

CITY OF
ANDERSON



AGENDA ITEM

February 16, 2010, City Council Meeting

Approved for Submittal By:

Dana Shigley
Dana Shigley, City Manager

To Be Presented By:

JK
Jeff Kiser, Public Works Director

To: Honorable Mayor and Members of the Anderson City Council

Through: Dana Shigley, City Manager
Telephone 378-6646

From: Jeff Kiser, Public Works Director
Telephone 378-6636

Date: February 16, 2010

SUBJECT

Authorization to bid the Automatic Meter Reading (AMR) Meter Replacement Project.

RECOMMENDATION

The Public Works Director recommends that the City Council adopt a resolution:

1. Approving the Plans, Specifications, Estimates and Contract Documents prepared by Pace Engineering of Redding, California for the Automatic Meter Reading (AMR) Meter Replacement Project, and
2. Increasing the Water Operations Budget for fiscal year 2009/2010 by \$290,000.
3. Instructing the Public Works Director to advertise for bids, and
4. Authorizing the opening of bids at 2:00 p.m. on Thursday, March 25, 2010, in the City Council Chambers at City Hall.

FISCAL IMPACT

The engineer's estimate for the project is \$290,000, including contingency. We are hopeful that advertising the project during the current economic climate will produce very competitive bidding and we may see significant savings. The project will be funded from the water operations fund.

DISCUSSION and BACKGROUND

Automated Meter Reading

Currently, the City manually reads all of the water meters throughout the City. On four out of five Tuesdays, most or all of the City Public Works crew walks a defined route in the City, visually looks at each water meter, and writes the meter reading in a book. These books are returned to the Finance Department where Finance Department staff members enter the meter readings into the billing computer system. Depending on the route, this process can take the entire Public Works crew up to a full day, plus several hours for the Finance Department staff to enter the information. The proposed project would replace every water meter (or, in some cases, just the meter register) in one of the City's four water routes. These new meters measure the water flow then transmit a signal containing the current meter reading. When it is time for the meters to be read, the Public Works staff member simply drives down the street with a handheld computer device that receives the signals and records the reads. This information is then downloaded into the billing system automatically in the Finance Department office.

AMR has numerous benefits.

- It will save staff time. One Public Works employee can read an entire route in just a matter of two or three hours, rather than five or six employees over the course of a whole day. This will free up the Public Works crews to focus on other priorities. When the weather is rainy, meter boxes often need to be pumped and cleaned before the meter can be seen, taking more time. In addition, the Finance Department staff members will be able to save two or three hours each billing cycle because they don't have to manually enter the meter readings.
- Improved accuracy saves even more staff time. Under the current manual system, the meters are visually observed by one staff member, written down by another, then entered into the billing system by a third employee. While our employees are highly accurate and errors are infrequent, such repeated manual handling of data leaves lots of opportunity for error. Eliminating all the manual steps will improve the accuracy of the data in the billing system and help reduce the need for re-reads.
- Increased revenues over time. Water meters, whether manual or automated, are mechanical devices that decrease in accuracy over time. An analysis by Bruce Crom, the city's water systems engineer, shows that accuracy of our water meters falls off as the meter ages, and reaches a breakeven point when the meter registers about 1.6 million

gallons. Approximately 55% of the water meters currently installed in the City exceed this point. Because these meters are older and less accurate, the City is losing revenues. Thus, installing new meters will improve the accuracy of our billing and keep revenues reflective of actual water consumed. Based on the average age of meters citywide, the City may be losing as much as \$140,000 annually in revenues.

•Savings for our customers. One of the features of these new meters is leak detection. The new meters sample water consumption 24 hours a day and notify the City if water is running continuously. City staff can then contact the owner and determine if this was a result of a leak. Already, in the short time we have been testing just 12 sample meters, we have found two leaks using this feature and notified the homeowners, who were able to promptly fix the problem. The new meters also allow us to chart water consumption for each meter over the course of day or week to help the homeowner identify high consumption periods and look for ways to conserve.

