

Reshaping the City

Zoning for a More Equitable, Resilient,
and Sustainable Future

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About This Report

Reshaping the City shares promising insights and examples of zoning updates from across the United States that have been crafted to promote healthy mobility, support increased housing affordability, build more resilient places, and accelerate climate action—among a host of other goals. Specifically, the report:

- Highlights connections among traditional zoning and land use challenges cities and towns are grappling with today;
- Makes the case for updating zoning policies to support health, social equity, and climate action and resilience—with a focus on aligning zoning with community priorities and public- and private-sector development objectives; and
- Shares promising examples of zoning policy innovations from across the United States.

The application of traditional zoning can be directly attributed to many of today's pressing issues, including structural inequities and increased greenhouse gas emissions. Updating zoning is necessary to support quality of life in communities throughout the United States.

To produce meaningful zoning updates, multiple stakeholders need to work together—including city leaders, community members and groups, real estate developers, and nonprofit organizations. This collaboration is often difficult and emotional, especially because it concerns people's homes, property values, and community features. Yet, with patience and intentionality, cross-sector collaboration can lead to actionable policies that advance locally defined priorities, promote real estate success, and support the creation of places where all can thrive well into the future.



JOSHUA KIRSH, CITY OF CARMEL

Real estate developers are essential constituents and partners in efforts to enact zoning updates. Some experienced, well-resourced developers may be adept at navigating complex local bureaucracies and may see zoning regulations as fixed frameworks. But zoning updates can make development easier to do and can broaden the spectrum of those that can participate in the development market, such as small-scale developers and those from underserved backgrounds.

Updates may also enable a wider range of development typologies, potentially by allowing or incentivizing higher density or infill development—thereby supporting sustainability,

walkability, and other key goals. Updating zoning provides multiple benefits for business, people, and the planet, and the real estate community can provide valuable insights that make reforms more successful.

A glossary on [page 76](#) provides short definitions of common zoning terminology, and links throughout this report refer to the glossary to orient the reader to some of the most common zoning jargon.

Executive Summary

Current zoning requirements often promote negative outcomes for cities, people, and communities. Many policies lead to development patterns that increase traffic congestion, contribute to air pollution, raise housing costs, prevent walkability, and exacerbate the effects of climate change, among other consequences.

Traditional zoning has contributed to the creation and perpetuation of racially and economically segregated communities with inequitable access to critical public resources, like parks. Communities that are home to historically disenfranchised groups lack equal access to housing and opportunities for economic mobility¹ and may suffer disproportionately when exposed to shocks and stresses, including extreme weather and rising housing costs.

Outdated policies can make development projects that aim to support housing affordability and in-demand building and community features time-intensive and costly to complete, thereby potentially reducing quality of life and limiting project success.

In recognition of the need to address today's pressing challenges, cities across the United States are overhauling zoning codes, with important implications for real estate—including potentially streamlining the development process and making it more straightforward to meet the market demand for healthier, more environmentally friendly projects.

Since most zoning bylaws have not been updated in decades, updates can give people an opportunity to share what they value in their communities through outreach processes that influence policy decision-making. Zoning updates can also play a role in integrating positive land use strategies throughout policies and geographies, increasing the likelihood that development will reflect locally defined priorities.

Potential benefits of zoning updates include the following:

- **Creating more livable and equitable places.** Updating zoning can promote development patterns that achieve multiple intersecting goals, including supporting healthy and sustainable mobility, housing affordability, climate resilience, and other positive outcomes.
- **Creating opportunities to meet the demand for sustainable, resilient, and healthy development.** Updating zoning policies can allow, incentivize, or require development types, uses, and features that are aligned with market demand for healthy, sustainable, resilient, and energy-efficient developments—which are often not possible by right under traditional zoning.
- **Providing consistency and predictability in zoning.** Outdated zoning policies can make development projects that would support resilience, sustainability, health, and equity goals illegal or difficult, time-intensive, and costly to complete. Updating zoning can lessen these barriers.

Goals of Zoning Code Updates

Certain zoning techniques are increasingly being used to advance updates with the potential to promote a healthier, greener, and more equitable and resilient future. When aligned with complementary city policies—like building and energy codes—zoning reforms can promote public- and private-sector investment that advances key goals. The goals of zoning code updates may include one or more of the following:

- Increasing production of a **variety of housing types**, leading to increases in affordable and attainable housing;
- **Lowering the cost of housing** development by reducing or eliminating policy barriers;
- Promoting **low-carbon building** principles and certification standards (e.g., Leadership in Energy and Environmental Design, known as LEED; Building Research Establishment Environmental Assessment Method, known as BREEAM; Passive House, and others);
- **Increasing permeable surfaces** to reduce flooding and adding **shade and reflective surfaces** to address the urban heat island effect, thereby enhancing climate resilience;
- Encouraging mode shift away from driving and car ownership, toward **transit, biking, and walking** by supporting the development of compact, mixed-use communities;
- **Integrating transit and real estate development**, and building more housing within walking distance of major transit hubs;
- Providing **parks and open space** and viewing them as critical infrastructure;
- Prioritizing **tree preservation** and protection;
- Including **food retailers** with fresh produce in development projects;
- Building **community gardens and farms**;
- Adding **community facilities** and promoting community-serving retail;
- Creating **walking and biking connections** to transit; and
- Supporting **water efficiency**.

Common zoning techniques that are being used to advance updates, include

- **Comprehensive overhauls.** New zoning policies to replace previous codes;
- **By-right zoning.** Policies allowing projects that comply with certain zoning standards to obtain approvals and building permits through relatively simple administrative processes;
- **Overlays.** Special districts placed over existing zones that include provisions in addition to those already present;
- **Floating zones.** Districts that delineate conditions which must be met before the area is approved for a given set of zoning rules; and
- **Zoning incentives.** Tools to make it more attractive or financially feasible for developers to provide certain public benefits by offering incentives that offset all or part of the cost of providing such features.²

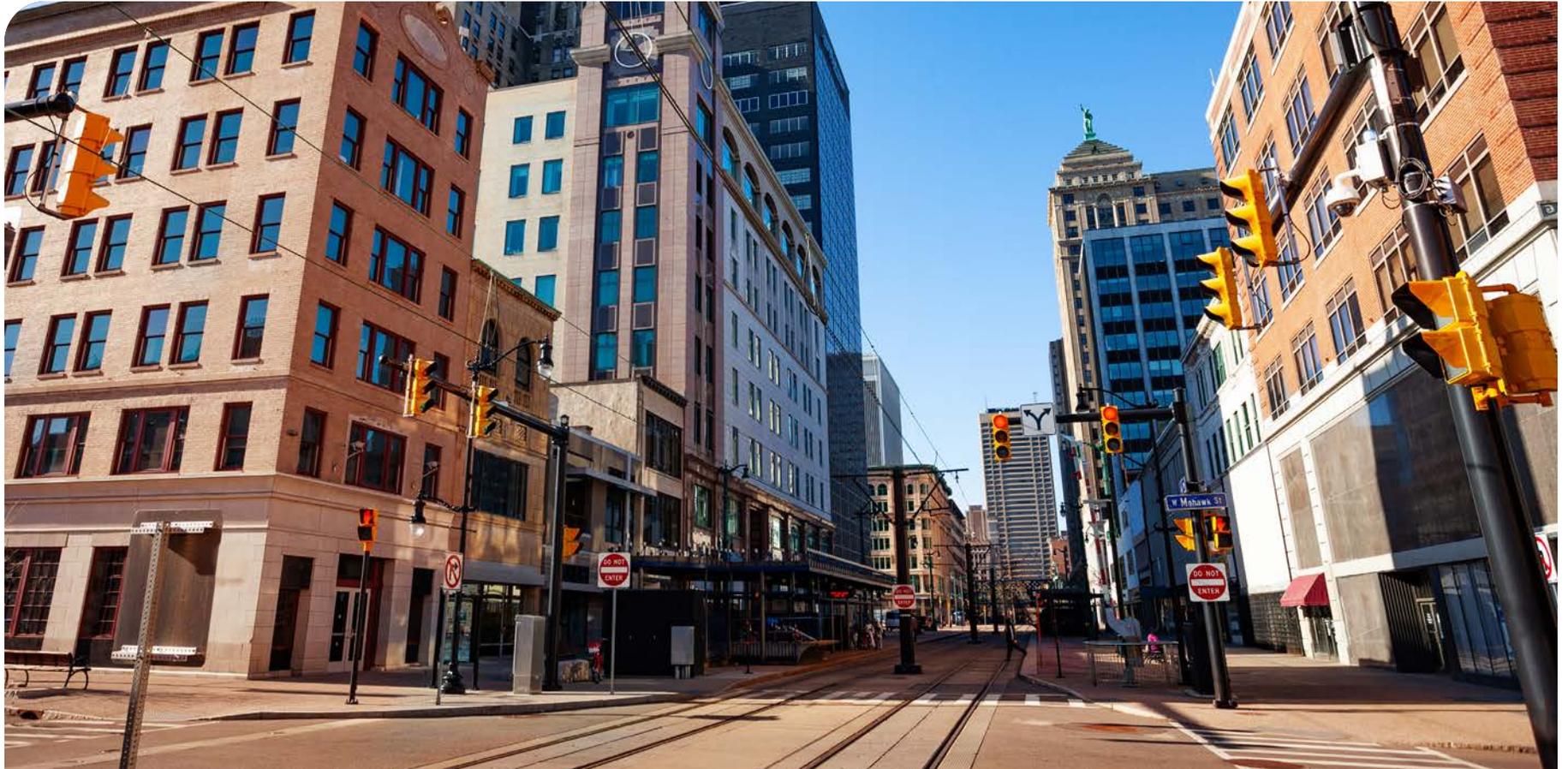
Form-based codes, which are land development regulations that use physical form (rather than separation of uses) as the organizing principle for the code, are another approach certain cities are using to support their land use goals.³

The promising zoning innovations explored in the body of this report advance many of the preceding goals and generally aim to enable a wider range of development typologies that support sustainability, housing affordability, health and social equity, and other key goals. Updating zoning can lead to multiple benefits for business, people, and the planet, and the real estate community can provide valuable insights that make reforms more successful.



Introduction

Cities and towns across the United States face multiple intersecting challenges, including skyrocketing home prices, housing segregation, and mitigating and adapting to the effects of climate change. At the same time, many communities are working to meet growing demand for features like trails, fresh food access, and high-quality open spaces. Among the most central considerations in addressing these challenges—and meeting the demand for more livable places—is the role of zoning.



Current zoning requirements often promote negative outcomes for cities, people, and communities. Many requirements promote development patterns that increase traffic congestion, contribute to air pollution, raise housing costs, and prevent walkability, among other negative outcomes.

Zoning policies have also generally failed to allow, incentivize, or require projects that actively respond to market demand for projects that support health, social equity, and environmental

resilience and sustainability. Outdated policies often make such projects illegal or difficult, time consuming, and costly to complete.

Modernizing outdated zoning rules can set the stage for accelerated public- and private-sector investment in development projects that advance community objectives. And the process of updating zoning policies can clarify a community's priorities, align policies around key goals, and create the conditions for a more sustainable, resilient, and inclusive future.

Origins and Effects of Zoning in the United States

When cities across the United States began adopting zoning ordinances over a century ago, many policies centered on promoting public health and safety. Common provisions included separating dwellings from harmful industrial uses and ensuring that buildings would not block light and air from reaching the sidewalk.⁴

While these are laudable goals, zoning laws have also long been used to discriminate against people of color and those with low incomes, often resulting in inequitable access to economic opportunity and significant exposure to environmental hazards,⁵ such as contaminated soils and flooding, among other harmful outcomes.

The U.S. Supreme Court banned explicit race-based zoning in *Buchanan v. Warley* (1917), but exclusionary zoning laws that created and maintained segregation soon became common and included provisions such as minimum lot size requirements, minimum square footage requirements, prohibitions on multifamily homes, and limits on the height of buildings,⁶ all of which served to encourage single-family neighborhoods and homeownership among the white middle class.

In 1926, the U.S. Supreme Court case *Euclid v. Ambler* upheld the practice of zoning—including the creation of exclusionary residential zones, stating that “the development of detached

house sections is greatly retarded by the coming of apartment houses,” and “the apartment house is a mere parasite, constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district.”⁷ Research has directly connected exclusionary zoning to racial segregation, which has led to measurable disparities in health outcomes and economic opportunity and has contributed to the racial wealth gap.⁸

In addition to segregating communities, zoning policies have promoted or failed to address urban sprawl, which has created adverse environmental outcomes and contributed to development patterns leading to chronic health problems like obesity, diabetes, and cardiovascular and respiratory disease.⁹ Moreover, because sprawl has contributed to the concentration of vulnerable populations in areas with existing health and environmental risks, climate change factors like rising temperatures and seas and more frequent and intense storms exacerbate impacts on these communities and stymie their recovery from adverse events.¹⁰

Today, roughly 75 percent of land zoned for housing in major U.S. cities allows only single-family homes.¹¹ Sprawling, low-density, single-family developments result in higher greenhouse gas emissions than other development forms. For example, in the Bay Area, the average annual household carbon emissions for sprawling single-family development are 21 metric tons, but just 10 metric tons for compact, mixed-use, multifamily development.¹²

In addition, multifamily housing faces barriers that single-family homes do not face. Multiunit buildings are often subject to mandatory public hearings to gain approval whereas single-family housing rarely faces this barrier, because it is allowed by right.

For example, in Connecticut, only 0.3 percent of land zoned for single-family housing requires a public hearing before approval of new single-family housing, whereas 94.6 percent of land zoned for residential use allowing four or more family-housing units requires a public hearing.¹³ Housing applications subject to public hearing requirements are more likely to be rejected, further limiting the overall housing supply.¹⁴ Public participation in these reviews may reinforce segregation and exclusion, highlighting the need for zoning reforms that eliminate undue burdens on equitable development.

Additional common zoning requirements, including minimum parking requirements for all types of developments, frequently exacerbate racial and economic segregation, unsustainable sprawl, increased greenhouse gas emissions, and unsafe conditions for pedestrians, bicyclists, and drivers alike.

By recognizing the negative consequences of many zoning ordinances and proactively working to craft new policies, cities across the United States are addressing past harms and promoting the creation of greener and more vibrant, livable, and equitable places.

For more on the consequences of common current zoning policies and processes, see Appendix 1 at knowledge.uli.org.

HISTORY OF RACISM AND ZONING

All levels of government, including municipalities across the United States, have systematically imposed residential segregation for over a century, including through racial zoning and redlining—a former Federal Housing Administration policy established in 1934 that refused to insure mortgages in and near neighborhoods where Black people lived.¹⁵

As a result, generations of Black Americans have been denied the constitutional right to “live where they wanted, the right to raise and school their children where they thought best, and the opportunity that whites were afforded to build generational wealth through home ownership.”¹⁶ The negative impacts of racial zoning, redlining, and other related policies are numerous, including disparities in exposure to extreme heat, children’s long-term outcomes, and wealth based on where people and families live.¹⁷

The following resources provide more information on the history of racism and zoning:

- Richard Rothstein, *The Color of Law: A Forgotten History of How Our Government Segregated America* (Liveright, 2018).
- Cecilia Rouse, Jared Bernstein, Helen Knudsen, and Jeffery Zhang, “[Exclusionary Zoning: Its Effect on Racial Discrimination in the Housing Market](#)” (White House, blog, June 17, 2021).
- Joseph DeAngelis, “[Grappling with the Racist Legacy of Zoning](#)” (American Planning Association, blog, January 21, 2022).
- Brad Plumer and Nadja Popovich “[How Decades of Racist Housing Policy Left Neighborhoods Sweltering](#),” *New York Times*, August 24, 2020.
- M. Nolan Gray, *Arbitrary Lines: How Zoning Broke the American City and How to Fix It* (Island Press, 2022).
- Lens M, [Low-Density Zoning, Health, and Health Equity](#) (Robert Wood Johnson Foundation, Health Policy in Brief blog, September 1, 2021).

Zoning Basics

Zoning is a police power granted to local governments to control the development of land. Local governments in the United States typically use Euclidean zoning to regulate land use and development. Euclidean or “traditional” zoning is organized around the principle that land uses should be separated by types of use. Early zoning efforts focused on health and safety concerns but shifted over time to segregate uses—and people. Zoning can be characterized by the following:

- The use taking place in or around a building and separating uses into zones;
- Development standards that dictate the form of buildings, including height, floor/area ratio, and relationship to public rights-of-way;
- The size of buildings and how they are oriented on a property;¹⁸ and
- Implementation of the vision of communities as laid out in documents, like comprehensive plans.

Most zoning codes in the United States separate uses into residential, commercial, industrial, and agricultural zones that allow varying degrees of density and/or specific uses.

Common zoning controls include height limits, minimum lot size and square footage requirements, and prohibitions on multifamily homes and commercial and industrial activity in certain residential zones.

