

# Green and Resilient Affordable Housing

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# Green, Resilient and Affordable Housing: Obstacles and Strategies

By Shelby D. Green\*

## I. Persistent Housing Shortages and *Un*Affordability

A. Rising Costs and Shrinking Markets. A 2021 survey conducted by the Pew Charitable Trust, on the state of housing access and affordability revealed that a growing number of Americans (49%), see availability of affordable housing as a major problem in their local community.<sup>1</sup>

- This number is up 10 percentage points from three years earlier.
- Incomes have failed to keep pace with housing cost increases and housing construction has slowed.<sup>2</sup>
- Rising demand for housing means limited supply.
- High interest rates and low inventory are contributing to this problem.
- The problem is especially acute for low-income Americans.
- Even as home sales spiked during the pandemic, active housing listings have recently dropped as the median home sale price has risen sharply.
  - In January 2022, there were 408,922 active listings on the market—a 60% drop from about 1 million listings in February 2020.
  - At the same time, the national median sale price for a single-family home rose 25% from \$327,100 in the fourth quarter of 2019 (the last full pre-pandemic quarter) to \$408,100 in the fourth quarter of 2021. In the third quarter of 2023, the median sale price was \$431,000.<sup>3</sup>
  - Monthly payments on the US median-priced home, including taxes and insurance, shot up from \$2,200 in January 2022 to \$3,100 in October after the annual interest rate on 30-year fixed-rate mortgages jumped

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<sup>1</sup> Housing affordability in the U.S.: Key facts | Pew Research Center, [about:reader?url=https%3A%2F%2Fwww.pewresearch.org%2Fshort-r...](https://www.pewresearch.org/short-r...) (“Pew Report”); *see also* *The Affordable Housing Crisis Grows While Efforts to Increase Supply Fall Short*, <https://www.gao.gov/blog/affordable-housing-crisis-grows-while-efforts-increase-supply-fall-short> (“GAO report”)

<sup>2</sup> Rising land and construction costs have put pressure on the market. Land prices increased 60% from 2012-2019, as the cost of homes more than doubled from 1998 to 2021. GAO report, *supra*.

<sup>3</sup> <https://fred.stlouisfed.org/series/MSPUS>; *see also* Joint Center for Housing Studies, <https://www.jchs.harvard.edu/blog/after-falling-last-year-home-prices-are-rising-again>.

- from 3.4 percent to 6.9 percent. Median monthly payments then settled to \$3,000 by March 2023 as interest rates plateaued at 6.5 percent.<sup>4</sup>
- The rental housing market is also worrisome. While the commercial vacancy rate has soared, to 17.8%,<sup>5</sup> the residential market vacancy rate has fallen to 6.6% in the third quarter of 2023.<sup>6</sup>
- Between 2017 and 2022, rent prices exceeded inflation in every region but the Northeast: the average rent rose 21% in the West, 20% in the South and 18% in the Midwest. Rents were up 12% in the Northeast during that time.
- From February 2020 to February 2022, rents were up 6%, compared with a 10% inflation rate amid loosening coronavirus restrictions.
- Renters tend to skew toward the lower ends of the economic scale when it comes to income and wealth, according to data from the Federal Reserve’s 2019 Survey of Consumer Finances. That year, about six-in-ten Americans in the lowest income quartile (61%) rented their homes, as did 88% of people with net worths below the 25th percentile. People with lower incomes or net worths were more likely to be renters.<sup>7</sup>
- Households headed by Black or African American adults are more likely than the population overall to rent their homes (57% rent), along with 52% of Hispanic- or Latino-led households. Around a quarter of households led by non-Hispanic White adults (26%) rent.<sup>8</sup>

B. Burdens of Housing Shortages. The most recent report from the Joint Center on Housing, states that between 2019 and 2021, millions of households are unable to afford their housing, that is, more than 21 million spent more than 30 percent of their incomes on housing costs and more than 11 million were severely cost burdened, spending more than 50 percent of income on housing costs.<sup>9</sup>

- While the rate of home ownership (65.5%) is near that reached during the housing crisis of 2008, the rates continue to vary based on race and ethnicity.

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<sup>4</sup> THE STATE OF THE NATION’S HOUSING 2023, [https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard\\_JCHS\\_The\\_State\\_of\\_the\\_Nations\\_Housing\\_2023.pdf](https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_The_State_of_the_Nations_Housing_2023.pdf), at 37, 41. (“Joint Studies”) at 3.

<sup>5</sup> Commercial Edge, <https://www.commercialedge.com/blog/national-office-report/>.

<sup>6</sup> <https://fred.stlouisfed.org/series/RRVRUSQ156N>.

<sup>7</sup> Pew Report, *supra* note 1.

<sup>8</sup> *Id.*

<sup>9</sup> Joint Studies, *supra* note 4, at 5. “The National housing shortage is not just in affordable homes. According to Freddie Mac estimates, the short-fall in market-rate housing both for sale and for rent amounts to some 3.8 million units. Although the federal government has limited power to expand the residential stock, the Biden Administration’s new Housing Supply Action Plan would advance this goal by giving communities higher scores on competitive grants if they reduce exclusionary zoning and other regulations that severely restrict housing development. State and local zoning reforms have in fact gained traction in recent years, allowing construction of other types of housing in areas previously limited to single-family homes. <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/16/president-biden-announces-new-actions-to-ease-the-burden-of-housing-costs/>. Minneapolis and Oregon took the lead with changes that went into effect in 2020 and 2021, followed by California in 2022.

- Homeownership by households headed by White Americans was 74%, compared to 43% of Black Americans and 48% of Hispanic Americans.<sup>10</sup>

## II. The Intersection of Climate Change and Housing Risks

A. Impact of Climate Change. The dynamics of urban and coastal living have changed as a consequence of climate change. Increase storm surges, coastal and riverine flooding have put many residents at risk of injury and loss of shelter.<sup>11</sup> The urban heat island effect—a phenomenon that occurs when vegetation is replaced with impervious surfaces that absorb and re-radiate greater levels of solar energy, increases in tandem with rising air temperatures. Because urban areas have more buildings and roads, urban dwellers are more vulnerable to this phenomenon.

- Marginalized Communities. Centuries of official land use policies and private conduct relegated the poor and communities of color to places that are not conducive to healthy living—downwind and downstream of industrial factories, and unprotected by trees.<sup>12</sup>
  - Proximity of low-income communities industrial and waste disposal sites,<sup>13</sup> subject them to higher levels of pollution leading to increased incidences of certain diseases (asthma, lung disease).<sup>14</sup>

<sup>10</sup> Joint Studies, *supra* note 3 at 3.

