# Carceral Environments and COVID-19

## The age of the pandemic and the era of mass incarceration are on an unprecedented collision course that is rapidly escalating before our eyes.

"Jails are petri dishes," said Toni Preckwinkle, president of the Cook County Board of Commissioners in an article in *The New York Times* on March 20, 2020. People who are incarcerated are disproportionately more likely to experience chronic and acute physical and mental health issues, putting them at higher risk of death due to COVID-19. Like the disparity in our neighborhoods, these effects are tied to historic legacies of racism, often made explicit through the built environment. Conditions of confinement, including overcrowding and poorly ventilated spaces, make social distancing a herculean if not altogether physically impossible task. Standard operational practices—like pat downs, cell shake downs, and double- or triple-bunking—and limited access to healthcare, sanitation, and personal protective equipment compound this challenge. And when combined with an inflexible space that was designed for punishment (rather than for rehabilitation), our carceral spaces quickly become breeding grounds for pandemic, putting staff, residents, and our communities at risk. The architecture of prisons can wreak indelible pain, but leveraging design as a mode of healing can mitigate the damage wrought by the pandemic.

## In responding to the pandemic, care must be taken to design for social distancing, not social isolation.

Although the overcrowding of carceral spaces (including prisons, jails, and detention centers) in America is well known because of the explosion of mass incarceration in the 1970s, they are also spaces of extreme isolation. The negative physiological and psychological public health effects of social isolation are well-known: in a report by the World Health Organization, social isolation is identified as a social determinant of health among isolated communities, associated with poor physical and mental health as well as increased rates of premature death. Conditions in prisons affect incarcerated populations, as well as the staff, wardens, and correctional officers: research shows that carceral staff have shorter lifespans than the average population.

One of the first inclinations in prison spaces is to restrict visitation and institute lockdowns and increased solitary confinement, but these actions can not only aggravate major physical and mental health conditions, but also have not been proven to be effective in the fight against contagion. There is no evidence that increased time in individual cells slows the transmission of the virus. In fact, shared HVAC systems between units can still spread the disease.

With the rapidly advancing COVID-19 pandemic, departments of corrections, activists, and advocates across the country are taking proactive steps to prevent yet another public health crisis from wreaking havoc on our society by depopulating facilities by releasing people behind bars who no longer pose an immediate public safety risk and reconfiguring carceral spaces to better protect staff and residents. Unless drastic actions are taken to reduce density and crowding and improve conditions within our correctional environments, they will continue to pose a significant public health threat to staff and residents that will be felt throughout our communities.

The current reality of the coronavirus pandemic puts many of us in a challenging position. While the primary effort should focus on rapid decarceration to address both the immediate need of contagion control and the larger problem of mass incarceration, the vast majority of incarcerated people will remain in detention through this public health crisis. We have compiled this document to help provide guidance about the physical conditions of carceral spaces, so that we can better protect these residents, the staff in charge of facilities, and our communities. This document is for:

Prison and jail administrators, wardens, correctional officers, and residents, who are looking for ways to redesign their spaces to be safer and healthier.

Governors, mayors, and others looking for ways to make sure their constituencies stay safe.

Public health practitioners who are looking to understand the full measure of the impact of COVID-19 on our communities, and identify the best response to those most in need of their services.

Advocates and activists who need effective strategies to recommend to ensure injustice is not further perpetuated upon our most marginalized and vulnerable

## About this document

Restoring Promise, an initiative of the Vera Institute of Justice and MILPA, works to address the root causes and consequences of mass incarceration. Working directly with prisons and jails, we seek to transform the culture, climate, rhythms, and routines that define the prison system, starting with young adults. MASS Design Group, a nonprofit architecture collective, has partnered to leverage physical design recommendations to imagine alternative models for accountability, restoration, and healing. Along with activists, advocates, departments of corrections, incarcerated people and their families, and agency leadership, we seek to push the prison reform movement beyond a tipping point—a wave that is led by incarcerated people and line staff.