Variations and Discretionary Approvals

Variations are requests to deviate from area or use requirements of zones where properties are located. Examples of area variations include projects that do not align with height, setback, floor/area ratio, or minimum parking requirements. Use variations include projects with uses that are either not explicitly permitted or expressly prohibited in specific zones.¹⁹ Nonconforming projects that seek variations will be subject to discretionary review, a process where officials decide whether a development can proceed.²⁰

Variations are intended to be very rare, and only applied when zoning regulations make it impossible or financially prohibitive to develop a property according to the zoning regulations. However, zoning regulations frequently do not reflect community needs or market demand. In such cases, variations may be granted so frequently that development is generally out of alignment with the zoning code.

Municipalities may also require discretionary approvals for certain projects and uses when they do not conform to zoning or building codes or when they are in areas that have legal requirements for discretionary review. Common reasons for discretionary review include the following:²¹

- Proposals to modify a previously conforming use;
- Deviations from zoning requirements;
- Development projects in environmentally sensitive areas;
- Projects that involve historical resources; and
- Developments in coastal zones.

Decision-makers must exercise legal judgement when determining whether to grant discretionary approvals—generally with scrutiny from the public and elected leaders—meaning that outcomes are often not certain,²² potentially adding time or cost to development projects. Updating zoning to advance health, equity, sustainability, and decarbonization goals and to align codes with market demand can limit discretionary review applications and make development entitlement outcomes more certain.

Useful Tools for Updating Zoning

Some recent zoning policies use different methods to advance locally defined goals, including allowing or promoting mixed uses and housing of various levels of density rather than separating uses or segregating housing types. Form-based codes, which are land development regulations that use physical form (rather than separation of uses) as the organizing principle for the code, differ significantly from the older use-based approach.²³

Zoning can also explicitly limit or prohibit uses with potentially harmful impacts or that may create conflicts with the preferred urban form for that zone. For example, drive-through restaurants and gas stations may be restricted in areas with heavy pedestrian and bike activity, or where such activity is being promoted. Overlay zones can be applied over a defined geography to advance certain goals, such as transit-oriented development (TOD). Such overlay zones would include provisions to promote denser, mixed-use, and parking-light development. Zoning incentives can be used to promote uses likely to have positive impacts, including grocery stores, parks, and community gardens.

BUILDING CODES

Whereas zoning regulates what can and cannot be built in specific areas, building codes concern safety and technical specifications for construction, including requirements related to fire safety, maximum occupancy, electricity, and plumbing. Similarly, state energy codes regulate the efficiency standards buildings must meet. Zoning and building codes may overlap, for example when they both specify height restrictions. In such cases, the most restrictive requirement generally applies.²⁴

Building codes generally concern life safety and do not guarantee property protection. In fact, most jurisdictions have not adopted the most recent model codes that contain updated hazard provisions—just 26 percent have adopted damaging wind standards and 12 percent have adopted tornado standards.²⁵

At the same time, current codes may contain provisions that can limit building innovation, such as restrictions on wood-frame buildings over certain heights or requiring dual staircases for buildings over three stories, which can increase housing costs due to higher construction costs and the fact that there is less room for housing units.²⁶ The inadequacy of many current codes to address the challenges of the day demonstrates the need for integration among proactive zoning and building code updates.

The Biden-Harris administration in 2022 announced the National Initiative to Advance Building Codes, aimed at helping all levels of government adopt the most current building codes to ensure communities are more resilient to the growing threat of extreme weather events, such as hurricanes, flooding, and wildfires, caused by climate change. Alongside zoning reforms, updating building codes can play a role in advancing design and construction methods that reduce property damage, save lives, and lower utility bills.²⁷

Zoning Reform: Challenging but Necessary

Updating zoning to create equitable access to places with features such as protection from natural hazards, more sustainable buildings, clean air and water, and parks and trails is no simple task because it requires generating consensus among stakeholders with varying needs and opinions.

For example, working to dismantle zoning policies that perpetuate segregation based on race and income can be fraught, given how entrenched such policies are across the United States. The nature of proposed solutions may be perceived as unwelcome changes to “neighborhood character.” The inequitable, unhealthy, and racist land use patterns many zoning policies uphold are often taken as a fact of life, rather than a predictable (and often intended) product of explicitly exclusionary policy.²⁸



Reconciling Competing Priorities

Reconciling competing community priorities and making progress on key goals that support the creation of healthier, more equitable, and greener cities through zoning updates can be a complex balancing act—especially when multiple priorities are in conflict or appear to be so.

For example, a 2021 National Association of Homebuilders survey showed that 78 percent of homebuyers are concerned about the impact building their home has on the environment, and among the most desired community features were “walking/jogging trails, a park area, being near retail space, and a walkable community.”²⁹

However, at the same time, a 2021 Pew Research Center survey showed that six in 10 U.S. adults would prefer to live in a community where “houses are larger and farther apart, but schools, stores, and restaurants are several miles away” as opposed to a community “with smaller houses that are closer together with schools, store, and restaurants within walking distance.”³⁰

While some of these community preferences are compatible, others demonstrate tensions that complicate efforts to update zoning codes and indicate the difficulty in teasing out what is truly desired from the built environment and what residents are simply used to seeing as the norm. Furthermore, even if the majority of people really do prefer communities consistent with the typical suburban status quo, many others still prefer denser, more walkable development—and these people and families are underserved by current zoning and land use policies.

Barriers to Change

Despite the need for reform, making changes to zoning can be politically risky and time-consuming. Existing residents may resist efforts to add more density to their neighborhoods. Often, concerns are raised about changes to “neighborhood character,” environmental impacts, and traffic and parking. In these discussions, the loudest voices are often the ones resisting updates.

These concerns often play out during discussions of updating zoning and other policy documents that inform zoning decisions, such as comprehensive plans. For example:

- **In Montgomery County, Maryland**, as of 2022, there was significant opposition to the Thrive Montgomery 2050 plan, which aims to guide future decision-making on housing, transit, and climate resilience—including by emphasizing walkable communities, investment in affordable housing, and the addition of denser residential development near transit.³¹ The concerns over the Thrive plan have centered largely over worries that future “upzoning” would raise property taxes, add to traffic congestion, replace single-family homes with affordable housing, and take away opportunities for existing residents to weigh in on new development, since developers could build projects that comply with new zoning by right. Conversely, supporters note that the county is projected to add 200,000 new residents by 2045 but 85 percent of land is already built out, so the plan “reflects a response to development constraints and rising home costs” and represents a step forward in redressing previous zoning that promoted racial and economic segregation.³²

- **In Minneapolis** in mid-2022, a judge ordered officials to stop implementing the city’s long-range development plan, which had already resulted in zoning updates such as eliminating single-family zoning and minimum parking requirements, because of environmental impact concerns. The plaintiffs in the case consist of environmental groups who believe the city has not identified or addressed the effects of implementing the plan.³³
- **In Oregon**, the state pulled a wildfire risk map in 2022 after pushback from residents. The map classified properties by risk level but was released without finalizing new zoning codes being created to address wildfire risk. Residents worried that they would face financial burdens related to complying with new codes and property insurance increases. The map is likely to be republished in 2023 alongside new zoning codes.³⁴



Advancing Zoning Updates

Such examples as the preceding are common in discussions of zoning reform across the United States and beyond. Successful strategies to make progress on key goals often center on implementing public outreach efforts that use creative communication techniques to focus on quality-of-life benefits to build local buy-in.

For example, Ottawa, Ontario, released a short, viral video explaining [minimum parking requirements](#) that received 40,000 views in a year. The video—and the city’s outreach overall—centered on outcomes and used clear, neutral language connecting parking to other urban opportunities. As a result, the Ottawa City Council passed a new zoning by-law unanimously in 2016, with no opposition at final public hearings, ultimately leading to new parking-free projects. The video is credited with helping Ottawa planners gather widespread support for the first parking policy updates since the 1960s.³⁵

Ground-up strategies for advancing reform include the “YIMBY” or “Yes in My Backyard” movement. Community residents and organized groups, including [YIMBY Action](#), advocate for policy updates—especially those that aim to increase the supply of housing and promote residential desegregation.³⁶ YIMBY advocates have engaged in multiple forms of advocacy across the country, including in Minneapolis where advocates created a video explaining how fourplexes could potentially support housing affordability.³⁷ Collaboration among various groups, including YIMBY and affordable housing organizations, can potentially

help organize zoning reform discussions and actions around efforts to promote housing development while mitigating the risk of displacement.

Groups like [Desegregate Connecticut](#), which was formed in June 2020 after the murder of George Floyd, advocate for more equitable, affordable, and environmentally sustainable land use policies through research, data collection, and grassroots organizing. Desegregate Connecticut’s work centers on reforming land use laws to forge racially and economically diverse communities.³⁸

Although an older example, Massachusetts’s Comprehensive Permitting and Zoning Appeal Law (known as Chapter 40B), adopted in 1969 in response to growing concerns that local zoning was excluding lower-cost housing, offers another strategy to overcoming potential barriers to zoning updates. The law “limits a local municipality’s authority during development review processes if the community does not have 10 percent of its total housing units affordable to households earning low and moderate incomes. By allowing projects to bypass established local review processes, the state helps moderate the impact of NIMBYism and enable the production of affordable and workforce housing that would not otherwise have been built.”³⁹

While engagement related to updating zoning policies can be a complex and emotional process, it can also be an opportunity to align policy around key livability goals and to create the conditions for a more healthy, sustainable, resilient, and inclusive future. Although leaders may face tradeoffs in determining the specific set of policies to achieve these goals, zoning reform will be a key part of the puzzle.

MOMENTUM FOR ZONING UPDATES

There is increased momentum at all levels of government to tackle zoning reform in recognition that many existing policies, at best, do not meet the needs of the day, and, at worst, continue to lead to harmful outcomes.

At the federal level, zoning is a priority for the Biden administration. The 2022 *Housing Supply Action Plan* aims to close the housing supply gap in five years, including by providing incentives for land use and zoning reform and reducing regulatory barriers.⁴⁰

Specifically, the plan rewards jurisdictions with higher scores in several federal grant processes for making certain zoning updates. Transportation funds from the Bipartisan Infrastructure Law are being leveraged via competitive grant programs to reward jurisdictions with policies that promote density, rural main street revitalization, and transit-oriented development. Additionally, updates to U.S. Economic Development Administration (EDA) investment priorities encourage increased density, transit-oriented development, and infill development within the EDA's competitive grants.⁴¹



State-level efforts are also helping lead the way. For example:

- A 2022 Oregon law requires cities to reduce or eliminate minimum parking requirements, allow more density in certain areas, and coordinate among housing and transportation plans to lesson single-occupancy driving.⁴²
- California bill AB 2011, passed in 2022, aims to facilitate infill housing on commercial lands by allowing projects that are 100 percent affordable to lower-income households by right in all commercial zones within urban districts. The bill also allows mixed-income housing development on commercial lands that front arterial roadways, with the goal of revitalizing underused strip commercial corridors.⁴³
- California bill AB 2097 prohibits public agencies from imposing minimum parking requirements on development projects within one-half mile of public transit.⁴⁴
- In 2021, California passed Senate Bill 9, which allows up to four units to be built on lots zoned for single-family-residences statewide, among other updates.⁴⁵
- Connecticut set limits for the number of parking spaces local government can require developments to include.⁴⁶
- Earlier state-level reforms include inclusionary zoning (IZ) policies in New Jersey, Maryland, and Oregon, which require or incentivize affordable housing production.⁴⁷

At the local level, ever more cities and towns are enacting various reforms, many of which are explored in this report. ULI has also begun to catalog municipal parking policy updates,⁴⁸ which have markedly increased in number over recent years due to the significant role they can play in reducing traffic, cutting pollution, and supporting housing affordability, among other benefits. Through this report and future research, ULI is identifying additional zoning policy innovations that have the potential to move the needle on health, equity, climate resilience, and low-carbon development.

Balancing Removing Regulations with Creating New Requirements and Incentives

In updating zoning, the appropriate balance in terms of removing existing regulations and implementing improved ones may not be obvious. For example, both strategies have been implemented across the United States with the goal of increasing attainable and affordable housing development.

Removing Regulations

Strong evidence indicates that many current zoning rules limit the housing supply and increase the cost of homes:⁴⁹

- In most U.S. cities, apartments are banned in at least 70 percent of residential areas.
- Most municipalities ban single-room occupancies (SROs) with rental units that include a furnished private bedroom and shared kitchens and bathrooms.
- Minimum parking requirements, height limits, minimum setbacks, and floor/area ratios lead to higher home prices, since fewer units can be built and/or unnecessary features may be included.

Multiple cities have abolished these types of policies with a goal of lowering the cost of housing and creating a mix of housing types, including missing middle housing. For example, Hartford, Connecticut; Buffalo, New York; Ann Arbor, Michigan; and South Bend, Indiana, have all gotten rid of minimum parking requirements citywide, and several cities in California, including San José, Sacramento, Berkeley, and San Diego, are pursuing similar policies as of 2022.

Houston, Texas, provides another relevant example, as it is considered the only major largely unzoned U.S. city. In part, because of its lack of a formalized zoning code, Houston creates 14 times more housing than peer cities—including more than 250,000 townhouses built since reforms to minimum-lot-size rules advanced in 1998, with the vast majority in existing urban areas.⁵⁰ Despite the city's lack of formal zoning, it includes other provisions, such as parking requirements, that influence development.

Creating New Requirements and Incentives

In contrast, other cities have implemented policies, such as inclusionary zoning, which require or encourage developers to create below-market rental apartments or owner-occupied housing in connection with local zoning approval of a proposed market-rate development.⁵¹ Such requirements are often paired with incentives, such as density bonuses, to offset the cost of below-market units.

Cities with mandatory inclusionary zoning policies include Boston, San Diego, San Francisco, and Washington, D.C.⁵² Evidence indicates that, in certain circumstances, inclusionary zoning can help spur the production of affordable housing, encourage integration, and improve equity. However, evidence is mixed on the effectiveness of IZ policies in substantially increasing affordable units. While successful in some areas, other jurisdictions have produced few or no units. Weak housing markets, a lack of enforcement, or a lack of development incentives have been linked to policies in areas that have produced fewer affordable units.⁵³

Context Is Key

Various strategies to update zoning clearly require tradeoffs. For example, reducing or eliminating certain zoning provisions may lead to a more efficient development process that reduces the cost of housing. At the same time, mandating or incentivizing affordable housing units may aid in desegregating cities and promoting public health goals.

While removing regulations can help address social and environmental challenges in certain contexts, clear and targeted zoning policies are still needed in many instances to create better outcomes for people and the planet.

For example, although Houston's lack of formal zoning has likely led to significant housing production, it has also been linked to a failure to implement land use controls related to climate risk. Since 2010, more than 7,000 homes have been built in the 100-year flood zone in Harris County, where Houston is located. Further complicating the situation, local flood insurance coverage is dropping, and premiums are increasing to account for risk. The number of homes with flood insurance policies fell by 25,000 between 2017 and 2022 even though extreme flooding has ravaged the area.⁵⁴



In addition, although many communities now allow solar by right in certain areas if they meet specific requirements, a wider range of enabling technologies that help buildings reach greater energy efficiency goals or net zero performance often still require additional or special permits and review, such as green roofs, high-R-value insulation, or energy storage technologies, where setback requirements or height limitations force developers to choose between occupiable floor space and efficiency features.

Zoning policies largely have also not set carbon or energy use maximums for buildings in certain areas, leaving that challenge to energy codes and specific ordinances. Many policies may stop at requiring low-carbon building certifications only.⁵⁵

Failing to clearly outline which technologies are allowed may disincentivize developers from pursuing higher building performance, since it may extend and complicate zoning review and approvals.

City leaders should engage developers, community members, and others when considering the appropriate mix of new regulations versus eliminating existing regulations to achieve specific goals, being mindful of the risk of “analysis paralysis” and the likely resistance they will face from existing residents who are concerned about changes to the status quo. Developers can also take the step of getting involved proactively in helping shape this mix by providing input about the barriers and opportunities zoning can present to high-quality development.



Benefits of Updating Zoning

Today, zoning codes often outline an outdated notion of what has been deemed unwanted or undesirable—for example, apartments next to single-family homes or developments without dedicated parking. The process of updating zoning policies can be a powerful way to instead determine how best to promote healthier, more equitable, and greener communities. Since most zoning bylaws have not been updated in decades, the process of advancing reforms can also give people an opportunity to share what they value in their communities through outreach processes that influence policy decision-making.

