

6/5/2020

## Healthy Design for the New Driscoll School

Design strategies to reduce the risk of transmitting communicable disease within buildings have been well established over the years, primarily for hospital design. Hospital Acquired Infections (HAI), which infect people while visiting or receiving care for other medical conditions is a major problem, and many recommended strategies to reduce HAIs are applicable to schools as well as health care facilities. Links to papers on the subject are provided below.

Primary strategies to reduce the transmission of disease within a building fall into 2 primary categories – design and culture. Most of these are by now well known to the public because of the Covid 19 pandemic. Primary strategies include:

### Hand Hygiene

Frequent hand washing remains **the single most important intervention** in infection control. The CDC recommends using alcohol-based hand sanitizer when your hands are not visibly dirty because it is potentially more effective at killing hand germs and less irritating and drying to your skin than soap. Plus, it's easier to use. The Driscoll design is far ahead of most public schools in addressing this by placing sinks in all classrooms and hand washing stations facing the cafeteria. Sanitizer stations at all entries and “Please wash hands” signs over sinks may be added.

### Clean and Cleanable Surfaces

All surfaces that people touch should be smooth (avoiding crevices) and be able to withstand chemical cleaners / disinfectants. These should be properly cleaned, disinfected, and maintained following adequate procedures for routine care. Use of copper alloys in door hardware and railings may be considered for their inherently anti-microbial properties.

### Indoor Air Quality

The new Driscoll will have a displacement ventilation system which provides both excellent pollution removal and a high percentage of fresh air to all rooms. Several additional Indoor Air Quality measures that will be incorporated into the design will follow well established LEED requirements including:

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- Indoor Air Quality Performance - Based on ASHRAE 62.1- 2010, airflow and exhaust measurement
- Tobacco Smoke Control - Requires site and building signage
- Enhanced Indoor Air Quality Strategies - Walk off mats, MERV 13 filters, negative pressurization; CO2 monitoring
- Low-Emitting Materials throughout
- Construction Indoor Air Quality Management Plan - Based on SMACNA measures
- Indoor Air Quality Assessment - Achievable through flush-out or IAQ testing

### Social Distancing

The new Driscoll will have approximately 25% more GSF per student than the existing building. This will improve social distancing. Measures currently proposed to allow restaurants in Massachusetts to reopen such as limiting the number of people at a table, table separation, and partitions between tables may be appropriate to consider in the new school. These measures would reduce the number of students eating together in the cafeteria, and could mean that 4 seatings rather than 3 would be employed for lunch, or potentially that some students might eat in their classrooms.

### Testing

The new Driscoll's design includes separate entries for students arriving from Washington Street, Westbourne Terrace, and Pre-K, K. This allows significantly more queueing space for temperature taking on arrival than a traditional single entry.

### Culture

Moving into a new school building means creating a new culture within. Students, teachers, staff, and administration will all start fresh in the new building. This will help establish and ingrain a culture of protecting others from disease through their actions.

### Links for further information:

<https://www.smithgroup.com/perspectives/2019/working-to-reduce-hais-how-design-can-support-infection-control-and-prevention>

<https://www.performancehealth.com/articles/hospital-acquired-infections-hai-prevention-tips-products>

<https://www.hfmmagazine.com/articles/1805-copper-materials-for-health-care-interiors>

<https://www.epa.gov/indoor-air-quality-iaq/what-merv-rating-1>