



Getting **Safely** Back to Work

Maintaining Healthy Office Operations

September 2020

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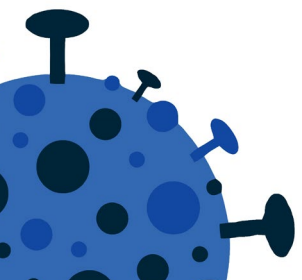
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Overview

The Coronavirus Disease 2019 (COVID-19) that quickly spread to many countries around the world, including the United States, caused a massive upheaval to a largely unprepared business world that had not planned for addressing influenza pandemic events. Almost overnight, non-essential businesses were shuttered and offices were closed to prevent exposure risks as well as to provide for the immediate safety of all employees during the initial wave of COVID-19 in the United States.

Businesses that had traditionally operated out of a physical office space found themselves thrust into a completely remote state of work that relied significantly on technological infrastructure that may or may not have been sufficiently in place at the beginning of the outbreak. For some businesses, the remote situation was satisfactory or at worst a bit inconvenient, but for many other organizations, the virtual situation was extremely challenging and non-conducive for conducting operations efficiently and continues to be so.

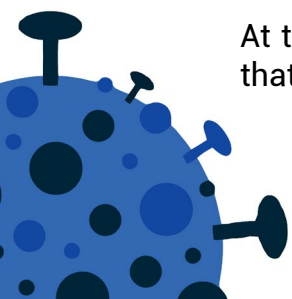
At this time, many of the companies that were forced to quickly transition

into an entirely remote workforce are considering the possibility of reopening their offices and bringing employees safely back to the workplace.

This white paper provides essential information for organizations that have started, are on the brink, or are just thinking about transitioning remote employees back to the office environment. It provides a general overview of all major requirements and controls that need to be in place to do so safely and responsibly in accordance with the guidance of both the Centers for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA).

The paper will also introduce a powerful, one-of-a-kind solution for addressing a crucial component of any strategic plan for getting back to work safely: air filtration and purification.

Air is the most shared resource on any floor in an office environment and to effectively protect employees from transmitting the virus that causes COVID-19, organizations must consider an affordable and robust technology for protecting the air that employees breathe as part of its overall plan for getting everyone safely back to the office to resume healthy business operations.



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Strategic Plan for Safely Returning to the Office

Both the CDC and OSHA have provided extensive guidance and toolkits for preparing workplaces and resuming business operations in the wake of the COVID-19 pandemic.¹ They both recommend that organizations develop a full infectious disease preparedness and workplace response plan. These plans should consider and address the levels of risk associated with particular worksites and the tasks that workers perform at these sites.

Additionally, any strategic plan must include specific policies and procedures for implementing basic infection prevention measures aimed at keeping the workplace safe and healthy for continuing operations. OSHA uses a framework called the “hierarchy of controls” to select ways of controlling workplace hazards that include infectious diseases such as COVID-19.

This framework categorizes recommended actions as either *engineering controls* or *administrative controls*. The CDC also provides an extensive readiness checklist that echoes the same actions as OSHA to effectively resume in-office operations and monitor the workplace to ensure its ongoing safety and healthiness for all returning employees.

Engineering controls generally involve isolating employees from work-related hazards such as the transmission of an infectious disease. These controls mostly reduce exposure to hazards without relying on worker behavior and can be some of the most cost-effective solutions to implement.²

Conversely, administrative controls mainly require action by the worker or employer. These typically include changes to work policy or procedures to reduce or minimize exposure to a hazard such as COVID-19. Below, this paper will breakdown the specific actions that may be taken or considered for each type of control to effectively reopen and continuously protect the workplace for everyone.³

Engineering Controls

Protecting and isolating employees from the transmission of COVID-19 in the workplace environment predominately involves two major engineering controls: physically

distancing people from one another and the use of a high-efficiency air filtration system.

