



BLACK & VEATCH

City of Clearwater

Asset Management System

May 18, 2023 | RFP #36-23



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Letter of Transmittal





May 18, 2023

City of Clearwater
Procurement Division
100 S Myrtle Ave, 3rd Floor
Clearwater, FL 33756-5520
Submitted via Online Bidding Website

RE: RFP #36-23 Asset Management System

Dear Selection Committee:

We recognize the criticality of this project and are eager to continue to assist the City in achieving long-term success through a more reliable and consistent work order system and better data management. Through our previous work with the City's Public Utilities Department and as a Gold Level Cityworks implementation partner, we have repeatedly demonstrated our ability to exceed customer expectations. We will continue to provide excellent support to the City within and beyond Public Utilities to include the Information Technology staff, Public Works, Recreational, and Facilities Management Departments. We are committed to performing the services requested within the time period agreed to with the City.

By selecting Black & Veatch for this project, the City will receive the following benefits:

- **An Asset Management System that meets all of the City's Goals and Objectives.** Black & Veatch understands the assignment and will ensure the system supports the City of Clearwater's Strategic Plan, Vision and Mission. We will provide effective collaboration to make sure all stakeholder needs are met in a cost-efficient manner. Finally, we will maintain the highest security and resilience standards to protect the City's investment and business operations.
- **We will provide the highest quality deliverables with creative solutions through working with all of the varied services and maintenance operating environments within the City.** For example, Black & Veatch designed and developed a custom solution called **Plantworks**, endorsed by Cityworks, for managing vertical assets (e.g., non-spatial plant or facility assets) within a GIS-centric Cityworks environment. This would be an optimal application to be exercised for the City.
- **A proven and methodical IT focused approach to meet the needs of all stakeholders.** Black & Veatch's work execution plan follows a hybrid-agile approach: The first two phases (Define and Discover) follow the traditional sequential waterfall execution plan, the third phase (Develop) includes a series of agile sprints occurring simultaneously, then the last two phases (Deploy and Support) once again follow the sequential waterfall approach. This approach has been proven time and again with numerous Cityworks implementations across the Country.
- **Responsive, personalized service from our local Asset Management team.** Our local team of more than 100 professionals includes Black & Veatch's core Asset Management Team consisting of more than seven local asset management and data intelligence professionals, including our **Project Manager, Nick Alexandrou**. Having local asset management resources will enable us to be responsive and efficiently support in person meetings and site visits, both during implementation and long term support.

- **A proactive partner providing you with quality work.** Black & Veatch and many members of this implementation team have been supporting the City for several years; first through the America's Water Infrastructure Act (AWIA) where we assessed all hazards to the Public Utilities water system, including cybersecurity; then through the Water Reclamation facilities (WRF) Master Plan where we've been building a data inventory and hierarchy for the Northeast WRF. We've worked with the IT department through the SCADA Master Plan and we have a staff member embedded with the Engineering Department as an extension of staff.

We've been studying the way the City operates and can quickly get up and running on the Asset Management System implementation. We bring local knowledge and confidence in knowing your processes, procedures, preferences, and decision-making processes and will ensure your project is delivered on time and budget. As we have done in the past, we will walk alongside you as your partner, making sure you understand the information to make the best decisions for the City.

On behalf of our team, we commit to providing you a quality Asset Management system that enhances the value of your facilities and efficiency of your operations. We will deliver this project in a collaborative manner to achieve your goals and all the benefits mentioned above and throughout this Statement of Qualifications. We appreciate your consideration of Black & Veatch for this important project. We look forward to the opportunity to work with you. Should you have any questions as you review this qualifications package, please do not hesitate to contact me at AlexandrouNA@bv.com or 813-207-7956.

Very truly yours,

Black & Veatch Corporation



Nick Alexandrou
Project Manager
Main Contact



Rebecca Oliva
Project Controls and Administration
Main Contact



Amanda Schwerman
Project Director
Main Contact

2

Demonstrated Experience of the Firm and Project Personnel



2

Demonstrated Experience of the Firm and Project Personnel

The City will receive personalized service and a seamless Cityworks implementation from our local team, backed by Black & Veatch's comprehensive capabilities and worldwide expertise.

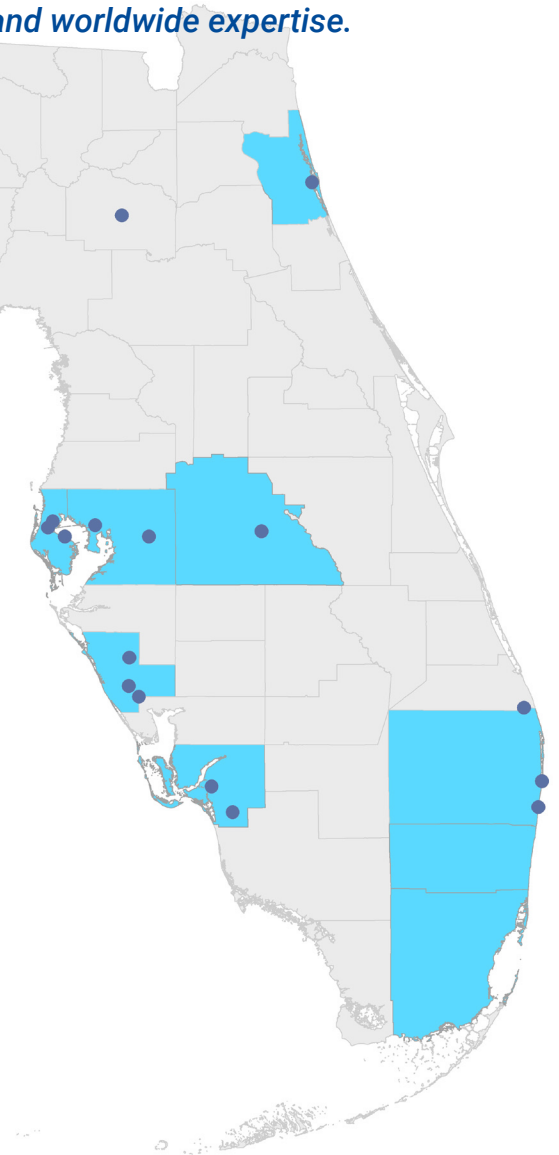
Dedication to Our Clients Combined with a Strong Local Presence

Black & Veatch Corporation (Black & Veatch) has industry-leading technical experts backed by optimal resources to support this project. Founded in 1915, our employee-owned company has over 8,000 professionals working in more than 100 offices worldwide with projects in 70 countries on six continents. Even as a large firm with worldwide resources, we will take a personal approach through our local team of more than 100 professionals who provide project leadership and diverse capabilities to support this effort.

Black & Veatch is a 100% employee-owned corporation that posted revenues of more than \$4 billion in 2022. Black & Veatch also brings stability, having been in business for over 100 years. The company has ample financial strength and stability to support our work under this contract.

Our local office has a strong reputation for delivering comprehensive services including asset management, master planning, design, construction administration, operations support, and more.

Black & Veatch's Florida Planning and Asset Management group has partnered with over 40 Florida water utilities as represented by the map to the right. We bring ideas and lessons learned from across the state and the country to efficiently accomplish the City's goals.



100+
YEARS

Black & Veatch has worked in the water infrastructure business

70+

Years Serving
FLORIDA

35+

Years Serving
TAMPA BAY AREA

9.8k+ **TOTAL**
Professionals

500+ **FLORIDA**
Professionals

100+ **LOCAL**
Professionals

PROJECT UNDERSTANDING AND OBJECTIVES

Black & Veatch understands and admires the long history of excellence within the City of Clearwater from being one of the top tourist destinations in the Country to being a beacon for environmental protection with the Clearwater Marine Aquarium. Black & Veatch would be honored to support the City to ensure a sustainable city through green measures focusing on your economy, environment and community.

- ✓ Ensure Asset Management System supports the City of Clearwater's Strategic Plan, Vision and Mission. Using the Black & Veatch approach, we can ensure the Asset Management System supports the five City departments included in the RFP with achieving a "High Performing Government," being an example of "Environmental Stewardship," and accomplishing "Superior Public Service."
- ✓ Effective collaboration to make sure needs are met for all stakeholders in a cost-efficient manner. The Information Technology (IT) department and staff are spearheading this project; however, the day-to-day users of the Asset Management System will be staff in the Utilities, Public Works, Recreational and Facilities Management Departments. IT staff have a responsibility to meet the needs of the departments and maximize the cost effectiveness of the project. Black & Veatch has experience with multi-department implementation and facilitation of work groups to ensure cost effective implementation.
- ✓ Provide the highest quality deliverables with creative solutions through working with all of the varied services and maintenance operating environments within the City. Black & Veatch has a strong history with the City's Public Utilities and Engineering Departments, and we understand how to perform successful projects for that team / stakeholder. However, we know they are not the only stakeholders. Our implementation team has also completed implementations for parks and recreation, public works, DOT departments, fleet management, etc. We're familiar with the types of software and operating environments used of all of the City's stakeholders and will provide a solution to meet everyone's needs.



The Black & Veatch team listened to our needs, communicated well with City staff and provided high quality work products allowing the City to make confident, well-informed decisions based on their recommendations, training and decision support tools."

- BRIAN PICKARD, PE
CHIEF PLANNING ENGINEER
CITY OF TAMPA WATER DEPARTMENT

- ✓ Maintain highest security and resilience requirements to protect the City's investment and business operations. The Black & Veatch team understands the high risk of cybersecurity and the need for data resilience. Members of the team proposed for this project also executed the America's Water Infrastructure Act (AWIA) project for the Public Utilities Department, which included collaboration with the IT Department. We understand how the City operates and how they want to protect the systems. Laurie Kusmaul was the cybersecurity lead for the AWIA project and has continued supporting the City through the SCADA Master Plan and WRF Master Plan. We will be good partners in protecting data and not being an entry point to the City for bad actors. We will follow all cybersecurity protocols and ensure data is backed up and secure.

Black & Veatch is committed to implementing a high-quality Asset Management System that meets the needs of all stakeholders and advances the City's Vision and Mission.

CITYWORKS SYSTEMS QUALIFICATIONS AND TECHNICAL EXPERTISE

Black & Veatch is a Gold-level Cityworks Implementation Business Partner, and our key implementation staff all have more than a decade of experience implementing Cityworks for utilities. **We have an exceptional level of practical expertise developed from the successful completion of more than 50 CMMS/Cityworks implementations** across the U.S. and across a wide range of project sizes and types, including water, wastewater, stormwater, transportation and

roads, city facilities, fleet, harbors, solid waste, parks and recreation, sustainability, engineering services, materials management, and more.

The following table demonstrates a few examples of our relevant and representative Enterprise Asset Management System (EAMS) implementation experience across the United States.

50+ Years of Experience with Cityworks | 10+ Cityworks Implementation/Support Projects in the Last 3 Years
Gold Level Cityworks Implementation Business Partner | Gold Level Esri Business Partner

TABLE 1. Sample of Black & Veatch Cityworks Implementation Experience

CLIENT	CITYWORKS IMPLEMENTATION
City of Delray Beach; FL	✓
City of Hollywood, Utilities Department; FL	✓
Seacoast Utility Authority; FL ²	✓
City of St. Augustine; FL	✓
City of Charlotte – Water, Transportation, Transit & Solid Waste Departments; NC	✓
Lancaster County Water & Sewer District; SC	✓
City of Greenville; SC	✓
City of Winston-Salem; NC	✓
City of Rock Hill; SC	✓
City of Alcoa; TN	✓
City of Memphis; TN	✓
Jackson Energy Authority; TN	✓
San Diego County; CA	✓
Salt Lake City; UT	✓
City of Mesa, Signal Butte Water Treatment Plant; AZ ¹	✓
City of Topeka; KS ^{1,3}	✓
City of Monroe; NC	✓
Fallbrook Public Utility District; CA	✓

KEY: 1 - Microwest | 2 - InforEAM | 3 - Infor Public Sector

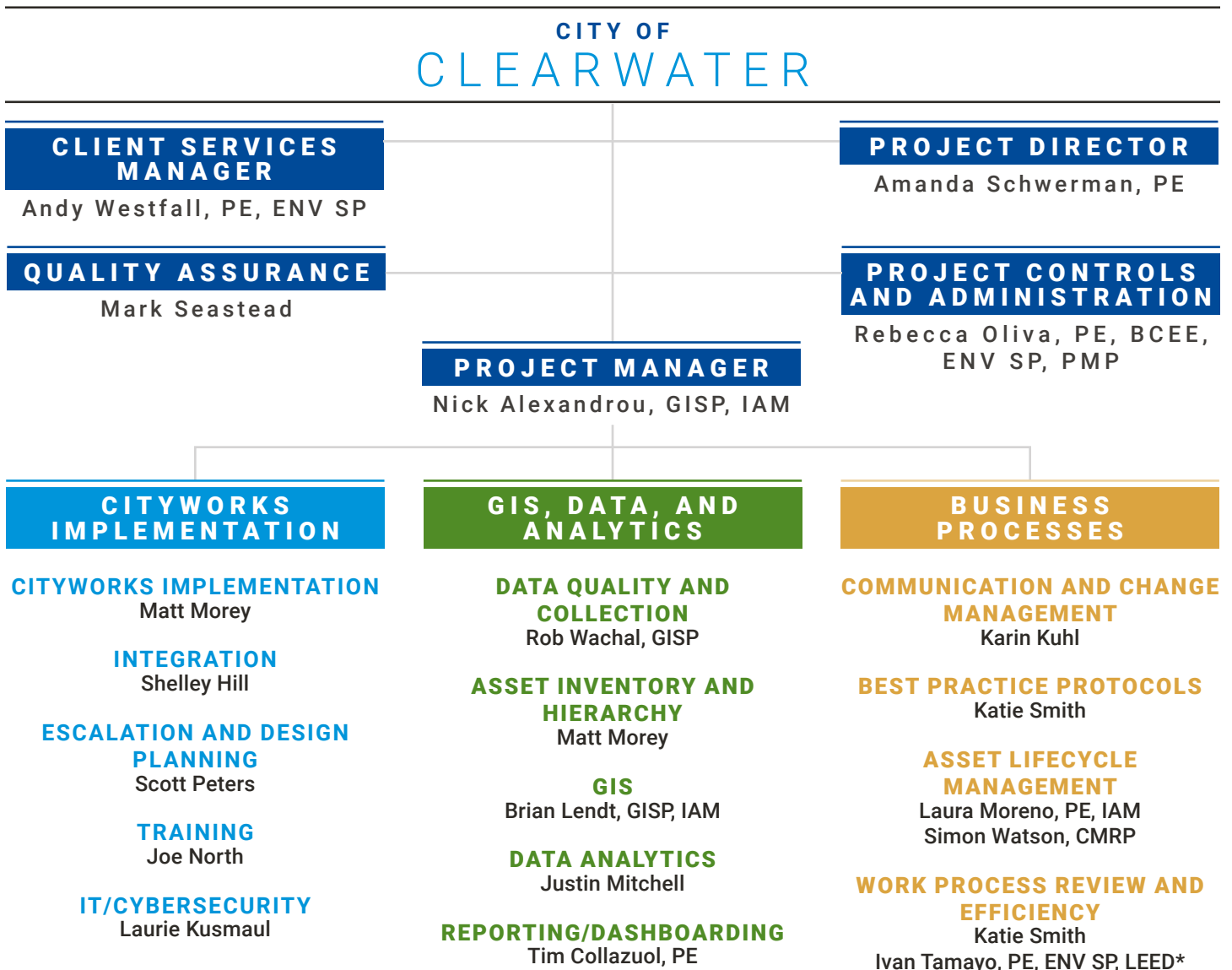
TEAM INTRODUCTION

Our team includes a combination of local leadership in **Nick Alexandrou, Amanda Schwerman, Andy Westfall, and Rebecca Oliva**, who bring long-term relationships and proven history of successful project delivery to the City of Clearwater. Our team is equipped with the national expertise of Quality Assurance Lead **Mark Seastead** and Cityworks Implementation Lead **Matt Morey**, who have proven experience implementing enterprise Cityworks solutions and are well-versed in GIS and Asset Management to best support the City's goals.

