



**CITY OF NOVI CITY COUNCIL
FEBRUARY 24, 2020**

SUBJECT: Consideration of approval to award a service contract to Ferguson Waterworks, through the Oakland County Cooperative Purchasing Contract, for the replacement of residential water meters (Phase 1 and 2) as part of the City's initiative to implement an Advanced Metering Infrastructure network, in the amount of \$1,459,319.55.

SUBMITTING DEPARTMENT: Department of Public Works, Water and Sewer Division

EXPENDITURE REQUIRED	\$ 762,629.80 Phase 1 FY 2019-20 Budget <u>\$ 696,689.75 Phase 2 FY 2020-21 Budget</u> \$ 1,459,319.55 Total
AMOUNT BUDGETED	\$ 782,879 Phase 1 FY 2019-20 Budget <u>\$ 1,050,000 Phase 2 FY 2020-21 Budget</u> \$ 1,832,879 Total
APPROPRIATION REQUIRED	\$ 0
LINE ITEM NUMBER	592-592.00-982.027

BACKGROUND INFORMATION: The Department of Public Works' Water and Sewer Division has installed the majority of the Advanced Metering Infrastructure (AMI), which is a fixed network system using technology that will allow City staff to remotely obtain meter reading data and other information, such as consumption, potential leakage, meter tampering, and backflow events for each user in the City's water distribution system. This will eventually replace the City's current Automated Meter Reading system, which involves staff driving by each meter in close enough proximity to allow a collector to receive transmitted data. The AMI system will eliminate the need to drive the entire city to collect meter data, which is typically a four to six day process.

The next step for implementing the AMI system involves the replacement of the non-compatible meters and older meters assumed to be under-registering water usage. The meter replacements were started in 2019, replacing aging commercial meters that were large water users and therefore considered to be significant contributors to the City's apparent water loss (i.e. unbilled water usage). This initial meter replacement round is complete.

This round of meter replacements will focus on residential meters that have exceeded their expected usage threshold, or have meter components that need to be upgraded. Approximately 2,400 meters or meter components will be replaced in Phase 1, with 2400 more replacements in Phase 2 shortly thereafter. Additional meters will need to be replaced in the future and will be included in the City's Capital Improvement Program.

All residents included in the program will receive an initial notice to introduce the program, and then will receive additional information with instructions about scheduling their appointment. The scheduling of the meter replacements will be managed by Ferguson and their contractor, Utility Metering Solutions, with whom they have worked with successfully on similar completed projects. City staff will exercise oversight throughout the entire replacement program.

Ferguson was asked for a proposal to complete the implementation of this meter replacement program. Ferguson is the sole distributor of Neptune water meters in the state of Michigan and supplies all the water meters purchased by the City. The attached proposal was provided for both Phases 1 and 2 for reference. The pricing for the equipment included is based on the Oakland County Cooperative Purchasing Contract.

RECOMMENDED ACTION: Approval to award a service contract to Ferguson Waterworks, through the Oakland County Cooperative Purchasing Contract, for the replacement of residential water meters (Phase 1 and 2) as part of the City's initiative to implement an advanced metering infrastructure network, for \$1,459,319.55.



Meter & Automation Group

February 10, 2020

Mr. Ben Croy
City of Novi
26300 Lee BeGole Dr.
Novi, MI 48375

Subject: Residential Water Meter Replacement, Phases One and Two

Dear Mr. Croy:

Ferguson Waterworks is pleased to provide the City of Novi with the following proposal for phase one and two of the City's residential water meter replacement program. The City of Novi, Ferguson Waterworks (Formerly Michigan Meter Technology Group), and Neptune Technology Group have a long-standing partnership and we sincerely appreciate this opportunity. The pricing within the following proposal is taken directly from the Oakland County Cooperative Purchasing Contract #005894 with Ferguson Waterworks, where applicable.

Ferguson Waterworks is the sole distributor of Neptune Water Meters in the state of Michigan, as well as in 10 other states across the country. As such, we have experience managing residential and commercial meter replacement projects across the country. Ferguson Waterworks' Meter and Automation's Michigan headquarters is located in Warren, where we maintain a very large inventory of Neptune products.

To implement this project, Ferguson Waterworks will be partnering with Utility Metering Solutions (UMS) to provide meter and R900 installation. We have worked with UMS on several successfully completed projects, and they are industry leaders in the installation field. UMS' work order management system makes the transfer of installation data to the City's billing software accurate and seamless. Collectively, our goal is to make this project as efficient and easy as possible for the City's employees.

