

LAKELAND HILLS ELEMENTARY SCHOOL HVAC System Assessment



Completed for:



March 2, 2021

Site Visits, Analysis & Report by:
Metrix Engineers
Josh Robischon, Principal, PE, LEED AP



SCOPE

Metrix Engineers was hired to perform an assessment of the existing heating, ventilation and air conditioning systems at the Lakeland Hills Elementary School site in Auburn School District. The goal of the assessment was to provide an executive summary level of detail regarding the type and condition of the existing mechanical systems, determine if the systems are operating in compliance with their original design intent, and identify any areas of improvement based on site observations.

The existing facility is a single-story building of approximately 52,035 square feet and also includes four portables on site. The facility was originally constructed in 2006.

A site walk was conducted on February 18, 2021 to review the existing mechanical systems. This report summarizes Metrix observations based on that visit.

EXECUTIVE SUMMARY

The existing building appears to be operating per its original design intent. No major points of operational concern were observed.

There are a few spaces that have been modified from their original use as noted in the observations section below. However, modifications appear to maintain HVAC design best practices.

EXISTING HVAC SYSTEM OBSERVATIONS

All observed equipment is original to the building construction date.

The heating, ventilation and ventilation system is generally served by central variable volume air handling units serving fan powered terminal units and variable air volume squeeze boxes located in the attic spaces. Single zone air handling units provide airflow to larger single zone spaces such as the Gym, Library and Kitchen.

A central boiler gas fired boiler plant comprised of two 2041MBH boilers distributes heating water via central system pumps throughout the facility to all air handling unit and terminal unit heating coils. Two split system condensing units provide mechanical air condition for the air handling units serving the Admin and Library.

A spot check of various HVAC system components was completed during the site visit, including the internals of various air handling units and unit ventilators. All heating and ventilation systems checked were verified operational with no issues noted. Equipment appeared to be well maintained.

In general, all spaces in the facility appeared to be meeting or exceeding designed outdoor airflow ventilation rates including classrooms, offices, gymnasium, stage, kitchen, and various support spaces. A few additional observed operational considerations to be aware of include:

- The Building A west storage room across the corridor from the Kindergarten classrooms has been converted to an office. Exhaust airflow ventilation rate and transfer from the corridor provides adequate ventilation air for this space.
- The storage room adjacent the main maintenance office has been converted to an office. Existing supply air VAV box provides adequate ventilation air for this space.



Controls:

Building automation system controls are provided by an Alerton Envision for Ibex direct digital control system. No major points of concern were observed.

A review of the Building Automation System and outside air damper setpoints was conducted and all systems and spaces appear to be meeting or exceeding design outdoor airflow ventilation rates.

During control system review, no space temperature deficiencies were identified.





Lakeland Hills Elementary
HVAC System Assessment Notes

		Estimated Completion Date	Final Completion Date
	No deficiencies found	No action planned	

Revision Date 3/9/21