The Black & Veatch team can deliver complete Cityworks system implementation support – we bring hands-on implementation and end-user experience in numerous EAM solutions, including Cityworks. A deep understanding and application of these solutions allow us to provide the City with best industry practices for its Cityworks system needs.

Below is the organizational chart that includes senior and technical staff. Biographies of our team and a chart of experience can be found on the pages that follow.

ORGANIZATIONAL CHART



**As other City commitments/availability allows*

TEAM BIOS



Nick Alexandrou, GISP, IAM

PROJECT MANAGER

EDUCATION

- MS, Geographic Information Science

YEARS EXPERIENCE

11

PROFESSIONAL REGISTRATION

- GISP Cert. #160706
- Asset Management Cert. #6127217, The Institute of Asset Management

Nick is a local Asset Management Lead and GIS Professional with 11 years of experience in the Water Industry. His areas of expertise include CMMS implementation, Cityworks platform optimizations, ArcGIS enterprise deployments and administration, system integrations with financial billing, permitting, and sewer CCTV. He has also implemented organization-wide asset management programs and strategies and performed large-scale data analysis for phased capital expenditure replacement plans for aging infrastructure. Nick helps organizations benefit from the value a strong CMMS can provide.

As Project Manager, Nick brings a unique combination of Cityworks technical expertise, large scale IT project management, and working knowledge of the City through the WRF Master Plan that makes him the best candidate for managing this effort. He will be the primary point of contact for the City, leading and coordinating the project team and managing the Work Plan to a successful outcome for the City.

SIMILAR EXPERIENCE

- City of Clearwater, FL | WRF Master Plan
- City of Hollywood, FL | Cityworks Implementation
- City of Delray Beach, FL | Cityworks Implementation and GIS Strategic Planning



Amanda Schwerman, PE

PROJECT DIRECTOR

EDUCATION

- MS, Env. Science and Engineering
- BS, Engineering

YEARS EXPERIENCE

18

PROFESSIONAL REGISTRATION

- PE - 2010, FL, #70751

Amanda has specific expertise in modeling, planning, and asset management of water and wastewater infrastructure. Amanda will use her expertise working with the City on the Water Reclamation Facilities Master Plan and America's Water Infrastructure Act (AWIA) to help guide the team for a successful Asset Management System implementation. As Project Director on this project, she will support Nick to provide the City with proven solutions based on sound asset management practices.

SIMILAR EXPERIENCE

- City of Clearwater, FL | WRF Master Plan; AWIA Risk and Resilience Assessment and Emergency Response Plan
- City of Delray Beach, FL | Cityworks Implementation and GIS Strategic Planning
- Pinellas County, FL | Asset Management Plan Program
- Polk County, FL | Level of Service Benchmarking; Condition Assessment and Data Inventory; Dashboard Training; Compliance Dashboard; Horizontal Asset Risk Assessment



Andy Westfall, PE, ENV SP

CLIENT SERVICES DIRECTOR

EDUCATION

- BS, Civil Eng.

YEARS EXPERIENCE

33

PROFESSIONAL REGISTRATION/ CERTIFICATIONS

- PE - 1994, Florida, 47693
- Envision

Andy's 33 years of experience has been dedicated to managing and executing water, wastewater, and reclaimed water projects for municipal utility clients in Florida. His project experience includes engineering studies, master planning, preliminary and detailed design, permitting, bidding, and construction phase services for a wide range of water infrastructure projects. Andy has a strong focus on ensuring that our team delivers outstanding client service and responsiveness.

SIMILAR EXPERIENCE

- City of Clearwater, FL | WRF Master Plan; AWIA Risk and Resilience Assessment and Emergency Response Plan
- Hillsborough County, FL | GIS Updates; Dashboarding and Boil Water Notice



Mark Seastead

QUALITY ASSURANCE

EDUCATION

- MS, Resource Planning
- BS, Geology

YEARS EXPERIENCE

26

Having led both large enterprise and small departmental efforts, Mark provides 20 years of experience in leading IT program development and asset management that focuses on practical usage and measurable performance. He specializes in work and asset management program development, CMMS solution selection, business process mapping, systems implementation and refinement, systems integration, and end user training and support.

SIMILAR EXPERIENCE

- City of Delray Beach, FL | Cityworks Implementation and GIS Strategic Planning
- City of Hollywood, FL | Cityworks Implementation



Rebecca Oliva, PE, BCEE, ENV SP, PMP

PROJECT CONTROLS AND ADMINISTRATION

EDUCATION

- ME, Env. Eng.
- BS, Env. Eng.
- BA, Spanish

YEARS EXPERIENCE

16

PROFESSIONAL REGISTRATION/ CERTIFICATIONS

- PE - 2012, FL, 74778
- BCEE
- Envision
- PMP

Rebecca is an experienced Project Management Professional whose knowledge of City policies and procedures ensures efficient, compliant project administration. Rebecca's career experience includes water/wastewater system and facility planning, design, construction, permitting, project management, master planning, permitting, life cycle analyses, asset management, GIS, Power BI dashboards, and Envision sustainability/resiliency rating system services and award.

SIMILAR EXPERIENCE

- City of Clearwater, FL | AWIA, WRF Master Plan, and UV Data projects
- PM for various | St. Petersburg, Plant City, and Hillsborough County projects



Matt Morey

CITYWORKS IMPLEMENTATION | ASSET INVENTORY AND HIERARCHY

EDUCATION

- BS, Marine Science, Coastal Geology

YEARS EXPERIENCE

20

Matt has 20 years of program management, consulting, and system implementation and integration experience on projects for municipal government public works and water, wastewater, and stormwater utilities clients. He specializes in CMMS solution requirements development, systems implementation and refinement, report writing, and systems integration requirements development.

City of Hollywood, FL | CMMS Implementation

Asset Management and Information Systems Lead. Tasks included design and development/configuration for data migration of the CMMS, integration, reports, end-user training, and implementation planning.

City of St Augustine, FL | GIS/CMMS Cloud Migration and Support

Information Systems Lead. Task lead for the migration of the City's GIS and Cityworks server environment from an aging on-premises deployment to a cloud hosted environment.



Shelley Hill

INTEGRATION

EDUCATION

- BA, Geography

YEARS EXPERIENCE

21

PROFESSIONAL REGISTRATION/CERTIFICATIONS

- Certification, CompTIA Security +, Illinois, 2013

Shelley is a senior application developer with over 20 years of experience specializing in GIS applications. She develops high-quality desktop and web-based solutions focusing on dynamic, modular, and configurable properties during design. She has written applications in numerous programming languages including C#, JavaScript and Python and stays current with industry standards and new software libraries such as Xamarin, React, Angular, Dojo, and the Esri JavaScript API.

Coachella Valley Water District, CA | Asset Inventory and Condition Assessment for NEXGEN Implementation

Senior Application Developer. Responsible for design, development, testing, and deployment of a set of applications used to collect and manage vertical asset condition assessments.

City of Memphis, TN | Contractor Bid Builder

Senior Application Developer. Deliverable generates detailed project estimates based on engineering review data of risk prioritization and GIS analysis that are tabulated and formatted to be sent to contractors for project bid.



Scott Peters

ESCALATION AND DESIGN PLANNING

EDUCATION

- BA, Political Science

YEARS EXPERIENCE

32

Scott has 32 years of program management, consulting, and systems implementation and integration experience. He specializes in the practical application of technologies to enable objective decision making for infrastructure management programs. His expertise with multiple enterprise CMMS/EAM solutions has been a key factor in client organizations achieving their goals with their asset management programs.

Sarasota County Utilities, FL | Capacity, Management, Operations and Maintenance Program

CMMS Functional Lead. Accountable for developing business case for ensuring migration to “Best in Class” CMMS solution. Documented existing processes, facilitated workshops to define the preferred future state.

Irvine Ranch Water District, CA | 5-Year Capital Improvement Program

CMMS Functional Lead. Advised team regarding the configuration and master data of the CMMS to ensure proper alignment of people, process, and technology in the execution of the plan.



Joe North

TRAINING

EDUCATION

- MA, International Business
- MS, Management
- BS, Computer Engineering

YEARS EXPERIENCE

16

Joe has 16 years of experience providing asset management as well as CMMS selection and implementation services and specializes in systems integrations. He has successfully led CMMS implementation initiatives with the City of Charlotte’s water utility, solid waste department, and transportation department as well as for cities across the eastern U.S.

Seacoast Utility Authority, FL | Cityworks Implementation

Lead Implementer. Following multiple system demonstrations and a system selection exercise, led the Cityworks implementation for the Water Treatment Plant, Wastewater Treatment Plant, and Administrative Facilities as well as training of management and field personnel.

City of Charlotte Department of Transportation, NC | Cityworks Implementation

Lead Technical Consultant. Roles and responsibilities included training and mentoring management and field personnel, facilitating business process analysis workshops, and more.



Laurie Kusmaul

IT/CYBERSECURITY

EDUCATION

- MBA, Management Information Systems
- BS, Business Information Systems

YEARS EXPERIENCE

18

PROFESSIONAL REGISTRATION/CERTIFICATIONS

- Trihedral VTSCADA Advanced Programmer – 2012, Multiple
- AVEVA Wonderware System Platform – 2007, Global, CSI3781

Laurie is a solutions-oriented Industrial IT Professional with proven success designing, implementing, and integrating cost-effective, high-performance technical solutions in various markets, especially the water & wastewater pumping industry. Strong background in Information Technology, Project Management, and Electrical Controls. Laurie is the Project Manager for the City's SCADA Master Plan and will bring valuable insights to data and systems the Asset Management System may connect to. She has also worked closely with the City's IT department.

City of Hollywood, FL | Automation & SCADA Improvements

PLC & SCADA HMI Programmer. Researched and documented the entire wastewater treatment plant supervisory control and data acquisition (SCADA) system, and performed automation and control improvements, as well as update SCADA HMI screens to comply with ISA-101 guidelines.

Martin County, FL | SCADA Services & Support

Project Manager & SCADA Engineer. Upgrade of the County's SCADA system; startup services and training were provided for preliminary sites; required some updates to the Wonderware System Platform application and configuration changes.



Rob Wachal, GISP

DATA QUALITY AND COLLECTION

EDUCATION

- BS, Geography

YEARS EXPERIENCE

22

PROFESSIONAL REGISTRATION/CERTIFICATIONS

- GISP Certified - Global Information System Professional, Computer, 57274, IL
- NASSCO PACP/MACP/LACP Certified U-813-18943, MD

Rob has 22 years of project management, consulting and implementation experience on projects for engineering, utilities and government agencies. He specializes in defining user requirements, system specifications, economic feasibility options, and workflow processes. He supports a variety of asset management integrations, demand analysis, and information solutions.

Jackson Energy Authority, TN | Cityworks Implementation

CMMS Consultant. Cityworks Implementation for Jackson Energy Authority Water and Wastewater Departments. Implementation included process mapping, Cityworks configuration, custom tools and configurations, training, and go-live support.

Tulsa Municipal Utility Authority, OK | Utility Enterprise Initiative: Water and Wastewater Asset Management System Improvements

GIS Implementation Specialist. GIS Implementation Support on utility-wide Asset Management System Improvements for both water (approximately 2,300 miles of mains) and wastewater (approximately 2,000 miles of mains) utilities.



Brian Lendt, GISP, IAM

GIS

EDUCATION

- MS, GISciences
- BS, Geography, GIS

YEARS EXPERIENCE

21

PROFESSIONAL REGISTRATION/ CERTIFICATIONS

- GISP
- IAM Certification

Brian specializes in areas related to information solutions and geospatial analysis and insights for water and wastewater utilities. Brian's experience includes working with clients of various sizes to develop geospatial and information management solutions including mobile and cloud, adaptive capital improvement planning, business intelligence, GIS-hydraulic model integration, asset management, and linear asset risk prioritization and rehabilitation programs.

Hillsborough County, FL | GIS Updates

Geospatial Consultant. Responsible for the development of GIS editing workflows and QA/QC procedures to update water distribution, stormwater, and wastewater GIS features.

Coachella Valley Water District, CA | Asset Inventory and Condition Assessment

Geospatial Consultant and Solution Lead. Supported and developed technology for completion of asset inventory and condition assessment of over \$1.2 billion in infrastructure assets encompassing water, wastewater, District facilities, and more.



Justin Mitchell

DATA ANALYTICS

EDUCATION

- Graduate Certificate, Applied Data Science
- MS, GIS & Data Science
- Graduate Certificate, Computer Science
- BS, GIS & Soil/Water Sciences

YEARS EXPERIENCE

10

Justin is a data science & GIS professional with ten years of consulting experience. He has led the development of a Cloud-Based GIS program management platform for the Lead & Copper Rule Revisions from the EPA that is being implemented by well over a dozen water providers across the country.

City of Marshall, MI | Server GIS & Cityworks Deployment

Implementation/Analytics Lead. Responsible for the development & implementation of cloud based-GIS services and Cityworks management systems. In addition, developed complete workflows including mobile and program management components for several routine and regulated water quality programs.

City of Sioux City, IA | Sanitary & Stormwater Risk Assessment

Lead Analyst. Developed a custom tool with Python that accepts multiple input data sources and implements a weighting ranking system to each individual pipe to provide municipalities a granular view of their systems' health.



Tim Collazuol, PE

REPORTING/DASHBOARDING

EDUCATION

- BS, Civil Engineering

YEARS EXPERIENCE

16

PROFESSIONAL REGISTRATION/ CERTIFICATIONS

- PE – 2015, NY, 95932

Tim is a licensed Professional Engineer and Senior Business Intelligence Analyst with more than 16 years of experience in infrastructure asset management and assessment. His expertise is diversified to include enterprise business intelligence solutions, engineering data science, data program management, business analysis, and civil/structural engineering software development.

City of Clearwater, FL | ESCO - Data Management Tool

Senior Business Analyst. Developed a data management tool in Power BI, providing a suite of dashboards that facilitated an understanding of project data.

Lee County Utilities, FL | Wellfield Monitoring Application

Business Intelligence Lead. Developed a Dynamic Wellfield Monitoring Application using Power BI which enables Lee County to effectively manage their Pinewoods wellfield.



Karin Kuhl

COMMUNICATION AND CHANGE MANAGEMENT

EDUCATION

- Executive MBA
- BS, Management Information Systems

YEARS EXPERIENCE

36

Karin has 36 years of experience leading organizational transformation and change management that achieved financial results through operational efficiency, organizational effectiveness and technology alignment. She has partnered with executive clients to develop and deploy strategic programs that addressed complex challenges, improved operational flexibility, speed to market efficiencies, and cost effectiveness.

