

## Implementing Asset Management Will Allow the City to Manage Infrastructure and Provide the Lowest Long-Term Cost to Rate Payers

CDM Smith has planned, developed, and implemented asset management (AM) programs across the country for utilities of all sizes, from small communities to some of the largest utilities in the world. The hallmark of our approach is to tailor a program that addresses the unique business and operating requirements of each client.

At CDM Smith, our firm-wide Asset Management (AM) and data solutions practice includes over 150 dedicated professionals focused exclusively on helping utilities optimize AM strategies and implement effective data solutions. Our AM capabilities, as represented in the list below, are further enhanced by nationally recognized strengths in conveyance, operations and maintenance (O&M), and water systems.

- AM planning and strategy development
- AM governance & ISO-55000 compliance
- Technology implementation including CMMS, GIS, business intelligence, web & mobile, and AI-driven tools
- Asset inventory and condition assessment, programs, and strategies
- Advanced risk framework development and criticality analysis
- Business intelligence and data analytics solutions
- Rate studies and organizational alignment
- Application of predictive analytics, machine learning, and digital twin technologies
- Data and technology master plans, technology integration, and data governance
- Life cycle cost analysis and risk-informed capital planning
- Preventative maintenance program optimization and training programs
- Smart capital and maintenance programs

We will leverage our experience from **150+ AM projects** developed and implemented with a customer base ranging from 10,000 to over 5 million.



### Innovators in utility asset management and technology solutions



**35+**  
YEARS

Implementing AM, GIS, and Technology Solutions for Utility and Governmental Clients



**150+**

Asset Management and GIS Staff



**100+**

Web & Mobile GIS Apps

**78**

YEARS

Wastewater & Water Industry

**150+**

Asset Management Implementations



**200+**

GIS & Technology Environments Implemented

**35** YEARS

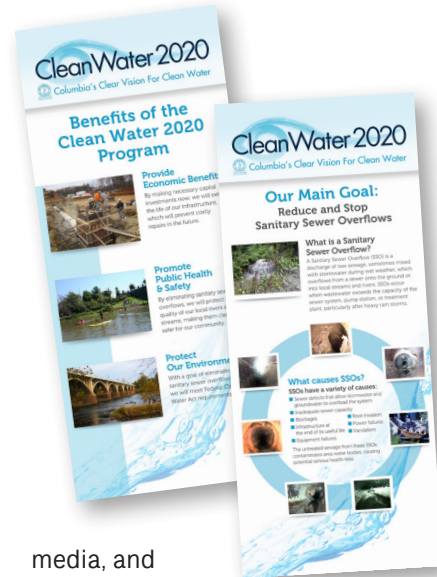
AS AN  
**esri**  
Business Partner

## Public Outreach with a Keen Attention to Detail and Commitment to Keeping Your Stakeholders and Customers Informed

Achieving community buy-in is paramount to successfully delivering a large utility program. Gaining trust and meeting the needs of the community is the keystone to community engagement. This includes proactive communication throughout the process to the residents/community, minimizing disruptions, performing timely restorations, and respecting individual homes and businesses throughout the process.

CDM Smith offers proven performance in consensus building and maintains examples of outreach that have resulted in successful program implementation. With involvement of our trained communication specialists, skilled public policy professionals, and locally-based experts, our team's approach is based on strategic engagement and grounded in using proven outreach techniques and communication technologies.

We have helped many utilities in their outreach efforts regarding sensitive water concerns, including Columbia, Hartford, Newark, Trenton, Middlesex Water Company, and the Passaic Valley Water Commission in New Jersey, the City of Chicago, IL, and Washington, DC. We do everything from preparing multi-lingual materials about a project's progress, impacts, and benefits, to helping prepare for and attending public meetings, to guiding stakeholders through decision-making processes, taking care to align our outreach efforts with the needs of customers. For the Columbia Clean Water 2020 Program we worked with the City to support public outreach and communications on a utility-wide and project specific basis. We helped develop messaging concepts and specific content, including the Program website, newsletter, social project specific updates.



media, and  
Columbia's  
Clean Water  
2020 Program  
Public  
Outreach  
Materials



## Effective Public Engagement Materials

CDM Smith has created a variety of targeted bilingual public outreach materials that are thematically consistent and use appealing graphics in a clear manner, supporting a high-level of community engagement.

Our team member Brizaga, Inc. directed community engagement and public education efforts for the City's Stormwater Master Plan. They designed a strategic communications plan with print and digital materials to simplify complex technical data for residents. They led outreach events, including hybrid workshops and roundtables with residents, business owners, and local officials and supported the development of a Citizens' Guide to enhance public understanding of stormwater infrastructure and its role in resilience.

