

Designing for Togetherness:

Safe Environments
for Connecting
during C-19

**Frederick
Fisher and
Partners**



For the past few months, we at FF&P have been working with our clients and within our own office to understand best space design practices for returning safely to our respective workplaces, academic and cultural campuses, etc. during this time of the coronavirus pandemic. In the spirit of trying to help as many people as possible, we wanted to share some lessons learned thus far.

Given that global understanding of the science behind C-19's spread and containment continues to evolve, we started from the standpoint that there is no absolute "right" way to handle this situation, either scientifically or in terms of design. As such, we are exploring the issue the same way we approach all our projects: outside-in and inside-out. From the outside-in, we are conducting thorough research, considering multiple perspectives and information sources ranging from trusted medical and public health organizations and professionals, to mechanical engineers, to furniture manufacturers. In parallel, we are seeking to understand our clients' institutional and organizational missions, existing spatial conditions, user groups and their daily operations, as well as their needs, desires, and cultures.

We do not claim to be experts in pandemic safety, and we do not advocate one set of best practices over another. Rather, we are simply taking proactive steps to help our clients and ourselves consider the issue from all angles, ask smart questions, identify available operational scenarios, and propose individually feasible strategies for implementation.

Our goal in this work is to ensure that we and our clients feel informed and empowered to make decisions that are both safe and appropriate for each of us.



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Big-Picture Considerations

Triggers and Timelines for Re-Opening

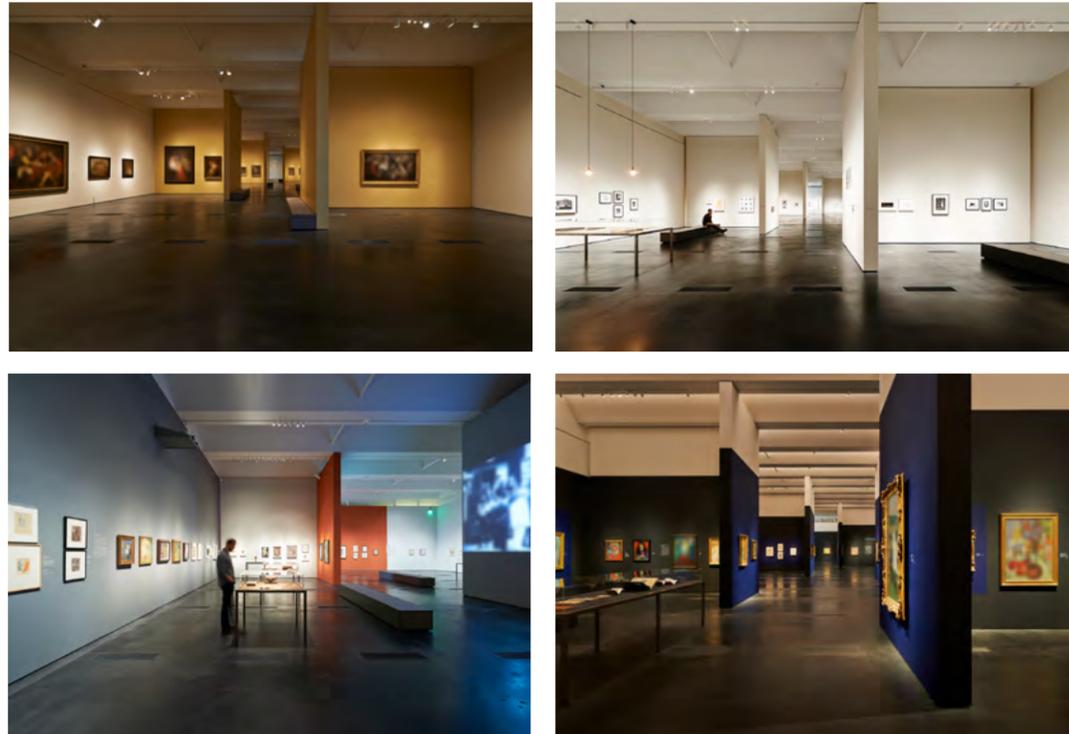
- What are external authorities we can look to for guidance about possible dates and phasing (ie. city/state regulations)?