Large Utility Company, AZ | Transformation Program

Program Director. \$200M, multi-year transformation program in supply chain, work management and accounting. Program consisted of 100+ Wipro resources, PwC as a sub-contractor and 12 additional system integrators.

Leading Oil Field Services Company, TX | Content Management System

Program Manager. Responsible for a \$5.7M “lift and shift” from a highly-customized TeamSite Content Management System to a World-Class Adobe Enterprise Management (AEM) Content Management System.



Katie Smith

BEST PRACTICES PROTOCOLS | WORK PROCESS REVIEW AND EFFICIENCY

EDUCATION

- BA, Business & English Literature

YEARS EXPERIENCE

21

PROFESSIONAL REGISTRATION/ CERTIFICATIONS

- Certified Reliability Leader
- ProSci Change Management Practitioner

Katie is an Asset Management Consultant who specializes in merging business needs with technology enablers for effective and sustainable solutions. She is a results-driven inspirational leader with 21 years of experience in project management, business analysis, communications, training, and software implementation.

Southern Nevada Water Authority, NV | EAM Implementation

CMMS Functional Lead. Accountable for the implementation of Program Governance during the project (process and lifecycle artifact management). Advised the team regarding the utilization of EAM for delivering desired business outcomes around Assets and Locations using manual data migration and integrations and Work Order management.

Southern Company, GA | Matrix Program: EAM Implementation

Business Analyst. Assisted the team in the design for Asset and Work Order Management in EAM to enable the desired business outcome.



Laura Moreno, PE, IAM

ASSET LIFECYCLE MANAGEMENT

EDUCATION

- MSc, Civil and Environmental Engineering
- BS, Civil Engineering

YEARS EXPERIENCE

20

PROFESSIONAL REGISTRATION/ CERTIFICATIONS

- PE – 2010, TX, #107580
- IAM Asset Management Certificate
- Lean Six Sigma Yellow Belt

Laura is a planning and asset management lead with 20 years of experience. She was the lead for the City's WRF Master Plan Condition Assessment and Renewal and Replacement Planning Tasks. She understands what is important to the Public Utilities Department and will expand that to all of the City's departments. She specializes in asset management program development, ISO 55001 gap assessments and improvement plans, capital improvement planning, and risk and resilience frameworks.

City of Charlotte, NC | Stormwater Asset Management and Cityworks Assessment

Asset Management Gap Assessment. Part of the team leading the ISO 55001 gap assessment and developing the asset management program implementation plan.

Trinity River Authority of Texas | Collection Systems CMMS Full Implementation

Engineering Manager. Managed the full and web implementation for the Authority's northern regional wastewater systems, including improvements to the work order system and the development of reports and dashboards to track performance and budget.



Simon Watson, CMRP

ASSET LIFECYCLE MANAGEMENT

EDUCATION

- Masters, Public Administration
- Bachelors, Business Management

YEARS EXPERIENCE

31

PROFESSIONAL REGISTRATION

- Certified Maintenance Reliability Professional
- Certified Aladon Practitioner for Reliability Centered Maintenance and Design
- Grade 4 Collections Systems Maintenance

Simon has extensive experience in all aspects of asset and maintenance management development and adoption in water and wastewater. Responsibilities have included development and implementation of an Asset Management program and a reliability engineering group; management and oversight of mechanical maintenance, collection systems maintenance, corrosion management program, building and grounds, and computer maintenance management systems.

Washington Suburban Sanitary Commission, VA | Preventive Maintenance Framework Improvements

Maintenance Management Lead. Led the update of the failure modes and failure effects for plant assets that will be used in the CMMS to track failures.

North Port Utilities, FL | Asset Management Gap Analysis

Maintenance Management Lead. Facilitated an asset management maturity assessment and development of an asset management improvement roadmap.



Ivan Tamayo, PE, ENV SP, LEED

WORK PROCESS REVIEW AND EFFICIENCY

EDUCATION

- BS, Civil Engineering

YEARS EXPERIENCE

8

PROFESSIONAL REGISTRATION

- PE - FL
- Envision
- LEED Green Associate

Ivan is currently serving as an extension of City staff and serving as a project manager. Through this support of the City he has a deep understanding of the City's work process and flows. He will be able to support the team and reduce the learning curve and cost to the City. His availability to support future assignments will be assessed based on the status of current engagements.

City of Clearwater, FL | Project Management Support

Project Manager. Managing approximately \$33M in the following type of projects: energy efficiency, groundwater wells, potable water distribution, reclaimed water distribution, and wastewater collection system repairs and upgrades, sewer lift station replacement and rehabilitation, and water reclamation facility upgrades.

Tampa Bay Water, FL | Capital Improvement Planning

Project Engineer. Assessed risks and assisted with updating their risk management plan for their CIP program.

In addition to the sample projects listed previously on the senior and technical staff biographies, our team has a broad range of experiences and specialties that will benefit the City on this project.

TABLE 2. Relevant Experience of the Team

TEAM MEMBER	CHANGE MANAGEMENT	QUALITY ASSURANCE	ASSET INVENTORY	GIS DESIGN & SUPPORT	BUSINESS PROCESS/WORKFLOW	SCADA	IT/CYBERSECURITY	TRAINING & USER TESTING	ESCALATION & DESIGN PLANNING	SYSTEMS INTEGRATIONS	CITYWORKS CONFIGURATION	REPORTING/DASHBOARDING	ASSET LIFECYCLE MANAGEMENT
Nick Alexandrou, GISP, IAM	■	■	■	■	■	■	■	■	■	■	■	■	■
Amanda Schwerman, PE	■	■	■		■	■		■				■	■
Andy Westfall, PE, ENV SP	■	■	■		■	■		■	■	■		■	■
Rebecca Oliva, PE, BCEE, ENV SP, PMP	■	■	■		■	■			■	■		■	■
Mark Seastead	■	■	■	■	■	■		■	■	■	■	■	■
Matt Morey	■	■	■	■	■		■	■		■	■	■	■
Shelley Hill		■	■	■	■		■			■		■	
Scott Peters	■	■			■			■	■				■
Joe North	■	■	■	■	■	■	■	■	■	■	■	■	■
Laurie Kusmaul		■				■	■			■			■
Rob Wachal, GISP			■	■	■			■	■		■	■	
Brian Lendt, GISP, IAM		■	■	■	■	■	■			■	■	■	
Justin Mitchell	■	■	■	■	■	■	■	■	■	■	■	■	■
Tim Collazuol, PE	■		■		■	■	■		■	■		■	■
Karin Kuhl	■	■						■					
Katie Smith	■	■			■			■		■	■	■	■
Laura Moreno, PE, IAM	■	■	■		■			■				■	■
Simon Watson, CMRP	■	■						■					■
Ivan Tamayo, PE, ENV SP, LEED					■			■					



Black & Veatch employees have immersed themselves in knowing and improving the Cityworks environment that the city has had. In turn, the City of Alcoa benefits from having a backup to the Cityworks administrator and a peace of mind is achieved knowing that the city is in good hands. The Black & Veatch team has improved our Cityworks system setup and has eliminated the need for multiple fixes after each software upgrade, they exemplify the 'fix it once fix it right' mentality. Not only are they a pleasure to work with, but they also are extremely professional, responsive, timely, and one always knows where the project stands: they are simply awesome to work with!"

- JESUS ORTEGA
CMMS ADMINISTRATOR | CITY OF ALCOA, TN

3

References

3 | References

Black & Veatch has carried out successful projects for various clients who were pleased with our firm's work. On the next several pages are references and contact information should the City wish to reach out to them about their experience with Black & Veatch on similar projects.



Cityworks Implementation for Utilities

CITY OF HOLLYWOOD | FLORIDA

The Department of Public Utilities identified the need to replace their legacy Accela CMMS solution with Cityworks as the foundation for a Citywide implementation. Phase 1 focused on water and wastewater facilities (treatment plants, lift stations, pump stations), linear underground assets, and supporting engineering projects. Integrations for employees and labor rate updates, parts/material inventories, utility billing, SCADA, and CCTV were included.

Black & Veatch performed an initial assessment and several rounds of onsite workshops to understand current work management practices within Public Utilities and needs for other City departments. The initial assessment resulted in a configuration plan that included – ‘to-be’ business processes, an asset hierarchy for WTP, WWTP, and collection/distribution system assets, improvement recommendations, and a plan for an enterprise implementation.

A train the trainer approach was utilized to successfully prepare users for the new CMMS. An iterative configuration strategy included multiple reviews with Department staff. This allowed City staff to be exposed to the system multiple times throughout the process as the foundation for change management. A phased deployment resulted in a successful deployment for the Utilities Department.

Phase 2 of the program, currently underway, addresses integration of additional critical information systems with Cityworks including:

- Tyler's MUNIS – Utility Billing
- WinCAN – CCTV Inspections
- Oracle Financials
- iFix – SCADA
- ERP – Employee and Labor Rate Updates

CLIENT REFERENCE

Bill Blue, Maintenance Supervisor,
Public Utilities WWTP
954-921-3288
wblue@hollywoodfl.org
1621 N. 14th Avenue
Hollywood, FL 33022

RELEVANCE TO CLEARWATER

- Cityworks Implementation
- Implementation Across Multiple Departments
- Plantworks User
- Program Management
- Asset Management
- Geographic Information Systems

DATES OF SERVICES

Phase 1 Completed in 2020; Phase 2 Ongoing

KEY TEAM MEMBERS

Nick Alexandrou, Mark Seastead, Matt Morey, Joe North



Cityworks Upgrade/Expansion/ Implementation – Multiple Projects

CITY OF ROCK HILL | SOUTH CAROLINA

The City of Rock Hill had previously implemented an older version of Cityworks that had gone largely unused. The City commissioned Black & Veatch to assist them in assessing improvements and upgrading their desktop system to the latest browser-based version and updating the configuration to support the hydrant flow test program, facilities maintenance, wastewater treatment, and water treatment.

Hydrant Flow Test Program

Black & Veatch worked with City staff to understand and automate a manual process related to hydrant flow testing data capture and reporting. Once the system was configured, a flow test results report required by the state of South Carolina and Fire ISO certification was developed, reducing a weeks long process to a simple button click. As a result, the City obtained the highest score for that section of the ISO rating process.

Facilities Maintenance

The Facilities Maintenance group is responsible for maintaining over 100 city facilities and assisting with the setup and staffing of all city related festivals and events. No system was in place to track the work that this division completed. Black & Veatch worked with city staff to understand and document work processes and reviewed/updated the asset registry to. Black & Veatch then worked with City IT/GIS staff to configure the CMMS to support the division. In addition to standard configuration, Black & Veatch developed an internal prioritized Facilities Request Portal to replace an email-based process.

Wastewater Treatment Facility

Black & Veatch replaced the City's legacy work order management system (MP2) for the City's Manchester Creek Wastewater Treatment Plant. During the implementation the project team updated an out-of-date asset registry, reviewed/updated work processes, and updated preventive maintenance (PM) tasks. The implementation included a Plantworks implementation along with an upgrade to the service request portal for operations staff not using the CMMS. Implementation is currently being expanded to the City's Water Treatment Plant.

CLIENT REFERENCE

Shawn Carson, GISP, GIS Manager
803-329-8723
shawn.carson@cityofrockhill.com
757 S. Anderson Road
Rock Hill, SC 29731

RELEVANCE TO CLEARWATER

- Plantworks User
- Business Process Review
- Asset Registry Review
- Configuration Design
- System Configuration
- Request Portal
- Plantworks
- WWTP Implementation
- Training Support
- Ongoing Support

DATES OF SERVICES

2016-Ongoing

KEY TEAM MEMBERS

Mark Seastead, Matt Morey, Joe North



Our ISO rating for our Fire Department improved and our auditors specifically mentioned the rapid access to hydrant test data accessed from Cityworks."

- SHAWN CARSON
GIS MANAGER



Cityworks Implementation

SEACOAST UTILITY AUTHORITY | FLORIDA

Seacoast Utility Authority (SUA) selected Black & Veatch (Black & Veatch) to implement Cityworks for their Water Treatment Plant (WTP), Wastewater Treatment Plant (WWTP), and Administration Facilities. The implementation of Cityworks was initiated to serve as a unified computerized maintenance management system (CMMS) for SUA's plant and facility asset environments.

Black & Veatch began the implementation by working with SUA staff to understand and document the organization's business processes. Once these processes were documented and understood, Black & Veatch designed a system configuration plan to support SUA's processes within Cityworks and utilize data already configured within SUA's existing work management system.

In addition to the CMMS configuration design, Black & Veatch exported all relevant asset data from SUA's existing CMMS, combined that data with additional asset information from spreadsheets, and imported the final asset hierarchies to GIS for consumption by Cityworks and Black & Veatch's vertical asset Cityworks plugin (Plantworks).

With the configuration design and asset data import complete, Black & Veatch staff installed and configured Cityworks and Plantworks while maintaining an understanding that other SUA divisions (e.g., Collection and Distribution) could use the system in the future. In addition to configuring the system, Black & Veatch modified the user interface and Cityworks Inbox to ensure that the system was easy to use for users of all levels.

Black & Veatch completed the implementation by finalizing system configuration and preparing customized training materials for end-user training. These materials were used by SUA trainers to train all end-users just prior to go-live with Black & Veatch support. In addition to end-user training, Cityworks Administration was provided to SUA administrators throughout the implementation process.

After implementation and go-live, SUA again selected Black & Veatch to provide supplemental asset hierarchy support for WWTP assets. This process included a comprehensive review of the entire WWTP asset hierarchy, recommendations for updates, GIS support to execute all hierarchy changes, and additional Cityworks and Plantworks training for WWTP staff.

CLIENT REFERENCE

Brandon Selle, COO
561-627-2900, Ext. 316
bselle@sua.com
4200 Hood Road
Palm Beach Gardens, FL 33410

RELEVANCE TO CLEARWATER

- Plantworks User
- Business Process Review
- Asset Registry Review and Migration
- Configuration Design
- System Configuration
- Report Development
- Training
- Ongoing Support

DATES OF SERVICES

2021-Ongoing

KEY TEAM MEMBERS

Nick Alexandrou, Joe North, Mark Seastead, Matt Morey



GIS Cloud Migration & Ongoing Cityworks Implementation Support

CITY OF ST. AUGUSTINE | FLORIDA

To improve system performance and user experience, the City of St. Augustine migrated their on-premises GIS and CMMS servers to a cloud-hosted environment. The migration included version upgrades for both ArcGIS Enterprise and Cityworks Asset Management System (AMS) & Permitting, Licensing, and Land (PLL). Once the server migration was complete, the City went live with an implementation of Cityworks PLL to manage its building permits and code enforcement cases.

To begin the cloud migration, Black & Veatch professionals collected application and usage information to understand the requirements the cloud hosted environment needed to support. With a conceptual architecture developed, Black & Veatch performed a costs analysis for multiple cloud service providers. With the service provider and server architecture agreed upon, Black & Veatch worked with the City's IT staff to build out all required components of the new cloud environment.

With all components in place, Black & Veatch professionals deployed a distributed ArcGIS Enterprise deployment and worked with City staff to migrate data and services. Additionally, the City's Cityworks environment was migrated and upgraded to the latest version.

