NATIONAL TAB
INTELLIGENCE

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Summary

The purpose of this building evaluation at Chili's in Lady Lake, FL was to provide an overall evaluation of the HVAC systems and balance of the space. There have been concerns about humidity issues within the building as well as balance concerns.

Mechanical drawings were not available so original design values are unknown. Design airflows were determined based on application of equipment and nominal size of units. This restaurant has Powerhouse Dynamics installed on it.

Building pressure was initially found to be very negative (-0.0518") and measured as net -1148 CFM. Condensation was observed on the exposed ductwork over the bar and general dining areas. Controls are set up to have the fans run in auto mode. The fans should be set to fan on while the restaurant is occupied to ensure a neutral building pressure.

Airflow for the RTU's was measured. Based on a target airflow of 400 CFM/ton, RTU's 1 and 3 are both low on flow. RTU-3 is especially low. The outside air for the RTU's is also low and needs to be increased to ensure positive building pressure. RTU-1 has humidity control listed on it's options sticker but the humidity sensor is not wired. Therefore the unit is not dehumidifying currently. Both RTU's 1 and 3 have active compressor alarms that need to be addressed. s

Exhaust airflow for the hoods was measured as is. The fryer and oven hood are both having capture and containment issues. The MUA for the hoods is a non-conditioned unit which is not recommended for Florida. During final TAB, if possible without worsening hood capture, it would be ideal to turn this unit off to avoid introducing more humidity into the space.

Recommendations / Next Steps

In order to resolve the humidity and pressurization issues in the space, the following is recommended:

1. Humidity sensor needs to be wired for RTU-1 per the manufacturers recommendations. This requires two separate shielded twisted pairs.
2. Alarms on RTU's 1 and 3 need to be resolved. It appears that they may be preventing 1st stage of cooling from operating.
3. Powerhouse Dynamics needs to adjust their controls so that the RTU's are operating in fan ON mode while the restaurant is occupied and not fan auto.
4. Review observations on the following pages. There are some maintenance related issues that need to be resolved that don't necessarily impact the balance of the space but will affect the HVAC/Kitchen hood performance.
5. Would be determined during a final TAB if it is feasible, but ideally the non-conditioned MUA would be completely turned off to avoid adding additional humidity into the space.
6. After completion of items 1 to 4, National TAB should return to perform the TAB to adjust RTU airflows, further investigate hood performance issues, set OA, and ensure positive building pressure.