In general, we suggest following local guidelines to be most in sync with your immediate context. City guidelines take precedent over state, which take precedent over federal.
- Are there specific benchmarks we can look for or explore more in depth like declining infection levels, vaccines, etc.?
- Are there other factors at play like an academic calendar?

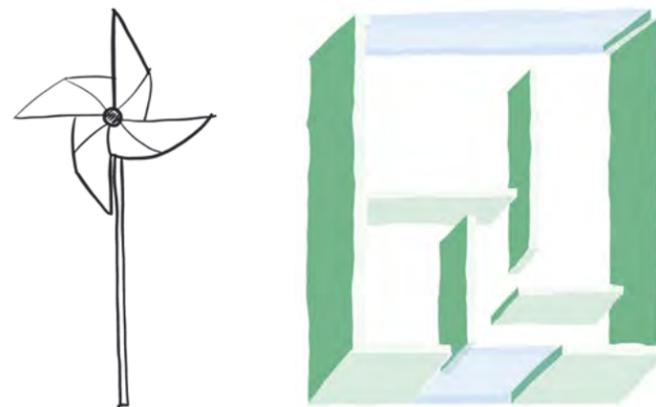
Short- vs. Long-term Change

- Do you want the changes to be temporary, or do you see them as opportunities to enact more systemic alterations?

Input from the full range of stakeholders (ie. surveys) about what is and isn't working can be very helpful and will make the process more thorough and inclusive.
- What are your available financial resources?
- If you are in the midst of a building project, how far into the process are you? It is logistically and financially easier to make changes towards the beginning of the process than towards the end.



Sustainable exhibition design with LACMA based on a rotating pinwheel



Making Policy

Consider People's Sense of Psychological Safety

Having a sense of agency and control over one's personal environment is vital to maintaining people's sense of mental well-being, as well as their ability to focus on their work, studies, etc.

Surveying your community will help you understand how people are feeling about the current situation and can help guide your decision-making.

At present, people are indicating a wide range of comfort-level with the idea of returning to workplaces, campuses, etc. As such, we suggest you consider keeping return-to-public-space policies voluntary.

The policies you put in place should be flexible enough to adapt to changing conditions. In the short term, you might focus on the particular issues that are priorities to keeping your organization up and running, perhaps with a limited group of people opting for in-person interaction. As more people return to your campus over time, revisit your policies to make sure they are applicable and relevant.



Sunnylands Center and Gardens trellis

Do you want to monitor the ongoing health of your community?

Daily health screenings and/or periodic virus testing are available options. Consider accuracy, logistical practicality, and issues of privacy.

The Americans with Disabilities Act (ADA)—an important piece of legislation to follow when space planning—includes some guidelines on privacy related to medical records: https://www.ada.gov/aag_covid_statement.pdf

How will you handle those in your community who get sick or are exposed to C-19?

Require self-isolation/remote work for a given period of time (ie. accepted virus incubation period). You can also mandate virus testing prior to returning to in-person activities.

Consider employee contact tracing, self-isolation, and testing for anyone in your community who may have been exposed to someone who has tested positive for C-19. Self-isolation can involve remote work. You will need to have the technological infrastructure in place to facilitate this.

Implement enhanced cleaning protocols per CDC guidelines, especially in the area where the person spent the most time in the days prior to exposure/diagnosis. See *Cleaning & Hygiene for more information*.

If possible, temporarily close off the area where the person spent the most time in the days before exposure/diagnosis. Duration of closure might be determined by CDC's accepted time limits for coronavirus to remain infectious and/or whether the space can be thoroughly cleaned.

How will you handle people within your community who need or want to travel?

We suggest that travel for work be kept to a minimum, and be voluntary. Video conferencing can be very helpful with this.