With the migration complete, Black & Veatch worked with the City to improve its recently deployed Cityworks PLL implementation. PLL enhancements include updating case workflows, correcting legacy data migration records/documents, planning for system integrations, and other usage improvements. The Cityworks PLL Public Access Portal was also deployed to allow the public to initiate their own permits. Continuing implementation efforts focused on expanding PLL usage to other Public Works and other departments.

CLIENT REFERENCE

Todd Grant, Utilities Director
904-315-8499
tgrant@citystaug.com
75 King Street
St. Augustine, FL 32085

RELEVANCE TO CLEARWATER

- Cityworks AMS/PLL Implementation
- Further Implementation Across Departments
- Program Management
- ArcGIS Enterprise Planning & Deployment
- Cloud Computing Planning & Migration
- GIS & Mapping Support
- Historic Data Migration
- Public Portal Deployment
- System Integration Planning

DATES OF SERVICES

2021-Ongoing

KEY TEAM MEMBERS

Nick Alexandrou, Mark Seastead, Matt Morey, Joe North



Black & Veatch treats us like they do their largest clients and are always prompt to respond."

- TODD GRANT
UTILITIES DIRECTOR



Cityworks Implementation and GIS Strategic Planning Services

CITY OF DELRAY BEACH | FLORIDA

Black & Veatch is performing a multi-phased project to help the City of Delray Beach improve its GIS program, data, and processes as part of a new CMMS implementation.

Phase I prioritized migrating away from a legacy CMMS with costly annual maintenance fees. It also included the migration of existing work history and business processes for the Utilities Department, along with the deployment of a new mobile work management system.

Phase II included updates to key business processes and expansion of the user base to include Public Works and Parks and Recreation, along with improved key performance metrics dashboards.

Phases III and IV include the completion of a GIS strategic plan for the City, along with deploying key areas, including:

- New GIS servers
- Esri ArcGIS software and architecture upgrades
- Deployment of ArcGIS Portal
- GIS data cleansing including deploying enterprise SDE versioning
- Standardizing GIS administration policies and processes
- Detailed business process mapping and configuration updates

CLIENT REFERENCE

Don Marese, IT Project Manager
561-243-7146
marese@mydelraybeach.com
100 NW First Avenue
Delray Beach, FL 33444

RELEVANCE TO CLEARWATER

- Cityworks Configuration
- Implementation Across Multiple Departments
- CMMS Review and Replacement
- SQL Development and Implementation
- Other Reporting Development and Configuration

DATES OF SERVICES

2018-Ongoing

KEY TEAM MEMBERS

Nick Alexandrou, Amanda Schwerman,
Matt Morey, Joe North, Mark Seastead,
Brian Lendt



Cityworks Magazine highlighted the City of Delray Beach project in a recent issue.

4

Project Plan/ Approach and Timeline



4 | Project Plan/Approach and Timeline

The City of Clearwater will receive a best-practice Cityworks program that is adaptable, flexible to change, and scalable as required. This is possible due to Black & Veatch's extensive subject matter knowledge base and experience with the City.

OVERVIEW

Our approach, plan, and schedule for this CMMS implementation is dynamic and agile while remaining rooted in team collaboration. We will work side by side with the City, in all phases of the project, to ensure Cityworks becomes a cornerstone of the day-to-day work activities for the City.

Through our five phased approach (Define, Discover, Develop, Deploy, and Support), our CMMS Implementation project plan offers the following benefits to the City:

Extension of Staff



Black & Veatch has worked on multiple projects with the City's Utility Department, including the current WRF Master Plan, and have coordinated with the IT department on several projects. This has afforded us the ability to gain in-depth knowledge of existing workflows and business processes, as well as build working relationships with staff. This shortens the discovery effort and helps generate buy-in. We envision the Utilities implementation to be the pilot for the other departments.

Dynamic Best Practice Approach



Black & Veatch's project team consists of a diverse group of subject matter experts who specialize in Cityworks, Business Process Improvements, IT and Cybersecurity, Change and Communication Management, Data Analytics/Visualization, and System Integrations. This team has worked together for years and has developed an industry best-practice approach that is dynamic and adaptable to the City's needs.

Management of Change



Throughout this project, change will be introduced to people, processes, and procedures. Black & Veatch has developed a robust Change Management Program that will ensure staff are never overloaded and can quantify the project's success and adoption rate.

Scalable and Resilient



In all configurations and planning, Black & Veatch will always ensure that the system is built in a manner to support scaling to Public Works, Gas, Recreation and Facilities - with no service interruptions to the other Departments day-to-day activities.

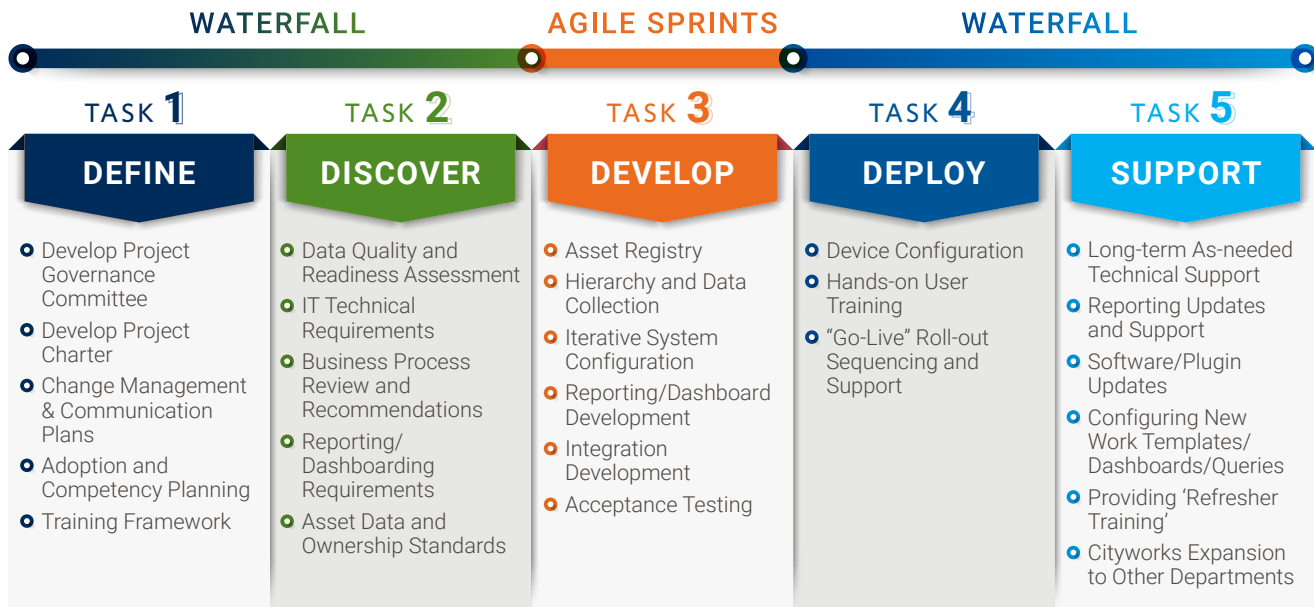
Best in Class Plants and Facilities Management with Plantworks



Black & Veatch is the national-leader in Plants and Facilities implementations in Cityworks. We have developed a best-in-class approach that utilizes our Plantworks plugin to expand the native Cityworks capabilities, making facilities and plant operations streamlined and efficient.

WORK PLAN

Black & Veatch's work execution plan follows a hybrid-agile approach. The first two tasks of the scope, **Define** and **Discover**, occur sequentially in the style of a traditional waterfall execution plan. The third phase, **Develop**, occurs as a series of agile sprints that allows Cityworks to be Designed, Built, Tested, and Revised through a controlled iterative process. The fourth phase, **Deploy**, will be performed as a waterfall approach with the device configuration and user training followed by go-live deployment and the fifth task, **Support**, which provides ongoing support after the project is complete.



Task 1 - Define

In this first task, the project team will establish the protocols and procedures to ensure success. A project governance committee will be established that develops and oversees change management plans, communication plans, and stakeholder engagements. Additionally, adoption and competency checks will be developed and the City's program-wide training framework will be established. Defining all of this upfront increases the likelihood of success, keeps the project on schedule/budget, decreases natural resistance to change, and improves project communication and visibility throughout the organization. This effort will help to establish a 'One-Vision, One-Voice' for the project.

Task 1.1 - Establish Project Governance

Project Governance is a series of people, processes, and plans based around project and change management. During this task, the members of the Project Governance Committee will be identified, with representatives from the City and Black & Veatch. Nick Alexandrou, Project Manager, will co-chair this committee with City staff who will be identified as the Cityworks program owner/champion.

Black & Veatch's Karin Kuhl, PROSCI certified Change Manager, will assist the Project Governance Committee and collectively develop a project charter, set business and project goals, and define success criteria. Project governance will also be defined to provide the framework for project decision making activities. Project governance will also include the governance model, list of key stakeholders, responsible, accountable, consulted, and informed (RACI) matrices, Risk-Action-Issue-Decision (RAID) log, escalation management, exit criteria, change control process, and acceptance criteria.

CITYWORKS PROJECT GOVERNANCE COMMITTEE

Project Charter



Establishing a Project Governance Committee sets the City up for long-term success by defining the framework and processes that lead to improved workforce efficiencies, individual user adoption, and better communication.

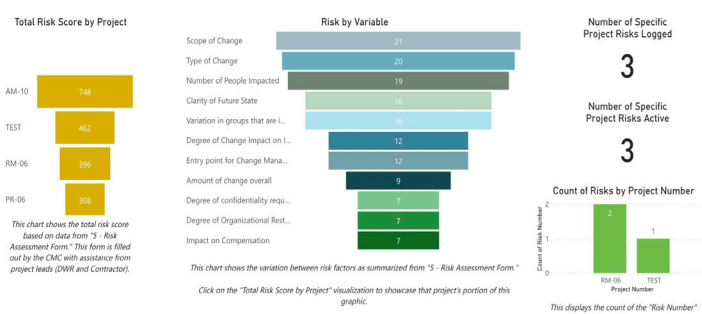
The committee will also be responsible for overseeing change management planning, monitoring and measuring program adoption, communicating to staff with “one-voice,” and approve standards developed throughout the project around for system usage, data management and ownership, and asset lifecycle standards.

Task 1.2 - Change Management Plan

Black & Veatch will facilitate workshops to identify and document the following to create a transparent change management plan:

- Specific changes
- Impacted groups
- Resistance identification
- Mitigation strategies
- Change readiness
- Risk assessment

The team will monitor changes in the project scope and vision and adapt the plan accordingly. Black & Veatch utilizes our internally developed Change Management Tracking Platform to monitor when each group will be exposed to changes, the type of change, and if certain staff or groups are projected to be “overloaded” with changes – a critical failure in implementations where staff are exposed to too much change at one time, causing none of it to be fully adopted.



Monitoring risk is an important component of Change Management. Black & Veatch has developed dynamic PowerBI based tools that will be used throughout this project to ensure staff are not overloaded with change, and risk is monitored and mitigated appropriately.

Task 1.3 - Communication Plan

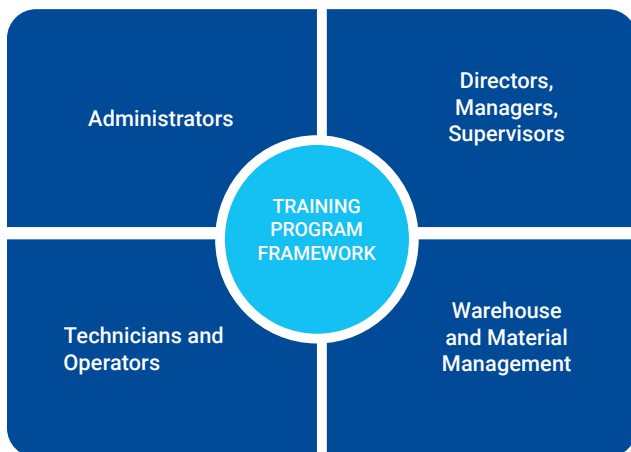
Members of the Project Governance Committee will serve as the key points of contact for their group and will be responsible for communicating the right messages regarding the changes to come, why they are important, and how they fit into the big picture of Cityworks usage.

Black & Veatch will work with the Governance Committee to develop a “one-voice” message for all City stakeholders that will include:

- Messaging and key important facts that need to be delivered
- Identifying who should be communicating the message and who is receiving it
- Determining how, and in what manner, the most effective way of conveying messages
- When certain messages should be conveyed (timeframe, frequency, etc.)
- Developing message confirmation/receival techniques

Task 1.4 - Training Program Framework

Training is an important component to building and maintaining staff's knowledge base and skillsets. As with mechanical equipment operation, IT cybersecurity, Human Resources, and other required training – the City's CMMS program should have a comprehensive training program that is used as an annual refresher and for new employee on-boarding.



Black & Veatch will develop a training framework that identifies:

- Role based courses
- Curriculum requirements
- User roles assignments including administrators, leads, power users, regular end-users, etc.
- Training schedules, including refresher training plans

This plan will be presented to the Project Governance Committee for review, comments and approval.

The on-site training program outlined in **Task 4.2 – Hands-on User Training** will serve as a great starting point for the City's Training Program. All materials, videos, and recordings will be subject to Project Governance Committee review and refinement to ensure it fits within the training programs framework.

Task 1.5 - Adoption and Competency Checks

During the Discover, Develop, and Deploy phases, it will be common for

changes to be proposed and implemented. It is important to track those changes and measure their effectiveness. Changes are tracked through our tracking platform, but we measure their effectiveness through competency checks.



Competency checks help the project team quantify adoption and acceptance. They help identify successfully adopted changes and those that may need reinforcement throughout the project.

Competency checks will take the form of questionnaires, mini-quizzes, and self-guided assessments. The content and materials of the competency checks will be developed and approved by the Project Governance Committee to ensure that staff members are internalizing success parameters. This is done to monitor stakeholder understanding and encourage adoption thus improving our likelihood of success of the project. Additionally, final platform user acceptance testing will be developed and approved by the Governance Committee. These will include the testing acceptance requirements, scenarios, and workflows for users to evaluate.

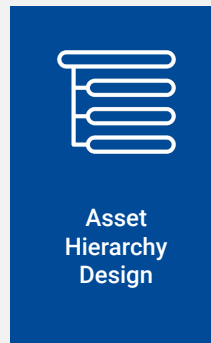
Task 1 Deliverables: Project Governance Committee, Project Charter, Stakeholder Register, RACI Matrices, Change Management Plan, Communication Plan, Training Program Framework, Adoption & Competency Checks, RAID Log, Escalation Management Strategy, Acceptance Criteria, Change Controls, RAID Log.

Task 2 – Discover

We will work hand in hand with City stakeholders from all groups to understand current conditions, review and document as-is business processes, identify technical and functional requirements, perform a data readiness assessment, and gain an understanding of any integration requirements with existing City enterprise systems. The culmination of this phase will be a comprehensive Cityworks Configuration and Implementation Plan that will be executed in Task 3: Develop.

Understanding the quality and criticality of existing data is crucial to building an effective asset hierarchy and understanding legacy data associated with City assets. Development of a migration plan will prioritize quality data and improve historic data usability in the new CMMS.

