

Virtual Building and Grounds Sub-Committee Report  
Friday, September 18, 2020  
Broadcast from the Media Arts Studio  
454 Broadway, Cambridge, MA

Called for the purpose of discussing the COVID-19 Safety & Facilities Manual, and the ventilation metrics and recommendations in particular.

Members Present: Chair José Luis Rojas Villarreal, Member Fantini,

Also Present: Mayor Siddiqui, Member Weinstein, Member Rachel James Maloney, Chief Operating Officer, Joanne Johnson, Operations Assistant, Vedad Konjic, Facilities Director, Maisha Rounds, Fletcher Maynard Principal, Chris Gerber, Kennedy Longfellow Principal (standing in for Principal Sarah Marrero of Amigos), Robin Harris, Family Engagement and Partnerships, Rowan Marcus, IT, Maureen MacFarlane, Legal Counsel, Claire Spinner, Chief Financial Officer, B Kim, Educational Liaison & Policy Advisor to Mayor's Office, Tracy Rose-Tynes, Nurse Manager for School Health Services, Interim Associate Chief, Dr. Jill Crittenden and Dr. Jaime Liechtenstein, Dan Monahan, Dr. Joseph Allen, Brendan Roy, Construction Manager

Chair Rojas began the meeting at 12:00pm with reading the notice to participate as well as going over the agenda.

He proceeded to give a synopsis and context around the meeting: That Adoption of the Safety & Facilities Manual is a key component of the contingencies for the approved reopening model to move forward. A central component of this analysis is agreeing on clean air standards for each room and only using rooms that meet those criteria. Important to agree on metrics for air ventilation and measures taken to meet/exceed those metrics.

#### Review topics to discuss and community questions

- COVID-19 Safety & Facilities Manual
  - Ventilation metrics and recommendations to achieve and exceed them.
  - Experiments using dry ice: mechanical air exchanges + air exchanges through windows and fans (+ air exchange equivalents through air filters).
  - Additions to masks and other slight changes
  - Living document, that once adopted by SC, will continue to be updated.



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Mitigation with open v

Chair Rojas yielded the floor to Jim Maloney who gave a thorough history and status update as to where the District is with the COVID-19 Safety & Facilities Manual, and the ventilation metrics and recommendations.

Dr. Jaime Lichtenstein presented to the group on Ventilation Mitigation with open windows going in depth to the breakdown of the Air Changes per hours for specific classrooms, citing examples and modification strategies.

Jim Maloney updated the group that the District has engaged an engineering firm to do the specification for the balancing of all the building. They have ID'd room that have been reclaimed and if they are not properly ventilated they will not be used.

Chair Rojas introduced Dr. Joseph Allen, Assistant Professor of Exposure Assessment Science and Director of the Healthy Buildings Program at the Harvard T.H. Chan School of Public Health. Who proceed to present, "Healthy Buildings, a program from the Harvard T.H. Chan School of Public Health." Which broke down, COVID 19, healthy school, 9 foundations of healthy buildings, COGFX study, climate co benefits. Noting that he has been advising multiple stakeholder of reentry and safety.



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Brendan Roy asked about the air exchange rate and wanted clarity. Do you factor out the larger space when calculating rates for classrooms.

- Dr. Allen answered it is, typically it spoken about air exchanges rate in home, now we are talking about clean air also through filters. Typically, they are talking about outdoor air we are talking about clean air. We are speaking about COVID and there is a larger conversation to be have about higher ventilation rates and its benefits. Clean air removes delusion and filtration. We are talking about smaller volume spaces.
- Dr. Lichtenstein added that she was quoting the classrooms from the study.

Dr. Lichtenstein asked what is the best way to use the Carbon Monoxide monitor filter.

- Dr. Allen answered that a monitor will give you a really good outdoor air ventilation rate, count number of scholars, volume of the space and get your data and what outdoor ventilation rate but it doesn't count filtration.

Dr. Jill Crittenden inquired where should the HEPA filters be placed in order to avoid dead zone?

- Dr. Allen replied that the general Guidance you want in central to the classroom. The ones that are sized correctly are circulating the air enough. Dead Zones won't be an issue. Mask wearing will be the most helpful in addition to this safety protocols. You want to manage air flow.

Dan Monahan asked how does the AHS rates interact with the occupancy in the classroom? Reminded the panel that social distancing is risky with teachers and students.

