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DESIGN CONSIDERATIONS FOR  
K12 FACILITIES POST PANDEMIC

With the residual impact and the changing needs of the market environments we support – workplace, industrial, learning, healthcare, science + technology, living and community – we continue to refine our approach, services and solutions. With safety and well-being at the forefront of these industry sectors, we are researching, innovating and sharing ideas on how we can deliver design solutions to support our clients' unique and evolving needs.

Our design experts are asking probing questions to achieve desired flexibility, quantify capacities and assess technologies that deliver forward looking and high-performing design solutions.

**At EUA, we are passionate about what we do. We believe that design has the ability to elevate people's potential. Now, more than ever, our pace of innovation remains ready to serve our clients.**

# THIS GUIDE

EUA understands that these are incredibly difficult times for school districts. You and your leadership team confront a series of challenging decision as you grapple with the implications of the COVID-19 pandemic. As your trusted architectural and facilities planning partner, rest assured that we stand at the ready to support your district now and in the weeks, months and years ahead. Like you, protecting the health and safety of your staff and students is always our top priority. This easy-to-use guide explores potential ways school design may be impacted by COVID-19. We outline both initial strategies for modifying existing facilities as well as design considerations for future facility planning.

The guide is focused on seven main areas:

- Learning Spaces
- Building Circulation
- Main Office + Health Room
- Common Spaces
- Restrooms
- Staff Resource Spaces
- Other Considerations

As updated CDC\*, WHO, State and local public health guidance becomes available, we will continue to provide insight and potential design solutions to adapt to those recommendations.

Each school district has unique needs and availability of financial resources. We understand that the physical and financial impacts of implementing the strategies described in this document may not be possible for all districts. However, we believe that a thoughtful approach to considering and implementing potential solutions will help ensure each district leverages resources strategically and appropriately to address short and long-term ramifications of this pandemic.

Like you, we do not have a crystal ball to tell us what the ultimate solutions could be. Instead, we have chosen to explore tangible ways that our approach to school design can, and likely will, change as we move forward. Our approach is not a one-size-fits-all. We are committed to bringing ideas and options for you to evaluate and decide what is right for your students, staff and community. We look forward to discussing these ideas with you.

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\*CDC recommendations as of 5/19/2020



## LEARNING SPACES

Student learning spaces come in many shapes, sizes and configurations. Core and exploratory learning spaces have the highest percentage of utilization by students throughout the day. Designing new spaces and renovating existing spaces for resilience and adaptability are fundamental for functional education delivery. Learning spaces have historically been designed around a 900 square foot room that can accommodate approximately 28 - 30 students. Overall, student population in each learning space may need to be reduced based on CDC, State and Local recommendations for physical distancing. The reduction of student population in a typical learning space means that more areas of the school will need to be utilized for core subject or other exploratory learning.

As you consider areas that could be used as core learning spaces, think about those spaces shown in your capacity and utilization studies that have low overall utilization or that may only be used a few periods each day or week. These might include, commons, music areas, art rooms, collaboration spaces, technical education areas, libraries/ LMC, gymnasiums, auditoriums, specialty classrooms and outdoor spaces.

When repurposing learning space to accommodate a different function from what was originally intended, the following could be considered: acoustics, lighting levels (both artificial and daylight), HVAC, access to electrical outlets and furniture.



## FACILITY CONSIDERATIONS | LEARNING SPACES

### RENOVATION OPPORTUNITIES

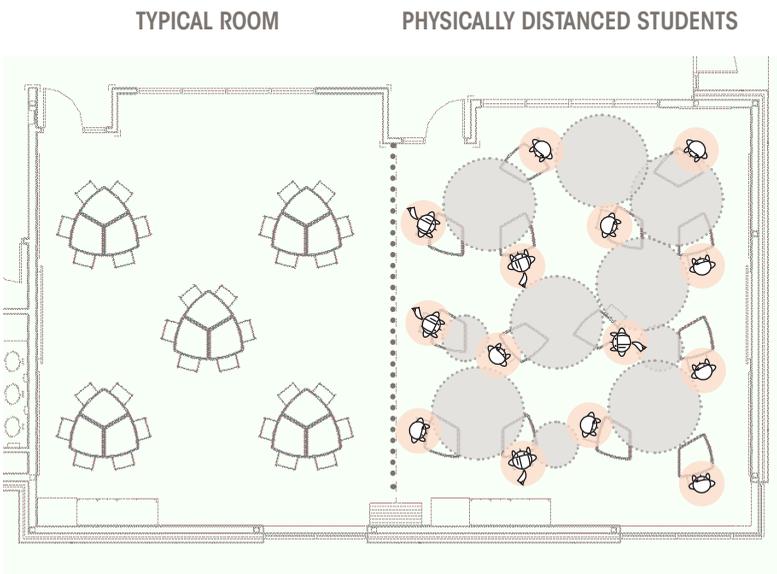
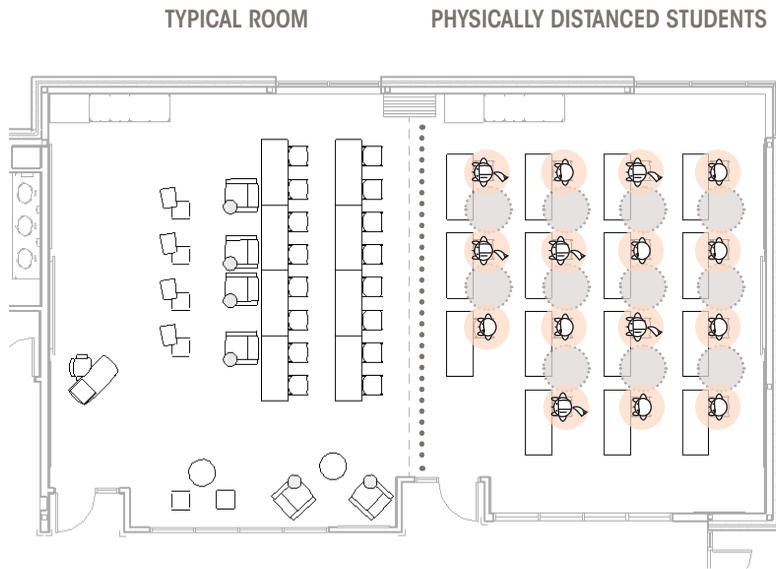
- Conduct a capacity study for your learning spaces and associated support spaces.
- Repurpose or utilize underutilized spaces.
- Utilize furniture that is easy to move in order to maximize flexibility.
- Subdivide large spaces into small learning areas.
- Provide temporary classrooms on unused athletic fields + green space.
- Minimize student and teacher storage in classrooms to create more useable floor area.
- Utilize collaboration or break-out areas as scheduled areas for students.
- Create sheltered outdoor spaces.