<sup>11</sup> See Shelby D. Green, *Building Resilient Communities in the Wake of Climate Change While Keeping Affordable Housing Safe from Sea Changes in Nature and Policy*, 54 Washburn L. J. 527, 544 (2015)

<sup>12</sup> See Shelby D. Green, *The Intentional Community: Toward Inclusion and Climate-Cognizance*, 62 Washburn L.J. 243 (2023); See generally Maya K. Buchanan, Scott Kulp, Lara Cushing, Rachel Morello-Frosch, Todd Nedwick & Benjamin Strauss, *Sea Level Rise and Coastal Flooding Threaten Affordable Housing*, 15 ENV'T RSCH. LETTERS, Dec. 1, 2020, at 1, 1 (discussing affordable housing as typically older and poorly constructed, and most often occupied by families of low income, making them particularly vulnerable to the effects of persistent flooding. In New Jersey, New York, and Massachusetts, the number of affordable housing units at risk of flooding will more than triple by 2050 and some cities will see coastal flooding at levels higher than the number of affordable housing sites. The authors argue for “significant resiliency planning and investment” at the city level to preserve affordable housing.); Alice Kaswan, *Domestic Climate Change Adaptation and Equity*, 42 ENV'T L. REP. 11125 (2012); Bernadette Onyenaka & Chelsea Jones, *Why Natural Disasters Hit Vulnerable Groups Hardest*, NAT'L LEAGUE OF CITIES (Sept. 21, 2017), <https://www.nlc.org/article/2017/09/21/why-natural-disasters-hit-vulnerable-groups-hardest/>.

<sup>13</sup> See UNITED CHURCH OF CHRIST COMM'N FOR RACIAL JUST., *TOXIC WASTES AND RACE IN THE UNITED STATES* (1987), <https://www.nrc.gov/docs/ML1310/ML13109A339.pdf>. This disparate environmental impact on certain populations became vivid several decades ago when studies found the overwhelming majority of hazardous waste facilities in the South were located in predominantly Black neighborhoods. *Id.* ADRIAN WILSON, JACQUI PATTERSON, KATIE FINK, KIMBERLY WASSERMAN, AMANDA STARBUCK, ANNIE SARTOR, JUDY HATCHER & JOHN FLEMING, *COAL BLOODED: PUTTING PROFITS BEFORE PEOPLE*, <https://climateaccess.org/system/files/Coal%20Blooded.pdf>. The Biden administration has announced an ambitious plan to address environmental racism. See <https://www.whitehouse.gov/environmentaljustice>.

<sup>14</sup> See generally *The State of Health Disparities in the United States*, in NAT'L ACADS. OF SCIS., ENG'G, AND MED., *COMMUNITIES IN ACTION: PATHWAYS TO HEALTH EQUITY* 57 (Alina Baciu, Yamrot Negussie, Amy Geller & James N. Weinstein, eds., 2017).

- They breathe more polluted air,<sup>15</sup> and are poisoned by contaminated floodwaters, residual toxic sediments, and debris disposal.<sup>16</sup>
- They are hotter because of the many miles of paved roads and highways running through them.
- They have fewer trees and parks.<sup>17</sup>
- Homes are twice as likely to have substandard plumbing and lack air conditioning.<sup>18</sup>
- They are less likely to be able to fortify homes against wind and flood, and are less likely to have emergency supplies.<sup>19</sup>
- In case of natural disaster, they are often trapped, because lack transportation to evacuate for safety.<sup>20</sup>

B. Effects of Historic Redlining. Many recent studies on the disparate impact of climate change demonstrates that historical “redlining” of minority neighborhoods in more than 100 American cities has placed a heavier burden on residents from extreme heat than other communities.<sup>21</sup>

### III. The Obstacles to Green and Resilient and Affordable

A. Land Use Regulations. The main barriers to building green, resilient and affordable housing lie most prominently in our existing land use regime, which in turn affects the housing markets.

- Local zoning laws prohibit structures other than single-family detached homes on the majority of land across cities and suburbs.<sup>22</sup>

<sup>15</sup>PATHWAYS TO HEALTH EQUITY, *supra* note 108; *Asthma and African Americans*, U.S. DEP’T OF HEALTH & HUM. SERVS., OFF. OF MINORITY HEALTH, <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=15>.

<sup>16</sup>Alice Kaswan, *supra* note 12 at 11130; *see also Targeting Minority, Low-Income Neighborhoods for Hazardous Waste Sites*, UNIV. OF MICH. (Jan. 19, 2016), <https://news.umich.edu/targeting-minority-low-income-neighborhoods-for-hazardous-waste-sites>.

<sup>17</sup>Ian Leahy & Yaryna Serkez, Opinion, *Since When Have Trees Existed Only for Rich Americans?*, N.Y. TIMES, <https://www.nytimes.com/interactive/2021/06/30/opinion/environmental-inequity-trees-critical-infrastructure.html>.

<sup>18</sup>Nina Lakhan, Maanvi Sing & Rashida Kamal, *Almost Half a Million US Households Lack Indoor Plumbing: ‘The Conditions Are Inhumane,’* GUARDIAN (Sept. 27, 2021), <https://www.theguardian.com/us-news/2021/sep/27/water-almost-half-million-us-households-lack-indoor-plumbing>.

<sup>19</sup>Kaswan, *supra* note 12.

<sup>20</sup>*Id.*

<sup>21</sup>Jeremy S. Hoffman, Vivek Shandas & Nicholas Pendleton, *The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 US Urban Areas*, 8 CLIMATE 1, 1–2, 11 (Jan. 13, 2020) (finding greater likelihood of exposure to the heat effect in more diverse and poorer neighborhoods).

<sup>22</sup>Sara C. Bronin, *Zoning by a Thousand Cuts*, 50 Pepp. L. Rev. 719 (2023). The article is based on a study that catalogued all 180 land use codes in the state of Connecticut, including 178 zoning codes and 2 subdivision codes functioning as zoning equivalents. It documents over one hundred specific housing-related rules for 2,622 zoning districts. Among other findings, the dataset confirmed the dominance of as-of-right zoning for single-family housing (90.6% of zoned land) over four-or-more family zoning (2.1%). The preliminary analysis in the Article demonstrated a strong correlation between single-family zoning, high household incomes and the

- Centuries-old zoning ordinances regulate land use, structures, and lots that dictate how and where we live.
- Restrictive land use regulations drive up development costs, degrade the environment, and makes communities too homogenous.<sup>23</sup>
- Local governments use their zoning powers to price out low-income families, bowing to pressure from upper-middle-income households to preserve or increase home values.<sup>24</sup>
- The economic costs of zoning regulations is quantifiable.<sup>25</sup> A study by the National Association of Home Builders estimates that government regulations account for nearly a quarter of the price of a home, with approximately 15 percent of the price attributable to land use regulations and 10 percent that apply after a builder has acquired land.<sup>26</sup>
- Regulations that limit density, impose design standards, or shift cost burdens to developers—essentially, regulations that limit where and how housing is built—decreases the supply and greatly affects total costs of land and construction.<sup>27</sup>
- Single-family zoning and large lot zoning drive up the cost of housing,<sup>28</sup> as they limit the available housing choices for low and moderate-income families.<sup>29</sup>

percentage of a neighborhood's White population. For an assessment of housing in Boston, *see also* June 2019 Multi-Family Housing Report\_Executive Summary.pdf (ma-smartgrowth.org).