- Dr. Allen replied that we have built in protective factors, derived (4 to 6 AHS per hour) assumed typical occupancy density as defined by ASHRAE standards, if you de densify you are getting the benefit. It is optimal to keep it at this rate. Reminded that the code for school is 3 exchanges per hour. From an exposure risk standpoint. He is for the lesser distance when universal masking and handwashing are used.

Jim Maloney wanted clarity about the 6 feet distancing that is currently in place for the cohort that will be returning on October 13 and thinking about the future with relaxing the social distancing to 3 feet for a larger amount of students to return.

- Dr. Allen replied that with the other safety controls and universal masking in place distancing matters less and there still can be protection, the risk calculus is low and manageable, doesn't make sense from the mechanistic or epidemiological literature.

Tracey Rose Tynes asked about contract tracing and the 6-foot distancing and wanted input about the potential to lessen the distancing.

- Dr. Allen responded that you are managing the exposure risk and if there is a probable case, is being cautious with the interactions and slow the spread. Contract tracing and setting up a classroom are things to keep in mind.

Member Fantini what is your recommendation for co2 testing protocols? Asked about first floor windows and their safety standards with the specific opening requirements.

- Dr. Allen answered that based on current ventilation rates, sounds like there will be no issue and good shape, as well as the other safety protocols in place, in terms of verifying, if you are getting your units balanced and measured, you have information at hand with their readouts, the monitor can be used as a screening tool. If there is a pressure differential air will move with the more inches open will make a difference.

Vedad Konjic asked about the pending seasons, specific winter to exhaust our systems, should the district consider the ratio of 28 fresh/outdoor air.

- Dr. Allen answered that the priority is bringing in the freshest air outdoor as possible. Go as long as you can to maximize the freshest air possible, the reliance of Merv 13 filters and portable air cleaners would be ok to par that back go as long as you can. Keep prioritize the outdoor air. It is reasonable to count 80% is protective.

Dr. Jaime Lichtenstein asked if he had an opinion on Box Fan placement?

- Dr. Allen answered the further apart the better, right near each other could short the out. That air will find its way out.

Chair Rojas asked what is our threshold number for air exchanges per hour for comfort to send children back?

- Dr. Allen answered Target 5 is the what is stated. However, he would be comfortable with a 4 with universal masking and low community spread and with other considerations.

Dr. Jill Crittenden asked about the latest data in terms of transmission for people who are more than a few feet apart? Is there safety in your own office?

- Dr. Allen replied fundamental confusion about particle sizes, the viral particles can extend beyond 6 feet. Airborne transmission beyond 6 feet, the distance is still going to matter, the aerosol plume will be greater, end of the room will be diluted. The masking is going to stop the concentration further away in the room. There is no evidence that people can be affected through the mechanisms. Shared spaces is the outlier.

Mayor Siddiqui thanked Dr. Allen for his time and information and commented on the District plans in place and would like to have a follow up.

Tracey Rose Tynes asked about cumulative exposure for people and COVID, she used the example exposure of maybe three to five minutes with an affected person?

- Dr. Allen answered that lot of what is happening is our best assumptions and risk reductions principles.

Jim Maloney addressed that the Facility and Safety manual is a living document, noted that setting the right standards is appropriate for the type of mask to wear for safety purposes. Clarified that Field trips would only be allowed to local parks.

- Dr. Jaime Lichtenstein The standard in the medical field has been N95 mask, echoed what Jim Maloney said. There should be a minimum standard and this change sets it.

Tracey Rose Tynes remarked that the get well room should have the teachers always be in contact with the school nurse. The nurse needs to make assessment over the phone.

Jim Maloney went on to thank all involved, various stakeholders and said that conversation has already begun about expanding the cohort of students. Remarked that Cambridge is incredibly fortunate for all its resources. Working on a best practices manual for educators for frequently asked questions and information.

Dr. Lichtenstein spoke about equivalent air exchanges per hour, and that language is important for clarification to manual.

Dan Monahan thanks for the best practices manual for the teachers and remarked the way the manual is written is important for the 6-foot distancing, but liked what Dr. Allen thoughts on also how important masking and ventilation is.

Dr. Helen Jenkins remarked that good PPE, good ventilation and having a mask mandate works.

Member Fantini asked about the viability of a flu clinic?

- Tracey Rose Tynes answered that there are flu vaccinations are mandated and flu clinics are scheduled with the anticipation of vaccinating 10K residents.

Chair Rojas reviewed next steps: Consider recommending adoption of Safety & Facilities Manual to the School Committee, Metric ventilation numbers, the best practice manual for the teachers.

Adjourned 12:15pm

Attest:

Jennifer Dever Wood  
Cambridge School Committee