

**North Canton City Council Notice  
Committee of the Whole Agenda  
Monday, February 1, 2016 – 7:00 p.m.**

North Canton City Council will meet as a Committee of the Whole **Monday, February 1, 2016 at 7:00 p.m.** in Council chamber at North Canton City Hall.

Items to be discussed.

1. Bond Presentation by Mike Burns
2. Finance and Property Committee

Chairperson: Dan Griffith  
Vice Chairperson: Marcia Kiesling  
Mark Cerreta  
Doug Foltz  
Dominic Fonte  
Daniel Peters  
Stephanie Werren

An ordinance amending Ordinance No. 46 – 2015, the Fixed Base Water Meter Project in the City of North Canton, increasing the appropriation from not to exceed \$1,074,000.00 to not to exceed \$1,520,000.00.

Mary Beth Bailey  
Clerk of Council

North Canton City Council  
Finance and Property Committee

Ordinance No. – 2016

An ordinance amending Ordinance No. 46 - 2015, the Fixed Base Water Meter Project in the City of North Canton, increasing the appropriation from not to exceed \$1,074,000.00 to not to exceed \$1,520,000.00.

WHEREAS, it is necessary for the City to increase the appropriation from not to exceed \$1,074,000.00 to not to exceed \$1,520,000.00 in order for work to begin on the Fixed Base Water Meter Project.

NOW THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF NORTH CANTON, COUNTY OF STARK, AND STATE OF OHIO:

- Section 1. That Ordinance No. 46 - 2015, the Fixed Base Water Meter Project, be, and the same is hereby amended to increase its appropriation from not to exceed \$1,074,000.00 to not to exceed \$1,520,000.00; copy of Ordinance No. 45 – 2015 is attached hereto and is incorporated herein.
- Section 2. That if a provision of this ordinance is or becomes illegal, invalid or unenforceable, that shall not affect the validity or enforceability of any other provision of this ordinance.
- Section 3. That this ordinance shall take effect and be in full force immediately upon its adoption by Council and approval by the Mayor.

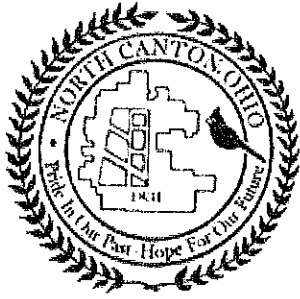
Passed in Council this \_\_\_\_\_ day of \_\_\_\_\_ 2016.

\_\_\_\_\_  
David Held, Mayor

Signed: \_\_\_\_\_, 2016

ATTEST:

\_\_\_\_\_  
Mary Beth Bailey, Clerk of Council



# City of NORTH CANTON, OHIO

145 NORTH MAIN STREET  
NORTH CANTON OHIO 44720-2587

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JAN 27 2016

## LEGISLATION REQUEST

ADMINISTRATION  
NORTH CANTON, OHIO

January 27, 2016

To: **Daniel J. Peters, President**  
City Council

Subject: **Fixed Base Water Meter Project**

Requested By: J. Bunkas Date: 1/27/16  
City Engineer

Approved By: [Signature] Date: 1/28/16  
Director of Administration

Request to amend **Section 3** of **Ordinance No. 46-2015** from \$1,074,000 to \$1,520,000

Attached is a copy of

- CT Consultants Bid Evaluation Process
- The Bid Tab
- The Cost Benefit Analysis Summary
- List of Cities using the recommended vendor

One of the items for discussion will be the up-front payment of the O&M cost for 15 years.

EMERGENCY REQUESTED: Yes X No \_\_\_\_\_

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JAN 27 2016

COUNCIL OFFICE  
NORTH CANTON, OHIO

North Canton City Council  
Water, Sewer and Rubbish Committee

Ordinance No. 46 - 2015

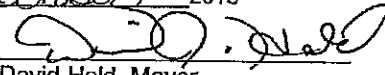
An ordinance authorizing the Director of Administration of the City of North Canton to advertise and receive bids according to specifications now on file in the Director's office, and authorizing the Mayor of the City of North Canton, through the Board of Control, to enter into a contract for the Fixed Base Water Meter Project, at a total cost not to exceed \$1,074,000.