### FUTURE DESIGN OPPORTUNITIES

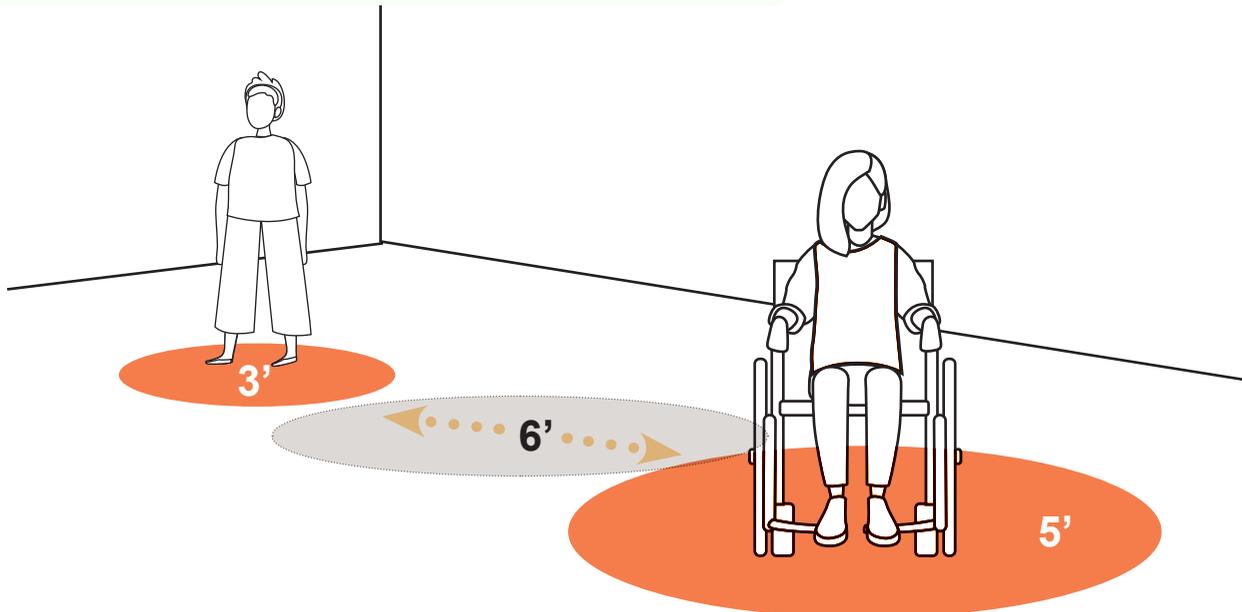
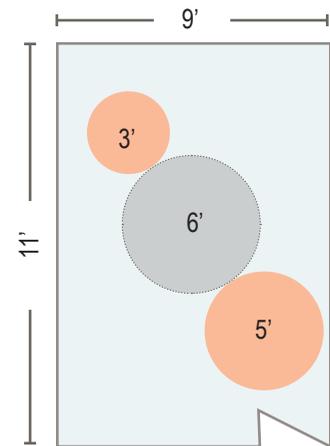
- Create large and small collaboration spaces adjacent to learning spaces. Provide physical and visual connections.
- Minimize permanent fixtures such as cabinets and bookcases in learning spaces to provide for the greatest flexibility.
- Create space for virtual connections to students who are not in the physical classroom.
- Incorporate operable windows to maximize fresh air.
- Provide opportunities for opening adjacent classrooms to each other to create larger spaces.

## LEARNING SPACES

Could be a 50% reduction in room population. Capacity will vary depending on room size and federal / state / local recommendation.