Proposed Project

The proposed project would replace all the meters in one of four city water routes. The route selected includes downtown east of Highway 273, the Willow Glen neighborhoods, the neighborhoods west of Stingy Lane, and the “flower” streets near Shady Lane and Balls Ferry (see exhibit map). This includes approximately 525 manual read water service meters ranging in size from 5/8-inch to 2-inch meters. The contractor will provide and install meter bodies, AMR encoder registers, AMR radio frequency transmitters and water meter appurtenances. In addition, the contractor shall also supply and retrofit approximately 400 new AMR encoder registers and radio frequency transmitters and appurtenances on existing manual read Badger meter registers ranging in size from 5/8-inch to 4-inch. The contractor will also supply to the owner and approved AMR handheld radio frequency data collector, water meter reading software, warranties, and service agreements for supporting the supplied AMR system.

As the Council is aware, the City has been testing two different makes of meters, Badger and Neptune. After considerable testing, staff is recommending that the bid documents specify Badger meters for several reasons. First, 85% of our currently installed meters are Badger meters. By using the same brand meter we can save money by retrofitting, instead of replacing, some of the newer meters. Second, after years of experience with Badger meters, we have found them to be reliable and we already stock some of the spare parts. Finally, we found their AMR software to be very easy to use, both in the field and in the office.

The current project will be the first phase of a several phase project to move the City from a manually read water meter to an AMR that collects the data electronically. Assuming this project is successful, we plan to return to the Council at a later date to bid and install similar meters on the other three water routes.

ATTACHMENTS

1. Resolution
2. Route 2 Map

RESOLUTION NO. 10-**A RESOLUTION BY THE CITY COUNCIL OF THE CITY OF ANDERSON
AMENDING THE BUDGET; APPROVING SPECIFICATIONS, ESTIMATES, AND CONTRACT
DOCUMENTS FOR THE PROJECT; AND AUTHORIZING THE ADVERTISING FOR BIDS**

WHEREAS, there are numerous advantages to installing and operating an automated meter reading system for our water system; and

WHEREAS, because of the advantages, the City Council of the City of Anderson now wishes to approve the Plans, Specifications, Estimates and Contract Documents for an Automatic Meter Reading (AMR) Meter Replacement Project and advertise for bids.

NOW, THEREFORE BE IT RESOLVED, by the City Council of the City of Anderson as follows:

- A. The Finance Director is directed to amend the adopted 2009/2010 budget as follows:

<u>Account</u>	<u>Current Budget</u>	<u>Change</u>	<u>Revised Budget</u>
660-4171-5728-026	\$0	\$290,000	\$290,000

- B. The City Council approves the Plans, Specifications, Estimates and Contract Documents for the Automatic Meter Reading (AMR) Meter Replacement Project and instructs the Public Works Director to advertise for bids.
- C. The City Council authorizes the opening of bids at 2:00 p.m. March 25, 2010, in the City Council Chambers at City Hall.

PASSED AND ADOPTED at the regular meeting of the City Council of the City of Anderson this 16th day of February, 2010, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

