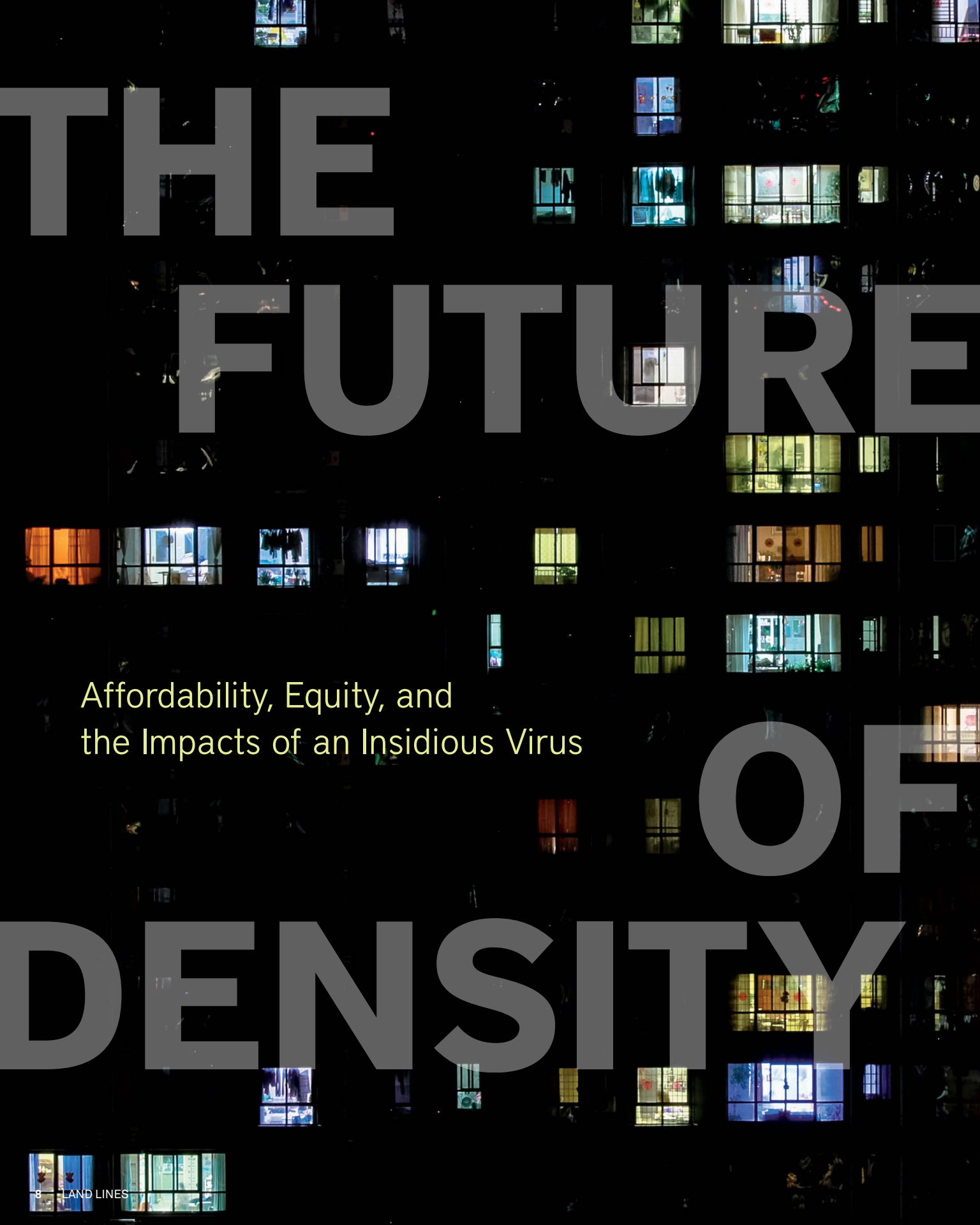


THE FUTURE OF DENSITY

Affordability, Equity, and the Impacts of an Insidious Virus

By Anthony Flint

AS CITIES AROUND the world begin the slow and careful work of recovering from the initial wave of devastation caused by the novel coronavirus, their quest for resilience hinges on one characteristic that has long been a foundational asset: density.

