



Arlington Public Schools
Building Ventilation Assessment – Airflow Table
March 2021

Final

	Location	Area	HVAC System Type	Design Year	Number of Classrooms	Classroom Size (SF)	OA CFM per Classrm	Ceiling Height	Room Volume	Room OA ACH	Number of Blue	Blue AIR 211+ Airflow	Equivalent ACH	Harvard Room ACH	
1	Abingdon Elementary	Lower	Classrooms 001-005 (VRF-DOAS)	2016	4	815	390	8.5	6928	3.38	1	350	3.03	6.41	
		Lower	Classroom 019 (VRF-DOAS)	2016	1	900	435	8.5	7650	3.41	1	350	2.75	6.16	
		Lower	Classroom 027 (VRF-DOAS)	2016	1	900	440	8.5	7650	3.45	1	350	2.75	6.20	
		Lower	Small Grp (VRF-DOAS)	2016	2	450	215	8.5	3825	3.37	1	350	5.49	8.86	
		Main - A	ERTU-3 (2002 - RTU-1)	2016	1	780	420	8.5	6630	3.80	1	350	3.17	6.97	
		Main - A	ERTU-3 (2002 - RTU-1)	2016	1	800	396	8.5	6800	3.49	1	350	3.09	6.58	
		Main - A	ERTU-3 (2002 - RTU-1)	2016	3	955	459	8.5	8118	3.39	1	350	2.59	5.98	
		Main - B	ERTU-3 (2002 - RTU-1)	2016	3	955	459	8.5	8118	3.39	1	350	2.59	5.98	
		Main - A	Music 136 - ERTU-2	2016	1	1075	300	8.5	9138	1.97	1	350	2.30	4.27	
		Main - A	Small Grp Inst - ERTU-2	2016	2	400	110	8.5	3400	1.94	1	350	6.18	8.12	
		Main - A	Music 140 - ERTU-1	2016	1	985	230	8.5	8373	1.65	1	350	2.51	4.16	
		Main - A	Music 142 - ERTU-1	2016	1	785	230	8.5	6673	2.07	1	350	3.15	5.22	
		Main - A	ART - ERTU-4	2016	1	1055	194	8.5	8968	1.30	2	350	4.68	5.98	
		Main - B	Classrooms - FCU/DOAS	2016	1	995	470	8.5	8458	3.33	1	350	2.48	5.82	
		Main - B	Classrooms - FCU/DOAS	2016	1	735	365	8.5	6248	3.51	1	350	3.36	6.87	
		Main - B	Sm Grp - FCU/DOAS	2016	1	455	215	8.5	3868	3.34	1	350	5.43	8.77	
		Main - B	ART - ERTU-6	2016	1	995	210	8.5	8458	1.49	2	350	4.97	6.46	
		Main - B / Main C	Classroom 174 - 177 (RTU-3)	2016	4	1045	456	8.5	8883	3.08	1	350	2.36	5.44	
		Main - C	Classroom 178 (ERTU-8)	2016	1	995	193	8.5	8458	1.37	2	350	4.97	6.34	
		Upper	Classrooms 201 - 205/Flex 220-221	2016	6	785	375	9.5	7458	3.02	1	350	2.82	5.83	
		Third	Classrooms 301 - 305	2016	4	815	390	9.5	7743	3.02	1	350	2.71	5.73	
							41	34295	358			2.94		3.09	6.03
		2	Ashlawn Elementary	Bsmt Flr - A	Class 183 - HP unit with OAU	2013	1	935	290	9.8	9116	1.91	1	350	2.30
Bsmt Flr - A	Mont 182 - HP unit with OAU			2013	1	930	285	9.8	9068	1.89	1	350	2.32	4.20	
Bsmt Flr - A	SPED/PreK 181 - HP unit with OAU			2013	1	895	270	9.8	8726	1.86	1	350	2.41	4.26	
Bsmt Flr - A	SPED/PreK 180 - HP unit with OAU			2013	1	930	280	9.8	9068	1.85	1	350	2.32	4.17	
Lwr Lvl - A	Flex 274 - HP unit with OAU			2013	1	815	350	9.8	7946	2.64	1	350	2.64	5.29	
Lwr Lvl - A	Kind 283 - HP unit with OAU			2013	1	970	370	9.8	9458	2.35	1	350	2.22	4.57	
Lwr Lvl - A	Kind 282 - HP unit with OAU			2013	1	910	365	9.8	8873	2.47	1	350	2.37	4.84	
Lwr Lvl - A	Kind 281 - HP unit with OAU			2013	1	915	365	9.8	8921	2.45	1	350	2.35	4.81	
Lwr Lvl - A	Kind 280 - HP unit with OAU			2013	1	960	370	9.8	9360	2.37	1	350	2.24	4.62	
Lwr Lvl - B	GR4 - 245-248 (UV-6) (x2)			1994	4	1000	320	8.5	8500	2.26	1	350	2.47	4.73	
Lwr Lvl - B	ELL - 252 - HP Unit			2013	1	800	365	8.5	6800	3.22	1	350	3.09	6.31	
Lwr Lvl - B	SC-GR4 - 251 HP Unit			2013	1	365	175	8.5	3103	3.38	1	350	6.77	10.15	
Lwr Lvl - B	SC-GR5 - 250 HP Unit			2013	1	400	189	8.5	3400	3.33	1	350	6.18	9.50	
Lwr Lvl - C (2nd)	GR5 - 236/237 - Unit Ventilators			2013	2	1050	390	8.5	8925	2.62	1	350	2.35	4.97	
Lwr Lvl - C (2nd)	GR5 - 238/239 - Unit Ventilators			1994	2	1050	390	8.5	8925	2.62	1	350	2.35	4.97	
Lwr Lvl - C (2nd)	Music 223 - HP units with OAU			2013	1	1125	535	8.5	9563	3.36	1	350	2.20	5.55	
Lwr Lvl - C (2nd)	Music 224 - HP units with OAU			2013	1	1125	515	8.5	9563	3.23	1	350	2.20	5.43	
Lwr Lvl - C (2nd)	Music 225 - HP units with OAU			2013	1	1125	390	8.5	9563	2.45	1	350	2.20	4.64	