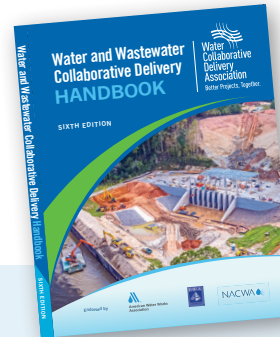




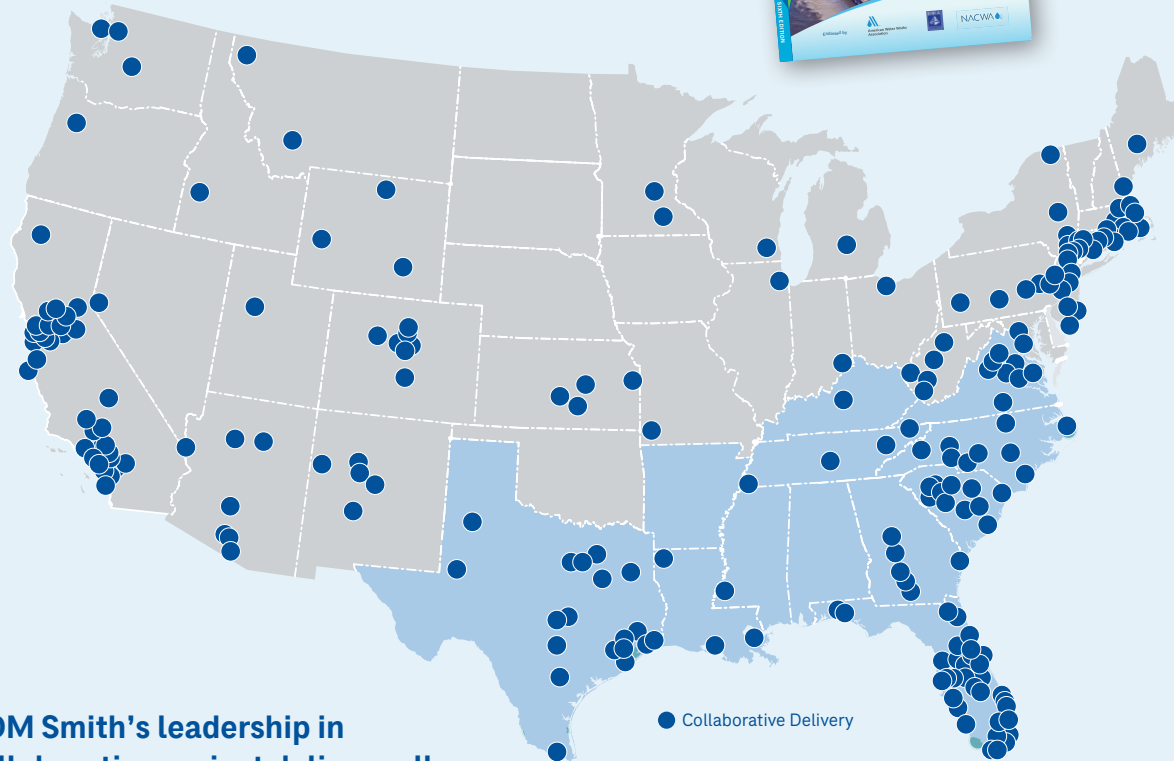
## Advertise Collaborative Delivery Projects

CDM Smith has been performing collaborative project delivery for 33+ years and works closely with organizations such as Design-Build Institute of America (DBIA) to develop and implement best practices for Design-Build (DB), Progressive Design-Build (PDB), and Construction Management-at-Risk (CMAR). Collaborative delivery methods require detailed management and communication between the Program team working with the design-build contractor (if design-build) or with the designer and the constructor (if CMAR).

**Our construction expertise allows us the quickly and efficiently evaluate bids and RFQ proposals, review and analyze proposals with respect to cost/risk/quality, lead source selections, negotiate work order and contracts, prepare resolution and staff summary to process and execute the approval of design work orders and construction contracts.**



*As a founding member of the Water Design-Build Council (WDBC) and active participant in supporting DBIA, CDM Smith provides leadership in implementing best practices.*



**CDM Smith's leadership in collaborative project delivery allows us to help evaluate whether projects under the City's program would benefit from collaborative delivery to meet expedited schedules and close out the program(s).**



### CASE STUDY

## Successful Delivery of Pipeline Projects Managed by

### CDM Smith Under the Columbia Clean Water 2020 Program

CDM Smith is currently serving as owner's advisor for the Saluda River Force Main Extension project, the first CMAR delivered project for Columbia Water. The project extends the current 30-inch force main by -1,200 lf and include upsize of -2,200 lf of gravity sewer to 48 inches. The project features microtunnel crossings of both the Saluda River and the historic Columbia Mill ruins, with an anticipated \$16+M construction cost. We worked closely with Columbia to select the delivery approach for this project, that best aligned with their goals, experience and internal processes. Upon selection of the CMAR delivery method, we assisted with the CMAR procurement, contract document development, and project management to verify successful project delivery.



## Construction Management Expertise

CDM Smith's construction management services are centered around quality and reliability. We are the eyes and ears in the field and will look out for the City to make sure you are getting the quality and product that you are paying for.

With the City engaged in so many projects, we know it can be challenging for your staff to dedicate significant time to the construction of the projects under this program. Our staff can help. CDM Smith takes great care in the assessment and planning of construction management activities and construction operations prior to execution. Our construction professionals understand the importance of a well-organized plan and the benefits of taking time to plan, which include, but are not limited to, identifying site safety hazards, identifying schedule and sequencing conflicts, identifying design discrepancies, and other unanticipated elements that can adversely affect a construction project.

### Quality

Our quality-focused tools and processes deliver consistent and complete work elements.

#### Pre-construction:

- Establish communications protocols
- Review contract documents for constructability and contractors' schedules and work plans for thorough planning and timely completion

#### During construction:

- Manage and coordinate project documentation
- Monitor, document, and report contractors' performance and progress

#### Post-construction:

- Coordinate, monitor, and document work acceptance
- Oversee testing, commissioning, and close-out protocols

### Reliability

CDM Smith uses best practice tools and our educated experts to manage all aspects of the construction process.

- Emphasize communications and organize meetings to promote constructive discussions and structured negotiations to effectively bring issues to timely resolutions
- Develop and implement project document management systems
- Use scheduling software and advanced data analytics software to track project progress
- Use established estimating tools and software to develop and assess bids and proposed changes

### Safety

Safety management on programs requires our team to assist in developing contract requirements, review safety-related submittals, and perform safety oversight and reporting. We take our strong culture and commitment to safety, as proven with our better than industry standard EMR, and apply our knowledge to reinforce the City's role in promoting strong safety performance by contractors. Field oversight specifically will:

- Use dedicated professionals
- Establish good relationships with contractor field personnel
- Monitor leading indicators of safety performance

## Quality Management

CDM Smith's quality program is a cornerstone of our operational philosophy and project delivery, deeply embedded in both our internal culture and external client engagements. We define quality as meeting the requirements of our clients and ourselves—it is the foundation of providing a legendary client experience. Our robust quality management program removes uncertainty and builds trust with our clients and our brand.

Because of our extensive experience in delivering billions of dollars of programs for public sector clients, our team has established quality management processes for program management, design, and construction.

