BLACK & VEATCH

January 10, 2020

City of Delray Beach
150 NW 1st Avenue
Delray Beach, FL 33444

Attention: Don Marese, Assistant IT Director
Subject: Cityworks System Implementation – Phase III and Phase IV Planning

Thank you for the opportunity to develop this prioritized list of tasks to move forward with the Cityworks Implementation Project for Phases III & IV. The tasks included in this document were based on several discussions with the City, but fully defined scope, fee, and schedule requirements will be finalized and delivered with each task order issued under this contract. The City will pick tasks from this list to be completed against the budget for Phases III & IV; Black & Veatch will define and write separate task order scopes and budgets for each task selected; and the City will approve each task order and budget before work begins. The potential list of tasks for Phases III & IV include the following:

Phase III

- Task 100. Clean and Safe – Additional Cityworks Implementation
- Task 200. Ad-Hoc Cityworks and Reporting Support
- Task 300. Lift Station Vertical Assets Cityworks Implementation
- Task 400. GIS Support
  - Subtask 401. Publishing/Production Servers, Workflows, and GIS Assessment of Environments
  - Subtask 402. Coded Value Domain Cleanup in Enterprise Geodatabase
  - Subtask 403. Assessment of GIS Rights and Permissions
  - Subtask 404. As-Built Tool Integration with Cityworks
  - Subtask 405. Crisis Track Replacement – Exploration
  - Subtask 406. Integration with Tyler to Update Labor Rates in Cityworks
  - Subtask 407. Cityworks Upgrade and Training
- Task 500. City-wide GIS Guidance

Phase IV Planning

- Task 600. Storeroom Implementation for Utilities, Public Works, Parks & Recreation, and Clean & Safe Departments
- Task 700. CCTV Workflow and Integration with Cityworks
- Task 800. Code Enforcement PLL Implementation Phase I
- Task 900. WebQA Integration with Cityworks
- Task 1000. Water Treatment Plant Cityworks Implementation
- Task 1100. CIP Project Tracking System - Needs Assessment and Recommendations

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Overall Project Assumptions

■ For the Cityworks Implementation Project Phases III & IV, individual task order scopes will be written and approved, based on the tasks outlined in this document, which will further define the scope and fee requirements specified for each task.

■ If the City wishes to proceed with a task that is not defined within this document, then the task may be created as an individual task order against the a not to exceed contract amount. Requirements and budget will be discussed with the City, defined with a task order scope and budget, and approved by the City.

■ Project management activities are built into each individual task.

PRIORITIZED LIST OF TASKS

The following prioritized list of tasks were requested by the City as part of Phases III & IV of the Cityworks Implementation project. Each task is described along with the anticipated deliverables, City responsibilities, and assumptions utilized to develop the associated level of effort for each task.

Task 100 Clean & Safe Additional Cityworks Implementation

Subtask 101 – Reporting

Black & Veatch budgeted 40 hours produce reports needed for Clean & Safe. Prior to creating each report, Black & Veatch will work with Clean & Safe staff during the Configuration Workshop to determine the information/fields that are to be included with each report and other details such as grouping, sorting, and general design. A list of reports will be produced during this workshop and the City will need to prioritize the list before Black & Veatch will being creating the reports.

Black & Veatch will start designing and creating the City prioritized reports in Crystal Reports. Once in draft form, Black & Veatch will deploy the reports in the Cityworks test environment for the users to review and provide feedback. Feedback will then be incorporated, and final reports will be deployed into the Cityworks production environment.

Deliverables

■ Listing of reports discussed during Configuration workshop
■ Cityworks reports in draft form in Cityworks test environment
■ Cityworks reports in final form in Cityworks production environment

City Responsibilities

■ Attend Configuration Workshop prepared with report examples
■ Review report listing, prioritize reports, and provide timely feedback

Assumptions

■ This task consists of allotted hours to complete reports using the prioritized list. There are 40 hours budgeted for the design and creation of reports. Reports requested that are outside this budgeted number of hours will require additional funds or be completed internally by the City.

Subtask 102 – Training

Just prior to system go-live, up to 25 Clean & Safe end-users will be given instructor-led hands-on training with the Cityworks environment. End-user training will be role-based to allow users to be trained only on specific Cityworks functionality that each user will encounter daily. Each user will be provided with brief cheat sheets for commonly used Cityworks functions that can be easily referenced after training.

CLASS NAME	ANTICIPATED USER TYPES	ANTICIPATED USERS PER SESSION	DURATION
Introduction to Cityworks - Inbox - Mapping	All Users	up to 10	2 Hours per class
Service Requests - Creating - Updating - Searching	Supervisors, Superintendents, Management, Office Staff	up to 10	2 Hours per class
Work Orders & Inspections - Creating - Updating - Searching	Supervisors, Superintendents, Management, Office Staff, Crew Leads, Field Staff	up to 10	4 Hours per class

Deliverables

■ On-Site End-User Training – 3 Days
■ Cheat Sheet Documentation – Hard Copy and Digital

City Responsibilities

■ Provide training facilities and necessary hardware for training sessions
■ Coordinate with Clean & Safe staff to attend training

Assumptions

■ In addition to training cheat sheets, standard Cityworks training materials will be provided in electronic format
■ Training materials will consist of eight (8) one-page cheat sheets for creating/editing service requests, work orders, and inspections for both Cityworks Office and Cityworks Respond

Subtask 103 – Go Live

Black & Veatch will provide on-site go-live support by embedding support staff in the field with users. Any issues can be more quickly identified, verified, and addressed.

Deliverables

■ On-Site Go-Live Support – 2 Staff for 2 Days

City Responsibilities

■ Department Cityworks Administrator(s) will initiate ongoing support requests

Assumptions

■ None

Task 200 – Cityworks/Reporting Ad-Hoc Assistance

This is an on-call task to provide the City's Cityworks administrators with Cityworks and/or Crystal Reports reporting support. One three-day on-site visit is included with this task.

If a need is recognized, the City's Cityworks administrators will contact Black & Veatch staff with a request. If the request will take more than one hour to complete, Black & Veatch will coordinate with the City staff to provide a level of effort and schedule.

Deliverables

■ Cityworks and/or Crystal Reports reporting ad-hoc support

City Responsibilities

■ Provide guidance on Cityworks and/or reporting request and due dates
■ Approval of estimated level of effort from Black & Veatch before performing requested tasks

Assumptions

■ This task has 280 hours budgeted to provide Cityworks and/or reporting support over a two-year period starting with the notice to proceed.
■ This task may also be used for additional Cityworks support needed after implementations for other departments noted in this scope. City approval will be needed to use this task's hours after post-implementation support hours have been exhausted in their respective tasks.

Task 300 – Utilities Maintenance - Lift Station Vertical Assets Cityworks Implementation

Subtask 301 – GIS Database Development

This task will focus on reviewing the existing geodatabase structure for Utilities Maintenance and working with the City to create the new asset registry for lift station vertical assets.

To begin, Black & Veatch will perform asset hierarchy workshops to determine asset types (object tables), relationships, and attribution needed to store asset information and enforce hierarchy rules. Details will be documented, and a data dictionary document will be provided in draft format for Utilities Maintenance and GIS to review and approve.