The ravages of the last six months—500,000 lives lost and counting, record unemployment, bankruptcies, trillions of losses in assets and tax revenue—have hit cities particularly hard. The crisis threatens the building blocks of a functioning urban economy: residents and businesses located downtown, transit systems that serve them, thriving colleges and universities, and amenities and services including restaurants, retail, sports, and entertainment.

Given that more than half of the world's population lives and works in urban areas—a number that is expected to increase to 68 percent by 2050—the recovery of urban areas is of vital importance.

Historically, cities have responded to disease and disaster with affirmative measures: first responders and building codes after great fires, water and sewer infrastructure prompted by cholera, or tightened security to guard against international terrorism. This time around, amid social distancing requirements and concerns about contagion, density has been in the spotlight, with skeptics in media and policy circles questioning its merits and advocates quickly rising to its defense.

A closer look at the realities of this virus and the way it has spread makes it clear that density itself is not the cause of collective pain. Density defines cities; it's what makes them work. The more significant factors powering the pandemic—and the issues cities urgently need to address—are overcrowding, lack of affordability, and economic and racial disparities.

THE MANAGEMENT OF the pandemic has several components, including testing, contact tracing, treatments, and ultimately, the world hopes, a vaccine. In the meantime, the public health protocols of social distancing—a minimum six-foot buffer between people—rely on reducing proximity. That can be achieved by, for example, limiting the number of people in a workplace, elevator, or subway car, or on a college campus, at any one time; drawing circles in a park to delineate safe distance between visitors; or letting a restaurant spill into the street for more space between tables.

In that sense, density is just one more thing that needs to be managed. But a closer look raises myriad questions about whether cities can function economically and socially with reduced proximity—let alone navigate a recovery that makes cities more sustainable and equitable. The pandemic has highlighted extensive economic and racial disparities, and the recent worldwide wave of protests over police brutality and structural racism further underscores how much work remains.

As the pandemic surged, the world saw wealthy city-dwellers decamp to second homes or hunker down in larger apartments, but lower-income workers in service jobs—disproportionately in communities of color—could not work from home and could not afford not to work. If their jobs didn't vanish, they risked higher exposure to infection, and if they got sick, their often-crowded living conditions—necessitated in part by the high costs of housing—made self-isolation more difficult.

As the author Jay Pitter wrote when the coronavirus began sweeping across North America this spring, there are different kinds of density at issue. There exists, she noted, a "dominant density . . . designed by and for

Credit: Afton Almaraz via Getty Images.

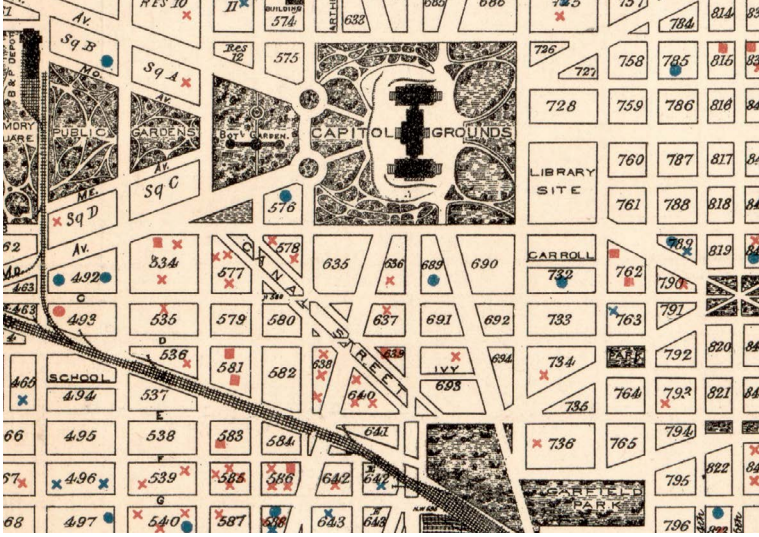
predominately white, middle-class urban dwellers living in high-priced condominiums within or adjacent to the city's downtown core," and "forgotten densities" that include those in the periphery: "favelas, shanty towns, factory dormitories, seniors' homes, tent cities, Indigenous reserves, prisons, mobile home parks, shelters and public housing" (Pitter 2020).