“CDM Smith has provided exceptional Program Management services to the City of Columbia. Their strengths on this long-term project enabled the City to successfully maintain compliance with our Consent Decree while staying within their contracted budget. These strengths include excellent program controls, the ability to hire and maintain a very professional and highly qualified team, a 100% focus on providing quality work on schedule and exceptional program leadership. I would hands down recommend CDM Smith for providing any aspect of program or construction management services at any level.”

— John Riggs, PE;  
Wastewater Project Manager  
City of Columbia, SC



### CASE STUDY

## Harris County Flood Control District Master Agreement for Construction Management Services, Houston, TX

Similar to the services required by Hollywood, for this large multi-purpose facility with phased construction, CDM Smith provides CM Agent services to the Harris County Flood Control District. Our services include construction management, daily inspection, and construction materials testing for a flood control improvements projects throughout the County.





## Risk Management

Proactive risk management is a vital step needed to navigate uncertainties and potential obstacles that could jeopardize the success of individual projects or the Hollywood Stormwater Program overall. Our risk management approach is a continuous process that focuses on identifying, assessing, mitigating, and monitoring risk on both a project-level and a program-level. The risk management processes follows industry-recommended practices, such as those described by the Construction Management Association of America (CMAA) and the Project Management Institute (PMI). In addition to describing risk management processes, our tailored Risk Management Plans include:

- A likelihood-consequence matrix to evaluate threats and opportunities across the dimensions of cost, schedule, safety, and public relations
- A risk register template, which is the primary tool for documenting the identification and analysis of risks, risk response actions, responsibility for response actions, risk and response status, and residual risk will be provided as part of the Program Management Plan (PgMP).

Prior to holding an initial Risk Management workshop, we prepare the draft risk register. This is based on our experience on other large programs, and addresses many technical, logistical, and communication risks inherent to performing the work. This allows the initial risk workshop to be productive and efficient and helps to foster a collective understanding of the range of risks facing the program. In our experience, the risks with the highest potential combination of likelihood and impact on a program are related to logistics, public outreach and communication, permitting, and data management. We leverage our experience in assessing and responding to those types of risks to efficiently develop an approved baseline risk register, and to begin implementing risk response actions to drive achievement of planned replacement rates and productivity.

| IDENTIFICATION | ASSESSMENT                     | MITIGATION | MONITORING  | RESPONSE    |
|----------------|--------------------------------|------------|-------------|-------------|
| RISK           | DESCRIPTION                    | LIKELIHOOD | CONSEQUENCE | RISK RATING |
| M.0.1          | Loss of critical staff         | High       | High        | Very High   |
| M.0.2          | Loss of critical equipment     | Medium     | Medium      | High        |
| M.0.3          | Loss of critical data          | Low        | Low         | Medium      |
| M.0.4          | Loss of critical funding       | Low        | Low         | Medium      |
| M.0.5          | Loss of critical permits       | Low        | Low         | Medium      |
| M.0.6          | Loss of critical contracts     | Low        | Low         | Medium      |
| M.0.7          | Loss of critical relationships | Low        | Low         | Medium      |
| M.0.8          | Loss of critical reputation    | Low        | Low         | Medium      |
| M.0.9          | Loss of critical resources     | Low        | Low         | Medium      |
| M.0.10         | Loss of critical information   | Low        | Low         | Medium      |

*CDM Smith develops program specific risk registers for coordination with the Client on who takes the risks of the unknowns, and incorporates them in a contingency as part of budget. For the Clean Water Nashville Program we have successfully used a risk register for the past 13 years.*

## Expertise in Florida Septic to Sewer Conversion

The City will be embarking on a concurrent program of septic to sewer conversions in areas that may overlap the SWMP CIP. It is important for the program manager to understand the process of the wastewater system construction for coordination of design and efficient installation of the parallel systems. CDM Smith has performed many septic tank phase-outs, as well as designed numerous wastewater collection systems for clients throughout Florida.

### Progresso Neighborhood Improvements, City of Fort Lauderdale, FL



- 35,000 lf of new sanitary sewers and designed and installed a new triplex submersible master pump station for a septic tank redevelopment in a mixed residential and commercial area neighborhood near downtown.
- Replacement of 25,000 lf of old, smaller diameter water mains, water service connections and water meters with new 8-inch pipe and new fire hydrants for spacing to code.

### St. Augustine Beach Septic Tank Phase Out, St. Johns County, FL



- Provided engineering services to successfully secure grant funding for the elimination of failing septic tanks, the administration of the grant, preparation of the facilities, and capital finance planning for the City of St. Augustine Beach septic tank phase-out program.
- The project included 27,500 feet of gravity pipe, 120 manholes, 13,000 feet of force main, and eight pump stations to connect 700 homes to a sanitary sewer system and phase out their septic tanks.

### Scott Mill Hill Wastewater Collection System Improvements, JEA, FL



- Conducted a feasibility study for the phase out of the septic tank system, as well as engineering design and bidding services for the preparation of contract documents related to the construction of wastewater collection system improvements.

## Local Permitting Expertise

CDM Smith has a long-standing and multifaceted permitting presence in Florida, with extensive experience across environmental, water, and infrastructure projects. Our team brings extensive knowledge and thorough understanding of regulations, the people, and the procedures involved in obtaining permits. We strive to maintain our relationship with regulatory agencies to verify a smooth permitting process for our clients. We have specific, recent experience with Southeast Florida regulatory staff, including the Florida Department of Environmental Protection (FDEP), South Florida Water Management District (SFWMD), United States Environmental Protection Agency (EPA), US Corps of Engineers (USACE), and the Central Broward Water Control District (CBWCD). Please refer to **Tab F Knowledge of Site and Local Conditions** for additional information on our permitting experience.