**COLLABORATION SPACES**  
(As size varies, so will occupancy)





## BUILDING CIRCULATION

Every school has circulation areas that allow students and staff to travel from point A to point B. These circulation paths can include corridors, stairways, social stairs, elevators, collaboration spaces, outdoor paths, sidewalks, etc. These circulation paths may include amenities such as seating niches, student storage (lockers or cubbies), display cases, digital boards, and drinking fountains. While there are ways to operationally limit student interaction in circulation areas, such as staggered bell schedules or bringing more services to the students to limit student movement, students will need to navigate the classroom, corridors, stairways and elevators throughout the day. Design strategies should provide adequate separation to support multidirectional traffic flow.

Corridors and other circulation components are typically very crowded at the beginning of the school day, lunch periods, class change times and the end of the school day. Reducing the amount of movement for students and staff throughout the day can reduce human contact. Understanding the capacity of your circulation components will help determine how best to move students and staff through your buildings at safe distances.

Circulation paths should be evaluated to determine how best to maintain recommended physical distancing. The evaluation should include measuring widths to determine one or two-way traffic options, determine if student storage areas can be eliminated or relocated in order to provide wider corridors and provide physical distancing recommendations for elevators.



## FACILITY CONSIDERATIONS | BUILDING CIRCULATION

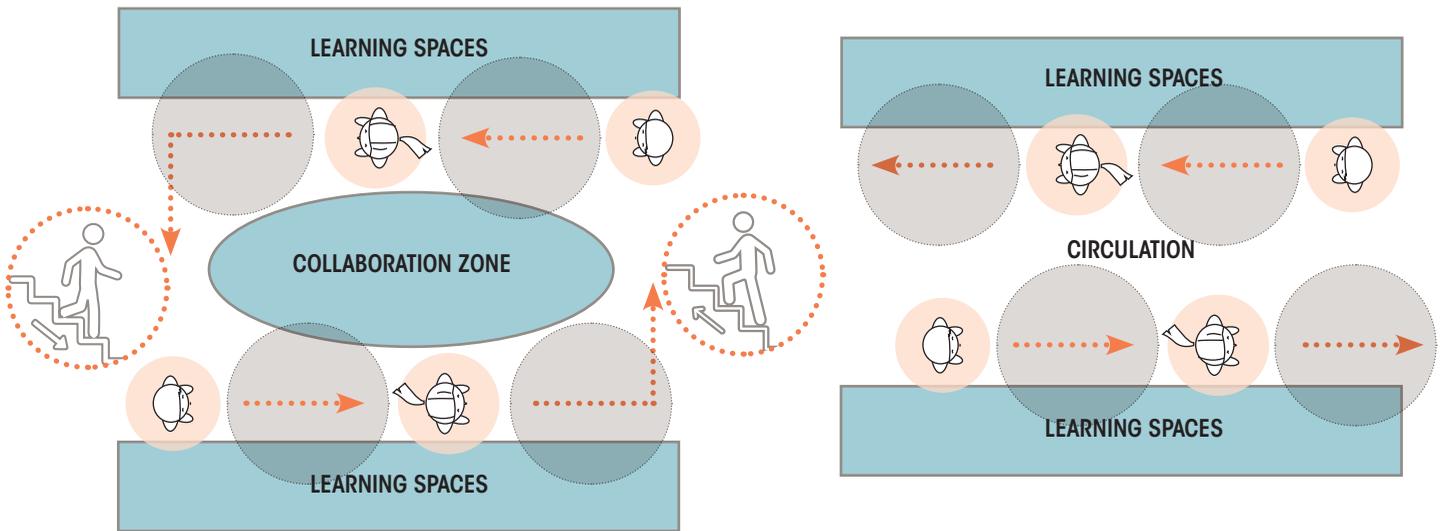
### RENOVATION OPPORTUNITIES

- Create one and two-way circulation pathways.
- Eliminate lockers + cubbies from one or both sides of corridors to create space for greater physical distancing.
- Utilize directional signage on stairs and corridor floors to enforce one-way traffic flow.
- Limit capacity and use of elevators.
- Designate entrance and egress doors to enforce one-way traffic flow.

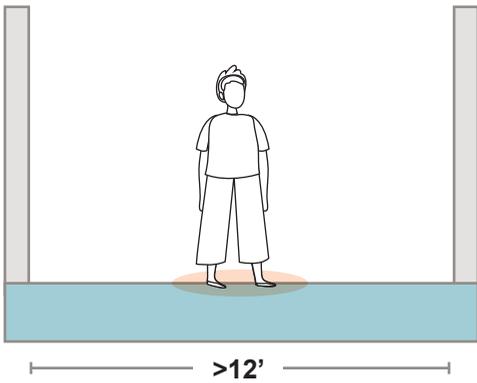
### FUTURE DESIGN OPPORTUNITIES

- Provide corridor width to allow for two-way traffic with physical distancing in mind.
- Provide appropriate separated student storage out of circulation paths.
- Provide storage at main entry + egress points for coats, boots etc.
- Provide stair widths that allow for comfortable one-way traffic flow for multiple people.
- Consider added vertical circulation components (non-code required) such as stairs and elevators.
- Consider student groupings to help reduce movement through the school.

