

LAKE VIEW ELEMENTARY SCHOOL HVAC System Assessment



Completed for:



February 24, 2021

Site Visits, Analysis & Report by:
Metrix Engineers
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SCOPE

Metrix Engineers was hired to perform an assessment of the existing heating, ventilation and air conditioning systems at the Lake View 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 50,000 square feet and is laid out from North to South with the Gym/Kindergarten wing followed by the Admin/Commons/Kitchen and classrooms and Library to the South. The facility was originally constructed in 1980, had a controls upgrade in 2000, and some minor HVAC improvements in 2013.

A site walk was conducted on February 17, 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. Generally speaking, no major operating points of concern were observed.

There were some spaces that have been modified or have existing space ventilation concern as noted in the Observations section below.

EXISTING SYSTEM OBSERVATIONS

HVAC:

Heating and ventilation of classroom, admin and commons spaces are provided by original central McQuay air handling units and individual electric duct coils mounted in the supply air ductwork serving each zone. The gym and library are served by original central McQuay air handling units and large electric duct coils. The air handling units are located in mezzanines throughout the building and the duct coils are generally located in the ductwork above the ceilings, with the gym and library duct coils also located in the mezzanines. The kitchen is served by a rooftop unit located above the kitchen. Central toilet rooms are served by exhaust fans located in mezzanines, and small toilet rooms are served by ceiling mounted exhaust fans.

A spot check of the internals of various HVAC system components was completed during the site visit. Systems scheduled on at the time of the site visit were verified operational and all equipment appeared well maintained.

All classroom systems and spaces appeared to be meeting or exceeding designed outdoor airflow ventilation rates. There are spaces from the original design that appear to be converted to different occupancies.

- The original Principal office 116 has been converted to a conference room. The existing HVAC design appears to be sized appropriated for a conference room.
- The storage 121 room off the gym appears to be used as the PE office as there is a desk set up in the space. The office does not have a supply diffuser for ventilation. Note 1
- A phone room has been added to the Staff Lounge that does not have any supply or ventilation air. Note 2



Controls:

Building automation system controls are KMC system installed by CCI. Siebe actuators and Mamac Systems thermostats were observed. 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.





Lakeview Elementary
 HVAC System Assessment Notes

Note	Additional Notes		Estimated Completion Date	Final Completion Date
1		Verify outside air pathway.	3/5/21	3/5/21
	1.1	Provide recommendation to space occupant to open door to gym and limit space to single occupancy to improve air quality.	3/5/21 email Tarsi	3/5/21
2		Verify outside air pathway.	3/5/21	3/5/21
	2.1	Provide recommendation to space occupant to open door to staff lounge and limit space to single occupancy to improve air quality.	3/5/21 in person St. Mary	3/5/21

Revision Date 3/5/21