



## Legislation Text

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**File #:** 2019-0495, **Version:** 1

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### Title

Supervisory Control and Data Acquisition (SCADA) System Upgrade - Proposal

### History

The Utility Division of Public Works has used the Supervisory Control and Data Acquisition (SCADA) system since 1985. The system provides twenty-four (24) hour monitoring and controls the village water and sanitary system. Last upgraded in 2012 with the addition of new desktop computers and a software upgrade, SCADA technology has evolved utilizing modern computers and software. The SCADA system located at the Main Pump Station has had periodic hardware failures within the past year. In March 2019, the Village's BIS department determined that the current SCADA server is beyond its serviceable life and have recommended replacement of the server.

Staff requested an assessment by the Utility Division's SCADA consultant and integrator, Concentric Integration of Crystal Lake, Illinois in order to ensure the reliability and security of the SCADA system. The assessment was completed in May 2019. The assessment results indicated that:

1. The existing SCADA Server that operates the system is experiencing intermittent failures. As a result, village staff has to periodically remove and reset critical system components to get the server operational. If the server was to fail entirely, staff would lose historical and current data.
2. The existing iFix SCADA software is several versions out of date. Concentric has proposed to upgrade the software to save time and cost with upgrading to the new server. This is needed to improve operations and minimize the vulnerability to viruses and cyber attacks.
3. Environmental improvements to protect the computer equipment from heat, dust and humidity are needed to avoid premature equipment failure. It was recommended by Concentric Integration and the village's BIS department to relocate the new server to the Public Works facility in order to maintain a more desirable environment and utilize the Village's fiber-optic network.
4. There is a remote access server located at the Police Department which provides remote connectivity to SCADA. Concentric proposes to consolidate this server into the proposed SCADA server virtual infrastructure. This would create redundancy for the SCADA server.
5. The server architecture and software should be brought up to current standards so the Village will be able to pursue greater operational insights. Concentric proposes to install the planned SCADA Historian software as part of the SCADA server infrastructure improvements. The Historian software provides the capability to efficiently collect and store enormous amounts of operational data from SCADA. The village will establish the foundation for further analytics of their operational data which will improve operational efficiencies.

Concentric was previously selected in 2012 as the village's vendor for SCADA. Due to the complexity of the current SCADA system and the historical relationship Concentric has had with the Village, a proposal for equipment and software upgrades was requested from Concentric Integration, of Crystal Lake, Illinois. They have an overall understanding of the project with the ability to provide continued support. Their proposal (attached) details the cost of the new equipment, overall project

management, SCADA hardware upgrade, SCADA server software migration, firewall replacement, and the SCADA Historian and Business Intelligence for a total of \$132,380.00.

**Financial Impact**

Funds are available for this project in the FY2019 Water Fund 031-6001-443610.

**Recommended Action/Motion**

I move to approve waiving the bid process;

And

Approve accepting the proposal from Concentric Integration, of Crystal Lake, Illinois, in the amount of \$132,380.00 for the Main Pump Station Server replacement, SCADA system software upgrades, and ongoing support.