DATA QUALITY & READINESS ASSESSMENT DOCUMENTATION



Task 2.1 - Data Quality and Readiness Assessment

Data accuracy, consistency, and completeness is a foundational component for any CMMS. In this effort, data will be evaluated from three different angles: asset hierarchy, asset registry, and the City's historical O&M work history. The findings of the following assessments will culminate in:

Task 2.1.1 - Asset Hierarchy Assessment

Through a series of workshops, asset classes and criteria will be defined for treatment facilities, lift stations, pump stations, and well fields. These asset classes will be grouped in a hierarchal fashion that supports easy navigation for O&M activities. The final hierarchal structures will be documented and finalized following industry standard best practices and with consultation from Utilities stakeholders. The final hierarchies will support both easy navigation for O&M staff, and asset roll-up for planning and financial analysis. This documented organizational structure will be used to develop and update the City's Enterprise Geodatabase and put into production in **Task 3.2 – Hierarchy Development/Data Collection**.

Task 2.1.2 - Asset Registry Assessment

Black & Veatch will evaluate existing GIS data for distribution, reclaim, and collection systems (linear assets). It will also review plant, lift station, pump station, and well field assets (vertical assets).

Common characteristics to be evaluated may include

- Asset identification and naming standards
- Asset attribute standards, usage, consistency, and completeness
- Data duplication
- Data redundancy
- Organizational standards

The Black & Veatch data quality approach sets the City up for prolonged success, easy updates and faster integration of all data, systems and software.



The results of the Asset Registry assessment will be a data gap and needs document. This will steer the Data collection plan and efforts to follow in **Task 3.1 – Asset Registry Database Development** and **Task 3.2 – Hierarchy Development/Data Collection**.



Black & Veatch will use the asset inventory developed during the WRF Master Plan as a foundation of the asset registry to save both time and money, while maintaining consistency.

Task 2.1.3 - Historical O&M Data Assessment

Ensuring historical work activities are retained and brought into the new platform is critical for maintaining an accurate maintenance history. This is also important to maintain a cumulative cost of ownership, for all assets. An assessment will be performed on existing O&M data currently recorded and tracked in Oracle WAM. Data evaluation will focus on legacy work orders and inspections but will include cost, dates, assets worked on, work types, and comments to determine data quality and feasibility for migration. The results of this assessment will be a Historical O&M Data Migration Plan to be executed in the Development phase.

Task 2.2 - Technical Requirements Assessment

Understanding and documenting the technical requirements for a Cityworks implementation helps ensure the configuration is implemented efficiently, is developed in a manner to be scalable to other Departments, and most importantly - meets the highest security and resiliency requirements possible. The findings of the following assessments will culminate in:



Performing this assessment ensures that the system will be configured to support all of the functional needs of the City, while also meeting all IT and Cybersecurity requirements.

Task 2.2.1 - IT Discovery

IT discovery and requirements include items such as licensing, user authentication, internal vs. external user access, and VPN requirements to name a few. This discovery effort will identify, evaluate, and provide guidance on the following examples:

- Cityworks Licensing
 - Contract and Licensing model evaluation
 - Plug-in Requirements
- Cybersecurity Protocols
- Mobile Devices
 - What devices are currently in use, what devices will be needed, how many, and for whom should they be assigned?
- Esri Licensing Needs
- For a successful Cityworks implementation, Single Sign-On (SSO) is recommended, which requires all users to have at least a Viewer account in ArcGIS Portal or ArcGIS Online
- GIS Technical Evaluation
 - ArcGIS Accessibility (externalized vs. internal with VPN)
 - Available servers and RDMS
 - Available storage
 - Network accessibility at remote sites and VPN connectivity (if not externalized)

Findings will be documented to guide the technical configuration and in **Task 3.3 – Iterative System Configuration**, and include recommended GIS enhancements.

Task 2.2.2 - Integration Requirements

A fully mature CMMS provides the most value to an organization when it is integrated and communicates with other business critical enterprise systems.

Workshops will be held with stakeholders to identify systems requiring integration. Requirements will be documented that define integration data directionality, data to be exchanged, frequency, and integration pathways (API, webservices, webhooks, etc.).



Black & Veatch will work with the City to identify integration needs for Tyler MUNIS, Accela, GraniteNet, and other mission critical software - and will develop a road map for success.

Common systems that are integrated with Cityworks include, but are not limited to, utility billing and customer relationship management software, HR software for employee labor rates, material inventory and storehouse management software, SCADA, and citizen service request systems.

The result of these discussion and workshops will be an Integration Requirements document that will help guide the City towards a fully integrated Enterprise solution.

This effort does not include any integration development. The execution of integrations is currently set to be executed within **Task 3.5 – Integration Development**; However, no fee will be provided for systems integration development at this time since the systems and effort to connect to those systems is currently unknown. A separate scope and fee estimate will be provided following the results of this task, for the City's review.

Task 2.3 - Functional Requirements (Business Process Review)

Functional requirements gathering is key to ensuring that Cityworks is configured in a manner that supports existing business needs, optimizes business processes, and is prepped for future enhancements and scalability.

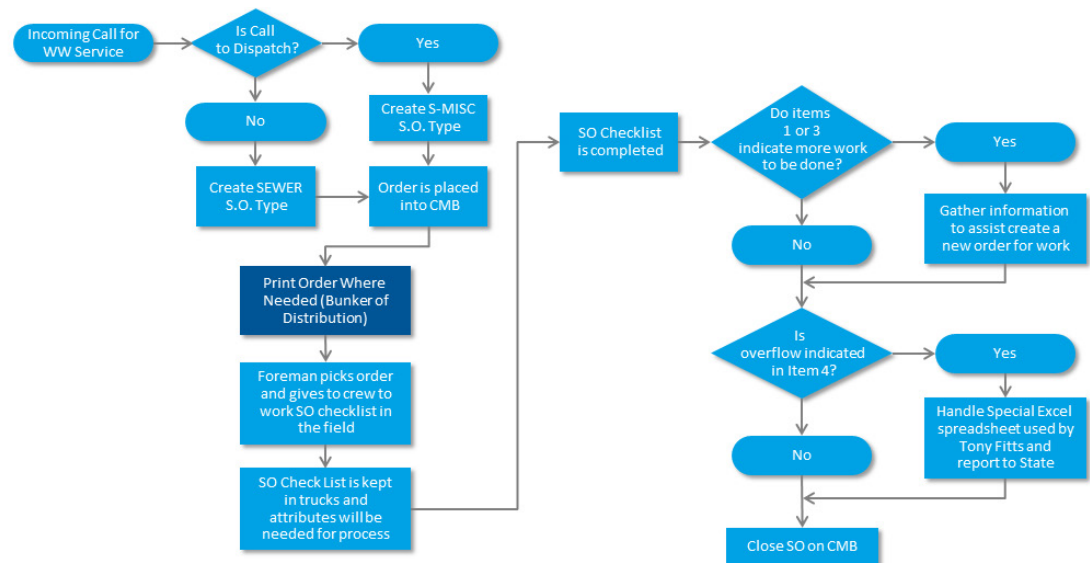
Task 2.3.1 – Existing Business Workflows and Process Reviews

Black & Veatch will utilize our national subject matter experts, and local resources with intimate knowledge of the City, to meet with stakeholders from the management and operations teams from each Utility group for a half day business process review workshop. The examples of groups identified include water treatment, wastewater treatment, water distribution and reclaim, and sewer collection for a total of four half day workshops to discuss, document, and better understand the City's existing key business processes and workflows. Common business processes include, but are not limited to:

- Preventative vs. Corrective Maintenance
- Issue Identification and Work Escalation Planning
- Cyclical Inspections/PM's
- Internal and External Service Requests
- Work Order Management Cycle
 - Assignment
 - Fulfillment
 - Review
 - Close Out

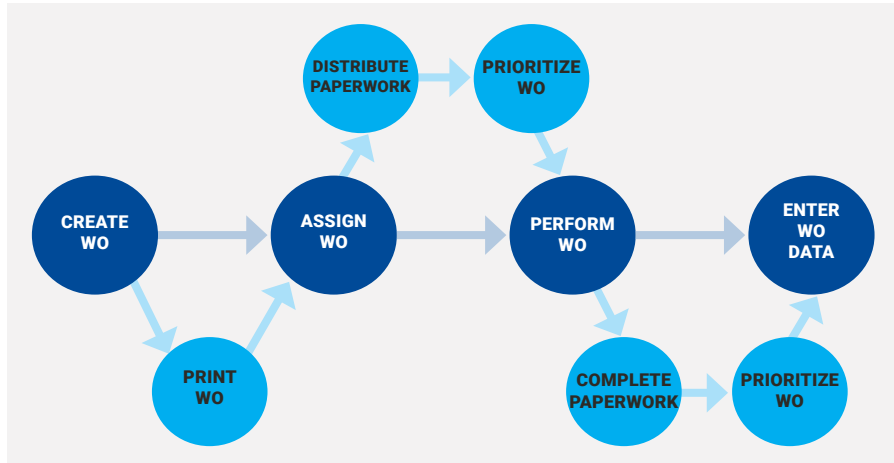
Additionally, materials and equipment management will be discussed and evaluated. Material management requirements including requisition, purchasing, receipt, warehouse storage, truck transfer, and installation will be evaluated and documented for each division.

Workflow Diagram Example



Task 2.3.2 – Develop Best Practice Protocols

Following the evaluation and documentation of the City’s current business processes, Black & Veatch will produce recommendations to business processes that will improve and optimize workflows for use in Cityworks. These ‘to-be’ workflows will help drive the configuration of the platform, but more importantly, will be used to help communicate to staff who may be impacted by changes to business processes.



By understanding the current business processes (light blue workflow steps), Black & Veatch will identify steps that can be improved, automated, and made more efficient using Cityworks (streamlined dark blue steps).

Task 2.4 - Reporting/Dashboarding Requirements

Workshops will be held to identify existing and new reporting requirements. The results of these discussions and reviews will be a catalog of Key Performance Indicators (KPI) and financial metrics. KPIs will include performance, financial, asset inventory, and broader operational metrics.

Common KPIs include:

- Average service request response time
- Monthly average work order costs, and percent change compared to previous months
- Average number of labor hours per work activity
- Average equipment, labor, and material costs per work activity
- Preventative vs. reactive ratio
- Number of work activities completed, by date range
- Summary costs per system or facility, by date range
- Preventative maintenance recurrence compliance rate
- Percent of work activities that did not require a “repeat repair”

Once KPIs have been defined, a review of available dashboarding platforms will be conducted to identify best-fit for the City. This will likely be based in Cityworks, ArcGIS, Power BI, or a combination of all three.

Additionally, during this phase, Black & Veatch will develop and present sample dashboards that take into account any City branding standards and presentation platform requirements. These design elements will be documented for use in **Task 3.4 – Reporting/Dashboard Development**

REPORTING/DASHBOARDING ASSESSMENT



Understanding the reporting and dashboarding requirements helps to ensure data is captured and stored correctly and in a manner that supports Key Performance Indicator metrics and dashboard visual needs identified by City stakeholders.

Task 2.5 – Asset Data and Ownership Standards Development

Having proper policies, procedures, and processes in place for the management of data ensures that the City will continue to build trust in the data, and confidence in their decisions.

Two important standards that will help sustain long-term success are based around asset lifecycle management and asset data editing.



Defining and implementing best-practice asset lifecycle management and asset data editing/management standards is critical to having standardized maintenance planning and reliable, trustworthy data.

Task 2.5.1 – Asset Lifecycle Management Standards

Through workshops and continual refinement, Black & Veatch will help the City develop and document Standard Operating Procedure's (SOPs) around asset lifecycle management. These SOPs can cover a broad range of subjects, but will typically include:

- New Asset Onboarding
- Recording Corrective and Preventative Maintenance
- Documenting Swap-outs

- Documenting Rehab/Replacements
- Standardizing the use of Problem, Cause, Remedy Codes
- Asset Decommissioning

Black & Veatch will help to develop up to eight SOPs specific to using Cityworks for asset lifecycle management. The SOPs will be subject to up to two rounds of review.

Task 2.5.2 – Data Editing Standards and Procedures

Asset data editing standards address roles and responsibilities, data validation, attribute rules, QC processes, nightly geodatabase maintenance, and versioned editing guidelines, to name a few.

Black & Veatch will work through multiple sessions with City IT and GIS staff around existing data editing workflows, standards, and procedures. The findings from these discussions will be used to develop a City of Clearwater GIS Data Editing Standards and Procedures document that will outline standards including:

- GIS User Roles and Responsibilities
- GIS User Access
- Versioned Editing
- Data QC Process
- Data and Attribute Validation
- Schema Changes
- Asset hand-over from developer projects
- Geodatabase Performance Administration

This documentation will subject to up to two (2) rounds of review by City staff before being used in Task 3 – Develop to ensure best practice GIS standards are being implemented succinctly with the Cityworks implementation.

Task 2 Deliverables: Cityworks Configuration and Implementation Plan, Enterprise Geodatabase Schema Design Recommendations, Asset Hierarchy Designs, Data Gap Assessment Results, Historical O&M Migration Plan, Enterprise GIS Infrastructure Recommendations, Software Licensing Support, Mobile Device Standards and Use-Cases, IT Tech Requirements Document, Integration Requirements, As-is and To-be Business Process Diagrams, KPI Catalog, Dashboard Design Guide, Dashboard Platform Recommendations, Asset Lifecycle Management SOP's, Asset Data Editing Standards.

Task 3 - Develop

This is the configuration and implementation phase. Here, Black & Veatch will utilize all information documented during the Discover phase and build-out the Cityworks environment to meet the needs of the City. Black & Veatch's iterative configuration approach is dynamic and seeks continual feedback from the City as functionality is developed.

Task 3.1 - Asset Registry Database Development

Building on **Task 2.1.1 - Asset Hierarchy Assessment**, Black & Veatch will create a physical geodatabase design for facility assets in Esri geodatabase format. Based on the results of conceptual asset registry design workshops. A draft registry will be developed and populated with a sample set of assets. The geodatabase will be reviewed along with the sample data in a workshop to provide a reference to City staff for what the design will look like within the Cityworks system. With the information from the physical asset registry review workshop, the Black & Veatch team will create a final asset registry.

Task 3.2 - Hierarchy Development/Data Collection

During discussions regarding maintenance managed items and IDs, Black & Veatch will coordinate with City staff to gather all necessary source data for asset repository data population. Source data will include existing databases, reports, and construction drawings then once acquired, those sources will be used to populate the GIS asset registry with maintenance managed items. Once the asset data population is completed for an entire plant or facility, it will go through an independent quality review check by the project quality assurance team. The final geodatabase will be delivered to the City to be included in the City's enterprise GIS.

The City has stated that they will perform all field data collection and our fee reflects that. However, Black & Veatch can perform any and all field data capture required as evidenced by our recent asset data collection and condition assessment effort completed as part of the WRF Master Plan. Additionally, we routinely perform this type of work with other organizations and will gladly provide you with an estimate of effort upon request by City staff. Black & Veatch have developed many Esri based data capture tools that can directly populate and QC data capture with your asset register (geodatabase) to streamline data loading and improve data quality.

Task 3.3 - Iterative System Configuration

Following the configuration specifications documented in the Cityworks Configuration and Implementation Plan (Task 2), Black & Veatch will direct and conduct an iterative configuration process that is based on choosing a subset of requirements identified in the Configuration and Implementation Plan, configuring the system to support that subset of requirements, reviewing those configurations with Department staff in a workshop, adjusting the configuration based on feedback from the workshops, and then repeating the process again up to a total of four times per group.. Configuration subset requirements may include, but are not limited to:

- GIS Map(s) Layout and Set-up
- Asset Work Order and Inspection Templates
- Service Request Templates
- Work Activity Statuses
- Process Workflows
- Respond Dashboard Set-up
- Respond Style Profiles for Page Layouts
- Group Membership
- User Permissions
- Crew Employee, Labor, and Equipment Assignments



Iterative Configuration Process Model allows for collaboration with the City and ensures deliverables best match the City's needs.