In response to the novel coronavirus pandemic, we compiled this document to provide guidance about the physical conditions of carceral spaces and better support those who live and work in these facilities or are impacted by mass incarceration. These strategies draw upon MASS's experience with epidemic outbreaks—including tuberculosis, cholera, and Ebola—to adapt existing knowledge to the current understanding of COVID-19 and its transmission via biological and social pathways. While there are no existing design standards specific to COVID-19, our hope is to provide best practice mitigation strategies to prevent the further spread of the disease.

This document prioritizes the need for rapid decarceration, and then focuses on repurposing spaces for those left behind. Many of these recommendations should have already happened, but the outbreak has accelerated the need for these recommendations to become policy. We seek partnerships and case studies to apply and iterate these design strategies in real-life scenarios.

**Acknowledgments**

Thank you to the following contributors and thought leaders who have lent their insight and support to this report and who have helped inform our process of rethinking the design of carceral facilities overall. Thank you to our partners at:

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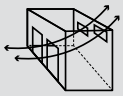
- Ashley Lucas, and the artists and activists of the University of Michigan's Prison Creative Arts Project.
- The leaders of different facilities and departments of corrections across the US, including: Scott Semple, Commissioner, Connecticut Department of Correction (ret.), Ken Nelson, Warden, Lee Correctional Institution, South Carolina, Richard Cothran, Warden (ret.), Turbeville Correctional Institution, South Carolina.

Please note that while these recommendations include suggestions to improve conditions of overcrowding, they are not intended to be an ideal design nor an implicit approval of the current conditions within correctional facilities.

As interventions in carceral spaces take fruition, certain spatial strategies can be incorporated to help facilitate the achievement of safer spaces for our communities.

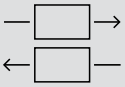
## Make space for each person's safety.

- Depopulate in order to reduce density and crowding and make other interventions more effective.
- Convert double- and triple-bunked cells into single rooms or program spaces.
- Rearrange rooms to accommodate more space between people, and use physical partitions where necessary.



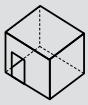
## Make your spaces breathe better.

- Use air cleansing strategies, such as Germicidal Ultraviolet (GUV) air disinfection units or high efficiency particulate air (HEPA) filters to purify potentially contaminated air.
- Dilute and remove contaminated indoor air by bringing in natural ventilation via open windows or doors.
- Instead of using every cell, aspire to use every other cell, so that people do not share adjoining vents.



## Sequence flows and segment populations.

- Create a plan to program space intentionally to minimize overlaps and touchpoints between groups of people.
- Where possible, make spaces self-sufficient, for example by establishing small kitchens/kitchenettes or laundry facilities within housing units.



## Reconfigure medical facilities and consider alternatives.

- In medical spaces within prisons, use signage or paint doors to notify individuals when they are transitioning into or out of areas where they may be at high risk of contagion, and locate PPE donning and doffing spaces at the thresholds.
- Consider repurposing open units or otherwise unused spaces for cases that require quarantine, but are not in need of intensive care. Make sure these patients are comfortable and maintain access to programming or the outdoors, where appropriate.
- As much as possible, consider alternative choices for quarantine spaces, including other government or private spaces better suited for the monitoring and care of those diagnosed with COVID-19.

## Use design cues to reinforce behavior change.

- Highlight high-touch surfaces (like door handles, handrails, tabletops, and telephones) with bright-colored paint, tape, and/or signage.
- Post clear signage to communicate a consistent message and provide updates to staff and residents.
- Use wayfinding clues like paint, tape, or signage to identify spaces thresholds where PPE and/or regular cleaning is necessary, and make hand washing units and/or sanitizing stations available at the transition between contaminated and "safe" zones, and before other shared spaces.

## Design for healing, not for lockdown.

- Facilitate access to video visitation and programming via virtual platforms or small class sizes to provide educational and therapeutic opportunities during this time.
- Create space to acknowledge the reality of human emotions during this time, and find ways to honor those whose lives have been lost or impacted in the path of the virus. Be sure to take into account different cultures or stages of grief and address legacies of terror and trauma, where possible.
- Empower staff and residents to design and define their own spaces, and give them agency as interventions to control contagion are enacted.
- Normalize spaces by introducing softer furniture and plants as well as natural, and porous materials (surfaces on which the virus has a shorter lifespan) to create a calmer environment and release tension.