Some of the specific actions that an organization can take to implement physical distancing of people in the office include de-densifying workstations or cubicles where it is possible to do so. An employer might also consider adding special partitions to block viruses that can be transmitted by talking, coughing, or sneezing. These physical barriers might even include clear plastic sneeze guards.

Employers should also consider removing or rearranging common area furniture as well as closing or limiting the use of shared spaces such as lounges, kitchens, and conference rooms. For restrooms it would make sense to limit the number of people that can be in the space at any given time barring emergencies.

Also, controlling specific traffic flows in normally congested or busy areas by marking them as "one way" along with designating specific doorways as "entry only" or "exit only" can be useful in limiting the physical distance or proximity of people to each other in the office.

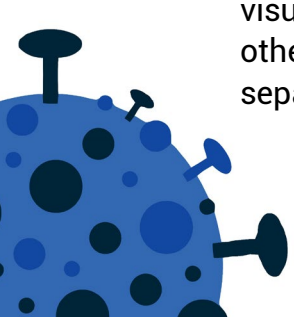
It is also recommended that organizations consider placing visual cues by using signs, tape, or other markings to keep people separated at a safe distance to

minimize the potential for transmission.

Aside from physical distancing actions, the other major engineering control that can provide an extremely robust and cost-effective protection against a virus from spreading in the office is the installation of a high-efficiency air filtration and purification system.

Because the air is a shared resource within an office environment it is highly recommended that organizations seeking to safely resume operations carefully review their current systems and consider making appropriate upgrades. Companies that are serious about air quality and safety should invest in a high-efficiency air-cleaning system designed to protect collaborative environments.

OSHA specifically recommends the installation of high-efficiency air filters along with increasing ventilation rates in the work environment.⁴ To really combat COVID-19, a powerful and high-efficiency air filtration system might include several layers of purification technology that treats air at the point in which it is exhaled, coughed, or sneezed by an employee in an office workspace. This is especially important because in a recent study published as a letter to the *New England Journal of Medicine* it was found that the virus that causes



COVID-19 can remain viable in the air—as an aerosol—for up to three hours.⁵

Administrative Controls

There are a significant number of administrative controls that are recommended by both the CDC and OSHA for getting back to work safely during the pandemic.

For starters, any organization on the cusp of bringing employees back to the office must have a formal communication strategy in place that addresses employee concerns as well as the practicalities of how to stay safe in the workplace. This communication program should ideally include employee training—either virtually or in small groups—aimed at reducing the spread of the virus in the workplace environment.

A COVID-19 coordinator should also be identified for the entire office. This individual will be responsible for all COVID-19 issues and its impact on the workplace. All employees should be made aware of the presence of this person.

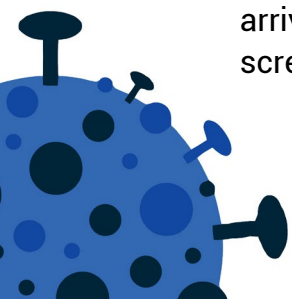
An extremely proactive, but effective, administrative control that some employers may wish to institute in the workplace are conducting symptom and temperature screenings for employees when they arrive at work each day. These screenings should be administered

as privately as possible using touchless thermometers. There could be multiple screening stations in place for employees entering the office.

Organizations thinking about reopening the office and reintegrating employees should also consider a phased or grouped approach to bringing workers back by prioritization based on necessity. Accommodations for vulnerable or high-risk employees should also be incorporated into any policy or strategic plan for getting back to work. This might include assigning duties to vulnerable employees that will minimize contact with others as much as is reasonably possible.

Furthermore, staggering work shifts and downsizing in-office operations along with cross-training other employees to perform essential functions may also be components of an overall strategic plan. A policy should also be implemented that limits in-person meetings and gatherings to a small number at the office. There should also be—for as much as it can be reasonably enforced—a limitation placed on large after work gatherings of employees as well. Non-essential business travel should also be curtailed or severely limited.