Once the review is complete, comments will be incorporated, and a final version of the data dictionary will be delivered to the City to keep for future use. Black & Veatch will update the City's enterprise geodatabase with the new asset hierarchy developed including the object and relationship classes.

Once the geodatabase schema has been defined, the asset data then can be populated either by the City or Black & Veatch. Black & Veatch has provided information on the optional data collection subtask below.

Plantworks Tool Installation

Black & Veatch has developed a custom hierarchy navigation tool (Plantworks) that allows for easier access to vertical assets compared to out-of-the-box Cityworks tools. Black & Veatch will install the tool for Utilities Maintenance to use with their vertical assets.

Deliverables

- Asset Registry Workshop
- Data dictionary in draft and final formats
- Updated City enterprise geodatabase with new lift station object and relationship classes
- Plantworks vertical asset navigation tool

City Responsibilities

- Schedule with staff, provide facilities for Asset Registry workshop
- Review data dictionary and provide feedback

Assumptions

- No business process mapping will take place during this task.
- Black & Veatch will complete the geodatabase design.

Subtask 301.1 – Data Collection (Optional Task)

Once the asset hierarchy is established, Black & Veatch will collect asset and attribute data for 143 City lift stations to populate the asset database. A GIS data collector application will be used to collect the data directly into the geodatabase eliminating spreadsheet to GIS conversion time. Black & Veatch anticipates that industry standard attribute data such as nameplate information and select Operations and Maintenance (O&M) data including voltage, RPM, runtime, and horsepower will be collected to the asset level. Each asset must also include a unique asset identifier, a unique name, and the asset's parent unique identifier.

If the City foregoes this subtask, the City will be responsible for the inventory of the assets and the population of those assets and attributes into the geodatabase.

Deliverables

- Data collection of lift station assets in digital format in the enterprise GIS

City Responsibilities

- Assist Black & Veatch staff during the data collection effort
- Review and provide feedback if issues are encountered during data collection
- Review draft data collection to ensure completeness

Assumptions

- Black & Veatch will perform the data collection of the lift station assets using Esri's Data Collector application.
- Estimating 3600 assets (143 lift stations with +/- 25 assets per lift station).
- Black & Veatch will populate the database if Black & Veatch performs that data collection.
- If the City decides to inventory the lift station assets, the City will also populate the geodatabase with all assets and related attribution information.

Subtask 302 – Updated Cityworks Configuration and Training

Black & Veatch will work with the Utilities Maintenance staff to incorporate the vertical assets into their existing Cityworks configuration. A configuration workshop will be held to discuss existing work activity and how they will now associate to the vertical assets. Additionally, new work orders that need configured as a result of new assets within the lift stations will be identified during the workshop.

Cityworks Training & Go-Live

Utilities Maintenance end-users will be given instructor-led hands-on training with the newly updated Cityworks environment. This training will build upon training already received as the focus now will be on how to navigate vertical assets and creating work activity on individual assets.

CLASS NAME	ANTICIPATED USER TYPES	ANTICIPATED USERS PER SESSION	DURATION
Introduction to Plantworks - Viewing Assets - Creating Work Orders	All Users	up to 10	2 Hours per class

Black & Veatch will provide on-site go-live support by embedding support staff in the field with users. Any issues can be more quickly identified, verified, and addressed.

Deliverables

- One-day on-site Configuration Workshop
- Updated Cityworks Configuration for Utilities Maintenance
- On-Site End-User Training – 2 Days
- Cheat Sheet Documentation – Hard Copy and Digital
- On-Site Go-Live Support – 2 Staff for 2 Days

City Responsibilities

- Schedule with staff, provide facilities for Configuration workshop
- Provide training facilities and necessary hardware for training sessions
- Coordinate with Utilities Maintenance staff to attend training
- Department Cityworks Administrator(s) will initiate ongoing support requests

Assumptions

- Remote access to the Cityworks servers will continue to be available to Black & Veatch staff to configure the system.
- Black & Veatch will configure in the Cityworks production environment so as not to duplicate efforts by configuring in test and then also production.
- Periodic SQL backups of the Cityworks production database will be performed by Black & Veatch. These backups will then be restored to the test database for testing purposes by Black & Veatch.
- In addition to training cheat sheets, standard Cityworks training materials will be provided in electronic format.

Subtask 302.1 – Preventive Maintenance Configuration

As part of the overall Cityworks configuration, it is recommended that preventive maintenance (PM) tasks for lift stations assets need to be collected from their respective Operations and Maintenance (O&M) manuals. The Utilities Maintenance staff has the most in-depth knowledge of the lift stations and will create the task list in digital format. The PM task list will include the asset id and name, frequency of PM, and instructions needed to complete the PM. Black & Veatch will then update the Cityworks configuration to include PM task cyclical work order template and will create the cyclical work orders in the system.

Deliverables

- Configured Cityworks system for lift station preventive maintenance work orders
- Cyclical preventive maintenance work orders created in Cityworks

City Responsibilities

- Provide preventive maintenance (PM) task list in digital format that includes asset id and name, frequency of PM, and instructions needed to complete the PM.

Assumptions

- Remote access to the Cityworks servers will continue to be available to Black & Veatch staff to configure the system.
- Black & Veatch will configure in the Cityworks production environment so as not to duplicate efforts by configuring in test and then also production.
- Periodic SQL backups of the Cityworks production database will be performed by Black & Veatch. These backups will then be restored to the test database for testing purposes by Black & Veatch.
- Black and Veatch will not collect any PM tasks from O&M manuals

Subtask 303 – Reporting

Black & Veatch will provide up to 24 hours to produce reports needed for the users of Utilities Maintenance. Prior to creating each report, Black & Veatch will work with the Utilities Maintenance staff during the Configuration Workshop (Subtask 302) to determine the information/fields that are to be included with each report and other details such as grouping, sorting, and general design. A list of reports will be produced during this workshop and the City will need to prioritize the list before Black & Veatch will being creating the reports.

Black & Veatch will start designing and creating the City prioritized reports in Crystal Reports. Once in draft form, Black & Veatch will deploy the reports in Cityworks for users to review and provide feedback. Feedback will then be incorporated, and final reports will be deployed.

Deliverables

- Listing of reports discussed during Configuration workshop
- Cityworks reports in final form in Cityworks production environment

City Responsibilities

- Attend Configuration Workshop prepared with report examples
- Review report listing, prioritize reports, and provide timely feedback

Assumptions

◼ 24 hours have been budgeted for the design and creation of reports. Reports requested that are outside this budgeted number of hours will require additional funds or be completed internally by the City.

Subtask 304 – Post-Implementation Support Hours

Black & Veatch is dedicating up to 16 hours of remote post-implementation support hours for Utilities Maintenance staff. These hours will be used to answer questions regarding Cityworks or Plantworks including configuration, usability, and reporting.

Deliverables

◼ 16 hours of remote support for Utilities Maintenance staff

City Responsibilities

◼ None.

Assumptions

◼ 16 hours have been budgeted for this task. If additional hours are needed beyond the hours allocated, additional support may come from the overall Cityworks Support Hours Task 200 if approved by the City's Cityworks administrators.

