

Executive Summary

This report is an in depth analysis of the mechanical system that will be in The Gateway at MICA. All the major parts of the system as well as the operation of the system were looked at and explained in this report.

In order to properly analyze the system background information was gathered and looked at. The information looked at were design factors such as location and cost, energy providers and costs of the site and the design objectives of the project team. The design conditions were also considered.

All major equipment in the building was analyzed as well. Schedules were created for the equipment and operation procedures were studied. After this was accomplished schematics of the water side systems were created and are explained in this report as well.

The system operation procedure is explained in detail in this report. In doing this, how the equipment functions, how it is interfaced with other equipment, and controls as well as the building automation system were looked at.

Overall it was found that the design of the mechanical system in The Gateway at MICA is very reasonable and there is little room for improvement. A few changes could be made that might result in some savings in either initial cost or long term cost, but analyses will have to be performed in order to determine this.