- Written deficiency notifications to the contractor.
- Lessons learned documentation.

## Risk Management

Unknown risks represent added costs for either the contractor or for the owner. **Early identification of risks is essential for controlling its effect on costs and schedule.** There are several tools for identification of risks including Risk Registers, Constructability Reviews and Value Engineering studies.

**Risk registers** typically begin life during the design phase where risk effect on design options are considered. Where risk registers are initiated during the design phase, they can become a tool for use in the construction phase. Arcadis is adept at using this tool to identify risks and then apply techniques for managing those risks. This, in turn, helps to control costs and to assign responsibilities for managing the risks.

**Constructability Review (CR)** is an integral part of Arcadis’ overall cost, quality control and risk management system. Arcadis is not only an Engineering firm but we are also a constructor and ***we perform constructability reviews from the standpoint of a constructor having to bid and build the project.***

Research by the Construction Industry Institute (CII) shows that properly conducted constructability reviews can save 4.3% of project costs and 7.5% of project time. These savings represent at least a 10:1 return on investment to the owner. For a design phase CR, we use a facilitator to guide and manage the review process and we have comprehensive checklists representing common major faults found on designs. Then we provide resulting commentary to the owner and designer in report form for implementation in the project design. For a construction phase CR, the CM/CEI team performs its own analysis, not only to to find weak or problematic elements of the project, but to understand the project and become as knowledgeable as the contractor.

We are very experienced in the review of sewer pump stations projects projects and have been able to manage numerous programs without resultant litigation. A thorough constructability review is valuable in the reduction of change orders and potential claims that could delay the project completion.

Arcadis’ constructability review is not another drawing review - it is a detailed analysis from a contractor perspective of potential change order conditions. We review the project from the standpoint of time, cost, quality, risk and safety in a facilitated workshop forum so that experts in each discipline can communicate and coordinate freely with each other in the same room with some of the following elements in mind:

**Time -** Identify elements that can adversely impact the project schedule and if the project can be constructed within the contract time allotted.

**Cost -** Verify if the engineer’s estimate is valid, if the contingency used is appropriate for the design stage or if all the unknowns have been accounted for.

**Quality -** Confirm that all the disciplines have been coordinated for fit and interference, and checks for complex construction that can be simplified.

**Risk -** Verify if all the bidding and construction risks have been identified, assigned appropriately and accounted for in the cost estimate and contract documents.

**Safety -** Verify that the project can be constructed safely with the design intent. Simply stated, the constructability review simulates a constructor's view of the construction resulting in a well-defined set of contract documents; a plan for construction with provisions in the specifications to properly manage the construction process; and a tool that allows the contractor to plan necessary resources and costs to properly prosecute the work on time and within the engineer's estimate.

**Weekly meetings are precision events regarding schedules. We learn the contractor's plan for the next two-three weeks and what was accomplished the last couple weeks. This information is measured against the project CPM schedule for progress and momentum. If momentum is slowing, we stand ready to offer suggestions to regain momentum or possibly to request a recovery schedule.**

**Value Engineering (VE)** is a great risk management tool for validating large complex projects when conducted early in the project development process. It affords development of alternative options that either can reduce costs or add value to the project. Risks are considered when evaluating development alternatives.

## Support Capabilities

Arcadis has extensive local and national resources for support of staffing, consultation and technical innovation. Following are examples of available resources:

**Electronic Document Control Platforms -** Arcadis has extensive experience with electronic document control platforms such as eBuilder, ProCore, Prolog, Oracle and others.

**Cost Estimating -** As a large international consulting engineering and construction firm, Arcadis has advanced, robust cost estimating capabilities for supporting Change Management, budgetary estimates, and alternative analysis. Our Cost Estimating practice uses commodity pricing, ENR price indices, and regional adjustments in its cost estimating procedures which results in accurate estimates at any level of project development.

**Discipline and Trades Support -** Arcadis has unlimited resources for support of design and construction issues related to infrastructure, technology, structural, mechanical, electrical, instrumentation and control.

**Technological Innovation -** Arcadis has a proven track record of technologically innovative projects and knowledge of innovative products that could be consulted if necessary.


Arcadis CEI Project - Preparation work for utility crossing under stormwater pipe

## Staffing for Success

Arcadis understands the potential problem of staffing the ebb and flow of pump station projects especially when concurrent work is being performed in other pump stations. We have staffed our organization chart with multiple members in the specialized assignments to work collaboratively in providing continuous service for all project assignments. The core staff assigned to your program are expert designers, engineers, managers, and inspectors. They will be supported by a deep field of staff that will provide additional expertise when and where needed, especially in times of high workload.

The Arcadis team can assist in the oversight of the construction of all of these projects by providing highly qualified inspectors who have the depth and flexibility to respond when needed, whether it be a planned project or an emergency situation.

We have an extensive local "bench strength" to provide experienced field inspectors and other CM staff support on an as-needed, on-call bases.

Arcadis has listed several team members for inspector's position in the project organization chart. This was done to show that we have serious capabilities for staffing the City's project. These alternate names in the organization chart serve to show our "deep bench strength" which may be required if work is performed in multiple areas simultaneously. This way, continuity of service is provided across the entire project.

# Firm's Current Workload

## Team Availability

Arcadis' client-focused project management approach (PMA) maintains a project staffing schedule, much like a project CPM schedule, so we can effectively manage project staffing. Arcadis project principals review project status periodically for comparison with our staffing schedule in order to provide continuity of service and availability of appropriate staff.

We have a solid understanding of the importance you place on timely performance and schedule adherence.

