

Proposal for Work Order Checks Plugin

October 28, 2013

This proposal from GeoIT Resources, Inc. (GeoIT) of Redding, CA is in response to a verbal request from Ms. Elsie Fong of the City of Sacramento Department of Utilities received on October 18, 2013.

It is proposed that GeoIT, working with subcontractor, Environmental Engineering and Contracting, Inc. (EEC) develop a custom Work Order Checks Plugin supporting the on-going Cityworks Upgrade Project (PO#22266, Project #Z14003603). It is presumed that the funding for this development will come from the existing Contingency Fund setup on that project for just such a purpose and that the work will be completed within the work breakdown structure and time window of the existing project that is approximately 40% complete.

Scope of Work

GeoIT, working with EEC, will develop a custom plugin for Cityworks Server AMS that will verify that specific data entry requirements have been met before City staff can indicate the work is “complete.” The standard functional within Cityworks Server AMS only performs these types of checks when closing a work order, resulting in the potential for critical data collection to have been missed while workers were in the field. As such, this custom plugin has the potential to greatly improve both the data entry quality and the usability of the Cityworks Server AMS software.

The plugin will display a list on each work order detail page of checks that must be satisfied before entering an actual finish date indicating the work order is “complete.” Unsatisfied checks will be colored red and satisfied checks will be colored green. The plugin will also warn the user when entering the actual finish date indicating the work order is complete if all checks have not been satisfied. If one of the checks cannot be satisfied for some reason (e.g. no materials were used on the job or other extenuating circumstances), the user will have the option to override the warning by clicking through extra prompts.

The plugin will check for the following items for each work order:

1. All tasks are completed
2. All related inspections are completed
3. All required work order standard fields (e.g. Actual Finish Date) are filled in
4. All required work order custom fields are filled in
5. The work order is attached to an asset
6. The work order has at least one labor entry
7. The work order has at least one material entry
8. The work order has at least one equipment entry

Development Environment

The plugin will be built as a Python/JavaScript web application that will need to be hosted on each Cityworks Server AMS web server where the functionality is desired. The application will generate forms that will be able to be injected into the work order detail pages within Cityworks via standard modifications to the Cityworks customization XML code. The application will require ODBC access to the applicable Cityworks database.

Plugin System Requirements

- Windows Server 2008 R2 or later with IIS 7 or later
- Cityworks Server 2013 SP1 or later
- Python 2.7.2 with pyodbc 3.0.6 or later (<https://code.google.com/p/pyodbc/>)

Deliverables

The following are the anticipated deliverables from this effort:

- Plugin Python and Javascript web page scripts installed on two Cityworks AMS servers
- Additions to test plan and system testing
- Additions to training plan, training materials, and user training sessions
- Plugin programming maintenance documentation and approximately one hour training session
- Additional project management

Schedule

It is estimated that the plugin will take from 2 to 4 weeks to develop. Work should commence once the test system is running and core configuration is complete, which is expected to be accomplished by mid-November, 2013.

Price Estimate

The estimated price for the proposed effort is \$8,360, which is based upon the anticipated award of a time and materials line item from within the existing Cityworks Upgrade Project budget.

All Activities	Category	Rate	Hours	Price
	G3.....	\$85	4	\$340
	G4.....	\$95	12	\$1,140
	G6.....	\$125	8	\$1,000
	G7.....	\$140	42	\$5,880

PRICE ESTIMATE US \$8,360

The anticipated "G7" staff is expected to be Mr. Steve Shaffer as Application Architect.

The anticipated "G6" staff is expected to be Mr. Brian Hoefer as Project Manager.

The anticipated "G4" staff is expected to be Ms. Ariana Wilfrey as Consultant / Specialist.

The anticipated "G3" staff is expected to be Ms. Sharlene Rakestraw as Quality Control Manager.

The City of Sacramento will be invoiced on a monthly basis, showing the compensation due for work performed during the previous thirty-day (or longer) period in accordance with the existing contract.