Upper lvl - A (3rd)	FLEX 374 - HP units with OAU			2013	1	820	350	9.8	7995	2.63	1	350	2.63	5.25	
Upper lvl - B (3rd)	Classroom - 351 - HP Units			2013	1	835	385	8.5	7098	3.25	1	350	2.96	6.21	
Upper lvl - B (3rd)	SC-GR1 - 352 - HP Units			2013	1	365	160	8.5	3103	3.09	1	350	6.77	9.86	
Upper lvl - B (3rd)	GR1 - 347-349 - Unit Vent			1994	3	985	320	8.5	8373	2.29	1	350	2.51	4.80	
Upper lvl - B (3rd)	GR1 - 350 - Unit Vent			1994	1	895	320	8.5	7608	2.52	1	350	2.76	5.28	
Upper lvl - B (3rd)	GR2 - 345-346 - Unit Vent	1994	2	985	320	8.5	8373	2.29	1	350	2.51	4.80			
Upper lvl - C (3rd)	GR3 - 338/339 - Unit Ventilators	2013	2	1060	390	8.5	9010	2.60	1	350	2.33	4.93			
Upper lvl - C (3rd)	Gr3 - 340/Gr2 341-342 - Unit Vent.	2013	3	1000	390	8.5	8500	2.75	1	350	2.47	5.22			
Upper lvl - D (3rd)	Art rooms - Unit Vent.	1994	2	1000	320	8.5	8500	2.26	1	350	2.47	4.73			
					39	36360	343			2.51		2.57	5.08		
3	Barcroft Elementary	LL - Music	RTUs	1991	1	700	213	8.6	6008	2.13	1	350	3.50	5.63	
		LL - Part B	Unit Ventilators	1991	9	850	250	8.6	7296	2.06	1	350	2.88	4.93	
		UL - Part A	Unit Ventilators	1991	3	1000	250	8.6	8583	1.75	1	350	2.45	4.19	
		UL - Part B	Unit Ventilators	1991	6	850	250	8.6	7296	2.06	1	350	2.88	4.93	
		UL - Part B	Unit Ventilators	1991	3	815	250	8.6	6995	2.14	1	350	3.00	5.15	
					22	18895	248			2.02		2.85	4.87		
4	Barrett Elementary	1st Flr - Area A	Unit Ventilators	2014	6	754	442	8.8	6595	4.02	1	350	3.18	7.20	
		1st Flr - Music	RTU	2014	1	950	510	8.0	7600	4.03	1	350	2.76	6.79	
		1st Flr - Area B	Unit Ventilators	2014	6	825	450	8.8	7219	3.74	1	350	2.91	6.65	
		1st Flr - K.G	RTU	2014	3	900	523	8.0	7200	4.36	1	350	2.92	7.28	
		2nd Flr - Area A	Unit Ventilators	2014	9	750	450	9.3	6998	3.86	1	350	3.00	6.86	
		2nd Flr - Area A	RTU	2014	2	750	450	9.3	6998	3.86	1	350	3.00	6.86	
		2nd Flr - Area B	Unit Ventilators	2014	6	775	450	9.3	7231	3.73	1	350	2.90	6.64	
					33	26022	457			3.89		2.98	6.87		
5	Campbell Elementary		UVs with DOAS	2001	22	1000	400	9.0	9000	2.67	1	350	2.33	5.00	
6	Career Center		4-Pipe AHUs, VAV, some FCUs	2010	44	725	425	9.0	6525	3.13	1	350	3.22	6.34	
7	Carlin Springs Elementary	1st Flr - Area A	FCUs/UVs and DOAS	2000	13	850	450	9.3	7863	3.43	1	350	2.67	6.10	
		1st Flr - Area A	FCUs/UVs and DOAS	2000	5	1000	450	9.3	9250	2.92	1	350	2.27	5.19	
		1st Flr - Area B	RTUs	2000	2	1000	775	9.3	9250	5.03	1	350	2.27	7.30	
		1st Flr - Area C	FCUs/UVs and DOAS	2000	13	825	450	9.3	7631	3.54	1	350	2.75	6.29	
					33	28775	470			3.49		2.60	6.10		
8	Claremont Elementary	Grd Flr - Area A	UVs and DOAS	2002	6	1000	390	9.0	9000	2.60	1	350	2.33	4.93	
		Grd Flr - Area A	Console HPs and DOAS	1996	4	750	450	9.0	6750	4.00	1	350	3.11	7.11	
		1st Flr - Area A	UVs and DOAS	2002	6	1000	390	9.0	9000	2.60	1	350	2.33	4.93	
		1st Flr - Area A	Console HPs and DOAS	1996	3	800	570	9.0	7200	4.75	1	350	2.92	7.67	
		1st Flr - Area A	Console HPs and DOAS	1996	3	530	570	9.0	4770	7.17	1	350	4.40	11.57	
		1st Flr - Area B	Console HPs and DOAS	1996	9	825	575	9.0	7425	4.65	1	350	2.83	7.47	
		1st Flr - Area D	UVs and DOAS	2002	6	1000	390	9.0	9000	2.60	1	350	2.33	4.93	
					37	32415	471			3.58		2.66	6.25		
9	Discovery Elementary		HPs and DOAS	2,014	32	985	360	10.0	9850	2.19	1	350	2.13	4.32	

Location	Area	HVAC System Type	Design Year	Number of Class rooms	Classroom Size (SF)	OA CFM per Classrm	Ceiling Height	Room Volume	Room OA ACH	Number of Blue	Blue AIR 211+ Airflow	Equivalent ACH	Harvard Room ACH				
10	Dorothy Hamm Middle	Grd Flr - Art	FCUs and OA-1	2012	1	1000	490	9.3	9330	3.15	1	350	2.25	5.40			
		Grd Flr - Bus	FCUs and OA-1	2012	1	1000	390	9.3	9330	2.51	1	350	2.25	4.76			
			1st - Drama	FCUs and OA-1	2012	1	750	340	9.3	6998	2.92	1	350	3.00	5.92		
			1st - Drama	FCUs and OA-1	2012	1	1000	390	9.3	9330	2.51	1	350	2.25	4.76		
