

Hard Bid

Wastewater Treatment System in Inclement Weather



**National Renewable Energy Lab: Flatirons
Campus Bldg. 251 Onsite Wastewater
Treatment System**

18200 SR 128
Boulder, CO 80303

Construction:

Start: Winter 2019
Completed: Spring—Summer 2020

Contract Price:

Initial: \$428,029
Final: \$428,029

Delivery Method:

Hard Bid

References:

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Design Team:

JVA Consulting Engineers
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Key Staff:

Scott Solem, Project Executive
Dave Armstrong Project Manager
Tyler Brenneman, Project Engineer
Cathy Myers, Project Coordinator
Brad Myers, Superintendent

Project Description

Building 251 at the Flatirons Campus was served by one onsite water treatment system (OWTS) consisting of septic tanks and a gravity dosed leach field. The system was over 20 years old and had exceeded its useful life. The system was originally designed to serve 70 people and due to growth at the site, it needed to serve approximately 125 employees. The system had been hydraulically overloaded and experienced observations of standing water in the sewer lines. This new work consisted to construct a new OWTS in it's entirety to serve the current and future building occupants. This work was completed while maintaining the use of the existing system during the normal working hours for the entire duration of the project.

Project Challenges

Some of the significant challenges that we faced during construction of the OWTS was winter weather conditions, Covid, and related labor, equipment and general procurement effects. For example, the Orenco pumps and control panels were two of the longest lead time items. It required diligent follow through and tracking which resulted in receiving the equipment and completing the project timely despite uncontrolled delays.

Project Accomplishments

Regarding ground cover and erosion control. Drill seeding is usually prescribed at the FIC but was not an option over the top of the new OWTS. Alternative methods were proposed and reviewed by the team. An alternative method of seeding was offered and this resulted in a viable substitution. The seeding rooted very well and the area looks 100% natural and undisturbed.

