

Montgomery County COVID-19 Ventilation & Filtration Guidance

On October 5, the Centers for Disease Control and Prevention (CDC) updated its “How COVID is Spread” guidance to more clearly identify the role of aerosol transmission in COVID infections. Given the CDC’s recommendation that indoor spaces be properly ventilated, Montgomery County has developed this guidance to help facilities improve ventilation and filtration in occupied spaces. Adoption of any of the recommendations contained in this guidance is voluntary and not required. These recommendations are intended to reduce COVID-19 exposure risk in buildings. They are NOT a substitute for other public health protections (face coverings, physical distancing, etc.), but rather an effort to further enhance the layers of protection. It is acknowledged that some of the below recommendations could increase energy use as well as equipment run time.

The very first step to considering these recommendations is to conduct of an assessment on your building facility HVAC system. The ability of facilities to implement one or more of the following recommendations will vary greatly by the age, type, and design of the HVAC system. Some systems will not be capable of implementing any of the recommendations without overhauls that cannot be achieved in the short term. A time and balance assessment will help a facility owner/operator both understand the capabilities of their system, and also ensure that the existing system is operating in good condition and up to current code requirements and best practice.

Recommendations

1. Check the basic operation of the system to see that it is delivering outdoor air to every space.
2. Disable demand-controlled ventilation (DCV) so that ventilation remains at the peak level even when occupancy is not at its peak. Increase the fraction of outdoor air in systems that recirculate air, provided the impact on indoor comfort is acceptable. This may be done by manually or automatically opening outdoor air dampers. When weather is temperate, the impact is low; consider increasing the use of air-side economizer cycles.
3. Indoor, occupied spaces should attempt to achieve 4-6 air changes per hour (sometimes referred to as ACH), based on total supply air or 15-30 cubic feet per minute (cfm) of outdoor air per person. Higher is better. If not achievable via the HVAC system, consider augmenting with use of open windows and doors.
4. Install a MERV-13 or higher filter into HVAC systems where possible. As an alternative, electrostatic filtration systems can be considered, as long as they do not produce unsafe levels of ozone outside the OSHA permissible limit.
5. Extend HVAC system runtime by running the system 1-2 hours before and after any occupancy, including before, during and after cleaning operations.
6. In high occupancy (>1 person per 100 square feet) settings where the existing HVAC system cannot meet the ventilation or filtration targets above, consider augmenting with standalone HEPA filtration units. Those units are more effective the closer they are to the breathing zone of occupants.