# Make space for each person's safety.

People should be separated by at least 6ft (2m) to minimize droplet transmission. In order to provide social distancing while maintaining freedom of movement, common spaces and open dorms should account for 150 to 200 SF/person. Allocating less than 150 SF/person will considerably restrict movement, resulting in "gridlocks," which are more susceptible to cross contamination.

*Right: At its height, the F3 Unit at Lee Correctional Institution in South Carolina held up to 128 people. Today, it holds just under 50 people, allowing for more comfortable distancing. Photo: Iwan Baan*

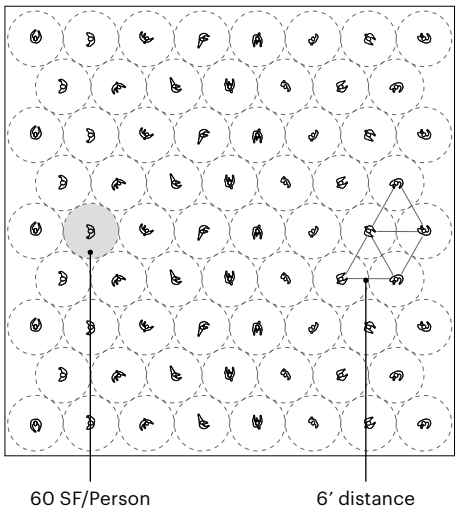
**Depopulate to reduce density and crowding.**
The single most impactful and necessary action to prevent the spread of coronavirus in jails and prisons is to reduce density and crowding through depopulation. A number of states and organizations have issued recommendations regarding early and compassionate releases, furloughs, and the cessation of new intakes. These policies focus on people that do not pose an imminent threat and/or who are more at risk of death from COVID-19: those who are elderly (over 50-65 years of age), medically vulnerable, en route to parole or release within a few months to years, in pretrial detention, awaiting sentencing, or are incarcerated on nonviolent charges.

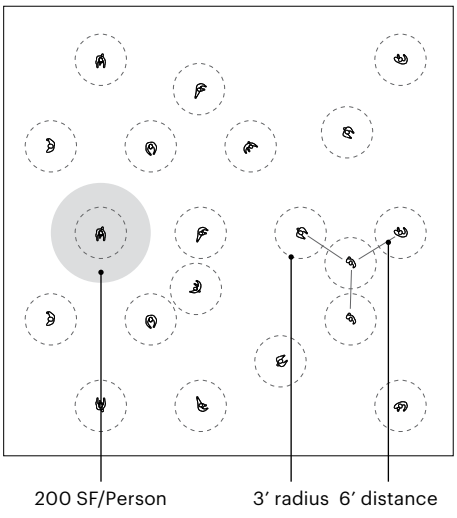
Executive orders by the governor in Colorado (executive order and criteria memo), New Jersey, New York, California (from KTLA), New Mexico, Maryland, Pennsylvania, and Illinois have accelerated the depopulation of prisons in these states.

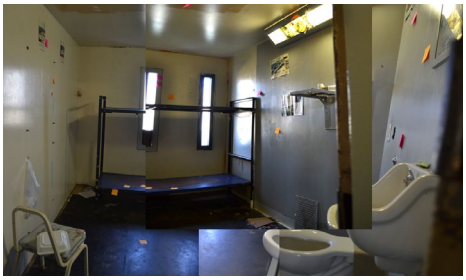
Additionally, the Vera Institute of Justice has released guidance for preventive measures in jails, prisons, immigration detention, and youth facilities.