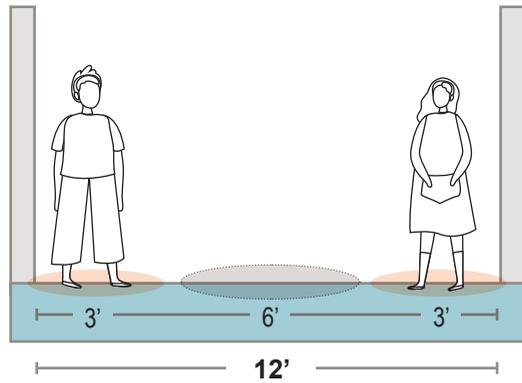
BUILDING CIRCULATION



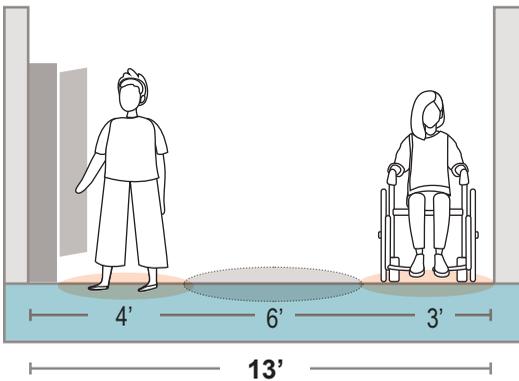
STUDENT CIRCULATION



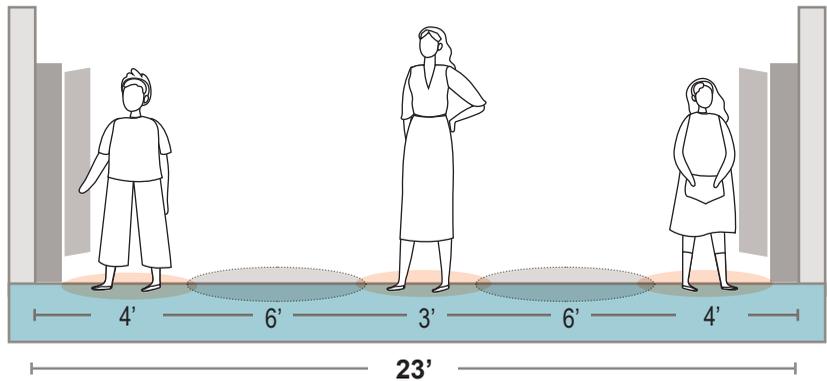
Circulation under 12 ft wide should be one-way



Circulation at least 12 ft wide w/o student storage can be two-way



Circulation at least 13 ft wide w/student storage on one side should only be one-way



Circulation at least 23 ft wide w/ student storage on both sides can be two-way



## MAIN OFFICE + HEALTH ROOMS

The main office of any school can be one of the busiest and potentially most crowded spaces in the building and will continue to be the interface between public and school. Post COVID-19, designs will need to consider the main office as a checkpoint for both security and health. Active and passive security measures that have been in place for many years will remain while additional measures for health security may need to be incorporated. The main office should separate and compartmentalize the intersection of public and school as it is paramount in limiting, as best as possible, sources of outside contamination.

Reducing the number of people waiting in the office will require a secure visitor waiting area directly accessible to the vestibule and the main office. This waiting area will be used by visitors prior to gaining physical access to the main office and rest of the building. Only those visitors and students who require direct interaction with office staff will be allowed to enter the main office, while others will wait in the waiting areas.

Health rooms have typically been located with direct access to the main office to allow office staff direct line of sight and physical access for monitoring purposes. In order to reduce interactions with ill students and the possible transmission of illness, entrance to health rooms could be available directly from a main corridor and have controlled direct exterior or outside access. Isolation rooms should be considered as a space for students with highly contagious illnesses.



## FACILITY CONSIDERATIONS | MAIN OFFICE + HEALTH

### RENOVATION OPPORTUNITIES

- Install clear glass or plexiglass sneeze guard at reception desk area to provide for separation of visitors.
- Utilize thermal imaging at vestibule prior to allowing access to the main office.
- Reduce seating capacity in waiting area to align with CDC recommendations.
- Create specific entrance and exit doors. Possibly install a laminated glass separation between these paths of travel.
- Create an isolation room for ill students + staff that is directly accessible from a main corridor and has access to an exterior door if possible.
- Provide a solid wall separating health room cots or limit the number of cots.
- Allow direct access to health room off main corridor.

### FUTURE DESIGN OPPORTUNITIES

- Items listed under Renovation Opportunities.
- The entrance vestibule divided into an entrance and an exit to eliminate crossing of traffic.
- A waiting area could be created as a space off the vestibule and utilized prior to visitors gaining access to the main office or school.
- Incorporate a holding area for deliveries.
- Create larger waiting areas.