So while taking over parking spaces and making other changes to the public realm may be salutary short-term fixes, says Amy Cotter, director of climate strategies at the Lincoln Institute, "it won't even begin to be sufficient. We're going to need policies that do double- or even triple-duty," addressing structural issues in housing, transportation, and the environment, to realize an equitable and sustainable recovery for the four billion-plus urban residents worldwide.

IN THE 19TH CENTURY, the global rise of diseases such as cholera and yellow fever led to new design practices and systems intended to keep people healthier, in part by giving them more space (Klein 2020). Formerly cramped and dirty cities introduced wide boulevards, water and sewer infrastructure, and public parks that served as the "lungs of the city," a concept embraced by Frederick Law Olmsted, whose landscape designs include New York's Central Park and the Emerald Necklace in Boston.

Such improvements were inarguably positive, but some came with economic and social consequences, intended or otherwise. To execute the cholera-inspired widening and straightening of Paris streets, for example, authorities razed lower-income neighborhoods. They also smoothed the way for the military to conduct surveillance and suppress potential rebellions, notes Sara Jensen Carr, an assistant professor of architecture, urbanism, and landscape at Northeastern University who wrote the forthcoming book *The Topography of Wellness: Health and the American Urban Landscape*.

In the early 20th century, separated-use zoning in the United States was driven in large part by public health concerns in congested



Officials have long tracked the connections between density and contagion, as illustrated by this 1894 map of Washington, DC, which indicates fatal cases of malaria, typhoid, scarlet fever, and other infectious diseases. Credit: Library of Congress, Geography and Map Division.

urban areas—that a tannery shouldn't be allowed to be sited next to tenement houses, for example. Arguably, that change in land use rules ended up reinforcing racist housing policies and enabling suburban sprawl. The redrawing of zoning maps extended to the racial segregation of residential areas, and set the foundation for federally imposed redlining in the wake of the Great Depression. The separation of uses is the basis for far-flung, low-density suburban development generally, following World War II.

Striving for more "light and air" in cities, the modernist pioneer Le Corbusier proposed clearing out the cluttered section of central Paris and replacing it with towers in parks. The United States embraced the idea in the era of urban renewal, building housing in windswept plazas and bulldozing the urban fabric—often houses and businesses in communities of color—to make way for extensive parking facilities and destructive freeways.

The history of urban interventions in response to crises underscores the need for policy makers and planners to be more thoughtful about what problem they are actually trying to solve, and what impacts and ripple effects the fixes could have. That means understanding more about how the coronavirus is actually spread, across all human settlement.

THE SCIENTIFIC LITERATURE supports the broad supposition that infectious disease spreads more easily in densely populated urban environments, whether the plague or the Spanish flu of 1918. "Scholars have argued that virtually all human infectious diseases due to microorganisms arose out of the emergence of urbanism," writes Michael Hooper, professor at Harvard University's Graduate School of Design. The association of density and disease, he notes, became known as the "urban penalty" (Hooper 2020).

But epidemiologists say that airborne infectious disease spreads at a more fine-grained level, such as in crowded churches, military barracks, or homes shared by large families—a significant narrowing of scale from the city as a whole. The drivers of the spread of the coronavirus are close contact in crowded indoor spaces, with the duration of time spent together another factor, says Muge Cevik, an infectious disease specialist at the University of St. Andrews. "There is a strong correlation between indoor crowding and pandemic hotspots, especially in packed cities for sure. But the same pattern is also reflected in nursing homes or meatpacking plants," she says. Indeed, the virus has torn through rural areas with comparable force, fueled by flareups in factories or prisons and, as an analysis by the *Wall Street Journal* shows, exacerbated by crowded family housing. This has all happened far from any urban center (Thebault 2020, Lovett 2020).

