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Memorandum 21-168

TO: Mayor Castner and Homer City Council
Through: Robert Dumouchel, City Manager
FROM: Janette Keiser, PE, Public Works Director
DATE: September 13, 2021
SUBJECT: CMMS Software Part I – Asset Management

Summary: The purpose of this memorandum is to request authorization to award a contract to acquire the Asset Management component of a Computerized Maintenance Management System (CMMS) for Public Works. A CMMS is software designed to track and monitor preventive maintenance of most Public Works assets, such as heavy equipment and rolling stock as well as mechanical and electrical equipment. The upgrade of CMMS software was approved in the FY 22 Capital Budget.

Part 1 of the CMMS software is the Asset Management component, which tracks the condition of individual pieces of rolling stock as well as individual pieces of electrical/mechanical equipment. This is the subject procurement.

Part 2 of the CMMS software is the Capital Planning component, which takes that information and predicts which systems are likely to experience failure and thus, need focused repair and replacement. This is addressed in a separate memorandum.

The AK Department of Environmental Conservation recently notified us that the City will be awarded a \$75,000 Principal Forgiveness Subsidy for Sustainable Infrastructure Planning Projects (SIPP). The CMMS Software Project is a qualifying project.

Background: There are two facets to CMMS software. One focuses on asset management; that is, helping utilities track and monitor preventative maintenance requirements of their assets. The other focuses on helping utilities (a) predict the likelihood of failure of systems and (b) plan for repair and replacement before failure occurs. This memo focuses purely on the asset management side. Capital planning will be addressed in a separate memorandum.

Public Works' currently has two asset management software programs. One is used by the water and sewer treatment plants, called Antero. The other, called MP2, is used by the Operators, Building Maintenance and the water distribution and sewer collection systems. Both programs track preventative maintenance, which needs to be performed on the assets catalogued in the programs, and alerts staff when maintenance needs to be performed. Both programs are outdated and ill-suited to meet our needs. For example, the developer of MP2, Infor, has discontinued support, meaning that MP2 will no longer be updated and we will no longer be able to receive any technical assistance from Infor. Also, in order to get the most effectiveness from our asset management software, we need to consolidate all of Public Works' functions into one program. This is particularly important for the functions related to the water/sewer utilities.

The Research: Staff reviewed five different asset management software programs that could potentially replace MP2, including: EAM, Asset Essentials, Cartegraph, E-maint and Antero. These programs were evaluated both in terms of the functionality and price. We found that while there were some differences in the functionality of asset management software, the differences tend to be small. There are dramatic differences in pricing structures. A summary of our findings are listed here:

- a. **Asset Essentials** is part of a suite of products offered by Dude Solutions. It has all of the functionality we need for preventative maintenance. However, it also had functionality we do not need, such as integration with ArcGIS mapping software, and we don't want to pay for. Asset Essential's initial annual subscription cost is \$7,500, with escalation of 10-15% per year.
- b. **EAM** was the program created by Infor to replace MP2. EAM's user interface is quite polished. Every element on the main dashboard screen was drillable and the layout of the interface was very customizable, both making it easy and efficient for users to access all of the information that they would need. That being said, we are not recommending EAM because supporting software required to run EAM is high. EAM does not have a cloud-based option and running it on a local server would require purchasing a specialized and proprietary program called Microsoft SQL, which would likely cost upwards of \$30,000. Further, EAM would have a startup cost of \$19,000 and an annual subscription fee starting at \$3,800.
- c. **Cartegraph** had a lot of functionality we don't want to pay for. Depending on the modules that we wanted to get, startup costs for Cartegraph would be between \$21,000 and \$24,000 and the first-year annual subscription would be at least \$6,500.
- d. **Emaint** has a few features we do not need, but most of the feature are things we would use. For its price, Emaint also has a lot of reporting functionality. The startup cost would be \$6,000 and the annual support would start at \$4,200 coming to a total of \$10,200 for the first year, for 3 users.
- e. **Antero**, our existing asset management program, has the least functionality but still serves our purpose. Antero's developer, Allmax, described Antero as a program focused mostly towards preventative maintenance, without a lot of embellishment like some of the other products. Our water and sewer treatment plant operators have been using an older version of Antero for a long time and are satisfied with its performance. The reporting functions in our older version are minimal and clunky, but Allmax said the reporting functions have improved dramatically. The biggest advantage of Antero was its price. The total first year price would be \$10,690 and the subscription fee would start at \$2,124, for up to eight users.

Product	Initial Fee	Annual Subscription
Asset Essentials		\$7,500 +10%-15% escalation
EAM	\$49,000	\$3,800+
Cartegraph	\$21,000-\$24,000	\$6,500+
Emaint	\$6,000	\$4,200 for 3 users
Antero	\$10,690	\$2,124 for 8 users

Conclusion: The differences in annual subscription fees, over time, are a key primary differentiator between the products. For example, while Asset Essentials has no initial fee, the annual subscription fee is \$5,376 more than the subscription fee for the Antero product, which offsets Antero's \$10,600 initial fee in two years. With this in mind, the lowest responsive, responsible solution for Asset Management software, considering both functionality and cost, is Antero.

Recommendation: That the City Council do the following:

- (1) Award a purchase order to Antero for Asset Management software for the Public Works Department.
- (2) Dedicate a portion of the ADEC Principal Forgiveness Subsidy to this project.