



Clearing the Air for Our Kids: School Ventilation Guidance Series

Part One: Why You Need Ventilation Verification

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In the first article of my series [‘Clearing the Air for Our Kids: School Ventilation Guidance,’](#) I want to focus on a high priority IAQ issue in schools: ventilation verification. Each individual school needs to perform a specific verification of their current ventilation system to make sure it is functioning correctly and circulating air properly.

Performing this assessment of your system is necessary to determine how well the HVAC is functioning and knowing where your equipment stands—and if any adjustments need or can be made. The importance of a fully functioning HVAC system can’t be overstated as schools prepare to welcome kids back after COVID-19.

In addition to helping reduce airborne virus transmission, research has shown that increased ventilation rates are associated with increased student performance, improved respiratory health, increased student attendance, and decreased airborne disease transmission. With the high density of students in such an enclosed space, proper ventilation is critical.

Each school should identify the proper team to perform the assessment. A qualified team will include a skilled, trained, and certified technician to perform the physical assessment in coordination with facilities personnel and a design professional. Make sure to hire technicians that are certified by a testing, adjusting, and balancing certification agency.

First, the technician will perform a physical assessment of existing HVAC infrastructure to verify operation and conditions of existing systems. Upon completion, the assessment shall be submitted to the design professional for determination of adjustments, replacements, repairs, and upgrades. School districts, individual schools, and building owners can then make educated decisions on improvements.

The National Energy Management Institute has these [sample Ventilation Verification Assessment test sheets and Method of Operations](#) (MOP) to help guide technicians through assessments. Sample procedures should be altered to meet local requirements, updated recommendations, and site specific equipment.

Here is a quick look at what's included in an HVAC assessment:

For Air Handlers over 1500 cfm:

- Verify filtration MERV ratings
- Ventilation Rates and supply air rates in cfm
- Demand Control Ventilation (DCV) status
- Air Distribution – Measure 10% of all inlets/outlets for a sampling
- Building pressure of contaminant rooms temporarily occupied by sick students and staff.
- Operational Controls
- Create a list of deferred maintenance items

Note: In cases where there is limited or no existing mechanical ventilation, the assessment would focus on available options and provide the design professional with documentation to provide ventilation options.

For Advanced IAQ

- Determine motor HP capability to handle MERV 13 filter
- Verification of ability to increase ventilation above scheduled value
- Ability to override and/or disable the DCV
- Air Distribution – Measure 100% of all inlets/outlets
- Building Pressure of all rooms.
- Operational Controls and ability to change set points and run times

Proper ventilation in classrooms is essential and will help support the health and productivity of students and teachers. As we start opening schools in the wake of COVID-19, it becomes even more important. And remember to make sure to have your ventilation systems tested regularly -- it's not something that should be done only once.

Don't miss the next article in my series: "A Must-Do for Every School: MERV 13 Filtration Upgrades to Central Air Handling Stations". I'll be explaining and discussing the importance of integrating MERV 13 upgrades into school HVAC systems.

[Importance of Ventilation in Schools](#)