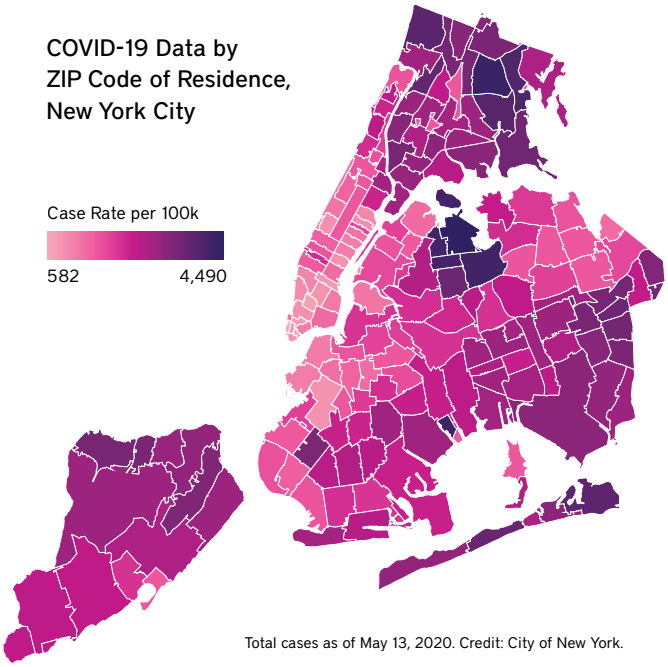
One recent study found that COVID-19 death rates were higher in low-density counties, in part due to differences in access to health care (Hamidi 2020). Early data suggest that even within cities, for every apartment complex like the one dubbed the "death tower" in the Bronx, there's a relatively low-density neighborhood that has been hit just as hard (Freytas-Tamura 2020). Several devastated New York neighborhoods, like Elmhurst, Borough Park, and Corona, have a high population density, measured as people per square mile, without sufficient housing density, as measured by units per acre, says Julie Campoli, principal at Terra Firma Urban Design in Burlington, Vermont. "In other words, larger households living in small spaces," Campoli says. "For the low-income residents in affected areas of Queens and Brooklyn, sharing tight quarters is the only affordable option in a city with very high rents."

"For the low-income residents in affected areas of Queens and Brooklyn, sharing tight quarters is the only affordable option in a city with very high rents."

NEW POLICIES AND PRACTICES to confront the coronavirus, whether incremental measures or more revolutionary change, will be informed by nuanced analysis of what's actually happening on the ground, in the spread of the disease.

It's a matter of following the string back to why there is a greater concentration of people living in the same household, says Yonah Freemark, a doctoral candidate in urban studies at MIT and founder of The Transport Politic blog.

Data suggest the spread of COVID-19 has far more to do with overcrowding in indoor spaces than with neighborhood density. Credit: Joey Cheung via iStock.



Total cases as of May 13, 2020. Credit: City of New York.

"Any sort of condition where you see crowding for any period of time seems to be a vector of this disease, and that can be people living closer together. People are more likely to be crowded because housing is expensive," he says. "If we had more density and more housing for people, we would have less crowding within the units and people could afford to be in larger units."

Many other systemic problems have made residents in poorer urban neighborhoods more susceptible to this disease, ranging from a lack of adequate health insurance to a legacy of environmental injustice. A study by Harvard's T.H. Chan School of Public Health found that communities with higher levels of fine particulate matter—air pollution from nearby power plants or highways—have recorded more deaths from the coronavirus (Wu 2020).