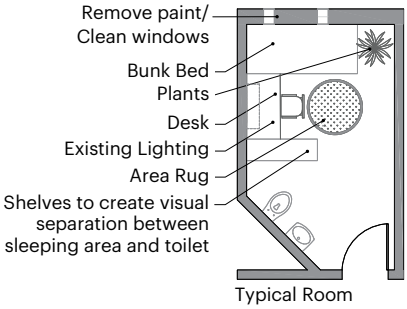
*Left: Minimal social distancing (60 SF/person) in a 5,000 SF dayroom: in a 68-person unit, each person is unable to move without interfering with another person's personal space. A gridlock ensues.*

*Right: Optimal social distancing (200 SF/person) in a 5,000 SF dayroom: with just 20-25 people in the dayroom, each person can move freely and adhere to social distancing guidelines.*



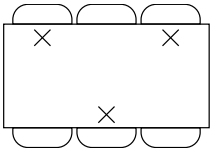





*Above: Double-bunked cells (top) converted into single rooms (middle) and a plan drawing of an example cell renovation (bottom) at the Lee Correctional Institution, South Carolina, 2019. Middle photo: Iwan Baan*

*Above, right: Diagram illustrating required spacing per bed in dormitories.*

*Below: Staggered seating arrangement for dining tables.*

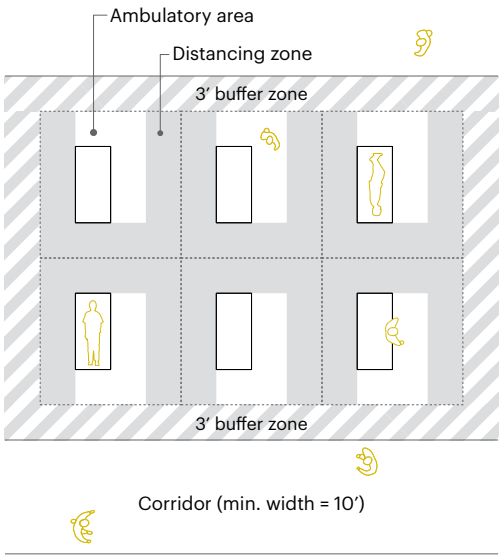


As the number of people incarcerated drops, the following opportunities become available to convert existing spaces to support a reduction in density:

Convert double- and triple-bunked cells into single rooms. Make sure to thoroughly clean and disinfect the space, including all the vents and fenestrations, prior to move-in and on a regular basis.

Convert empty cells into programmed spaces, including meditation rooms, exercise rooms, art studios, recording studios, libraries, and kitchenettes, among others.

Where there are open toilets, especially in cell rooms, install seat covers to limit possible contamination from human waste.




Rearrange rooms to accommodate more space between people, and use physical partitions where necessary.

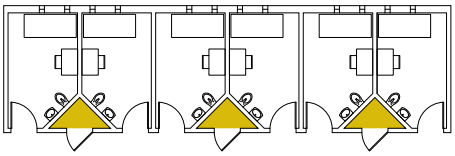
**In dormitories:**
To adhere to a 6′ separation and also allow for circulation and activity between and before getting into bed, beds should be separated by at least 9′ (6′ + 3′ landing area on each side). Remember to aim for 150-200 total SF/person to accommodate freedom of movement within the dormitory.

**In group congregation spaces:**
Rearrange dining halls to accommodate more space between each person, such as using only one side of the table or staggering seating. Consider allowing small groups of people to eat outside where they can spread out more without experiencing isolation.

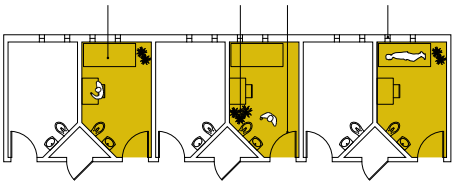
Communal spaces like hallways, dayrooms, cafeterias, shared bathrooms, and sally ports, can be the most contagious because they're where crowding can occur. Look for opportunities to bring communal spaces into segmented spaces (i.e., by reassigning temporarily underutilized spaces), make sure these spaces are identified as zones to be careful, and when possible, move activities outdoors where there is more room to spread out.

# Make your spaces breathe better.

Coronavirus is mainly spread by droplets—produced by coughing, sneezing or even just talking—that can travel up to 6′ (2 m). There is early evidence that smaller particles may be able to float even longer distances. In the latter situation, called airborne transmission, proper ventilation and simple airflow strategies can help.