			1st -East	FCUs and OAU-2	2012	4	700	305	9.3	6531	2.80	1	350	3.22	6.02		
			1st - West	FCUs and OAU-2	2012	3	700	305	9.3	6531	2.80	1	350	3.22	6.02		
			1st - West (Core)	FCUs and OAU-2	2012	3	800	345	9.3	7464	2.77	1	350	2.81	5.59		
			1st - West (HS)	FCUs and Ecst HRU	2012	4	700	345	9.3	6531	3.17	1	350	3.22	6.38		
			2nd -East	FCUs and OAU-2	2012	6	700	310	10.0	7000	2.66	1	350	3.00	5.66		
			2nd - West	FCUs and OAU-2	2012	3	700	310	10.0	7000	2.66	1	350	3.00	5.66		
			3rd -East	FCUs and OAU-2	2012	6	700	305	10.0	7000	2.61	1	350	3.00	5.61		
			3rd - West	FCUs and OAU-3	2012	8	700	310	10.0	7000	2.66	1	350	3.00	5.66		
			3rd - West	FCUs and OAU-3	2012	5	700	340	10.0	7000	2.91	1	350	3.00	5.91		
							46	33450	325			2.76			2.97	5.73	
			11	Drew Elementary	1st -1A (AHU-3)	Vocal Muisc Classroom	2000	1	955	306	8.7	8280	2.22	1	350	2.54	4.75
1st -1B (AHU-3)	Art Classroom	2000			1	1230	306	8.7	10664	1.72	2	350	3.94	5.66			
		1st -1B (AHU-3)		Flex Space	2000	1	750	204	8.7	6503	1.88	1	350	3.23	5.11		
		1st -1B (AHU-2)		Adult Education	2000	1	1150	437	8.7	9971	2.63	1	350	2.11	4.74		
		1st -1B (AHU-2)		Adult Education	2000	1	1350	308	8.7	11705	1.58	2	350	3.59	5.17		
		2nd - 2A (OAU)		1st grade - FCUS and DOAS	2000	2	825	450	8.7	7153	3.77	1	350	2.94	6.71		
		2nd - 2A (OAU)		Montessori - FCUS and DOAS	2000	2	945	280	8.7	8193	2.05	1	350	2.56	4.61		
		2nd - 2A (OAU)		Montessori - FCUS and DOAS	2000	1	935	450	8.7	8106	3.33	1	350	2.59	5.92		
		2nd - 2B (OAU)		Montessori - FCUS and DOAS	2000	2	935	450	8.7	8106	3.33	1	350	2.59	5.92		
		2nd - 2B (OAU)		Kindergarden - FCUS and DOAS	2000	3	925	450	8.7	8020	3.37	1	350	2.62	5.99		
		2nd - 2B (OAU)		FCUS and DOAS	2000	7	825	450	8.7	7153	3.77	1	350	2.94	6.71		
		3rd Lvl (OAU)		Unit Ventilators	2000	11	825	450	8.7	7153	3.77	1	350	2.94	6.71		
							33	23970	419			3.54			2.83	6.37	
		12		Fleet Elementary		HPs and DOAS	2,017	46	950	370	10.0	9500	2.34	1	350	2.21	4.55
		13		Glebe Elementary		RTUs/AHUs / MAUs, FCUs, UVs		28	1000	450	9.0	9000	3.00	1	350	2.33	5.33
14	Ed Center/ Planetarium	Larger	HPs and DOAS	2020	23	825	375	9.0	7425	3.03	1	350	2.83	5.86			
		Smaller	HPs and DOAS	2020	1	475	275	9.0	4275	3.86	1	350	4.91	8.77			
		Collaboration	HPs and DOAS	2020	5	900	525	9.0	8100	3.89	1	350	2.59	6.48			
						29	23950	397			3.21			2.83	6.03		
15	Gunston Middle	Ground	HPs and DOAS	2018	15	825	375	9.0	7425	3.03	1	350	2.83	5.86			
		Ground - Home Ec	HPs and DOAS	2018	1	1800	600	9.0	16200	2.22	2	350	2.59	4.81			
			Ground - Art	HPs and DOAS	2018	1	1465	495	9.0	13185	2.25	2	350	3.19	5.44		
			Grd - CPU Lab	RTU-8 - MZ Unit (40% OA)	2018	1	980	584	9.0	8820	3.97	1	350	2.38	6.35		
			Grd --MP Class	RTU-8 - MZ Unit (40% OA)	2018	1	825	421	9.0	7425	3.40	1	350	2.83	6.23		
			Grd -- Classroom	RTU-15	2018	1	920	475	9.0	8280	3.44	1	350	2.54	5.98		
			Grd -- Classroom	RTU-16	2018	1	915	475	9.0	8235	3.46	1	350	2.55	6.01		
			Grd - (J) - Arts	RTU-8 - MZ Unit (40% OA)	2018	1	815	421	9.0	7335	3.45	1	350	2.86	6.31		
			Grd - (J) - Weight	RTU-8 - MZ Unit (40% OA)	2018	1	830	421	9.0	7470	3.38	1	350	2.81	6.19		
			Grd - East (J)	RTU-11 (40% OA)	2018	1	725	284	9.0	6525	2.61	1	350	3.22	5.83		
			Grd - East (J)	RTU-11 (40% OA)	2018	2	725	296	9.0	6525	2.72	1	350	3.22	5.94		
			Grd - East (J)	RTU-11 (40% OA)	2018	1	1025	252	9.0	9225	1.64	2	350	4.55	6.19		
			Grd - East (J)	RTU-12 (40% OA)	2018	1	710	262	9.0	6390	2.46	1	350	3.29	5.75		
			Grd - East (J)	RTU-12 (40% OA)	2018	2	600	215	9.0	5400	2.39	1	350	3.89	6.28		
			Grd - (J) Comp Lab	RTU-12 (40% OA)	2018	1	825	525	9.0	7425	4.24	1	350	2.83	7.07		
			Grd - East (J)	RTU-12 (40% OA)	2018	1	945	499	9.0	8505	3.52	1	350	2.47	5.99		
			Lvl 1 - Area B	RTU-11 (40% OA)	2018	1	760	304	9.0	6840	2.67	1	350	3.07	5.74		
