



NAPA SANITATION DISTRICT

GHD - TASK ORDER No. 63

Phase 1B Asset Management Program Implementation

Date: _____

Issued under Professional Services Agreement dated August 19, 2017.

To: GHD

Project Description:

Provide technical assistance with implementing the new CMMS as described in Phase 1B in the Asset Management Plan.

Description of Scope of Services to be performed by Consultant under this Task Order:

See Exhibit 'A' – Scope of Services

Description of Services to be Provided by District: See Exhibit 'A' –Scope of Services

Deliverables: See Exhibit 'A' –Scope of Services

Consultant Project Manager: Ted Whiton, PE

Consultant Quality Control Manager: Gage Muckleroy, PE

Schedule to Perform Services: July 2018 to August 2019

Time & Materials Not-to-Exceed Cost Limit: \$169,957.00

See Exhibit 'A' –Fee Estimate

APPROVALS:

GHD

By: _____
Authorized Representative

Date

NAPA SANITATION DISTRICT

By: _____
Purchasing Agent

Date



May 02, 2018

Ms. Robin Gamble Holley
Asset Management Analyst
Napa Sanitation District
515 Soscol Ferry Road
Napa, CA 94558

RE: Proposal for CMMS (Cityworks) Implementation and Program Oversight

Dear Robin:

The following proposal describes GHD's scope of services to provide CMMS Implementation and Program Oversight for coordinating with The Timmons Group to implement Cityworks at NapaSan. This scope represents a portion of the work recommended for NapaSan's AMP Phase 1B tasks; all other tasks will be incorporated into a separate proposal later. A description of this scope and a summary of the fee is provided below for your consideration.

SCOPE OF SERVICES

GHD will assist NapaSan with implementing their new CMMS software as described below.

Task 1 – Project Management

GHD will convene a kickoff meeting with NapaSan to review the scope and schedule, and to facilitate a demonstration of Cityworks by The Timmons Group (assume 4 hours total). GHD will provide coordination among project team members throughout the execution of the work, and will provide a detailed progress report with monthly invoices detailing budget status; work completed over the billing period, and planned work for the upcoming billing period. GHD will also have weekly check-in calls with NapaSan's project manager to coordinate on on-going activities. GHD has assumed 18 months to complete the scope of work.

Task 1 Deliverables:

- Project Work Plan
- Schedule (Gantt Chart)
- Monthly Progress Reports

Task 2 – Business Process Mapping

GHD will examine the current business processes that relate to the implementation of the CMMS. This work will involve, in a group or individual basis, appropriate divisions, crews, and/or staff members from NapaSan. The final output will be documented business processes for select tasks and workflows to be programmed into the new CMMS. Goals of this effort are to understand how NapaSan staff currently perform and complete key maintenance or inspection activities and include understanding and documenting how work is initiated, communications between crews, supervisors, customer service and others as needed. This will include:

- Identify and outline current "As-Is" business processes
- Map "To-Be" business processes to use for Cityworks configuration



GHD will conduct workshops with NapaSan staff to review existing business processes that have been documented, document unmapped core business processes as they currently exist ('As-Is'), and update these practices with 'To-Be' process maps in consideration of Cityworks functionality. Business processes will be documented as flowcharts using MS Visio®, and up to twenty (20) distinct processes will be documented.

Existing NapaSan maintenance practices that are mapped will be reviewed during a workshop. 'As-Is' business processes that are not mapped, such as inspections or preventative maintenance, will also be documented during this workshop. Documentation will include process flow-charting and brief descriptive annotation. 'To-be' business processes based upon Cityworks functionality, systems integration, and appropriate work and asset management practices will be developed with brief descriptive annotation.

The up to twenty (20) 'To-Be' business processes will include current practices such as:

- Reactive maintenance
- Preventive maintenance
- Equipment replacement (new, retire, or swap)
- Operations and maintenance inspections
- Materials management

The 'To-Be' processes will include work creation and/or the use of service requests, assignment, material issues, recording labor, equipment and materials used, attaching invoices for contractor work, and other items that are functions of Cityworks and will support the asset management vision for NapaSan.

The outputs documented during this task will guide configuration decisions that will be utilized for implementation.

Task 2 Deliverables:

- Facilitate up to four (4) days of business process mapping workshops and one (1) half-day review workshop
- Final MS Visio and MS Word documents supporting business process workflows and annotation for up to twenty (20) business processes

Task 3 – Configuration Planning for Software and Data

For this task, GHD will analyze the current data structure of the District's GIS and compile the findings from the Business Process Workshops in Task 2 to define requirements for the Cityworks software configuration. During this task, discrepancies between out-of-the box Cityworks and NapaSan requirements are identified and reviewed in the context of NapaSan's Asset Management Plan developed in 2017.

Task 3.1 Review Utilities GIS Data Model – Horizontal Assets

GIS plays a critical role for NapaSan by providing the capability to manage and represent the geographic locations, proximity, adjacency and movements of their strategic assets. GHD has developed a specific asset management framework for CMMS software with GIS functionality. The review of the Utilities GIS will include:

- Evaluation of NapaSan's existing GIS Data Model including features, objects, fields, domains and relationships;
- Comparison of the gaps that exist between NapaSan's GIS Data Model and the components highlighted from GHD's AM Framework customized for NapaSan;
- Assigning a standardized AssetID for the assets;



- Adding additional fields to assets to account for GHD's AM Framework for NapaSan; and
- Adding missing feature classes, object tables, and relationships for horizontal assets that will be maintained within Cityworks but do not currently reside in GIS.