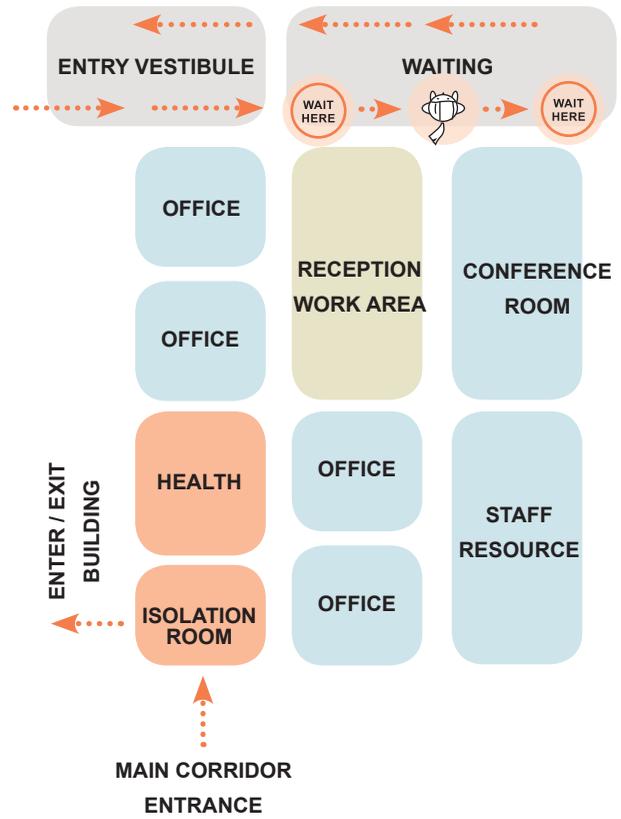
# MAIN OFFICE CONFIGURATION

Recommendations for configuring main office and secure accessibility to health rooms

### PRE-COVID-19 OFFICE DESIGN



### POST-COVID-19 OFFICE DESIGN



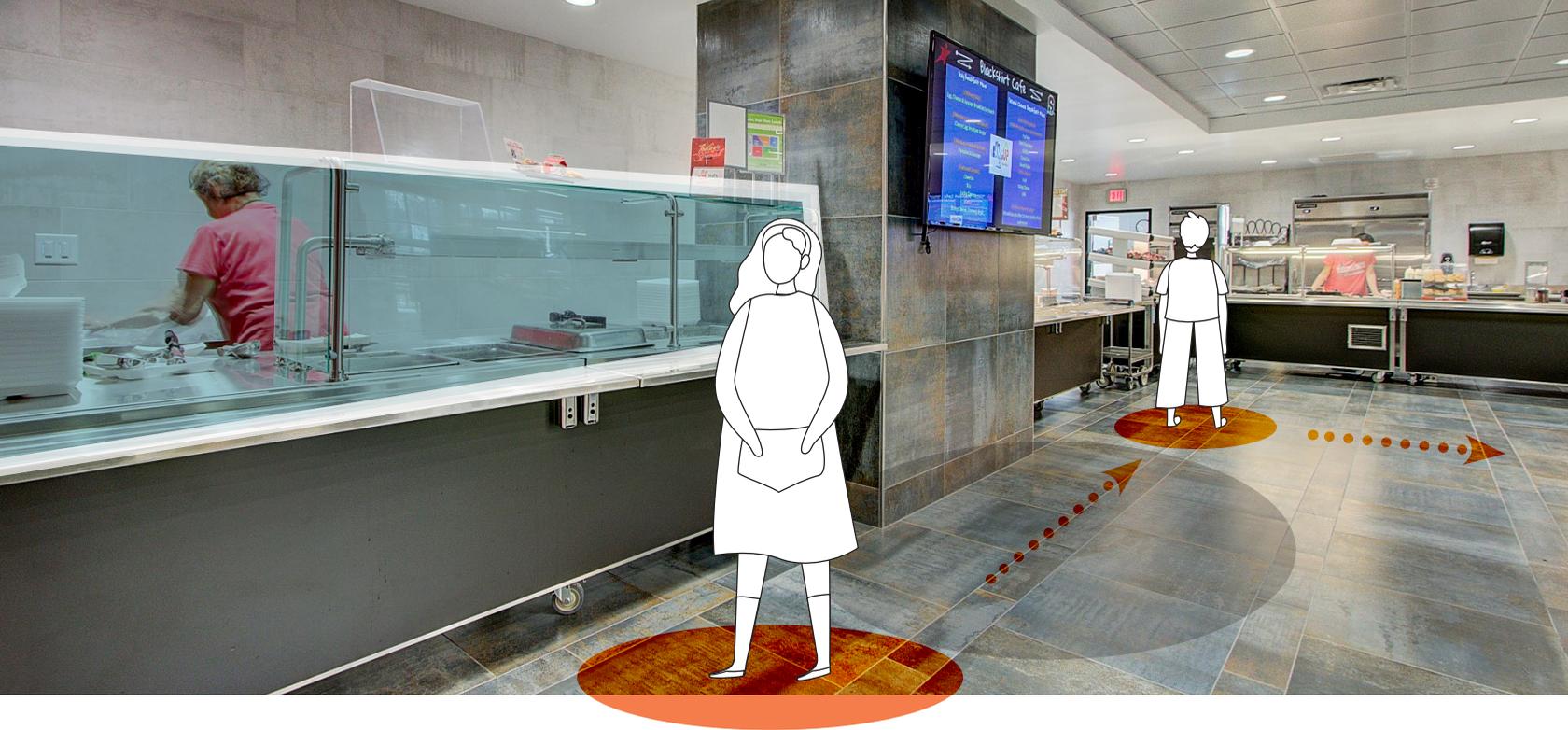


## COMMON SPACES

In recent years the traditional cafeteria has been transformed into a space that can be utilized for more than just eating. In addition to eating, today's "commons" can serve as a large group instruction space, multipurpose room or performance area. Commons are typically located in the center of school making them easily accessible for a variety of uses throughout the day.