Our PMA tools and emphasis on continuous schedule review will provide additional tools in achieving solid schedule performance on our projects for you.


2020-2024 Townsend WTP Upgrade Electrical and Mechanical Improvements: Phase I & II

### Current/Anticipated Workloads

The staff resources available in our local and regional offices provide significant "bench strength" that facilitates required resource allocations to meet the City's needs. Our South Florida offices (Plantation, Boca Raton, Miami, and Coral Gables) include more than 135 professionals to cover the potential services described in this solicitation. We have more than 350 additional professionals located throughout Florida. Key project personnel are available to initiate the work immediately upon contract execution and to continue work on an ongoing basis. Furthermore, we commit to providing other resources as needed to supplement the proposed team to meet your needs. Our Principal-in-Charge, Leah Richter, will be responsible for scheduling and committing team resources to assigned project and incorporating additional staff as needed.

Below is a listing of the availability of our proposed key team members and support personnel for this project over the next 12 to 16 months.

| Name \| Role | Availability |
|---|---|
| **Leah Richter, PE \|** Prinicipal-in-Charge | 30% |
| **Chris Remme, CCM, CCP, PSP \|** QAQC | 15% |
| **Len Sheptock, CGC \|** Senior Construction Manager | 100% |
| **Cheriece Davidson \|** Inspector | 100% |
| **Eric Fernandez** \| Inspector | 75% |
| **Joshua Roberts, PE** \| Inspector | 75% |
| **Jeff Luetjen** \| Inspector | 60% |
| **Bryce Kaufman** \| Inspector | 60% |
| **Jerald Boles** \| Inspector | 30% |
| **Richard Espinosa** \| Inspector | 30% |

| Name \| Role | Availability |
|---|---|
| **Andrew Cooper** \| Inspector | 30% |
| **Darryl Dunn, PE \|** Cost Estimating / Constructability | 40% |
| **Chris Matthews, PE \|** Cost Estimating / Constructability | 30% |
| **Bhadrash Patel \|** Scheduling and Project Controls | 30% |
| **Chris Tilman, PE \|** Environmental Compliance | 30% |
| **Tina Laird \|** Project Administrator / Document Control | 30% |
| **Jose Custodio, PE \|** Pipeline Technical Advisor | 25% |
| **Roy Cooper, PE \|** Contract Solutions | 20% |
| **Lia Dombroski, EIT** \| Inspection Support | 10% |
| **Brian Duane, PE \|** Pump Station Technical Advisors | 10% |
| **John Scioscia, PE** \| Pump Station Technical Advisors | 10% |

# Available Facilities, Technological Capabilities and Other Available Resources

Arcadis is a state-of-the art company and we use state-of-the-art technology in all our projects— from everyday design, management and administration tools to Artificial Intelligence(AI)! That's right, Arcadis has its own AI instance hosting on our company intranet for use internally on projects if needed, and it is called ArcadisGPT.

Of course, not every project is so complex that AI is required, but our use of AI indicates Arcadis' forward-thinking in its use of technology.

Arcadis does, however, use high-tech tools every day on our projects including Mobile Data Collection tool, Power BI Dashboarding, 360-degree cameras, BIM and BIM360 Collaboration and Document Management platform, Drone imagery, and Remote Expert. These tools are implemented at different stages of a project as needed in order to add value, improve efficiency, or enhance collaboration.

## Section 4.2.6.

# References

# 4.2.6. References

## 1 Sarasota County

### Clark Road UWHCA (As part of the Continuing Services Contract)

John J. Saputo, IV
Construction Manager
Sarasota County Capital Projects
1001 Sarasota Center Boulevard
Sarasota, FL 34240
Cell: 941-650-0022
Email: jsaputo@scgov.net Web: www.scgov.net

**Description of Work:** Sarasota County entered into a Utility Work by Highway Contractor Agreement (UWHCA) for the Florida Department of Transportation (FDOT). The UWHCA included the relocation of a 16-inch water main under active and future ramps as well as Interstate 75 (SR 93), modifications to a 16-inch reclaimed water, and traffic fiber optic cables relocations along Clark Road (State Road 72) from Gantt Road to Hummingbird Avenue. The project included professional engineering services including design, permitting, bidding, and construction phase services.

**Year Project was Completed:** In Project Closeout
**Total Cost of Construction (Estimated and Actual):**
**Estimated:** $1.44M; **Actual**: $1.2M

## 2 City of Richmond

### Annual Contract for A/E Services

Bob Stone,
Engineer Manager
1400 Brander St.
Richmond, VA 23224
804.646.8661
robert.stone@rva.gov

**Description of Work:** Over the past 15 years, Arcadis has been providing Construction Management and Inspection services for the City of Richmond's Wastewater Treatment plant and CSO projects. The managed projects total more than $200M in constructed value, and none of their final costs have exceeded the original bid price. In addition, there have been no NPDES violations because of construction activities during that time nor have there been any unresolved claims. The services provided include Construction Management, Contract Administration, and Resident Inspection.

