ANN ARBOR PUBLIC SCHOOLS
LEAD. CARE. INSPIRE.

AAPS Ventilation Study Overview

In accordance with AAPS' commitment to health and safety for students and staff, we are preparing our classrooms and buildings across the district for a COVID-informed return to in-person learning. To that end, and concurrent with robust building preparation work in accordance with CDC guidelines and other resources, the AAPS has completed a number of steps to improve indoor air quality, including:

Building Controls Programming, Filter Replacements and HVAC Systems Commissioning

- Programmed a new sequence of operations for the HVAC controls system (Enhanced Indoor Air Quality Mode (EIAQ)) to provide increased ventilation, intake of outside air, and filtration above our typical operating mode, and well beyond code minimum.
- Replaced all filters and increased their density as much as the equipment will allow
- Commissioned all HVAC units (approximately 1,000) including opening the unit, cleaning everything, and verifying the proper operation of items like dampers and actuators.

Room by Room Ventilation Rate Study and Mitigation Actions

- The district has commissioned Fishbeck, a professional engineering firm, to conduct a detailed room-by-room ventilation study for all AAPS buildings. The deliverables of this study include floor plans indicating air changes per hour (ACH) levels by room as well as a summary in the form of an Excel chart. Air changes per hour (ACH) is a measure of how many times the air in a room is replaced, by either outside air or recirculated filtered air, within one hour.
- The Harvard School of Public Health sets ACH levels of five (5) and above to have excellent ventilation.
- Those spaces that fall below 5 ACH will be provided portable air cleaners and/or fans to provide additional air changes to raise the ACH above 5.

Below you will find the results of the ventilation engineering study conducted at your school. The report documents existing ventilation rates in Air Changes per Hour (ACH) as well as any mitigation actions that will be completed prior to a return to in-person instruction.

PATHWAYS

Equipment	Space	Area (ft2)	Ceiling Height (ft)	Supply Air Flow (cfm)	Supply Air Changes per Hour (ACH)	Supply Air Changes per Hour (ACH) with Corrective Actions
AHU-1	Gym	2,000	22	6,050	***8.3***	8.3
RTU-1	Multi-Purpose Room	2,907	22	4,000	***3.8***	**6.6**
RTU-2	Science Lab + Lab 406	3,159	9	3,000	***6.3***	6.3
RTU-HP + Univent	Health Place	1,706	12	3,000	***9.2***	9.2
RTU-MC + Univent	Media Center	3,030	9	2,000	***4.4***	**5.0**
UV-113 + UV114	Classroom 113	853	11	0	***0***	**5.1**
None	Room 306 (Typ.)	103	8	0	***0***	**19.3**
AHU-307	Room 307	510	11	1,200	***13.4***	13.4
Ducted Split AC	Rooms 100 - 104	1,220	9	0	***0***	**7.2**
Univent	Classroom 202 (Typ.)	827	11	0	***0***	**5.2**
Ductless Split AC	Teacher's Lounge	377	8	0	***0***	**5.3**

Corrective Action(s)

RTU-1	Multi-Purpose Room	2,907	22	4,000	***3.8***
Add (1) 24" 3,000 CFM Industrial Fans In Exterior Door		2,907	22	7,000	**6.6**
RTU-MC + Univent	Media Center	3,030	9	2,000	***4.4***
Add (1) 265 CFM Trio Portable Air Cleaner		3,030	9	2,265	**5.0**
UV-113 + UV114	Classroom 113	853	11	0	***0***
Add (3) 265 CFM Trio Portable Air Cleaner		853	11	795	**5.1**
None	Room 306 (Typ.)	103	8	0	***0***
Add (1) 265 CFM Trio Portable Air Cleaner		103	8	265	**19.3**
Ducted Split AC	Rooms 100 - 104	1,220	9	0	***0***
Add (5) 265 CFM Trio Portable Air Cleaner (1 in each room)		1,220	9	1,325	**7.2**
Univent	Classroom 202 (Typ. 200/300)	827	11	0	***0***
Add (3) 265 CFM Trio Portable Air Cleaner		827	11	795	**5.2**
Ductless Split AC	Teacher's Lounge	377	8	0	***0***
Add (1) 265 CFM Trio Portable Air Cleaner		377	8	265	**5.3**