Confronting all of those issues, which were intensifying long before the current pandemic set in, may seem as daunting as a massive overhaul of society. But when it comes to housing, at least, advocates suggest that now is the time to begin to address the inequities and lack of affordability the pandemic has so starkly revealed.

Many states have put a hold on evictions and instituted other tenant protections, not only for residents but also for small businesses and nonprofits (Howard 2020). Those policies could become a more permanent safety net. California passed an initiative to allow the most vulnerable and homeless populations to safely isolate in vacant hotel rooms. Oakland Mayor Libby Schaaf has suggested seizing the moment to keep that policy in place, providing safer and more secure shelter than temporary encampments.

Campoli, who wrote *Made for Walking: Density and Neighborhood Form* (Campoli 2012) and coauthored *Visualizing Density* (Campoli 2007), echoes the idea that the need to address affordability is more pressing than ever. "A long-term solution to fighting the spread of pathogens in cities is to make housing a right," she says. "Investing in affordable housing and implementing policies that ensure everyone has a home to shelter in will help cities achieve density without the overcrowding and homelessness that bring suffering and spread disease."

New approaches in the design of multifamily housing should also play a role in urban recovery, Campoli says. "Experimenting with temporary installations for social distancing makes sense, but when it comes to expensive investments like buildings and public spaces, let's make changes that add value well beyond the immediate crisis," she says. Campoli suggests that multifamily housing should increasingly include features such as carefully designed outdoor spaces, better ventilation systems, flexible partitions that enable privacy, and even touchless doors and handwashing stations in public rooms.

Policy makers will have to be creative and work with what's feasible. State and local budgets are piling up record deficits, just when added services are most needed. The economic downturn triggered by the pandemic will almost certainly slow down real estate development, which could lead to a decrease, at least temporarily, in such market-based solutions as inclusionary housing. Privately built multifamily housing below the luxury level, with its lower profit margins, may get put on hold.

Yet local governments might be able to take advantage of the massive reshuffling in urban real estate that is already underway, according to the Lincoln Institute's Martim Smolka, a senior fellow who is advising cities in Latin America on their response to the pandemic. That means special attention to land policy, regulations, and financing mechanisms related to urban development and land markets.

Office space in central business districts, with busy elevators, shared bathrooms, and scarce parking, will likely be abandoned in favor of properties in lower-density residential zones at the urban periphery, Smolka says. Less space will be needed as more employees work remotely more often (Seay 2020). An appropriate intervention might be to acquire the now lower-valued office buildings and convert them to affordable housing—and to charge development rights for those areas that require a zoning change from residential to commercial.

Trading places in this manner would present new opportunities to reenvision metropolitan areas in terms of housing and labor markets. Large metropolitan areas might see increases in density in suburban areas, in what urban planners refer to as the polycentric model: multiple urban villages across a larger area (Zeljic 2020). "That could actually increase economic efficiency and social equity, due to lower mobility costs and flatter land price gradients," Smolka says.

Similarly, looking at recovery in a larger, more regional framework—the New York–Boston corridor, for example—opens up possibilities for smaller legacy cities to play a more prominent role across a larger landscape. If more employees are working from home, they could live in more affordable places, like Hartford or Worcester, and make only the occasional trip into headquarters in bigger cities.

There is already evidence that major companies are staging an exodus, as reduced workplace density fails to justify high rents (Davis et al., 2020). Higher-income residents, young professionals, and aging boomers may well follow, drawn once again to large suburban houses with big back yards, accessed by car—especially as the amenities that attracted them to the city in the first place steadily disappear (Davis 2020). As jobs at many levels vanish, middle- and working-class populations might also quit the metropolis; they simply cannot afford to stay (Morgan 2020).

Others hope the advantages of downtowns will persevere, fueled by persistent demographic trends. "For the next two decades, 80 percent of net new households [in the United States] will be singles and couples," says David Dixon, a partner in the urban design firm Stantec. "A majority of our population growth will be folks over 65. That means unprecedented demand for urban living and a knowledge-dominated economy."