Zoning updates can also play a role in integrating positive land use strategies throughout policies and geographies, increasing the likelihood that development will reflect locally defined priorities that address today's pressing challenges and meet market demand. Examples of the demand for sustainable, resilient, affordable, and healthy projects and community features include the following:

- **Low-carbon buildings.** In a 2021 global survey of senior executives representing building occupiers and investors, 79 percent of occupiers of commercial real estate said they were prioritizing location searches for buildings that will help reduce their emissions, yet only 63 percent of leading investors were planning to prioritize investments to own, build, or invest in net zero carbon assets—showing that investors may be underestimating demand for greener real estate.⁵⁶
- **Climate resilience.** Investors are increasingly assessing a city's preparedness for climate change when deciding where to buy or build. Cities need to show that they are prepared for emergencies, investing in resilient infrastructure, and making commitments to energy efficiency to continue to attract investment.⁵⁷ Highlighting how some investors now view this issue, Laura Craft, head of global ESG strategy, Heitman, notes in ULI's 2020 report *Climate Risk and Real Estate*,⁵⁸ "We have created a system that allows us to assess and account for market-level risk in investment decision-making by understanding the type of climate market risk faced, the market risk mitigants and resilience, the investment time horizon and structure, and the portfolio exposure tolerances."

- **Housing affordability.** Attainable housing, which refers to modestly priced for-sale homes,⁵⁹ represents as much as 60 percent of market demand in some areas.⁶⁰ Recent research indicates a national production shortfall of 3.79 million housing units, with 169 regions experiencing underproduction as of 2019.⁶¹
- **Health-promoting community features.** When asked which community characteristics people in the United States value the most, 50 percent of U.S. residents said walkability was a top or high priority when considering where to live,⁶² and 85 percent identified proximity to parks, playgrounds, open space, or recreation centers as an important factor in deciding where to live.⁶³





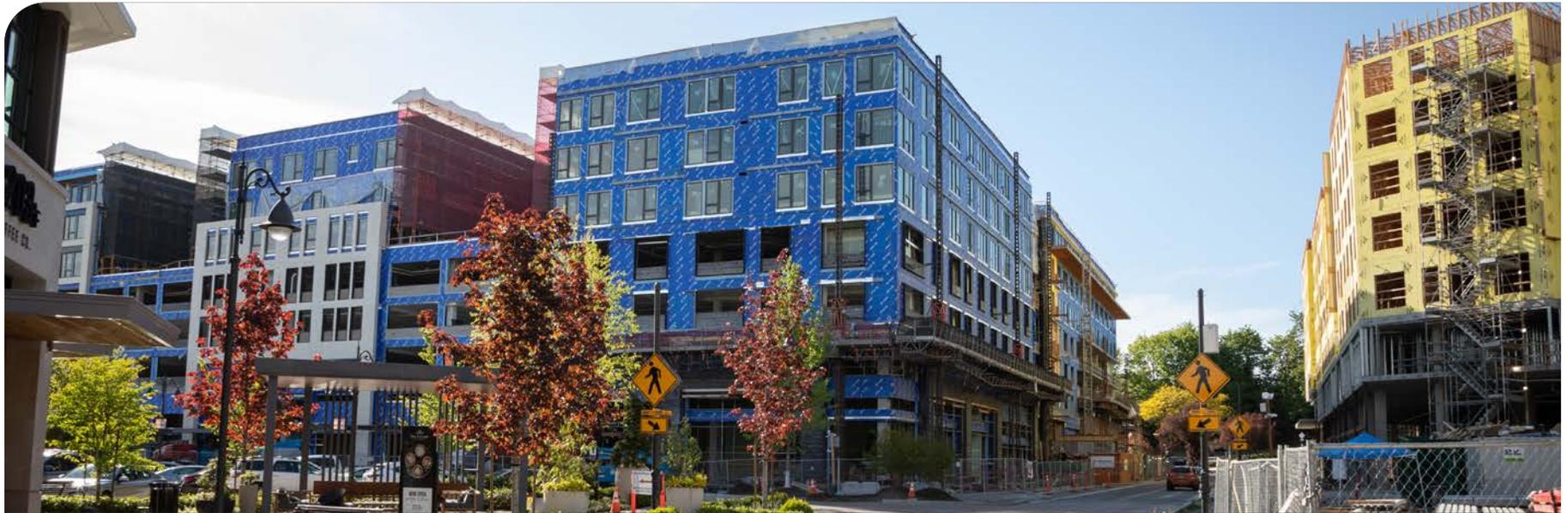
Updating zoning codes can help cities set the stage for accelerated public- and private-sector investment in development projects that advance community objectives. Common goals of zoning updates include:

- Increasing production of a variety of housing types, leading to increases in affordable and attainable housing;
- Lowering the cost of housing development by reducing or eliminating policy barriers;
- Promoting low-carbon building principles and certification standards (e.g., LEED, BREEAM, Passive House, and others);

- Increasing permeable surfaces to reduce flooding and adding shade and reflective surfaces to address the urban heat island effect, thereby enhancing climate resilience;
- Encouraging mode shift away from driving and car ownership, toward transit, biking, and walking by supporting the development of compact, mixed-use communities;
- Integrating transit and real estate development and building more housing within walking distance of major transit hubs;
- Providing parks and open space and viewing them as critical infrastructure;
- Prioritizing tree preservation and protection;
- Including food retailers with fresh produce in development projects;
- Building community gardens and farms;
- Adding community facilities and promoting community-serving retail;
- Creating walking and biking connections to transit; and
- Supporting water efficiency.

A 2021 study published in the journal *Circulation* showed a link between heart health and inclusionary zoning across hundreds of U.S. jurisdictions. In places with inclusionary zoning, residents overall had “uniformly better” cardiovascular health outcomes, such as lower blood pressure, cholesterol, and rates of blood pressure medication prescriptions.⁶⁴

How Updating Zoning Can Streamline the Development Process



Advancing zoning updates to support investment in many of the features listed previously can create more predictability in the development process, potentially making projects less expensive and risky. Whereas outdated zoning policies can make projects that aim to support in-demand types of development illegal or difficult, time-intensive, and costly to complete, zoning that advances local priorities and responds to market demand for healthier and more environmentally friendly projects allows more projects to be approved by right, making development application outcomes more certain. In contrast, outdated zoning may make projects riskier for developers and investors, may lead to expensive legal bills, and may even stall or end projects.

The need to update and streamline zoning policies is especially acute, since soft costs—including complying with zoning regulations—typically represent around 20 to 30 percent of project costs and vary based on the length of time they add to the development process.⁶⁵ In residential development, those extra costs often show up in the rents or sales prices of the finished housing.⁶⁶ Reforming zoning to reflect market demand can lower the costs of development and support housing affordability, resilience, and environmental performance.

ZONING AND THE DEVELOPMENT PROCESS

Traditional zoning



Zoning uncertainty raises costs at every stage of development, from financing through construction; higher costs are generally passed along to future tenants and buyers.

Updated zoning policies



Simplifying zoning to reduce the cost of development is more likely to lead to developments that affordably meet community needs.



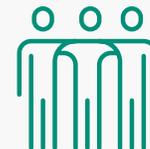
Development projects that comply with traditional zoning and include features that are not aligned with market demand—for example, projects with excessive parking in areas with high walkability and transit access—raise costs and lead to less viable developments.



Zoning updates that streamlines the development approvals process may give municipalities room to require or incentivize developer-funded, in-demand community investments, such as parks and trails, which can also provide a return on investment for associated projects.



Existing zoning may not meet current market demand, forcing developers to build less economically viable products to avoid potentially costly and lengthy approvals processes to gain variances.



Aligning zoning policies with community needs and market demand means developer and investor funds that would otherwise be spent to gain variances or get parcels rezoned may instead be used to invest in features that support health, equity, resilience, and sustainability.



Zoning Innovations: Techniques and Approaches

Certain techniques are increasingly being used to advance zoning innovations with the potential to promote a healthier, greener, and more equitable and resilient future. When aligned with complementary city policies—like building and energy codes—zoning reforms can promote public- and private-sector investment that advances key goals. This section outlines examples of zoning techniques and innovations; details potential health, social equity, climate resilience, and low-carbon building benefits; and provides examples of relevant city policies in action.

The types of zoning approaches covered in this document, summarized in the following overview, represent common techniques that can be used to update zoning policies across the country. They range from comprehensive overhauls, which include extensive outreach processes and may take many years to complete, to more targeted approaches, such as providing incentives for land uses that are likely to support locally defined goals.

The end of this section includes a guest contribution on opportunities and potential benefits related to form-based codes, which was authored by the Form-Based Codes Institute.

These common techniques can be used to advance zoning updates and may be combined with one another. Their utility varies based on past zoning rules, local infrastructure investments, and other contextual considerations.



Overview of Zoning Techniques and Policy Examples

Zoning technique	Overview	Policy examples
<p>Comprehensive overhauls: Creation of new zoning policies to replace previous codes</p>	<ul style="list-style-type: none"> Includes extensive outreach processes and creation of guiding documents, such as comprehensive plans Can simplify complicated zoning policies, determine community priorities, and integrate land use strategies throughout all policies and geographies 	<p>Buffalo, NY: Promoting walkability and eliminating minimum parking requirements through comprehensive overhaul</p> <p>Baltimore, MD: Promoting healthier development through comprehensive overhaul</p> <p>Stamford, CT: Strengthening and encouraging greener buildings through a comprehensive overhaul</p> <p>Norfolk, VA: Comprehensively addressing community vulnerabilities through zoning overhaul</p>
<p>By-right zoning: Policies that allow projects that comply with certain zoning standards to obtain approvals and building permits through relatively simple administrative processes</p>	<ul style="list-style-type: none"> Can expand the types of projects allowed in specific zones or citywide May streamline the development process—potentially resulting in lower project costs 	<p>Minneapolis, MN: Allowing increased residential density by right by eliminating single-family zoning</p> <p>Denver, CO: Allowing lower parking ratios by right for affordable housing</p> <p>Boston, MA: Adopting net zero carbon standards by right through strengthening low-carbon building requirements</p> <p>Summit County, CO: Minimizing losses from wildfire damage</p>

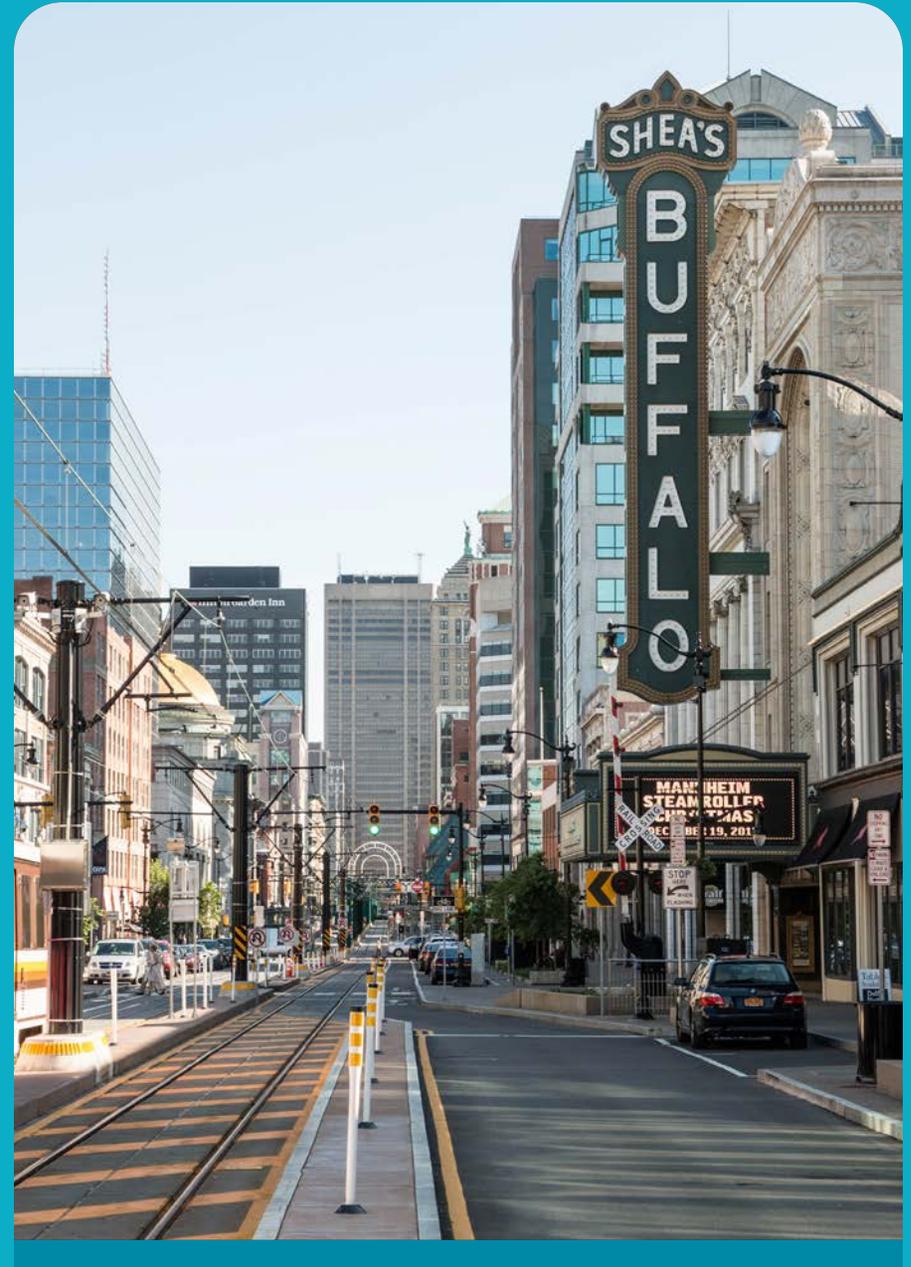
<p>Overlays: Special districts placed over existing zones that include provisions in addition to those already present</p>	<ul style="list-style-type: none"> • Can be used to protect features, including historic buildings, wetlands, and waterfronts, or to encourage certain types of development projects, such as mixed use, transit-oriented development, waterfront development, affordable or mixed-income housing, and developments that account for future climate risk⁶⁷ • Provides opportunities for additional oversight through site plan reviews and other processes 	<p>Indianapolis, IN: Promoting healthier, more equitable development by zoning overlay</p> <p>Northampton, MA: Creating a sustainable growth district through overlay zoning</p> <p>Stonington, CT: Using overlays to achieve scalable flood hazard mitigation</p>
<p>Floating zones: Districts that delineate conditions that must be met before the area is approved for a given set of zoning rules</p>	<ul style="list-style-type: none"> • Can promote local priorities while allowing for flexibility • Can be written to facilitate urban development that regulates both form and use⁶⁸ 	<p>Cambridge, MA: Facilitating green, resilient, and flexible development</p> <p>James City County, VA: Creating a planned unit development for conservation and community resilience</p>
<p>Zoning incentives: Tool to make it more attractive or financially feasible for developers to provide certain public benefits by offering incentives that offset the cost of providing such features⁶⁹</p>	<ul style="list-style-type: none"> • Can help municipalities obtain a public good at low or no cost • Can be used to stimulate residential development in previously largely commercial areas, promote affordable housing, support elevation in flood-prone areas, promote low-carbon building practices, and create or preserve open space 	<p>New York, NY: Promoting healthy food access</p> <p>Arlington County, VA: Advancing carbon neutrality through density bonuses</p>

Comprehensive Overhauls

Comprehensive overhauls involve extensive outreach processes and the creation of guiding documents, such as comprehensive plans, to create brand-new zoning policies that replace previous codes. Overhauls often take several years and include participation from thousands of community members and other stakeholders.

Cities may go decades between overhauls because of the time and complexity of the undertaking, but the process and implementation activities associated with overhauls can determine community priorities, create buy-in, and integrate positive land use strategies throughout all policies and geographies. Comprehensive overhauls also present the opportunity to simplify and shorten complicated zoning policies, making them more user-friendly. Potential benefits of overhauls include:

- Aligning codes with opportunities to address today's pressing challenges, including the health and climate crises;
- Streamlining complex codes to make development simpler and less expensive, with the goal of increasing affordability by passing on savings to end users; and
- Designating target areas for combining high-performance building goals with other objectives, such as attainable housing or economic development.



ZONING TECHNIQUE: COMPREHENSIVE OVERHAUL



Application to health

Provides the ability to comprehensively prioritize health-promoting land uses (pedestrian-oriented design, community gardens, and access to supermarkets, etc.)