Again, thank you for the opportunity to work with the City of Novi on this project. Should you have any questions regarding this proposal, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew Rizzo".

Matthew Rizzo
Business Development Manager
Ferguson Waterworks

Ferguson Waterworks Meter and Automation
799 E Whitcomb
Madison Heights, MI 48071

Section One | Process

Background

Ferguson Waterworks has worked closely with the City of Novi to determine the most sensible area to begin residential meter replacement, considering the following factors: budgeted resources, usage on meters and register, and register/radio type. Based on these factors we have recommended a plan of action that ensures we are best leveraging the City's continued investment into their metering system. As such, we have proposed to begin residential meter replacement in Cycle two of the City's billing routes. This would include Routes 7-12. These routes have a total of 5,377 meters.

Phase 1 Installation – March, 2020 – June, 2020

We propose to begin installation in routes 7 and 9 in March 2020 through the end of June 2020. This is a total of 2,738 meters. Based on the plan of action developed, the following is a breakdown of the work needing to be completed:

- 1,985 meters exceed the AWWA specified usage threshold and we are recommending them to be replaced, along with a new R900 MIU.
- 294 meters were within the AWWA specified usage threshold and have the latest version of R900 MIU. These will not be replaced.
- 430 meters were within the AWWA specified usage threshold; however, these accounts have R900 MIU's integrated into the register, which affects their ability to be heard by the gateway infrastructure. We are proposing a register and R900 MIU replacement for these accounts.
- 29 meters* were within the AWWA specified usage threshold. However, these accounts have old versions of the R900 MIU. We are proposing to install a new R900 MIU on these accounts, while leaving the meter in service.

Phase 2 Installation – July, 2020 – December, 2020

We propose to continue installation in routes 8, 10, 11 and 12 beginning in July of 2020, and anticipate completing this cycle no later than December 2020. This is a total of 2,640 meters.

- 2,084 meters exceed the AWWA specified usage threshold and we are recommending them to be replaced, along with a new R900 MIU.
- 196 meters were within the AWWA specified usage threshold and have the latest version of R900 MIU. These will not be replaced.
- 175 meters were within the AWWA specified usage threshold; however, these accounts have R900 MIU's integrated into the register, which affects their ability to be heard by the gateway infrastructure. We are proposing a register and R900 MIU replacement for these accounts.
- 183 meters* were within the AWWA specified usage threshold. However, these accounts have old versions of the R900 MIU. We are proposing to install a new R900 MIU on these accounts, while leaving the meter in service.

*Assumes all R900 MIU's are on the outside of home



Meter & Automation Group

Section Two | Proposal

Phase One – Based on the plan of action described above

Description	Unit cost	Quantity	Total Cost
5/8" Neptune T-10 Procoder Water Meter	\$ 99.00	1,009	\$ 99,891.00
1" Neptune T-10 Procoder Water Meter	\$ 185.00	976	\$ 180,560.00
5/8" T-10 Procoder Register Only	\$ 83.56	138	\$ 11,531.28
1" T-10 Procoder Register Only	\$ 83.56	293	\$ 24,399.52
R900W MIU	\$ 83.25	2,444	\$ 203,463.00
Meter, R900 Installation Complete	\$ 101.00	1,985	\$ 200,485.00
Register and R900W Installation	\$ 95.00	430	\$ 40,850.00
R900W Only Installation*	\$ 50.00	29	\$ 1,450.00
Phase One Total:			\$ 762,629.80

Phase Two – Based on the plan of action described above

Description	Unit cost	Quantity	Total Cost
5/8" Neptune T-10 Procoder Water Meter	\$ 99.00	1,652	\$ 163,548.00
1" Neptune T-10 Procoder Water Meter	\$ 185.00	432	\$ 79,920.00
5/8" T-10 Procoder Register Only	\$ 83.56	155	\$ 12,951.80
1" T-10 Procoder Register Only	\$ 83.56	20	\$ 1,671.20
R900W MIU	\$ 83.25	2,523	\$ 210,039.75
Meter, R900 Installation Complete	\$ 101.00	2,084	\$ 210,484.00
Register and R900W Installation	\$ 95.00	175	\$ 16,625.00
R900W Only Installation*	\$ 50.00	183	\$ 1,450.00
Phase Two Total:			\$ 696,689.75
Total for Cycle Two Complete:			\$ 1,459,319.55

* Assumes all R900 MIU's are on the outside of home