- Different modes of travel involve different levels of potential exposure. For example, travel for work may be more acceptable if it involves individual travel via car as it has less potential exposure opportunities than travel via public transit or airplane.

If personal travel is allowed, consider encouraging self-isolation and remote work for a given period of time (ie. accepted virus incubation period). You can also mandate virus testing for community members prior to returning to in-person activities.

Review the CDC's Traveler's Health Notices prior to travel for more information, including information about specific locations: <https://wwwnc.cdc.gov/travel>



How will you handle visitors from outside your “resident” community?

- Consider limiting non-essential outside visitors as much as possible.
- For potential contact tracing, consider implementing a visitor check-in system to track who is coming and going.
- If visitors are unavoidable, consider how many you will allow at a given time, how you will educate them about your established policies and protocols, how you will facilitate their compliance, and how you will protect the people they come in contact with. *See Space Planning, Cleaning & Hygiene, And Communication & Monitoring for more information.*



Area



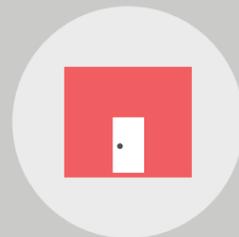
Employees



Gross sf/Employees



Desk System
(Open)



Private Offices



Shared Offices



Enclosed Gathering Spaces
(e.g. Conference Room)



Open Gathering Spaces
(e.g. Soft Seating)



Additional Amenities

Space Planning

What is the allowable density of a given space per social distancing guidelines?

This can be tricky to answer, but a good general guideline would be to figure out how everyone can maintain a 6-foot distance from one another at all time.

- If you are using a space in a way that goes beyond simply sitting in a chair or standing, consider any furniture or equipment you might need to include in this calculation.
- You should also factor in space required for circulation—both general facility circulation and circulation within individual spaces and rooms.

Activities that convene people in groups should be avoided as much as possible. If you have to gather a group of people, you should look to city and state guidelines regarding maximum recommended assembly numbers per square foot of space. Be aware that these numbers are subject to change.

Air volume and movement, available fresh air, and duration of space occupancy are also considerations. *See Air Ventilation for more information.*

What you can do if your existing spaces cannot accommodate needed capacity while meeting social distancing requirements?

Social distancing measures often result in diminished space capacity. There are several options to address this.

- If other spaces are available, consider re-purposing these to meet demand overflow.
- If possible, you can implement a blended system of in-person and remote use.
- Scheduling adjustments can reduce the number of people occupying a space at any given time. Allow time for cleaning and air filtration between occupancy shifts.

For workplace environments, it may be useful to assign staff to shifts of in-person vs. remote work. Alternating shifts on a weekly or bi-weekly schedule might be an effective strategy, as this limits people's exposure over a longer period of time and facilitates contact-tracing if someone gets sick.

For cultural sites and campuses, consider implementing an online reservation system for timed entry to limit the number of visitors at a given time.

For academic environments, classes can be scheduled over extended hours and/or broken down into multiple sessions of smaller groups. Consider teacher and student willingness to make such adjustments. Also consider people in alternate time zones who cannot or prefer not to travel.

In-person access to specialized resources or facilities can be scheduled online. If designated on-campus workspaces cannot be assigned for individual student use, access to shared workspaces can also be scheduled. See *Shared Equipment & Objects for more information.*



FF&P "back to campus" office configurations studies



Shared Equipment & Objects

How do you want to handle shared access to stationary equipment and objects such as computers, studio/shop/lab equipment, copiers/scanners printers, etc.?

For computers, consider designating regular seat assignments. In computer labs, one option might be to designate alternating workstations for remote access, thus allowing social distancing between them.

- If possible, computer users can be provided with individual keyboards and mice for personal use. You can also use keyboard and mouse guards, which will be easier to clean if people are sharing.
- Consider implementing sign-up schedules for more regulated access time.
- Allow for time in-between equipment/object use for cleaning/sanitation.

Locate cleaning supplies for maximum convenience.