## Coordination with Florida Department of Transportation (FDOT)

A local firm with almost 38 years of experience providing transportation services to the FDOT and to municipalities throughout Florida, CDM Smith is uniquely qualified to assist the City with FDOT coordination and permitting, and in fact, our staff are embedded in the FDOT's head office in Tallahassee affording us a unique understanding of FDOT permitting requirements. Our extensive experience in permitting local Florida transportation projects provides valuable insight into the necessary design elements and relations with the FDOT. Our established excellent working relationships with the FDOT is demonstrated through the successful coordination efforts for many local Hollywood projects including the Johnson Street Culvert JPA, the SR A1A present and future stormwater pump stations conceptual designs and design coordination, Sterling Road/Turnpike SWMP and Sheridan St/Turnpike coordination, FDOT I-95 Expansion SWMP coordination, Sunset Park SWMP coordination, Hollywood Beaches backflow preventors, and King Tide flooding analyses and pipe lining coordination. This relationship verifies a smooth permitting process for our clients. Preapplication meetings would be conducted as soon as possible, and would be used to identify the most permissible path for each project.

## Central Broward Water Control District (CBWCD)

CDM Smith and our team members, both Chen Moore & Associates (CMA) and Craven Thompson & Associates (CTA) have experience in permitting with CBWCD. During the SWMP, CDM Smith worked closely with the CBWCD and its engineer to coordinate the offsite flows to and from their basin areas and to understand their stormwater operations. As the CBWCD's jurisdictional watershed overlaps the city limits, CDM Smith obtained, analyzed, and incorporated their basic watershed stormwater model into the citywide SWMP and enhanced the detail to meet the City's desired LOS analyses. As the City's trusted representative, we hosted several stormwater workshop meetings for City Staff and Commissioners with the Control District Board members and their engineers to share the SWMP findings and propose potential joint solutions for flood reduction in the common jurisdictional areas.

In addition, CMA, as our design partner, has extensive experience working with CBWCD. They have been working on projects within CBWCD for over three decades and have a thorough understanding of the permitting requirements. All design improvements will adhere to the CBWCD Stormwater Management Regulations, Standards, and Procedures design criteria.

CTA has served as the District Engineer for the 22 square mile CBWCD since March 2007. As surveying and program management staffing augmentation, they will continue their engagement with CBWCD as an independent reviewer of all drainage projects within that area; review variance requests; and serve on the Development Review Committee, etc.

For permitting, CDM Smith has been your valued partner locally with CBWCD, Broward County Environmental Permitting Department (EPD), and Broward County Surface Water License Division using the master plan as a tool to provide analyses and respond to permit RFIs and providing project narratives for designers applying for permits on their stormwater projects. We will continue this local, close coordination.

**CDM Smith has developed innovative stormwater solutions that have saved our clients over \$385M in the last 20 years on more than \$1.6B of stormwater infrastructure.**

## Proven Expertise Provides Funding Compliance

CDM Smith's experience in program management also includes funding support for federal, state, and municipal programs and projects. Our team has expertise in identifying available funding, writing grants and justification requests to obtain such funding, and administering the funded programs in accordance with the funding guidelines. We are also experts in preparing the financial reporting necessary for such funding for our clients. We have experience with a range of government agencies that provide financial aid for infrastructure and public works, including FEMA, Housing and Urban Development (HUD) Community Development Block Grants (CDBG), American Rescue Plan Act (ARPA), State Revolving Funds (SRF) and several others.



*CDM Smith is managing the City of Miami's Stormwater Master Plan, which has received \$360M in ARPA grants.*

As your program manager, we will support the City in reviewing the projects under the scope of this contract, assessing the schedules and needs for each project, and creating a comprehensive overall plan that allows for the most efficient use of funding and meets the required expenditure deadlines for each funded project. We will track and report on the progress of each project and expenditures as part of our overall reporting in project delivery to verify compliance with Federal program guidelines.

## \$158M WIFIA Secured Funding for Memphis, TN

“...today we officially closed on the WIFIA loan. Its been a long journey but all of this started in partnership with CDM Smith who helped us achieve a successful application with EPA... please pass along my gratitude to the CDM Smith team who worked on the application for the City.”

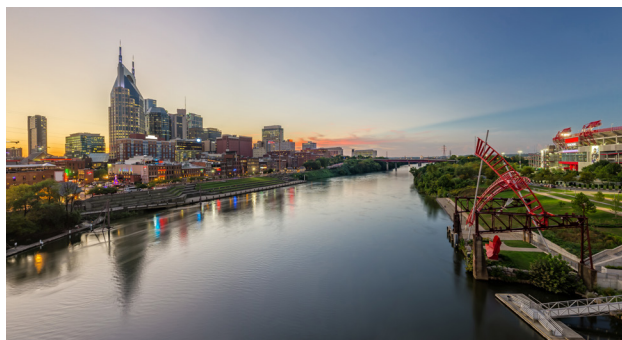
— Robert Knecht | Public Works Director, City of Memphis, TN





## Past Performance - Leverage Experience to Develop Good Decisions for the Future

Our team will work in unison with the City throughout the life of this contract to enable our entire team to meet our commitments and your expectations. Over the years, we have successfully led the implementation of critical local and national programs to deliver large-scale stormwater infrastructure solutions—granting us the experience and credibility to meet any challenge that may emerge. Details of our projects are included in **Tab G: References**.



### Clean Water Nashville Program & Construction Management NASHVILLE, TN

**Program Value:** \$2.74B

**Program Dates:** 2011 – 2023; 2023 – Ongoing

- Technical and managerial support for 129 projects to reduce combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs)
- Develop scopes and OPCCs, manage design firms, identify and manage risks, coordinate permitting and property acquisition, assist with outreach, and support bidding and construction services

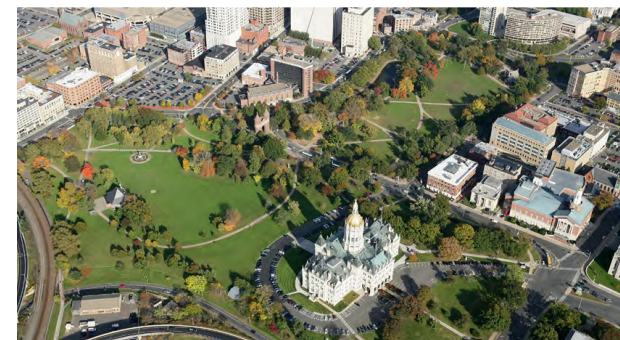


### Clean Water 2020 Program COLUMBIA, SC

**Program Value:** \$1B

**Program Dates:** 2012 – 2023;  
2023 – Ongoing

- Manage projects as extension of staff from inception through design and construction to closeout
- Managed 75+ active projects, from complex WWTP projects to pump station and collection system rehab, and new pump stations and pipelines for expanded capacity
- Public meetings, maintain program website, social media posts, and yard signs to alert on project status