**Year Project was Completed:** Ongoing
**Total Cost of Construction (Estimated and Actual):**
**Estimated:** On-call; **Actual**: >$200M

## 3 Orlando Utility Commision

### Orange Avenue Water Main Replacement

Natalie Urick, PE
Senior Engineer Water Distribution Engineering
3800 Gardenia Ave
Orlando, FL
Office: 407.434.2847
Cell: 321.230.6694
nurick@ouc.com

**Description of Work:** Arcadis provided construction management and inspection services for the replacement of approximately 4,350 LF of a 16-inch water main, maintenance of traffic (MOT) plans for the Utility Work by Highway Contractor Agreement (UWHCA) project, permitting, bidding, public outreach, and construction administration and construction inspection services. Orange Avenue is a busy corridor owned by FOOT with high traffic volume, hospitals, businesses, etc. which adds a level of complexity to the MOT and the construction sequence

**Year Project was Completed:** In Project Closeout
**Total Cost of Construction (Estimated and Actual):**
**Estimated:** On-call; **Actual**: $11.3M

## 4 Harford County

### On-Call Services

Steven D. Schulz, P.E.
Civil Engineer III
220 S. Main St.
Bel Air, MD 21014
Office: 410.638.3300 ext 1474
Cell: 443.838.2352
sdschulz@harfordcountymd.gov

**Description of Work:** For over 30 years, Arcadis has partnered with Harford County to implement some of their more challenging water and wastewater projects. Arcadis has provided construction management and inspection (CM/I) services, for the award-winning Sod Run Wastewater Treatment Facility Enhanced Nutrient Removal project, the Abingdon Water Treatment Plant, the Bush Creek PS & FM and the Sod Run Bio Solids Dewatering project.

**Year Project was Completed:** Ongoing
**Total Cost of Construction (Estimated and Actual):**
**Estimated:** On-call; **Actual**: $75M

## Section 4.2.7.

# Minority/Women (M/WBE) Participation

# 4.2.7. Minority/Women (M/WBE) Participation

Arcadis implements a M/WBE program that creates value for our clients as well as benefits our employees and our communities through the enhanced economic environment that the success of these businesses brings. Arcadis fully subscribes to the proposition that a climate conducive to the development, growth, and expansion of M/WBE businesses is vital to the economic health. We also believe in being an active participant in the community by providing mentorship to its students, building relationships with its community leaders, and promoting community M/WBE firms to embody the Arcadis core value of entrepreneurship. To encourage and support this value, Arcadis aggressively pursues subcontracting opportunities with small, disadvantaged, woman-owned, minority-owned, and service-disabled veterans' concerns in accordance with the laws and regulations of the U.S. government, the State of Florida, and Broward County. Arcadis has partnered with the following minority subconsultant for this contract:

**WIRX Engineering, LLC** is a certified SBE, CBE, DBE and MBE Professional Engineering Firm specializing in Geotechnical Engineering, Water Resource Engineering, Construction Management, Construction Materials Testing and Inspections services. The WIRX Team brings a strong portfolio of geotechnical and materials engineering with extensive experience at the City of Fort Lauderdale.


BROWARD COUNTY FLORIDA
OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT
CERTIFIED
OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT

THIS CERTIFICATE IS AWARDED TO

WIRX ENGINEERING, LLC

AS SET FORTH IN THE BROWARD COUNTY BUSINESS OPPORTUNITY ACT, THE CERTIFICATION REQUIREMENTS HAVE BEEN MET FOR:

County Business Enterprise (CBE) and Small Business Enterprise (SBE)

SANDY-MICHAEL MCDONALD

Digitally signed by SANDY-MICHAEL MCDONALD
Date: 2023.06.07 10:03:22 -04'00'

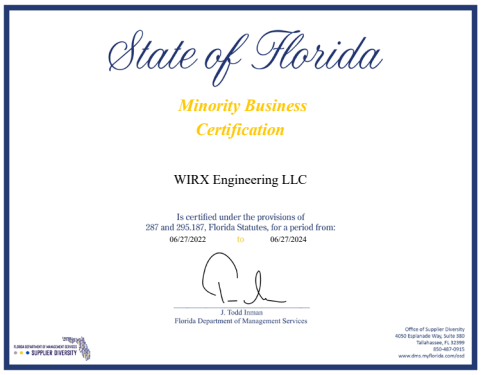
AUTHORIZED REPRESENTATIVE

Anniversary Date: March 7th

THE OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT MUST BE NOTIFIED WITHIN 30 DAYS OF ANY MATERIAL CHANGES IN THE BUSINESS W... MAY AFFECT OWNERSHIP AND CONTROL. FAILURE TO DO SO MAY RESULT IN THE REVOCATION OF THIS CERTIFICATE AND/OR IMPOSITION OF OTHER SANC...

A SERVICE OF THE BROWARD COUNTY BOARD OF COUNTY COMMISSIONERS
BROWARD.ORG/ECONDEV

GOVERNMENTAL CENTER ANNEX 115 S. ANDREWS AVENUE, ROOM A680 FORT LAUDERDALE, FL 33301
TEL: 954-357-6400 • EMAIL: SBCERT@BROWARD.ORG • TTY: 954-357-5684


State of Florida

Minority Business Certification

WIRX Engineering LLC

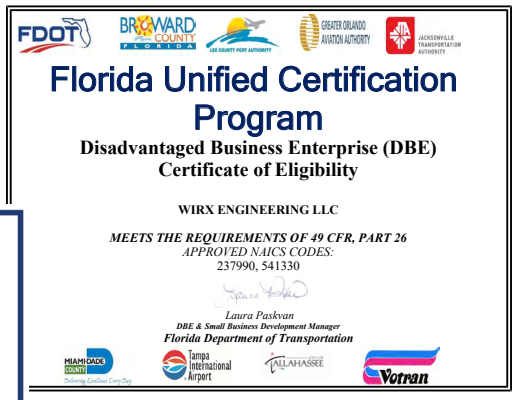
Is certified under the provisions of 287 and 295.187, Florida Statutes, for a period from:

06/27/2022 to 06/27/2024

J. Todd Inman
Florida Department of Management Services

SUPPLIER DIVERSITY

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915
www.dms.myflorida.com/osd


FDOT
BROWARD COUNTY FLORIDA
LEE COUNTY PORT AUTHORITY
GREATER ORLANDO AVIATION AUTHORITY
JACKSONVILLE TRANSPORTATION AUTHORITY

Florida Unified Certification Program

Disadvantaged Business Enterprise (DBE)
Certificate of Eligibility

WIRX ENGINEERING LLC

*MEETS THE REQUIREMENTS OF 49 CFR, PART 26*
*APPROVED NAICS CODES:*
237990, 541330

Laura Paskvan
*DBE & Small Business Development Manager*
*Florida Department of Transportation*

MIAMI-DADE COUNTY
Tampa International Airport
TALLAHASSEE
Votran

## Section 4.2.8.

# Subconsultants

# 4.2.8. Subconsultants

## WIRX ENGINEERING Role: Geotechnical Engineering Services, Construction Materials Testing and Inspection (CMT/CEI)

### BENEFITS:

- WIRX is very familiar with the City's requirements. Performed the geotechnical evaluation for the 48" Finished Water Pipeline for the new Prospect Clean Water Center.
- WIRX's Principals have decades of experience working on 1000's of projects in South Florida for numerous municipalities and government agencies; hence, no learning curve.
- WIRX understands the local geotechnical and materials challenges throughout South Florida and will custom tailor our solutions to these issues.

WIRX Engineering, LLC formerly known as WIRX Engineering & Construction, LLC is a Professional Geotechnical Engineering Firm with offices in Broward and Palm Beach Counties. Our services include Geotechnical Engineering, Water Resource Engineering, Geotechnical Drilling, Construction Management, and Construction Materials Testing and Inspections. Our 3 Principals have decades of combined Civil and Geotechnical Engineering experience, covering all aspects of a project including Design, Construction Engineering Inspection, Material Testing, Project Management, and Heavy Civil Construction. Our experience includes working on 100's of high-profile projects with federal and local government agencies, including South Florida Water Management District (SFWMD), United States Army Corps of Engineers (USACE), Florida Department of Transportation (FDOT), and numerous City and County Agencies. We incorporate our experience and insight into the Contractor's means and methods during the project design phase. This ultimately improves the constructability and the quality of the project, reducing unwanted change orders, facilitating communication and conflict negotiations, and providing the owner with the most cost-effective end-product.

State of Florida
Department of State

I certify from the records of this office that WIRX ENGINEERING LLC is a limited liability company organized under the laws of the State of Florida, filed on November 7, 2017, effective January 1, 2018.

The document number of this limited liability company is L17000229939.

I further certify that said limited liability company has paid all fees due this office through December 31, 2023, that its most recent annual report was filed on January 18, 2023, and that its status is active.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-second day of May, 2023

Secretary of State

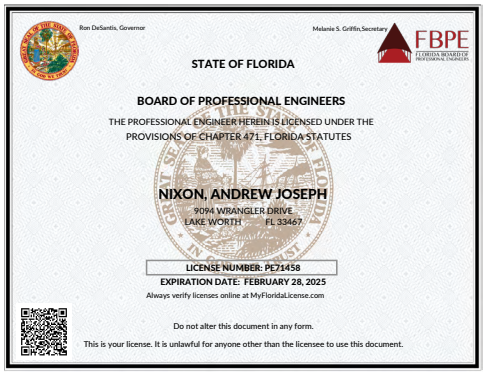
Tracking Number: B2860423565CU

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

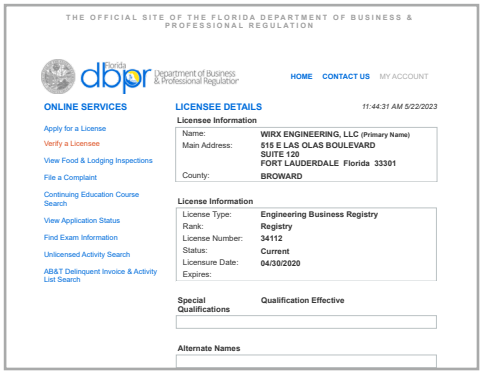
https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

WIRX holds all the required certifications and licenses from the State of Florida and the Board of Professional Engineers to operate our Professional Geotechnical Engineering, Construction Inspection and Material Testing Business. WIRX also holds small and minority certifications with the State of Florida M/WBE, Florida DOT DBE, Palm Beach County S/MBE, Broward County S/CBE and South Florida Water Management District SBE.

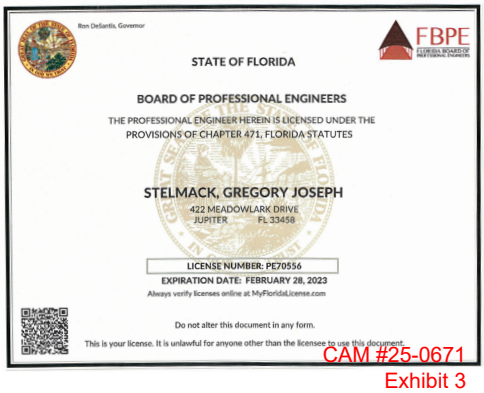
WIRX is a committed, professional, and cost-effective service provider, dedicated to providing the highest performance and ultimate in customer service. Regardless of the scale of your project, WIRX will develop a practical approach to successfully achieve your goals on schedule and within budget.