Creates the opportunity to align multiple policies across all geographies—including comprehensive plans, zoning codes, zoning maps, and land development processes—to ensure health is prioritized⁷⁰

Allows municipalities to designate potentially harmful uses (i.e., liquor stores in residential neighborhoods, hazardous waste sites) that are either prohibited or require discretionary reviews



Application to social equity and affordability

Can align multiple policies across all geographies to ensure equity is prioritized⁷¹

Lays the groundwork for developers to build more equitable, attainable, and/or affordable projects because of increased zoning predictability, efficiency, and/or requirements and incentives outlined in overhauls

Provides opportunities to revisit older master plans with a focus on equitable development in communities with priorities and needs that have shifted



Application to resilience

Affords communities the opportunity to identify and respond to known risks

Allows communities to seamlessly integrate zoning with administrative rules, plans, and other governing documents to support community resilience—in the process, replacing or reconciling disaggregated or possibly contradictory existing zoning policies



Application to low-carbon buildings

Allows cities to reconsider which low-carbon building standards new construction or major renovations must adhere to, and where those standards should apply⁷²

Provides opportunities to align low-carbon building practices with city climate and energy efficiency goals, including by planning links between land use and building practices that work synergistically (e.g., planning new parks in higher-efficiency zones to reduce energy use through natural cooling)

Promoting Walkability and Eliminating Minimum Parking Requirements through Comprehensive Zoning Overhaul

LOCATION:

Buffalo, New York

YEAR:

2017

APPLICABILITY:

Citywide



In 2017, the city of Buffalo updated its Unified Development Ordinance (UDO) to promote walkability and promote green and smart growth principles. As part of the update, Buffalo became the first major U.S. city to eliminate minimum parking requirements citywide. The UDO update, known as the Buffalo Green Code, was a nearly seven-year effort to overhaul the city's zoning that included participation from thousands of community members across the city. The changes were aimed at supporting healthier lifestyles by making it safer, more convenient, and more attractive to walk or bike to reach destinations.

The new UDO was the city's first comprehensive zoning rewrite in 63 years. The Green Code's goals included the following:⁷³

- Promoting walkable, mixed-use neighborhoods;
- Supporting transit-oriented development; and
- Strengthening economic centers.

Specific zoning updates were as follows:⁷⁴

- Eliminating minimum parking requirements citywide;

- Creating provisions requiring convenience stores and drugstores to be built closer to the street, with parking in the back or on the side;
- Making streetscapes part of the planning board review process for the first time, including considerations on the location of curb cuts and whether benches, bike lanes, bus stops, and adequate lighting;
- Addressing solar panels and urban agriculture, which were not explicitly allowed in the city previously; and
- Zoning 90 percent of the Outer Harbor area to remain as green space (previous zoning allowed industrial development in the area).

Repealing minimum parking requirements was one of the most consequential updates. The city’s planning team had previously considered moving toward a less significant parking policy change but decided to eliminate parking minimums citywide after finding that their engagement efforts uncovered surprisingly little opposition.⁷⁵ Specifically, the city made the following findings:

- Public engagement surveys showed that 74 percent of people expressed strong support for repealing minimum parking requirements.
- Many public comments centered on the negative impacts of the overabundance of surface parking lots and a desire to protect the walkability of existing neighborhoods.

- Businesses and residents’ associations endorsed the update, including the Elmwood Village Association (a community development organization comprising business owners and neighborhood residents), who stated: “Minimum parking standards make suburban-style surface lots a requirement and would have prevented many of Elmwood’s existing great buildings from being constructed.”⁷⁶

Early results of eliminating minimum parking requirements are promising. A 2021 study tracked 14 mixed-use projects developed since 2017; they provided 53 percent less parking than previously required, four projects built no parking at all, others shared parking, and TOD increased.⁷⁷

Promoting Healthier Development through Comprehensive Zoning Overhaul Informed by Health Impact Assessment

LOCATION:

Baltimore, Maryland

YEAR:

2016

APPLICABILITY:

Citywide



In 2016, Baltimore adopted a comprehensive update to its 45-year-old zoning code called *TransForm Baltimore*. Work to overhaul the code began in 2008, with initial Planning Commission hearings held in 2012. Major goals of the new code included the following:

- Creating more pedestrian-friendly neighborhoods;
- Streamlining the development process and making it more straightforward to approve transit-oriented developments and projects with amenities like urban farms; and
- Strengthening regulations on potentially unhealthy uses, like liquor stores located in residential areas.⁷⁸

Selected *TransForm Baltimore* provisions included:

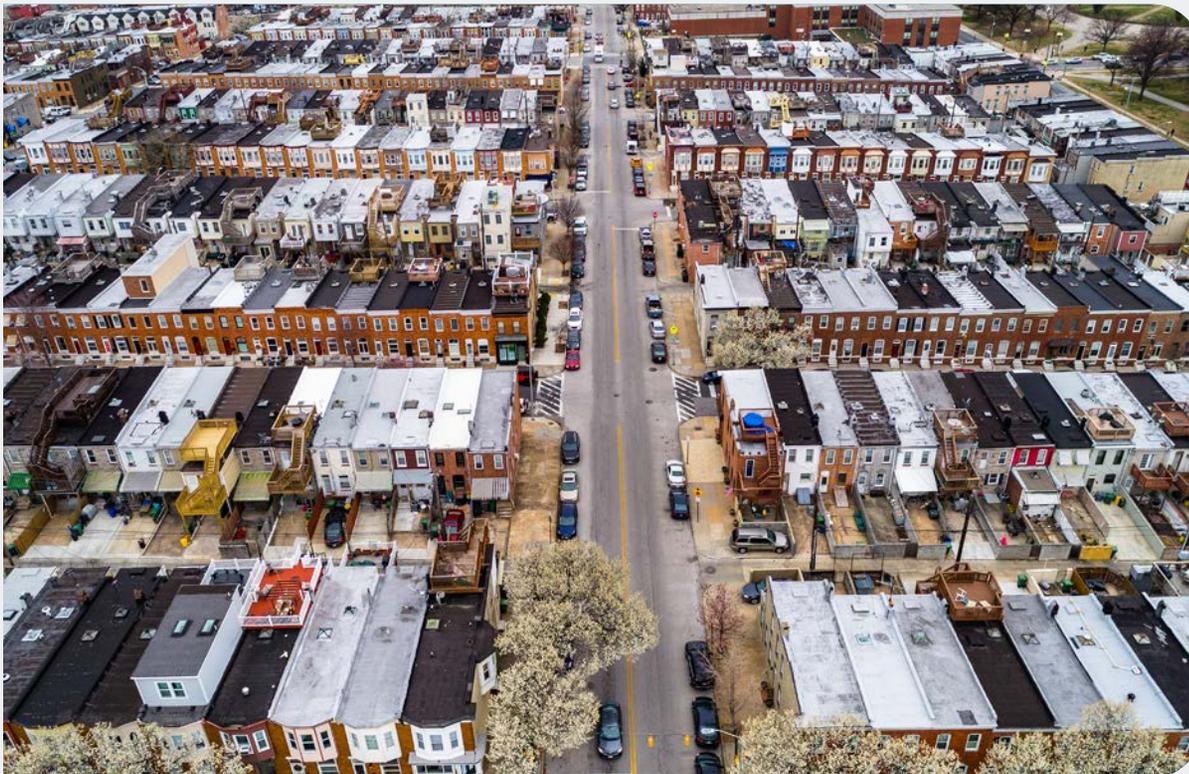
- Providing new rules for how various uses interact with each other to remove barriers to creating mixed-use, walkable neighborhoods;
- Encouraging adaptive use of historic structures—for example, old churches in residential neighborhoods now face fewer barriers to reuse, including as small office buildings,⁷⁹ thereby supporting local economic development; and

- Making certain project uses subject to discretionary review to avoid potential negative consequences of unchecked development—for example, new bail bonds and check-cashing businesses must be approved by city council; making potentially harmful uses subject to discretionary review can help ensure such uses are dispersed throughout cities and regions rather than concentrated in specific areas where they might exacerbate existing inequities.⁸⁰

Before adoption of the new code, Johns Hopkins University completed a health impact assessment (HIA) and shared findings during the city’s initial review and public comment process. The HIA provided evidence that the proposed zoning code revisions could have a positive impact on community health, including by improving lighting and landscaping across the city, promoting transit-oriented development, and increasing access to healthy foods.

The HIA also identified mixed-use development as an important tool for improving health because of the potential positive effects on physical activity, obesity, and reductions in violent crime. The analysis showed that mixed-use development could create incentives for physical activity by providing amenities within walking distance and improving access to transit.

However, many proposed mixed-use districts in the draft code allowed alcohol outlets, which “can play a role in destabilizing neighborhoods by generating crime.”⁸¹ The existing overconcentration of liquor stores in residential neighborhoods had already been linked to higher rates of hypertension and diabetes.⁸² The HIA helped advance changes included in the final approved code that applied new regulations to liquor stores, including by addressing the location, distribution, and density of alcohol outlets^{83,84} to reduce their overconcentration.



Strengthening and Encouraging Greener Buildings through a Comprehensive Overhaul

LOCATION:

Stamford, Connecticut

YEAR:

2015

APPLICABILITY:

Citywide



In 2015, the city of Stamford released a master plan that included a goal to “make Stamford the most sustainable, transit-friendly, walkable community in Connecticut and a national leader in sustainability.”⁸⁵ A key part of this goal is advancing a comprehensive overhaul of the 1950s zoning code.

An important part in the overhaul process is the Stamford Sustainability Scorecard that was created in partnership with the Regional Plan Association, a nonprofit that develops and promotes economic health, resiliency, and quality-of-life research for the New York-New Jersey-Connecticut metropolitan area,⁸⁶ and Local Governments for Sustainability, a global organization committed to sustainable urban development.⁸⁷

The goals of the Stamford Sustainability Scorecard are to encourage sustainable land use and development standards by

- Providing residents, employees, and consumers with building-level information related to sustainability and providing the development community with guidelines on related best practices;

- Tracking sustainable aspects of buildings and development in Stamford;
- Improving community awareness of sustainability and resiliency issues in the built environment; and
- Improving the quality of life for all Stamford residents.⁸⁸

All new developments, redevelopments, or conversions with 10 or more housing units, 10,000 square feet or more in floor area, or on lots where 20,000 square feet or more in area are disturbed, or extensions or substantial alterations, must submit projects with the Scorecard. Some scores only apply to large projects, that is, projects with 30 or more housing units, 50,000 square feet of floor area or more, or when more than 40,000 square feet of area are disturbed.⁸⁹

The Zoning Board receives all scores before and after construction. The Scorecard considers the following:

- Building health;
- Energy use and land use;
- Landscaping and open space;
- Mobility;
- Resiliency;
- Urban design;
- Waste management; and
- Water use.

The Scorecard is beneficial to advancing the goals of Stamford’s 2030 District, which commits to reduce energy and water consumption by 50 percent from a 2014 baseline.⁹⁰ The total district accounts for about 19 million square feet and, in 2020, was on target with a 20 percent reduction in energy and water consumption. The Scorecard will continue to complement this program as more than 40 percent of the district’s square footage is from larger office buildings, which are subject to more stringent scores.⁹¹

An important lesson from this zoning overhaul is to focus on engaging the public throughout the decision-making process. As of June 2022, city representatives voted to halt the project, citing a lack of sufficient public hearings and vast number of changes. Representative Sean Boeger stated: “It’s not about turning our backs on children or not converting office buildings. It’s about the process not being followed. . . . There is a lot of information in here that the public has not been allowed to digest because their input was limited.”⁹² Although the zoning changes are meant to align with the community’s goals, some members of the public shared that they felt engagement was not sufficient given the scope of the changes.

Comprehensively Addressing Community Vulnerabilities

LOCATION:

Norfolk, Virginia

YEAR:

2018

APPLICABILITY:

Citywide



Norfolk, which sits on the edge of the Chesapeake Bay, has over 144 miles of shoreline, is home to the world’s largest naval base, and has also been increasingly affected by flooding due to sea-level rise, changing precipitation patterns, and land subsidence.^{93,94}

In response to growing concerns, a 2013 comprehensive plan update prompted a major revision to the city zoning ordinance in 2018, referred to as ZoneNorfolk, that “considered the risks of sea-level rise on the built environment.”⁹⁵

The city of Norfolk’s revised zoning code reflects several years of public outreach and engagement with local developers and builders as well as other community stakeholders. The end product was a zoning code coupled with administrative policy that not only prioritizes flood risk mitigation but also provides design flexibility. Under this code, all new development is to meet a “resilience quotient” that encompasses risk reduction, stormwater management, and energy resilience. In addition, ZoneNorfolk added two resilience-specific overlay zones, namely the Coastal Resilience Overlay (CRO) and the Upland Resilience Overlay (URO). The URO district encompasses areas with reduced risk of

flooding and potential for redevelopment, and the CRO district encompasses areas of the city with high risk of flooding:

- The CRO regulations require that all new development and redevelopment within the 1 percent annual chance flood zone be elevated three feet above base flood elevation; the district restricts construction of basements in residential construction, limits impermeable area, and requires use of native and salt-tolerant plants.⁹⁷
- The CRO district also presents a unique intersection between resilience zoning overlays and transfer of development rights incentive programs. Compliance with regulatory requirements pivots on demonstrating that a site's zoning-determined "resilience quotient" has been met. One potential method for earning points toward this quotient is through designation of a conservation easement within the low-risk CRO district.* Taking part in this incentive gives developers in the CRO flexibility, with site design leading to more cost-effective, aesthetically appealing, and innovative development outcomes.^{98,99}

As a consequence of the city of Norfolk's efforts, new development and redevelopment must exceed minimum standards for flood risk mitigation. As a direct result of its efforts to adopt more resilient zoning

policies, Norfolk was awarded more points on the Federal Emergency Management Agency (FEMA) Community Rating System scale, resulting in lower flood insurance rates for residents.**

Norfolk Flood Insurance Rate Map, 2017



* See Code of Ordinances §3.9.19(C).

** According to FEMA, the CRS is, "a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP)." Flood insurance premiums are reduced to reflect reduced flood risk in participating communities. www.fema.gov/floodplain-management/community-rating-system

By-Right Zoning

By-right zoning allows projects that comply with certain zoning standards to obtain approvals and building permits through relatively simple administrative processes—without requiring discretionary approval or extensive public review processes.

Updating zoning to meet locally defined goals and defining and expanding what uses are allowed by right can streamline the development process and decrease opportunities for resident protest, making development more predictable and efficient. Updates can also expand the types of projects allowed in specific zones or citywide. Examples include the following:

- Multifamily or mixed-use developments in formerly single-family and/or single-use zones;
- Projects with low or no parking ratios (including affordable housing);
- Accessory dwelling units (ADUs);
- Development that promotes walkability by focusing on building form, including by allowing greater lot coverage and buildings closer to the street;
- Allowing on-site renewables, like solar panels or wind turbines, in appropriate areas; and
- Development that adheres to more stringent requirements (e.g., setbacks, stormwater retention) in risk-prone areas.



ZONING TECHNIQUE: BY-RIGHT ZONING



Application to health

Can make health-promoting land uses (i.e., pedestrian-oriented design, community gardens, and access to supermarkets, etc.) the default rather than the exception

Can define what potentially harmful uses require discretionary reviews rather than being allowed by right (i.e., liquor stores in residential neighborhoods, hazardous waste sites, etc.)



Application to social equity and affordability

Potentially lowers risks and costs of development through streamlined approvals processes, thereby supporting increased housing production and affordability¹⁰⁰

Can limit abuse of discretionary processes that may restrict development in desirable areas and drive displacement in lower-income communities¹⁰¹

Lowers the barriers to entry for participation in real estate development, potentially leading to a more diverse developer base



Application to resilience

Can be crafted to protect development against known risks including floodings, storm surges, erosion, and wildfires

Can help ensure access to critical infrastructure



Application to low-carbon buildings

Can ensure proven high-performance building strategies or net zero technologies do not require special review and can be replicated at scale across varying building typologies and neighborhood contexts, thereby increasing feasibility of multifamily developments in previously single-family, suburban districts

Allowing Increased Residential Density By Right by Eliminating Single-Family Zoning

LOCATION:	YEAR:	APPLICABILITY:
Minneapolis, Minnesota	Passed in 2018, implemented in 2020	Citywide



Minneapolis passed a new comprehensive plan called Minneapolis 2040 in 2018 that allowed two- and three-unit homes on parcels previously zoned as single-family only. This reform was implemented in 2020. Zoning that allows building multiple units on individual parcels by right can potentially play a role in reducing housing costs, because the costs of development are spread across multiple units.¹⁰²

As of 2022, the number of denser, “missing middle” homes being built in Minneapolis has increased modestly, but several issues have limited progress, including the following:

- Barriers related to building codes, which make it difficult to construct more than one unit per lot due to setback requirements and building proximity restrictions; and
- Challenges related to financing duplexes, triplexes, or other denser building types since construction loans require that applicants qualify for the full cost of a project without factoring in potential future rents—so multiunit properties often require investors.



Heather Worthington, principal at Worthington Advisors, who led the creation, engagement, and policy adoption of the Minneapolis 2040 Comprehensive Plan in her former role as director of long-range planning notes, “Single-family zoning is inherently exclusionary, but eliminating single-family zoning is not inherently inclusionary. Cities need to invest in affordable housing to make a significant impact.”*

In addition to direct investments in affordable housing, complementary policies may help cities advance housing affordability at scale. Data show that housing production increased in Minneapolis between January 2020 and March 2022, with 9,000 units permitted. However, of these units, just 62 were duplexes and 17 were triplexes, according to data collected by the city’s Department of Community Planning and Economic Development (CPED).