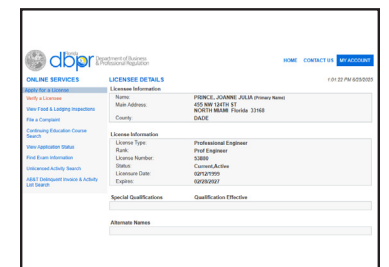
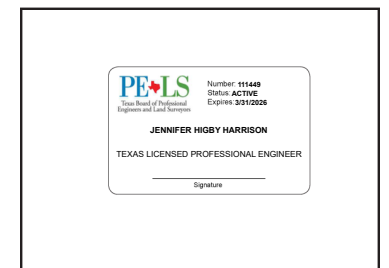
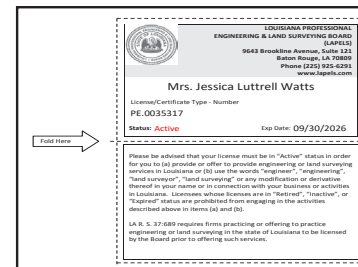
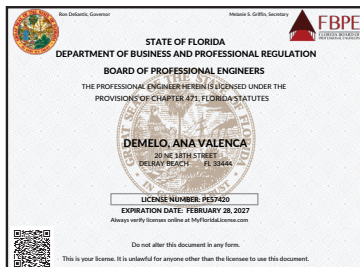
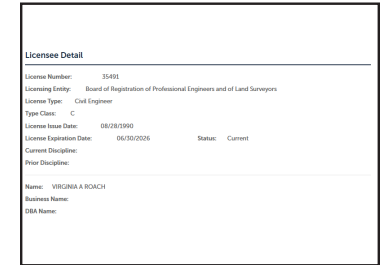
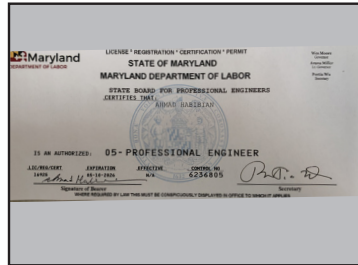
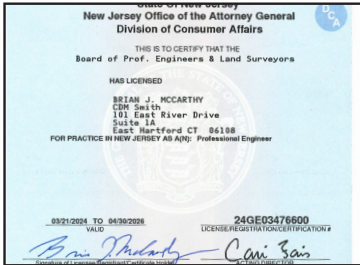
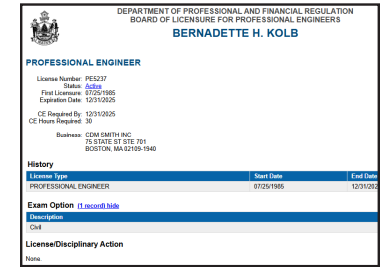
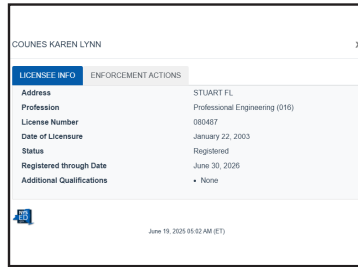
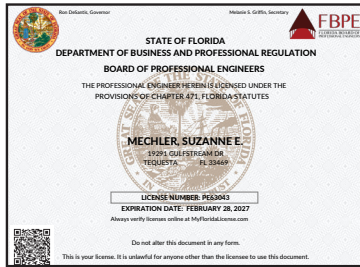
### Clean Water Program Management METROPOLITAN DISTRICT COMMISSION, HARTFORD, CT

**Program Value:** \$2.5B

**Project Dates:** 2007 – 2023; 2023 – Ongoing

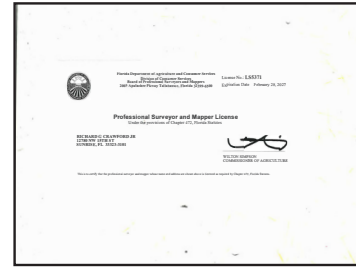
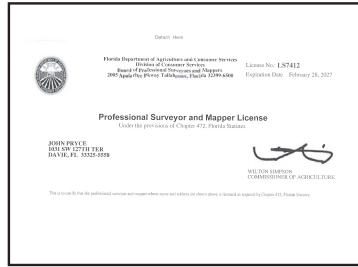
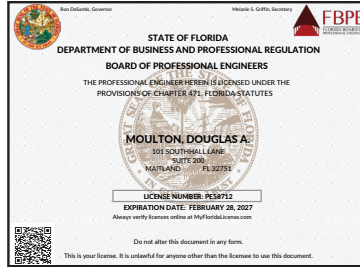
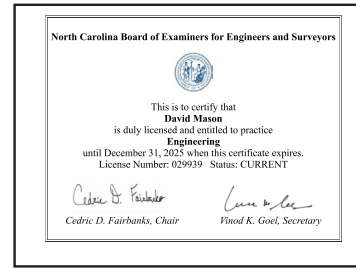
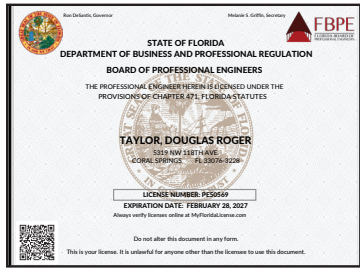
- 250 projects, with 100+ completed to date include \$1.2B in large-diameter tunnels/conduits, \$550M in WWTP upgrades, \$300M in separate combined sewers projects, and \$320M in projects to reduce I/I
- Assisted in fast-tracking projects to engage local contracting and labor communities and take advantage of ARRA funding; to date, secured \$1B in grants and loans for program