But Dixon—who notes that a similar anti-density frenzy arose in the wake of 9/11, with the advantages of compact urbanism swiftly subordinated to "feelings, not data"—says cities must address the other crisis in their midst if they are to rebound: "Major cities aren't losing their allure, they are losing their affordability."

Yet local governments might be able to take advantage of the massive reshuffling in urban real estate that is already underway . . . . That means special attention to land policy, regulations, and financing mechanisms related to urban development and land markets.

As workplaces evolve in the pandemic's aftermath, some office buildings could become candidates for conversion to housing or other uses. Credit: Jan Fidler via Flickr CC BY 2.0.

The World Economic Forum, C40 Cities Group, and others see this moment as a chance for cities to create a more equitable and sustainable future. Credit: REUTERS/Peter Nicholls.

"EVERYONE DESERVES to live in a community that is healthy, equitable, and resilient," wrote Smart Growth America CEO Calvin Gladney in June, as protests unspooled across the country. "These communities have housing their residents can afford, provide access to transportation options that affordably connect people to jobs and opportunities, and offer public spaces that anyone can safely enjoy." Gladney pointed out that decisions made over decades related to land use, transportation, and the built environment have led to an unequal system, urging the country to use this moment to do better.

"Everyone deserves to live in a community that is healthy, equitable, and resilient . . . . These communities have housing their residents can afford, provide access to [affordable] transportation . . . and offer public spaces that anyone can safely enjoy."

In early May, C40 Cities, which represents more than 750 million people around the world, released a statement of principles that embraces building "a better, more sustainable, and fairer society out of the recovery from the COVID-19 crisis," warning against a return to "business as usual" (C40 Cities 2020). "The only parallel to what we're facing right now is the Great Depression," said New York City Mayor and C40 member Bill de Blasio in a statement. "Against that kind of challenge, half-measures that maintain the status quo won't move the needle or protect us from the next crisis. We need a New Deal for these times—a massive transformation that rebuilds lives, promotes equality, and prevents the next economic, health, or climate crisis."

Other organizations including the World Economic Forum are promoting the idea of "building back better" as the world copes with the repercussions of the COVID-19 crisis. Setting the bar higher will mean confronting persistent and pernicious problems in our cities. It will also mean building on the strongest physical assets of those same cities: walkable, mixed-use environments served by transit and mobility systems other than private vehicles. "Smart density and the agility and creativity of cities is what's going to allow us to not just get through this health crisis, but emerge with a more equitable, healthy environment," says Schaaf.

Resilient cities will recover from this crisis, and density—adjusted as it must be to ensure greater accessibility and affordability for all—is sure to be a critical component. "Americans have always had a love-hate relationship with cities and an aversion to density, so it's no surprise that spreading out would be considered an appropriate response to this moment," Campoli notes. "But in the long run, proximity is essential for healthy communities and the environment. We aren't planning to give up on the essential activities that sustain us." □

Anthony Flint is a senior fellow at the Lincoln Institute and a contributing editor to *Land Lines*.

REFERENCES

C40 Cities. 2020. "No Return to Business as Usual: Mayors Pledge on COVID-19 Economic Recovery." Press release. London: C40 Cities. https://www.c40.org/press_releases/taskforce-principles.

Campoli, Julie. 2012. *Made for Walking: Density and Neighborhood Form*. Cambridge, MA: Lincoln Institute of Land Policy. https://www.lincolninst.edu/publications/books/made-walking.

Campoli, Julie and Alex S. MacLean. 2007. *Visualizing Density*. Cambridge, MA: Lincoln Institute of Land Policy. https://www.lincolninst.edu/publications/books/visualizing-density.

Carr, Sara Jensen. Forthcoming. *The Topography of Wellness: Health and the American Urban Landscape*. Charlottesville, VA: University of Virginia Press.

Davis, Elliott. 2020. "A New Report Highlights What Binds People to Their Cities." *US News & World Report,* May 20. https://www.usnews.com/news/cities/articles/2020-05-20/a-new-report-highlights-what-binds-people-to-their-cities.