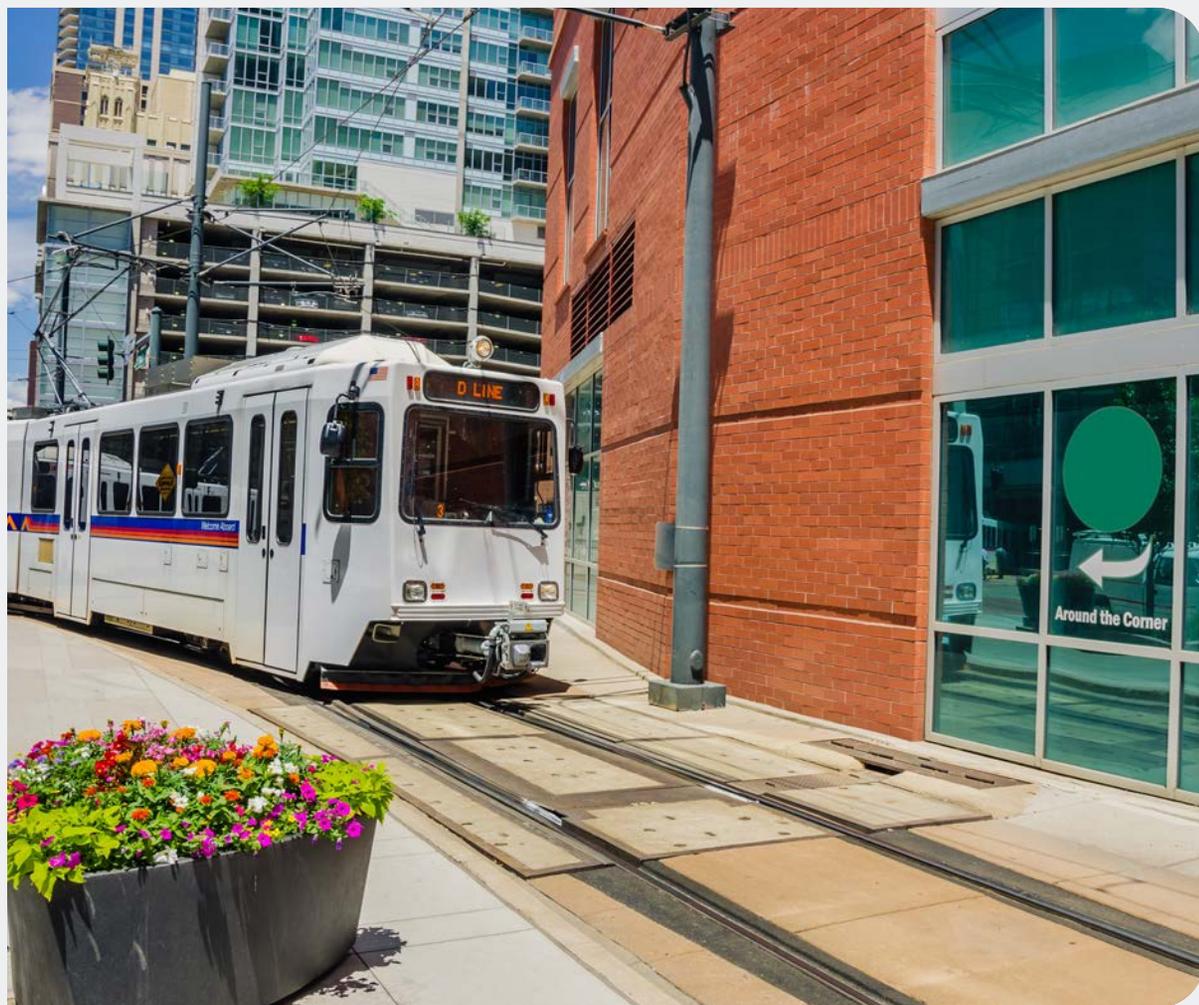
Jason Wittenberg, a planner with CPED, explains that the elimination of parking minimums across the city—allowing developments with low or zero parking ratios to be built by right—played a major role in advancing increased development of smaller apartment buildings.¹⁰³

Note: Implementation of the Minneapolis 2040 plan was on hold as of summer 2022, following a court order based on environmental concerns. The plaintiffs in the case, a coalition of environmental groups, maintained that the city had not identified or addressed the effects of implementing the plan to the environment. In contrast, council member Jeremiah Ellison was quoted in MPR News, saying “People like exclusionary zoning practices... they don’t mind if the consequences are, by and large, segregation in our city.”¹⁰⁴ The fight over processes and outcomes illustrates the challenges of advancing and implementing meaningful zoning reform.

* Heather Worthington, interview by authors, virtual, January 4, 2022

Allowing Lower Parking Ratios By Right for Affordable Housing

LOCATION:	YEAR:	APPLICABILITY:
Denver, Colorado	2021	Citywide, for affordable housing developments



In 2021, the Denver City Council approved a change to the city's zoning code that reduced minimum parking requirements for affordable housing developments. The change was made after a 2020 study showed the following:¹⁰⁵

- Income-restricted properties in Regional Transportation District (RTD) station areas currently provide 50 percent more parking than residents use, with only one unit of every 12 using parking.
- The cost to provide unused parking at RTD station areas is over \$9 million—roughly equivalent to the cost to build 40 units of affordable housing.

Specifically, the updated zoning included¹⁰⁶

- Requiring only 0.1 parking spot per unit in any district for affordable housing development—equivalent to one spot for every 10 units; and
- Increasing the applicable area median income (AMI) from 40 to 60 percent.



Before the zoning change, evidence showed that affordable housing developments in Denver and across the United States could not move forward because of the high costs associated with providing unnecessary parking.¹⁰⁷ Allowing lower parking ratios by right can lower the costs of development—and make housing more affordable—since developers do not need to apply for variances to create financially feasible projects.

Another related example, California law AB 744, enacted in 2015, directs localities to reduce parking requirements for affordable housing developments near transit, without the need for developers to go through local approval processes for parking reductions. Alta Mira, a 151-unit property developed by Eden Housing as part of a mixed-income community in Hayward, California, made use of the city's reduced parking requirements, allowing Eden to deliver the project for \$3 million less than would have been the case under typical parking requirements.¹⁰⁸

Parking reforms can also support sustainability and resilience by reducing impervious coverage and freeing up space for parks, green space, and other features that limit stormwater runoff.

Adopting Net Zero Carbon Standards By Right through Strengthening Low-Carbon Building Requirements

LOCATION:

Boston, Massachusetts

YEAR:

Ongoing as of 2022

APPLICABILITY:

Citywide



The Zero Net Carbon Building Zoning Initiative of the Boston Planning and Development Agency (BPDA) has a goal to develop a zero net carbon standard for new construction to contribute to the city’s goal of carbon neutrality by 2050.¹⁰⁹ The initiative’s Technical Advisory Group recommended that net zero carbon buildings should optimize on-site renewable energy production by being solar ready, defining a minimum required area for solar production, and allowing participation in the SMART (Solar Massachusetts Renewable Target) Program. The SMART program aims to create a long-term sustainable solar incentive program that promotes cost-effective solar development in the commonwealth.¹¹⁰

The initiative performed extensive financial analysis to consider the implications for future developers subject to these regulations and found potential positive impacts. Its consultant, Cadmus, concluded, “Solar can create economic value and positive cash flow on a variety of project types under today’s conditions. As the costs of solar continue to come down, this is likely to be true for an increasing number of projects.”



If the current goals of the BPDA Zero Net Carbon Building Zoning Initiative are adopted, the resulting zoning would ensure that zero net carbon buildings use an established minimum standard for on-site renewable energy, give rewards for innovation, and provide transparency in complying with the resulting regulations. As of 2022, the final policies and standards were on track to be reviewed, with final comments due at the end of October.¹¹¹ The requirements would apply to all new buildings over 20,000 square feet.

Key actions of the zoning initiative include the following:

- Constructing new municipal buildings to a zero net carbon standard;
- Adopting a zero net carbon standard for city-funded affordable housing in Boston;
- Strengthening low-carbon building zoning requirements to a zero net carbon standard;
- Investing in energy efficiency and renewable energy;
- Developing a carbon emissions performance standard to decarbonize existing large buildings;
- Expanding workforce development programs for building decarbonization; and
- Advocating for state building policies that align with carbon neutrality by 2050.¹¹²

Minimizing Losses from Wildfire Damage from the Outset

LOCATION:

Summit County, Colorado

YEAR:

2016

APPLICABILITY:

Countywide

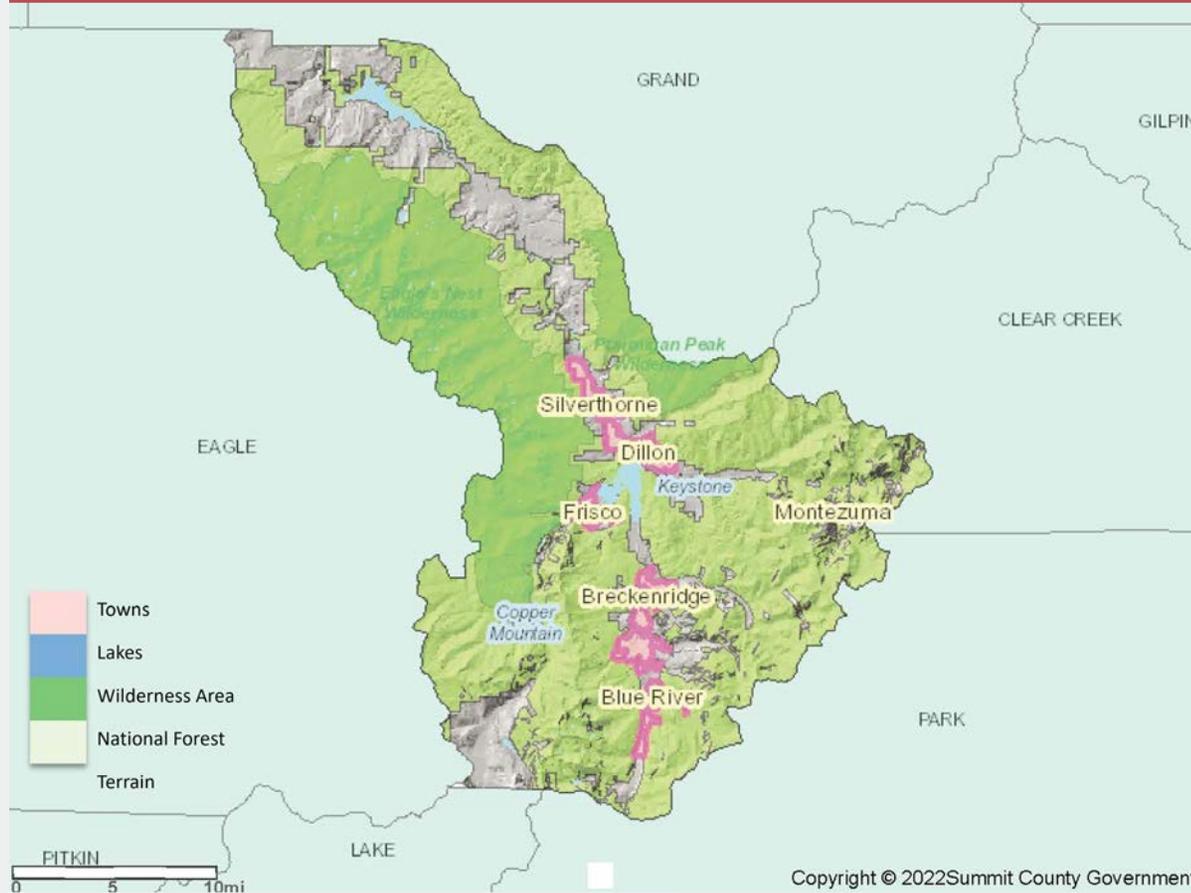


Since 1989, Summit County, Colorado, has taken measures to implement proactive wildfire mitigation. The county’s approach involves enhancing public education efforts on wildfire prevention and mitigation while establishing criteria for by right development in local codes to reduce structural ignitability and improve defensible space around development. To accomplish the latter goal, in addition to changing local building codes, Summit County changed base zoning requirements to reflect the contents of long-term planning documents revised in 2016.

Although the code contains provisions for proactive wildfire mitigation throughout, the zoning regulations of chapter 3 of the Summit County Land Use and Development Code contain special requirements for by-right development within designated Wildfire Hazard Areas. These include the following:¹¹³

- Special considerations for locations of permitted uses;
- Use-specific standards;
- Landscaping requirements; and
- Requirements for outdoor storage in at-risk areas.

Summit County Zoning Map, 2022



One landscaping-specific example of these requirements is the provisions in section 3600.00 requiring allocation of defensible space and fuel reduction zones alongside the inclusion of a firewise/fire-resistant category in the Allowed Plant Materials List.¹¹⁴

In an article published in the *Pikes Peak Courier*, Dan Gibbs, executive director of the Colorado Department of Natural Resources, speaks to the return on investment for zoning reform in communities vulnerable to climate change-related hazards—particularly wildfire. Gibbs states that “updated plans can save lives and property” and notes that when Summit County updated its plan in 2016, it helped attract \$1 million in federal aid and local funding for mitigation, and it prevented a 2018 wildfire from destroying, “2,600 homes and property worth about \$1 billion.”¹¹⁵

“I would urge communities to take a hard look at their plans. These are not something that should just be put on a shelf. Land use decisions can dramatically change a focus area. If you put in a new neighborhood, should that be incorporated into wildfire planning? You bet it should. These plans are living, breathing documents that need to be updated regularly.”

—Dan Gibbs, Executive Director of the Colorado Department of Natural Resources, quoted in *Pikes Peak Courier*¹¹⁶

Overlays

Overlays create special districts placed over existing zones that include additional standards and criteria in addition to those already present. Communities may use overlay zones to

- Protect features including historic buildings, wetlands, and waterfronts;
- Encourage certain types of development projects, such as mixed-use, transit-oriented development, energy-efficient or net zero buildings, waterfront development, affordable or mixed-income housing, and developments that account for future climate risk;¹¹⁷ and
- Create opportunities for additional oversight through site plan reviews and other processes, potentially limiting uses inconsistent with the goals of the overlay, such as drive-through restaurants or car washes located in TOD overlay zones.



ZONING TECHNIQUE: OVERLAYS



Application to health

Can promote healthier development in specific areas (e.g., near transit), including by allowing for higher concentrations of health-supportive uses like medical facilities, grocery stores, parks, and pedestrian-friendly residential developments¹¹⁸

Allows municipalities to restrict potentially unhealthy land uses not conducive to goals of overlay zone, like gas stations and car washes¹¹⁹



Application to social equity and affordability

Can advance equitable development goals—like increasing healthy food access and promoting housing affordability—when overlay districts require, allow, or incentivize such features, including by reducing parking requirements or allowing larger floor area allowances

Can help address negative outcomes associated with existing land use patterns and the legacy of racist land use regulations by creating overlays that support equitable development strategies,¹²⁰ including mixed-income housing and equitable TOD (eTOD) strategies



Application to resilience

Can incentivize or require mitigation for development in hazard-prone areas without completing an overhaul of the municipal code

May offer a more flexible alternative to protecting life and property than some alternatives, including amendments to base zoning requirements

Generates funding opportunities for implementation of community resilience-building plans



Application to low-carbon buildings

Allows municipalities to incentivize or require aspects of high-performance buildings in certain areas, such as achievement of low-carbon building certifications or limits on greenhouse gas emissions

Can set low-carbon building goals (e.g., renewable energy production targets) or relax requirements that hinder progress (e.g., providing height exceptions for rooftop solar)¹²¹

Promoting Healthier, More Equitable Development through a Zoning Overlay

LOCATION:

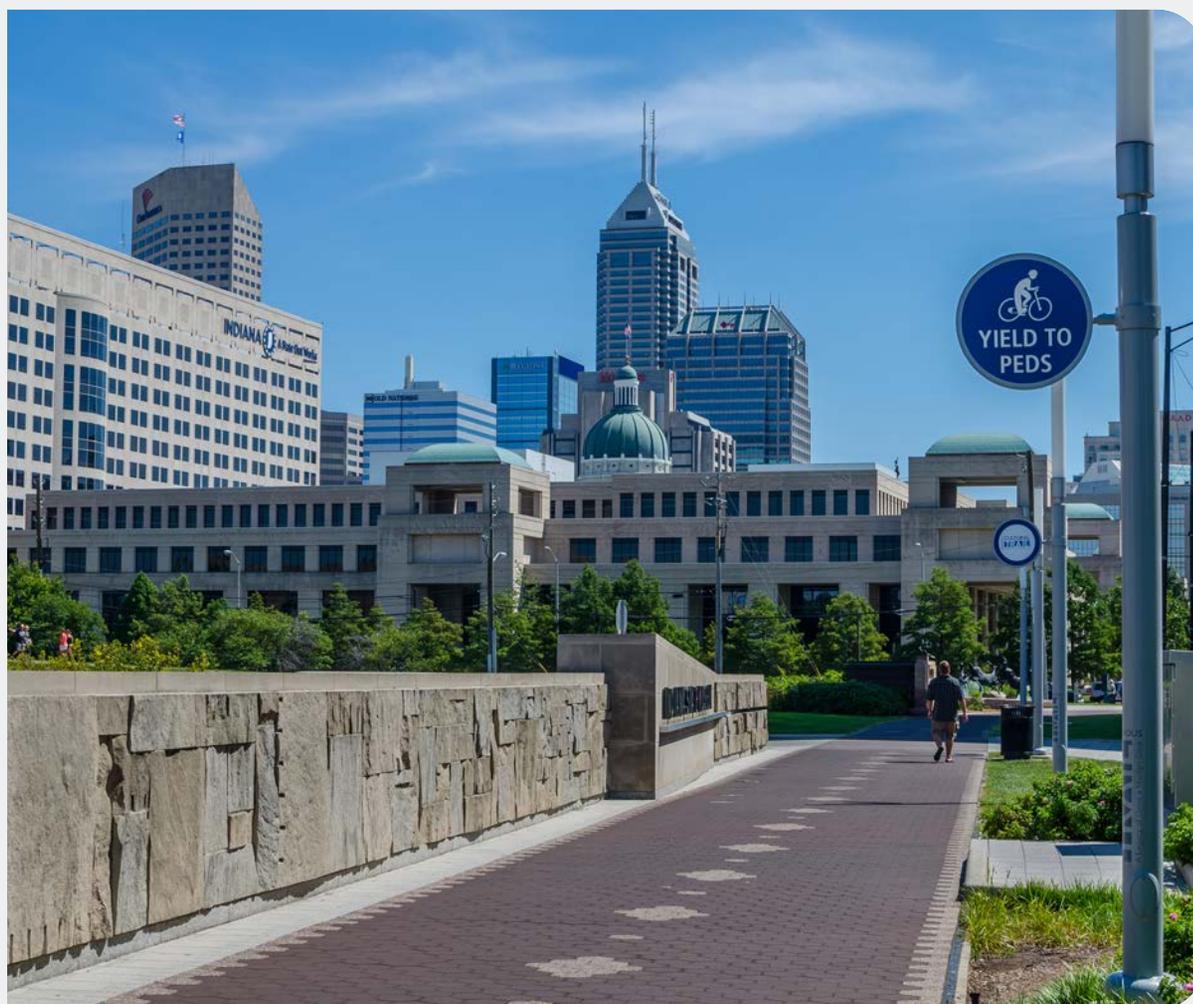
Indianapolis, Indiana

YEAR:

2021

APPLICABILITY:

Areas near transit



In 2021, amendments to Indy Rezone—the city-county of Indianapolis’s 2016 zoning update—went into effect, including the creation of a TOD overlay district. These changes occurred after five years of administering the 2016 regulations, because city staff recognized that they did not reflect demand for walkable, mixed-use development, adding time and cost to projects.

Through a partnership with the Bloomberg American Cities Climate Challenge, ULI members provided valuable insights throughout the processes of amending Indy Rezone, including through local events and direct engagement with city staff. City engagement and communication with the development community helped ensure the likelihood that the updates would be successful in advancing local defined livability and equity goals.

The Indy Rezone revisions make it more straightforward to develop higher-density projects and include new design standards to ensure developments are pedestrian-oriented.¹²² The goals of Indy Rezone are as follows:

- Create community and economic development potential within bus rapid transit (BRT) corridors.



- Amend yard and lot standards for dwelling districts, allowing for more infill housing;
- Enhance walkability and streetscape requirements for residential and commercial projects.

In Indianapolis, there is an estimated demand for more than 18,000 mixed-use, walkable, attached units by 2040,¹²³ and across the United States, multifamily housing in walkable urban places commands a 61 percent premium over drivable suburbs.¹²⁴ The limited supply of walkable neighborhoods can lead to displacement for those with lower incomes. Updating regulations to promote walkable development will potentially increase supply and help mitigate displacement.

Complementarily, the Indianapolis Neighborhood Housing Partnership launched a \$15 million equitable transit-oriented development (eTOD) fund in 2019, created with the city's Department of Metropolitan Development and other partners to preserve and create affordable-housing units within a half-mile of transit corridors.¹²⁵ The recent zoning amendments bolster these investments, which are important to serve residents who might not have or want a car.

- Facilitate the development of compact, walkable mixed-density and mixed-use neighborhoods within a half-mile of bus rapid transit (BRT) stops.
- Support TOD patterns corresponding with public investments in transit.
- Limit noncontributing or unproductive development patterns and uses along transit corridors.

Specifically, the amendments

- Create a Transit-Oriented Development Overlay District:
 - 1,000 feet wide on each side of the street along BRT lines;
 - Restrict certain uses not conducive to TOD (e.g., gas stations, car washes, oil change facilities);
 - Stricter standards for parking and drive-throughs;

Sustainable Growth District through Overlay Zoning

LOCATION:

Northampton, Massachusetts

YEAR:

2017

APPLICABILITY:

Neighborhood/district



In 2017, Northampton established a Sustainable Growth Overlay District to encourage smart growth principles and to foster a range of housing opportunities and mixed-use development, while also promoting compact design, preservation of open space, and a variety of transportation options.¹²⁶ The 30-acre district is directly adjacent to the central business district, making it an attractive area for development.

Specific objectives include the following:

- Promoting public health, safety, and welfare by encouraging a diversity of housing opportunities;
- Providing a full range of housing choices for households of all incomes, ages, and sizes to meet the goal of preserving municipal character and diversity;
- Increasing the production of a range of housing units to meet existing and anticipated housing needs; and
- Enabling the city to receive zoning incentive payments and/or density bonus payments.

Within the Sustainable Growth Overlay District are subdistricts with permitted uses including townhouse, multifamily, and single-family homes at a density level of 20 or more per acre.¹²⁷

The requirements for these developments include the following:

- Home Energy Rating System (HERS) rating no greater than 47 for units of 1,200 square feet or less, and no greater than 41 for units larger than 1,200 square feet. The HERS Index is the industry standard by which a home's energy efficiency is measured.¹²⁸ Alternatively, for units of 1,200 square feet or less, the developer may consider a comparable energy standard to the HERS rating of 47 after consultation with the building commissioner.
- U.S. Green Building Council LEED for New Construction Gold or Neighborhood Development Gold certification.

- All projects shall include a park/common area fully designed and constructed to be integrated into the project, which area shall be easily accessible and available for residents of the project. At a minimum, this space shall be 300 square feet or 30 square feet per dwelling unit of buildable land area, whichever is greater.

Northampton has a poverty rate of 11 percent, higher than the Massachusetts average of 9.4 percent, and a home-

ownership rate of 58.4 percent, lower than the Massachusetts rate of 62.2 percent,¹²⁹ making access to affordable and sustainable housing crucial. This district will promote sustainable growth through increased density requirements and a higher minimum standard for construction. Northampton also follows affordable requirements under Chapter 40B, which requires developers to make at least 50 percent of units affordable and fossil-fuel free.



Using Overlays to Achieve Scalable Flood Hazard Mitigation

LOCATION:

Stonington, Connecticut

YEAR:

2009

APPLICABILITY:

Areas within the floodplain



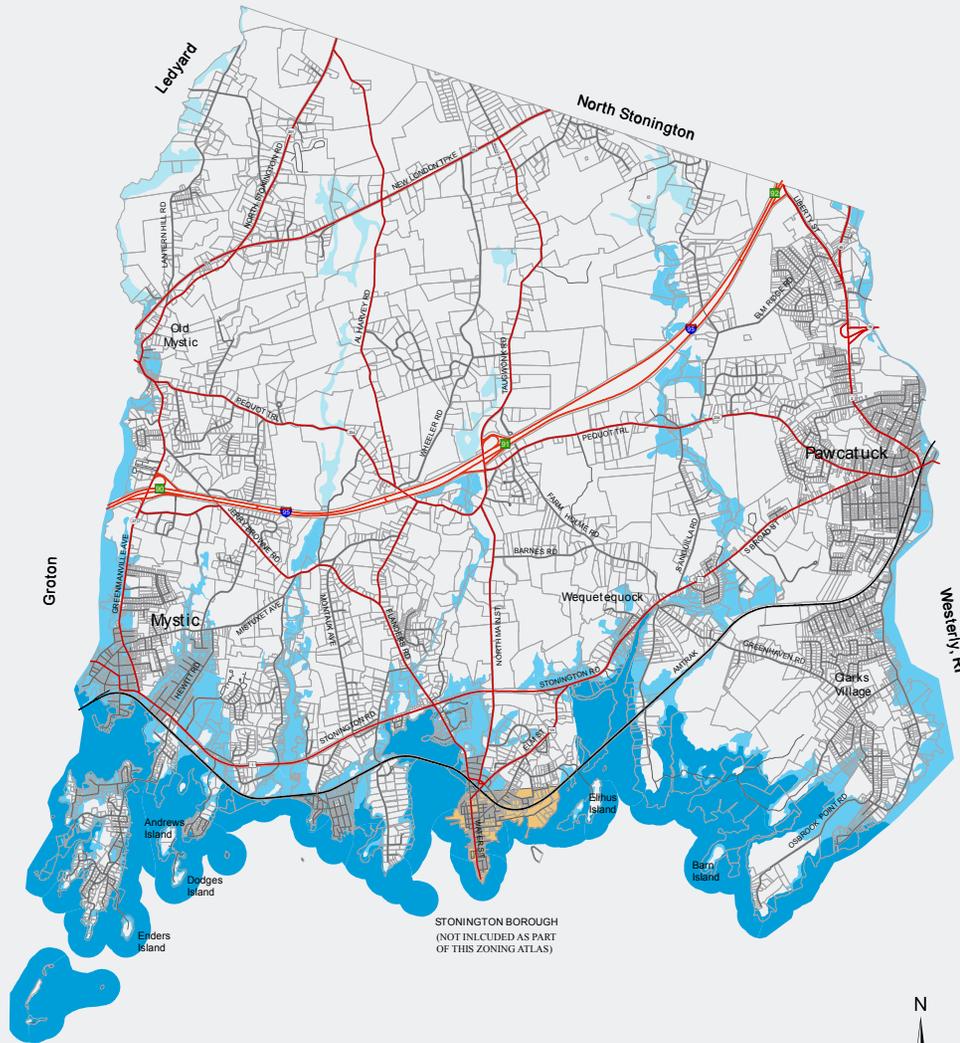
Overlay districts can be applied to protect vulnerable communities from potential climate-related impacts including fire, flood, and storm damage. Among the numerous examples of U.S. communities that have adopted overlay districts to protect properties from flood damage are large municipalities such as the city of Boston and Fairfax County, Virginia, through their respective Coastal Flood Resilience Overlay and Water Supply Protection Overlay districts.^{130,131} However, creating resilient overlay zones is a surprisingly versatile solution for communities of all sizes.¹³²

For instance, the small coastal town of Stonington, Connecticut, has taken measures to protect the people and property located within its floodplains through adoption of a Flood Hazard Overlay District (FHOD).

Stonington's FHOD zoning district, which targets new construction and substantial improvement within special flood hazard areas,* imposes standards for flood hazard reduction, including the following provisions:

*Special flood hazard areas (SFHAs) are areas having special flood, mudflow, or flood-related erosion hazards and shown on a flood hazard boundary map (FHBM) or a flood insurance rate map (FIRM). They are established and defined by FEMA. Learn more about SFHAs at www.fema.gov/glossary/special-flood-hazard-area-sfha.

Flood Hazard Overlay District, Stonington, 2017



STONINGTON FLOOD AWARENESS NEWSLETTER

- Structures must be anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- In coastal areas, structures must be set back 100 feet from the mean high tide mark.
- Alteration of sand dunes is prohibited.

The town of Stonington continues to maintain and develop its planning documents alongside its zoning and land use policies, and as a result, not only does it benefit from more favorable flood insurance rates, but the town has also developed strong programming and greater awareness about flood risk.



Zoning Map Atlas Planning and Zoning Commission, Town of Stonington, Connecticut

Flood Hazard Overlay District

VE AE A

Effective July 20, 1961 as amended through September 19, 2017



Data: Stonington GIS / Projection: Connecticut State Plane NAD83

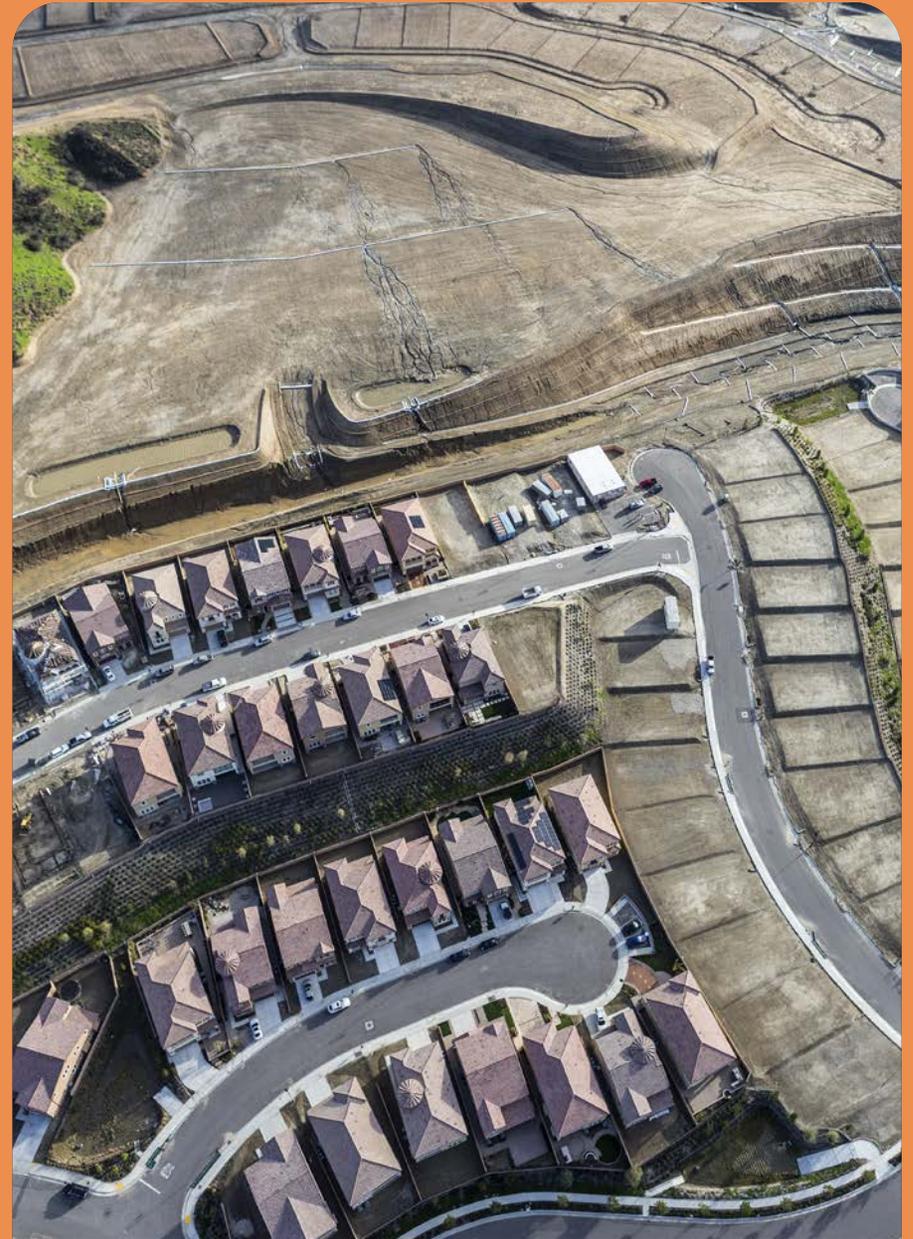
Floating Zones

Floating zones are a tool that can offer a flexible alternative to amendments to base zoning requirements while promoting local priorities. Floating zones are districts that delineate conditions that must be met before the area is approved for a given set of zoning rules. The zone “floats” until a development application is approved, then it is added to the official zoning map.¹³³

Floating zones are one of several flexible zoning tools that can be applied by municipalities to allay potential adverse impacts caused by more stringent zoning regulations. Floating districts include planned unit developments (PUDs) or planned developments (PDs) and can be created through amendments to municipal zoning codes following approval of development applications.