## Minimum Qualifications - Staff Licenses

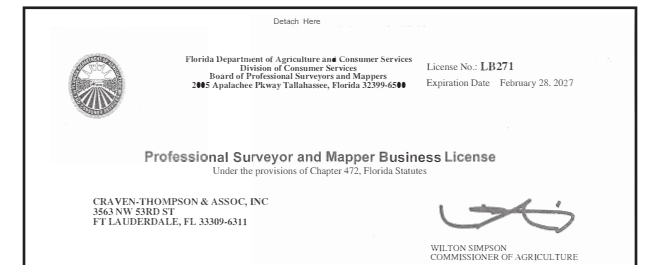




## Minimum Qualifications - Staff Licenses (continued)



## Minimum Qualifications - Subconsultant Firm Licenses





## **Tab D:** Organizational Profile and Project Team Qualifications



# Organizational Profile and Project Team Qualifications

## Proven Leadership to Deliver the Program by Anticipating and Mitigating Challenges with Proactive Communication



### Karen Counes, PE, Program Manager

**Recognizing the significance of this program, we have assigned Karen Counes as Program Manager. She is a South Florida resident specializing in infrastructure and public works facilities. She is a proven program manager with 28 years of experience developing and delivering complex technical programs with challenging schedules and budgets and advises clients and teams on different delivery approaches to accomplish client goals.**

Karen's experience includes both the consulting and owner's side of the table, giving her a clear understanding how the two need to integrate. She has been responsible for technical quality, planned major programs up to \$1B, provided collaborative contract delivery methods, and managed a team of 20 consultant design teams to prepare design and construction documents for SFWMD. She will manage the overall direction for the program, conduct scope negotiations, prepare projects for procurement, and manage projects as an extension of City staff from inception through design and construction to project closing.



### Juan Mendoza, Jr., PMP, Onsite Project Manager

**Juan has 25 years of experience as a project management professional with extensive experience in delivering capital projects across various industries. He has a deep understanding of construction and fiscal management processes and excels in high-tension situations requiring quick analysis and critical thinking. As a certified PMP Juan brings expertise in risk management, client communication, and quality procedures—areas necessary successful implementation of Hollywood's Stormwater Program.**

Juan will support Karen and allow her to do what she does best—building a structured, right-sized team to accomplish the City's goals—while Juan focuses on day-to-day oversight of all stormwater projects from Hollywood's Public Utilities offices. This will include extensive coordination with City staff and other stakeholders including developers, homeowners, regulatory agencies, and other consultants; standards management; project scoping; capital budgeting; project scheduling; design reviews; document control; easement acquisition; bidding coordination; and construction management.

## Setting the Benchmark for High-Performance Delivery

Karen and Juan recently collaborated on the \$1.6B Genera program to restore operational capacity and improve the power generation system in Puerto Rico after devastating hurricanes. While Juan acted as client liaison for the onsite program team, managing day-to-day operations, Karen provided headquarters team support as an advisor for program management needs and provided subject matter expertise in engineering operations including optimization of plant efficiencies and regulatory standards, regulatory compliance, operational dashboards, and quality management support. This talented tandem, Juan as onsite representative and Karen as the advisory support, worked in concert to lead a team of 23 professionals supporting the improvement of Puerto Rico's power infrastructure 14 projects launched in the aftermath of the extensive hurricane damage to upgrade and ultimately strengthen critical points of Puerto Rico's power grid.



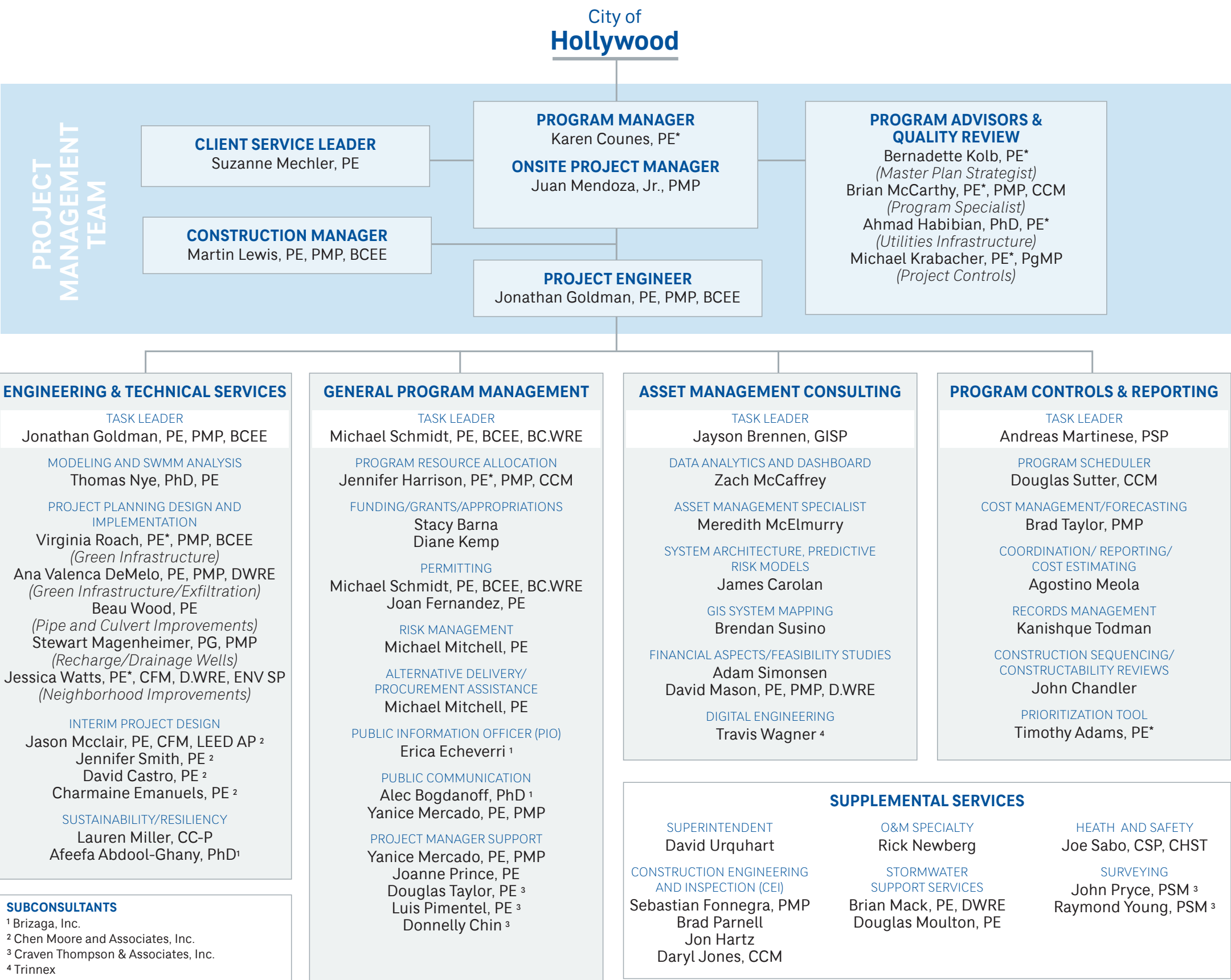
Breadth and Depth of Expertise – Great shared past experience will deliver comprehensive approach to effectively manage the City’s stormwater

