




CITY OF
MARGATE
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INTEROFFICE MEMORANDUM

FROM THE DEPARTMENT OF ENVIRONMENTAL AND ENGINEERING SERVICES

DATE: January 26, 2016

TO: Douglas Smith, City Manager

FROM: Reddy Chitepu, P.E., Director 

RE: **Conversion of Datamatic Drive-by System to Zenner Fixed Network**

In 2010, after a selection process, the contract to transition the City's manual water meter reading program to an Automatic Meter Reading (AMR) system was awarded to Datamatic, Ltd. (Datamatic). The Datamatic AMR system selected was a drive-by system and included data transmitting devices (Firefly's) and the required hardware and software to allow for meter reading remotely from a vehicle without the need to physically visit each meter. The implementation was phased with initial installation of approximately 2,000 Firefly units to service all commercial accounts. Subsequently, an additional 2,100 units were installed in residential areas through 2012 bringing the total number of installations to approximately 4,100 units, which represents 24 percent of the water system. In late 2013, some of the firefly units began to fail due to issues with their batteries and other operating components. City staff notified Datamatic who under warranty began replacing the units that failed. However, due to similar failure issues with the units from other installations across the Country, Datamatic could not keep up with the repair requests and ultimately filed for bankruptcy. The Bankruptcy trustee later sold Datamatic assets to ZennerUSA (Zenner) in May 2014.

As a result of the bankruptcy, staff researched other technologies that could support the existing Datamatic system, including the economics of replacing the current units with other products. Based on the research, staff identified Zenner Meter Interface Units (MIU) and its technology to be compatible with our existing system. Zenner has successfully transitioned other Datamatic customers to the Zenner system over the last few years. To verify Zenner's system, in early 2015, a small pilot area was selected with approximately 150 accounts to test for conversion and compatibility of the existing Firefly's with the Zenner technology. The conversion and data transfer were successfully completed, and the system has been in service and continues to transmit data from the pilot area as of this date.

The pilot study was based on a fixed network compared to our existing drive-by system. The fixed network was selected to address staffing concerns with meter reading, since the fixed network option allows remote meter reading without the need for meter reading staff. The fixed network system allows data transmission from the meters through a remote tower directly to a computer server which is then used by our billing system to generate water bills. As you are aware, the City contracted with an outside vendor for meter reading due to staffing issues, and transitioning to a fixed network will eliminate the need to continue with the vendor resulting in a significant reduction in meter reading costs. The cost difference to

convert the existing drive-by system to a fixed network system is minimal compared to the savings associated with future meter reading costs.

In addition to reducing meter reading costs, the data collected will afford significant benefits including: provide a history of customer usage patterns; assist in resolving customer complaints and claims regarding unusual high usage and billing issues; act as a useful tool to identify water leaks early which will promote conservation and improve customer service; provide accurate accounting of billable water with water pumped from the water plant; and standardize water meter inventory throughout the system.

Based on the results from the pilot study and the compatibility of the Zenner system with the existing meter reading and utility billing system, I recommend the conversion of our current Datamatic system to the Zenner system including purchase and installation of new Zenner MIU's to transition the remaining water meters in the system to an AMR system.

Attached is a License and Warranty Agreement with unit rates from Zenner for equipment purchase, installation, and hosting services. The agreement provides for automatic annual renewal with a 60-day termination clause. The unit rates are subject to the City's standard annual Consumer Price Index (CPI) adjustment provision. The Zenner MIU's are approximately 15% cheaper than the Firefly units based on the 2010 Datamatic contract. The unit rates proposed by Zenner are equal to or less than their standard rates for all their clients' nationally for conversions from Datamatic to Zenner.

The City's water system has approximately 16,500 service connections and is read in four (4) cycles. A scope of services and a quote from Zenner are also attached for Phase I deployment. The Phase I deployment will include conversion of existing firefly units and installation of approximately 2,000 additional Zenner MIU's for a functionally complete operating fixed network system for the City's Cycle 1 and a portion of Cycle 3 (all commercial accounts). The cost of Phase I deployment will be \$313,763, with an additional annual maintenance costs of \$7,818.96. Phase II will include Cycle 2 with an estimated cost of approximately \$500,000 and Phase III will include Cycle 4 and remaining portions of Cycle 3 at an estimated cost of approximately \$600,000. Phases II and III are tentatively scheduled for deployment in Fiscal Year 2017 and 2018, respectively.

With your approval, I will schedule the attached Zenner agreement for the upcoming City Commission agenda for approval to waive bidding and approval of the Zenner License and Warranty Agreement.

Please let me know if you have any questions.

Attachments

cc: Finance Director
Purchasing Manager