New Plug-in for Cityworks®
A TRIMBLE COMPANY

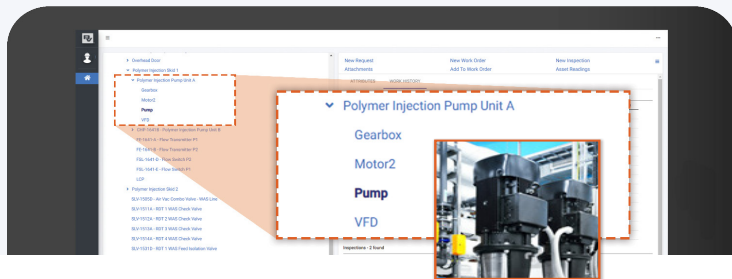
Plantworks

Now it's easier and faster to visualize facility asset data to streamline the tracking, maintenance and optimization of assets.

1 FIND

Quickly identify assets

Promoting efficiency, Plantworks provides the ability to show vertical assets as a visual hierarchy, organized by process or location. The asset list is also searchable to find the equipment you are looking for.



2 CLICK

Access information from one screen

Plantworks allows you to quickly refer to equipment attributes, readings and work history, as well as add new equipment within the hierarchy or edit attributes.

WO #	Description	Status
27298	Pump 500 Hour PM (Oil Change)	OPEN
27296	Pump 500 Hour PM (Oil Change)	OPEN
27284	Pump 500 Hour PM (Oil Change)	OPEN
27283	Pump 500 Hour PM (Oil Change)	OPEN
27282	Pump 500 Hour PM (Oil Change)	OPEN
27245	Pump 500 Hour PM (Oil Change)	OPEN
27226	Pump 500 Hour PM (Oil Change)	OPEN
27225	Pump 500 Hour PM (Oil Change)	OPEN
27196	Pump 500 Hour PM (Oil Change)	OPEN
27184	Pump 500 Hour PM (Oil Change)	OPEN
27174	Pump 500 Hour PM (Oil Change)	OPEN
27167	Lock Out/Tag Out	OPEN
27158	Pump 500 Hour PM (Oil Change)	OPEN
27157	Pump 500 Hour PM (Oil Change)	OPEN

Developed by



BLACK & VEATCH



The Plantworks plug-in optimizes facility asset management in Cityworks.

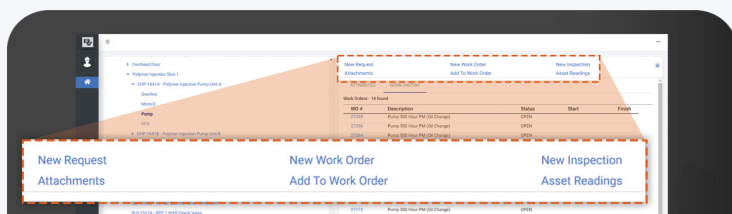
BENEFITS

- Visual facility asset hierarchy
- Enhances field staff productivity and asset register management
- Improves data collection and management
- Advances reporting and trending with accuracy and quality

3 CREATE

Generate maintenance activity records on demand

From the same screen, Plantworks provides the ability to generate service requests, work orders, inspections; add readings and attachments directly from the asset record.



DEPLOYS EASILY

- ✓ No duplication of data
- ✓ Compatible with Respond
- ✓ Hosted in the Cityworks environment

Task 3 Deliverables: Physical Geodatabase Design/Registry, Data Collection Plan and Support, Asset ID Standards, Cityworks System Configuration, Historical O&M Data Migration, Up to twelve reports and six dashboards, System Integration Support (pending additional fee approval), User acceptance testing.

Task 4 – Deploy

Deployment is where the “rubber meets the road.” This is where the culmination of all the planning, design, configuration, evaluation, and testing performed up to this point are put in production and Cityworks becomes the focal point of work management and communication for the Utilities department. Black & Veatch recognizes the importance of a planned and well communicated roll-out, and will work closely with the Governance Committee to schedule and sequence device set-up, training, and go-live for each group.

Task 4.1 - Device Configuration

Before To ensure a smooth roll-out for each group, Black & Veatch will have a dedicated session with each group to ensure their mobile devices, tablets, and/or computers are prepped and ready for training and subsequent go-live. Common configuration set-up can include device assignment, app installs, app preference settings, multi-factor authentication (MFA) configuration (if needed), VPN configuration (if needed), confirming staff account access, and sign-in verification.

Task 4.2 - Hands-on User Training

Black & Veatch will deliver user training of the new CMMS system through four different courses. Users will be assigned to their specific course(s) based on their role and typical daily work activities.



Recommended courses for hands-on training

Training Schedule and Sequencing

The following tables show the agendas for each of the four recommended courses.

CITYWORKS ADMINISTRATORS COURSE EXAMPLE AGENDA

Grouping: All Administrators

Duration: 4 days onsite

Purpose: Staff will have the knowledge and materials necessary to provide internal support and Cityworks administration to the Department.

Day 1	<ul style="list-style-type: none"> ■ Navigating the Cityworks User Interface ■ Using the Cityworks Map ■ How to Create and Assign Work Activities (Service Requests, Inspections, Work Orders)
Day 2	<ul style="list-style-type: none"> ■ Creating Preventative Maintenance Schedules ■ Respond Management (Queries, Dashboards, Side-menu Management)
Day 3	<ul style="list-style-type: none"> ■ System Administration <ul style="list-style-type: none"> ■ Adding/Deactivating Employees ■ Groups, Crews, Employee Relates, Employee Plugins ■ Work Activity Templates ■ Labor, Materials, and Equipment
Day 4	<ul style="list-style-type: none"> ■ Technical Maintenance (Plugin Updates, System Updates, System Patches) ■ System and Usage Monitoring/Cleanup

MANAGERS AND SUPERVISORS COURSE EXAMPLE AGENDA

Grouping: Individual supervisor groups, as they are scheduled to be brought online

Duration: 2 days onsite

Purpose: Staff will have the knowledge and materials necessary to create, manage, monitor, review, and report on activities that occur and are documented within the Cityworks system.

Day 1	<ul style="list-style-type: none"> ■ Navigating the Cityworks User Interface ■ Using the Cityworks Map ■ How to Create and Assign Work Activities (Service Requests, Inspections, Work Orders)
Day 2	<ul style="list-style-type: none"> ■ Creating Preventative Maintenance Schedules ■ Work Activity Monitoring, Reviewing, and Closing ■ Handling Work Escalations ■ Performance Metric Monitoring (Dashboard Usage, Reporting)

OPERATORS AND TECHNICIANS COURSE EXAMPLE AGENDA

Grouping: Individual Operator/Technician groups, as they are scheduled to be brought online

Duration: 1 full day per group (water treatment plant operators, wastewater treatment plant operators, water distribution and reclaim operators, wastewater distribution operators)

Purpose: Focus on the Cityworks Mobile Application and/or Respond Web Application.

Day 1	<ul style="list-style-type: none"> ■ Reviewing your Work Assignments in your Inbox and Map ■ Adding Labor Hours, Equipment Usage, and Material Quantities ■ Adding Comments and Photos ■ Performing Observations ■ Recommending Follow-up Actions & Escalations ■ Completing the Work Assignment
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MATERIAL MANAGEMENT COURSE EXAMPLE AGENDA

Grouping: All warehouse and material management staff together

Duration: 1 full day

Purpose: Focus on the Cityworks Storeroom plug-in and its use for material management at the City. Attendees will be warehouse management and procurement staff.

Day 1	<ul style="list-style-type: none"> ■ How to perform: Requisitions, Receipts, Transfers, Assignments ■ Performing and Scheduling Audits ■ Cost and Material Data Maintenance Strategies
-------	---

It is anticipated that go-live will be staggered, with each group being brought on-line sequentially, one week after the other. Because of this, we recommend administrator training being held all at once. However, the full day managers, operators, and technician training sessions should be only be provided to the group that is scheduled to be brought online next.

This ensures that users who are scheduled to go-live attend training right before their go-live dates, and users who are not scheduled to go live do not attend training and then have to wait a period of time before going live. Having the delay between training and go-live would diminish knowledge retention and minimize the effectiveness of the training. The culmination of the on-site training will be a competency check to measure and quantify user understanding and adoption. An additional week of training has been factored into the project schedule if the results of the competency check do not meet the Project Charter's level of expectations. As needed, the additional week of training will be used to revisit and bolster specific process or platform-based procedures that were not fully adopted or understood.

The materials developed as a part of this training session will be reviewed and approved by the Project Governance Committee and will serve as the foundation for the City's CMMS Training Program moving forward.

Task 4.3 - Cityworks Go-Live Roll Out

Once training is completed and the competency check meets the Program Charter's defined standards - a "Go-Live" date will be determined by the City and Black & Veatch for each group within Utilities. It is more impactful and successful to go-live with a staggered approach, bringing a group or division within Utilities on-line, one at a time, instead of all at once. Staggering the go-live ensures that each group being brought online has a direct line of support and communication, allowing any additional configuration changes and/or unforeseen issues to be addressed without affecting or impacting others groups. Lessons learned from one go-live can be applied to subsequent ones for optimal delivery quality.

Black & Veatch will provide two Cityworks specialists to be on-site for two days per group to support Cityworks production roll-out. On-site Black & Veatch staff will be available to resolve technical issues from staff, answer questions, provide additional training sessions (small group, 1-on-1, etc.) and perform general technical triage should any issues arise.

Task 4 Deliverables: Mobile Device configuration, Execution of On-site Training, On-site Go-live Support, Post Go-live Triage Support.

Task 5 - Initial Go-Live Support

After Cityworks has been put into production, there will be a transition period into long-term as needed support and maintenance (outlined in Tab 5). This support task will help to fill that gap by providing direct and immediate administrative and technical support to the City for the calendar month immediately following go-live for all groups.

Black & Veatch will make team members available to fulfill requests from the City and provide remote and on-site support to assist with common technical support items, including but not limited to:

- User access
- Reporting updates and support
- Software/Plugin updates
- Configuring new work templates
- Revising technical configurations
- Dashboard/query revisions or updates
- General technical troubleshooting

After one month of technical support, the project team will transition into our long-term maintenance and support approach, which is detailed in Tab 5.

Task 5 Deliverables: To be determined as needs arise.

Task 6 – Project Management/Administration (Implementation Phase)

Black & Veatch will perform general administrative duties associated with the Project, including project set-up, resource management, progress monitoring, scheduling, general correspondence, office administration, and invoicing. We will maintain the schedule and an accurate project documentation, filing, and cost accounting system throughout the project. Black & Veatch will manage the Quality Assurance process as detailed on page 44. Rebecca Oliva, Project Controls and Administration, will support Nick Alexandrou, Project Manager, on this task.

Task 6 Deliverables: Comment-Response Logs, Progress Status Reports; Document Catalog; and Regular project updates with City's PM to communicate progress and discuss any issues, improvements, or necessary changes to project delivery.

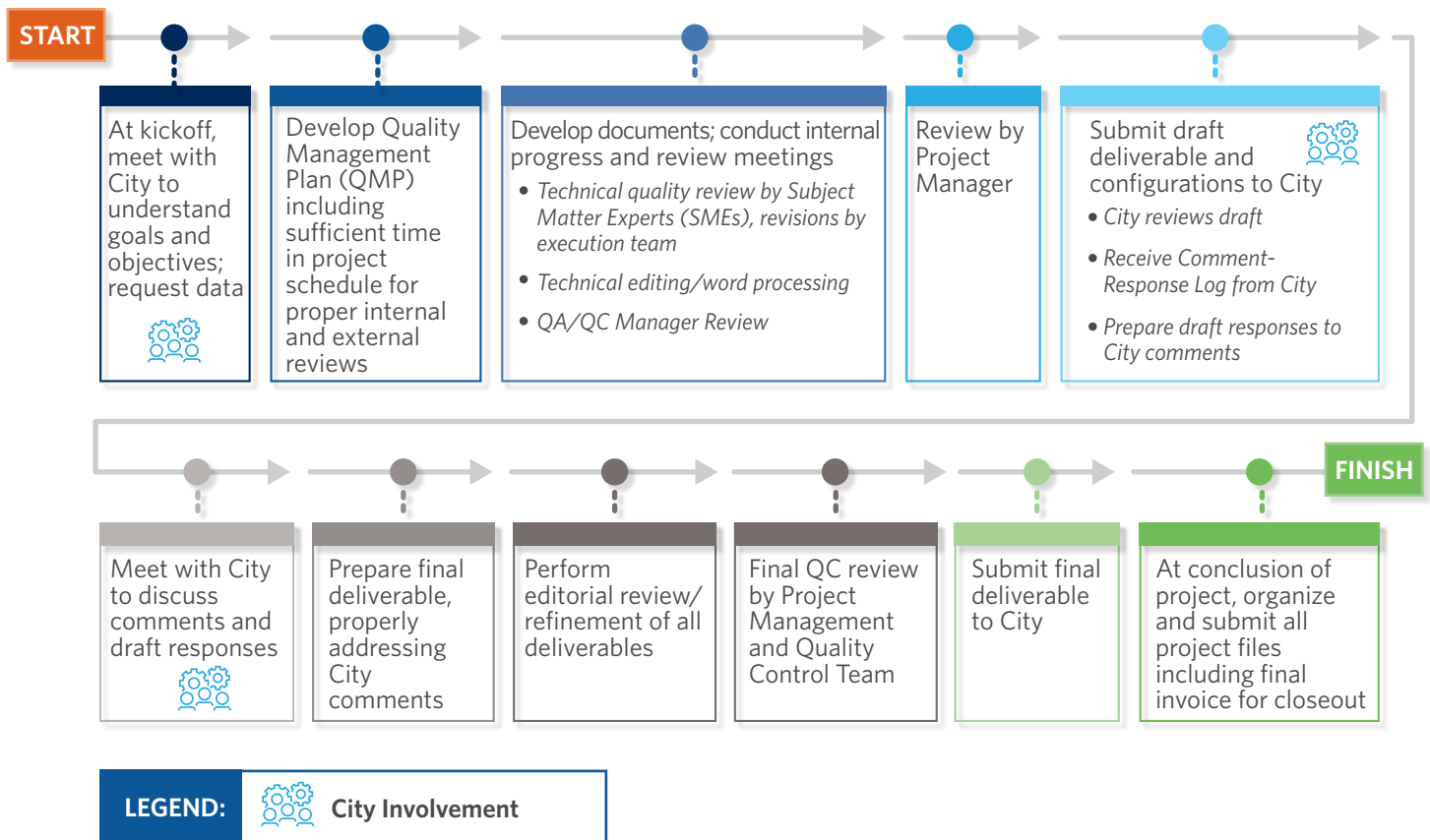
RFP ITEM 5 REQUIREMENT FOR PROJECT IMPLEMENTATION	STRATEGY AND PROCESS LOCATION IN THIS PROPOSAL	
a. Project Methodology and Implementation Process	Tasks 1 through 6	✓
b. Scope, Limitation, Dependencies and Assumptions	Tasks 1 through 6	✓
c. Change Management Procedure and User Adoption	Tasks 1.2, 1.5	✓
d. Quality Assurance and Testing Strategy	Tasks 3.6, 6; "Project Quality Assurance" Section, Page 44	✓
e. Asset Inventory Process	Tasks 2.1.1, 2.1.2, 3.1, 3.2	✓
f. User Communication and Change Management Plan	Tasks 1.1, 1.2, 1.3, 1.5	✓
g. Estimated Project Timeline	Project Schedule, Page 45	✓
h. Issue Documentation and Escalation Procedure	Tasks 1.1, 1.2	✓
i. Training Strategy and Documentation by User Role	Tasks 1.4, 4.2	✓
j. Work Order Workflows and Escalation Plans	Tasks 2.3.1, 2.3.2	✓
k. Asset Life Cycle Management Protocols	Tasks 2.5.1	✓
l. Functional Integration with Existing Software Services	Tasks 2.2.2, 3.5	✓

PROJECT QUALITY ASSURANCE

One of the most important aspects of our management approach is our Project-Specific Quality Management Plan (QMP). This plan is built upon the Black & Veatch Quality Manual and is tailored to serve as a tool for individual assignments to define key project milestones and quality review checkpoints. Checkpoints are integral to successful project execution and are built into the project schedule to allow sufficient time for quality reviews. Black & Veatch integrates quality control into the development of all deliverables, as shown in the following graphic. **This approach is aligned with our quality policy and has been proven successful and effective in the execution of project deliverables by receiving a limited number of comments, mostly technical and very few grammar related comments. Every deliverable undergoes an editorial and technical proofreading review before submittal to the City. This demonstrates our policy has been successful and effective.** For different types of work and deliverables we have different types of workflows, however, quality is never compromised and is always incorporated into each deliverable we submit to the City as shown in the following graphic.