The organizational structure of the CDM Smith team, shown in the attached figure, was developed to efficiently deliver this program. Based in our Boca Raton office, we offer a local Program Management team with extensive experience and a proven history of successfully delivering large, complex programs that support our client’s goals. Our organizational structure provides senior management expertise for day-to-day leadership and experienced technical experts in an organization that fully supports the City of Hollywood staff by aligning the strongest professionals with the most appropriate projects.

Local Teaming Partners with a History of Serving Hollywood

CDM Smith routinely works with specialty firms to complement our in-house capabilities. We have forged exceptional working relationships with many subconsultants throughout South Florida, we recognize and appreciate the value in developing strategic and long-term partnerships with local firms. Our team includes four specialty support firms with recent and relevant stormwater infrastructure experience. Details for each firm are included in **Tab H Subconsultant Information**.

CDM Smith is committed to being the City’s trusted partner in delivering resilience through a community-centered Stormwater Program that addresses flooding challenges, safeguards public health, protects economic vitality, and enhances quality of life.



\* PE in State other than Florida



## Performance, Experience, and Qualifications, Exemplary Cost Containment Minimization of Change Orders and Proven History of Project Completion Within Initial Budget

We are confident in our ability to deliver executional results in our program through project delivery and the following strengths:

### Performance, Experience, and Qualifications

CDM Smith's project management and delivery process are designed to meet client expectations and incorporate technological and business tools to assist project managers in delivering projects on time and within budget. The program also integrates our well-established Quality Management System (QMS) as an integral part of our delivery process.

Our approach is based on the Project Management Institute's (PMI) framework to project management. Our onsite project manager, Juan Mendoza is a certified Project Management Professional that is trained and proficient in the use of modern project management tools and data that allow an efficient project delivery. Our project delivery will focus on one-on-one client coordination.

### Exemplary Cost Containment and Minimization of Change Orders

We implement rigorous cost control measures from project inception through completion. Our proactive budgeting, value engineering, and negotiations have consistently resulted in cost savings without compromising quality. One of the risk management strategies we implement is to regularly monitor ENR's Construction Cost Index against the program's escalation assumptions and actual costs.

In addition, through pre-construction planning, stakeholder engagement, and detailed scope definition, we minimize change orders. We maintain a change order management log to monitor and track issues with projected and actual costs as they develop. This along with managing critical path schedules will directly affect the health and expectations of the project as it moves through construction.

### Proven History of On-Budget Completion

We have a strong track record of completing projects within the original budget. As maintaining the schedule is so closely linked to budget, a proactive team helps all parties stay within budget and deliver a successful project. Program Controls Lead Andreas Martinese will develop budget and tracking progress and reporting that are critical Program success.

For example, we have managed NAVFAC Atlantic's U-ICAP Program since 2009, enabling maintenance and capital replacement projects to be prioritized, to date, we have successfully delivered 50+ task orders on schedule/within budget. The success is due to our disciplined project management and forecasting tools as well as a detailed budget and schedule review at key stages to validate costs.

### Clean Water 2020 Program, City of Columbia, SC

| CHALLENGE  | SOLUTION   | BENEFITS AND RESULTS   |
|--|--|--|
| The utility had outdated and inconsistent project documents and contracts that did not protect the owner, paired with a reactive approach to construction management. This often left the utility open to large change orders and unable to proactively manage the schedule and construction processes resulting in unclear lines of responsibility. | CDM Smith's Program Management team lead the City through a process to dramatically improve contract documents, establish new standard construction contracts, develop workflows and processes for construction management, and strengthen the construction management inspection and oversight roles. | Better contract terms, consistent workflows and responsibilities, and improved levels of inspection were delivered consistently on all new projects. This new approach led to a decrease in bid price variation as a result of clarity in the scope and contract documents. During construction, this effort also reduced change orders, improved project quality, and greatly reduced the schedule and cost risk to the City. |



## KEY PERSONNEL

### Experience Highlights

- Responsible for technical quality, planned major programs up to \$4.2B
- Delivered programs using multiple contract delivery methods, including Construction Management At-Risk (CMAR), Design/Build (D/B), PDB, Engineer-Procure-Construct (EPC) and others,
- Managed a team of 12 engineers to prepare design and construction documents for New York Power Authority assets

#### EDUCATION:

ME – Environmental Engineering;  
BS – Civil Engineering

#### LICENSING/REGISTRATION:

Professional Engineer (PE):  
NY, NJ, TX

#### PERCENTAGE OF TIME ASSIGNED FULL TIME TO THIS PROJECT:

50%

#### TOTAL YEARS EXPERIENCE:

28

#### YEARS WITH CDM SMITH:

4

#### YEARS WITH OTHER FIRMS:

24

## Karen Counes, PE

### Program Manager

**Roles and Responsibilities.** Karen is a proven and tested large project and program management professional that specializes in infrastructure and public works facilities. She develops and delivers complex technical programs with challenging schedules and budgets and advises clients and teams on different delivery approaches to accomplish client goals. She develops programs and innovative solutions by using a long-term, collaborative vision and aligning people, processes, and technology to provide the best value and positive impacts to clients. Karen's 'hands-on' experience provides a unique perspective that allows her to look past the traditional ways of doing business in order to solve today's and future challenges for clients.