			Lvl 1 - Area B	RTU-11 (40% OA)	2018	1	830	332	9.0	7470	2.67	1	350	2.81	5.48		
			Lvl 1 - Area B	HPs and DOAS	2018	6	825	375	9.0	7425	3.03	1	350	2.83	5.86		
			Lvl 1 - (B) Science	HPs and DOAS	2018	2	1000	580	9.0	9000	3.87	1	350	2.33	6.20		
			Lvl 1 - (D) Science	HPs and DOAS	2018	2	1000	580	9.0	9000	3.87	1	350	2.33	6.20		
			Lvl 1 - Area D	HPs and DOAS	2018	2	825	375	9.0	7425	3.03	1	350	2.83	5.86		
			Lvl 1 - Area G	RTU-8 - MZ Unit (40% OA)	2018	1	735	317	9.0	6615	2.87	1	350	3.17	6.05		
			Lvl 1 - Area G	RTU-8 - MZ Unit (40% OA)	2018	1	725	296	9.0	6525	2.72	1	350	3.22	5.94		
			Lvl 1 - Area G	RTU-8 - MZ Unit (40% OA)	2018	1	725	292	9.0	6525	2.68	1	350	3.22	5.90		
			Lvl 1 - (I) CPU Lab	RTU-8 - MZ Unit (40% OA)	2018	1	910	500	9.0	8190	3.67	1	350	2.56	6.23		
			Lvl 1 - (K) Spec Ed	RTU-11 (40% OA)	2018	1	706	232	9.0	6354	2.19	1	350	3.31	5.50		
			Lvl 1 - (K) Spec Ed	RTU-11 (40% OA)	2018	1	555	204	9.0	4995	2.45	1	350	4.20	6.65		
			Lvl 1 - (K) Band	RTU-11 (40% OA)	2018	1	1535	495	9.0	13815	2.15	2	350	3.04	5.19		
			Lvl 1 - East (K)	RTU-12 (40% OA)	2018	1	740	258	9.0	6660	2.32	1	350	3.15	5.48		
			Lvl 1 - East (K)	RTU-12 (40% OA)	2018	1	730	318	9.0	6570	2.91	1	350	3.20	6.10		
			Lvl 1 - (K) Music	RTU-12 (40% OA)	2018	1	1345	499	9.0	12105	2.47	1	350	1.73	4.21		
			Lvl 1 - East (K)	RTU-12 (40% OA)	2018	1	735	323	9.0	6615	2.93	1	350	3.17	6.10		
			Lvl 1 - East M	RTU-10 MZ Unit (40% OA)	2018	2	815	384	9.0	7335	3.14	1	350	2.86	6.00		
			Lvl 1 - East M	RTU-10 MZ Unit (40% OA)	2018	1	825	300	9.0	7425	2.42	1	350	2.83	5.25		
			Lvl 1 - East M	RTU-10 MZ Unit (40% OA)	2018	1	800	336	9.0	7200	2.80	1	350	2.92	5.72		
			Lvl 1 - East M	RTU-10 MZ Unit (40% OA)	2018	1	780	344	9.0	7020	2.94	1	350	2.99	5.93		
			Lvl 1 - East M	RTU-10 MZ Unit (40% OA)	2018	1	825	320	9.0	7425	2.59	1	350	2.83	5.41		
			Lvl 2 - East N	RTU-10 MZ Unit (40% OA)	2018	1	735	312	9.0	6615	2.83	1	350	3.17	6.00		
			Lvl 2 - East N	RTU-10 MZ Unit (40% OA)	2018	1	740	308	9.0	6660	2.77	1	350	3.15	5.93		
Lvl 2 - East N	RTU-10 MZ Unit (40% OA)	2018	1	740	260	9.0	6660	2.34	1	350	3.15	5.50					
Lvl 2 - East N	RTU-10 MZ Unit (40% OA)	2018	1	785	341	9.0	7065	2.89	1	350	2.97	5.87					
Lvl 2 - East N	RTU-10 MZ Unit (40% OA)	2018	1	1020	376	9.0	9180	2.46	1	350	2.29	4.75					
				68	33541	378			2.82			2.99	5.81				
16	The Heights (High Sch)		VRF-DOAS		61	800	420	9.0	7200	3.50	1	350	2.92	6.42			
17	Montessori Public School of Arlington	104, 114, 134,189,195	Unit Ventilator/HP	1992	5	800	150	8.5	6800	1.32	1	350	3.09	4.41			
		144	Unit Ventilator/HP	1992	1	880	150	8.5	7480	1.20	1	350	2.81	4.01			
		146, 147	Unit Ventilator/HP	1992	2	950	150	8.5	8075	1.11	2	350	5.20	6.32			
		141	Unit Ventilator/HP	1992	1	800	185	8.5	6800	1.63	1	350	3.09	4.72			
		105-112, 135, 142, 184-188, 190-194	Unit Ventilator/HP	1992	11	800	135	8.5	6800	1.19	1	350	3.09	4.28			
		118	Unit Ventilator/HP	1992	1	1047	150	8.5	8900	1.01	2	350	4.72	5.73			
		119	Unit Ventilator/HP	1992	1	1079	262	8.5	9172	1.71	1	350	2.29	4.00			
				22	18506	149			1.25			3.34	4.59				

Location	Area	HVAC System Type	Design Year	Number of Class rooms	Classrm Size (SF)	OA CFM per Classrm	Ceiling Height	Room Volume	Room OA ACH	Number of Blue	Blue AIR 211+ Airflow	Equivalent ACH	Harvard Room ACH	
18	Hoffman-Boston	Grd - Area C	Uvs and DOAS	1999	9	1000	450	9.0	9000	3.00	1	350	2.33	5.33
	Elementary	1st Flr - Arts	Uvs and DOAS	1999	1	1425	900	9.0	12825	4.21	1	350	1.64	5.85
		1st Flr - Area B	Uvs and DOAS	1999	7	950	450	9.0	8550	3.16	1	350	2.46	5.61
		1st Flr Comp Lab	RTU	1999	1	825	450	9.0	7425	3.64	1	350	2.83	6.46
		1st Flr - Area C	Uvs and DOAS	1999	6	950	450	9.0	8550	3.16	1	350	2.46	5.61