<sup>23</sup> *See, e.g.*, Vicki Been, Ingrid Gould Ellen & Katherine O'Regan, *Supply Skepticism: Housing Supply and Affordability*, 29 HOUS. POL'Y DEBATE 25 (2019) (more housing means greater affordability); Edward L. Glaeser, Joseph Gyourko & Raven Saks, *Why is Manhattan So Expensive? Regulation and the Rise in Housing Prices*, 48 J. L. & Econ. 331 (2005) (the "regulatory tax" raises housing costs); Keith R. Ihlanfeldt, *The Effect of Land Use Regulation on Housing and Land Prices*, 61 J. URB. ECON. 420 (2007) (more restrictions increase house prices and decreases vacant land prices); John M. Quigley & Steven Raphael, *Regulation and the High Cost of Housing in California*, 95 AM. ECON. REV. 323 (2005) (land use regulation reduces housing supply for all types of housing).

<sup>24</sup> Richard V. Reeves & Dimitrios Hilikias, *How Land Use Regulations Are Zoning Out Low-Income Families*, BROOKINGS INST. 16 (Aug. 16, 2016), <https://www.brookings.edu/blog/social-mobility-memos/2016/08/16/zoning-as-opportunity-hoarding/>. The complexity of the regulatory process has been shown to be highly correlated with income segregation). *See* Michael C. Lens & Paavo Monkkonen, *Do Strict Land Use Regulations Make Metropolitan Areas More Segregated by Income?*, 82 J. AM. PLAN. ASS'N 1, 8 (2016); *see also* Vanessa Brown Calder, *Zoning, Land Use Planning, and Housing Affordability*, CATO INST. 1–15 (Oct. 18, 2017), <https://www.cato.org/policy-analysis/zoning-land-use-planning-housing-affordability> (zoning regulations lead to increased average housing prices in thirty-six states, limiting housing options for low-and middle-income families and increasing reliance on federal rental subsidies).

<sup>25</sup> Joseph Gyourko & Raven Malloy, *Regulation and Housing Supply*, in 5 HANDBOOK OF REGIONAL AND URBAN ECONOMICS 1289–337 (Gilles Duranton, J. Vernon Henderson & William C. Strange eds., 2015).

<sup>26</sup> PAUL EMRATH, NAT'L ASS'N OF HOME BUILDERS, GOVERNMENT REGULATION IN THE PRICE OF A NEW HOME: SPECIAL STUDY FOR HOUSING ECONOMICS 1 (2016).

<sup>27</sup> *See* Joseph Gyourko & Albert Saiz, *Construction Costs and the Supply of Housing Structures*, 46 J. REG'L SCI. 661–80, 672 (2006); SANFORD IKEDA & EMILY WASHINGTON, MERCATUS CTR., HOW LAND-USE REGULATION UNDERMINES AFFORDABLE HOUSING (2015); C.J. Gabbe, *Looking Through the Lens of Size: Land Use Regulation and Micro-Apartment in San Fran.*, 17 CITYSCAPE: J. POL'Y DEV. & RSCH. 223, 224–25 (2015).

<sup>28</sup> *See, e.g.*, Robert C. Ellickson, *Zoning and the Cost of Housing: Evidence From Silicon Valley, Greater New Haven, And Greater Austin*, 42 CARDOZO L. REV. 1611, 1611–18 (2021).

<sup>29</sup> Quigley & Raphael, *supra* note 22; Edward L. Glaeser, Joseph Gyourko & Raven Saks, *Why Is Manhattan So Expensive? Regulation and the Rise of Housing Prices*, 48 J.L. & ECON. 331, 333 (2005).

Impact fees that are greater than actual costs, limits on infill development, obsolete building codes, and slow permitting systems,<sup>30</sup> all contribute to the cost of housing.<sup>31</sup>

B. Land Use Policies Animated by Racism and Classism. The historic barriers to housing began with overt racial zoning.<sup>32</sup> Then came private refusals to sell on account of race.<sup>33</sup> Then, there were private racial covenants written to keep out residents based on race.<sup>34</sup> The federal government took up the exclusionary private covenants as a part of its housing support programs, along with its color mapping.<sup>35</sup>

- In *Village of Euclid v. Ambler*,<sup>36</sup> the Supreme Court upheld a zoning ordinance that limited land uses within certain zones. The Court found that zoning rested within a city's inherent police powers—so long as there was a rational basis for the ordinance, it would be upheld.
- After *Euclid*, other than zoning by race, municipalities have had almost unchecked power to determine who builds where and what and the regulations have become increasingly onerous.<sup>37</sup>
- The prohibitions did not overtly exclude based on race, but by allowing only single-family detached structures, and only if the lot was at least ten acres, the exclusionary impact was the same.
- Communities of color have been the worst hit by apparently neutral, but onerous, land use practices.<sup>38</sup>

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<sup>30</sup>The permitting process may require interacting with multiple public agencies and take years. ABT ASSOCIATES, NAT'L ASS'N OF HOME BUILDERS, DEVELOPMENT PROCESS EFFICIENCY: CUTTING THROUGH THE RED TAPE 1, 7 (2015).

<sup>31</sup>Quigley & Raphael, *supra* note 22, at 325 (noting an increase of up to 5 percent for homes and 2.5 percent for rental properties).

<sup>32</sup>See *Buchanan v. Warley*, 245 U.S. 60, 82 (1917) (striking down Kentucky's racial zoning ordinance under the Fourteenth Amendment).

<sup>33</sup>See *Jones v. Alfred H. Mayer Co.*, 392 U.S. 409 (1968) (finding a violation of the Civil Rights Act of 1866 and the Thirteenth Amendment).

<sup>34</sup>See *Shelley v. Kraemer*, 334 U.S. 1, 23 (1948) (striking down as enforcement was a violation of the Fourteenth Amendment).

<sup>35</sup>George McCarthy, *President's Message: Think Land Policy Is Unrelated to Racial Injustice? Think Again*, LINCOLN INST. OF LAND POL'Y (Jun. 24, 2020), <https://www.lincolninst.edu/publications/articles/presidents-message-think-land-policy-unrelated-racial-injustice-think-again>; see also Shelby D. Green, *Equitable, Affordable and Climate-Cognizant Housing Construction*, 75 ARK. L. REV. 363 (2022) (describing how under the Depression-era program, the Home Ownership Loan Corporation provided government benefits based on whether the property resided on a map, color coded by race—red indicating predominantly Black areas that deemed too great a risk).

<sup>36</sup>*Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365, 394–95 (1926).

<sup>37</sup>Robert C. Ellickson, *Zoning and the Cost of Housing: Evidence from Silicon Valley, Greater New Haven, and Greater Austin*, SSRN (Jan. 14, 2020), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3472145](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3472145).