Personal Protective Equipment (PPE) should be provided to employees as needed based on their job function



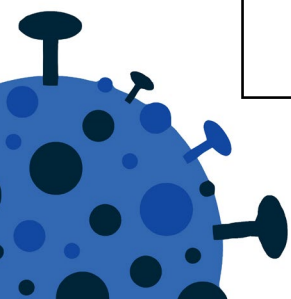
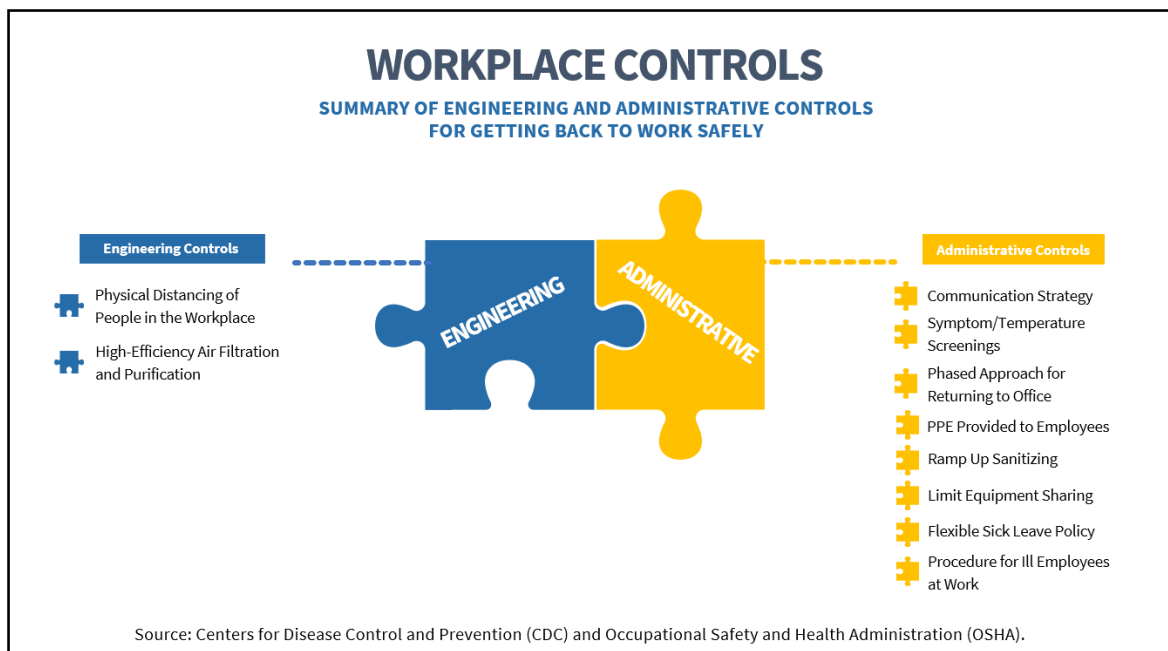
and level of risk. This may include masks, tissues, disposable disinfectant wipes as well as cleaners and sprays that are effective against COVID-19. A decision will also need to be made about whether face masks will be required and if so to what extent.

Office cleaning, disinfecting, and sanitizing will need to be significantly ramped up. Written policies with specific cleaning protocols should be established for prioritizing and improving janitorial services—especially in the common areas and restrooms. Organizations should consider purchasing no-touch garbage receptacles and hand sanitizer stations for employee use. In the same vein, there should also be limited equipment and tech sharing among employees at the office. Each individual should have their own

laptop, mouse, keyboard, headset, etc. to avoid the inadvertent transmission of disease.

A flexible sick leave policy—that is non-punitive in nature—should be established. Sick leave policies and practices should be supportive and flexible for both the employee and fully take into account family members at home that might also be sick or showing symptoms that might be related to COVID-19. To protect the workplace, employees should also be actively encouraged to stay home if they are feeling unwell or sick.