Communities may use floating zones to do the following:

- Advance master-planned suburban communities; and
- Facilitate urban development that regulates both form and use.¹³⁴



ZONING TECHNIQUE: FLOATING ZONES



Application to health

Offers an opportunity to set health-promoting zoning standards that must be met before a zoning district is approved, including walkable and bikeable streets and paths, transit access, mixed-use development, and proximity to schools, recreational facilities, and public spaces^{135,136}



Application to social equity and affordability

Can provide time for developers and others to conduct significant community outreach¹³⁷ since floating zones are not mapped until a development application fulfills certain conditions

Can be used to enact TOD ordinances with specific location criteria and opportunities for public input during the planning process (instead of during rezoning or approval)¹³⁸



Application to resilience

Can present an opportunity for developers to achieve economically viable outcomes for larger projects while exceeding or complying with standards that improve community resilience; projects with smaller square footage in built-out urban centers can also leverage development agreements to achieve similar outcomes



Application to low-carbon buildings

Can set standards for efficiency and performance of future properties while providing flexibility on requirements, such as height and width, thereby allowing properties to implement green add-ons (e.g., in Stonington, Connecticut, floating zones are used in several districts with solar access regulations)¹³⁹

Green, Resilient, and Flexible Development

LOCATION:

Cambridge, Massachusetts

YEAR:

2015

APPLICABILITY:

Areas that have been rezoned to the Planned Unit Development 7 and 8 districts



The zoning code for the city of Cambridge includes resilience and low-carbon building requirements for planned unit developments. These requirements were informed by multiple studies and plans. In 2015, the city of Cambridge released the first part of its Climate Change Vulnerability Assessment, which identified precipitation-driven flooding and heat as the city’s leading sources of vulnerability.¹⁴⁰ In the same year, the city also released the first iteration of its Net Zero Action Plan (NZAP), which aimed to continuously monitor and adapt to changes related to greenhouse gas emission reductions in buildings.¹⁴¹

Seven years later, the city released Resilient Cambridge, its climate change preparedness and resilience plan. Among the early actions recommended by this plan were adoption of regulations that “support adaptation and resiliency to flooding and heat through zoning for new and retrofit buildings.”¹⁴² In addition, the city has issued annual updates to its NZAP and incorporated resilience and low-carbon building compliance requirements in its zoning code, including within its PUD requirements.



Specific requirements include the following:

- Buildings in both the PUD-7 and PUD-8 districts must address goals in the Cambridge Net Zero Action Plan.
- Projects zoned PUD-7 must address “expected vulnerability of the development to the effects of climate change, including increased precipitation, flood risk, temperature, and urban heat island effect, and strategies to promote resiliency within individual building sites and at a larger district-wide level, including natural stormwater management systems, increased vegetation and shade, and measures to withstand and recover from extreme climatological events,” and must be able to attain a LEED Gold certification.¹⁴³
- Projects zoned PUD-8 must address “how the proposed development serves nearby East Cambridge community-wide needs for emergency refuge or shelter during heat or storm emergencies.”¹⁴⁴

Planned Unit Developments for Conservation and Community Resilience

LOCATION:

James City County, Virginia

YEAR:

1985

APPLICABILITY:

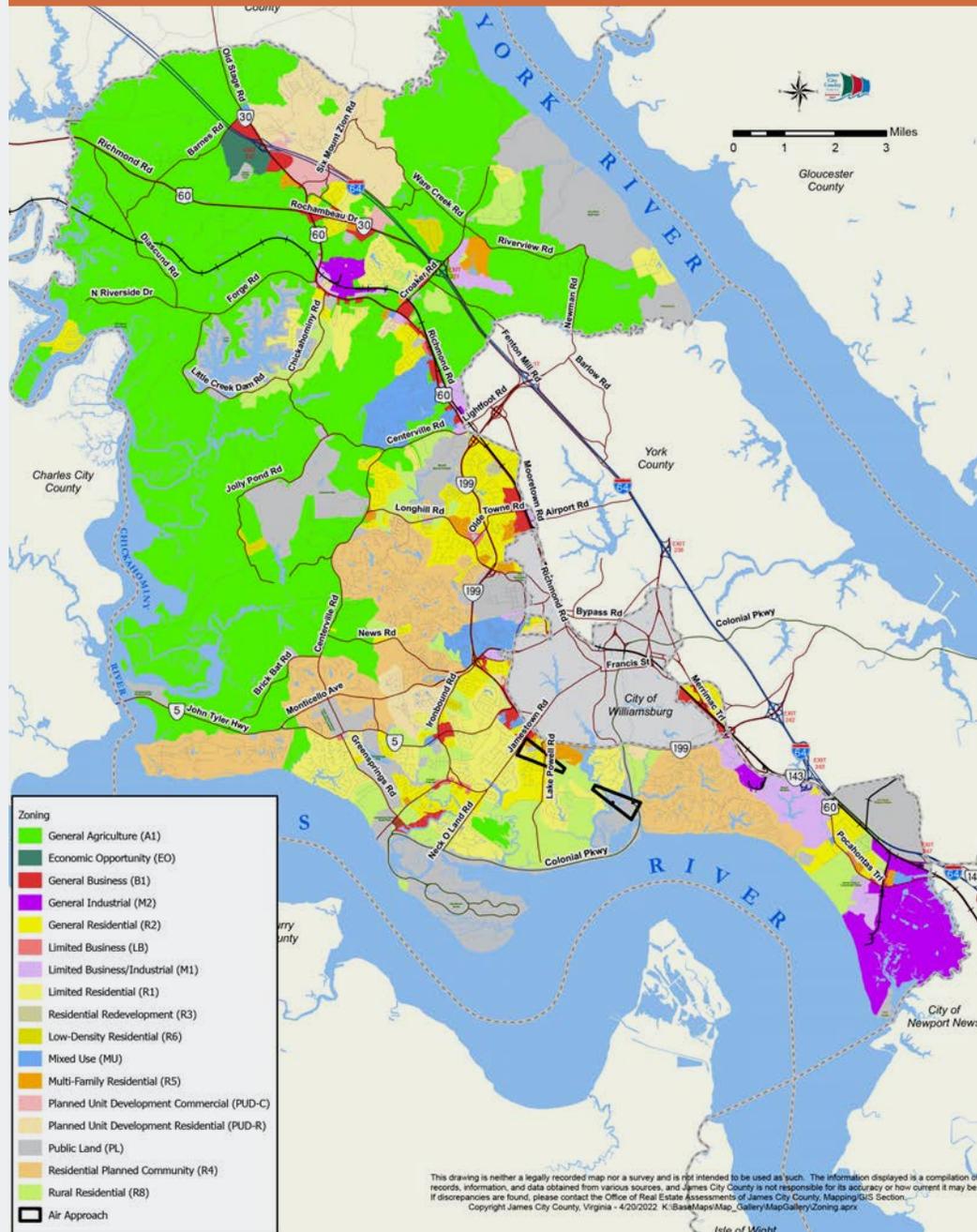
Areas that have been rezoned to the Planned Unit Development district



James City County is located in east central Virginia and is bordered by the James and York rivers. The county experiences periodic flooding events tied to both sea-level rise and storms, most notably, Hurricane Irene in 2011.¹⁴⁵

Section 24 of the James City County Code of Ordinances introduced floating zones as an alternative to base zoning districts. The county adopted its PUD zoning district (see section 24 of the James City County Code of Ordinances) to “promote efficient use of land, allow flexible application of development controls, allow various densities and land uses, protect surrounding property, and protect the natural feature and scenic beauty of the land.” To apply for a PUD, developers must follow the permitting process for a zoning amendment, which calls for extensive documentation attesting to existing conditions on a site in addition to a detailed development proposal.

James City County Zoning Map, 2022



While the ordinance affords local developers much-needed flexibility for commercial and residential development, it also mitigates flood risk to communities. Section 24 of the code also allows developers to earn density bonuses for plans that:

- Contain green infrastructure and low-impact design elements;
- Include buffers exceeding the minimum required in areas adjacent to floodplains;
- Allot conservation area; and
- Include a watershed or greenway master plan.

Zoning Incentives

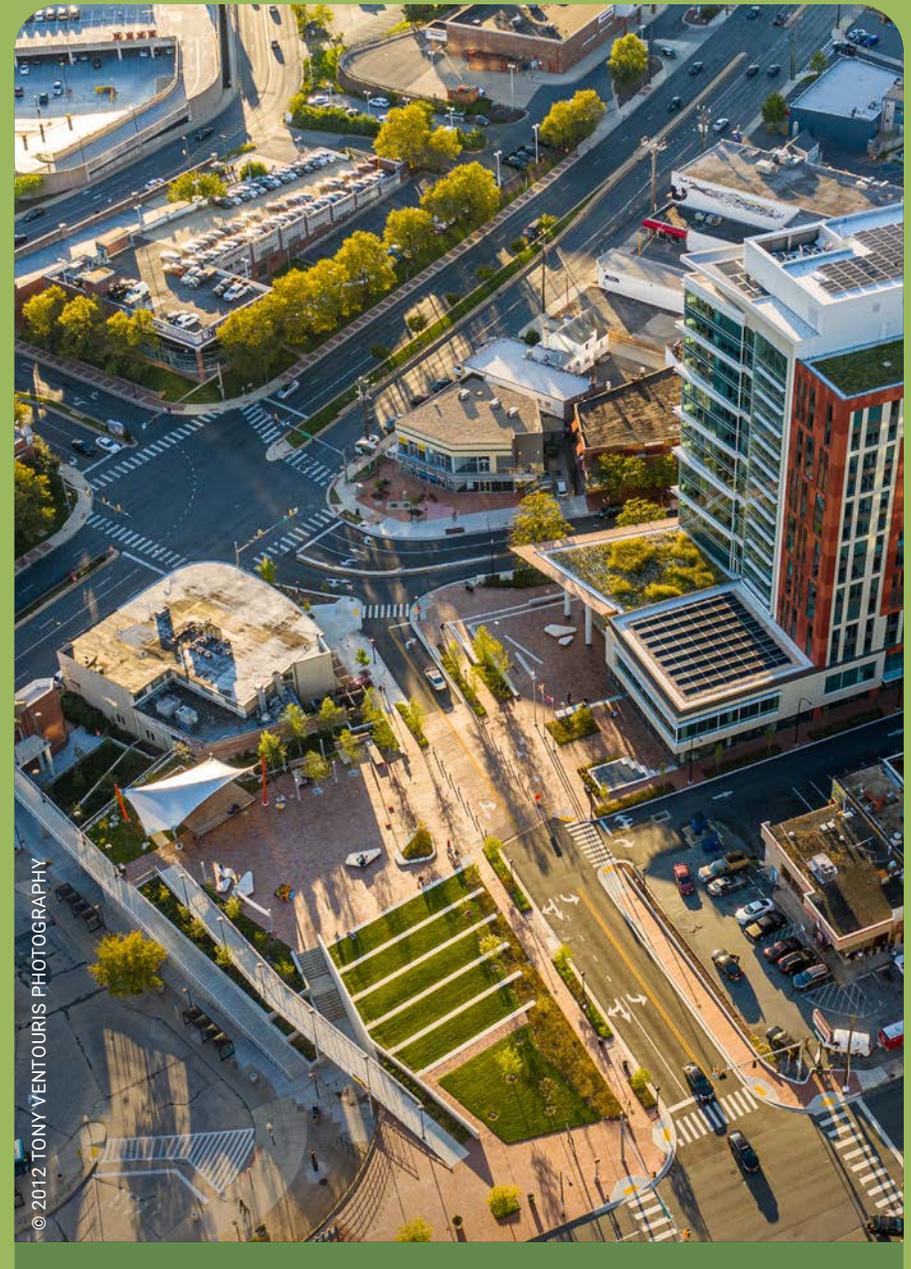
Incentive zoning is a tool that cities can use to make certain public benefits more attractive or financially feasible for developers to provide as part of their projects by offering incentives that offset the cost of providing such features. Incentives are often used when municipalities want to obtain a public good at low or no cost. Selected examples include the following:¹⁴⁶

Stimulating residential development in previously largely commercial areas;

- Incentivizing affordable housing or low-carbon building practices in areas where requiring such development priorities may not be allowed by state law;¹⁴⁷
- Creating or preserving open space; and
- Providing green infrastructure and other features to support environmental resilience.

Common incentives include the following:

- Decreased parking requirements;
- Expedited permitting;
- Reduced permit fees; and
- Increased height, density, lot coverage, and floor area.



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ZONING TECHNIQUE: ZONING INCENTIVES



Application to health

Can incentivize health-promoting features, including mixed-use development, open-space conservation, walkability, affordable housing, and parks¹⁴⁸

May increase healthy food access by encouraging urban agriculture, expanding farmers markets, and improving the food environment around schools and recreation centers¹⁴⁹

Provides a strong likelihood of impact, with evidence showing that real estate practitioners often take advantage of incentives to help implement health-promoting strategies¹⁵⁰



Application to social equity and affordability

Provides a strong likelihood of impact, with evidence showing that real estate practitioners often take advantage of incentives to help implement equity-promoting practices¹⁵¹

Allows municipalities to design incentive policies to expand and accelerate housing production and promote diversity of housing types (including mixed-income, attainable, and affordable units)¹⁵²

Can aid in increasing the supply of affordable housing, including in cities where requiring affordable units is not allowed due to state laws¹⁵³



Application to resilience

Can encourage development that exceeds minimum hazard mitigation requirements specified in base zoning, improving the safety of communities and relative contribution of a development project (e.g., by creating and leveraging local markets as seen in bonus density or credit-based programs)



Application to low-carbon buildings

Can promote achievement of green building certifications (e.g., LEED or Passive House) through incentives, such as density bonuses

Provides opportunities to set net zero carbon and energy standards in exchange for incentives, such as additional height or floor area

May streamline the development process through expedited permitting in exchange for low-carbon building features, such as green roofs

Promoting Healthy Food Access through Zoning Incentives

LOCATION:	YEAR:	APPLICABILITY:
New York, New York	2009	Underserved neighborhoods citywide



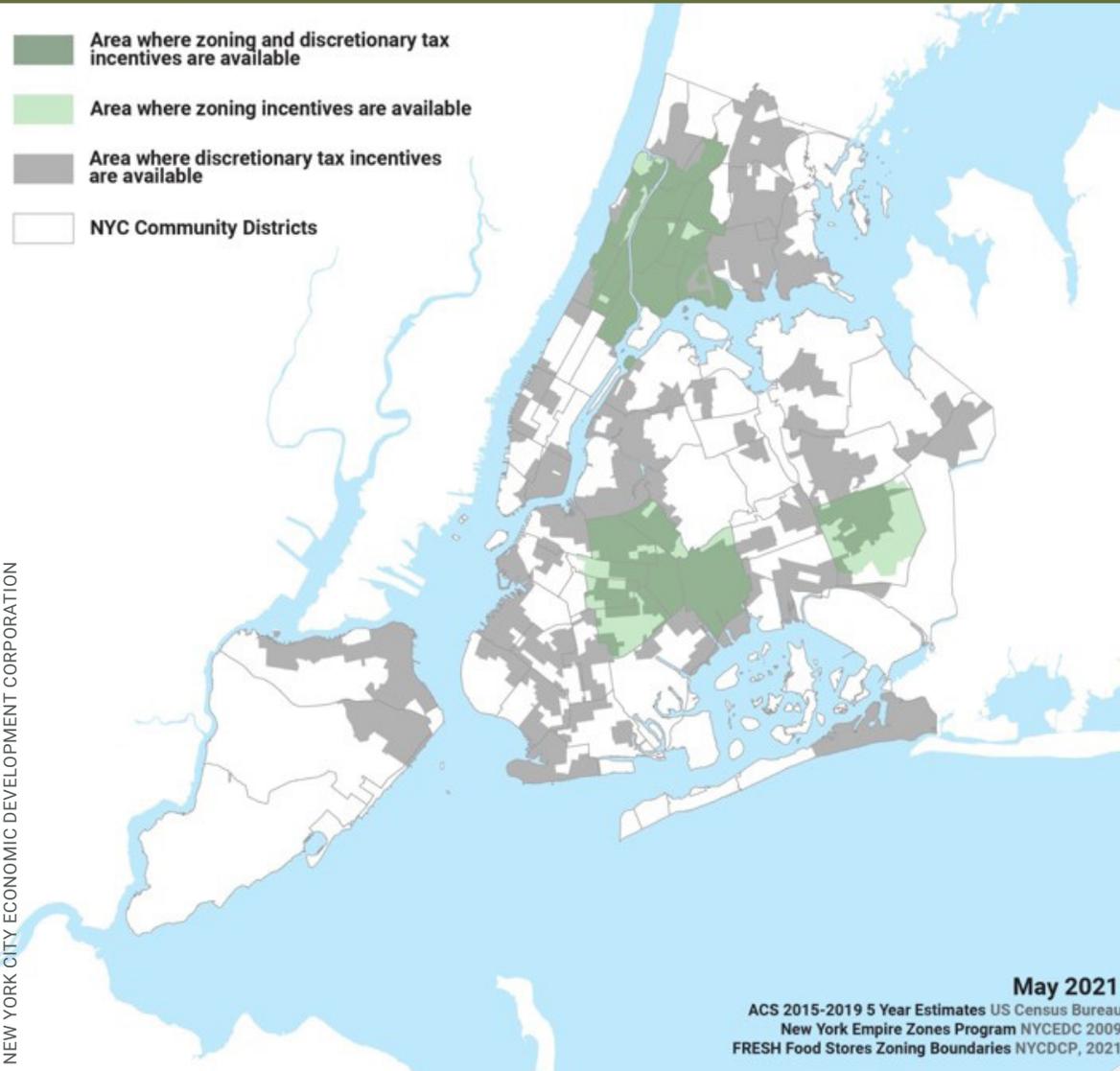
New York City's Food Retail Expansion to Support Health (FRESH) program was established in 2009 to bring convenient, accessible grocery stores to underserved New York neighborhoods. Specifically, the program goals include the following:

- Giving zoning incentives to property owners by allowing them to construct slightly larger buildings in mixed residential and commercial districts if they include a supermarket; and
- Allowing grocery stores by right in light manufacturing districts, which increases the number of areas where they can be built.