#### Assistant Director of Engineering, Everglades Restoration Program, Everglades Restoration Engineering Department, SFWMD, West Palm Beach, FL

- Led and managed multi-disciplined teams to plan, design, and construct large-scale environmental and water resource projects in accordance with the Everglades Restoration Program, spanning a total of 11 major projects of approximately \$385M each, totaling \$4.2B, plus a series of smaller projects in the program portfolio.
- Managed portions of the engineering budget and schedule of the Everglades Restoration capital program and managed a team of District project managers and over twenty consultant design teams.
- Directed activities in keeping with the strategic goals of the mission of Everglades Restoration according to the Water Resources Development Act requirements, including managed large-scale capital Everglades Restoration projects from conception to and through construction.
- Managed cross-functional consultant teams, identifying and planning land acquisitions, partnering with local government agencies, planning capital improvement project designs, budget and schedule management, engineering design review, and critical path decision-making.
- Conducted interagency coordination during all project phases and spearheaded the creation of a new change control process for project management procedures that increased efficiency and tracking in project, budget, and program management.

#### Program Advisor and Operations Subject Matter Expert, New Fortress Energy/Genera Master Services Agreement Program Management, New Fortress Energy/Genera, PR

- Provided quality management for program deliverables and advised an on-site program team that provided upgrades and improvements to Puerto Rico's power infrastructure in this \$1.6 billion program launched in the aftermath of the extensive damage caused by Hurricane Maria.
- Provided guidance in program setup, planning, procedure development including the program management plan, budgets, schedules, risk management and quality management.
- Performed quality reviews of major deliverables and helped resolve unanticipated program challenges with the multifaceted team and client as they arose to keep the Program moving forward.
- Acted as an operations and engineering subject matter expert and advised the client regarding plant operational inefficiencies and reporting, plus worked with the client to comply with federal licensing requirements and worked with the client to create plans to reduce inefficiencies and improve deliveries and rates for consumers.

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**Program Director, Program Management Services for Architecture Facilities, Nevada Department of Transportation (NDOT), Carson City and Various Locations, NV**

- Developed the program management approach and guidelines for NDOT's Architecture Facilities Program, as well as managed the program delivery services on-site staff as part of a staff augmentation effort to support NDOT's Statewide Buildings Capital Improvement Program.
- Prepared the Program Management Plan and advised and guided the client through changes in their process and managed the delivery of projects from scope development through construction.
- Responsible for the development of three strategic plans, the Carson City Headquarters Complex Strategic Plans, Statewide 55 Maintenance Station Strategic Plan, and the overall Five-Year Strategic Plan.
- Led the development of a Project Prioritization tool, criteria and dashboard as part of the planning. These strategic plans are used to prioritize critical needs and also to prepare biennium budget requests to the state legislature.

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**Program Advisor, Clean Water 2020 Program, City of Columbia, SC**

- Prepared contract documents and led contract negotiations for a public-private partnership to use the City's waste effluent for a biogas plant that would provide fuel to sell to local users. Worked with the City to develop bid criteria, bid evaluation procedures, technical criteria and agreements with stakeholders for a \$10M plant to increase greener energy for the City over a 10-year period.
- Reviewed several reports and communications documents from the program team to the City and assisted in resource management and staffing to allow the program team to continue to provide a consistently high level of service in program delivery.
- Provided recommendations and templates for reporting to both technical and executive leadership, and led the program team to streamline communications.
- Advised the program team on resource allocation and management including how to maintain the same volume of staff under varying workload conditions over time to provide continued service throughout the program.

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**Owner's Advisor, City of Nashville Clean Water Program, City of Nashville, TN**

- Jointly drafted a memo with the Construction Manager that evaluated the use of a Construction Management At-Risk delivery method versus a traditional design-bid build delivery method for a linear project for work at the Central WWTP.
- Assessed the project, the methods and noted the benefits and impacts of each decision for the City, and ultimately provided recommendations via formal memo that was incorporated into the City's record of decision in selection of delivery method.

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**Owner's Advisor and Program Management Advisor, Risk Management, Valley Water P3 Purified Water Program, Santa Clara Valley, CA**

- Evaluated Technical Requirements for Valley Water's Public-Private Partnership for the Purified Water Program design/build/finance/operate/maintain delivery for a large advanced treatment facility and distribution and conveyance elements for the \$15M, five-year program.
- Evaluated the technical requirements and bid documents from a risk management perspective and provided comments, edits and recommendations that helped provide a clearer, more detailed set of performance and technical requirements that will enhance the bid process for the owner and contractor and also shield the client from additional risk.

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**Management Consultant, Strategic Plan Development, Clay County Utility Authority, FL**

- Led a team of subject matter experts, while also serving as one of those experts, in operations management, program management, engineering, communications, finance and information technology to develop a strategic plan roadmap for the Clay County Utility Authority to upgrade and add new facilities to grow from a mid-size utility into a large-scale utility.
- Evaluated the current conditions, assessed their financial and overall operations, and worked with their executive leadership team to develop critical factors for success, critical needs to address, and develop a roadmap of activities needed for a full strategic plan.
- Full strategic plan involves developing recommendations, tactical plans for enterprise-wide procedure and software system changes, operational changes in several departments, staff development and training, capital improvement planning, and related tasks.
- Led the CCUA Leadership Team through the development of the Workforce Development portion of the full strategic plan development and served as an overall subject matter expert and management consultant throughout the joint process.