- If individual cleaning supplies cannot be located at every piece of stationary equipment, consider how to make communal supplies touchless.



How do you want to handle shared access to mobile equipment and objects such as breakroom appliances, dishes, utensils, art supplies, etc.?

If possible, designate objects for individual personal use (ie. dishes and utensils). Disposable personal use objects are an option, but this is less environmentally and financially sustainable. People could also be encouraged to bring their own from home.

Consider additional storage needs related to individual object and equipment use.

Shared appliances Like coffee makers, microwaves, toasters, etc. should be cleaned after each use. Include signage and supplies to facilitate this. *See Cleaning & Hygiene for more information.*

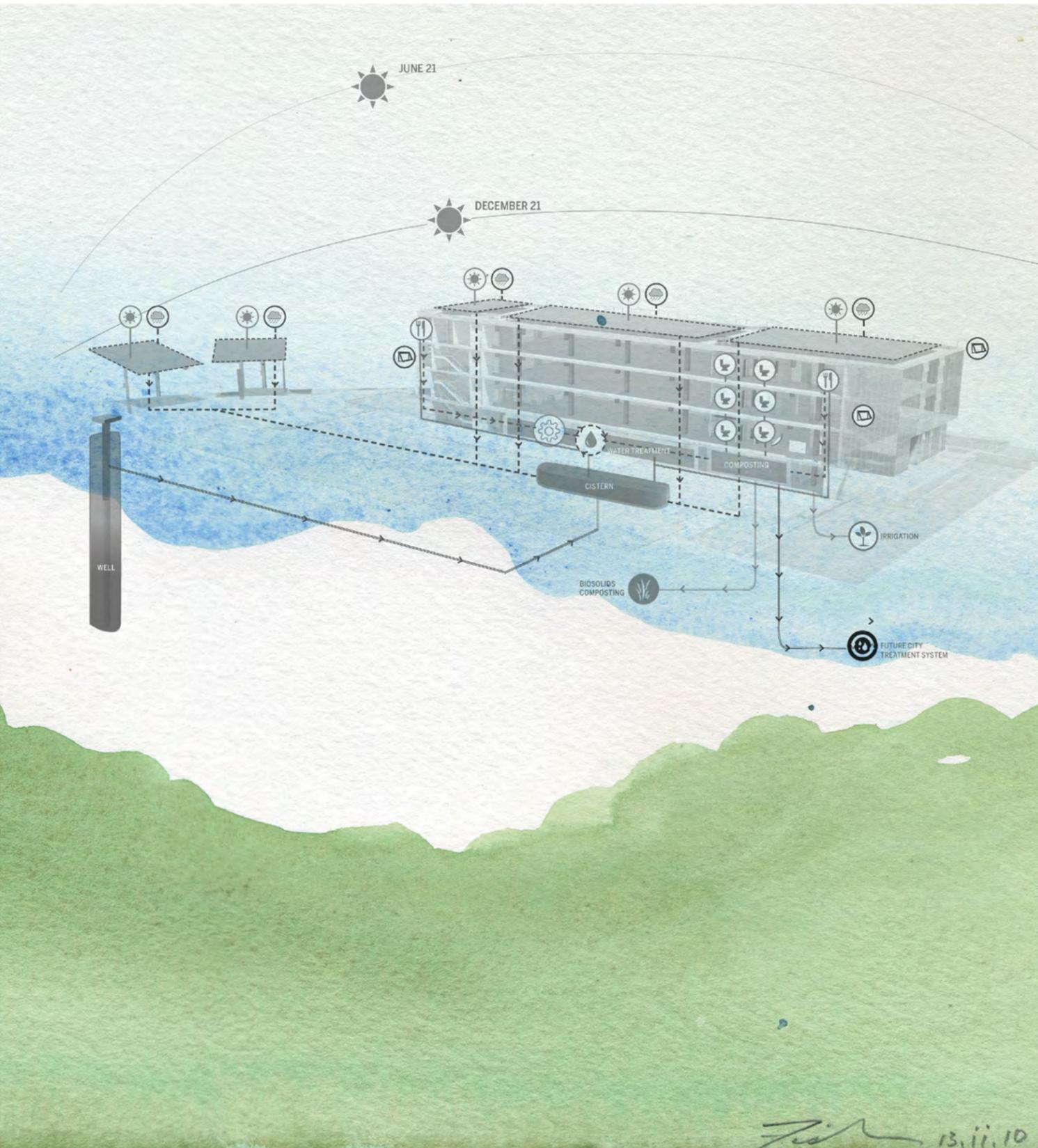
Air Ventilation

What are the key considerations regarding ventilation?

- Space size and volume
- Available sources of fresh air
- Methods of air filtration
- Duration of space occupancy (as related to air exposure time) Purging stale air from a space depends on your ventilation system's air change rate- measured in air changes per hour (ACH).
- Direction of forced airflow, the location of air vents in relation to seating

What is the condition and capability of your existing mechanical system?

In general, it is a good idea to understand how your existing mechanical system functions in order to assess available options for potential upgrades, if necessary. A system review be done by a mechanical engineer, who can also help make recommendations for how to adjust it. This can also often be done by the company that services your existing system.



What are the strategies available to optimize ventilation?

Provide as much outside fresh air as possible to spaces during and after occupation. Operable windows are an ideal source. If an existing space does not have operable windows, consider if it is possible to increase the rate of fresh air intake through your mechanical ventilation system.

Consider leaving mechanical and/or natural ventilation systems operating when your space is not in use. This can act as an additional air “flush.”

If you have access to outdoor space, consider using it for convening activities such as meetings, classes, and other educational activities when the weather allows. Tent structures can be protected to provide shade and/or weather protection. Mobile white boards and/or pin-up surfaces might also be useful for this type of application. Consider any required technological infrastructure as well.

What are the strategies available to optimize filtration?