		2nd Flr - Area B	Uvs and DOAS	1999	8	950	450	9.0	8550	3.16	1	350	2.46	5.61
		2nd Flr - Area C	Uvs and DOAS	1999	11	950	450	9.0	8550	3.16	1	350	2.46	5.61
				43	41650	460			3.17			2.41	5.58	
19	Jamestown	1st flr - Area A	HP units (per ALC)	2002	6	800	135	10.0	8000	1.01	2	350	5.25	6.26
	Elementary	1st flr - Area A	HP units (per ALC)	2002	3	600	135	10.0	6000	1.35	1	350	3.50	4.85
		1st flr - Area C	HP units (per ALC)	1992	1	800	150	10.0	8000	1.13	2	350	5.25	6.38
		1st flr - Area B	UV and DOAS	2002	3	800	450	10.0	8000	3.38	1	350	2.63	6.00
		1st flr - Area C	UV and DOAS	2002	4	800	450	10.0	8000	3.38	1	350	2.63	6.00
		1st flr - Area C	HP units (per ALC)	1992	7	800	135	10.0	8000	1.01	2	350	5.25	6.26
		1st flr - Area C	HP units (per ALC)	1992	5	800	150	10.0	8000	1.13	2	350	5.25	6.38
		1st flr - Area C	HP units (per ALC)	1992	3	800	185	10.0	8000	1.39	1	350	2.63	4.01
						32	19400	211			1.12			4.76
20	Kenmore Middle		4-pipe AHUs / VAVs	2003	44	800	450	9.3	7400	3.65	1	350	2.84	6.49
21	Key	Lvl 1 - East	ERUs / Uvs	1998	12	975	375	8.5	8288	2.71	1	350	2.53	5.25
	Elementary	Lvl 1 -West	4-pipe AHUs / ERUs / Uvs	1998	1	850	375	8.5	7225	3.11	1	350	2.91	6.02
		Lvl 2 -West	ERUs / Uvs	1998	5	975	375	9.0	8775	2.56	1	350	2.39	4.96
		Lvl 3 - East	ERUs / Uvs	1998	13	975	375	9.0	8775	2.56	1	350	2.39	4.96
				31	30100	375			2.64			2.46	5.10	
22	Langston	Head Start Area	AHUs, MAUs (ERVs), VAVs	2001	4	1000	450	8.8	8750	3.09	1	350	2.40	5.49
	Elementary	Second Floor	AHUs, MAUs (ERVs), VAVs	2001	6	1000	390	8.8	8750	2.67	1	350	2.40	5.07
		Third Floor	AHUs, MAUs (ERVs), VAVs	2001	8	1000	390	8.8	8750	2.67	1	350	2.40	5.07
				18	18000	403			2.77			2.40	5.17	
23	Long Branch	Frist Floor	MAUs (ERVs) and FCUs		12	900	380	8.3	7425	3.07	1	350	2.83	5.90
	Elementary	Second Floor	MAUs (ERVs) and FCUs		12	900	380	8.3	7425	3.07	1	350	2.83	5.90
					24	21600	380			3.07		2.83	5.90	
24	McKinley	MZU-5 (Area A)	DX MZ AHU	2019	6	825	400	9.3	7631	3.14	1	350	2.75	5.90
	Elementary	RTU-4 (Area B)	DX RTUs & VAV	2019	4	825	360	9.3	7631	2.83	1	350	2.75	5.58
		MZU-1/2 (Area C)	DX MZ AHU	2019	11	825	360	9.3	7631	2.83	1	350	2.75	5.58
		Main Lvl Area D	VAV RTU-2	2019	4	825	400	9.3	7631	3.14	1	350	2.75	5.90
		Gym Lvl Area D	VAV RTU-2	2019	5	825	400	9.3	7631	3.14	1	350	2.75	5.90
		Field Lvl Area D	VAV RTU-2	2019	5	825	400	9.3	7631	3.14	1	350	2.75	5.90
		MZU- x (Area E)	DX MZ AHU	2019	4	825	400	9.3	7631	3.14	1	350	2.75	5.90
				39	32175	385			3.02			2.75	5.78	
25	Nottingham	Lower Lvl (Area E)	HRC-ERVs, Uvs	2004	6	1000	450	9.5	9500	2.84	1	350	2.21	5.05
	Elementary	Main Lvl (Area B)	HRC-ERVs, FCUs, Uvs	2004	7	900	450	9.5	8550	3.16	1	350	2.46	5.61
		Main - B- C.Lab	RTU-B1	2004	1	940	490	9.5	8930	3.29	1	350	2.35	5.64
		Main Lvl (Area C)	HRC-ERVs, FCUs, Uvs	2004	1	900	450	9.5	8550	3.16	1	350	2.46	5.61
		Main Lvl (Area D)	HRC-ERVs, FCUs, Uvs	2004	3	550	375	9.5	5225	4.31	1	350	4.02	8.33
		Main Lvl (Area E)	HRC-ERVs, Uvs	2004	6	1000	450	9.5	9500	2.84	1	350	2.21	5.05
				24	21790	442			3.08			2.43	5.51	
26	Oakridge	Lower Lvl A	MAUs and UV	1998	6	820	375	9.0	7380	3.05	1	350	2.85	5.89
	Elementary	Upper Lvl A	MAUs and FCUs	1998	17	850	375	9.0	7650	2.94	1	350	2.75	5.69
		Upper Lvl (Vocal)	MAUs and FCUs	1998	1	865	600	9.0	7785	4.62	1	350	2.70	7.32
		Upper Lvl (Inst)	DX RTU	1998	1	785	442	9.0	7065	3.75	1	350	2.97	6.72
		Upper Lvl B (Flex)	DX RTU	1998	1	600	213	9.0	5400	2.36	1	350	3.89	6.25
		Upper Lvl C	MAU and UV	1998	4	875	375	9.0	7875	2.86	1	350	2.67	5.52
		Upper Lvl C	MAU and UV	1998	4	875	375	10.0	8750	2.57	1	350	2.40	4.97
				34	28620	379			2.96			2.73	5.69	
27	Randolph Elementary		DX RTU-VAV / 4-pipe FCU with HRC OA units (12 univent split systems)	1992	32	900	380	8.8	7875	2.90	1	350	2.67	5.56
28	REED	Smaller	HPs and DOAS	2019	16	800	350	9.3	7466	2.81	1	350	2.81	5.63