Ron DeSantis, Governor
Melanie S. Griffin, Secretary
FBPE
STATE OF FLORIDA
BOARD OF PROFESSIONAL ENGINEERS
THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES
NIXON, ANDREW JOSEPH
9094 WRANGLER DRIVE
LAKE WORTH FL 33467
LICENSE NUMBER: PE71458
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com
Do not alter this document in any form.
This is your license. It is unlawful for anyone other than the licensee to use this document.



THE OFFICIAL SITE OF THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION
dbpr Department of Business & Professional Regulation
HOME CONTACT US MY ACCOUNT
ONLINE SERVICES
Apply for a License
Verify a Licensee
View Food & Lodging Inspections
File a Complaint
Continuing Education Course Search
View Application Status
Find Exam Information
Unlicensed Activity Search
AB&T Delinquent Invoice & Activity List Search
LICENSEE DETAILS
11:44:31 AM 5/22/2023
Licensee Information
Name: WIRX ENGINEERING, LLC (Primary Name)
Main Address: 615 E LAS OLAS BOULEVARD SUITE 120 FORT LAUDERDALE Florida 33301
County: BROWARD
License Information
License Type: Engineering Business Registry
Rank: Registry
License Number: 34112
Status: Current
Licensure Date: 04/30/2020
Expires:
Special Qualifications
Qualification Effective
Alternate Names



Ron DeSantis, Governor
FBPE
STATE OF FLORIDA
BOARD OF PROFESSIONAL ENGINEERS
THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES
STELMACK, GREGORY JOSEPH
422 MEADOWLARK DRIVE
JUPITER FL 33458
LICENSE NUMBER: PE70556
EXPIRATION DATE: FEBRUARY 28, 2023
Always verify licenses online at MyFloridaLicense.com
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This is your license. It is unlawful for anyone other than the licensee to use this document.

STONER
SURVEYORS • MAPPERS

# Role: Geotechnical Engineering Services, Construction Materials Testing and Inspection (CMT/CEI)

**Stoner & Associates** was founded by James D. Stoner, P.S.M. in 1988. Stoner & Associates has over fifteen employees, including four Licensed Professional Surveyor and Mappers, supervising four survey field crews. Stoner & Associates maintains an office in Fort Lauderdale, Florida. Teamwork and highly qualified personnel are the foundation of the company. Their team of Licensed Professional Land Surveyors has worked together for over twenty years. During this time, they have developed their skills and developed a team that can make accurate surveys seamlessly and efficiently. They also have developed the ability to work as part of a team, participating on large projects. They know that other professionals rely on their survey products for the basis of their projects and they take that responsibility seriously. Stoner & Associates is committed to using the latest technology. They employ the latest technology to produce high quality surveys. Their formidable arsenal of tools includes electronic and robotic total stations, automated data collection, Real Time GPS, and CADD Mapping Software.

**Licenses:** State of Florida Professional Surveyor and Mapper, Business License Number LB6633

## Certifications:

- The School District of Palm Beach County, SBE (Small Business Enterprise)
- South Florida Water Management District, SBE (Small Business Enterprise)

## Services:

- ALTA/ACSM Land Title Surveys
- Aviation Surveys
- Boundary Surveys
- Construction Layout Surveys
- Engineering Design Surveys
- Environmental Support Surveys
- FDOT Surveys
- Platting
- Specific Purpose Surveys
- Topographic Surveys
- Utility Surveys

*State of Florida*
*Department of State*

I certify from the records of this office that STONER & ASSOCIATES, INC. is a corporation organized under the laws of the State of Florida, filed on September 13, 1988.

The document number of this corporation is M99107.

I further certify that said corporation has paid all fees due this office through December 31, 2023, that its most recent annual report/uniform business report was filed on January 4, 2023, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

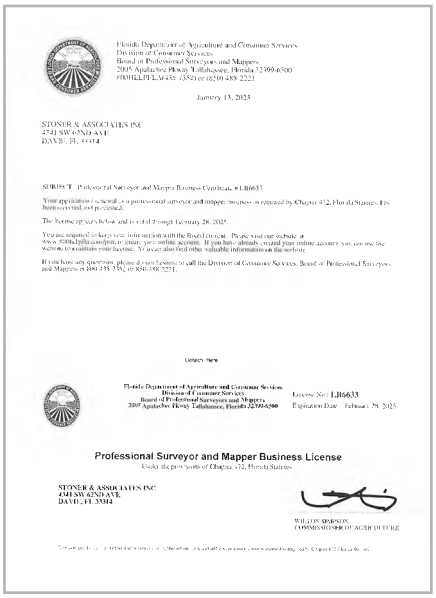
*Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Fourth day of January, 2023*

*Secretary of State*

Tracking Number: 7365507558CC

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

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



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

January 13, 2023

STONER & ASSOCIATES INC
4341 SW 62ND AVE
DAVIE, FL 33314

Professional Surveyor and Mapper Business License

STONER & ASSOCIATES INC
4341 SW 62ND AVE
DAVIE, FL 33314

WILTON SIMPSON
COMMISSIONER OF AGRICULTURE

## Technology Utilized:

- Real Time GPS
- Electronic Data Collection
- Electronic Total Stations
- AutoCAD Land Development
- MicroStation/CAiCE

Stoner understands the City's Standard for CAD and Record Drawings. Having worked in several City projects, including performing topographic survey for the 48" Finished Water Pipeline from the Prospect Clean Water Center.