A 2021 update to the FRESH program made changes, including the following:

- Expanding it to 11 additional lower-income community districts throughout the city and updating zoning rules to prevent clustering of FRESH supermarkets, which can make it difficult for them to prosper; and
- Creating other incentive-based updates, including reducing building renovation requirements for projects that aim to transform existing buildings into a supermarket and reducing parking requirements. [154,155](#)

FRESH Program Eligibility Areas, 2021



As of 2022, 28 projects had been approved with FRESH zoning incentives—representing 700,000 square feet of new or renovated space, creating over 1,000 new jobs, retaining more than 600 jobs, and an investment of \$100 million into the city’s economy. [156,157](#)

Advancing Carbon Neutrality through Density Bonuses

LOCATION:

Arlington County, Virginia

YEAR:

1999 (updated in 2020)

APPLICABILITY:

Countywide



Arlington County has set a 2050 carbon neutrality goal, and buildings have become a key target since 58 percent of the county’s greenhouse gases are generated by buildings.¹⁵⁸ The primary tool to advance building sustainability has been the Green Building Density Incentive Program, which has gone through multiple iterations since its inception in 1999.

The program began exclusively for office buildings and rewarded 0.25 FAR for achieving LEED Silver.¹⁵⁹ Only one project applied at the time, leading to the expansion of building types and rewards in 2003. Since then, the program was revised in 2009, 2012, 2014, and 2020 to meet the city’s evolving goals.

Since the first LEED bonus density project, 146 site plans have been approved by the county board and about 17 million square feet of development in Arlington County had been certified since 2001.¹⁶⁰ The benefit for developers is the potential for increased ROI (return on investment) from being able to build at greater density, and, in the long term, the sustainable upgrades will lower utility costs, increase the lifetimes of building products, and potentially help achieve higher rent premiums.^{161,162}

As of 2022, the following are the latest additions:

- LEED Gold is now the minimum level of green building certification required to receive bonus density (Earthcraft¹⁶³ is allowed for multifamily).
- Baseline items that address specific energy measures, including energy- and water-efficient appliances, electric vehicle charging, renewable energy, ventilation performance, refrigerant leakage, and energy benchmarking, are included.
- Additional baseline community sustainability priorities include equity, human interaction with nature (biophilia), light pollution reduction, and bird-friendly materials.
- Requirements include meeting specified energy optimization criteria to ensure energy efficiency above the LEED baseline.

- Energy Star Building Certification (or equivalent) must be achieved post-occupancy, with increasing levels of compliance stipulated for higher FAR levels.

The policy now offers five levels of participation ranging from 0.25 FAR to 0.70 FAR, each with increasing requirements for energy efficiency. For participation above the baseline 0.25 FAR level, projects must meet the preceding requirements and must include a specific number of additional items selected from the “Extra” list.

Items on the “Extra” list incentivize the following:

- Additional renewable energy;
- Energy storage and resilience;
- Electrification of building systems;
- Additional energy efficiency;
- Low-carbon materials; and
- Affordable housing.

At the three highest levels of participation, applicants may opt to use a more stringent building certification such as Passive House, Net Zero Energy, or Zero Carbon certifications. To ensure that the policy continues to remain rigorous and in line with the Community Energy Plan goals, it includes an automatic update that will take effect on June 30, 2023. This update will increase the minimum requirements for energy optimization specified for each level of participation.¹⁶⁴

Understanding the Potential Benefits of Form-Based Codes

This section shares opportunities and potential benefits related to form-based codes and was written by the Form-Based Codes Institute.

Traditional zoning (guided by a separation of uses) has led to car-dependent, sprawling communities. Form-based codes (FBCs) offer an alternative approach to zoning that can create more predictable, walkable, and mixed-use development that can be applied at different scales (citywide, neighborhood, or corridor).

Form-based codes are a regulatory framework that focuses on the form of buildings to develop the “shape” of a community; in short, the code regulates the outside of the building and public realm, rather than the use of the building.

A form-based code is a regulation, not a guideline; is adopted into city, town, or county law; and is not to be confused with design guidelines or general statements of policy. Form-based codes are widely recognized as tools to improve the character of a place and encourage physical activity.

To be considered a form-based code, the zoning regulation must include the following:

- A Regulating Plan (or map), which designates the locations where different building form standards apply;
- Public standards that outline specific elements in the public realm, such as sidewalks, travel lanes, on-street parking, street trees, and furniture;
- Building standards controlling the features, configurations, and functions of buildings;
- A clearly defined and streamlined application and project review process; and
- A glossary to ensure the precise use of technical terms.

Other elements, such as architectural, landscaping, signage, and environmental standards, can also be included.

“Communities cling to discretionary review processes like special use permits out of a fear of losing control over the look and feel of the places they love, while developers can no longer build affordable units by right in part because of protracted discretionary approval processes that cost time and money. Form-based codes effectively mediate between the public’s desire to know how development will impact the physical character and functioning of their neighborhoods and the developers’ need for predictable and timely review processes.”

—Kathleen M. Galvin, architect, FAIA, CNU-A; FBCI Steering Committee;
Galvin Architects, founding principal; Renaissance Planning, design principal;
Charlottesville, Virginia

The 1980s SmartCode, developed by Duany Plater-Zyberk and Company, is one early version of an FBC, which was defined by its focus on scale, intensity of development, the shape of public spaces, and the interrelationships between buildings. The ideas and methodology of the SmartCode were refined over time into what we now know as form-based codes.

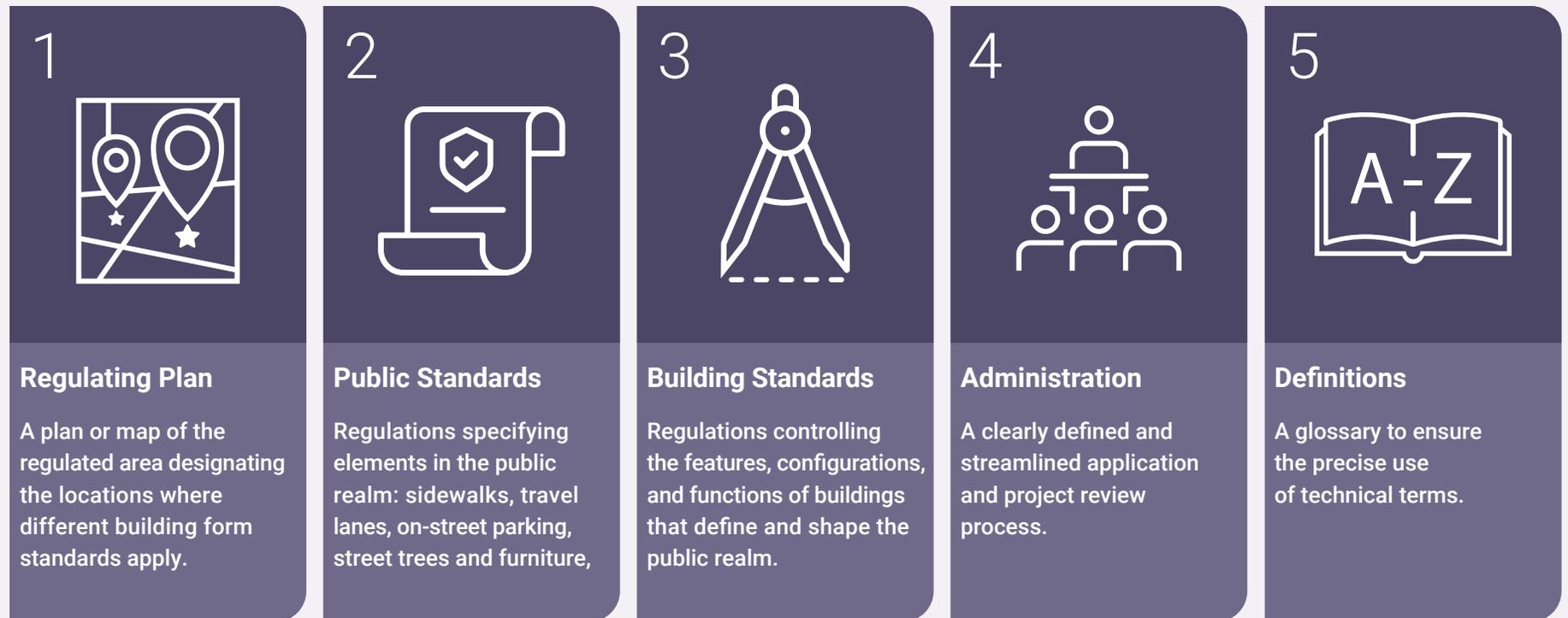
Three early, prominent examples of FBCs include Hayward, California, one of the earlier FBC projects in the United States (downtown design guidelines), the resort town of Seaside Florida (entire planned community code), and Denver Commons (applied to the entire city except the historic district). Denver’s 2010 code has begun to yield results, with a 76.9 percent decrease in zoning change requests within the first three years of the code’s adoption.

Approved in 2008 after several years of community engagement, Miami 21 was the first citywide application. It scaled up the form-based code methodology to be applied to a large existing city encompassing many development typologies and neighborhood conditions.

FBCs can lend themselves to equitable development because they are organized around the important role that buildings play in shaping the walls of communities, and because they can support the delivery of a wider range of types of housing units.

FBCs can also help communities add more homes for more people while increasing property values and tax revenues—but not necessarily the overall cost of housing. The codes’ parameters for form can deliver a diversity of housing types over time and with flexibility to respond to community needs and market dynamics.

FIVE MAIN ELEMENTS OF FORM-BASED CODES



Adapted from Form-Based Codes Institute.

A recent study conducted by the Form-Based Codes Institute at Smart Growth America, *Zoned In: Economic Benefits and Shared Prosperity with Form-Based Codes*,¹⁶⁵ found that average rents in multifamily developments grew at a slower pace in areas with FBCs than in the comparison areas in the same jurisdiction (an 8.7 percent increase in rents versus a 16.6 percent increase) without FBCs. Affordability was somewhat stabilized in these communities even though there was a greater increase in construction activity and property values in these same form-based code areas.

Because FBCs focus on the height, placement, and scale of buildings rather than number of units per acre, developers can deliver a wider diversity of housing types. For example, accessory dwelling units can be built in neighborhoods where only large single-family detached units are allowed under conventional zoning, or a higher number of moderate-income units could be built in a location where it would be financially infeasible under a conventional code's density limits. By allowing higher development densities, FBCs can enable households with different needs and income levels to join and share in the prosperity of what could have otherwise been a more homogenous community.



Conclusion

Updating zoning can be a powerful way to set the stage for a more equitable, resilient, and sustainable future. Zoning policies play a major role in housing attainability, and they shape both communities' and individuals' health, environmental impact, and resilience to climate risks.

The momentum for implementing zoning innovations in the United States is growing at all levels of government. Since most zoning codes have not been updated in decades, the process of advancing reforms can give people an opportunity to share what they value in their communities through outreach processes that influence policy decision-making.

Whereas outdated zoning policies can make projects that aim to support in-demand types of development illegal or difficult, time-intensive, and costly to complete, zoning that advances local priorities and responds to market demand for healthier and more environmentally friendly projects allows more projects to be approved by right, making development application outcomes more certain.

Real estate developers are essential constituents and partners in efforts to update zoning. Reforms can make development easier to carry out and can broaden the spectrum of participants in the development market, such as small-scale developers and those from underserved backgrounds.

The policy examples explored in this report use common techniques familiar to many cities but in innovative ways. By taking an integrated, collaborative approach to sustainability, resilience, health, social equity, and housing attainability, municipalities can use zoning to set the stage for accelerated public- and private-sector investment in development projects that advance essential community objectives.



Glossary

This glossary provides short definitions of common zoning terminology. Links throughout this report refer to the glossary to orient the reader to some of the most common zoning jargon.

- **Accessory dwelling units (ADUs):** Smaller, independent dwelling units with a full kitchen and bathroom that may be attached or detached from a primary residential building. [166](#)
- **Building codes:** State-level policies that concern safety and technical requirements, including those related to fire safety, structural loads, and maximum occupancy. [167](#)
- **By-right zoning:** Allows projects that comply with certain zoning standards to obtain approvals and building permits through relatively simple administrative processes—without requiring discretionary approval.
- **Comprehensive overhauls:** Zoning updates that involve extensive outreach processes and the creation of guiding documents, such as comprehensive plans, to create brand-new zoning policies that replace previous codes.
- **Critical infrastructure:** Resources that serve communities, providing functions such as roads, hospitals, community centers, utility facilities, and commercial centers.
- **Discretionary approval:** Requirements that officials must decide whether a development can proceed, usually when proposals do not conform to zoning or building codes. [168](#)
- **Entitlement:** Legal approval of development plans.
- **Equitable transit-oriented development (eTOD):** “Development that enables all people regardless of income, race, ethnicity, age, gender, immigration status or ability to experience the benefits of dense, mixed-use, pedestrian-oriented development near transit hubs.” [169](#)
- **Euclidean zoning:** “The separation of land uses by type—residential, commercial, retail, industrial, etc.—each into their own zones or areas within a given city.” The name “Euclidean” came from the U.S. Supreme Court decision *Euclid v. Ambler* (1926) that gave local governments the power to determine which properties and zones should accommodate specific uses. [170](#)
- **Exclusionary zoning:** Ordinances that restrict the types of homes that can be built in certain neighborhoods that have often been used to discriminate against people of color and maintain property prices in suburban and urban neighborhoods. [171](#)
- **Floating zones/districts:** A tool to promote local priorities while allowing for flexibility. Floating zones are districts that delineate conditions which must be met before that zoning district can be approved for an existing piece of land. The zone “floats” until a development application is approved, then it is added to the official zoning map. [172](#)
- **Form-based code (FBC):** “A land development regulation that fosters predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code. A form-based code is a regulation, not a mere guideline, adopted into city, town, or county law.” [173](#)
- **Inclusionary zoning (IZ):** Encourages or requires developers to create below-market rental apartments or owner-occupied housing in connection with local zoning approval of a proposed market-rate development. [174](#)

- **Missing middle housing:** “A range of house-scale buildings with multiple units—compatible in scale and form with detached single-family homes—located in a walkable neighborhood.”¹⁷⁵
- **Overlays:** A special district placed over existing zones that includes provisions in addition to those already present. Communities may use overlay zones to protect features including historic buildings, wetlands, and waterfronts or to encourage certain types of development projects, such as mixed use, transit-oriented development, waterfront development, and affordable or mixed-income housing.¹⁷⁶
- **Parking minimums:** Policies that require developers to build a set ratio of parking spaces based on a building’s square footage, planned uses, or the number of bedrooms in multifamily units.
- **Performance-based zoning:** Traditional zoning prescribes rules such as the minimum number of required parking spaces and minimum setbacks or lot sizes, whereas performance-based zoning focuses primarily on outcomes, often laying out performance criteria to evaluate the expected impacts of land use decisions rather than predefined rules.¹⁷⁷
- **Resilience:** The ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events. Enhancing resilience entails designing buildings, infrastructure, parks, and public spaces that are prepared for extreme events such as hurricanes, as well as the longer-term impacts of climate change, such as sea-level rise and extreme temperatures.¹⁷⁸
- **Shocks:** Generally single-event disasters, like fires, earthquakes, and floods.¹⁷⁹
- **Single-family zoning:** Residential zoning that limits development to single-family detached homes; restricts duplexes, multifamily housing, and other nonresidential uses; a form of exclusionary zoning.
- **Stresses:** “Factors that pressure a city on a daily or reoccurring basis, such as chronic food or water shortage, an overtaxed transportation system, endemic violence, or high unemployment.”¹⁸⁰
- **Sustainability:** Meeting the needs of the present without compromising the ability of future generations to meet their own needs.¹⁸¹
- **Transfer of development rights:** Programs that seek to preserve landowners’ asset values by moving the right to build from a location where development is prohibited to a location where development is encouraged.¹⁸²
- **Variance:** A request to deviate from a requirement applicable to a zone in which a property is located;¹⁸³ variances are applicable when compliance with the requirements would cause undue financial hardship, including because of the physical characteristics of the land.
- **Zoning incentives:** A tool that cities can use to make it more attractive or financially feasible for developers to provide certain public benefits as part of their projects by offering incentives that offset the cost of providing such features.¹⁸⁴

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