Policies and procedures should also be put in place for what to do if an employee becomes ill at the office. At a minimum that employee must be immediately isolated from others in the workplace.



A large blue square with a white number "3" in the center, set against a grey background.

The Clean Zonez Panels Solution

The virus that causes COVID-19 is thought to spread mainly from person-to-person. Specifically, between people who are in close contact with one another (within about 6 feet) and through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are in close proximity in the workplace and possibly be inhaled into the lungs.⁶ As was previously mentioned, these aerosolized droplets can remain viable for up to 3 hours if not treated.⁷

Both the CDC and OSHA have recommended a plethora of controls for getting back to work safely, but some are more critical than others when it comes to employees sharing office space and air during a modern-day unprecedented pandemic.

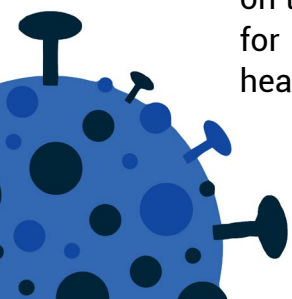
The engineering controls that were outlined earlier in this paper focused on two of the most vital components for keeping employees safe and healthy once they have returned to

the office: physical separation and distancing combined with a high-efficiency air filtration and purification system. Accordingly, organizations may wish to give serious consideration to a powerful one-of-a-kind solution that is a hybrid of both of these important safety controls—Clean Zones Panels.

Clean Zonez Panels is a scientific, patent-pending technology that combines physical blocking between coworkers with a robust air filtration and purification system. It utilizes thermoformed PET panels that can be easily adjusted above the worksurface of an employee's space with its own individual air filtration system.

The panel acts as a barricade while creating a more desirable workspace by absorbing noise and minimizing surrounding distractions in the environment. At the same time, the individual air filter that attaches to the panel has intake fans that pull air through a connected five-layered purification system that includes a HEPA filter for removing allergens and harmful bacteria along with an ultraviolet (UV-C) light that treats infected air at its source by inactivating harmful viruses like the SARS-CoV-2 virus that causes the COVID-19 respiratory disease.

While physical blocking or barricading is limited on its own, when combined with an air filtration



unit that purifies air at the point in which it is exhaled, coughed, or sneezed, can deliver an extremely powerful workplace solution for preventing the transmission of COVID-19 in the office. Not even heating, ventilation, and air conditioning (HVAC) are capable of cleaning air directly at the source like this system is designed to do.

The air filtration system is connected by five layers of protection that include a primary anti-microbial filter, a true high-efficiency particulate air filter (HEPA), a honeycombed activated carbon filter, a cold catalyst filter, and a ultraviolet light (UV-C) sterilization. The use of ultraviolet light irradiation is considered a highly versatile viral inactivation step that should be included in any air purification process. Hospitals have used similar technologies for decades to sterilize equipment and surgical tools.

Ultraviolet light has been scientifically proven to be a disinfectant that has the ability to inactivate microorganisms, including viruses, by breaking bonds in an organism's genome and structure.⁸ UV-C has an extended history of research and testing along with a decades-long trail of science proving its effectiveness in disrupting the DNA in viruses and germs that result in them being unable to replicate themselves and create infection. Clean Zonez uses the 253nm

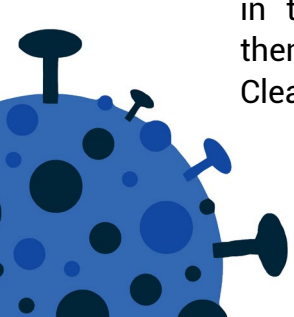
wavelength of UV-C light proven by the International Ultraviolet Association (IUVA) to be one of the most effective at disabling the virus that causes COVID-19 disease.⁹

While no single technology has been identified as one-hundred percent effective in mitigating any virus, Clean Zonez panels lower the numbers of virus particles and droplets in the air which significantly reduces the potential for transmission at the office.