*Shared ventilation shafts can facilitate the spread of contaminated air. It may be necessary to install dampers to prevent air recirculation.*



*If possible, consider using only every other cell.*

**Air cleansing strategies** that disinfect harmful particles, such as Germicidal Ultraviolet (GUV) air disinfection units or high efficiency particulate air (HEPA) air filters, can be installed inside cells and throughout dayrooms and common spaces that are used by several different groups of people.

**Regularly clean vents and replace air filters**. It is suspected that shared HVAC systems can still transmit contaminated air between cells, so be sure to pay careful attention to these less obvious connection moments. If possible, use every other cell.

Another effective option is the **dilution of contaminated air with clean air.** To dilute and remove contaminated indoor air, open doors and windows on opposite ends for cross ventilation (if the space allows), or use exhaust fans or mechanical systems to pull air outside.

Where possible during open hours or other times of day, keep cell doors open to facilitate ventilation, and also help mitigate the feeling of being trapped due to reduced interactions and socialization. Aim for 12 air changes per hour as a baseline.

**Introduce air-purifying plants** in cells and throughout the space. While unlikely to be effective against coronavirus, they introduce additional benefits, including reducing harmful VOCs, easing irritation to eyes, ears, nose, and throat; prevent coughing and congestion; lower stress; and have restorative benefits.

**Use outdoor spaces** for programming activities where possible.

As these strategies are implemented, also consider how they might inform ventilation strategies over the long term to control airborne pathogens and maintain a healthy environment. Don't be afraid to make permanent interventions (such as the installation of operable windows) to bring in more daylight, air, views, and access to nature, as these elements bring in additional positive health benefits to both staff and residents.

*Right: Opening windows to facilitate natural ventilation can improve airflow and using fans positioned to exhaust air to the outdoors can prevent contaminated air from spreading to other parts of the building. In addition, a view to the outdoors, as this room at the Halden Prison in Norway offers, can bring calm to a difficult situation. Photo: Jack W. Duran, Vera Institute of Justice.*

# Sequence flows and segment populations.

Prisons, jails, and detention centers are confined spaces, which poses two challenges in managing the spread of coronavirus. The first challenge is that staff members, who may interact with those carrying the virus in their homes and communities in between each shift, may import the virus into prisons, jails, and detention centers. The second challenge is that once coronavirus enters the prison, it can rapidly spread due to standard operating policies, including pat downs, cell searches, counts, common shower times. Reducing such practices where possible can limit the spread of infection. An additional strategy to limit contagion, while reducing stress and maintaining as much normalcy as possible, is to intentionally design for the flows and interaction of staff and residents.

## Designing Flows for Infection Control

Reduce overlapping interactions by limiting the number of contacts between staff and incarcerated people. Where possible, assign staff to specific groups of residents in order to facilitate as much normalcy as possible. The broader the interactions are, the harder it will be to conduct contact tracing and separate confirmed and suspected cases. Meanwhile, ensuring access to existing programming, such as classes, exercise, and outdoor time, as well as having meals outside of the cell, will help reduce stress and additional mental and physical health conditions that may arise from increased isolation.

Reduce the overlap of space to avoid cross-contamination and contain the spread of the virus. For example, different groups can be allowed staggered access to shared spaces, like the central laundry, commissary, kitchens, and other essential spaces—a preferable alternative to implementing time restrictions.

Add extra outdoor time and stagger access to the outdoors to reinforce social distancing both outdoors and indoors.