	Elementary	Larger	HPs and DOAS	2019	21	825	375	9.3	7700	2.92	1	350	2.73	5.65
				37	30125	364			2.88			2.76	5.64	
29	Science Focus	Grd Flr A	OAUs/FCUs/Uvs	1998	4	850	375	9.0	7650	2.94	1	350	2.75	5.69
		Grd Flr B (small)	OAUs/FCUs/Uvs	1998	4	400	150	9.0	3600	2.50	1	350	5.83	8.33
		Grd Flr B (Large)	OAUs/FCUs/Uvs	1998	2	850	375	9.0	7650	2.94	1	350	2.75	5.69
		1st Flr A (small)	OAUs/FCUs/Uvs	1998	2	400	150	9.0	3600	2.50	1	350	5.83	8.33
		1st Flr A (Large)	OAUs/FCUs/Uvs	1998	5	850	375	9.0	7650	2.94	1	350	2.75	5.69
		1st Flr B (Large)	OAUs/FCUs/Uvs	1998	9	850	375	9.0	7650	2.94	1	350	2.75	5.69
		1st Flr C (small)	OAUs/FCUs/Uvs	1998	4	400	150	9.0	3600	2.50	1	350	5.83	8.33
		1st Flr C (Large)	OAUs/FCUs/Uvs	1998	3	850	375	9.0	7650	2.94	1	350	2.75	5.69
		First Floor C	RTUs/OAUs/FCUs/Uvs	1998	2	850	375	9.0	7650	2.94	1	350	2.75	5.69
					35	25250	311			2.87			3.23	6.11
30	Swanson	2003 Addition	4-Pipe AHUs - VAV	2003	17	725	378	9.0	6525	3.48	1	350	3.22	6.69
	Middle	Existing Unit Vents	UV / ERV	1994	23	650	375	9.0	5850	3.85	1	350	3.59	7.44
		Consumer Science	UV	1994	1	1462	775	9.0	13158	3.53	1	350	1.60	5.13
		Vocal Music	UV	1994	1	1011	875	9.0	9099	5.77	1	350	2.31	8.08
		Band	UV	1994	1	1029	375	9.0	9261	2.43	1	350	2.27	4.70
		Building Interior Classrooms	AHU / VAV	2003	17	725	200	9.0	6525	1.84	1	350	3.22	5.06
		Tech Ed	UV	1994	1	1285	304	9.0	11565	1.58	2	350	3.63	5.21
		Tech Ed	UV	1994	1	720	174	9.0	6480	1.61	1	350	3.24	4.85
Classrm 214	AHU-5	2003	1	1635	864	9.0	14715	3.52	1	350	1.43	4.95		
				63	46742	346			3.11			3.19	6.31	

Location	Area	HVAC System Type	Design Year	Number of Class rooms	Classrm Size (SF)	OA CFM per Classrm	Ceiling Height	Room Volume	Room OA ACH	Number of Blue	Blue AIR 211+ Airflow	Equivalent ACH	Harvard Room ACH	
31 Taylor Elementary	Area A	Classrooms - ERVs and HPs	2011	8	1000	400	9.0	9000	2.67	1	350	2.33	5.00	
	Area B	PODS - ERVs and HP s	2011	4	575	375	9.0	5175	4.35	1	350	4.06	8.41	
	Area B	PODS - ERVs and HPS	2011	2	400	300	9.0	3600	5.00	1	350	5.83	10.83	
	Area B	PODS - ERVs and HPs	2011	6	500	375	9.0	4500	5.00	1	350	4.67	9.67	
	Area B	1st Grd - ERVs and HPs	2011	1	860	195	9.0	7740	1.51	1	350	2.71	4.22	
	Area B	1st Grd - ERVs and HPs	2011	1	820	180	9.0	7380	1.46	1	350	2.85	4.31	
	Area B	2nd Grd - ERVs and HPs	2011	1	875	195	9.0	7875	1.49	1	350	2.67	4.15	
	Area B	2nd Grd - ERVs and HPs	2011	1	825	180	9.0	7425	1.45	1	350	2.83	4.28	
	Area B	Spec Ed - ERVs and HPs	2011	4	600	375	9.0	5400	4.17	1	350	3.89	8.06	
	Area D	Pre-K/MIPA - ERVs and HPs	2011	2	800	415	9.0	7200	3.46	1	350	2.92	6.38	
	Area D	Grd 4/5 - ERVs and HPs	2011	6	800	415	9.0	7200	3.46	1	350	2.92	6.38	
	Area D	Grd 3/5s - ERVs and HPs	2011	8	800	375	9.0	7200	3.13	1	350	2.92	6.04	
					44	32680	366			3.29			3.14	6.43
	32 Thomas Jefferson (Middle Sch)	lower level	4-Pipe / Dual Duct AHU	2009	13	600	160	9.0	5400	1.78	1	350	3.89	5.67
lower level - Art		4-Pipe / Dual Duct AHU	2009	1	1320	320	9.0	11880	1.62	2	350	3.54	5.15	
lower level - Classrm 67		4-Pipe / Dual Duct AHU	2009	1	1829	655	9.0	16461	2.39	2	350	2.55	4.94	
lower level - Tech Lab		4-Pipe / Dual Duct AHU	2009	1	1215	434	9.0	10935	2.38	1	350	1.92	4.30	
level 1		4-Pipe / Dual Duct AHU	2009	14	600	160	9.0	5400	1.78	1	350	3.89	5.67	
lvl 1 - Consumer Sci 117		4-Pipe / Dual Duct AHU	2009	1	1725	613	9.0	15525	2.37	2	350	2.71	5.07	
level 1 - Band		4-Pipe / Dual Duct AHU	2009	1	1400	625	9.0	12600	2.98	1	350	1.67	4.64	
level 1 - Orchestra		4-Pipe / Dual Duct AHU	2009	1	1400	625	9.0	12600	2.98	1	350	1.67	4.64	
level 2		4-Pipe / Dual Duct AHU	2009	45	700	200	9.0	6300	1.90	1	350	3.33	5.24	
level 2 - Life Skills		4-Pipe / Dual Duct AHU	2009	1	1151	351	9.0	10359	2.03	1	350	2.03	4.06	
