

## Case Study

# Assessment of Existing Ventilation Conditions and Comparison to Recommendations for Reducing Risk of Virus Transmission

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[Harvard T.H. Chan School of Public Health, in a June 2020 report titled “Schools for Health: Risk Reduction Strategies for Reopening Schools”](#), defines three (3) routes of SARS-CoV-2 (the virus that causes COVID-19) transmission supported by models and case studies which include close-contact transmission, long-range transmission, and [fomite transmission \(i.e., transmission of the virus from an inanimate object\)](#). (Harvard T.H. Chan School of Public Health Healthy Buildings Program, 2020). As scientific evidence continues to support the hypothesis that SARS-CoV-2 can transmit from respiratory droplets and via airborne particles in the indoor environment, RHP’s group of Certified Industrial Hygienists (CIHs) and Occupational Health and Safety (OHS) science professionals continue to assist schools and businesses with assessing existing ventilation conditions and comparing current conditions to best-practice guidance for reducing the risk of COVID-19 transmission ([cdc.gov](#); [Van Doremalen `et. al. 2020](#); [wsj.com](#); [cidrap.unm.edu](#)). Businesses and schools continue to search for COVID-19 risk reduction and transmission solutions based on scientific and professional best practice guidance and, as described in the following case study, RHP continues to work closely with clients to provide defensible guidance and identify customized site specific solutions to maintain a healthy indoor environment.

In October 2020, RHP conducted an on-site assessment of existing ventilation conditions within a Milwaukee, Wisconsin High School. The school, which was originally constructed in 1929 and is approximately 124,000 gross square feet, contains four mixed-use floors which include a cafeteria, maintenance areas, classrooms, common hallways, laboratories, teacher lounges, a gymnasium, and an auditorium theater. The school’s ventilation system was divided into three (3) sections (or zones) of the building, one (1) ventilation system for each zone.



Prior to the onsite assessment, RHP met with school and facility staff to gather site specific information and collectively discuss scope of work options to reach the schools primary objective of safely returning



filtration units. In addition, RHP provided qualified and trusted mechanical, engineering, and construction referrals if the school opted to make significant changes to the building and/or HVAC system.

By making these changes, the school now has confidence that the ventilation system is aligned with current best practice guidance established by organizations and experts in the field of public health sciences for reducing the risk of virus transmission.



As the COVID-19 pandemic continues and more information becomes available, we recommend staying informed and current with regulations, industry guidance and best practices. Effective solutions should not be limited to a single control mechanism or practice, instead multiple control measures should be implemented to add layers of protection such as social distancing, face coverings, personal hygiene, and engineering controls that work together to reduce risk.

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