Task 400 – GIS/Cityworks Support

Subtask 401 – Publishing/Production Servers, Workflows, and Assessment of GIS Environments

Several assessments will take place during this subtask to support the growing need to streamline and centralize the GIS at the City. These assessments will result in several memos that will be written that will be combined later into the GIS Guidance document (Task 500). The subtasks below outline the steps that will be performed for this overall task.

401.1 – Establish Publishing and Production Servers for GIS Map Services

Black & Veatch will conduct an on-site workshop to discuss hardware and software needs for GIS. This will include discussion on how to establish publishing and production servers for GIS map services, how to centralize storage for all City GIS datasets, and other GIS related needs. Black & Veatch will provide a memo of the GIS hardware and software needs that includes recommendations. In addition, Black & Veatch will work with City staff to establish the production and publishing servers for GIS map services.

401.2 – Assessment of GIS Environments & Workflows of Funneling GIS Information City-wise

Black & Veatch will conduct an on-site workshop to discuss with various departments their GIS needs and workflows when interacting with the GIS. An assessment will be made with these departments on how they use the GIS, what datasets they maintain, who owns the data, which format the data resides, and determine workflows for GIS information. Additionally, Black & Veatch will discuss future GIS plans at the City for ArcGIS Pro, Portal for ArcGIS (ArcGIS Enterprise), and Utility Network. The outcome of this subtask will be a memo documenting information obtained during the workshops. This memo may include the following items:

- GIS Datasets Listing, Data Format, and Data Owner
- ArcGIS Needs and Upgrade Options
  - ArcGIS Pro/Portal for ArcGIS (ArcGIS Enterprise)/Utility Network
- Workflows for Funneling GIS Information

401.2.1 – Data Mapping and Migration of GIS Datasets to Esri's Local Government Information Model

This task will involve mapping non-utility GIS datasets not currently in the Local Government Information Model (LGIM) to LGIM and performing the work. Black & Veatch will provide data mapping/data dictionary documentation to the City to review before the migration of datasets takes place. Once the City agrees with the documentation, non-LGIM datasets will be loaded into the LGIM enterprise geodatabase.

401.3 – Training for City Staff on Updated GIS Infrastructure and Datasets

Black & Veatch will provide training to City GIS and IT staff on the updated datasets and the location they are now located as well as how to use the new production and publishing servers for GIS map services.

Deliverables
- Two-day on-site workshop to discuss GIS hardware and software needs
- Five-day on-site workshop for GIS environment assessment
- Two-day on-site workshop to discuss GIS workflows with other departments
- Memo of GIS Datasets Listing, GIS Data Format, GIS Data Owner, and ArcGIS Needs, Upgrade, and Training Options
- Memo of Workflows for Funneling GIS Information
- Memo of Hardware and Software Needed
- Data Mapping/Data Dictionary of non-utility, non-LGIM datasets
- Migrated non-LGIM datasets to LGIM enterprise GIS
- Two-day on-site training for GIS users on new Production/Publishing servers and Updated Datasets

City Responsibilities
- Provide meeting facilities and coordinate with appropriate staff for all workshops
- Provide meeting facilities and coordinate with appropriate staff for training
- Review and provide feedback on submitted memos and data mapping/data dictionary documentation
- City IT will provide access and assist with setting up the two new servers – production and publishing. City IT will provide servers and all software licensing required.

Assumptions

■ No more than 10 datasets will need to be migrated to LGIM enterprise geodatabase.

■ Black & Veatch will provide up to 10 documented workflows for both Utilities GIS and Planning/Zoning GIS groups.

■ Discussion of and recommendation for ArcGIS Desktop upgrade does not include performing the actual upgrade.

Subtask 402 – Coded Value Domain Cleanup in Enterprise Geodatabase

Due to the speed of developing the GIS during Phases I & II of this project in order to implement Cityworks, it has been found that there are redundant coded value domains within the GIS. The GIS Administrator has developed a list of these redundant domains and has asked Black & Veatch to help in updating the GIS to correct these duplicates.

This task will begin by reviewing the list of duplicate coded value domains and will review the GIS datasets to ensure the duplicate domains and occurrences have been accounted for. Once the list is complete, Black & Veatch will work with the City to find an opportune time to update the GIS. This work will need to take place after-hours as map services will need to be stopped and locks on the database removed, so the clean-up work can be performed. This work may happen over several days or a weekend in order to complete the task and make sure there is no interruption to the GIS and Cityworks users.

Deliverables

■ Updated (as needed) list of redundant coded value domains in the GIS

■ Correct redundant coded value domains

City Responsibilities

■ Allow access to the GIS database, map services (ArcGIS Server) and ensure Black & Veatch staff have all appropriate permissions to perform clean-up work

■ City staff will be on-call as Black & Veatch is working on clean-up efforts if there are issues that arise

■ City staff will notify all GIS and Cityworks users that maintenance work is being done on the GIS (and by extension, Cityworks) and the applications will be unavailable to use during that time.

Assumptions

■ Black & Veatch clean-up efforts of the GIS will happen after 5pm ET and/or on the weekend.

■ City's list of redundant coded value domains identifies feature classes and fields where duplication occurs.

Subtask 403 – Assessment of GIS Rights and Permissions

The City's GIS and Cityworks Administrators are seeing discrepancies in their permissions to similar GIS and server functionality. The City has asked Black & Veatch for assistance in discerning the differences in permissions and work with IT staff to correct the issues.

Black & Veatch will be on-site to work with the City staff to troubleshoot the issues and find a solution. During this time, Black & Veatch will also determine roles and permissions for current and future GIS users city-wide, based on the corrective action taken to resolve the issues already occurring. Black &

Veatch will provide the City with documentation of the permissions issues, how they were resolved, and GIS user permissions city-wide. It is anticipated that parts of this memo will be incorporated later into the GIS Guidance documentation outlined in Task 500.

Deliverables

- Memo outlining permissions issue assessment, conclusion, and current/future GIS users' permissions
- Three-day on-site visit to review permissions issue and provide solution

City Responsibilities

- Assist Black & Veatch staff with demonstrating permissions issues and working to find a solution to the issue.
- Review memo and provide feedback as necessary.

Assumptions

- Memo will be incorporated into overall GIS Guidance documentation (task 500).

Subtask 404 – As-built Tool Integration with Cityworks

The City's GIS staff developed a tool for an ArcGIS Online application to replace the use of the Geodocs extension for the Laserfiche document management system. This tool allows users to access as-built drawings by selecting a street centerline

This task will incorporate the as-built viewing tool into the Cityworks mapping interface. To begin, Black & Veatch will review the tool and will discuss if it is cost effective to create a plug-in tool in Cityworks or if there is another solution. Black & Veatch will prepare a recommendations memo with options for the City to review before developing the plug-in tool in Cityworks.

If the City agrees to move forward with a Cityworks plug-in, Black & Veatch will recreate a plug-in for Cityworks with the same functionality. Once the plug-in tool is created and tested, Black & Veatch will be on-site to train the Cityworks administrators how to use the tool within Cityworks.