<sup>38</sup>Sylvia Hood Washington, *Interview with Robert D. Bullard, Ph.D., and Kenneth Olden, Ph.D., Sc.D., L.H.D.*, 3 ENV'T JUST. 1 (2010); *Environmental Justice Primer*, GOTHAM 360 (June 4, 2020), <https://www.gotham360.com/our-blog/item/environmental-justice-primer>. (quoting Robert Bullard).

- Urban Renewal and the Interstate Highway Programs<sup>39</sup> caused great human displacement and produced a host of adverse social (destroying the communities that were severed to make way for the highways) and health (increases in noise and air pollution from automotive traffic) ills.<sup>40</sup>

C. Judicial and Legislative Movements to Improve Housing Access. One of the first major movements by courts to challenge municipalities' exclusionary zoning practices came from the Supreme Court of New Jersey in *South Burlington County NAACP v. Mount Laurel Township*,<sup>41</sup> where it declared that all governments have an obligation to make reasonable opportunities for housing available to all, and that all cities must undertake their fair share of housing needs.

- The discriminatory impact of Euclidean zoning has since been challenged as a violation of the Fair Housing Act of 1968.<sup>42</sup> Recently, in *Mhany Management, Inc. v. County of Nassau*, the Second Circuit saw racial animus in code words uttered in opposition to a proposal to build affordable multi-unit homes.<sup>43</sup>
  - The legacies of exclusionary practices continue to adversely impact certain populations.<sup>44</sup>

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<sup>39</sup>"In fact, starting with the 1950s and the interstate highway program through 1967, more than 700,000 families, primarily low-income and minority, were displaced." Green, *Building Resilient Communities in the Wake of Climate Change*, *supra* note 11, at 564; *see also* BERNARD J. FRIEDEN & LYNNE B. SAGALYN, *DOWNTOWN, INC.: HOW AMERICA REBUILDS CITIES* 29 (1989).

<sup>40</sup>*See* Rachael Dottle, Laura Bliss & Pablo Robles, *What it Looks Like to Reconnect Black Communities Torn Apart by Highways*, BLOOMBERG (July 28, 2021), <https://www.bloomberg.com/graphics/2021-urban-highways-infrastructure-racism>; *MapLab: Visualizing the Legacy and Future of Urban Highways*, BLOOMBERG (Aug. 25, 2021, 4:06 PM), <https://www.bloomberg.com/news/newsletters/2021-08-25/maplab-visualizing-the-racial-injustice-of-u-s-highways>; Kathleen McCormick, *Deconstruction Ahead: How Urban Highway Removal is Changing Our Cities*, LINCOLN INST. OF LAND POL'Y (Apr. 14, 2020), <https://www.lincolnst.edu/publications/articles/2020-03-deconstruction-ahead-urban-highway-removal-changing-cities>.

<sup>41</sup>*S. Burlington Cnty. NAACP v. Twp. of Mount Laurel*, 456 A.2d 390, 415 (N.J. 1983).

<sup>42</sup>*See, e.g., Pac. Shores Props., LLC v. City of Newport Beach*, 730 F.3d 1142 (9th Cir. 2013).

<sup>43</sup>*Mhany Mgmt., Inc. v. Cnty. of Nassau*, 819 F.3d 581, 609 (2d Cir. 2016). Under the zoning ordinance there, attached townhouses, apartments (except on farms for agricultural workers), and mobile homes were not allowed anywhere in the township. The development of these kinds of dwellings, resulting in the quadrupling of the number of inhabitants, had been confined to two sections—the northeasterly and southwesterly corners of the community, adjacent to the turnpike and other major highways. The residents of the township who opposed the plan to allow the construction of multi-unit housing stated the development should “preserve ‘the flavor and character of what Garden City is now’”; “that no affordable housing [should] be built . . .”; and “that the development [should] only be upscale.”

<sup>44</sup>MARIA PAPPAS, *COOK CNTY. TREASURER, MAPS OF INEQUALITY: FROM REDLINING TO URBAN DECAY AND THE BLACK EXODUS* (July 2022), <https://www.cookcountytreasurer.com/pdfs/scavengersalestudy/2022scavengersalestudy.pdf> [<https://perma.cc/GP58-W47N>]. (showing continuing disinvestment by the redlining maps approved by the Home Owner's Loan Corporation (“HOLC”) in the 1940s and followed by nearly all mortgage lenders during that period.).

- As the movement to improve housing access continues, cities and states have eliminated or restricted single-family zoning.<sup>45</sup>
- Some states are moving to preempt local zoning to address barriers to housing access and affordability by directives to facilitate missing middle housing,<sup>46</sup> requiring that zoning be inclusive, and supporting and protecting the use of accessory dwellings.<sup>47</sup>

### **III. Cost of Building Affordable Housing.**

A. What Can the Extremely Low-Income Household Afford. The persistent mismatch between the number of extremely low-income household to available units (100 to 29) makes housing largely unavailable. While affordable housing is a great societal need, the cost of building affordable housing is not affordable. In fact, there is a huge gap between what these buildings cost to construct and maintain and the rents most people can pay.<sup>48</sup>

- The poorest can't afford to pay enough to cover builders' costs. These costs include acquisition expenses (although in some cases, developers are able to use public land to develop affordable housing); construction costs (largely determined by market forces); developers' fees (to pay all the costs of doing business: hiring staff, running an office, finding new opportunities); as well as design fees, construction loan interest, permanent financing fees, reserves, and project management fees.
- Funding Sources for Affordable Housing. Developers can rely on a combination of funding sources to build affordable housing.
  - Institutional borrowing depending on an assessment of market conditions, including prevailing interest rates and vacancy rates.
  - Low Income Housing Tax Credits
  - Tenant-based rental assistance programs (including vouchers)
  - Project-based rental assistance programs
  - Public housing operating fund and capital fund

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<sup>45</sup>Oregon provides that a certain level of multi-family housing types to be permitted in single-family zones. See OR. REV. STAT. §§ 197.175, 197.290 (2022). California passed an ordinance that establishes a mechanism for two-unit housing developments for urban lot splits. See CAL. GOV'T CODE § 65852.21 (2022); see generally Shelby D. Green & Bailey Andree, *The Aerial View of Land Use, Preempting the Locals for Improved Housing Access*, PROB. & PROP., Sept./Oct. 2022, at 24, 25. To be sure, there are some unintended consequences to be concerned about, such as unhealthy density levels (too many tall buildings may block the sun and air) and net increases in market rate as opposed to affordable units under inclusionary zoning schemes. There is also the worry about accelerated gentrification. See John R. Nolon, *Pandemics and Housing Insecurity: A Blueprint for Land Use Law Reform*, 46 VT. L. REV. 422, 442–43 (2022)(discussing some local responses to gentrification, including right-to-purchase programs in some cities).

<sup>46</sup> See Green and Andree, *supra* note 45.

<sup>47</sup> *Id.*

<sup>48</sup> The cost of affordable housing: Does it pencil out?, <https://apps.urban.org/features/cost-of-affordable-housing/>.