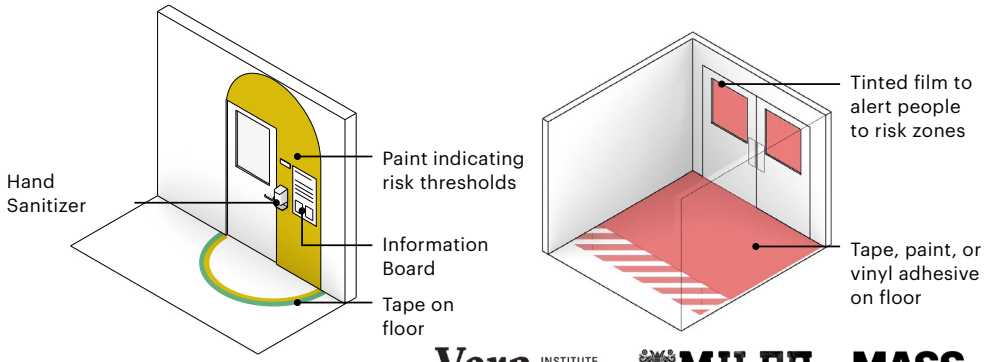
Reduce or if possible, eliminate the use of standard practices including pat downs, cell searches, counts, common shower times, that can spread infection.

Assign dedicated staff check-in spaces to ensure compliance and regular temperature checks.

Limit flows into and out of centralized kitchens. Separate food preparation from tableware and dinnerware.

Since housing units will need to become more self-sufficient, establish small kitchens or kitchenettes within each housing unit. To the extent possible, install laundry facilities in each housing unit to limit cross contamination through the handling of laundry.

Highlight thresholds where people may be entering or exiting an area where contagion risk is high or where they may encounter people who are medically vulnerable.

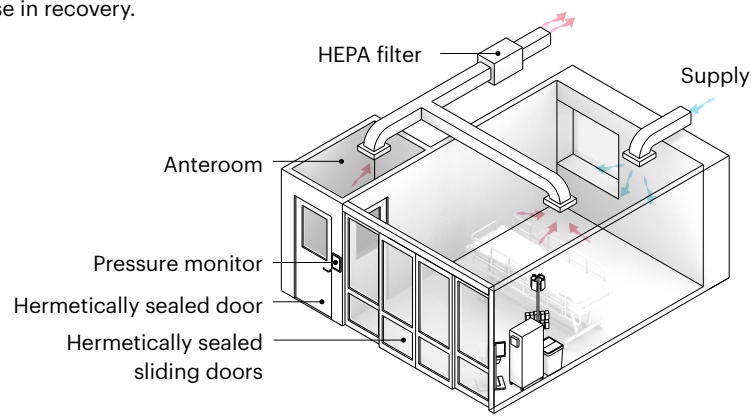





Vera INSTITUTE OF JUSTICE MILPA MASS.

## Reconfigure medical facilities to control contagion and consider alternatives to accommodate extended stays.

Not every correctional environment has a medical facility equipped to deal with coronavirus patients, and those that do are frequently at capacity, even before the pandemic. Each facility should assess their medical capabilities, review protocols for dealing with disease outbreaks and exposure, and coordinate with state, local, tribal, or territorial health departments. Correctional institutions should take care to separate testing, suspected, confirmed, and acute cases, as well as those in recovery.




*Right: This diagram represents a preferred condition within which to treat patients with highly infectious diseases. A negative pressure isolation room is sealed from surrounding spaces to prevent contaminants and typically features transparent windows to allow for continuous monitoring from the nursing station.*

Just as patients must be triaged to prioritize those most in need of care; spaces must be triaged to protect healthy people from getting sick—including staff and incarcerated people with non-confirmed cases. Prepare spaces for those infected with coronavirus with access to comfortable furnishings and personal belongings, a telephone, and programming, even if that programming is done via videoconference or another technology. Below are some additional strategies related to medical preparation:

- Consider how a reduction in the institution's overall capacity can open units that can be renovated to be used as quarantine wards for cases that require less intensive care.
- Assign a room near each unit for COVID-19 testing and evaluation to limit spread to other parts of the facility.