Integrating filters rated MERV 13 and above into your existing mechanical system is recommended as a relatively low-cost solution as most systems can accommodate their installation and they catch the vast majority of 1-5 micron airborne water droplets (the size that typically can contain coronavirus). These filters require more frequent replacement because they catch more particulates than lower-rated filters.

Be aware of evolving research regarding how the virus is aerosolized—this may impact air filtration strategies.

If you have outside air dampers to control air flow, maximize operation in accordance with your system’s capacity for peak design days

It’s not possible to run your air conditioning at 100% all the time because too much outside hot air can’t actually be cooled. To address this, either reduce your cooling to meet your existing set point or raise the set point a little.

You can install a heat recovery system, but there is significant cost involved. It also requires a lot of fan power, which consumes a lot of energy.

There is some indication that UV light can kill virus particles, but this strategy can be expensive. Perhaps a more cost-effective and easier option might be to install UV directly into your space, where it can shine directly on high-touch surfaces. Some UV light is dangerous, so be aware of your own usage patterns and evolving research about this emerging technology.



Cleaning & Hygiene

Who is responsible for cleaning ?

If you employ professional cleaners, consider increasing cleaning frequency and any additional training required regarding best cleaning practices, recommended products and their proper use, documentation of cleaning practices, etc.

- Also consider the health and safety of your cleaning staff. Provide masks and gloves if they do not have access to these. Consider hazard pay.

Between professional cleanings, call on your staff/community to routinely clean and disinfect high-touch areas such as breakrooms/kitchens, bathrooms, etc. and objects like doorknobs, elevator buttons, rails, copiers/printers, kitchen/bathroom fixtures, breakroom appliances, etc.

- Just as with professional cleaners, consider any additional training required for your staff/community regarding best cleaning practices, recommended products and their proper use, documentation of cleaning practices, etc.
- Consider assigning these responsibilities and documenting ongoing cleaning efforts—these can be publicly posted to keep people feeling informed and safe.
- For restrooms dispersed throughout large facilities operating at reduced occupancy, consider limiting the number available for use to ensure regular cleaning.