- Choice Neighborhoods
  - HOME Investment Partnerships Program (HOME)
  - Community Development Block Grants (CDBG)
  - National Housing Trust Fund
  - Capital Magnet Fund
  - Rural Housing Service programs
  - Qualified Opportunity Zone Designations<sup>49</sup>
- Building More Apartments Will Not Make Developers Whole. Increasing the number of units is meaningful only if developers can fill the units with tenants who can pay the rent. Also, there is concern about concentrating low-income families apart from the rest of a community.<sup>50</sup>

### **III. Green and Resilient Development**

A. The Resilient City. Resilience in housing construction depends on first creating a resilient city.<sup>51</sup> A “resilient city” as one that rebounds after disaster; embeds into its infrastructure and operations responsive strategies that are evidence-based, and integrates technologies and experience into its design.<sup>52</sup> Recognizing that cities are for people, the resilient city cares for the social and economic well-being of its residents and requires collaboration between community leaders and citizens.<sup>53</sup>

B. The Imperatives of Sustainable Development. International Council for Local Environmental Initiatives (“ICLEI”), through its network of over 2,500 cities,<sup>54</sup> ICLEI recognizes the imperatives of global sustainability and commits to regard sustainable development as a right of all, “entrenching sustainability as the most fundamental and

<sup>49</sup> See Federal programs for affordable housing - Local Housing Solutions, <https://localhousingsolutions.org/fund/federal-programs-for-affordable-housing/#table-of-content-heading-anchor-0>. This site contains references and descriptions of all the programs listed. The Department of Housing and Urban Development (HUD) offers support for all aspects of housing access—from mortgage programs to construction. The Self-Help Homeownership Opportunity Program (SHOP). The SHOP program provides grants to nonprofits to help develop affordable housing units for low-income buyers. The Housing Trust Fund is designed to preserve and increase the number of affordable rental units available to extremely low-income households. Under this program, HUD provides funding to states for affordable housing rental projects. GAO Report, *supra* note 1.

<sup>50</sup> For an interesting view of this issue, see *Tex. Dep’t of Hous. & Cmty. Affairs v. Inclusive Cmty. Project, Inc.*, 516 U.S. 519 (2015)(upholding the validity of disparate impact theory under the Fair Housing Act, on a challenge to the allocation of more Low Income Housing Tax Credits to majority minority communities, thereby making housing unavailable in non-minority communities)

<sup>51</sup> See generally JOSEPH SCHILLING, CATHERINE TUMBER, AND GABI VELASCO, GREENING AMERICA’S SMALLER LEGACY CITIES (July 2023).

<sup>52</sup>THE ROCKEFELLER FOUND. & ARUP INT’L DEV., CITY RESILIENCE FRAMEWORK 3, <https://www.rockefellerfoundation.org/wp-content/uploads/City-Resilience-Framework-2015.pdf>.

<sup>53</sup>*City Resilience Index: Understanding and Measuring City Resilience*, THE ROCKEFELLER FOUND. & ARUP INT’L DEV., at 9, [https://www.arup.com/-/media/arup/files/publications/c/170223\\_cri-brochure.pdf](https://www.arup.com/-/media/arup/files/publications/c/170223_cri-brochure.pdf).

<sup>54</sup>ICLEI—*Local Governments for Sustainability*, INT’L COUNCIL FOR LOC. ENV’T INITIATIVES, <https://iclei.org/>.

inextricable component of all local, national and global development and cooperation in and across jurisdictions.”<sup>55</sup> The ICLEI advocates for equitable and people-centered development, inclusive communities, and efforts to identify and root out systemic causes of poverty and injustice and to safeguard human life’s natural support systems. This includes access to quality housing and climate-resilient infrastructure, as well as equitable mobility systems.<sup>56</sup> ICLEI developed its own strategic vision for sustainable development through five pathways which aim to reduce harmful pollutants and emissions from energy, transportation, waste, and the built environment, among other things.<sup>57</sup>

C. Leadership at the Local Level. Local governments are taking the lead in sustainable development in addressing climate change.

- This is a particular imperative since cities account for 70% of global CO<sub>2</sub> emissions from energy use, consume 75% of all the natural resources, and produce 50% of all waste.<sup>58</sup>
- Cities are also at the forefront of climate change vulnerability. More than 70% of cities worldwide are already experiencing the harmful effects of climate change, with 77% expected to undergo a dramatic change in climate conditions. As much as 90% of coastal cities are at risk of flooding from sea-level rise and storms which create significant economic and human losses.

D. Rethinking the Built World for Resiliency. As incubators of innovative actions and policies, local governments are taking the lead on efforts to respond to climate change. They are the incubators for innovative actions and policies. The approaches are wide-ranging, starting with comprehensive planning, targeted regulations, technological inventions, economic incentives, and educational programs to encourage wise stewardship of our living, but fragile environment.<sup>59</sup> <sup>60</sup> There is a long list of measures.

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<sup>55</sup>INT’L COUNCIL FOR LOCAL ENV’T INITIATIVES [ICLEI]—LOC. GOV’TS & SUSTAINABILITY, ICLEI IN THE URBAN ERA: OUR VISION FOR A SUSTAINABLE URBAN WORLD 22 (Apr. 2021), [https://e-lib.iclei.org/publications/ICLEI\\_in\\_the\\_Urban\\_Era\\_2021.pdf](https://e-lib.iclei.org/publications/ICLEI_in_the_Urban_Era_2021.pdf). The ICLEI has compiled an inspirational collection of case studies on the occasion of the historic adoption of the global 2030 Sustainable Development Agenda and its 17 Sustainable Development Goals, including the SDG11 to “[m]ake cities and human settlements inclusive, safe, resilient and sustainable” in the horizon of 2030. *See id.* at 123; *Goals*, U.N. DEP’T OF ECON. & SOC. AFFS., <https://sdgs.un.org/goals/goal11>.

<sup>56</sup>ICLEI, *supra* note 54.

<sup>57</sup>*Our Approach*, ICLEI—LOC. GOV’TS & SUSTAINABILITY, [https://iclei.org/our\\_approach/](https://iclei.org/our_approach/). The “approach” addresses food systems; commits to implement the Paris Climate Agreement goal of limiting to less than 2°C; strives for climate neutrality in government infrastructure and operations and in communities by mid-century; and calls for nature-based development to restore connections between nature and planet. *Id.*

<sup>58</sup> [2021-State-of-Cities-Finance-Part-2.pdf \(citiesclimatefinance.org\)](https://www.iclei.org/2021-State-of-Cities-Finance-Part-2.pdf).

<sup>59</sup>Shelby D. Green, *Adaption to Climate Change at the Subnational Level*, in CLIMATE CHANGE LAW: AN INTRODUCTION 72, 72–108 (Karl S. Coplan, Shelby D. Green, Katrina Fischer Kuh, Smita Narula, Karl R. Rábago & Radina Valova eds., 2021).