Quality touches virtually every component of the project and is essential to project success. Black & Veatch takes ownership of the quality of the product and cares about the quality of the QC process. Black & Veatch understands Quality Control is our job, not the City's.

Black & Veatch's Proven Quality Process for CMMS Implementation Projects

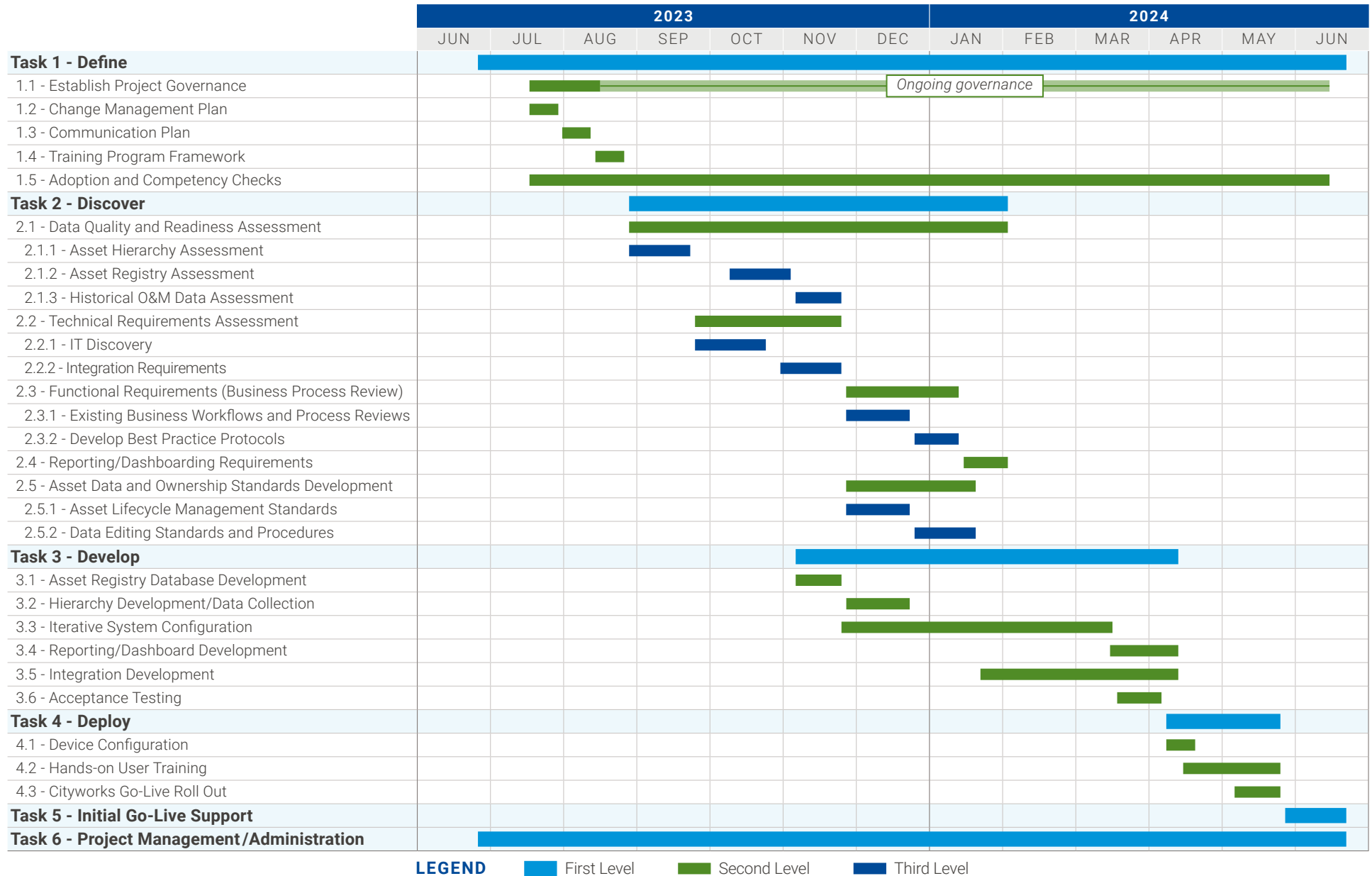


Black & Veatch staff... are adept to listening to the needs of the County, communicating well and providing high quality deliverables. They have worked across departments and disciplines to provide the County holistic system recommendations. As a result, the County has gained increased confidence in implementing projects without the fear of negative unintended consequences from evaluating systems in silos. I recommend Black & Veatch's water, wastewater, and reclaimed water services to other utilities."

- MARGARET R. (BECKY) COOK, PE
SENIOR ENGINEER | PINELLAS COUNTY

PROJECT SCHEDULE

Black & Veatch has staff available and will complete the Tab 4 scope of services from June 2023 to June 2024 (or within 13 months from the Notice to Proceed date). The Tab 5 services will be completed within six years of the initial project Notice to Proceed.



5

Long-Term Support and Maintenance



5

Long-Term Support and Maintenance

FIVE-YEAR ONGOING SUPPORT

As with any system that is implemented and adopted across an organization, support will be needed as the program matures. Following the Implementation Phase described in Tab 4, Black & Veatch will provide five years of support and maintenance. This support could be for a number of technical, functional, and process driven needs. This support could also be to help develop further enhancements, integrations, and expansions into other Departments.

Black & Veatch has a team of subject matter experts and local trusted advisors who possess the expertise to provide technical support and system administration for the five year support term and beyond, if needed. *This support is in addition to the Trimble Cityworks support provided as part of the Cityworks licensing agreement.*

Some of the advancements or expansions that could arise, which we have previously supported include but are not limited to:

Platform Enhancements

More complex material management in Cityworks Storeroom can include items such as integrations with Finance and Purchasing Software, barcoding for warehouse inventory management and asset tagging, and automatic purchase order generation based on minimum quantity thresholds.

Black & Veatch has helped many of our clients utilize Cityworks for permitting and zoning processes within the Planning department that involves automated workflows and plans review processes.

Asset readings, a common enhancement, have improved client communication and efficiencies. This allows for dynamic work management to be issued automatically as things like pump run times, temperature readings, and flow values hit thresholds that require certain follow-up work activities to happen. Often, we will help our clients configure Cityworks to get read-only export notifications from SCADA that trigger these activities in Cityworks.

Some other common enhancements we have helped clients with include setting up SMS text notifications to staff as work gets assigned to them, automated compliance and regulation reporting, and dynamic staff workload management.

Platform Expansions

Following Utilities, the Cityworks platform will likely be looked to as leading-edge technology at the City. This will drive the desire for migration to Cityworks for other departments. Known candidates include Public Works, Recreation, and Facilities. Black & Veatch has helped numerous clients expand their Cityworks footprint throughout their organization.



Black & Veatch has helped numerous clients expand Cityworks to Utilities, Public Works, Parks & Rec, Facilities, Fleet, Fire, Police, Planning and Zoning, and Beach Maintenance departments.

As-Needed Technical Support

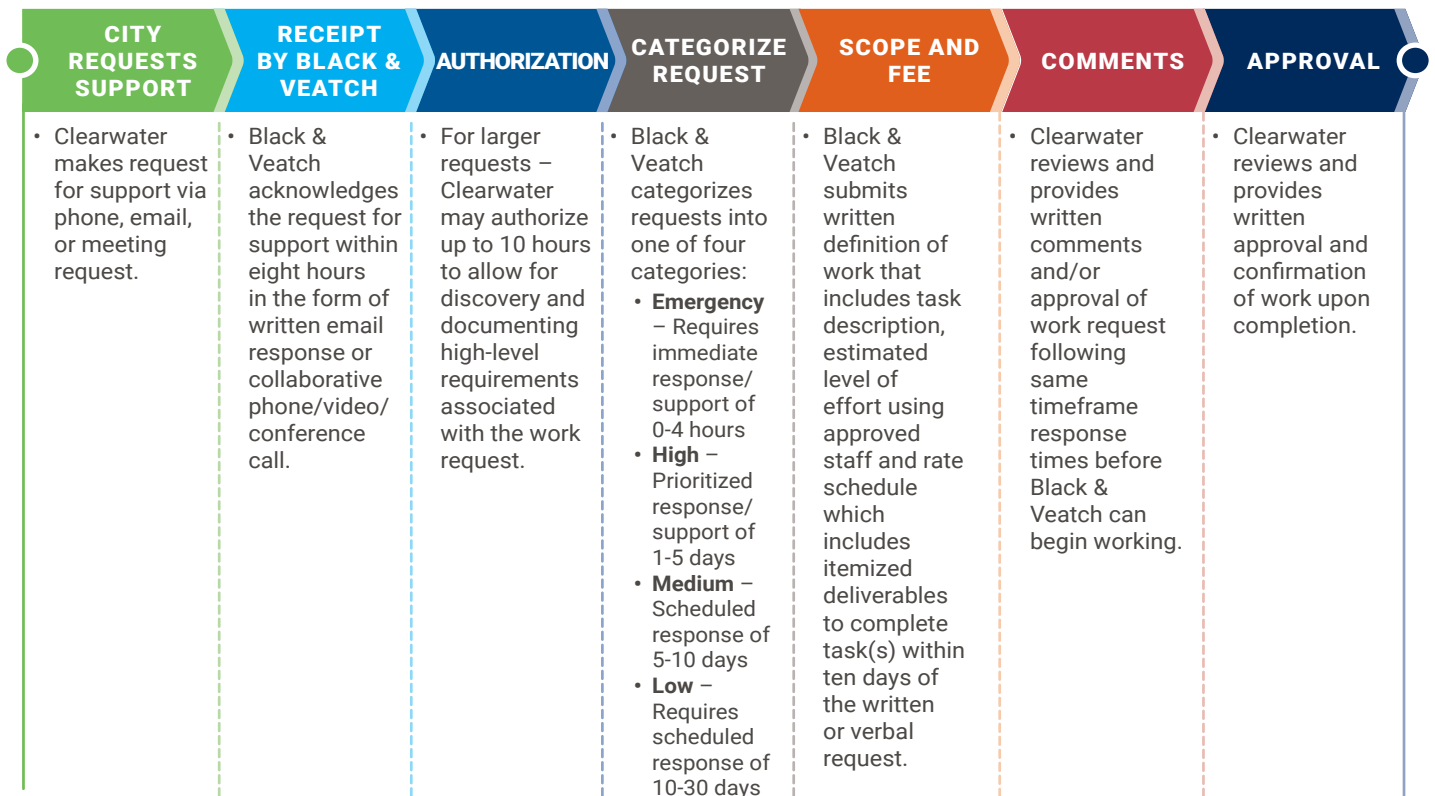
Beyond the enhancements and expansions that will come up as the program is used and the City looks for more ways to expand the platform, there will inevitably be day-to-day technical support cases that arise that Black & Veatch will provide support on.

Black & Veatch has continuing services and support contracts with many of our clients using Cityworks who need additional technical support in the years that follow implementation. We generally refer to these as common administration and support efforts. Common ongoing services can include, but are not limited to:

- Software plug-in updates
- Configuring new work templates
- Providing additional training

- Updating/revising technical configurations not previously identified as a need
- Dashboard/query updates and support
- General technical troubleshooting
- New employee configuration
- Use-case scenario modeling
- Emergency response
- Business case analysis

Black & Veatch has developed a communication and request mechanism that will allow us to receive, prioritize, and respond to requests from the City in an organized and expedited fashion. Our general approach includes:



For repetitive or ongoing tasks such as staff augmentation for cyclical work, like monthly or quarterly updates, a single task order may be authorized to utilize over a defined time period.

Following this general process, Emergency and High categorized requests are prioritized for immediate response. Also, requests for support identified as “day-to-day” administrative can bypass this review and authorization effort.



Working with the City, Black & Veatch will refine our support protocols and add specifics to meet the City's short- and long-term needs.

Projecting Need and Support Hours

Black & Veatch will work hand in hand with the City to identify technical support needs and future enhancement opportunities.

As all technical support request vary in complexity and duration to complete, it is difficult to foresee all potential issues or enhancements that may arise. It is recommended that a not-to-exceed support task be authorized each fiscal year for Cityworks On-Call Support. This effort should be set-up and billed as a time and material task where Black & Veatch only invoices the City the hours we work, with support documentation provided in each invoice. While we are flexible to the amount of as-needed budget that the City wishes to establish, our Cost of Services herein is based on an annual amount of \$60,000.

This annual budget is anticipated to approximately cover one Senior Cityworks SME dedicated to the City for an average of four hours a week.

Depending on the need and response time, additional staff or SMEs will be utilized where appropriate.

Having a support task budget structured in this manner affords the City a safe budget amount to ensure there is no lapse in support or funding, and flexibility to use these funding for general technical support as well as enhancements depending on the needs that arise each year.

Black & Veatch will perform the administrative duties similar to Task 6, but for the as-needed support for the additional five-year term. Rebecca Oliva (Project Controls and Administration) will support Nick Alexandrou (Project Manager) on this task.



Black & Veatch has helped guide the Port to advance its Asset Management program. Their hands-on approach focused directly on improving our operations workflows to integrate Information Technology with our strategic Asset Management goals and objectives."

- CID TESORO
VP, FACILITIES & ENGINEERING | PORT OF SAN DIEGO

6

Cost of Services



6 | Cost of Services

The scope of services described in Tabs 4 and 5 can be completed for the fees shown below, by task.