Norma Cornnick, Mayor

Juanita Barnett, City Clerk

ROUTE 2

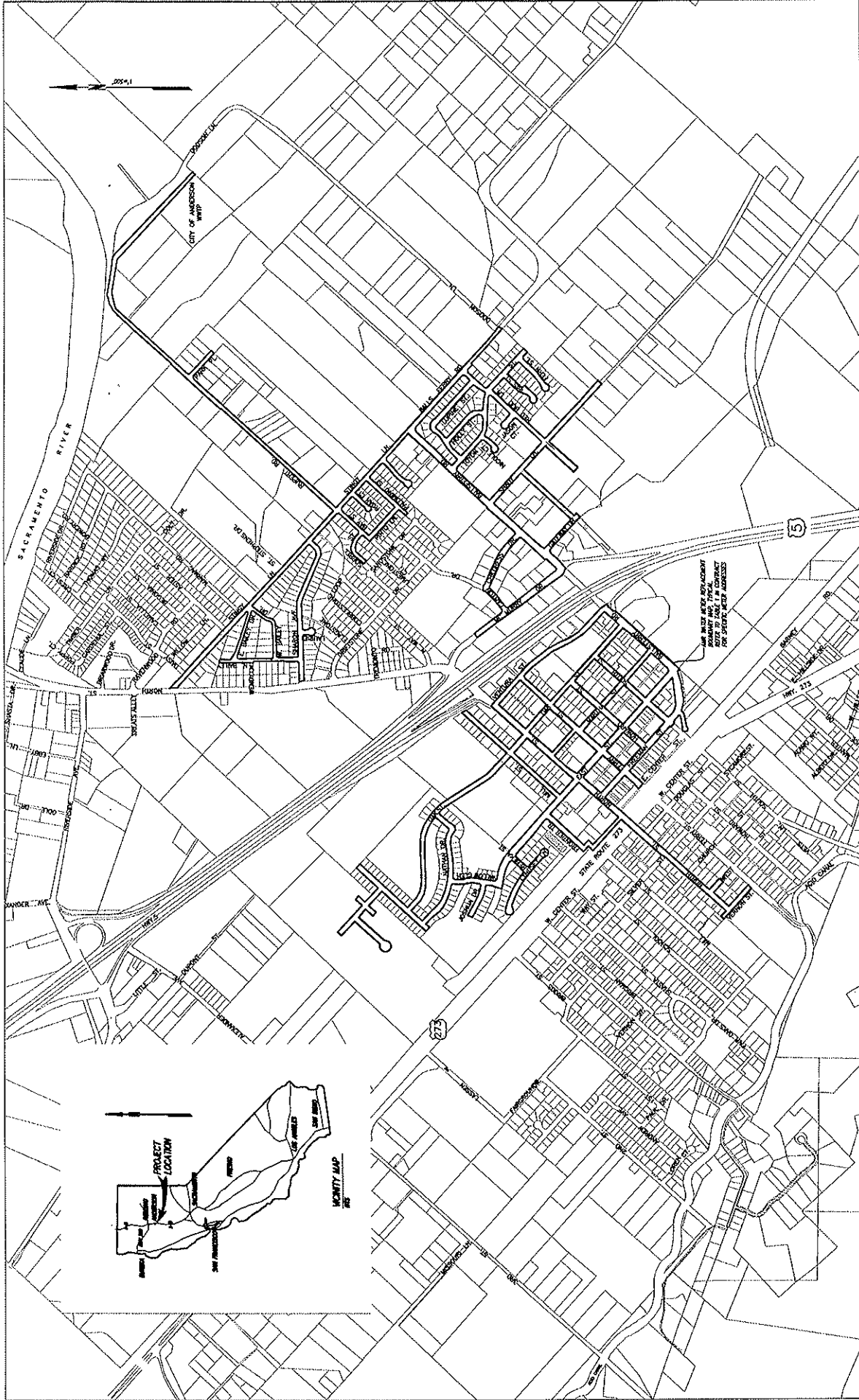


FIGURE 3

**CITY OF ANDERSON
AMR METER REPLACEMENT PROJECT
METER STREET LOCATIONS**



PACE
ENGINEERING
REGISTERED PROFESSIONAL ENGINEER
No. 12345 State of Oregon

REVISIONS	
NO.	DESCRIPTION

THIS IS ONE OF THE SHEETS OF THE PROJECT. THE PROJECT IS IDENTIFIED BY THE PROJECT NUMBER AND SHEET NUMBER. THE PROJECT NUMBER IS 12345 AND THE SHEET NUMBER IS 001. THE PROJECT IS OWNED BY THE CITY OF ANDERSON, OREGON. THE PROJECT IS BEING DESIGNED BY PACE ENGINEERING, REGISTERED PROFESSIONAL ENGINEER, NO. 12345, STATE OF OREGON. THE PROJECT IS BEING CONSTRUCTED BY THE CITY OF ANDERSON, OREGON. THE PROJECT IS BEING FINANCED BY THE CITY OF ANDERSON, OREGON. THE PROJECT IS BEING MAINTAINED BY THE CITY OF ANDERSON, OREGON.