Commons over the years have been designed to hold large amounts of students so as to reduce the lunch time duration. This increase of capacity has been obtained by using some ordinary cafeteria tables and some contemporary furniture with small group settings. Fortunately those commons that have more contemporary furniture settings may have an easier time transitioning to smaller seating areas.

In order to maximize efficiency and minimize the time needed for serving food, modern serveries have been organized in a scatter format where students enter the area and then scatter to different food stations. While this is efficient, the scatter approach may need to be reconsidered in response to physical distancing to create a more orderly one-way single line approach to reduce personal contact and allow for a single point of entrance and exit.



## FACILITY CONSIDERATIONS | COMMON SPACES

### RENOVATION OPPORTUNITIES

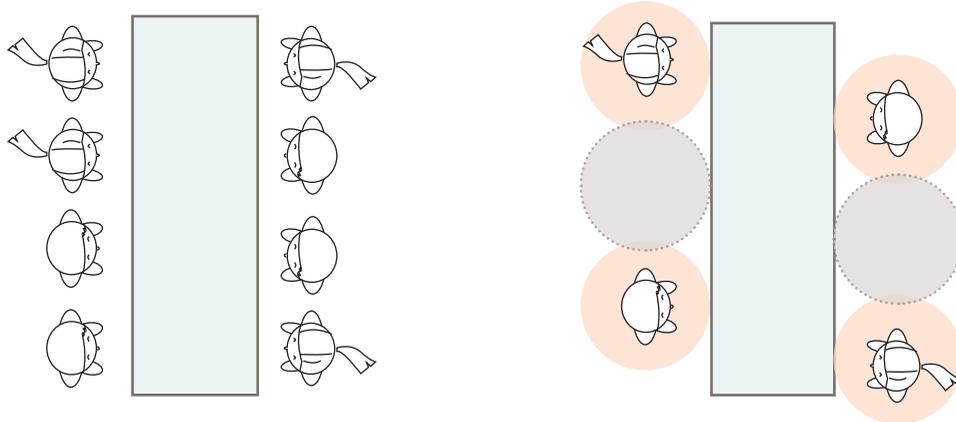
- Relocate lunch services to classrooms.
- Repurpose commons into learning spaces.
- Consider furniture options in repurposed commons that can transition into commons seating in the future. This will eliminate the stereotypical cafeteria table.
- Utilize as supplemental circulation space to accommodate one and two-way traffic flow.

### FUTURE DESIGN OPPORTUNITIES

- Reimagine large cafeterias in favor of smaller neighborhood common areas to function as lunch and “dirty” spaces such as a Makerspace.
- Create food serveries in each grade neighborhood.
- Consider space and amenity requirements if eating will occur in learning spaces.

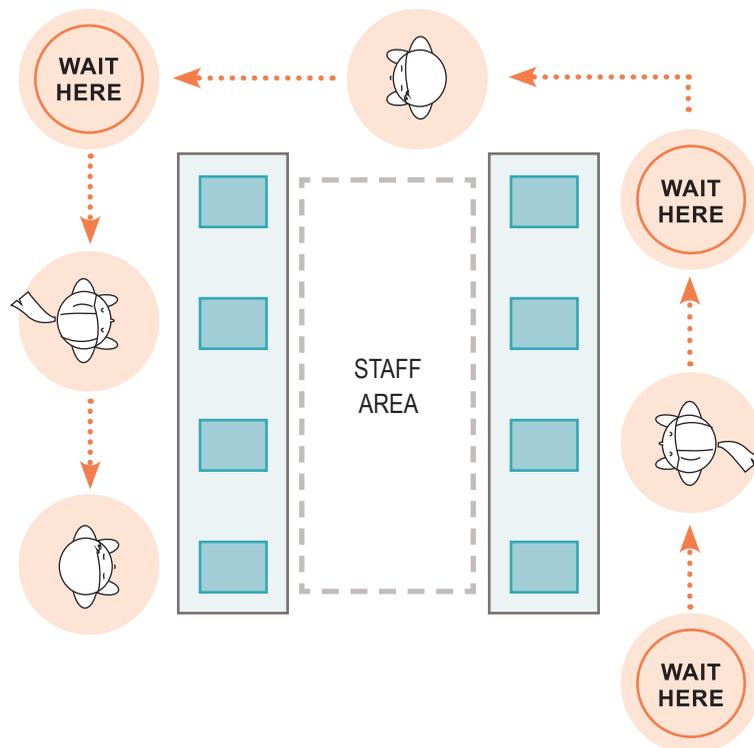
### TYPICAL CAFETERIA TABLES

Typical cafeteria table seating capacity could be reduced by 50%



### SERVERY + QUEUING LINE

Use designated signage to help filter students through servery safely





## RESTROOMS

There is much discussion related to restroom design, how they are accessed, and their configuration. Used throughout the day by all students and staff, school restrooms are one of the places where a high probability of cross contamination can occur. Care needs to be taken in utilizing these spaces to maximize touchless operation and navigation while promoting ease in cleaning and disinfecting.

The approach in this document is to provide ideas of how to create restrooms that create a single entrance with a separate exit to reduce personal contact. Many event venues have utilized this type of layout for years as it provides an efficient way to move people through restrooms. This type of restroom will require more square footage than typical school restrooms, but will also provide the greatest flexibility in the future. Aside from increased square footage requirements, challenges and expenses associated with reconfiguring plumbing systems may make this solution unattainable for many districts. When evaluating restroom design options, factors to consider include direction of travel, cost, space requirements, building capacity and building code requirements.

