

## **Executive Summary**

ASHRAE Standard 62 is one of the primary guides used to properly design mechanical systems that will supply a correct amount of outdoor air. The Central Shared Use Facility is located in the middle of the FDA's campus in Silver Spring Maryland. It is a 4 story building approximately 11,695 square meters. As the name suggests, it is a multi-use building which contains a library, cafeteria, doctor's office, gym, auditorium, offices, and conference rooms. There are two rooftop units, OAHU-1 and OAHU-2, which supply 5 interior air handling units with outdoor air. The entire ground floor is serviced by AHU B-1, while the first and second floors are each serviced by two AHU's, AHU 1-1, 1-2, 2-1, and 2-2. OAHU-1 supplies AHU B-1, 1-1, and 2-1. OAHU-2 supplies AHU 1-2, 2-2.

It was found that OAHU-1 supplies an adequate amount of outdoor air to the three air handling units it supplies. 20,168 L/s is required by the AHU's and it supplies 26,515 L/s. This leaves enough outdoor air for the future unit which will supply a library.

OAHU-2 does not supply enough outdoor air to the two air handling units it supplies. 21,817 L/s is required but it only supplies 20,680 L/s of outdoor air. This unit is already undersized and there is not enough outdoor air for the future space planned on being supplied by it.

Aside from a couple spaces, the average space outdoor air fraction was found to be around 50%. A couple spaces were found to be under ventilated.