

ITEM #:	<u>18</u>
DATE:	<u>03-25-25</u>
DEPT:	<u>ELEC</u>

COUNCIL ACTION FORM

SUBJECT: BAKER SUBDIVISION GEOTHERMAL WELL INSTALLATIONS - PROJECT COMPLETION

BACKGROUND:

The City pursued the installation of geothermal heat pump systems to be installed in Baker Subdivision. The geothermal systems would provide space heating, cooling, and boost water heating efficiency for all the single-family homes in the subdivision. This project proposal was motivated by an effort to advance environmental sustainability of the subdivision developed by the City, while maintaining affordable utility costs for the mixed-income neighborhood. The system would help to balance the seasonal load and utilization of existing electric infrastructure and reduce community greenhouse gas emissions.

On February 9, 2021, City Council awarded a contract to Thorpe Water Development Company, of Ankeny, Iowa, in the amount of \$235,835 (inclusive of sales tax). Installation of the geothermal wells was completed in July 2021 and a field report from the design engineer was completed in August 2021. However, during the installation, three of the 27 wells had to be moved from their original location to obtain the required setback from a buried storm sewer pipe. The storm sewer pipe was adjusted from its original position during installation in the field. Additional easement agreements had to be created between the City and the new owners of the adjoining property that was affected. Council approved these agreements in March 2024.

Another issue regarding permit fees arose in summer 2023 when City staff was informed by the Story County Health Department that no permits had been approved for the geothermal wells that had been installed. According to the bid documents, permitting the wells was the responsibility of the well driller. However, City staff was informed that the driller was operating under the incorrect assumption that the new wells were covered under a previously approved permit for a test well installed in 2020.

After discussions with Story County and the Iowa DNR staff, it was determined that although a test well permit had been granted, it did not exempt the City's additional wells from permitting requirements, which is to obtain a permit for each structure meant to receive a geothermal system. City staff continued working with the County and Iowa DNR and was able to retroactively obtain permits for each well system in February 2024. The City paid \$150 for each well system for a total of \$4,050.

Three change orders were administratively approved by staff during the project:

- **Change Order No. 1, in the amount of \$2,500** was added to include staking the construction site, which was not part of the original bid.
- **Change Order No. 2, was to deduct (\$5,381.35)** in order to reduce the size of the pipe in the specifications.
- **Change Order No. 3, was to deduct (\$5,745.34).** There are two items making up this total

deduction, 1) a deduction of \$1,695.34 due to a payroll adjustment that Thorpe Water Development made when changing its personnel on the job, and 2) a deduction of \$4,050 to reimburse the City for permit fees.

The City has paid Thorpe Water Development \$219,695.39 to date. The amount of retainage being held by the City is \$7,512.92. All the requirements of the contract have been met by Thorpe Water Development and the Engineer has provided a certificate of completion. Therefore, the retainage can now be released.

ALTERNATIVES:

1. Accept the Geothermal Well Installation at Baker Subdivision project as completed by Thorpe Water Development Company, of Ankeny, Iowa, in the amount of \$227,208.31 (inclusive of sales tax) and release retainage.
2. Delay the completion of the project and hold the retainage.

CITY MANAGER'S RECOMMENDED ACTION:

The project has now been completed in accordance with the approved plans and specifications. The project engineer has issued a certificate of completion. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, as noted above.

In regards to the one well on Lot 18 that substantially encroaches into the year yard, Ames Electric Services will be responsible to pay for the abandonment of this well and drilling of a new well if necessary for the maximum use of the lot.

ATTACHMENT(S):

[Engineer's Statement of Completion - Baker Subdivision Geothermal Well Project.pdf](#)