

BOWMAN CREEK ELEMENTARY SCHOOL HVAC System Assessment



Completed for:



February 19, 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 Bowman Creek 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.

Bowman Creek elementary is a new single-story facility completed in 2020. The building is approximately 73,000 square feet with three classroom wings and a central admin, gym, library and corridor connecting the classroom wings.

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 building appears to be operating per its original design intent. No operating points of concern were observed and no spaces have been modified beyond the original design intent.

EXISTING SYSTEM OBSERVATIONS

HVAC:

A central gas fired boiler plant comprised of two high efficiency 2,000 MBH gas fired boilers is located in a dedicated boiler room. Heating water is distributed to the building via two central system pumps also located in the boiler room. A central cooling chiller with a cooling capacity of 150 tons is located on grade outside the boiler room. Two central systems pumps located in the boiler room distribute chilled water throughout the building.

Heating and air conditioning to classrooms spaces are provided by fan coil units located in mechanical platforms above each of the three classroom wings. Classroom ventilation is handled by energy recovery ventilators located in the same mechanical platforms as the fan coil units. Heating, cooling and ventilation to administration spaces and library are provided by a high efficiency variable air volume (VAV) system, with the VAV's, dedicated air handling units and energy recovery ventilator unit located in a platform above the kitchen. The gym and kitchen and are each served by a dedicated air handling unit, providing heating, cooling and ventilation.

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. Paint storage was observed in the Mechanical Platform P200A. Storage of paint and chemicals are not recommended in airside mechanical rooms, but dedicated exhaust to the space is provided and therefore paint fumes are unlikely to propagate to occupied areas of the building.

Note 1

All systems and spaces appeared to be meeting or exceeding designed outdoor airflow ventilation rates. The only space noted that appeared to be used outside of design intent was Storage 125, located between the gym and admin area, that had a nurse's bed in the room.

Controls:

Building automation system controls are new Honeywell controls.



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.





Bowman Creek Elementary
HVAC System Assessment Notes

Note	Additional Notes		Estimated Completion Date	Final Completion Date
1		Notify Capital Projects of finding.	3/11/21	3/11/21 email Nolan

Revision Date 3/11/21