



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.

SKYLINE HIGH SCHOOL

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-5A, 5B	Main Gym	22,629	38	52,200	3.6	5.0
	Scene Shop	1,759	38	4,920	4.4	5.0
	Costume Shop	412	10	310	4.5	8.4
AHU-6	Auxiliary Gym	7,827	38	15,400	3.1	5.9
AHU-7, 8, 9	Auditorium House	7,800	38	22,100	4.5	5.0
AHU-8	Auditorium Stage	4,170	42	19,600	6.7	6.6
AHU-9	Auditorium Lobby	5,600	38	16,700	4.7	5.0
	Green Room	726	10	440	3.6	5.8
	West Dressing Room	280	10	180	3.9	9.5
	East Dressing Room	540	10	340	3.8	6.7
AHU-11	Kitchen & Servery	6,345	10	12,000	11.3	11.3
	Pool Seating	2,516	12	5,810	11.5	11.5
	Staff Dining	778	9	500	4.1	6.6
	Experimental Theater	4,257	18	4,200	3.3	5.2
	CAD Lab & Career	2,515	10	2,640	6.3	6.3
	Video Editing	360	10	165	2.8	7.2
	Conference Room	472	10	1,270	16.1	16.1
AHU-12	Media Center	7,045	25	12,310	4.2	5.0
AHU-13	Commons	19,519	14	21,400	4.7	5.0
AHU-14	Mens Locker Area	3,410	10	5,250	9.2	9.2
AHU-15	Athletic Director Office Area	642	10	450	4.2	6.7
	Coach's Office Area, Showers (Men)	2,200	10	3,155	8.6	8.6
	C123 PE Classroom	790	10	600	4.6	6.6
	Coach's Office Area, Showers (Women)	3,066	10	4,440	8.7	8.7
	Men and Women Pool Lockers and Office	2,480	9	3,755	10.1	10.1
AHU-16	Deck Safety Office	186	8	120	4.8	15.5
	North Women's Locker and Coach Office	2,700	10	5,850	13	13.0
	MIDI Lab	940	10	1,280	8.2	8.2
	Pool	15,650	30	49,020	6.3	6.3
DU-1, 2	Band Room	3,390	20	3,270	2.9	5.6
	Band Practice Rooms	370	8	210	4.3	9.6
	Orchestral Music Room	2,670	12	1,950	3.7	9.3
	Choral Music Room	2,150	12	1,765	4.1	5.3
	Practice Room	107	8	60	4.2	22.8
BCU-4	Weight Room and Offices	2,760	10	1,995	4.3	12.0
HP No.						
	103 A208 Main Conference Room	530	9	930	11.7	11.7
	74 A210 A212 Conference Rooms	976	9	1,460	10	10.0
	75 A207 Office Main Reception/Corridor	2,911	9	1,920	4.4	5.0
	76 A207 Principal/Career/Business	1,448	9	1,130	5.2	5.2
	79 A215 Photography	1,850	9	1,380	5.0	5.0
	104 A219 Art Studio	1,244	16	1,380	4.2	5.0
	105 A221 Art Studio	1,266	16	1,380	4.1	5.0
	78 A225 Concessions	996	9	830	5.6	5.6
	B203 Fitness Center	3,400	16	3,900	4.3	5.0
	98 B206 Magnet	1,830	18	2,400	4.4	5.5
	93 B210 Magnet	1,830	18	2,400	4.4	5.5
	88 C207 CAD Lab	1,234	9	1,765	9.5	9.5
	86 C209 Career	1,234	9	1,180	6.4	6.4
	33 A301 Staff Planning	1,138	10	1,180	6.2	6.2
	2 A302 Classroom	877	10	930	6.4	6.4
	6 A306 Classroom	906	10	930	6.2	6.2

25	A311 SISS/Flexible Therapy	919	10	930	6.1	6.1
11	A312 Science Lab	1,302	10	1,380	6.4	6.4
19	A317 Science Lab	1,334	9	2,400	12	12.0
102	B301 Science Lab & Prep	1,855	10	1,765	5.7	5.7
36	B306 Computer Lab	1,117	10	2,400	12.9	12.9
92	B308 Magnet	1,955	10	2,400	7.4	7.4
38	B310 Computer Lab	1,117	10	2,400	12.9	12.9
73	B329 Forum	986	10	1,940	11.8	11.8
13	B325 Reception/Break/Office	663	10	1,380	12.5	12.5
18	B327 Forum	986	10	1,940	11.8	11.8
42	B331e Office/Conference	490	10	930	11.4	11.4
41	Media Work Room	167	10	140	5	5.0
90	B330 Distance Learning	1,070	10	930	5.2	5.2
54	C302 Classroom	844	10	930	6.6	6.6
57	C303 Staff Planning	886	10	930	6.3	6.3
50	C306 Classroom	870	10	1,180	8.1	8.1
46	C310 Classroom	860	10	930	6.5	6.5
70	C317 Classroom	1,260	10	1,380	6.6	6.6
1	A402 Classroom	860	10	930	6.5	6.5
34	A403 Staff Planning	846	10	930	6.6	6.6
30	A407 Classroom	914	10	930	6.1	6.1
20	A417 Science Lab	1,354	10	1,760	7.8	7.8
99	B401 Science Lab	1,408	10	2,900	12.4	12.4
35	B406 Computer Lab	1,000	10	2,900	17.4	17.4
97	B408 Magnet	1,925	10	2,900	9	9.0
37	B410 Computer Lab	1,000	10	1,765	10.6	10.6
17	B427 Forum	1,010	10	1,940	11.5	11.5
72	B429 Forum	1,010	10	2,900	17.2	17.2
52	C404 Classroom	895	10	2,900	19.4	19.4
48	C408 Classroom	910	10	1,380	9.1	9.1
69	C417 Science Lab	1,400	10	1,765	7.6	7.6