## Section 4.2.9.

# Required Forms

## CITY OF FORT LAUDERDALE BID/PROPOSAL CERTIFICATION

**Please Note:** It is the sole responsibility of the bidder/proposer to ensure that their response is submitted electronically through the City's on-line strategic sourcing platform prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit http://www.dos.state.fl.us/).

Company: (Legal Registration) Arcadis U.S., Inc. EIN (Optional): _____

Address: 150 S. Pine Island Road, Suite 315

City: Plantation State: FL Zip: 33324

Telephone No.: (954) 761 3460 FAX No.: N/A Email: Leah.Richter@arcadis.com

---

Delivery: Calendar days after receipt of Purchase Order **(section 1.02 of General Conditions)**: N/A

Total Bid Discount **(section 1.05 of General Conditions)**: N/A

Check box if your firm qualifies for DBE **(section 1.09 of General Conditions)**: ☐

---

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

| Addendum No. | Date Issued | Addendum No. | Date Issued | Addendum No. | Date Issued | Addendum No. | Date Issued |
|---|---|---|---|---|---|---|---|
| No. 1 | 9/18/24 | | | | | | |
| No. 2 | 9/23/24 | | | | | | |
| No. 3 | 10/07/24 | | | | | | |
| | | | | | | | |

---

VARIANCES: If you take exception or have variances to any term, condition, specification, scope of service, or requirement in this competitive solicitation you must specify such exception or variance in the space provided below or reference in the space provided below all variances contained on other pages within your response. Additional pages may be attached if necessary. No exceptions or variances will be deemed to be part of the response submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A.

N/A

---

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars ($500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Leah Richter, PE
Name (printed)

Signature

September 23, 2024
Date

Vice President
Title

City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

# ADDENDUM NO. 1

Event 346
CEI Services for Triplex Pump Station Rehab
ISSUED: September 18, 2024

This addendum is being issued to make the following changes:

1. The Construction Bid Certification Form and Questionnaire Sheet are hereby replaced by the attached Bid Proposal Certification Form.

All other terms, conditions, and specifications remain unchanged.

Erick Martinez
Senior Procurement Specialist

Company Name: Arcadis U.S., Inc.
(please print)

Bidder's Signature: Leah K. Richter

Date: September 23, 2024

**ADDENDUM NO. 2**

Event 346

CEI Services for Triplex Pump Station Rehab

ISSUED: September 23, 2024

This addendum is being issued to make the following changes:

- **Extend Bid Close Date to September 30, 2024**

All other terms, conditions, and specifications remain unchanged.

*Erick Martinez*
Senior Procurement Specialist

Company Name: Arcadis U.S., Inc.
(please print)

Bidder's Signature: Leah K. Richter

Date: September 30, 2024

City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

**ADDENDUM NO. 3**

Event 346

CEI Services for Triplex Pump Station Rehab

ISSUED: September 30, 2024

This addendum is being issued to make the following change:

- **Extend Bid Close Date to October 7, 2024**

All other terms, conditions, and specifications remain unchanged.

Erick Martinez
Senior Procurement Specialist

Company Name: Arcadis U.S., Inc.
(please print)

Bidder's Signature: Leah K. Richter

Date: October 7, 2024

# 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 | CONTACT NAME: | |
|---|---|---|
| Aon Risk Services South, Inc.<br>Franklin TN Office<br>501 Corporate Centre Drive<br>Suite 300<br>Franklin TN 37067 USA | PHONE (A/C. No. Ext): (866) 283-7122 | FAX (A/C. No.): (800) 363-0105 |
| | E-MAIL ADDRESS: | |

| INSURED | INSURER(S) AFFORDING COVERAGE | NAIC # |
|---|---|---|
| Arcadis U.S., Inc.<br>630 Plaza Drive<br>Suite 200<br>Highlands Ranch CO 80129 USA | 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 INSD | SUBR WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS | |
|---|---|---|---|---|---|---|---|---|
| | COMMERCIAL GENERAL LIABILITY<br>☐ CLAIMS-MADE ☐ OCCUR<br>GEN'L AGGREGATE LIMIT APPLIES PER:<br>☐ POLICY ☐ PRO-JECT ☐ LOC<br>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<br>☐ ANY AUTO<br>☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS<br>☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY | | | | | | COMBINED SINGLE LIMIT (Ea accident) | |
| | | | | | | | BODILY INJURY ( Per person) | |
| | | | | | | | BODILY INJURY (Per accident) | |
| | | | | | | | PROPERTY DAMAGE (Per accident) | |
| | | | | | | | | |
| | ☐ UMBRELLA LIAB ☐ OCCUR<br>☐ EXCESS LIAB ☐ CLAIMS-MADE<br>☐ DED ☐ RETENTION | | | | | | EACH OCCURRENCE | |
| | | | | | | | AGGREGATE | |
| | | | | | | | | |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY<br>ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N ☐<br>(Mandatory in NH)<br>If yes, describe under DESCRIPTION OF OPERATIONS below | N/A | | | | | ☐ PER STATUTE ☐ OTH-ER | |
| | | | | | | | E.L. EACH ACCIDENT | |
| | | | | | | | E.L. DISEASE-EA EMPLOYEE | |
| | | | | | | | E.L. DISEASE-POLICY LIMIT | |
| A | Contractors Pollution Liability | | | US00101061E024A<br>Professional & Pollution<br>SIR applies per policy terms & conditions | 06/01/2024 | 06/01/2025 | Each Claim<br>Annual Aggregate | $2,000,000<br>$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**

Arcadis U.S., Inc.
630 Plaza Drive, Suite 200
Highlands Ranch CO 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 :

Certificate No : 570105766919

AGENCY CUSTOMER ID: 570000005571
LOC #:

# ADDITIONAL REMARKS SCHEDULE



| AGENCY | NAMED INSURED |
|---|---|
| Aon Risk Services South, Inc. | 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 | | | | | | | |
| | [X] Claims-Made | | | | | | | |
| | [X] Professional Liability | | | | | | | |
| | [X] and Contractors | | | | | | | |
| | [X] Pollution Liability | | | | | | | |
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# CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
09/25/2023

**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

| 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: | Hartford Accident & Indemnity Company | 22357 |
| INSURER E: | | |
| INSURER F: | | |

**COVERAGES** **CERTIFICATE NUMBER:** 570101700819 **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 | |
|---|---|---|---|---|---|---|---|---|
| A | X **COMMERCIAL GENERAL LIABILITY**<br>CLAIMS-MADE X OCCUR<br>X Contractual Liability<br>GEN'L AGGREGATE LIMIT APPLIES PER:<br>POLICY X PRO-JECT X LOC<br>OTHER: | | | 20ECSOL5318<br>SIR applies per policy terms & conditions | 10/01/2023 | 10/01/2024 | EACH OCCURRENCE<br>DAMAGE TO RENTED PREMISES (Ea occurrence)<br>MED EXP (Any one person)<br>PERSONAL & ADV INJURY<br>GENERAL AGGREGATE<br>PRODUCTS - COMP/OP AGG | $1,000,000<br>$1,000,000<br>$10,000<br>$1,000,000<br>$2,000,000<br>$2,000,000 |
| B | **AUTOMOBILE LIABILITY**<br>X ANY AUTO<br>OWNED AUTOS ONLY<br>HIRED AUTOS ONLY<br>SCHEDULED AUTOS<br>NON-OWNED AUTOS ONLY | | | 20 UEN OL5319 | 10/01/2023 | 10/01/2024 | COMBINED SINGLE LIMIT (Ea accident)<br>BODILY INJURY ( Per person)<br>BODILY INJURY (Per accident)<br>PROPERTY DAMAGE (Per accident) | $1,000,000 |
| C | X **UMBRELLA LIAB** X OCCUR<br>**EXCESS LIAB** CLAIMS-MADE<br>DED X RETENTION $10,000 | | | 20XHUOL5322 | 10/01/2023 | 10/01/2024 | EACH OCCURRENCE<br>AGGREGATE | $5,000,000<br>$5,000,000 |
| D<br>A | **WORKERS COMPENSATION AND EMPLOYERS' LIABILITY**<br>ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: N<br>**(Mandatory in NH)**<br>If yes, describe under DESCRIPTION OF OPERATIONS below | N / A | | 20WNOL5323<br>AOS<br>20WPROL5321<br>MA, WI | 10/01/2023<br><br>10/01/2023 | 10/01/2024<br><br>10/01/2024 | X PER STATUTE OTH-ER<br>E.L. EACH ACCIDENT<br>E.L. DISEASE-EA EMPLOYEE<br>E.L. DISEASE-POLICY LIMIT | <br>$1,000,000<br>$1,000,000<br>$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 CO 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 :

Certificate No : 570101700819

## NON-COLLUSION STATEMENT

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

> 3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g., ownership of five (5) percent or more).
>
> 3.4. Immediate family members (spouse, parents, and children) are also prohibited from contracting with the City subject to the same general rules.

**Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.**

| NAME | RELATIONSHIPS |
|---|---|
| N/A | N/A |
| | |
| | |
| | |

**In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.**

Leah K. Richter

Authorized Signature

Vice President

Title

Leah Richter, PE

Name (Printed)

September 23, 2024

Date

*Rev 09-2022*

## CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH NON-DISCRIMINATION PROVISIONS OF THE CONTRACT

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-17(a)(i)(ii), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

A. Contractors doing business with the City shall not discriminate against their employees based on the employee's race, color, religion, gender (including identity or expression), marital status, sexual orientation, national origin, age, disability, or any other protected classification as defined by applicable law.

Contracts. Every Contract exceeding $100,000, or otherwise exempt from this section shall contain language that obligates the Contractor to comply with the applicable provisions of this section.

The Contract shall include provisions for the following:

(i) The Contractor certifies and represents that it will comply with this section during the entire term of the contract.

(ii) The failure of the Contractor to comply with this section shall be deemed to be a material breach of the contract, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.

Leah K. Richter

Authorized Signature

Leah Richter, PE / Vice President

Print Name and Title

September 23, 2024

Date

## E-VERIFY AFFIRMATION STATEMENT

Solicitation/Bid /Contract No: Event No. 346

Project Description:

Triplex Pump Station Rehabilitation CEI Services

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

A. all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,

B. all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: Arcadis U.S., Inc.

Authorized Company Person's Signature: Leah K. Ritter

Authorized Company Person's Title: Vice President

Date: September 23, 2024

## CONTRACT PAYMENT METHOD

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale to receive your payments fast and safely. No more waiting for checks to be printed and mailed.

In accordance with the contract, payments on this contract will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, bidders must presently have the ability to accept the credit card or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below, you agree with these terms.

