THE CORPORATION OF THE TOWN OF GEORGINA

REPORT NO. OID2025-0003

FOR THE CONSIDERATION OF
COUNCIL
January 22, 2025

SUBJECT: Single Source Award – Water/Wastewater SCADA Upgrade

1. RECOMMENDATION:

1. **That Council receives report No. OID2025-0003 prepared by the Operations Division, Operations & Infrastructure Department dated January 22, 2025, regarding Single Source of the Water/Wastewater SCADA system upgrade as outlined in approved business case 25-CI-WAT-05;**

2. **That Council approve the single-source award of contract to Actemium Summa Engineering, in the amount of $210,000 (Inclusive of HST); and,**

3. **That Council authorize the Manager of Procurement Services to execute the agreement between the Town of Georgina and Actemium Summa Engineering and execute all other necessary documents.**

2. PURPOSE:

To obtain Council approval for a single source award of contract to Actemium Summa Engineering in the amount of $210,000 (Inc. tax), in accordance with Single Source Acquisition (*Section 10.4.4, 10.4.3, 10.4.5, 10.5.2*) and Schedule E – Thresholds of the Town's Procurement Policy.

3. BACKGROUND:

The Water and Wastewater Department depends on the reliable operation of its SCADA (Supervisory Control and Data Acquisition) system to manage the Town's Critical Infrastructure (CI). Currently, the system monitors 20 sewage pumping stations and 2 water booster stations, responsible for the movement of wastewater to regional facilities and maintaining adequate pressure within low-pressure zones respectively. This system is crucial for monitoring all facility operations in real-time, tracking water system pressures and pump status, monitors wet well levels and overflow alarms, and monitors pump functionality. While the system doesn't perform the tasks itself, it sends alerts to notify staff of issues instantly, allowing a response either electronically or physically very quickly.

These systems host a local server for data management and can also be remotely accessed from any computer or laptop in the field, ensuring compliance with

environmental regulations. However, based on the existing SCADA assets, the actual hardware/software, reporting and alarming need replacement and/or upgrading.

As technology has advanced, the current system is struggling to keep up with new operational requirements, and its capabilities are increasingly limited. It is essential to upgrade the SCADA system to ensure the continued reliability and efficiency of these critical stations.

The outdated system poses a growing risk to the uninterrupted delivery of water and wastewater services. Any failure in the SCADA system could result in serious operational disruptions, including service interruptions, system overloads, or environmental risks. Town staff have responded to 90 alarms outside of regular business hours over the past 12 months. If these alarms were not received, there could be significant risks, including potential water quality complaints, insufficient fire flows, sewage backups, and overflows or spills into the environment/Lake Simcoe. These outcomes could have serious implications for system performance, public safety, and environmental protection.

Upgrading the SCADA system is vital to maintaining public health, securing consistent water and sewage management, and improving long-term operational efficiency.

4. <u>ANALYSIS:</u>

The budget amount is based on a strategy report completed in Q2 of 2024, which includes an inventory of the system, a review of existing facilities, and recommendations for improvements. It covers SCADA hardware, HMI software, SCADA reporting and data management, alarm monitoring, and necessary upgrades.

The SCADA upgrades will include the following:

       a. Computer Hardware Upgrades
       b. Computer Software Upgrades

The procurement policy includes four sections under Non-Standard Procurement Methods that apply to the work being proposed:

- 10.4.3: The confidential or security-related nature of the requirement is such that it would not be in the public interest to solicit competitive bid submissions;
- 10.4.4: There is a need for standardization or compatibility with deliverables previously acquired;
- 10.4.5: Where necessary to maintain an existing warranty from a previous or existing vendor;
- 10.5.2: One available vendor's unique ability or capability to meet the particular requirements of the Town

The request to single source the current SCADA vendor is driven by several key factors that contribute to the continued success and stability of our water and wastewater systems, outlined below considering operational, technical, financial, and risk-related

aspects. These align with Section 10.4.4, 10.4.3, 10.4.5, 10.5.2 of the approved procurement policy:

1. **Operational Efficiency and Reliability:**

   The current vendor possesses in-depth knowledge of this specific SCADA system, which is highly unique and requires minimal downtime and rapid resolution of issues. Their expertise in the unique configuration of the Town of Georgina system is critical to maintaining optimal performance. Switching vendors could lead to inefficiencies, delays in issue resolution, and potential service disruptions, which could have serious consequences on water and wastewater services.