Compared to other technologies which do not treat infected air at the source, Clean Zonez Panels are significantly less expensive and affordable. In fact, this solution can save companies thousands of dollars compared to the average cost of reconfiguring workspaces to bring people back to work.

While this product is the only solution in the world that blocks, captures, and treats contaminated air before it can be shared, it also provides other benefits beyond protecting employees from the virus that causes COVID-19.

Bad air in the workplace affects employee productivity and health. The benefits of clean air have also been shown to reduce illness during allergy and flu season. According to the American College of Allergy, Asthma, and Immunology (ACAAI), allergies are the 6th leading cause of chronic illness in the U.S. with an

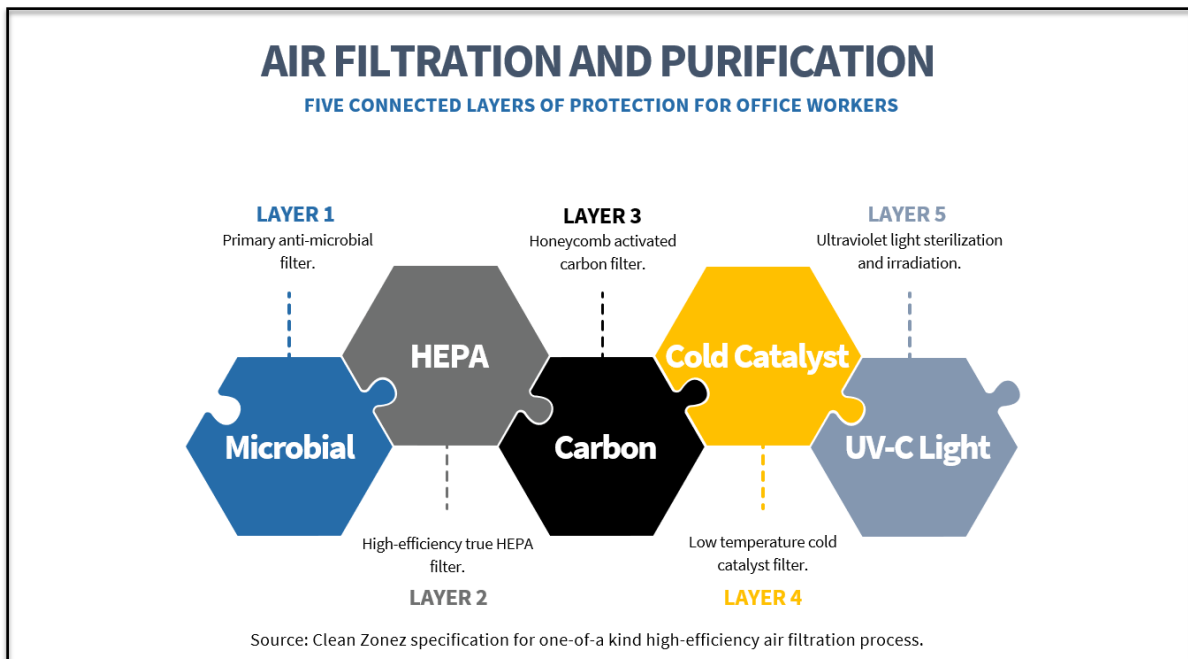


annual cost in excess of \$18 billion. More than 50 million Americans suffer from allergies each year.¹⁰

Clean air in the workplace is noticeable, it makes employees feel safer as well as more appreciated and valued. In a recent study conducted by the School of Public Health at Harvard University, it was concluded that when office workers were exposed to bad air quality their cognitive functions were significantly reduced resulting in dramatic impacts on decision making.¹¹

Clearly it makes sense to place Clean Zonez Panels at each workstation in the office environment to provide superior protection for employees from the deadly COVID-19 respiratory disease. However, in doing so, employers will also find

that the added benefits of circulating purified air throughout the office environment will increase overall employee wellness, productivity, and performance for years to come—making it an extremely worthwhile investment.