level 2 - Science 219		4-Pipe / Dual Duct AHU	2009	1	1064	202	9.0	9576	1.27	2	350	4.39	5.65	
level 2 - Science 225		4-Pipe / Dual Duct AHU	2009	1	856	144	9.0	7704	1.12	2	350	5.45	6.57	
lvl 2 - Science Labs 226		4-Pipe / Dual Duct AHU	2009	1	1070	206	9.0	9630	1.28	2	350	4.36	5.64	
					82	60730	213			1.92			3.38	5.30
33 Traditional Elementary	1st Flr - North	KG 111 - AHU-2 (40% OA)	2002	1	1000	400	9.0	9000	2.67	1	350	2.33	5.00	
	1st Flr - North	KG 112 - AHU-2 (40% OA)	2002	1	1000	400	9.0	9000	2.67	1	350	2.33	5.00	
	1st Flr - North	KG 113 - AHU-2 (40% OA)	2002	1	1000	400	9.0	9000	2.67	1	350	2.33	5.00	
	1st Flr - North	First 108 - AHU-2 (40% OA)	2002	1	795	450	9.0	7155	3.77	1	350	2.94	6.71	
	1st Flr - North	First 107 - AHU-2 (40% OA)	2002	1	780	400	9.0	7020	3.42	1	350	2.99	6.41	
	1st Flr - North	First 106 - AHU-2 (40% OA)	2002	1	775	400	9.0	6975	3.44	1	350	3.01	6.45	
	1st Flr	Music 126 - AHU-3 (34% OA)	2002	1	1145	272	9.0	10305	1.58	2	350	4.08	5.66	
	1st Flr	Art Room 134 - FCU	2002	1	1480	450	9.0	13320	2.03	2	350	3.15	5.18	
	2nd Floor	Classrm 208 - AHU-3 (34% OA)	2002	1	1200	272	9.0	10800	1.51	2	350	3.89	5.40	
	1st Flr - Pre-K	Unit Ventilators	2002	2	965	360	9.0	8685	2.49	1	350	2.42	4.91	
	1st Flr - 2nd	Unit Ventilators	2002	1	1025	360	9.0	9225	2.34	1	350	2.28	4.62	
	1st Flr - 2nd	Unit Ventilators	2002	1	965	360	9.0	8685	2.49	1	350	2.42	4.91	
	1st Flr - 2nd	Unit Ventilators	2002	1	925	360	9.0	8325	2.59	1	350	2.52	5.12	
	1st Flr - 3r Grd	Unit Ventilators	2002	3	965	360	9.0	8685	2.49	1	350	2.42	4.91	
	2nd Flr - 4th Gr	Unit Ventilators	2002	1	825	360	12.0	9900	2.18	1	350	2.12	4.30	
	2nd Flr - 4th Gr	Unit Ventilators	2002	2	950	360	9.0	8550	2.53	1	350	2.46	4.98	
	2nd Flr - 5th	Unit Ventilators	2002	2	965	360	9.0	8685	2.49	1	350	2.42	4.91	
	2nd Flr - ESOL-208	Unit Ventilators	2002	1	705	360	12.0	8460	2.55	1	350	2.48	5.04	
					23	18450	369			2.63			2.46	5.09
34 Tuckahoe Elementary		Dual Duct DX AHUs and DX RTUs	1998	26	900	400	9.0	8100	2.96	1	350	2.59	5.56	
35 Wakefield (High Sch)	1st lvl - A - Labs	Photo/Graph - VAV / OAU	2011	1	1515	360	10.0	15150	1.43	2	350	2.77	4.20	
	1st lvl - A - Labs	Art Lab - VAV / OAU	2011	1	1165	1000	10.0	11650	5.15	1	350	1.80	6.95	
	1st lvl - A - Labs	Art Lab - VAV / OAU	2011	1	1725	380	10.0	17250	1.32	3	350	3.65	4.97	
	1st lvl - A - Labs	Eng Lab 0 VAV / OAU	2011	1	1055	460	10.0	10550	2.62	1	350	1.99	4.61	
	1st lvl - A - Labs	Eng Lab 0 VAV / OAU	2011	1	1040	680	10.0	10400	3.92	1	350	2.02	5.94	
	1st lvl - B - Band Rm	VAV / RTU-1 (57% OA)	2011	1	2200	1072	10.0	22000	2.92	2	350	1.91	4.83	
	1st lvl - B - Orchestra	VAV / RTU-1 (57% OA)	2011	1	1725	1117	10.0	17250	3.89	1	350	1.22	5.10	
	1st lvl - B - Studio	VAV / RTU-1 (57% OA)	2011	1	2235	2018	10.0	22350	5.42	1	350	0.94	6.36	
	1st lvl - B - S. Shp	VAV / OAU	2011	1	1000	1000	10.0	10000	6.00	1	350	2.10	8.10	
	1st lvl - C	VAV / OAU	2011	3	900	360	10.0	9000	2.40	1	350	2.33	4.73	
	1st lvl - E	VAV / OAU	2011	4	900	360	10.0	9000	2.40	1	350	2.33	4.73	
	2nd lvl - Labs	HPs and OAU	2011	8	1000	510	10.0	10000	3.06	1	350	2.10	5.16	
	2nd lvl - Classrm	HPs and OAU	2011	29	900	270	10.0	9000	1.80	1	350	2.33	4.13	
	3rd lvl - Labs	HPs and OAU	2011	9	1000	510	10.0	10000	3.06	1	350	2.10	5.16	
3rd lvl - Classrm	HPs and OAU	2011	46	900	270	10.0	9000	1.80	1	350	2.33	4.13		
				108	36960	366			3.13			2.10	5.23	
36 Washington-Liberty	4-B	AHU - VAV	2006	6	800	315	9.8	7800	2.42	1	350	2.69	5.12	
	4-B labs	AHU - VAV w/ ERV	2006	4	1300	1200	9.8	12675	5.68	1	350	1.66	7.34	
	4-A	AHU - VAV	2006	10	800	315	9.8	7800	2.42	1	350	2.69	5.12	
	4-A labs	AHU - VAV	2006	2	1300	1000	9.8	12675	4.73	1	350	1.66	6.39	
	3 labs	AHU - VAV w/ ERV	2006	3	1200	980	9.8	11700	5.03	1	350	1.79	6.82	