Task 3.2 Vertical Assets

Cityworks requires all assets to reside in the GIS. At present, the assets for the Treatment Plant are maintained in MP2. GHD will utilize the asset hierarchy design created in AMP Phase 1A Task 4 and extract the asset information in MP2 and create the plant hierarchy in the geodatabase. Included in this will be the development of the drill down parent-child relationships that exist between the assets. For vertical assets on-site that may not reside in MP2, such as assets in the Administration building, the asset hierarchy framework and relationships will be built in the geodatabase. Data collection for that framework is not part of this task. All assets will be assigned a standardized AssetID. As part of the geodatabase build, the additional fields to account for GHD's Asset Management framework for NapaSan will be included.

Task 3.3 CMMS Data Gathering

GHD will work with NapaSan to gather the preliminary data needed for configuration. This data includes:

- Employees - Names, Tiles, email address, hourly rate, login name, and their permissions
- Crews – the employees that compose the various crews
- Material List – Part number, description, manufacturer, supplier, model, min qty, unit cost, cost type, where it is stored
- Equipment – Type of equipment, manufacturer, model, hourly or fixed rate, unit cost
- Contractors – Contractor name, contractor number, description
- Work Order Templates – description, category (Preventive/Reactive), Priority, Submit To, repeat intervals, security, custom fields
- Service Request Templates – Description, priority, dispatched to, duration, model, keywords to search for, security, questions and answers
- Inspection Templates – name, description, submit to, priority, duration, model, work order its attached to, security, questions and answers

Much of this information can be extracted from the Business process maps and additional communications. One half-day, on-site configuration session will be held and coordinated with the half-day business process review workshop convened under Task 2. The collected information will be compiled in a Cityworks configuration template that The Timmons Group can easily harness for their configuration efforts.

Task 3 Deliverables:

- Updated geodatabase in SDE with fields conforming to NapaSan's AMP requirements
- NapaSan geodatabase populated in SDE with features, objects and relationships for vertical assets
- Vertical asset geodatabase populated with assets from MP2 extracted data and updated with new AssetIDs
- Standardized AssetID naming convention for all assets in geodatabase
- Materials to facilitate a half-day configuration workshop
- Compiled data in Cityworks spreadsheet for The Timmons Group to use for configuration

Task 4 – CMMS Configuration

Once the first round of system configuration and integration has been completed, it is important to complete testing to confirm that the configuration is correct. Testing serves not only as QA/QC measure



of the system to ensure all elements have captured and documented appropriately, but also as a great training tool to help get accustomed to the system. During this task, GHD will help NapaSan test the new CMMS, and prepare to go live with the platform.

The following tasks define the effort involved in planning and conducting the testing, capturing results, and revising the system configuration as needed.

Task 4.1 Develop Test Plan and Test Scripts

GHD will develop a testing plan that documents the following:

- Goals for the testing program
- Testing methodology including the test environment, involved participants, the testing process and schedule requirements
- Change control documentation process
- Acceptance procedures
- Test scripts for each Service Request, Work Order, Inspection type, and integration component
- Final acceptance sign-off document

Task 4.2 Test Initial Configuration

The GHD project team will work with NapaSan staff to perform system acceptance testing. Major system functions and primary workflows will be tested. Approved test scripts will serve as a checklist for system testing.

Testing should involve the core project team, or power users. GHD will be on-site to work with the testers who will work through test scripts, complete the test script forms and submit them to a test administrator for review. The administrator will document system deficiencies into an Issues Log. Once testing is complete, this Log will be the source of information for configuration deficiencies to be addressed by the The Timmons Group Implementation team. As some of the items listed as deficiencies may be product bugs or deficiencies, GHD will work with The Timmons Group and NapaSan to agree on the items listed in the deficiency log that will be corrected.

Task 4 Deliverables:

- Test Plan
- Test scripts for service requests, work orders, inspections and integrations
- One day on-site testing support
- Agreed upon Issues Log for The Timmons Group Implementation team to update

Task 5 – Training

Training of NapaSan staff on the use of the configured Cityworks CMMS will be provided by The Timmons Group under their contract. GHD will attend the training with NapaSan to facilitate future support activities relating to the implementation of future phases of the asset management program as detailed in NapaSan's Asset Management Plan.

Task 6 – Project Close-out

GHD will provide as-needed support to NapaSan to close out the CMMS implementation project with The Timmons Group.



PROJECT TEAM

GHD will utilize the following key staff, augmented by others as required, to complete this scope of work:

- Ted Whiton, PE – Project Manager
- Gage Muckleroy, PE – Asset Management Lead
- Kathleen Zynda – Sr. Asset Management Advisor
- Andy Lovell – GIS Lead
- Steve Cyphers – Sr. GIS Advisor

FEE ESTIMATE

Task Description	Hours	Labor Cost	Expenses	Estimated Fee
Task 1 – Project Management	155	\$34,205	\$3,211	\$37,416
Task 2 – Business Process Mapping	284	\$41,340	\$6,609	\$47,949
Task 3 – Configuration Planning	328	\$56,390	\$2,599	\$58,989
Task 4 – CMMS Configuration Testing	74	\$12,020	\$1,771	\$13,791
Task 5 – Training	32	\$5,760	\$192	\$5,952
Task 6 – Project Close-out	30	\$5,680	\$180	\$5,860
Totals	903	\$155,395	\$14,562	\$169,957

GHD will perform the scope of services for a fee not to exceed \$169,957 as shown on the above fee estimate. The overall schedule will be driven by The Timmons Group and NapaSan, and we anticipate having the scope of work executed within 18 months from project initiation. Please contact me with any questions you have regarding our proposal at 707-540-9007 or email me at ted.whiton@ghd.com.

Regards,
GHD Inc.

Theodore B. Whiton, P.E.
Principal/Sr. Civil Engineer