<sup>60</sup>*See* Diana Budds, *How Do Buildings Contribute to Climate Change?*, CURBED (Sept. 19, 2019, 5:47 PM), <https://archive.curbed.com/2019/9/19/20874234/buildings-carbon-emissions-climate-change>

- To reduce emissions, improve energy efficiency, and improve structural quality of buildings, cities and states are also adopting a variety of stringent standards and codes.<sup>61</sup>
  - Efficient heating and cooling equipment, aggressive insulation, and cool roofs.<sup>62</sup>
- Fortification, including measures designed for wind resistance (sturdy roof connectors and hurricane clips, strong fasteners, anchoring, high-impact resistance doors, windows, outward-opening doors, and bracings)<sup>63</sup> and fire resistance.<sup>64</sup>
- Flood control measures.<sup>65</sup>
- In earthquake-prone areas, seismic retrofits and metal strapping.<sup>66</sup>
- Public infrastructure plans call for permeable road services and using land filling to raise the elevation of roads and bridges and for new development to anticipate sea level rises.
- Incorporating green infrastructure (green alleys, vegetative swales, rain gardens, pervious pathways, constructed wetlands), building parks, greenways, biking and walking paths, setting aside open spaces, setting up tree canopies, encouraging wise water use by low-water use plants, and xeriscaping.<sup>67</sup>
- Supporting the incorporation of solar energy through zoning measures that allow the placement of solar panels in yards as if right and encouraging geothermal energy (which is obtained by harnessing heat from the ground to both heat and cool homes)<sup>68</sup>

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<sup>61</sup> See David Ribeiro, *US Cities Adopt Stricter Building Energy Codes*, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON. (Sept. 9, 2019), <https://www.aceee.org/blog/2019/09/us-cities-adopt-stricter-building> See also N.Y. City Local Law 97 (2019)(requiring substantial reductions in GHG emissions within the decade). Buildings are the largest contributor to greenhouse gas emissions, representing 35 percent of total energy-related emissions.

<sup>62</sup> See *Cool Roofs*, U.S. DEP'T OF ENERGY, <https://www.energy.gov/energysaver/cool-roofs>.

<sup>63</sup> *Your Family Deserves a Strong Home*, FORTIFIED—A PROGRAM OF THE INS. INST. FOR BUS. & HOME SAFETY, <https://fortifiedhome.org/>. *Insurance Institute for Business & Home Safety*.

<sup>64</sup> See generally *Protecting Your Home from Wildfire*, S. GRP. OF STATE FORESTERS, <https://southernforests.org/fire/wui/home/protecting-your-home-from-wildfire>. Intumescent paint applies like latex paint but slightly thicker. When exposed to heat/fire, the coating bubbles and hardens into charred surface, creating an insulating protective barrier—fire wrap. *International Wildfire–Urban Interface Code 2021 (IWUIC 2021)*, INT'L CODE COUNCIL (“ICC”), <https://up.codes/code/international-wildland-urban-interface-code-iwuic-2021>.

<sup>65</sup> FED. EMERGENCY MGMT. AGENCY [FEMA], *REDUCING FLOOD RISK TO RESIDENTIAL BUILDINGS THAT CANNOT BE ELEVATED 4–6* (2015),

[https://www.fema.gov/sites/default/files/2020-07/fema\\_P1037\\_reducing\\_flood\\_risk\\_residential\\_buildings\\_cannot\\_be\\_elevated\\_2015.pdf](https://www.fema.gov/sites/default/files/2020-07/fema_P1037_reducing_flood_risk_residential_buildings_cannot_be_elevated_2015.pdf).

<sup>66</sup> See *Seismic Building Codes*, FEMA, <https://www.fema.gov/emergency-managers/risk-management/earthquake/seismic-building-codes>.

<sup>67</sup> See *Reports from Greening America's Communities Projects*, U.S. ENV'T PROT. AGENCY <https://www.epa.gov/smartgrowth/reports-greening-americas-communities-projects>

<sup>68</sup> The City of Hartford, Connecticut allows freestanding solar panels on historic properties. CITY OF HARTFORD, *GUIDELINES FOR SOLAR ON HISTORIC PROPERTIES 5* (2017), <https://hartfordclimate.files.wordpress.com/2016/12/historic-properties-guidelines.pdf>; see also For

- Reducing energy use from the transportation sector through transit oriented development and alternative transportation systems.

C. What Building Green and Resilient Structures Means. Resilient building techniques produce buildings, landscapes and communities designed to better withstand disasters and long-term shifts resulting from climate change.

- The benefits of resilient residential design strategies include minimizing risks from natural occurrences (such as hurricanes, floods, earthquakes, fires and tornados).
- Construction techniques to reduce the cost of repair and/or rebuilding after a severe event.
- Building codes are a starting point for resilient construction, but homes can be built above code.

D. Guidances on Achieving Resilience.

- HUD. The U.S. Department of Housing and Urban Development (HUD) has promulgated guides. *Designing for Natural Hazards: A Resilience Guide for Builders & Developers*,<sup>69</sup> helps home builders incorporate resilience in their home designs.
- Resilient Construction Certification Programs. In addition to being a comprehensive above-code third-party verified green building certification program, the ICC 700-2020 National Green Building Standard® (NGBS)<sup>70</sup> provides the opportunity for building professionals to incorporate an available suite of resilient building practices and earn an NGBS Green+ Resilience badge.
- IBHS, FORTIFIED homes. A voluntary construction and re-roofing program designed to strengthen homes and commercial buildings against specific types of severe weather (high winds, hail, hurricanes and tornados). The FORTIFIED Home™ voluntary third-party verified program offers three levels of certification.<sup>71</sup>
- Universal building codes. Stringent codes set new standards for livability and sturdiness.<sup>72</sup>

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resources on alternative energy, see CTR. FOR SUSTAINABLE SYS., UNIV. OF MICH., GEOTHERMAL ENERGY FACTSHEET, [https://css.umich.edu/sites/default/files/2022-09/Geothermal%20Energy\\_CSS10-10.pdf](https://css.umich.edu/sites/default/files/2022-09/Geothermal%20Energy_CSS10-10.pdf).

<sup>69</sup> [https://www.huduser.gov/portal/sites/default/files/pdf/Natural-Hazards\\_Volume-1-Wind.pdf](https://www.huduser.gov/portal/sites/default/files/pdf/Natural-Hazards_Volume-1-Wind.pdf); <https://www.huduser.gov/portal/publications/Designing-for-Natural-Hazards-Series.html>. The guides were authored by Home Innovation Research Labs with technical assistance from NAHB members and staff. A series of two-page guidelines illustrating techniques for retrofitting existing houses to improve their protection against natural hazards. Topics include shingle attachment; flashing and sealing roof penetrations; sealing the roof deck; preventing ice dams; impact resistant doors; and hurricane shutters.

<sup>70</sup> <https://www.nahb.org/advocacy/industry-issues/sustainability-and-green-building/icc-700-national-green-building-standard>.

<sup>71</sup> <https://fortifiedhome.org/>.