2. **Cost Effectiveness and Continuity:**

   Retaining the current vendor avoids the significant costs associated with transitioning to a new vendor, which would include training for both the vendor and staff, knowledge transfer, and potential system modifications to accommodate another vendors' preferred software/hardware. Additionally, the current vendor's familiarity with the system's architecture allows them to perform maintenance and support tasks more efficiently, thereby reducing the likelihood of costly repairs or system failures. A new vendor would also require significantly more staff time in order to facilitate a new relationship and coordination of knowledge transfer.

3. **Minimizing Risks:**

   A key concern with changing vendors is the potential risk of service interruptions. The SCADA system is essential for real-time monitoring and control of critical infrastructure, and any downtime or failure could lead to operational inefficiencies, environmental compliance violations, or service disruptions. The current vendor has a proven track record of ensuring the system's continuity, which reduces the likelihood of such risks occurring. In the event the SCADA system is inoperable for any lengthy period of time, staff would be unable to actively monitor (physically be present) at each station within the current staffing compliment.

   Releasing certain components of the SCADA system to solicit bids can be high-risk relating to potential cyber-attack as well, given the system can control the entire network of pumping stations that the majority of serviced properties within Georgina benefit from. By continuing with the existing proven vendor, we remove this as a potential risk.

4. **Contractual and Warranty Considerations:**

   The existing contract with the current vendor includes warranties and predefined service rates that provide financial protection and ensure that maintenance is performed at agreed-upon terms. Changing vendors for the upgrade of the system could void these protections and potentially increase

costs for repairs or upgrades. By continuing with the current vendor, we preserve these contractual benefits.

5. **Regulatory and Environmental Compliance:**

Maintaining a fully functional SCADA system is essential for the effective monitoring and management of our extensive network of sewer pumping stations, especially given our current staffing capacity. The SCADA system plays a vital role in ensuring operational efficiency and resource optimization, supported by the continuity and reliability of our current vendor. Additionally, the performance and functionality of our sewer pumping stations, as well as the SCADA system, will be prominently featured in the Wastewater Performance Report. This report, a requirement under our CLI Environmental Compliance Approval (ECA) for the Sanitary Collection System, underscores the importance of these systems in demonstrating the effectiveness and reliability of our operations.

Wastewater systems approved by the Ministry of the Environment, Conservation and Parks (MECP) do not explicitly mandate SCADA as a requirement, however, SCADA facilitates regulatory, operational and record-keeping and reporting which are mandated requirements under MECP approval. An example of this is under O.Reg 129/04, which requires system operators to ensure proper monitoring and control at all times. This can be done manually, but at a municipal network scale, becomes difficult or impossible to manage without significant labour increases. This is where SCADA benefits.

6. **Strategic Alignment with Internal ITS Department:**

By maintaining the current vendor, the Internal ITS Department can continue its collaborative work with the vendor, leveraging their expertise and ensuring seamless integration with the department's broader IT infrastructure. This alignment will foster better communication and problem-solving capabilities, enhancing the overall performance of the SCADA system. This existing alignment of ITS and the current vendor further reduces onboarding requirements, screening and security requirements and confidential network infrastructure knowledge needed should a new vendor be required.

The above analysis supports the various rationale under the non-standard procurement methods as outlined in the approved Procurement Policy.

5. RELATIONSHIP TO STRATIC PLAN:

Not applicable to this report.

6. FINANCIAL AND BUDGETERY IMPACT:

The estimated total budget for this project is $210,000, which has already been approved as part of the 2025 budget. Therefore, no additional funding is required.

7. CONCLUSSION:

In conclusion, ongoing maintenance and support of the SCADA system are essential to ensuring the reliable operation of Town water and wastewater infrastructure. The expertise, familiarity, and continuity provided by the current vendor are critical for maintaining optimal performance and minimizing disruptions. By continuing this partnership with the existing vendor, the Town benefits from specialized tools, preserves contractual protections, and mitigates the risks associated with vendor transition. For these reasons, single sourcing the current vendor is the most effective and cost-efficient solution to safeguarding the operational integrity of our water and wastewater services.

APPROVALS

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