

# STRATEGIES TO REDUCE COVID-19 EXPOSURE IN FACILITIES

The following strategies have been shown to reduce the transmission of infectious diseases through airborne particles. While many technologies claim to increase occupant health and safety, those listed below have solid evidence to support a substantial value addition to your project.

Implementing these strategies have minimal upfront costs, but these minor additions can be highly leveraged for occupants' health and safety. Often, these costs are only a fraction of a percent of the entire construction cost of the building. In addition, this investment has a high return by increasing productivity and health of building occupants. While the future cannot be predicted, it is likely that national standards will be updated in the wake of this pandemic to include or confirm the use of these technologies in general construction practices.



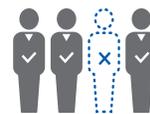
**HIGHER  
PRODUCTIVITY**



**INSTILL  
CUSTOMER  
CONFIDENCE**



**LOWER  
HEALTHCARE  
COSTS**



**REDUCED  
ABSENTEEISM**



**WIN  
TENANTS**

## Increased Mechanical Filtration Efficiency

*There is significant evidence of health benefits for higher filtration strategies*

ASHRAE Standard 62.1 requires minimum MERV 8 filters for commercial buildings.

- Option 1: MERV 13
  - Proven to reduce risk of infectious diseases
  - LEED credit
  - Established industry efficiency rating standard
- Option 2: Electronic Filters
  - Reduces operational cost
  - Potential to reduce risk of infectious diseases
  - No efficiency rating standard

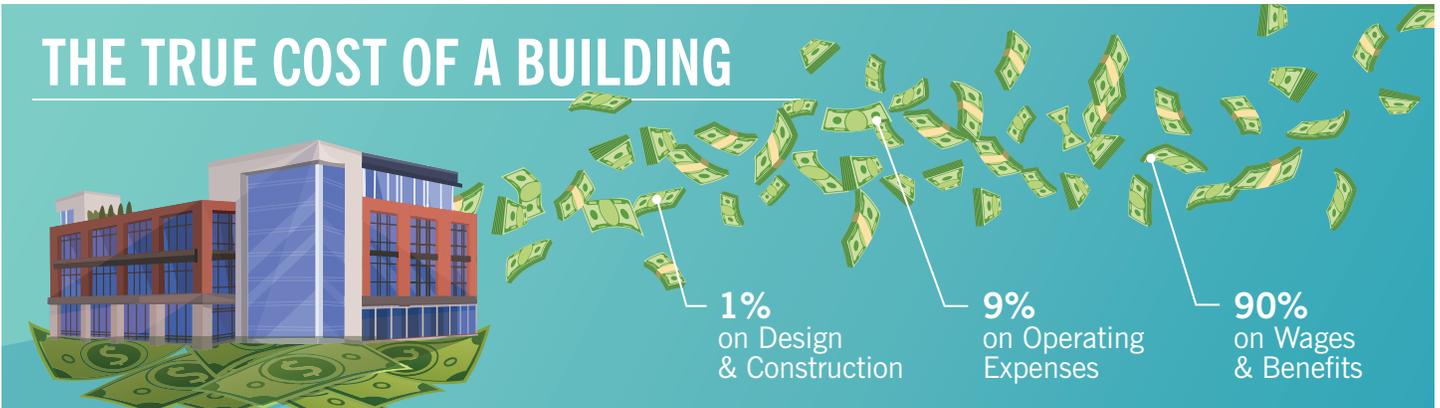
## Ultraviolet Germicidal Irradiation (UVGI)

*UVGI disinfection has been proven to be highly effective in inactivating microorganisms.*

- Option 1: Coils and drain pans
  - Mold often grows on cooling coils in HVAC systems due to moisture condensation and can be reintroduced into the building's indoor air. Installing UV lamps near coils and drain pans can significantly improve the air supplied by the HVAC system.
- Option 2: In-duct airstream disinfection
  - In-duct UVGI system is more effective than UVGI coil disinfection, but constructability and cost limit its application.



## THE TRUE COST OF A BUILDING



### Humidification

Latest research shows decrease in infections

- Include humidifiers that target a minimum 40% relative humidity
- Dry air can create opportunities for pathogens to spread rapidly in mechanically ventilated spaces
- Research has shown humidification during the winter reduces number of influenza infections in schools, nursing homes
- In operating rooms, it creates a more sterile environment

### Airflow Best Practices

Engineering review can help improve prevention efforts

- Increased ventilation dilutes the pollutants in the space and provides better IAQ
- Limit air flowing from lower quality air areas into higher quality air areas
- Slightly pressurize spaces adjacent to lobbies or high traffic areas to limit contaminants migrating from high traffic areas to other spaces

### Promising Technologies

Other technologies, such as bipolar ionization and photocatalytic oxidation, are available. TDIndustries is ready to discuss these alternative innovations as well, and ways to implement them for potential benefit.

As always, the TD Engineering Team is ready to collaborate and solve complex, fast-track issues with you and your design team.

For more information, contact Gary Roden at [Gary.Roden@TDIndustries.com](mailto:Gary.Roden@TDIndustries.com), or call him at 214-803-8291.

## Let Us Help Protect Your Facility