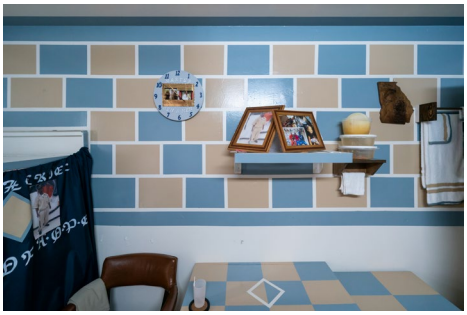
Create clear thresholds for donning and doffing of personal protective equipment (PPE) before entering and exiting areas with individuals that have been confirmed or are suspected of having the coronavirus infection, and clearly post infection control protocols at key thresholds into or out of these spaces. See this case study of The Mount Sinai Hospital for additional design interventions that can be implemented in medical spaces.

Due to the unique and emergency needs related to COVID-19, repurposing existing facilities or reopening closed facilities may not be the best and healthiest course of action for everyone in the facility. Where possible, consider alternative choices for quarantine spaces, including other government or private spaces better suited for the monitoring and care of those diagnosed with COVID-19 based on the principles outlined in this document.

Consider alternative care spaces equipped to deal with COVID-19 surges, such as secure personal housing units, college dormitories, or field hospitals.

*Medical Monitoring Station, Morial Convention Center in New Orleans (left) or the Javits New York Medical Station (right). Photos: Louisiana Department of Health (left), Darren McGee, Office of Governor Andrew M. Cuomo (right).*

# Design for healing, not for lockdown.



Even the best-intentioned plans will fail if they do not consider the needs of the individuals and communities (both staff and residents) who will be affected. Be aware that solitary confinement and isolation have been shown to be "profoundly damaging and sometimes deadly."

Options like lockdown, tent dorms, or converting gyms into warehouse dorms may seem like the easiest interventions to implement, but can result in increased fear, panic, and distress, and subsequently increased distrust, violence, vandalism, and recidivism. Keep in mind that the social and emotional needs of incarcerated people are different and often more severe than those who practice social distancing outside confined facilities. Sensitivity to an increased need for emotional and counseling support, transparency, and family connection should guide how correctional institutions balance social distancing with social connectivity. The below interventions can help rebuild trust, hope, and solidarity in the public domain.

*Photo: Iwan Baan*

## Plan for social distance, not social isolation

Research in carceral spaces has shown a correlation between communal programming and improved outcomes, including increased education and vocational skills that contribute to successful re-entry, as well as reduced violence, vandalism, assault, and recidivism. Where possible, make every effort to facilitate access to these programming opportunities which are critical to the success of those inside. This may mean classes need to be resized to facilitate better social distancing.

Prepare spaces with access to comfortable furnishings and personal belongings, a telephone, and programming, even if that programming is done via videoconference or another technology.

Acknowledge the reality of human emotions and honor those whose lives have been impacted or lost in the path of the virus. Consider how current spaces can be reimagined into spaces that support the grieving process, preserve memory, and offer comfort.

Don't forget to take into account how different cultural practices might be affected by current conditions, and work with staff and residents to be as adaptive as possible to their needs.

Look for opportunities to involve both staff and residents in the COVID-19 prevention efforts. It's likely that they may be spending extended periods of time in a smaller area, and letting them define their spaces can help bring a sense of agency and control in a difficult situation.

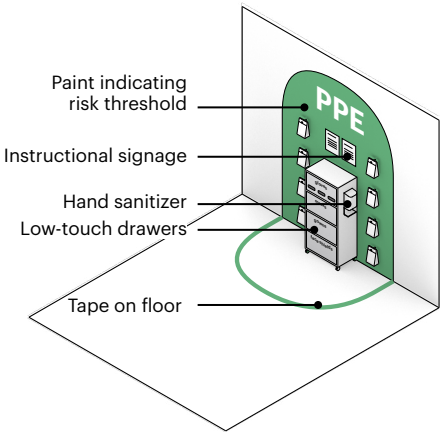
Consider how each unit can be self-sufficient by converting empty cells and buildings into recreational and programming spaces. Consider activities to support meditation, exercise, classes, and reading rooms, among others. Before repurposing these spaces, take care to thoroughly clean and disinfect the spaces, optimize the spaces for natural ventilation if possible, and install hand sanitizers next to each door or threshold in or out of the space.