Deliverables

- One-day on-site as-built tool discovery workshop
- Tool integration to Cityworks recommendations memo
- Custom as-built map plug-in for Cityworks
- One-day on-site training for Cityworks administrators on how to use the tool in Cityworks

City Responsibilities

- Provide meeting facilities and coordinate with appropriate staff for as-built tool discovery workshop
- Provide meeting facilities and coordinate with appropriate staff for training
- Review and provide feedback on recommendations memo

Assumptions

- Migrate existing as-built tool code from ArcGIS Online to the Cityworks plug-in map tool, once the plug-in tool has been created.

◼ City Cityworks administrators will train other users how to use the as-built plug-in tool in Cityworks.

Subtask 405 – Crisis Track Replacement - Exploration

Black & Veatch will meet with the City's emergency management staff to review how they use the current Crisis Track software and the reports that can be produced. This workshop will result in a recommendations document that will define how Cityworks could replace Crisis Track. This task does not include implementation as the City will need to review the recommendations document and decide if/when to move forward with replacement of Crisis Track.

Deliverables

◼ Crisis Track Review Recommendations Document

City Responsibilities

◼ Provide meeting facilities and coordinate with appropriate staff for Crisis Track software exploration workshop
◼ Provide access to Crisis Track for functionality review

Assumptions

◼ Task does not include any implementation of software, just the documentation if Cityworks is a valid replacement for Crisis Track. If the City decides to move forward with implementation, a separate scope and budget will be developed.

Subtask 406 – Cityworks/Tyler Labor Rate Integration

Black & Veatch will begin this task with an integration requirements workshop to discuss the process and data requirements needed to periodically update employee labor rates from Tyler to Cityworks. As a result of this workshop, Black & Veatch will develop an integration requirements memo that may include the following information:

◼ Data Sources/Destinations & Field Mapping
◼ Integration Process Details (Workflow)
◼ Data Requirements

Once there is agreement on the integrations requirements, Black & Veatch will develop the integration components required to successfully update the Cityworks labor rates. Once the initial development is completed, Black and Veatch will work with City staff to install and test the process on the City's test environment. Updates identified during testing will be made until the integration is successful. Once testing is successful, the integration components will be deployed in the City's production environment.

Deliverables

◼ Successful Cityworks/Tyler Labor Rate Integration Install in Test
◼ Successful Cityworks/Tyler Labor Rate Integration Install in Production

City Responsibilities

◼ Allow read-only access to the Tyler database

■ Update IDs between Tyler and Cityworks, if needed
■ Provide meeting facilities and coordinate with appropriate staff for integration requirements workshop

Assumptions

■ The Tyler database is in SQL format.
■ City will allow read-only access to the Tyler database.
■ Similar IDs (such as employee ID) exist between the Tyler data and Cityworks data in order to relate data. If this link does not exist, the City will ensure both systems have those IDs in both databases.
■ Integration will not include adding new users to Cityworks if they are in Tyler. This will still fall to the City's Cityworks administrator unless additional scope and fee is created to add this step.
■ Black and Veatch is not responsible for any new objects that may need to be developed within the Tyler system/database. There is an assumption that the Tyler data can be used as-is to update the Cityworks system.

Subtask 407 – Cityworks Upgrade and Training

The City has requested assistance in upgrading their Cityworks software to a newer version. Black & Veatch will provide remote assistance to the City by first upgrading the test environment. The City and Black & Veatch will verify the success of the upgrade which includes running multiple scenarios to ensure the Cityworks configuration is working in the new version. Also, Cityworks Respond will be upgraded and tested as well as testing XML user interface layouts already in place in the current version. Black & Veatch will be on-site to assist with the production environment upgrade.

While on-site, Black & Veatch work with the City's Cityworks administrator and IT staff to perform the upgrade to the production environment after-hours. Black & Veatch will work with the City's staff to ensure Cityworks is working properly after the upgrade. In addition, Black & Veatch will provide a "what's new" training session to review the new functionality and features found in the upgraded version of Cityworks for both Office and Respond users.

Deliverables

■ Upgraded test environment performed remotely
■ Upgraded production environment performed on-site after-hours
■ One-day "What's New" training for managers/supervisors and for field staff

City Responsibilities

■ Assist Black & Veatch with testing upgrade functionality in test environment
■ Assist Black & Veatch with upgrading production environment after-hours
■ Managers, Supervisors, and Cityworks administrators will assist with "What's New" training with field crews.
■ Provide meeting facilities and coordinate with appropriate staff for training session(s)

Assumptions

■ "What's New" training will be given to Office users prior to production upgrade (same day as upgrade only during work hours). During this time, supervisors and managers will also be shown the new features in Respond to help with training the field staff the next morning.

Task 500 – City-wide GIS Guidance

The City is looking to streamline their GIS data and processes as well as establish a guide to GIS decision making and resources city-wide. Black & Veatch will assist the City in developing a roadmap to help guide the City along this path. Building upon the memos developed during Task 400 subtasks and with information gathered during the workshops, a roadmap will be developed.

Black & Veatch will define a draft technical memo for the City to use as an Enterprise GIS Roadmap for the entire organization. This document may include the following:

■ Vision and mission of City's GIS data
■ GIS schema recommendations
■ System architecture recommendations
■ User access/permissions recommendations
■ Future state of the GIS – how to incorporate GIS technologies
■ Leveraging of County datasets
■ Assist/cultivate more advanced GIS analysis
■ Define champions and leadership buy-in

Black & Veatch will conduct an on-site workshop to review the draft roadmap with the City. Once the City provides feedback on the draft roadmap, comments will be incorporated, and the final roadmap will be delivered.

Deliverables

■ Draft roadmap documentation
■ Two-day on-site review workshop
■ Final roadmap documentation

City Responsibilities

■ Provide meeting facilities and coordinate with appropriate staff for workshop
■ Review draft documentation and provide feedback

Assumptions

■ Task does not include implementation of recommendations in the roadmap documentation. If the City wants assistance with implementation, it will be defined in a separate scope and budget.
■ Task builds upon several subtasks of Task 400. If those subtasks are not completed before this task, it will increase the scope and budget of this task.

Task 600 – Cityworks Storeroom Implementation for Utilities, Public Works, Parks & Recreation, and Clean & Safe

Subtask 601 – Business Process Mapping

Identifying and understanding the business processes related to inventory activities is a critical step in implementing Cityworks Storeroom. This task will begin with the review of existing inventory datasets and documented workflow diagrams provided by the City. To facilitate the review of business processes, Black & Veatch will conduct a Storeroom Business Process Review Workshop to confirm an understanding of inventory processes and discuss how they will be incorporated into Cityworks. Process documentation will be updated by Black & Veatch to reflect the planned use of Cityworks Storeroom ("to-be" workflows). The updated process documentation gathered during this task will be used as a starting point for the Cityworks Storeroom configuration design.

Deliverables

- Two-day on-site Business Process Review Workshop with Utilities, Public Works, Parks & Recreation, and Clean & Safe staff
- Business Process documentation for "to-be" workflows in Visio and PDF formats

City Responsibilities

- Schedule with staff, provide facilities for Business Process Review workshop
- Provide existing "as-is" business process workflows for Black & Veatch to review

Assumptions

- Black & Veatch will not document the "as-is" business process workflows
- Up to six (6) "to-be" workflows will be created by Black & Veatch for this task
- Black & Veatch will not be developing the material management/warehouse management policies and procedures. It is recommended that these policies and procedures are in place before the Storeroom implementation begins.

