

WVU One Waterfront Place Chillers & Cooling Tower Renovation

Exhibit A: Project Description

West Virginia University (“WVU”) is seeking Architecture and Engineering Design Services for the redesign of the One Waterfront Place chillers & associated cooling tower located on WVU’s Downtown Campus in Morgantown, WV. One Waterfront Place houses WVU’s Foundation, Payroll, and visitor center. One Waterfront Place is a seven-story building that utilizes heated and chilled water units for temperature control. The two existing 300-ton water cooled chillers, dedicated pumps, and cooling tower have been running 24/7 totaling nearly 100,000 hours of constant run time for this system. Siemens has recently installed controls for the plant and added VFDs for the pumps. The existing control valves are currently pneumatic, some of which have failed.

The goal of the project is, not just replace 1 for 1, but to improve the existing system to resolve performance issues involving cooling of the building. To achieve this, WVU would like to switch the system from a constant flow, primary system and convert it to a variable primary.

WVU would like full redundancy in the system, which would involve upsizing one chiller. This work will require piping modifications including adding a minimum flow bypass to the chillers and replacement of existing pneumatic valves on the AHUs. An equalizing line on the cooling towers will be needed since at least one tower will always run due to the water size economizer. WVU would also like a way to improve the cooling water quality which may include a separator to clean the cooling tower basin.

WVU requires the work on the chillers and cooling towers to be done during the cooler months in Fall, Winter, and Spring (October to March) which would not require as much cooling.

Included in the project are two (2) add alternates to be considered: 1) provide two (2) chillers with high turndown of flow to allow both chillers to run at the same time for the bulk of the mechanical cooling season in a variable primary arrangement; 2) consolidate the existing motor control centers and replace with a distribution panel since VFDs and new chillers should not require it anymore.

The milestones schedule dates for the project are listed below:

- Design Kick-off: August 2022
- Complete Design: October 2022 (3 months duration)
- RFB Release: November 2022
- Start Construction: October 2023 (6 months duration)
- Substantial Completion: March 2023