	3 physics labs	AHU - VAV	2006	3	1200	490	9.8	11700	2.51	1	350	1.79	4.31	
	3-B	AHU - VAV	2006	14	800	280	9.8	7800	2.15	1	350	2.69	4.85	
	3-A	AHU - VAV	2006	16	800	315	9.8	7800	2.42	1	350	2.69	5.12	
	2-B	AHU - VAV	2006	24	800	315	9.8	7800	2.42	1	350	2.69	5.12	
	2-A	AHU - VAV	2006	8	801	315	9.8	7810	2.42	1	350	2.69	5.11	
					90	77408	392			2.81			2.50	5.31
37 Williamsburg Middle	Lower Shop Area													
	Shop - Art	Fan Coils - OA direct	1990	1	1800	1000	9.5	17100	3.51	1	350	1.23	4.74	
	Shop - FACS	Fan Coils - OA direct	1990	1	1970	1000	9.5	18715	3.21	1	350	1.12	4.33	
	Shop - Tech Ed	Fan Coils - OA direct	1990	1	1992	1000	9.5	18924	3.17	1	350	1.11	4.28	
	Lower Lvl C	AHU-VAV	2002	2	800	250	9.5	7600	1.97	1	350	2.76	4.74	
	Lower Lvl C	AHU-VAV	2002	4	600	250	9.5	5700	2.63	1	350	3.68	6.32	
	Lower Lvl (Gym)	Unit Ventilators	1990	7	700	250	9.5	6650	2.26	1	350	3.16	5.41	
	Lower Lvl	Unit Ventilators	1990	11	700	250	9.5	6650	2.26	1	350	3.16	5.41	
	Main Lvl (Music)	Unit Ventilators	1990	2	700	250	9.5	6650	2.26	1	350	3.16	5.41	
	Main Lvl (Admin)	Unit Ventilators	1990	4	1000	250	9.0	9000	1.67	1	350	2.33	4.00	
	Main Lvl	Unit Ventilators	1990	16	700	250	9.0	6300	2.38	1	350	3.33	5.71	
	Band	Unit Ventilators	1990	1	1625	250	9.0	14625	1.03	3	350	4.31	5.33	
Chorus	Unit Ventilators	1990	1	1435	250	9.0	12915	1.16	2	350	3.25	4.41		
				51	38022	294			2.37			2.97	5.34	
38 Yorktown (High Sch)	Phase 1 - labs	RTUs-AHUs-VAV / ERUs FCUs/	2009	12	1300	1300	9.7	12571	6.20	1	350	1.67	7.88	
	Phase 1 - classrooms	RTUs-AHUs-VAV / ERUs FCUs/	2009	33	700	465	9.7	6769	4.12	1	350	3.10	7.22	
	Phase 3 - labs	RTUs-AHUs-VAV / ERUs FCUs/	2009	15	1300	1400	9.7	12571	6.68	1	350	1.67	8.35	
	Phase 3 - Classrooms	RTUs-AHUs-VAV / ERUs FCUs/	2009	6	750	465	9.7	7253	3.85	1	350	2.90	6.74	
				6										

Disclaimers

- The information in this document is provided as general guidance based on the current information available utilizing the strategies developed by ASHRAE and Harvard. HVAC systems play only a small role in infectious disease transmission, the airflow information provided in these documents are not mitigation strategies. Additional non-HVAC mitigation strategies to be used includes:
 - **Building Occupancy Levels Allowed**
 - **Face mask requirements**
 - **Social distancing between desks, students, teachers, etc.**
 - **Directional flow for movement through the building**
 - **Personal hygiene**
 - **Cleaning requirements**
 - **Touchless services.**

- It is important to note that HVAC strategies are means to improve the air quality and reduce risk but will not prevent all possibility of virus transmission, user should acknowledge that there is a no “zero risk” scenario. HVAC improvements are intended to be used as part of an overall risk reduction strategy for reopening schools. Each building and situation are unique and the guidance provided doesn’t not equally apply to all buildings or classrooms.

- The information in this report is based on the very latest recommendations but the COVID-19 crisis remains an ever-evolving situation and this assessment and our recommendations are not intended to override or supersede any current or future guidance from health and government experts. This guidance should be used in conjunction with relevant guidance and research from governmental agencies. This information is not a substitute for guidance as recommended by health care professionals.

- CMTA does not warrant the accuracy or completeness of this guidance, by adopting these recommendations for use, each adopter agrees to accept the full responsibility in connection with their use. CMTA assumes no responsibility for any injury, loss, or damage arising out of or in connection with this guidance.