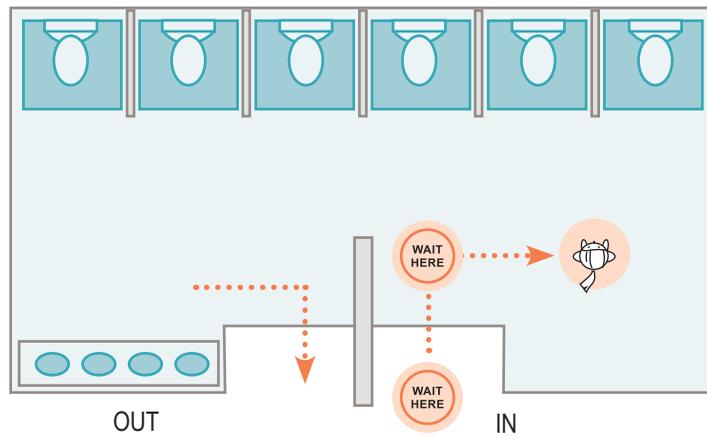
## FACILITY CONSIDERATIONS

### RENOVATION OPPORTUNITIES

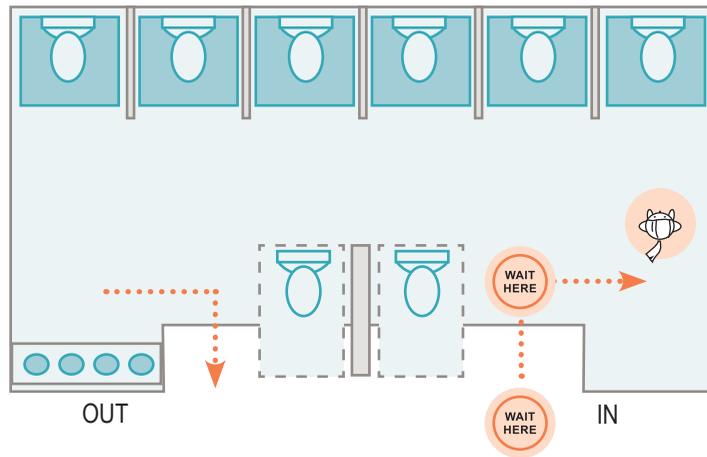
- Remove restroom doors where existing walls provide necessary privacy screening at entry.
- Replace traditional faucet and toilet fixtures with no-touch alternatives.
- Since restroom renovations will be a costly undertaking and will required major demolition refer to “Future Design Opportunities” below for options.

### FUTURE DESIGN OPPORTUNITIES

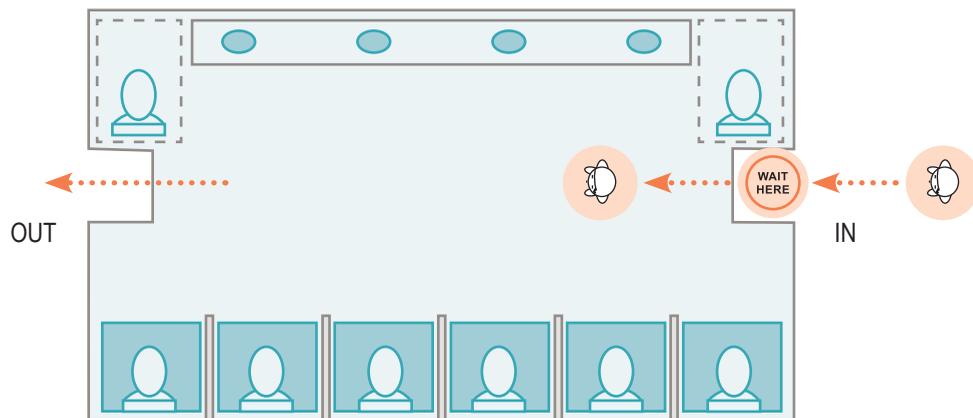
- Create one-way traffic flow with separate entrance and exit.
- Provide automatic door operators to provide hands free entry.
- Provide restroom groupings appropriate to student neighborhoods and/or program areas such as music, art, technical education, etc.
- Provide hands free operating fixtures throughout restroom.



