Bruegger's Bagels CVG

**Summary**

Our scope of work for this job included TAB of one RTU, and two existing VAVs. Our main goals were to verify the space was getting adequate airflow and that we were remaining within the unit specifications. The airflow was measured from the diffusers via flow hood and the diffuser total was used for the unit total.

The 8.5 Ton RTU that was installed had three diffusers at the back of house and one in the front. The ductwork was sized to accommodate 500 cfm per diffuser for a total of 2,000 cfm. However, the unit tonnage of 8.5 would require a minimum of approximately 2,700 cfm. We set the unit to this minimum airflow to prevent the coils from freezing during cooling. Due to the relatively high positive pressure (outside air) of the surrounding airport terminals there was no need for minimum outdoor air, so this was left closed at minimum at the request of the team.

The existing VAVs that are ducted off the main trunkline of an existing larger airport AHU unit was measured under normal operation (maintaining space temp setpoint), as there were no visible controls and we were unable to get in touch with the airport controls technician. These VAVs were designed for 1,000 cfm each. One VAV was right at 1,000cfm while the other was closer to 350cfm.

The hood exhaust was read via Velocity matrix within the exhaust duct to ensure adequate flow for the application.

**Conclusion**

The space was originally designed to have 4,000 cfm of supply airflow. With the two VAVs and the RTU the space had 4,100cfm which is well within design tolerances in respect to total space conditioning requirements.