Subtask 602 – Storeroom Configuration/Implementation

After a review of the existing material inventory data and documentation of inventory business processes, Black & Veatch will work with City staff to design a Storeroom configuration to meet its needs. The details needed to configure the system will be added to the Cityworks Configuration Plan. To gather the details needed to define a configuration, a Storeroom Configuration Workshop will be held with City inventory management staff. The process for developing the Storeroom configuration plan will include the following:

- **Prepare Master Material List & Part Numbers** Black & Veatch will work with the City to ensure the existing materials list for the City's warehouse includes a standard material ID and all information for relevant Cityworks fields including material keywords, stock locations, minimum and maximum thresholds, and stock on hand.
- **Associate Material Suppliers to Materials** Black & Veatch will work with the City to associate all the materials to the appropriate suppliers.

■ **Define Cityworks Security Configuration** Black & Veatch will design a Cityworks security configuration that will support the required access for each group and storeroom location.

Black & Veatch will configure Cityworks as defined in the configuration plan. Most configuration items will be setup using the out of the box Cityworks administration tools. However, some configuration tasks (SupplierMaterial, StorermStock) are completed more efficiently by running database scripts on the Cityworks database. Black & Veatch will provide database scripts to City IT staff to review and execution of those configuration items.

Black & Veatch will coordinate the final deployment of Storeroom with City staff. Black & Veatch, along with City IT staff and City Cityworks administrators, will update the Cityworks system with the Storeroom configuration, including the current inventory levels for each configured storeroom.

Storeroom Training & Go-Live

Once the Cityworks Storeroom environment is setup, Black & Veatch will provide on-site training for City users. All training will be completed using the City's Cityworks test environment.

Each user will be provided with brief cheat sheets for commonly used Storeroom functions that can be easily referenced after training. In addition to training cheat sheets, standard Cityworks training materials will be provided in electronic format.

Storeroom training focuses on the main inventory functions available:

■ Issue
■ Receive
■ Transfer
■ Audit
■ Searching

CLASS NAME	ANTICIPATED USER TYPES	ANTICIPATED USERS PER SESSION	DURATION
Storeroom Administration	Department Warehouse Managers/Staff, Cityworks Administrators	6-8	4 Hours per class
Storeroom Manager/Supervisor User	Utilities, Public Works, Parks & Rec, and Clean & Safe – Supervisors, Managers	Up to 6	1 Hour per class
Storeroom Field User	Utilities, Public Works, Parks & Rec, and Clean & Safe – Field staff using ELM	up to 10	30 minutes per class

Black & Veatch will provide on-site go-live support for Utilities, Public Works, Parks & Recreation, and Clean & Safe staff to respond quickly to any issues that may arise.

Deliverables

■ Two-day on-site Storeroom Configuration Workshop
■ Configuration of Storeroom
■ On-Site Storeroom Training – 2 Days

- Five (5) one-page cheat sheets for Storeroom Issue, Receive, Transfer, Audit, and for Utilities users on how to add materials from a Storeroom to a work order in ELM.
- On-Site Storeroom Go-Live – 2 Days

City Responsibilities

- Schedule with staff, provide facilities for Storeroom Configuration Workshop
- Validate Storeroom configuration
- Provide final warehouse stock levels prior to go-live – Black & Veatch will work with the City on the format needed to easily load into Cityworks
- Provide training facilities and all necessary hardware for training sessions
- Coordinate with staff to attend training

Assumptions

- Remote access to the Cityworks servers will continue to be available to Black & Veatch staff to configure the system.
- Black & Veatch will configure in the Cityworks production environment so as not to duplicate efforts by configuring in test and then also production.
- Periodic SQL backups of the Cityworks production database will be performed by Black & Veatch. These backups will then be restored to the test database for testing purposes by Black & Veatch.
- No integration between Tyler (material ordering system City currently uses) and Cityworks will be performed during this task.
- In addition to training cheat sheets, standard Cityworks training materials will be provided in electronic format

Subtask 603 – Reporting

Black & Veatch will provide up to 40 hours to produce reports needed material inventory. Prior to creating each report, Black & Veatch will work with the Utilities, Public Works, Parks & Recreation, and Clean & Safe staff during Configuration Workshops (Subtask 602) to determine the information/fields that are to be included with each report and other details such as grouping, sorting, and general design. A list of reports will be produced during this workshop and the City will prioritize the list before Black & Veatch will being creating the reports.

Black & Veatch will start designing and creating the City prioritized reports in Crystal Reports. Once in draft form, Black & Veatch will deploy in Cityworks for users to review and provide feedback. Feedback will then be incorporated, and final reports will be deployed.

Deliverables

- Listing of reports discussed during Configuration workshop
- Cityworks reports uploaded to the Cityworks production environment

City Responsibilities

- Attend Configuration Workshop prepared with report examples
- Review report listing, prioritize reports, and provide timely feedback

Assumptions

■ 40 hours have been budgeted for the design and creation of reports. Reports requested that are outside this budgeted number of hours will require additional funds or be completed internally by the City.

Subtask 604 – Post-Implementation Support Hours

Black & Veatch is dedicating up to 16 hours of remote post-implementation support hours for City Storeroom users as well as the Cityworks administrators. These hours will be used to answer questions regarding Storeroom including workflows, configuration, usability, and reporting.

Deliverables

■ 16 hours of remote support for Cityworks Storeroom

City Responsibilities

■ None.

Assumptions

■ If additional hours are needed beyond the hours allocated, additional support may come from the overall Cityworks Support Hours Task 200 if approved by the City's Cityworks administrators.

Task 700 – CCTV Workflow and Integration with Cityworks

Subtask 701 – Investigation & Workflows

This task will begin with a workshop to define the requirements of an integration between the City's CCTV platform and Cityworks. Additionally, during the workshop, there will be discussion about CCTV data workflows how they will be incorporated into Cityworks.

As a result of this workshop, Black & Veatch will develop a memo that outlines the requirements and integration recommendations.

Deliverables

■ Three-day on-site integration investigation workshop
■ Integration memo

City Responsibilities

■ Schedule with staff, provide facilities for Investigation workshop
■ Review and provide feedback on Investigation memo

Assumptions

■ City uses Granite XP or GraniteNet CCTV software.
■ Software is PACP compliant and City has correct version that integrates with Cityworks.
■ Black & Veatch will not document the "as-is" business process workflows if not already available

■ Up to three (3) "to-be" workflows will be created by Black & Veatch for this task

Subtask 702 – Configuration and Training

Based on the information obtained during the investigation and workflow workshops, the Cityworks system can be configured for the CCTV integration tool. After the tool is configured, training for those Utilities staff that uses CCTV data will take place with on-site go-live support immediately following.