Who is supplying your facility's cleaning products, and what are these?

Cleaning/hygiene Products should meet CDC/EPA standards for cleaning and disinfecting: <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html>

Consider taking responsibility for supplying your facility's cleaning/hygiene products for non-professional cleaners at a minimum.

Ensure that there are adequate supplies and signage/instruction to support cleaning and disinfection practices

Locate hand sanitizing stations throughout.

For personal workstations, provide disposable wipes for people to wipe down commonly used surfaces.

Ideally, shared hygiene/disinfection stations should be touchless, including trash cans.

Disposable cleaning products (paper towels, tissues, etc.) are generally recommended.

Consider the environmental impact of your cleaning products and supplies. In general, select EPA-registered products, and dispose of them sustainably.

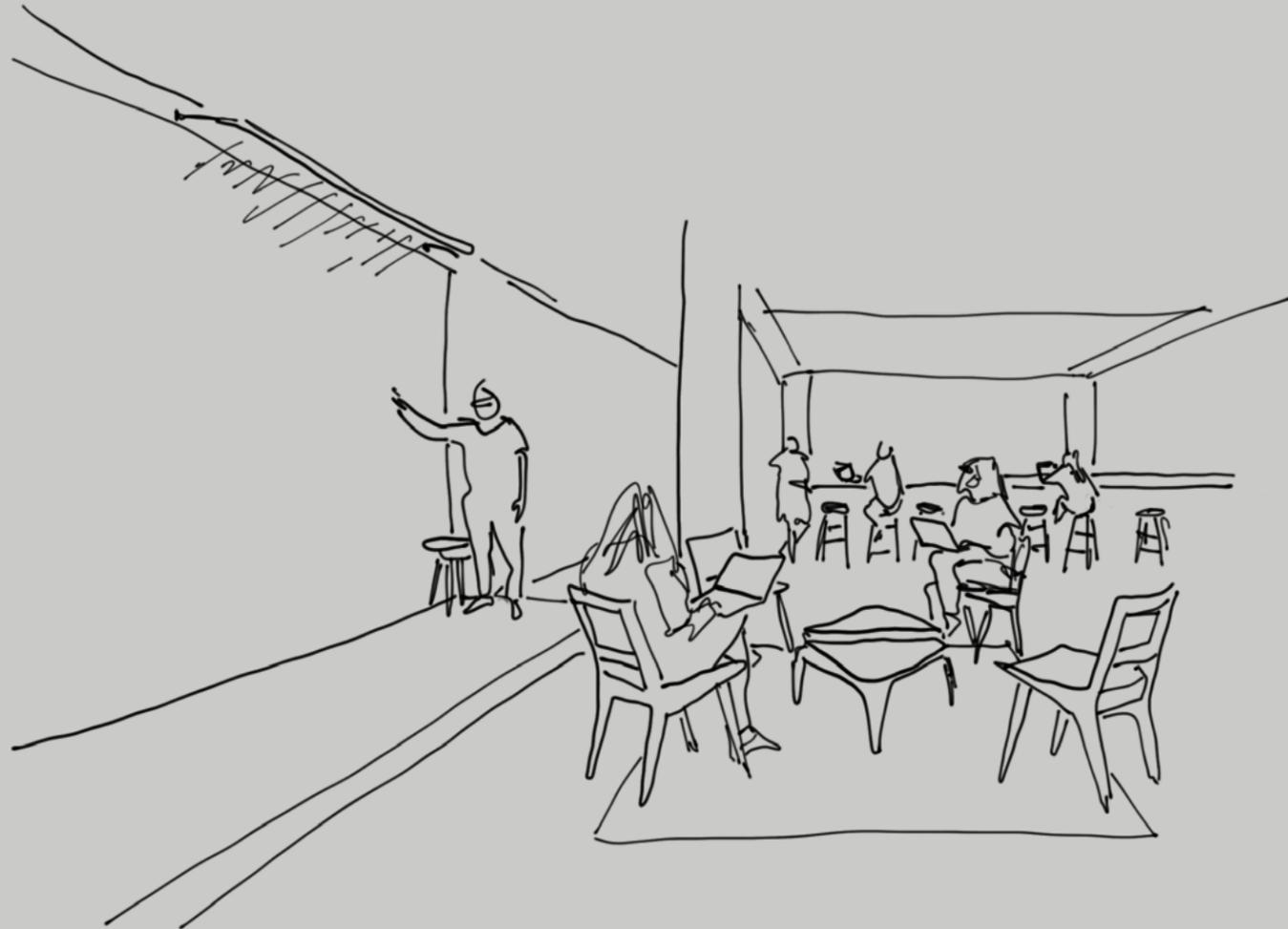
What is your stance on wearing masks and personal protection equipment?