Davis, Michelle, Viren Vaghela, and Natalie Wong. 2020. "Big Banks Plan Staffing Limits, Shift to Suburbs After Lockdown." Bloomberg Law, May 20. https://news.bloomberglaw.com/banking-law/big-banks-plan-staffing-limits-shift-to-suburbs-after-lockdown.

Freytas-Tamura, Kimiko de, Winnie Hu, and Lindsey Rogers Cook. 2020. "'It's the Death Towers': How the Bronx Became New York's Virus Hot Spot." *The New York Times*, May 26. https://www.nytimes.com/2020/05/26/nyregion/bronx-coronavirus-outbreak.html.

Hamidi, Shima, Sadegh Sabouri, and Reid Ewing. 2020. "Does Density Aggravate the COVID-19 Pandemic?" *Journal of the American Planning Association*, June 18. https://doi.org/10.1080/01944363.2020.1777891.

Hooper, Michael. 2020. "Pandemics and the Future of Urban Density: Michael Hooper on Hygiene, Public Perception, and the 'Urban Penalty'." Harvard University Graduate School of Design. April 13. https://www.gsd.harvard.edu/2020/04/have-we-embraced-urban-density-to-our-own-peril-michael-hooper-on-hygiene-public-perception-and-the-urban-penalty-in-a-global-pandemic.

Howard, Miles. 2020. "Response to Pandemic Shows What's Possible in Housing." *Shelterforce*, May 20. https://shelterforce.org/2020/05/20/response-to-pandemic-shows-whats-possible-in-housing.

Klein, Christopher. 2020. "How Pandemics Spurred Cities to Make More Green Space for People." History Stories, History.com. April 28. https://www.history.com/news/cholera-pandemic-new-york-city-london-paris-green-space.

Lovett, Ian, Dan Frosch, and Paul Overberg. 2020. "COVID-19 Stalks Large Families in Rural America." *Wall Street Journal*, June 7. https://www.wsj.com/articles/covid-19-households-spread-coronavirus-families-navajo-california-second-wave-11591553896.

Morgan, Richard, and Jada Yuan. 2020. "Frustrated and Struggling, New Yorkers Contemplate Abandoning the City They Love." *The Washington Post*, May 25. https://www.washingtonpost.com/national/frustrated-and-struggling-new-yorkers-contemplate-abandoning-the-city-they-love/2020/05/25/153ca71e-9c5b-11ea-a2b3-5c3f2d1586df_story.html.

Pitter, Jay. 2020. "Urban Density: Confronting the Distance Between Desire and Disparity." *Azure*, April 17. https://www.azuremagazine.com/article/urban-density-confronting-the-distance-between-desire-and-disparity/.

Seay, Bob. 2020. "How Working from Home May Change Where Mass. Residents Live." WGBH News. Boston, MA: WGBH, May 29. https://www.wgbh.org/news/local-news/2020/05/29/how-working-from-home-may-change-where-mass-residents-live.

Thebault, Reis, and Abigail Hauslohner. 2020. "A Deadly 'Checkerboard': COVID-19's New Surge Across Rural America." *The Washington Post*, May 24. https://www.washingtonpost.com/nation/2020/05/24/coronavirus-rural-america-outbreaks.

Wu, Xiao, Rachel C. Nethery, M. Benjamin Sabath, Danielle Braun, and Francesca Dominici. 2020. "Exposure to Air Pollution and COVID-19 Mortality in the United States." Cambridge, MA: Harvard T.H. Chan School of Public Health. https://projects.iq.harvard.edu/files/covid-pm/files/pm_and_covid_mortality.pdf.

Zeljic, Aleksandar Sasha. 2020. "Polycentric Cities: The Future of Sustainable Urban Growth." *Dialogue* (blog), Gensler. https://www.gensler.com/research-insight/blog/polycentric-cities-new-normal-manila-finance-centre.