Corrective Action(s)

AHU-5A, 5B	Main Gym	22,629	38	52,200	3.6
Add (2) 10,000 CFM Industrial Fans In Exterior Doors		22,629	38	72,200	5.0
	Scene Shop	1,759	38	4,920	4.4
Add (2) 300 CFM Goodyear Portable Air Cleaners		1,759	38	5,520	5.0
	Costume Shop	412	10	310	4.5
Add (1) 265 CFM Trio Portable Air Cleaner		412	10	575	8.4
AHU-6	Auxiliary Gym	7,827	38	15,400	3.1
Add (2) 7,000 CFM Industrial Fans In Exterior Doors				29,400	5.9
AHU-7, 8, 9	Auditorium House	7,800	38	22,100	4.5
Add (8) 300 CFM Goodyear Portable Air Cleaners		7,800	38	24,500	5.0
AHU-9	Auditorium Lobby	5,600	38	16,700	4.7
Add (3) 300 CFM Goodyear Portable Air Cleaners		5,600	38	17,600	5.0
	Green Room	726	10	440	3.6
Add (1) 265 CFM Trio Portable Air Cleaner		726	10	705	5.8
	West Dressing Room	280	10	180	3.9
Add (1) 265 CFM Trio Portable Air Cleaner		280	10	445	9.5
	East Dressing Room	540	10	340	3.8
Add (1) 265 CFM Trio Portable Air Cleaner		540	10	605	6.7
AHU-11	Staff Dining	778	9	500	4.1
Add (1) 265 CFM Trio Portable Air Cleaner		778	9	765	6.6
	Experimental Theater	4,257	18	4,200	3.3
Add (8) 300 CFM Goodyear Portable Air Cleaners		4,257	18	6,600	5.2

	Video Editing	360	10	165	2.8
Add (1) 265 CFM Trio Portable Air Cleaner		360	10	430	7.2
AHU-12	Media Center	7,045	25	12,310	4.2
Add (8) 300 CFM Goodyear Portable Air Cleaners		7,045	25	14,710	5
AHU-13	Commons	19,519	14	21,400	4.7
Add (4) 300 CFM Goodyear Portable Air Cleaners		19,519	14	22,600	5.0
AHU-15	Athletic Director Office Area	642	10	450	4.2
Add (1) 265 CFM Trio Portable Air Cleaner		642	10	715	6.7
	C123 PE Classroom	790	10	600	4.6
Add (1) 265 CFM Trio Portable Air Cleaner		790	10	865	6.6
AHU-16	Deck Safety Office	186	8	120	4.8
Add (1) 265 CFM Trio Portable Air Cleaner		186	8	385	15.5
DU-1,2	Band Room	3,390	20	3,270	2.9
Add (1) 24" 3,000 CFM Industrial Fans In Exterior Door		3,390	20	6,280	5.6
	Band Practice Rooms	370	8	210	4.3
Add (1) 265 CFM Trio Portable Air Cleaner (1 in each of the 3 noted rooms)		370	8	475	9.6
	Orchestral Music Room	2,670	12	1,950	3.7
Add (1) 24" 3,000 CFM Industrial Fans In Exterior Door		2,670	12	4,950	9.3
	Choral Music Room	2,150	12	1,765	4.1
Add (2) 265 CFM Trio Portable Air Cleaners		2,150	12	2,295	5.3
	Practice Room	107	8	60	4.2
Add (1) 265 CFM Trio Portable Air Cleaner		107	8	325	22.8
BCU-4	Weight Room and Offices	2,760	10	1,995	4.3
Add (1) 24" 3,000 CFM Industrial Fans In Exterior Door (Weight Room)					
Add (2) 265 CFM Trio Portable Air Cleaners (1 in each office)		2,760	10	5,525	12.0
HP75	A207 Office Main Reception/Corridor	2,911	9	1,920	4.4
Add (1) 265 CFM Trio Portable Air Cleaner		2,911	9	2,185	5.0
HP104	A219 Art Studio	1,244	16	1,380	4.2
Add (1) 265 CFM Trio Portable Air Cleaner		1,244	16	1,645	5.0
HP105	A221 Art Studio	1,266	16	1,380	4.1
Add (1) 300 CFM Goodyear Portable Air Cleaner		1,266	16	1,680	5.0
	B203 Fitness Center	3,400	16	3,900	4.3
Add (2) 300 CFM Goodyear Portable Air Cleaners		3,400	16	4,500	5.0
HP98	B206 Magnet	1,830	18	2,400	4.4
Add (2) 300 CFM Goodyear Portable Air Cleaners		1,830	18	3,000	5.5
HP93	B210 Magnet	1,830	18	2,400	4.4
Add (2) 300 CFM Goodyear Portable Air Cleaners		1,830	18	3,000	5.5