<sup>72</sup> See generally Energy Conservation Code 2021 (IECC 2021); INT’L CODE COUNCIL, INTERNATIONAL GREEN CONSTRUCTION CODE (“IGCC”) (2021). The codes create a portfolio of advanced mitigation solutions to battle the impacts of our changing climate. The US Green Building Council has created the LEED standards, encouraging building owners to achieve varying levels of energy efficiency. See generally *LEED Rating System*, U.S. GREEN BLDG. COUNCIL, <https://www.usgbc.org/leed>.

E. The Characteristics of the Resilient Home. Resilient homes must be smart and robust; oriented toward the sun, away from flooding;<sup>73</sup> they must be designed to resist fierce winds<sup>74</sup> and be capable of snapping back into form after the fiercest climate event.<sup>75</sup> They must be safe for the inhabitants and the environment.<sup>76</sup> They must be resistant to fire.

- High-performance and passive homes. Go beyond the minimum requirements of local governments. A high-performance home exceeds code standards by “integrat[ing] and optimiz[ing] all major high-performance building attributes, including energy efficiency, durability, life-cycle performance, and occupant productivity.”<sup>77</sup> By this definition, a high-performance home incorporates sustainability features. They use near net-zero or net-zero energy. This level of efficiency is achieved by an insulated, air-tight building envelope, high-efficiency heating and cooling systems, and renewable technologies.<sup>78</sup> They need less energy for heating and cooling and need less energy for making hot water.
- The homes contain ventilation systems to prevent the build-up of indoor pollutants.<sup>79</sup> The building materials, paints, and sealants consist of low, volatile organic compound content. Additionally, “different types of cladding and siding” are used for increased durability and for reduced maintenance costs.<sup>80</sup>
- Photovoltaic solar panels generate clean energy for 100% of the home’s energy. This means they have a zero or near-zero carbon footprint related to the energy the home uses.
- High performance homes are virtually draft-free, the temperature in the home is consistent from room to room and within rooms. The humidity in the home is at the right level for comfort and health.
- High-performance homes help conserve water because they use high-pressure/low flow showerheads and low/flow toilets, and sometimes employ rainwater capture and greywater approaches to saving water. Also, the less water a home uses, the less water waste treatment is needed lowering costs for communities and helping reduce taxes needed to fund water treatment plants.

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<sup>73</sup>See Nick Gromicko & Ben Gromicko, *Building Orientation for Optimum Energy*, INT’L ASS’N OF CERTIFIED HOME INSPECTORS, <https://www.nachi.org/building-orientation-optimum-energy.htm>.; see also, See Shelby D. Green, *Zoning Neighborhoods for Resilience: Drivers, Tools & Impacts*, 28 Fordham Env’t L. Rev. 41 (2016).

<sup>74</sup>Matthew Cappucci, *Designed for Disaster: These Homes Can Withstand a Category 5 Hurricane*, WASH. POST (May 26, 2021, 4:32 PM), <https://www.washingtonpost.com/weather/2021/05/16/hurricane-proof-homes-deltec/>.

<sup>75</sup>*Id.*

<sup>76</sup>See Michael Battaglia, *High Performance Home Design*, AM. INST. OF BLDG. DESIGN (Jan. 19, 2018), <https://aibd.org/high-performance-home-design>.

<sup>77</sup>42 U.S.C. § 16194(a).

<sup>78</sup>Battaglia, *supra* note 76.

<sup>79</sup>*Whole-House Ventilation*, ENERGY SAVER, <https://www.energy.gov/energysaver/whole-house-ventilation>.

<sup>80</sup>Kalyani.Rc, *What is a High Performance Home?*, RATE IT GREEN (Apr. 26, 2017), <https://www.rateitgreen.com/green-building-articles/what-is-a-high-performance-home/60>.

- While they cost more to buy, they cost less to maintain and operate than conventional homes, the operational and maintenance cost savings can offset the higher cost of buying or building.
- A passive home is a type of high-performance home that is built to achieve energy efficiency without mechanical systems for heating or cooling. It employs technologies that seal the home from outside temperatures while keeping the inside temperature and quality constant.<sup>81</sup> An average-sized “passive home will typically add between 5 to 10 percent to the construction” costs of a home, merely meeting minimum standards.<sup>82</sup> On the back end, however, the efficiency standards of high-performance homes promise huge savings, by as much as 60 to 70 percent on annual energy costs, insurance premiums, costs of rebuilding, losses from flooding, and by “significantly reduc[ing] its carbon footprint.”<sup>83</sup>

F. Government Support for Resilient Housing. The Inflation Reduction Act (IRA)<sup>84</sup> contains a section entitled “Improving Energy Efficiency or Water Efficiency or Climate Resilience of Affordable Housing”, provides funding for direct loans and grants to fund projects that improve energy or water efficiency, enhance indoor air quality or sustainability, implement the use of zero-emission electricity generation, low-emission building materials or processes, energy storage, or building electrification strategies, or address climate resilience, of eligible HUD-assisted multifamily properties.

- There is also funding available under this provision for HUD’s benchmarking initiative that will finance Energy and Water benchmarking of HUD-assisted properties to measure usage and efficiency of those properties. Owners do not have to receive a grant or loan under GRRP to participate in HUD’s Benchmarking Initiative. Eligible owners primarily include owners receiving HUD rental assistance under Multifamily Section 8 Project-Based Rental Assistance (PBRA), Section 202 Supportive Housing for Low-Income Elderly, and Section 811 Supportive Housing for Low-Income Persons with Disabilities. Public housing and properties with vouchers are not eligible.<sup>85</sup>

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<sup>81</sup>*Id.*

<sup>82</sup>Barbara Eldredge, *Passive House Construction: Everything You Need to Know*, CURBED (Sept. 6, 2016, 12:00 PM), <https://archive.curbed.com/2016/9/6/12583346/passive-house-construction-guide>.

<sup>83</sup>Natalie Leonard, *Can Building a Passive House Cost the Same as a Code-Built Home?*, PROBUILDER (Feb. 24, 2020), <https://www.probuilder.com/blog/can-building-passive-house-cost-same-code-built-home>; *see also Record Number of Residents Rebuilding High-Performance Homes After Marshall Fire*, UNITED POLICYHOLDERS (Oct. 10, 2022), <https://uphelp.org/record-number-of-residents-rebuilding-high-performance-homes-after-marshall-fire/>. (They are less costly to rebuild.); *Building a High-Performance House [Complete Guide]*, ELECTRICRATE, <https://www.electricrate.com/high-performance-home/> (discussing savings on operational expenses); *The Advantages of the Passive House*, FIORITA PASSIVE HOUSE, <http://www.fioritapassivehouse.it/en/le-case-passive/i-vantaggi-della-casa-passiva/>.

<sup>84</sup> Section 30002 of Title III of the IRA, (Publ. L. 117-169).

<sup>85</sup> <https://www.hud.gov/GRRP>; <https://www.novoco.com/periodicals/articles/what-you-need-know-about-huds-green-and-resilient-retrofit-program>.

D. The Price and Costs of Building Green and Resilient. None of these much-discussed mitigation and accommodation measures are without costs to marginalized populations and communities. Retrofitting existing structures and building new ones to more stringent codes adds to the price of homeownership.

