

## SEA Health and Safety Committee Glossary of Terms and School Tiers

Glossary of Abbreviations and Terms			
OA	outdoor air		
CFM	cubic feet per minute		
ACH	air change per hour	ACH = CFM of OA (coming into the room) x 60 (minutes)/volume of room (length x width x height)	
Co <sub>2</sub>	Carbon Dioxide		
AIHA	American Industrial Hygiene Association		
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers.		
<b>Mechanical Units that provide Air exchanges in most SPS schools</b>			
univents	unit ventilators	A <b>unit ventilator</b> is a fan coil <b>unit</b> that is used in classrooms and is designed to use a fan to blow outside air across a coil, to condition and ventilate the space which it is serving.	<p><b>Each classroom</b> is provided with heating and/or cooling via a rectangular unit positioned on the exterior wall of the classroom. Univents may draw from interior room air and exterior fresh air for filtration, and tempering, prior to discharge into room.</p> <p><b>Two Pipe System</b> Only two pipes feed critical equipment making either heating OR cooling possible, not both</p> <p><b>Four Pipe System</b> Both heating and cooling can occur.</p>
<u>Ducted systems:</u>			
AHU	Internal Air Handling Units	Air handling units' condition and distribute air within a building. They take fresh ambient air from outside, clean it, heat it or cool it, maybe humidify it and then force it through some ductwork around to the designed areas within a building. Most units will have an additional duct run to then pull the used dirty air out of the rooms, back to the AHU, where a fan will discharge it back to atmosphere.	<b>AHU (Air Handling Unit)</b> Heating and/or cooling is generated by the boiler/chiller and pumped through the mechanical AHU, which may be located in various rooms (i.e. mechanical room) or spaces (i.e. ceiling cavities) within the building. The AHU provides heated or cooled air to the occupied space(s) or to VAVs.
RTU	Roof Top Units	A rooftop <b>HVAC</b> unit, or <b>RTU</b> , works very similarly to most indoor systems: They provide heating or cooling to an area by treating the air that passes through it and then circulating that air. In particular, a rooftop unit is an air handler – the part of the system that conditions the air and circulates it.	Heating and/or cooling is provided from a mechanical unit located on the roof which uses an electrical coil or gas burner/compressor and condenser to provide warm or cool air to the occupied space. Each unit contains an economizer which regulates the percentage of outside air brought in. Factors such as outside temperature, relative humidity, and carbon dioxide (monitored by sensor units located in or on the RTU), may affect the volume of fresh air intake and, if needed, may be adjusted.
VAV	Variable Air Volume Units	The <b>VAV</b> Zone Controller has a built-in actuator and maintains zone temperature by operating the terminal fan and regulating the flow of conditioned <b>air</b> into the space.	<b>VAV (Variable Air Volume)</b> VAVs provide heated or cooled air to classrooms in newer schools without Univents. The VAV uses an actuated damper to control the supplied air to the space. Some have coils which reheat or cool the air to individual occupied area set points.

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DOAS	Dedicated Outside Air Units	A dedicated outdoor air system (DOAS) is a unit supplying cooled, dehumidified outside air to the building in summer and heated outside air in the winter. The system can also include a total energy wheel.	
MAU	Make Up Air Unit		A dedicated mechanical unit that serves the building's fresh air needs
DCV	Demand Controlled Ventilation	A ventilation system capability that provides for the automatic reduction of outdoor air intake below design rates when the actual occupancy of spaces served by the system is less than design occupancy.	
Other Terms			
MERV	Minimum Efficiency Reporting Value	An air filter's minimum efficiency reporting value (MERV) rating measures how effectively the filter stops dust and other contaminants from passing through the filter and into the air stream. Although ASHRAE does not recommend a specific MERV filter rating for preventing COVID-19 transmission, the organization suggests that upgrading systems in non-healthcare facilities to MERV-13 or the highest achievable level can be a worthwhile step in emergency response plans	
HEPA	High Efficiency Partical Air (filter)	This type of air filter can theoretically remove at least 99.97% of dust, pollen, mold, bacteria, and any airborne particles with a size of 0.3 microns (µm).	
RH	Relative Humidity	A measure of the moisture in the air, compared to the potential saturation level.	
UV	Ultra Violet		
HVAC	Heating Ventilation and Air Conditioning		
IWave	I wave air purifiers	An iWave air purifier installs in the air conditioning system to help clean the air in spaces. When air passes over the iWave, ions produced by the device reduce pathogens and other airborne particles, creating a healthy environment without producing any harmful byproducts.	

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		<b>Building Tiers</b>	
Tier 1 schools have the newest ventilation systems that use various ducted systems			
Tier 2 schools use Univents			
Tier 3 schools have no ventilation system and depend on windows for ventilation. New units have been installed to ensure air exchange.			
	<b>Tier 1 buildings:</b>	<b>Tier 2 Buildings:</b>	<b>Tier 3 buildings</b>
	<b>13 buildings</b>	<b>32 buildings</b>	<b>6 buildings</b>
	Boland	Balliet Elementary	Brightwood
	Brookings	Balliet Middle	Homer
	Chestnut	Beal	Kensington
	Commerce	Bowles	Springfield Alternative Campus
	Dryden	Brunton	Springfield High
	Early Childhood Center	Central	Liberty Prep
	Forest Park	DeBerry	SSARC
	Harris	Dorman	Springfield Conservatory of the Arts
	Putnam	Duggan	Springfield Public Day Middle
	Rebecca Johnson	Ells	
	Sci tech	Freedman	
	STEM Middle	Gerena	
	Van Sickle	Glenwood	
		Glickman	
		Indian Orchard	
		Kennedy	
		Kiley	
		Liberty Elementary	
		Lincoln	
		Lynch	
		Milton Bradley	
		Pottenger	
		Public day Elementary	
		Public Day High	
		South End	
		Sumner	
		Talmadge	
		Walsh	
		Warner	
		Washington	
		White ST	
		Zanetti	