TABLE 3. Cost of Services - Implementation

TASK	FEE TO CITY
1 – Define	\$93,000
2 – Discover	\$225,000
3 – Develop	\$190,000
4 – Deploy	\$86,000
5 – Support	\$15,000
6 – Project Management/Administration	\$71,000
Total	\$680,000

Our team will support the project for up to \$60,000 per year for the five years of ongoing support to cover the example types of services described in Tab 5.

7

Other Forms



7 | Other Forms

Form 1. Exceptions/Additional Materials/Addenda Form

Form 2. Vendor Information Form

Form 3. Vendor Certification of Proposal Form

Form 4. Scrutinized Companies Form

Form 5. E-Verify Eligibility Form

Form 6. Proof of Platinum or Gold Implementation Status with Cityworks

Form 7. W-9 Form

EXCEPTIONS / ADDITIONAL MATERIAL / ADDENDA

Proposers shall indicate any and all exceptions taken to the provisions or specifications in this solicitation document. Exceptions that surface elsewhere and that do not also appear under this section shall be considered invalid and void and of no contractual significance.

Exceptions (mark one):

****Special Note – Any material exceptions taken to the City's Terms and Conditions may render a Proposal non-responsive.**

- ☐ No exceptions
- ☒ Exceptions taken (describe--attach additional pages if needed)

Black & Veatch kindly requests the City consider making the following non-material change:

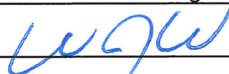

Insert under Sec. 29: "City shall not acquire any rights to any of Black & Veatch or its subcontractors' or vendors' proprietary computer software that may be used in connection with the Services except as expressly provided in the scope of Services or as may be separately agreed."

Additional Materials submitted (mark one):

- ☒ No additional materials have been included with this proposal
- ☐ Additional Materials attached (describe--attach additional pages if needed)

Acknowledgement of addenda issued for this solicitation:

Prior to submitting a response to this solicitation, it is the vendor's responsibility to confirm if any addenda have been issued.

Addenda Number	Initial to acknowledge receipt
1	
2	

Vendor Name Black & Veatch Corporation

Date: 05-17-23

VENDOR INFORMATION

Company Legal/Corporate Name: Black & Veatch Corporation

Doing Business As (if different than above): N/A

Address: 1715 N. Westshore Blvd. Suite 725

City: Tampa State: FL Zip: 33607

Phone: 813-207-7910 Fax: N/A

E-Mail Address: AlexandrouNA@bv.com Website: www.bv.com

DUNS # 09-225-5939

Remit to Address (if different than above):

Address: _____

City: _____ State: _____ Zip: _____

Order from Address (if different from above):

Address: _____

City: _____ State: _____ Zip: _____

Contact for Questions about this proposal:

Name: Nick Alexandrou Fax: N/A

Phone: 813-207-7956 E-Mail Address: AlexandrouNA@bv.com

Day-to-Day Project Contact (if awarded):

Name: Nick Alexandrou Fax: N/A

Phone: 813-207-7956 E-Mail Address: AlexandrouNA@bv.com

_____ Certified Small Business

Certifying Agency: _____

_____ Certified Minority, Woman or Disadvantaged Business Enterprise

Certifying Agency: _____

Provide supporting documentation for your certification, if applicable.

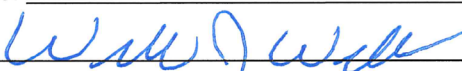
VENDOR CERTIFICATION OF PROPOSAL

By signing and submitting this Bid/Proposal/Qualification/Response, the Vendor certifies that:

- a) It is under no legal prohibition on contracting with the City of Clearwater.
- b) It has read, understands, and is in compliance with the specifications, terms and conditions stated herein, as well as its attachments, and any referenced documents.
- c) It has no known, undisclosed conflicts of interest.
- d) The prices offered were independently developed without consultation or collusion with any of the other vendors or potential vendors or any other anti-competitive practices.
- e) No offer of gifts, payments or other consideration were made to any City employee, officer, elected official, or consultant who has or may have had a role in the procurement process for the commodities or services covered by this contract. The Vendor has not influenced or attempted to influence any City employee, officer, elected official, or consultant in connection with the award of this contract.
- f) It understands the City may copy all parts of this response, including without limitation any documents or materials copyrighted by the Vendor, for internal use in evaluating respondent's offer, or in response to a public records request under Florida's public records law (F.S. Chapter 119) or other applicable law, subpoena, or other judicial process; provided that the City agrees not to change or delete any copyright or proprietary notices.
- g) It hereby warrants to the City that the Vendor and its subcontractors will comply with, and are contractually obligated to comply with, all federal, state, and local laws, rules, regulations, and executive orders.
- h) It certifies that Vendor is not presently debarred, suspended, proposed for debarment, declared ineligible, voluntarily excluded, or disqualified from participation in this matter from any federal, state, or local agency.
- i) It will provide the commodities or services specified in compliance with all federal, state, and local laws, rules, regulations, and executive orders if awarded by the City.
- j) It is current in all obligations due to the City.
- k) It will accept all terms and conditions as set forth in this solicitation if awarded by the City.
- l) The signatory is an officer or duly authorized representative of the Vendor with full power and authority to submit binding offers and enter into contracts for the commodities or services as specified herein.

ACCEPTED AND AGREED TO:

Company Name: Black & Veatch Corporation

Signature: 

Printed Name: William J. Wells, PE

Title: Vice President

Date: 5-8-2023

SCRUTINIZED COMPANIES FORMS

SCRUTINIZED COMPANIES AND BUSINESS OPERATIONS WITH CUBA AND SYRIA CERTIFICATION FORM

IF YOUR BID/PROPOSAL IS \$1,000,000 OR MORE, THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID/PROPOSAL. FAILURE TO SUBMIT THIS FORM AS REQUIRED MAY DEEM YOUR SUBMITTAL NONRESPONSIVE.

The affiant, by virtue of the signature below, certifies that:

1. The vendor, company, individual, principal, subsidiary, affiliate, or owner is aware of the requirements of section 287.135, Florida Statutes, regarding companies on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaging in business operations in Cuba and Syria; and
2. The vendor, company, individual, principal, subsidiary, affiliate, or owner is eligible to participate in this solicitation and is not listed on either the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Sector List, or engaged in business operations in Cuba and Syria; and
3. Business Operations means, for purposes specifically related to Cuba or Syria, engaging in commerce in any form in Cuba or Syria, including, but not limited to, acquiring, developing, maintaining, owning, selling, possessing, leasing or operating equipment, facilities, personnel, products, services, personal property, real property, military equipment, or any other apparatus of business or commerce; and
4. If awarded the Contract (or Agreement), the vendor, company, individual, principal, subsidiary, affiliate, or owner will immediately notify the City of Clearwater in writing, no later than five (5) calendar days after any of its principals are placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Sector List, or engaged in business operations in Cuba and Syria.



William J. Wells
Authorized Signature

William J. Wells, PE

Printed Name

Vice President

Title

Black & Veatch Corporation

Name of Entity/Corporation

STATE OF South Carolina

COUNTY OF Dorchester

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization on, this 08 day of May, 2023, by William J Wells (name of person whose signature is being notarized) as the VP & Subregion Director (title) of Black & Veatch Corporation (name of corporation/entity), personally known X, or produced _____ (type of identification) as identification, and who did/did not take an oath.

Melissa Palmer

Notary Public

Melissa Palmer

Printed Name

My Commission Expires: 06-20-2032

NOTARY SEAL ABOVE

E-VERIFY ELIGIBILITY FORM

VERIFICATION OF EMPLOYMENT ELIGIBILITY FORM

PER FLORIDA STATUTE 448.095, CONTRACTORS AND SUBCONTRACTORS MUST REGISTER WITH AND USE THE E-VERIFY SYSTEM TO VERIFY THE WORK AUTHORIZATION STATUS OF ALL NEWLY HIRED EMPLOYEES.

THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID/PROPOSAL. FAILURE TO SUBMIT THIS FORM AS REQUIRED MAY DEEM YOUR SUBMITTAL NONRESPONSIVE.

The affiant, by virtue of the signature below, certifies that:

1. The Contractor and its Subcontractors are aware of the requirements of Florida Statute 448.095.
2. The Contractor and its Subcontractors are registered with and using the E-Verify system to verify the work authorization status of newly hired employees.
3. The Contractor will not enter into a contract with any Subcontractor unless each party to the contract registers with and uses the E-Verify system.
4. The Subcontractor will provide the Contractor with an affidavit stating that the Subcontractor does not employ, contract with, or subcontract with unauthorized alien.
5. The Contractor must maintain a copy of such affidavit.
6. The City may terminate this Contract on the good faith belief that the Contractor or its Subcontractors knowingly violated Florida Statutes 448.09(1) or 448.095(2)(c).
7. If this Contract is terminated pursuant to Florida Statute 448.095(2)(c), the Contractor may not be awarded a public contract for at least 1 year after the date on which this Contract was terminated.
8. The Contractor is liable for any additional cost incurred by the City as a result of the termination of this Contract.






Authorized Signature
 William J. Wells, PE
 Printed Name
 Vice President
 Title
 Black & Veatch Corporation
 Name of Entity/Corporation

STATE OF South Carolina
 COUNTY OF Dorchester

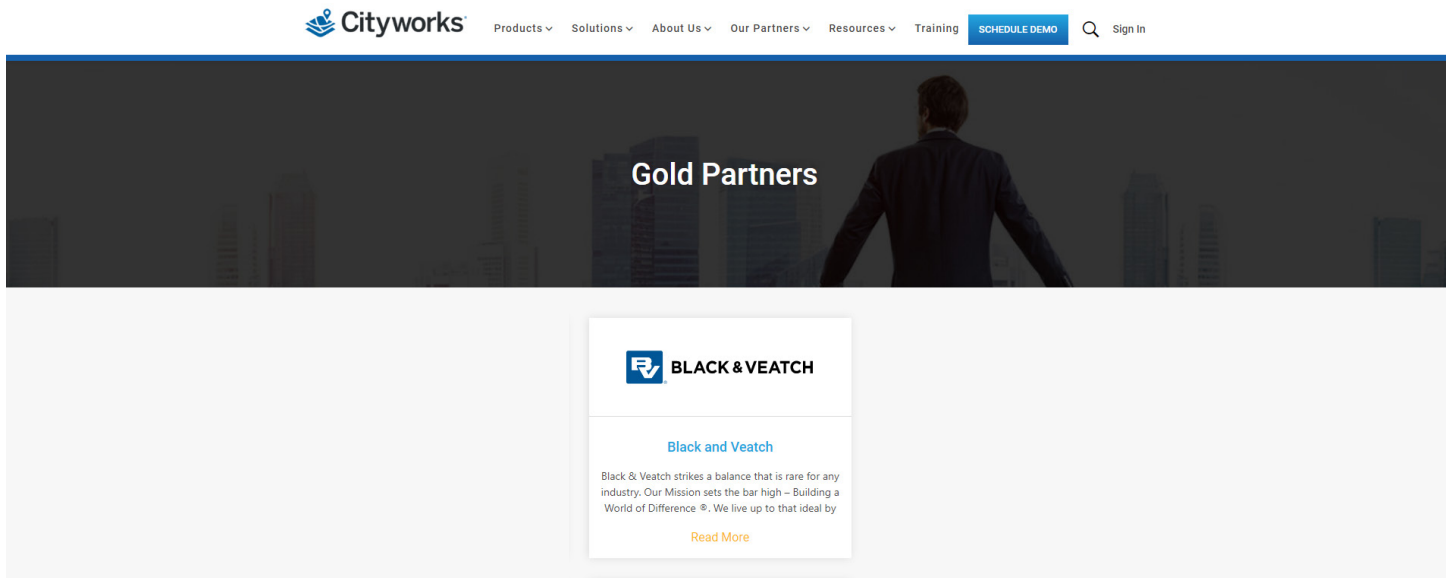
The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization on, this 08 day of May, 2023, by William S Wells (name of person whose signature is being notarized) as the VP + Subregion Director (title) of Black & Veatch Corporation (name of corporation/entity), personally known X, or produced _____ (type of identification) as identification, and who did/did not take an oath.



Notary Public
 Melissa Palmer
 Printed Name

My Commission Expires: 08-20-2032
 NOTARY SEAL ABOVE

Black & Veatch is a Cityworks Gold Level Implementation Partner as shown on their website accessed on May 16, 2023 (https://www.cityworks.com/partner_categories/gold-partners/).



Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Give Form to the
requester. Do not
send to the IRS.

Print or type.
See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. BLACK & VEATCH CORPORATION	
2 Business name/disregarded entity name, if different from above	
3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► _____ Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ► _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) <u>5</u> Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
5 Address (number, street, and apt. or suite no.) See instructions. 11401 LAMAR AVE.	Requester's name and address (optional)
6 City, state, and ZIP code OVERLAND PARK, KS 66211	
7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number									
			-						
or									
Employer identification number									
4	3		-	1	8	3	3	0	7 3

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign
Here

Signature of
U.S. person ►

Date ► January 1, 2023

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
 - Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
 - Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
 - Form 1099-S (proceeds from real estate transactions)
 - Form 1099-K (merchant card and third party network transactions)
 - Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
 - Form 1099-C (canceled debt)
 - Form 1099-A (acquisition or abandonment of secured property)
- Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.



BLACK & VEATCH

SCRUTINIZED COMPANIES FORMS

SCRUTINIZED COMPANIES THAT BOYCOTT ISRAEL LIST CERTIFICATION FORM
THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID/PROPOSAL.
FAILURE TO SUBMIT THIS FORM AS REQUIRED MAY DEEM YOUR SUBMITTAL
NONRESPONSIVE.

The affiant, by virtue of the signature below, certifies that:

1. The vendor, company, individual, principal, subsidiary, affiliate, or owner is aware of the requirements of section 287.135, Florida Statutes, regarding companies on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel; and
2. The vendor, company, individual, principal, subsidiary, affiliate, or owner is eligible to participate in this solicitation and is not listed on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel; and
3. "Boycott Israel" or "boycott of Israel" means refusing to deal, terminating business activities, or taking other actions to limit commercial relations with Israel, or persons or entities doing business in Israel or in Israeli-controlled territories, in a discriminatory manner. A statement by a company that it is participating in a boycott of Israel, or that it has initiated a boycott in response to a request for a boycott of Israel or in compliance with, or in furtherance of, calls for a boycott of Israel, may be considered as evidence that a company is participating in a boycott of Israel; and
4. If awarded the Contract (or Agreement), the vendor, company, individual, principal, subsidiary, affiliate, or owner will immediately notify the City of Clearwater in writing, no later than five (5) calendar days after any of its principals are placed on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel.

Authorized Signature

Rafael E. Frias III, PE

Printed Name

Vice President

Title

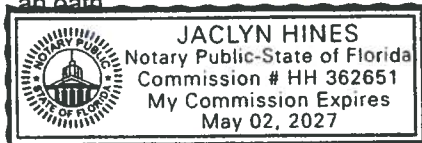
Black & Veatch Corporation

Name of Entity/Corporation

STATE OF Florida

COUNTY OF Broward

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization on, this 18th day of May, 2023, by Rafael E. Frias III (name of person whose signature is being notarized) as the Vice President (title) of Black & Veatch Corporation (name of corporation/entity), personally known ☒, or produced N/A (type of identification) as identification, and who did/did not take an oath.



Notary Public

Printed Name

My Commission Expires: May 2, 2027
NOTARY SEAL ABOVE