- The upfront costs are greater.
- Zoning restrictions may prohibit certain retrofitting measures, such as installing mechanical systems in yards.
- The roofs of some buildings may not be capable of bearing the weight of mechanical systems or greening.

#### **IV. Institutional Strategies and Programs for Green, Resilient and Affordable Housing**

A. Eliminating Burdensome Land Use Policies. Communities adopt restrictive zoning laws to discourage or block development. Cities that set low allowable densities and building heights build fewer housing. Places with more restrictive zoning built fewer apartments. To increase housing availability, restrictions on development of multi-unit housing must be relaxed.<sup>86</sup> Below are some strategies:

- Allowing flexibility in housing types allowed in all zones.
- Easing the permitting processes.<sup>87</sup>
- Condition legal and financial tools localities for transportation projects and schools increased housing production.<sup>88</sup>
- Vest more control over zoning to the state government.<sup>89</sup>

B. Designing and Building Communities for Living and Thriving. Where we live is integral to life expectancy, health, families and economic stability.

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<sup>86</sup> <https://www.brookings.edu/articles/california-needs-to-build-more-apartments/>; see also Allison Ehrich Bernstein, *How Small and Midsize Legacy Cities Can Pursue Equitable, Comprehensive “Greening”* (July 11, 2023), <https://www.lincolnst.edu/publications/articles/how-small-midsize-legacy-cities-can-pursue-equitable-comprehensive-greening>; Brian J. Connolly, Andrew L.W. Peters, Heidi Aggeler Avilla Bueno, Julia Jones & Susan Daggett, *Tackling the Affordability Crisis in the West: The Colorado Housing Affordability Project and the Challenge of Zoning Reform*, 58 Idaho L. Rev. 513 (2022)(discussing strategies to incentive and facilitate construction of affordable housing); Sarah J. Adams-Schoen and Edward J. Sullivan, *Middle Housing By Right: Lessons From an Early Adopter*, 37 J. Land Use & Envtl. Law 189 (2022)(offering an analysis of the promises and gaps in Oregon’s elimination of single-family zoning); Stephen R. Miller, *Prospects for a Unified Approach to Housing Affordability, Housing Equity and Climate Change*, 46 Vt. L. Rev. 463 (2022)(discussing the viability of various policy prescriptions for housing);

<sup>87</sup> The City of Los Angeles, California recently amended its municipal code to exempt affordable housing projects from site plan review. LAMC §16.05.

<sup>88</sup> <https://www.brookings.edu/articles/california-needs-to-build-more-apartments/>.

<sup>89</sup> See *Controlling the Locals from the Top Down to the Bottom Up for Housing, review of Beyond the Double Veto: Housing Plans as Preemptive Intergovernmental Compacts*, 71 Hastings L. J. 79 (2019), <https://jotwell.com>; <https://www.brookings.edu/articles/california-needs-to-build-more-apartments/>

- Communities and housing must be built with intention—to be safe and offer an opportunity for thriving and survival.
- But we must be mindful of the impacts of the remedies to the phenomenon of climate change. Heaping onto the poor and marginalized communities the new burdens from measures deployed to confront climate change at large must be avoided.<sup>90</sup>
- Builders and planners play a huge role toward these ends.<sup>91</sup>
- Building equitable and accessible communities is not antagonistic to building climate-cognizant communities.<sup>92</sup>
- Equity in community design should aim to improve the substantive outcomes and quality of life for disadvantaged persons, starting by elevating the importance of access to housing (along with the necessary financial and physical infrastructure for housing development), vigorous enforcement of fair housing laws, and substantive public engagement in land use decision-making.
- This means collaboration on economic investment, development proposals, and budgetary decisions. Collaborators must include scientists, architects, builders, planners, housing advocates, and importantly, residents. Racial impact assessments should be used to assess community needs, risks, and impacts of governmental initiatives.<sup>93</sup>

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<sup>90</sup> See generally S. Nazrul Islam & John Winkel, *Climate Change and Social Inequality* 12–13 (U.N. DEP'T OF ECON. & SOC. AFFS., Working Paper No. 152, 2017), [https://www.un.org/esa/desa/papers/2017/wp152\\_2017.pdf](https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf).

<sup>91</sup> See Building Resilient Cities: From Risk Assessment to Redevelopment, <https://www.ceres.org/resources/reports/building-resilient-cities-risk-assessment-redevelopment>, for prescriptions on assessing and planning for climate risks).

<sup>92</sup> See *Community and Site Planning for Green Residential Design*, WHOLE BLDG. DESIGN GUIDE, <https://www.wbdg.org/resources/community-and-site-planning-green-residential-design> (discussing site selection considerations, open spaces, street orientation, types and density of housing and green components, renewable energy, and storm management); see generally U.S. DEP'T OF ENERGY, BETTER BUILDINGS: STEPPING UP TO THE CHALLENGE TOGETHER (2022), [https://betterbuildingsolutioncenter.energy.gov/sites/default/files/attachments/DOE\\_BBI\\_2022\\_Progress\\_Report.pdf](https://betterbuildingsolutioncenter.energy.gov/sites/default/files/attachments/DOE_BBI_2022_Progress_Report.pdf).

<sup>93</sup> See William West, *Racial Impact Assessment in Land Use Planning and Zoning Comes to New York*, 22 N.Y. ZONING L. & PRAC. REP. 1 (2022).

# GREEN AND RESILIENT AFFORDABLE HOUSING

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2. City of Buffalo's Green Development Code (which is really a version of Mark's White's Uniform Land Development Code and Form Based Code: <https://www.buffalogreencode.com/green-code-components/unified-development-ordinance-2/>
3. Working Paper on Norfolk Zoning <https://www.lincolninst.edu/publications/working-papers/case-climate-informed-zoning>
  1. Specific section of code called the resilience quotient. [https://www.norfolkva.gov/norfolkzoningordinance/#Norfolk-ZO/5\\_12\\_Resilience\\_Quotient.htm?Highlight=climate%20resilience](https://www.norfolkva.gov/norfolkzoningordinance/#Norfolk-ZO/5_12_Resilience_Quotient.htm?Highlight=climate%20resilience)
4. City of Providence Climate Justice Plan <https://www.providenceri.gov/sustainability/climate-justice-action-plan-providence/>
5. City of Richmond's RVA2050 Climate Equity Plan: <https://www.rva.gov/sustainability/plan#:~:text=It%20is%20a%20roadmap%20that,heat%2C%20precipitation%2C%20and%20flooding.>
6. City of Minneapolis Green Zones
  1. <https://www2.minneapolismn.gov/government/departments/health/sustainability-homes-environment/sustainability/green-zones/>
7. Sustainable Development Code—although a model code it does have sample provisions and ordinances
  1. <https://sustainablecitycode.org/brief/creating-green-zones/#:~:text=Green%20zones%20are%20areas%20that,affordable%20housing%20and%20sustainable%20jobs.>
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