Deliverables
■ Configured Cityworks CCTV Integration tool
■ On-Site End-User Training – 1 Day
■ On-Site Go-Live Support – 1 Staff for 2 Days

City Responsibilities
■ Provide training facilities and necessary hardware for training sessions
■ Coordinate with staff to attend training
■ Department Cityworks Administrator(s) will initiate ongoing support requests

Assumptions
■ Remote access to the Cityworks servers will continue to be available to Black & Veatch staff to configure the system.
■ Black & Veatch will configure in the Cityworks production environment so as not to duplicate efforts by configuring in test and then also production.
■ Periodic SQL backups of the Cityworks production database will be performed by Black & Veatch. These backups will then be restored to the test database for testing purposes by Black & Veatch.
■ The integration between Cityworks and CCTV will be completed using the CCTV Interface for Cityworks. The City is licensed for this product. If another integration process is defined, the City may need to acquire additional licensing.

Task 800 – Code Enforcement PLL Implementation – Phase I

This task includes phase I of the Cityworks PLL (Permits, Licensing, and Land) impelmentation for Code Enforcement staff to track notice of violations and fees. Cityworks PLL will assist in streamlining workflows for City staff and helps provide better serivce for the residents.

Overall Task Assumptions
■ Budget for this task does not include Cityworks PLL software licensing costs.
■ City will not be using the Cityworks PLL Public Portal (used only for permits and licenses, not violation fees)
■ Budgeted amount is for the implementation of up to five (5) workflows for code enforcement. Based on limited knowledge of the number of workflows for code enforcement, additional scope and fee may be created and budgeted to implement the remaining workflows.
■ Existing violation library is in digital format.

Subtask 801 – Business Process Mapping

Identifying and understanding the business processes related to code enforcement activities is a critical step in implementing Cityworks PLL. This task begins with the review of existing, documented workflow diagrams provided by the City. To facilitate the review of business processes, Black & Veatch will conduct a Business Process Review Workshop to confirm an understanding of code enforcement workflows and discuss how they will be incorporated into Cityworks. Process documentation will be updated by Black & Veatch to reflect the planned use of Cityworks PLL ("to-be" workflows). The updated process documentation gathered during this task will be used as a starting point for the Cityworks PLL configuration design.

Deliverables

■ Three-day on-site Business Process Review Workshop with Code Enforcement staff
■ Business Process documentation for "to-be" workflows in Visio and PDF formats

City Responsibilities

■ Schedule with staff, provide facilities for Business Process Review workshop
■ Provide existing "as-is" business process workflows for Black & Veatch to review

Assumptions

■ Black & Veatch will not document the "as-is" business process workflows if not already available
■ Up to five (5) "to-be" workflows will be created by Black & Veatch for this task
■ Similar violations will be grouped together and not as separate workflows.

Subtask 802 – GIS Database Development

This task will focus on reviewing the existing geodatabase structure for code enforcement which may include parcel boundaries. Black & Veatch will perform an asset review workshop to determine assets and attribution needed for implementation. Black & Veatch is available to assist GIS staff with asset or attribute updates as necessary.

Deliverables

■ Asset Review Workshop

City Responsibilities

■ Schedule with staff, provide facilities for Asset Review workshop
■ Provide feedback on existing assets and attribution

Assumptions

■ No new assets will need to be created for this implementation. However, additional attribution for existing assets may be needed.
■ Black & Veatch is available to assist GIS staff with asset or attribute updates as necessary.

Subtask 803 – Cityworks Configuration/Implementation

Prior to beginning system configuration, the design of the system will be documented in the Cityworks Configuration Plan. Black & Veatch will conduct a configuration workshop, focusing on the following topics:

- Cases
- Tasks
- Workflows
- Fee Setup
- Violations

- Employees/Users and security
- Data Groups
- Checklists
- Assets

Information obtained during the workshop will be used to complete the Cityworks Configuration Plan.

After the Configuration Plan has been created/updated, the City will have the ability to review the configuration design prior to system configuration taking place. Once the design is approved, system configuration will begin. The Configuration Plan document will be a living document and will be updated throughout the project to reflect the actual configuration of Cityworks as completed.

Based in the information defined in the Configuration Plan, Black & Veatch technical staff will fully configure the Cityworks system. Once configured, Black & Veatch will hold a configuration review workshop and then the City staff will test/review the configured system and provide feedback on the configuration.

Cityworks Training & Go-Live

Just prior to system go-live, up to 20 code enforcement end-users will be given instructor-led hands-on training with the Cityworks environment. End-user training will be role-based to allow users to be trained only on specific Cityworks functionality that each user will encounter daily. Each user will be provided with custom training documentation that can be easily referenced after training.

CLASS NAME	ANTICIPATED USER TYPES	ANTICIPATED USERS PER SESSION	DURATION
Introduction to Cityworks - Inbox - Mapping	All Users	up to 10	2 Hours per class
Cases - Creating - Updating - Searching	Supervisors, Superintendents, Management, Office Staff, Field Staff	up to 10	6 Hours per class

Black & Veatch will provide on-site go-live support by embedding support staff in the field with users. Any issues can be more quickly identified, verified, and addressed.

Deliverables

- Three-day on-site Configuration Workshop
- Cityworks Configuration Plan Document
- Configured Cityworks System for Code Enforcement

- Three-day on-site Configuration Review Workshop
- On-Site End-User Training – 5 Days
- Training Documentation – Digital
- On-Site Go-Live Support – 2 Staff for 2 Days

City Responsibilities

- Schedule with staff, provide facilities for Configuration workshop
- Attend configuration review workshop
- Test configured system and provide feedback
- Provide training facilities and necessary hardware for training sessions
- Coordinate with staff to attend training
- Department Cityworks Administrator(s) will initiate ongoing support requests

Assumptions

- Remote access to the Cityworks servers will continue to be available to Black & Veatch staff to configure the system.
- Black & Veatch will configure in the Cityworks production environment so as not to duplicate efforts by configuring in test and then also production.
- Periodic SQL backups of the Cityworks production database will be performed by Black & Veatch. These backups will then be restored to the test database for testing purposes by Black & Veatch.
- Implementation of up to five (5) workflows for code enforcement.

Subtask 804 – Report Development

Black & Veatch budgeted 40 hours to produce reports needed for code enforcement staff. Prior to creating each report, Black & Veatch will work with code enforcement staff during the Configuration Workshop (Subtask 803) to determine the information/fields that are to be included with each report and other details such as grouping, sorting, and general design. A list of reports will be produced during this workshop and the City will need to prioritize the list before Black & Veatch will being creating the reports.

Black & Veatch anticipates that there will be one violation letter/report per workflow and additional reports needed for code enforcement management. Once reports have been created, Black & Veatch will deploy the reports in the Cityworks for users to review and provide feedback. Feedback will then be incorporated, and final reports will be deployed.

Deliverables

- Listing of reports discussed during Configuration workshop
- Cityworks reports in final form in Cityworks production environment

City Responsibilities

- Attend Configuration Workshop prepared with report examples
- Review report listing, prioritize reports, and provide timely feedback

Assumptions

- ◼ 40 hours have been budgeted for the design and creation of reports. Reports requested that are outside this budgeted number of hours will require additional funds or be completed internally by the City.
- ◼ One (1) violation letter/report will be created per workflow (there are 5 workflows estimated for this task).

Subtask 805 – Post Implementation Support Hours

Black & Veatch is dedicating up to 20 hours of remote post-implementation support hours for code enforcement staff. These hours will be used to answer questions regarding Cityworks PLL including configuration, usability, and reporting.