¹ See “Resuming Business Toolkit—Coronavirus Disease 2019 (COVID-19),” U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) at <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/Resuming-Business-Toolkit.pdf>. Also see “Guidance on Preparing Workplaces for COVID-19,” U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), OSHA 3990-03 2020 at <https://www.osha.gov/Publications/OSHA3990.pdf>.

² See “Guidance on Preparing Workplaces for COVID-19,” U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), OSHA 3990-03 2020, pages 12-13 at <https://www.osha.gov/Publications/OSHA3990.pdf>.

³ Ibid., page 13.

⁴ Ibid., page 12.

⁵ See “Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1,” *New England Journal of Medicine* at <https://www.nejm.org/doi/full/10.1056/NEJMc2004973>.

⁶ See “Guidance on Preparing Workplaces for COVID-19,” U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), OSHA 3990-03 2020, page 5 at <https://www.osha.gov/Publications/OSHA3990.pdf>.

⁷ See “Aerosol and Surface Stability of SARS-CoV-2 as Compared with SARS-CoV-1,” *New*

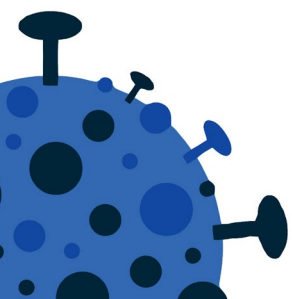
England Journal of Medicine at <https://www.nejm.org/doi/full/10.1056/NEJMc2004973>.

⁸ “UV 101: Overview of Ultraviolet Disinfection,” International Ultraviolet Association, 2020 at <https://iuva.org/resources/covid-19/UV%20101%20-%20Overview%20of%20Ultraviolet%20Disinfection%20-%20White%20Paper.pdf>.

⁹ See “SARS-CoV-2 UV Dose-Response Behavior,” International Ultraviolet Association at <https://iuva.org/resources/covid-19/SARS%20CoV2%20Dose%20Response%20White%20Paper.pdf>. This white paper states in relevant part that ultraviolet (UV) radiation is a broad-spectrum antimicrobial agent that has been applied successfully in a wide range of disinfection applications. UV radiation in the wavelength range of 200nm and 320nm, sometimes referred to as “germicidal” or “microbial” UV radiation, is known to cause damage to DNA and RNA that results in inactivation of microorganisms and viruses.

¹⁰ See “Allergy Facts,” American College of Allergy, Asthma, and Immunology (ACAAI) at <https://acaai.org/news/facts-statistics/allergies#:~:text=Allergies%20are%20the%206th%20leading,suffer%20from%20allergies%20each%20year>.

¹¹ See “Poor Indoor Air Quality May Dull Cognitive Abilities,” Harvard University, T.H. Chan School of Public Health at <https://www.hsph.harvard.edu/news/hsph-in-the-news/indoor-air-quality-cognitive-abilities/>.





About

Zonez is a new brand and a subsidiary of Allied Modular Building Systems, Inc., that has been building quality modular spaces for over 30 years and has worked with almost every Fortune 500 company. Allied has successfully completed over 20,000 plus projects to date around the world ranging from \$10,000 to upwards of one million dollars on each project.

Utilizing the Allied engineering expertise, Zonez has developed—*Clean Zonez Panels*—a powerful patent-pending technology that combines physical blocking between coworkers with an air filtration system to treat air at the point in which it is exhaled, coughed, or sneezed. Intake fans pull air into five layers of air filtration including HEPA filtration and ultraviolet light sterilization.

We know what we are doing, and we know how to do it well. If you would like to learn more about how we can help your organization and employees get back to work safely in the new COVID-19 environment, we would be pleased to hear from you.

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