WHEREAS, the City desires to enter into a contract for the purchase of equipment required for the Fixed Based Water Meter Project.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF NORTH CANTON, COUNTY OF STARK, AND STATE OF OHIO:

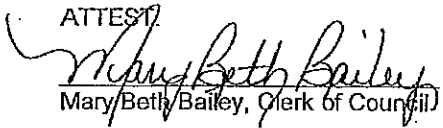
- Section 1. That the Director of Administration of the City of North Canton, be, and is hereby authorized to advertise and receive bids according to specifications now on file in the Director's office, for the Fixed Base Water Meter Project.
- Section 2. That the Mayor of City of North Canton, through the Board of Control, be, and is hereby authorized to enter into a contract for the Fixed Base Water Meter Project, at a total cost not to exceed \$1,074,000.
- Section 3. That the Director of Finance of the City of North Canton, be, and is hereby authorized to draw funds necessary for the payment of the above specified contract from the following appropriation:
- |              |                                    |             |
|--------------|------------------------------------|-------------|
| 651          | WATER EXP. REPL & IMPROVEMENT FUND |             |
| 651.767.5500 | Equipment                          | \$1,074,000 |
- upon receipt of vouchers duly approved by the proper departmental authority.
- Section 4. That if a provision of this ordinance is or becomes illegal, invalid or unenforceable, that shall not affect the validity or enforceability of any other provision of this ordinance.
- Section 5. That this ordinance shall take effect and be in full force immediately upon its adoption by Council and approval by the Mayor. Otherwise, it shall take effect and be in force from and after the earliest period allowed by law.

Passed in Council this 12<sup>th</sup> day of October, 2015

  
David Held, Mayor

Signed: 10/19, 2015

ATTEST

  
Mary Beth Bailey, Clerk of Council

January 5, 2016

Mr. James Benekos, PE PS  
City Engineer  
City of North Canton  
145 North Main Street  
North Canton, OH 44720



**RECEIVED**

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**NORTH CANTON  
ENGINEERING DEPT.**

**Re: Fixed Base Water Meter Project  
Bid Evaluation Process**

Dear Mr. Benekos:

The City of North Canton received bids on Friday November 13, 2015 for the Fixed Base Water Meter Project. Three bidders submitted bid packages that consisted of Technical Proposal for AMI System, Bid Proposal Questions Form, and price proposal. The three companies were: NECO, HD Supply, and Aclara Solutions. The Bid from Aclara Solutions was determined to be in non-conformance due to altering the bidding documents, and thus has not been further included in the evaluations.

The two remaining Bids have been reviewed in detail. CT Consultants has been tasked with evaluating technical proposals, bidders qualifications questions, and price proposals for two similar technologies, both of which are good and have advantages and disadvantages. The real question is which technology is best for the City of North Canton given what the City has and where the City ultimately wants to go with customer service, transparency and accountability. The solution desired must be a long-term approach with specific advantages in the short term as well. Cost is a major component, and has been considered as well in this evaluation, although it is not the sole factor.

Several factors were considered for each of these bids and are discussed below. Any one of these issues may be more or less important to various City staff members. However, our review and recommendation is based on an overall basis, giving considerations to the many facets of each vendor's products.

1. Primary licensed fixed base:
  - a. NECO – 450 MHz Secondary to land mobile operations (i.e. fire and police radio), not primary and not noise free. FCC 450-470MHz frequency range is limited to fixed base only, not migratable, and no other method (i.e. handheld) of collecting data as needed. If flexibility of read format is desired, would need the 900 MHz, unlicensed frequency option.
  - b. HD – 900 Mhz primary, sole ownership and control by Sensus. Sensus Metering is the only vendor that currently utilizes a Primary License Frequency. This equates to absolutely no interference from other radio devices of any kind and allows the radio endpoints to have maximum power output (2 watts). This system is migratable and readable using touch pad, drive by and fixed base.

2. AMI Reads per day
  - a. NECO – One transmission per day (midnight) when potential interference (noise) is minimal. Cannot detect leaks for 24 hours. Data is only real-time on 24-hour intervals.
  - b. HD – Four transmissions per day (every 6 hours) permits more real-time data permitting monitoring for leaks or breaks (house service line burst inside home – for snow-birds as well as any other services). Also data transmitted is for more than just the past 6 hour or 24 hours of readings (up to 7 days), offering redundancy if a message was previously missed for any reason. Alarms that are programmed are real-time, thus transmitted immediately upon detection.
3. Endpoint data storage in case of DCU outage
  - a. NECO – endpoint only stores one day of 24 hour reads
  - b. HD – endpoint stores 7 days of reads and transmits 4X per day. This permits recovery of data for billing disputes that may have occurred over a 1 or 2 day window when the DCU is off-line (i.e. filling a pool, theft, etc)
4. True 2-way communication through endpoint and all the way back to the meter:
  - a. NECO – 2 way communication is thru the endpoint – not back to the meter
  - b. HD – 2 way communication is thru the endpoint and includes back to the meter
5. Endpoint warranty
  - a. NECO – battery 10/10 warranty. Warranty continues to run thru the installation period warranty, and is not based on manufacturer date on tag.
  - b. HD – There was confusion regarding warranty for “touch coupler” vs. for 510M endpoint. Touch coupler is the end on the handheld meter reading equipment and has a one year warranty. The 510M endpoint has a 10/10 warranty on the battery and the electronics. Warranty restart at time =0 for replacement endpoints, and is based on the date of manufacturer tag, not based on original date of installation.
6. Emergency or alternative read capabilities
  - a. NECO – cannot be read by alternative method if using the 450 MHz band. Loses data until DCU is back up and running. Cannot perform final reads from the office, but must go to the meter to “program it”.
  - b. HD – endpoints can be read via drive-by with computer unit already owned by City of North Canton. Also, data stored on endpoint for 7 days. Can ping the meter for instantaneous reads for final reads at any time (as long as the meter is capable of this technology).
7. Number of data collector units
  - a. NECO – Five data collectors, increased O&M. At least one of these is proposed to be on a City of Canton water tower (asset). This is not desirable.
  - b. HD – Two data collectors. All on City owned assets. Less O&M for less units.