Deliverables

- ◼ 20 hours of remote support for Utilities Maintenance staff

City Responsibilities

- ◼ None.

Assumptions

- ◼ 20 hours have been budgeted for this task. If additional hours are needed beyond the hours allocated, additional support may come from the overall Cityworks Support Hours Task 200 if approved by the City's Cityworks administrators.

Task 900 – WebQA Integration with Cityworks

Subtask 901 – Requirements Gathering

Black & Veatch will begin this task with an integration requirements workshop to determine the functional requirements needed to complete and integration between Cityworks and WebQA, the City's public request portal. An Integration Requirements document will be created to outline these requirements, integration processes, and supporting Cityworks configuration changes. The integration requirements documentation will include the following:

- ◼ Where the WebQA data resides
- ◼ What format the WebQA data is in
- ◼ How will the data be communicated between software – one way to two way?
- ◼ Additional Cityworks configuration needs

Deliverables

- ◼ Two-day on-site integration requirements workshop
- ◼ Integration requirements document

City Responsibilities

- ◼ Provide meeting facilities and coordinate with appropriate staff for workshop
- ◼ Review integration requirements documentation and provide feedback

■ Provide updated list (if necessary) of service requested needed for Cityworks

Assumptions

■ None.

Subtask 902 – Integration Development

Once there is agreement on the integrations requirements, Black & Veatch will develop the integration components required to successfully update Cityworks and WebQA with requests. Black & Veatch will also update Cityworks configuration as needed for both new service request templates as well as employees and permissions for those that will be receiving Cityworks service requests from WebQA.

Once the initial development is completed, Black and Veatch will work with City staff to install and test the process on the City's Test environment. Updates identified during testing will be made until the integration is successful. Once testing is successful, the integration components will be deployed in the City's production environment.

Deliverables

■ Updated Cityworks configuration with new service requests, employees, and permissions
■ Integration with WebQA

City Responsibilities

■ Assist Black & Veatch staff as necessary during configuration updates and integration

Assumptions

■ Up to 70 new Cityworks service request templates will be needed for integration.
■ New users that come online to receive Cityworks service requests will be trained by City staff.

Task 1000 – Water Treatment Plant Cityworks Implementation

Subtask 1001 – Business Process Mapping

Identifying and understanding the business processes related to the water treatment plant is a critical step in implementing Cityworks. This task begins with the review of existing, documented workflow diagrams provided by the City. To facilitate the review of business processes, Black & Veatch will conduct a Business Process Review Workshop to confirm an understanding of plant processes and discuss how they will be incorporated into Cityworks. Process documentation will be updated by Black & Veatch to reflect the planned use of Cityworks ("to-be" workflows) at the plant. The updated process documentation gathered during this task will be used as a starting point for the Cityworks configuration design.

Deliverables

■ Three-day on-site Business Process Review Workshop with water treatment plant staff
■ Business Process documentation for "to-be" workflows in Visio and PDF formats

City Responsibilities

- Schedule with staff, provide facilities for Business Process Review workshop
- Provide existing "as-is" business process workflows for Black & Veatch to review

Assumptions

- Black & Veatch will not document the "as-is" business process workflows
- Up to ten (10) "to-be" workflows will be created by Black & Veatch for this task

Subtask 1002 – GIS Database Development

This task will focus on working with the water treatment plant staff to create the new asset registry for the plant's vertical assets.

To begin the task, Black & Veatch will perform asset hierarchy workshops to determine asset types (object tables), relationships, and attribution needed to store asset information and enforce hierarchy rules. Details will be documented, and a data dictionary document will be provided in draft format for plant staff and GIS to review and approve.

Once the review is complete, comments will be incorporated, and a final version of the data dictionary will be delivered to the City to keep for future use. Black & Veatch will update the City's enterprise geodatabase with the new asset hierarchy developed including the object and relationship classes.

Once the geodatabase schema has been defined, the asset data then can be populated either by the City or Black & Veatch. Black & Veatch has provided information on the optional data collection subtask below.

Plantworks Tool Installation

Black & Veatch has developed a custom hierarchy navigation tool (Plantworks) that allows for easier access to vertical assets than the out of the box Cityworks tools. Black & Veatch will install the tool for plant staff to use with their vertical assets.

Deliverables

- Asset Registry Workshop
- Data dictionary in draft and final formats
- Plantworks vertical asset navigation tool

City Responsibilities

- Schedule with staff, provide facilities for Asset Registry workshop
- Review data dictionary and provide feedback

Assumptions

- Black & Veatch will complete the geodatabase design.

Subtask 1002.1 – Data Collection (Optional Task)

Once the asset hierarchy is established, Black & Veatch will collect asset and attribute data for the water treatment plant to populate the asset database. A GIS data collector application will be used to collect

the data directly into the geodatabase eliminating spreadsheet to GIS conversion time. Black & Veatch anticipates that industry standard attribute data such as nameplate information and select Operations and Maintenance (O&M) data including voltage, RPM, runtime, and horsepower will be collected to the asset level. Each asset must also include a unique asset identifier, a unique name, and the asset's parent unique identifier.

If the City foregoes this subtask, the City will be responsible for the inventory of the assets and the population of those assets and attributes into the geodatabase.

Deliverables

■ Data collection of water plant assets in digital format in the enterprise GIS

City Responsibilities

■ Assist Black & Veatch staff during the data collection effort
■ Review and provide feedback if issues are encountered during data collection
■ Review draft data collection to ensure completeness

Assumptions

■ Black & Veatch will perform the data collection of the water treatment plant assets using Esri's Data Collector application.
■ Estimating 2000 assets to be collected.
■ Black & Veatch will populate the database if Black & Veatch performs that data collection.
■ If the City decides to inventory the plant assets, the City will also populate the geodatabase with all assets and related attribution information.

Subtask 1003 – Cityworks Configuration/Implementation

Prior to beginning system configuration, the design of the system will be documented in the Cityworks Configuration Plan. Black & Veatch will conduct a configuration workshop, focusing on the following topics:

■ Service requests
■ Work orders
■ Inspections
■ Assets
■ Materials/Storeroom

■ Equipment
■ Employees and security
■ Custom fields
■ Email setup
■ User interface modifications

Information obtained during the workshop will be used to complete the Cityworks Configuration Plan.

After the Configuration Plan has been created/updated, the City will have the ability to review the configuration design prior to system configuration taking place. Once the design is approved, system configuration will begin. The Configuration Plan document will be a living document and will be updated throughout the project to reflect the actual configuration of Cityworks as completed.

Based in the information defined in the Configuration Plan, Black & Veatch technical staff will fully configure the Cityworks system. Once configured, City staff will review the configured system and provide feedback on the configuration.

Cityworks Training & Go-Live

Just prior to system go-live, up to 30 water treatment plant end-users will be given instructor-led hands-on training with the Cityworks environment. End-user training will be role-based to allow users to be trained only on specific Cityworks functionality that each user will encounter daily. Each user will be provided with brief cheat sheets for commonly used Cityworks functions that can be easily referenced after training.