Please indicate which credit card payment you prefer:

✔ MasterCard

✔ Visa

Arcadis U.S., Inc.
Company Name

Leah Richter, PE
Name (Printed)

Leah K. Richter
Signature

Vice President
Title

September 23, 2024
Date

**AFFIDAVIT OF COMPLIANCE WITH FOREIGN ENTITY LAWS**
**(Florida Statute- §287.138, 692.201, 692.202, 692.203, and 692.204)**

The undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Entity is not owned by the government of a foreign country of concern as defined in Section 287.138, Florida Statutes. (Source:§ 287.138(2)(a), Florida Statutes)

2. The government of a foreign country of concern does not have a controlling interest in Entity. (Source:§ 287.138(2)(b), Florida Statutes)

3. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern. (Source: § 287.138(2)(c), Florida Statutes)

4. Entity is not owned or controlled by the government of a foreign country of concern, as defined in Section 692.201, Florida Statutes. (Source:§ 288.007(2), Florida Statutes)

5. 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. (Source: § 288.007(2), Florida Statutes)

6. Entity is not a foreign principal, as defined in Section 692.201, Florida Statutes. (Source: § 692.202(5)(a)(l), Florida Statutes)

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

8. ***(Only applicable if purchasing real property)*** Entity is not a foreign principal prohibited from purchasing the subject real property. Entity is either (a) not a person or entity described in Section 692.204(1)(a), Florida Statutes, or (b) authorized under Section 692.204(2), Florida Statutes, to purchase the subject property. Entity is in compliance with the requirements of Section 692.204, Florida Statutes. (Source:§§ 692.203(6)(a), 692.204(6)(a), Florida Statutes)

9. The undersigned is authorized to execute this affidavit on behalf of Entity.

Name: Leah K. Richter Title: Vice President Entity: Arcadis U.S., Inc.

Signature: Leah K Richter Date: 09/19/2024 03:54 PM EDT

**NOTARY PUBLIC ACKNOWEDGEMENT SECTION**

STATE OF Florida
COUTY OF St Lucie

The foregoing instrument was acknowledged before me, by means of ❑ physical presence or ■ online notarization, this 19th day of September 20 24 by Leah K. Richter, as Vice President for Arcadis U.S., Inc., who is personally known to me or who has produced _____ as identification.

CAMILLE T MATTAR
Notary Public - State of Florida
Commission # HH 576843
My Comm. Expires Jul 29, 2028
Bonded through National Notary Assn.

Online Notary Public. This notarial act involved the use of online audio/video communication technology. Notarization facilitated by SIGNiX®

Notary Public Signature: Camille T Mattar (Notary Seal)

Print Name: Camille T. Mattar My commission expires: 07/29/2028

## REFERENCES

A minimum of three (3) references shall be provided:

1. **Company Name:** Sarasota County

Address: Sarasota County Capital Projects
1001 Sarasota Center Boulevard
Sarasota, FL 34240

Contact: John J. Saputo, IV Construction Manager

Phone #: 941-650-0022 Email: jsaputo@scgov.net

Contract Value: Estimated: $1.44M; Actual: $1.2M Year: In Project Closeout

Description: Sarasota County entered into a Utility Work by Highway Contractor Agreement (UWHCA) for the Florida Department of Transportation (FDOT). The UWHCA included the relocation of a 16- inch water main under active and future ramps as well as Interstate 75 (SR 93), modifications to a 16-inch reclaimed water, and traffic fiber optic cables relocations along Clark Road (State Road 72) from Gantt Road to Hummingbird Avenue. The project included professional engineering services including design, permitting, bidding, and construction phase services.

2. **Company Name:** City of Richmond

Address: 1400 Brander St.
Richmond, VA 23224
804.646.8661

Contact: Bob Stone, Engineer Manager

Phone #: N/A Email: robert.stone@rva.gov

Contract Value: Estimated: On-call; Actual: >$200M Year: Ongoing

Description: Over the past 15 years, Arcadis has been providing Construction Management and Inspection services for the City of Richmond's Wastewater Treatment plant and CSO projects. The managed projects total more than $200M in constructed value, and none of their final costs have exceeded the original bid price. In addition, there have been no NPDES violations because of construction activities during that time nor have there been any unresolved claims. The services provided include Construction Manage

3. **Company Name:** Orlando Utility Commision

Address: 3800 Gardenia Ave
Orlando, FL

Contact: Natalie Urick, PE

Phone #: Office: 407.434.2847 Cell: 321.230.6694 Email: nurick@ouc.com

Contract Value: Estimated: On-call; Actual: $11.3M Year: In Project Closeout

Description: Arcadis provided construction management and inspection services for the replacement of approximately 4,350 LF of a 16-inch water main, maintenance of traffic (MOT) plans for the Utility Work by Highway Contractor Agreement (UWHCA) project, permitting, bidding, public outreach, and construction administration and construction inspection services. Orange Avenue is a busy corridor owned by FOOT with high traffic volume, hospitals, businesses, etc. which adds a level of complexity to the MOT and the construction sequence.

**4. Company Name:** Harford County

Address: 220 S. Main St.
Bel Air, MD 21014

Contact: Steven D. Schulz, P.E. Civil Engineer III

Phone #: Office: 410.638.3300 ext 1474 Cell: 443.838.2352 Email: sdschulz@harfordcountymd.gov

Contract Value: Estimated: On-call; Actual: $75M Year: Ongoing

Description: For over 30 years, Arcadis has partnered with Harford County to implement some of their more challenging water and wastewater projects. Arcadis has provided construction management and inspection (CM/I) services, for the award-winning Sod Run Wastewater Treatment Facility Enhanced Nutrient Removal project, the Abingdon Water Treatment Plant, the Bush Creek PS & FM and the Sod Run Bio Solids Dewatering project.

**5. Company Name:**

Address:

Contact:

Phone #: Email:

Contract Value: Year:

Description:

# About Arcadis

Arcadis is the leading global Design & 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 $4.2 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.*