Facilities and Operations has taken multiple actions to ready buildings across campus for occupancy for the coming academic year while the COVID-19 pandemic remains a major public health threat. The CDC, New York State Department of Health, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and Federation of European Heating, Ventilation and Air Conditioning Associations (REHVA) have published recommendations for building owners to protect people and slow the spread during the COVID-19 pandemic that have guided our actions, in consultation with the University’s COVID-19 Task Force and public health experts.

This fact sheet provides the information you need to know related to the specific building systems and preparations at Warren Hall.

**Air Handling and Quality**

The main principles of the recommendations from the CDC and other government and industry associations related to air quality and ventilation include:

- *Ensure ventilation systems are operating properly* – At Warren Hall, Facilities and Operations has completed a comprehensive, ramp-up checklist and upgrades to ensure the building’s air ventilation systems are in full operation. The building systems are running at a frequency that meets or exceeds ASHRAE recommendations. In addition, we have increased the frequency and extent of preventative maintenance measures.

- *Increase circulation of outdoor air as much as possible* – Warren Hall’s has three air handling units serving occupied spaces that recirculate a percentage of outside air. The percentage of outside air is being increased as much as possible, taking into account equipment limitations and the thermal comfort of the building occupants. The building is also served by local fan coil units, small, fan-powered air conditioning units that recirculate room air through the unit to condition the space in which they are located. Fan coil units should remain in continuous operation and set to run at low speed where possible. In multiple-occupancy locations, avoid sitting within six feet of the fan coil unit. Where centralized ventilation is not provided, increase ventilation of the space through open windows and doors where safely possible and allowable by building code.

- *Upgrade air filters to a level efficient at capturing airborne viruses to reduce potential concentration of particles in the air* – At Warren, all air handler units have filters that meet the rating specifications of MERV 13 or higher to be efficient at capturing airborne viruses. Learn more about Minimum Efficiency Reporting Value (MERV). All four of the building’s air handler units had filters upgraded prior to building reopening in order to meet the MERV 13 or higher rating. MERV 13 or higher filters cannot be installed in fan coil units due to physical and performance limitations.
Ventilation has been measured in all classrooms to ensure that requirements for HVAC industry recommended air changes per hour (ACH) are met. ACH refers to the number of times that room air gets replaced every hour with outside air and/or filtered air. During ACH testing and measuring, if the ACH was below the minimum recommended requirement, repairs were made to the ventilation system to bring the ACH to an acceptable level. High-efficiency particulate air (HEPA) filters were installed in certain classrooms to supplement and increase the effective ACH. All classrooms meet or exceed ACH level requirements.

Cleaning and Disinfecting

The COVID-19 custodial plan focuses on enhanced cleaning and disinfecting. Columbia Operations uses Genefect to disinfect high-touch surfaces. Genefect is EPA-approved for use against the virus that causes COVID-19. The new plan meets—and in some areas exceeds—standards issued by the CDC, New York State Department of Health, and OSHA.

- A comprehensive cleaning of Warren Hall was completed prior to the start of the Fall Term.
- Disinfecting high-touch public spaces twice daily, surpassing CDC guidelines, including doorknobs, elevator buttons, handrails, light switches, bathroom fixtures, public phones, and water fountains.
- Electrostatic cleaning in classrooms and public spaces, an enhancement to CDC and NYS Department of Health guidelines.
- Increasing classroom cleaning and disinfecting to twice daily, including tables, podium/lectern areas, floors, chair armrests, door handles and glass, blackboards, erasers and chalk trays, and emptying recycling and trash.
- Increasing steam cleaning of restrooms. Steam cleaning of restrooms disinfects without chemicals, using heat from steam to disinfect and kill germs. This process is an enhancement to CDC and New York State Department of Health guidelines. In addition, we are maintaining negative pressure in all restrooms to sweep air from the room and to minimize fecal-oral transmission from toilet flush aerosol and operating toilet exhausts 24/7 where possible.

In addition to enhanced cleaning, Facilities and Operations has implemented several changes at the building to improve health and safety on campus:

- Converting restroom fixtures to operate automatically. New touchless faucets and flushometers are being installed where possible to improve restroom hygiene.
- Installing hand sanitizer stations. Sanitizing dispensers are located in the main entrance lobby and other highly visible areas.
- **Additional inspection of public spaces in all campus buildings**, increasing inspection frequency to twice daily in lobbies and restrooms, including checking and refilling hand sanitizer, soap dispensers, and paper towel and toilet paper dispensers.

- **Augmenting cleaning supplies.** Supplies in use are rated to disinfect SARS-COV-2 virus.

**Plumbing System Check**

The building systems at Warren Hall have continued operating continuously through the COVID-19 pandemic. The drop in building occupants from typical, however, led to reductions in normal water use. Facilities and Operations completed a comprehensive flush and check of the building’s plumbing system to ensure the system is in working order and to guard against microbial hazards that had the potential to surface due to the reduced activity at the building.

**Signage**

Educational, directional, and safety signage has been installed in Warren Hall. The comprehensive signage is intended to assist physical distancing among building occupants – particularly in high-traffic areas – and remind and encourage behaviors to reduce the spread of COVID-19.

Signage covered several areas, including:
- Health guidance and behavioral best practices
- Circulation and egress
- Max capacities (elevators, restrooms, conference rooms)
- Offices and workspaces
- Queuing areas

**Working With Us**

We are here to serve you. For urgent, emergency service requests, continue to call the Facilities Services Center, 24/7/365, at 212-854-2222. Routine, non-COVID-19 related maintenance requests can be submitted via the online portal at [https://servicerequest.cuf.columbia.edu](https://servicerequest.cuf.columbia.edu). For COVID-19 related requests (signage, furniture, and other related changes) your request should first be discussed with your School or Department’s facilities manager, who will review your request and submit on your behalf. Please consult Warren Hall’s Client Services representative, Kim D’Eustachio, at kd2427@columbia.edu for additional assistance and guidance.

Please keep in mind it may take us a little longer than usual to respond to a non-urgent request, as we are updating our team rotations and staggering shift hours to accommodate physical distancing best practices.

**The expectation is that all of these measures are taken in tandem with the behaviors articulated in the University’s Enhanced Health and Safety Policy to reduce the spread of COVID-19, including wearing a face covering, maintaining at least a six-foot distance from others, and washing hands frequently.**