CLASS NAME	ANTICIPATED USER TYPES	ANTICIPATED USERS PER SESSION	DURATION
Introduction to Cityworks - Inbox - Mapping	All Users	up to 10	2 Hours per class
Service Requests - Creating - Updating - Searching	Supervisors, Superintendents, Management, Office Staff	up to 10	2 Hours per class
Work Orders & Inspections - Creating - Updating - Searching - ELM/Storeroom	Supervisors, Superintendents, Management, Office Staff, Crew Leads, Field Staff	up to 10	4 Hours per class
Storeroom Manager/Supervisor User	Supervisors, Managers	Up to 6	1 Hour per class

Black & Veatch will provide on-site go-live support by embedding support staff in the field with users. Any issues can be more quickly identified, verified, and addressed.

Deliverables

- Three-day on-site Configuration Workshop
- Cityworks Configuration Plan Document
- Configured Cityworks System for the plant
- On-Site End-User Training – 5 Days
- Cheat Sheet Documentation – Hard Copy and Digital
- On-Site Go-Live Support – 2 Staff for 5 Days

City Responsibilities

- Schedule with staff, provide facilities for Configuration workshop
- Validate Cityworks configuration
- Provide training facilities and necessary hardware for training sessions
- Coordinate with staff to attend training
- Department Cityworks Administrator(s) will initiate ongoing support requests

Assumptions

- Remote access to the Cityworks servers will continue to be available to Black & Veatch staff to configure the system.

- Black & Veatch will configure in the Cityworks production environment so as not to duplicate efforts by configuring in test and then also production.
- Periodic SQL backups of the Cityworks production database will be performed by Black & Veatch. These backups will then be restored to the test database for testing purposes by Black & Veatch.
- In addition to training cheat sheets, standard Cityworks training materials will be provided in electronic format.

Subtask 1003.1 – Preventive Maintenance Configuration

As part of the overall Cityworks configuration, it is recommended that preventive maintenance (PM) tasks for the water treatment plant assets need to be collected from their respective Operations and Maintenance (O&M) manuals. The plant staff has the most in-depth knowledge of the plant's assets and will create the task list in digital format. The PM task list will include the asset id and name, frequency of PM, and instructions needed to complete the PM. Black & Veatch will then update the Cityworks configuration to include PM task cyclical work order template and will create the cyclical work orders in the system.

Deliverables

- Configured Cityworks system for water treatment plant preventive maintenance work orders
- Cyclical preventive maintenance work orders created in Cityworks

City Responsibilities

- Provide preventive maintenance (PM) task list in digital format that includes asset id and name, frequency of PM, and instructions needed to complete the PM.

Assumptions

- Remote access to the Cityworks servers will continue to be available to Black & Veatch staff to configure the system.
- Black & Veatch will configure in the Cityworks production environment so as not to duplicate efforts by configuring in test and then also production.
- Periodic SQL backups of the Cityworks production database will be performed by Black & Veatch. These backups will then be restored to the test database for testing purposes by Black & Veatch.
- Black and Veatch will not collect any PM tasks from O&M manuals

Subtask 1004 – Reporting

Black & Veatch budgeted 40 hours to produce reports needed for the water treatment plant users of Cityworks. Prior to creating each report, Black & Veatch will work with the water treatment plant staff during the Configuration Workshop (Subtask 1002) to determine the information/fields that are to be included with each report and other details such as grouping, sorting, and general design. A list of reports will be produced during this workshop and the City will need to prioritize the list before Black & Veatch will being creating the reports.

Black & Veatch will start designing and creating the City prioritized reports in Crystal Reports. Once in draft form, Black & Veatch will deploy the reports in Cityworks for users to review and provide feedback. Feedback will then be incorporated, and final reports will be deployed.

Deliverables

■ Listing of reports discussed during Configuration workshop

■ Cityworks reports in final form in Cityworks production environment

City Responsibilities

■ Attend Configuration Workshop prepared with report examples

■ Review report listing, prioritize reports, and provide timely feedback

Assumptions

■ 40 hours have been budgeted for the design and creation of reports. Reports requested that are outside this budgeted number of hours will require additional funds or be completed internally by the City.

Subtask 1005 – Post-Implementation Support Hours

Black & Veatch is dedicating up to 32 hours of remote post-implementation support hours for water treatment plant staff. These hours will be used to answer questions regarding Cityworks or Plantworks including configuration, usability, and reporting.

Deliverables

■ 32 hours of remote support for WTP staff

City Responsibilities

■ None.

Assumptions

■ 32 hours have been budgeted for this task. If additional hours are needed beyond the hours allocated, additional support may come from the overall Cityworks Support Hours Task 200 if approved by the City's Cityworks administrators.

Task 1100 – CIP Tracking System – Needs Assessment and Recommendations

Subtask 1101 – Needs Assessment and Recommendations

Black & Veatch will conduct a workshop to perform a needs assessment for a CIP tracking system and a demonstration or availability to look at the City's legacy CIP tracking tool. As a result of this workshop, Black & Veatch will develop a recommendations document outlining the different software and options available to the City based on their CIP tracking needs. This task does not include implementation of a new software package as the City will need to review the recommendations document and decide if/when to move forward with implementing a new CIP tracking system.

Deliverables

■ CIP Tracking System Recommendations Document

City Responsibilities

◼ Provide meeting facilities and coordinate with appropriate staff for workshop

Assumptions

◼ Task does not include any implementation of new software, just the documentation of recommended software/options for CIP tracking tool. If the City decides to move forward with implementation of a replacement software, a separate scope and budget will be developed.

PROJECT SCHEDULE

Based on this prioritized list of tasks, we estimate that project execution should not exceed two years.

PROJECT COST

The estimated level of effort for the described prioritized list of tasks is a lump sum amount of **$650,000** as detailed in the tables below. Individual task order scopes and budgets may be adjusted as necessary based on the requirements defined in the task orders chosen by the City.

Phase III

Task	Cost
Task 100: Clean & Safe Additional Cityworks Implementation	$30,610
Task 200: Ad-Hoc Cityworks and Reporting Support	$66,631
Task 300: Lift Station Vertical Assets Cityworks Implementation	$119,064
Task 400: GIS Support	$256,412
Task 500: City-wide GIS Guidance	$38,772
Total:	**$511,489**

Phase IV Planning

The tasks currently anticipated for Phase IV will need to be further defined to be able to be completed under the budget allocation. Once the City determines whether all the tasks below are required, specific budgets will be assigned.

Task	Cost
Task 600: Storeroom Implementation for Utilities, Public Works, Parks & Recreation, and Clean & Safe Departments	TBD
Task 700: CCTV Workflow and Integration with Cityworks	TBD
Task 800: Code Enforcement PLL Implementation, Phase I	TBD
Task 900: WebQA Integration with Cityworks	TBD
Task 1000: Water Treatment Plant Cityworks Implementation	TBD
Task 1100: CIP Project Tracking System – Needs Assessment & Recommendations	TBD
Total NTE Tasks 600 thru 1100:	**$138,511**

We look forward to the opportunity to assist the City with this innovative and important project in support of its asset management efforts. Please, feel free to contact me with any questions at (954) 319-9861.

Very truly yours,

BLACK & VEATCH CORPORATION

Isabel Botero, PE
Project Manager

cc: Mark Seastead
         Traci Berlingieri