8. DCU data storage in case of power outage
  - a. NECO – DCU only stores 3 days of 24 hour reads in the event of outage
  - b. HD – DCU stores 30 days of data.
9. 2-wire vs. 3-wire
  - a. NECO – recommends hard wiring all meters. Can use either 2 or 3 wire systems. Stance is that eventually all meters will require a 3-wire system.
  - b. HD – performs all functions currently as well as improvements under research and development utilizing a 2-wire system. Sensus stance is that they provide a 3-wire apparatus so that they can support any one's meters, but that the 3<sup>rd</sup> wire is an unnecessary, redundant feature.
10. SaaS – Hosted programs
  - a. NECO – Referenced called did not have NECO hosted programs or services. Hosted data themselves in house. SaaS relatively new. Software programming is all in-house.
  - b. HD – All referenced talked to used SaaS and were very happy with the service. Circa 2008 program was not hosted initially, but later switched out to hosted, and reference was overall very pleased with service and support. Training should be more robust and timing closer to actual deployment or transfer of accounts into the billing software – such that staff can learn and practice with real data. Software programs are provided by a 3<sup>rd</sup> party to Sensus.
11. Made in the USA
  - a. NECO – Manufacturers all parts in the USA and maintains local control of software with on-staff programmers. Made in ISO 9001 facilities
  - b. HD – Some parts made outside the USA. Outsource software development. Made in ISO 9001 facilities
12. Endpoint Installation
  - a. NECO – must unwire each touch pad & rewire base plate on each wall. Wire/screw holes may or may not align well. Additional cost for back plate to accept the 2-wire systems. Would result in more effort and time to deploy system.
  - b. HD – this system seems to be very user friendly to install. The as-bid Alternative price is excessive for the level of effort that we perceive. We would recommend that the City install with existing staff or with summer interns working alongside the meter reader staff over 2-3 months this summer.



13. Long term system flexibility and support

- a. NECO – We believe both companies are solid and will continue providing support for the long term. Flexibility will continue to grow but lags some of the Sensus features such as multiple reads per day.
- b. HD – Based on data provided, seems as though Sensus architecture provides more up-front tools such as ability to see problems throughout the day (real-time) vs. waiting until next day (service pipe burst at a customer's location for example), and other similar tools. Other expanded capabilities such as service side leak detection are available. Also, SCADA data can be transmitted over the same AMI – thus City could move and expand all SCADA to this primary licensed band.

14. Reference calls

- a. NECO – All communities called as references have been long-time Neptune customers. At least one reference noted manufacturing defects “on a few hundred MIU’s that had to be replaced”. In addition, several were not providing readings and gave error codes showing that they did not “program correctly” during the install process. Several newer meters (2-5 years old) were kept, but their registers had to be changed out.
- b. HD – All communities called as references have been long-time Sensus customers. Reference callers all use the Sensus SaaS hosted programs. At least one noted that they felt training was too early in the process, but everyone had installed the MTUs themselves in-house with existing or seasonal staff.

Recommendations:

1. Select the Sensus FlexNet system as bid and enter into an Agreement with them for this project.
2. Utilize current or summer staff to perform endpoint installations over 2-3 months.
3. Delete Bid Items 3 and 4 via Change Order. After further review we cannot recommend that the City pay for 15 years' worth of operational charges as part of a capital project. There are too many variables to consider.
4. Only include Alternative Bid Items that City believes are needed at this time. Wait for Customer Portal for after transition has been completed and billing office can make a clear decision based on their workloads.
5. Don't need to change meters at this time. Current touch pads and hand-helds can be programmed to include codes to determine what meters are higher priorities to replace and which ones can be replaced in a second wave if desired. This data will show up when programming each MTU during installation.





Mr. James Benekos  
City of North Canton  
January 5, 2016  
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- a. Estimated 5,250 older meters that cannot be reprogrammed to more precision reads. These meters can be identified during Phase 1 installations of MTUs for potential replacement during a Phase 2 project.
- b. Estimated 3,565 newer meters that will be programmable. These should be programmed at this time. This group of meters can be replaced during a Phase 3 effort.

If you have any questions regarding this review, evaluation and recommendation, please contact me at your earliest convenience.

Respectfully,

**CT CONSULTANTS, INC.**



Robert L McNutt, PE  
*Senior Project Manager*

RLM:mep

Enclosures

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