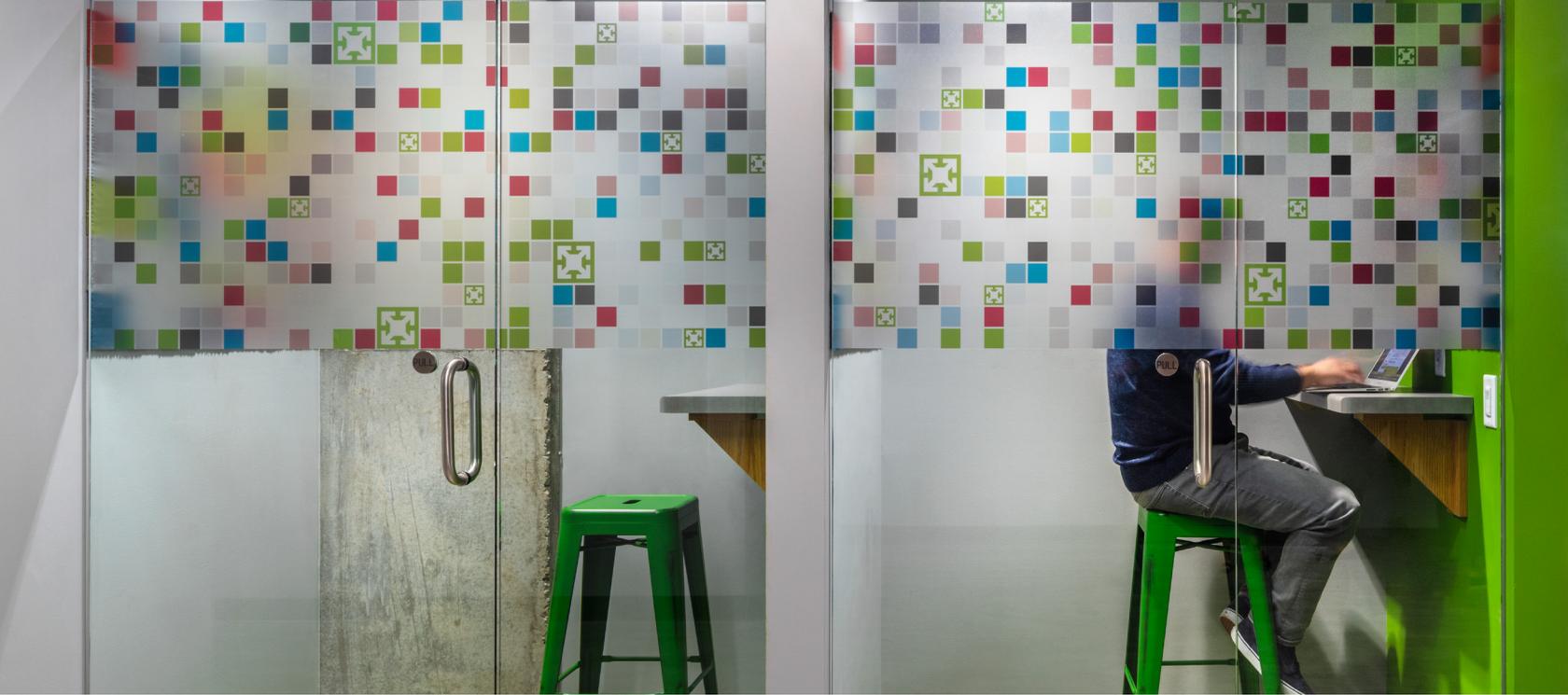
Center entrance / exit one-way traffic flow so traffic doesn't pass or cross over



Separated center entrance / exit one-way traffic flow so traffic doesn't pass or cross over



Opposite entrance / exit one-way traffic flow so traffic doesn't pass or cross over



# STAFF RESOURCE SPACES

Teachers are the front line for our students. Teachers must have space to collaborate with one another and deliver education to each student. Space needs and technology infrastructure will be paramount.

Teachers and staff need space where they can have focused conversation, take a break, and do private work. These spaces are incorporated into schools today, however, the privacy required for group and individual on-line instruction has not been accounted for on a large scale.

## FACILITY CONSIDERATIONS

### RENOVATION OPPORTUNITIES

- Utilize furniture solutions.
- Create small “phone booths” with appropriate technologies for on-line teaching and conferencing.
- Provide appropriate technology (cameras, speakers and microphones) in learning spaces for virtual learning opportunities.

### FUTURE DESIGN OPPORTUNITIES

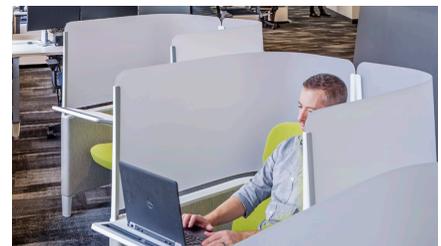
- Items listed under Renovation Opportunities.



Small collaboration spaces



Virtual Learning



Individual touch-down



## OTHER CONSIDERATIONS

### HEATING + VENTILATION

- Operable windows throughout
- UV light treatment
- Air supply + filters

### WELLNESS

- Provide bottle fillers instead of water fountains.

### STUDENT STORAGE

- Lockers in circulation paths may be a thing of the past. Individual learning spaces may need to accommodate and separate student personal belongings.
- Students could be encouraged to reduce what they carry around to reduce possible transition of disease.

### VIRTUAL LEARNING

- Consider space in new construction for all aspects of virtual learning (one-on-one and group interaction).



**As thought leaders and trail blazers in K-12 design, EUA is committed to creating thoughtful, innovative and responsive architectural solutions for our partners in education. We hope this guide will be a trusted resource as you plan for the short and long-term future of your school facilities.**

**We believe that great architecture has the ability to elevate people's potential.**



**TERESA WADZINSKI, LEED AP BD+C, NCARB, CDT**  
Learning Environments Studio Director : Principal  
Wisconsin Market Leader : [teresaw@eua.com](mailto:teresaw@eua.com)

**JANE CRISLER, AIA, LEED AP**  
Educational Planner : Associate  
Colorado Market Leader : [janec@eua.com](mailto:janec@eua.com)

milwaukee : madison : denver [eua.com](http://eua.com)