

Summary

Budderfly had recently performed an equipment replacement on the roof and the purpose of the visit was to rebalance total flows for all new equipment as well as the existing kitchen ventilation and exhaust systems. No drawings were provided so airflows were balanced based on nominal equipment size and application.

- RTU-1 and RTU-2 were both found very low on airflow. Both units were sped up to 400 CFM/ton. The OA dampers were also closed and these were opened up and set to 20% ratio of outside air.
- ERV's were initially around 600 CFM And he increased to approximately 1000 CFM for all three per Budderfly's recommendation.
- Hoods 1 and 2 exhaust rates are acceptable and no adjustments were made.
- EF-2 (Hood 2) airflow is about 1300 CFM higher than necessary and EF-3 (Hood 3) airflow is about 1500 CFM too high but they could not be reduced. It is a direct drive fan and there is no VFD provided.
- The building pressure was initially -0.07" which is extremely negative. This was improved to -0.04" which is still highly negative.
- The net building airflow was improved from -5824 CFM to -2453 CFM. There are a few factors preventing further improvement. See recommendations below
- The hoods are an outdated style that have a combination of short cycle MUA along with a front face discharge MUA. These are notorious for causing comfort issues. To get the building positive, the MUA would need to be increased but in doing so this is going to likely cause the kitchen to get really hot and possibly cause smoke capture issues. Modifications to the hoods would be required for any further improvement.

Recommendations:

1. Add VFD's to all three hood exhaust fans and add full vertical end panels to all three hoods. This would allow for airflow reduction on all three hoods which would help reduce negativity in the building. This should allow us to get the net airflow in the building neutral.
2. If comfort issues arise in the kitchen due to the outdated style of MUA, add PSP's to all hoods and then cap off and blank off the existing short cycle and front face discharge MUA plenums.
3. EF-4 & EF-5 (Customer and employee restrooms) are not operational. These should be replaced to remove odor, but they will cause the building pressure to get more negative.