

1 Executive Summary

ANSI/ASHRAE Standard 62.1 – 2007, ventilation for acceptable indoor air quality sets forth measures “to provide indoor air quality that is acceptable to human occupants and that minimizes adverse health effects. Specifically, Section 6 describes how to calculate the minimum amount of outdoor air that is needed in each zone of the building. Standard 62.1 Section 5 on the other hand, sets forth measures to comply mechanical systems and equipment for acceptable air quality. The purpose of this report is to analyze and conclude whether or not the Hospital for Special Surgery River Building (HSS River Building) in New York, New York complies with ASHRAE standard 62.1-2007 Section 6 and as much of section 5 with the information available.

The HSS River Building is a 90,000 [ft²] 12 story building on the upper east side of Manhattan built on top of the FDR highway. It has office spaces functioning as exam, evaluation, and X-Ray rooms along with a rehabilitation gym and therapy space on the second floor. The building has (1) 100% Outdoor Air - Air Handling Unit (McQuay Vision Air Handler) feeding multiple zones. Each zone consists of a concealed ceiling water source heat pump conditioning and mixing the outdoor air and room air.

The results conclude that the HSS River Building complies with ASHRAE Standard 62.1-2007 Section 6 requirements. Calculations show a minimum outdoor air of 10,500 [cfm] is needed when in actuality the unit is designed for 13,000 [cfm] . This difference in value was because the design conditions for the building used more [cfm/person] of outdoor air than ASHRAE standard 62.1.

The results also conclude that the HSS River Building complies with ASHRAE Standard 62.1-2007 Section 5 as well. From the building mechanical specifications, the River Building complies to prevent mold growth, condensation on interior surfaces, and particulate filtration. From the mechanical drawings, the River Building complies to prevent re-entry of contaminated air, equipment clearance, and ventilation equipment access.