## Vandal-proof is not virus-proof.

It is believed that surfaces contaminated with infected droplets can transmit disease. Non-porous surfaces (e.g., stainless steel, plastic, composites) are materials where COVID-19 has been shown to live the longest and tend to be used on doors, handrails, and tables. Typical correctional furniture and finishes feature surfaces that are made of these metallic, hard, and nonporous materials which require continuous cleaning, which can introduce harmful chemical fumes. In an environment with inadequate ventilation, this can significantly degrade interior air quality and pose a health risk to incarcerated people and staff working in these spaces. As much as possible, use zero-VOC cleaning products to avoid harmful chemicals.

Consider introducing softer and natural materials, including couches,area rugs, and products with natural finishes evoke normalcy, comfort, and dignity. In a stressful time, these qualities are increasingly crucial to everyone's mental health during this time, and have been shown to contribute to significantly lower rates of violence, vandalism, and verbal assault in correctional environments. In short, more normalized environments are healthier and safer for everyone.

# Use design cues to reinforce behavior change.




Design can help rebuild trust, remind users of changes or new protocols, and reinforce communication so everyone is on the same page. Signs and graphics can help reveal the systems that are working behind the scenes and provide visual cues that reinforce the behavior change necessary to prevent contagion.

Highlight high-touch surfaces (door handles, handrails, tabletops) with bright-colored paint, tape, and/or signage. Clearly identify spaces where masks and regular cleaning are required. Use language that conveys firm but encouraging reminders instead of an aggressive tone, which can add stress.

Take special care to routinely clean high-touch surfaces and non-porous surfaces, and consider creating no-touch surfaces where possible (i.e., leave doors open to reduce interaction with door handles or doors).

Place sanitizers or hand wash stations next to high-touch surfaces and at centralized PPE stations for staff and residents to encourage use and reduce contamination.

Consider using these interventions to build a sense of solidarity and accountability by engaging residents in creating signage, painting walls, doors, and furniture to design how they want their spaces to look like, especially during a time of dramatic change.


*Involve incarcerated residents in creating signage, painting walls, and defining their spaces to build solidarity during a time of dramatic change. Turbeville Correctional Institution, South Carolina. Photo: Iwan Baan.*

# Conclusion:
## A radical commitment to humanity in the time of pandemic

For years, departments of corrections, incarcerated people, staff, academics, and activists have recognized that existing conditions of confinement in prisons, jails, and detention centers continue to have a devastating impact on everyone in the system, particularly those who live and work in these facilities. In the midst of a pandemic, a new revelation has emerged: these conditions of confinement are uniquely dangerous during a public health crisis and existing structures are not optimized for infection control and are inflexible to change.

This unique moment has also shown that decarceration—the process of depopulating our correctional infrastructures—is a central part of the solution. Even after the crisis settles, our existing criminal justice infrastructure will need to be radically reconsidered to protect public safety and public health. Criminal justice, law enforcement, and corrections can no longer operate as ever-narrowing disciplines, but must now become integrated with broader matters of concern. Carceral environments will become less carceral and thought of more like public health facilities where people can access services from day one and where staff and residents are empowered to engage collaboratively in restorative programming. Models already exist—in Norway, Finland, Germany, as well as South Carolina, Connecticut, and North Dakota.

The architecture of prison is a messenger not just for a philosophy of justice, but for the public accountability of the state. It defines what we can expect from our institutions. Through housing, hospitals, schools, or prisons, our public buildings demonstrate the values of the state, its priorities and understandings of its people.

Our hope is that the design strategies presented above can be tested and implemented in facilities across the country to bring us a step closer to carceral spaces that promote health and human dignity.

This document will be iteratively updated with case studies that document how prisons, jails, and detention centers are responding to the pandemic and will be shared among a network of prison reform organizations, departments of corrections, and public health agencies throughout the COVID-19 response. MASS is grateful to the experts who have advised on this document. It does not represent the opinions or full understanding of any one person. Please reach out to covidresponse@massdesigngroup.org if you have any questions, are seeking support, or would like to be included as a case study in this evolving body of work.