Consider following CDC guidelines for your particular facility type. At this time is generally recommended that people wear masks at all times, especially inside spaces where social distancing is not possible.

For people who interact with the public, consider providing masks and PPE (ie. disposable gloves), as well as implementing additional safety precautions for this potentially vulnerable population.

Post signage to ensure facility users follow your selected policies. *See Communication for more information.*

People have varying comfort levels and opinions about wearing masks, especially for long periods of time. When establishing your mask-wearing policies, is important to balance CDC guidelines with how people feel they can operate most effectively. Have an open dialogue, and try to help accommodate individual needs and considerations that might fall outside of your established mask-wearing policy.



Communication & Monitoring

To ensure that people in your facility follow your established policies and protocols, it is vital that you communicate these clearly, visibly, and frequently.

- Stay open to ongoing feedback from your community so that policies can be changed if necessary. Surveys can help with this.
- Once your policies and protocols are established, share these with staff either via meetings or digital communication.
- Post signage throughout your facility, in both public and back-of-house locations.
- To keep facility users informed, consider posting documentation of cleanings, health and policy updates from jurisdictional authorities, etc.
- Where possible, consider in-person monitoring to make sure policies and protocols are being followed. This can be done by security staff, teachers and TA's, etc.
- Remind people regularly to take personal responsibility for helping keep your facility clean and safe.



An extended boardwalk at Annenberg Community Beach House provides accessible oceanfront access

Other Considerations

Compliance with ADA guidelines is mandatory, and an important consideration in your thinking regarding policies, protocols, and space planning.

Consider extending this kind of thinking to assess how your space can be more inclusive of “non compliant bodies—people whose age, gender, race, religion, or physical or cognitive abilities often put them at odds with the built environment, which is typically design for people who embody dominant cultural norms”: <https://www.nytimes.com/interactive/2020/06/09/magazine/architecture-covid.html?referringSource=articleShare>

People who use public transportation to get to your facility face additional hazards that should be taken into account.

There is some conflict between recommended policies to limit exposure to C-19 and environmental sustainability. Consider ways to minimize such conflicts as much as possible.

Resources

There are myriad resources available to assist institutions and organizations with strategizing and designing plans for their own version of “togetherness” during this challenging time. The ones listed below are by no means exhaustive; rather, they are a selection of those we found to be most informative and helpful during our own research and conversations around this issue.

Stakeholder Surveys:

Offices:

<https://www.cdc.gov/coronavirus/2019-ncov/community/office-buildings.html>

Academic Campuses and Facilities:

K-12:

<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html>

Higher Education:

<https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/considerations.html>

https://www.acha.org/documents/resources/guidelines/ACHA_Considerations_for_Reopening_IHEs_in_the_COVID-19_Era_May2020.pdf

Museums and Cultural Institutions:

<https://www.aam-us.org/programs/about-museums/preparing-to-reopen/>

FF&E Strategies:

<https://www.vitra.com/en-us/back-to-the-office>

Other Considerations:

ADA/Universal Design

https://www.ada.gov/aag_covid_statement.pdf

Travel

<https://wwwnc.cdc.gov/travel>

Cleaning & Hygiene:

<https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html>

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