

## **1.0 EXECUTIVE SUMMARY**

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The following report investigates if the Bronx School for Law, Government, & Justice meets the minimum outdoor air requirements of ASHRAE 62.1-2004. This report contains an analysis of all (10) air handling units serving the Bronx School, the calculated minimum outdoor air requirements from ASHRAE 62.1-2004, including detailed procedures and sample calculations and a comparison of the results with the original design. There were two applicable ways to determine the outdoor air requirement, Ventilation Rate Procedure and Indoor Air Quality Procedure, a comparison between the two is also included.

The Bronx School for Law, Government & Justice is an 114,000 square foot school located in Bronx, NY. It is a six story plus a mechanical penthouse building and was one of the first specialized schools in New York City. The building is ventilated by a combination of ten (10) air handling units, totaling 134400 cfm of which 66040 cfm is outdoor air or nearly 50%. The building is a mixture of constant volume (7), and variable air (3) systems.

After an analysis with ASHRAE 62.1-2004 it was determined that the Bronx School for Law, Government & Justice more than adequately satisfies ASHRAE 62.1-2004. Some air handling units were well above the minimum requirements of ASHRAE. The reason for this large discrepancy is due to the fact the building is located in New York City and the New York City Energy Code was used for the design and the determination of the minimum outdoor air. The large population density of New York City requires a more stringent code to be used for the assurance of proper ventilation. The school is approximately 50% outdoor air with one unit (AHU-6) as a 100% outdoor air unit.