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Zoning by a Thousand Cuts

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Zoning by a Thousand Cuts

Sara C. Bronin*

Abstract

Zoning is increasingly viewed as a constraint on the nation's housing supply, and as zoning enters its second century, there is a strong drumbeat for reform. Across the country, reformers have targeted the elimination of single-family zoning, pointing to research showing that single-family zoning drives up development costs, degrades the environment, and homogenizes communities.

While allowing more multi-family options could help address these issues, reformers should not exclusively focus on the elimination of single-family zoning. Process requirements including mandatory public hearings, and substantive requirements involving lot configuration, building size, and occupancy, among other things, play a significant role in determining whether and what residential development occurs. Understanding the prevalence and nature of these aspects of zoning codes will help reformers identify the most impactful policy reforms. Unfortunately, most current zoning research offers only unreliable or incomplete data about the panoply of regulations that mold residential development.

This Article's central contribution is to start filling this

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information gap with a detailed empirical analysis of the many hidden constraints on housing embedded in zoning codes. It involves a one-of-a-kind statewide dataset, tied to geospatial layers of zoning districts, developed with methods that attempt to overcome the reliability and comprehensiveness flaws of prior research. By combining regulatory and spatial analysis, this Article shows how zoning kills housing by a thousand cuts. It closes by calling for a national zoning atlas, which could better illuminate the scope and effects of zoning across a broader range of jurisdictions than this Article covers.

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I. INTRODUCTION

For a century, zoning—the local-government regulation of land use, structures, and lots through the assignment of lots to distinctly regulated districts¹—has dictated how and where we live. With broad discretion, municipalities² exercise zoning powers by establishing processes for permitting housing and by prescribing substantive requirements for the development of land uses, structures, and lots. Over the decades, municipalities have imposed what some scholars call a “straitjacket” on new housing through increasingly onerous requirements.³ As zoning enters its second century, there is a strong drumbeat for reform.

Pro-housing zoning reform efforts are intimately bound up in research on the subject. Reformers and scholars have most explicitly targeted the elimination of single-family zoning, pointing to research showing that single-family zoning drives up development costs,⁴ degrades the environment, and

1. See RESTATEMENT (FOURTH) OF PROP.: LAND USE § 2.1 (AM. L. INST., Proposed Official Draft 2022) (defining “zoning”).

2. For simplicity’s sake, I have used the term “municipality” here and in various places in this Article to refer to any jurisdiction to which a state legislature has granted zoning authority. See *infra* Section III.A (revealing states, including Connecticut, have granted the power to zone to entities other than municipalities, such as submunicipal authorities and private homeowners’ associations).

3. See Edward Glaeser, *How Biden Can Free America from its Zoning Straitjacket*, N.Y. TIMES (Apr. 12, 2021), <https://www.nytimes.com/2021/04/12/opinion/biden-infrastructure-zoning.html>; Robert C. Ellickson, *Zoning and the Cost of Housing: Evidence from Silicon Valley, Greater New Haven, and Greater Austin*, SSRN (Jan. 14, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3472145.

4. See, e.g., Vicki Been, Ingrid Gould Ellen & Katherine O’Regan, *Supply Skepticism: Housing Supply and Affordability*, 29 HOUS. POL’Y DEBATE 25 (2019) (arguing that more housing makes all housing more affordable); Roderick M. Hills, Jr. & David N. Schleicher, *Balancing the “Zoning Budget”*, 62 CASE W. RESV. L. REV. 81, 84 (2011) (focusing on the importance of zoning regulations governing the number of housing units allowed to be built, especially in instances where such regulations can cause “potential housing units [to be] lost” in “prime locations for housing”); Edward L. Glaeser, Joseph Gyourko & Raven Saks, *Why is Manhattan So Expensive? Regulation and the Rise in Housing Prices*, 48 J.L. & ECON. 331 (2005) (arguing that regulation constraining housing supply leads to higher prices in several high-priced housing markets across the country by calculating a “regulatory tax” calculated by subtracting the marginal cost of building from the market price, rather than cataloguing actual height restrictions or other zoning regulations); Keith R. Ihlanfeldt, *The Effect of Land Use Regulation on Housing and Land Prices*, 61 J. URB. ECON. 420 (2007) (analyzing data surveying planners in Florida to show that greater regulatory restrictiveness increases house prices and decreases vacant land prices); John M. Quigley & Steven Raphael, *Regulation and the High Cost of Housing in California*, 95 AM. ECON. REV. 323 (2005) (showing regulation reduces housing supply for owner-occupied and rental units, relying on survey data).

makes communities too homogenous.⁵ In 2019, Minneapolis made waves as the first major American city to effectively eliminate zoning that only allows single-family housing.⁶ Portland, Oregon, followed suit the following year.⁷ Other cities have moved to allow for multi-family, affordable housing on lots previously zoned exclusively for single-family-only housing.⁸ At the state level, Maine and Oregon have enacted legislation eliminating single-family-only zoning in larger towns,⁹ while several others have chipped away at single-family-only zoning by allowing for accessory dwelling units (smaller housing units on single-family lots) statewide.¹⁰ In 2022, California's SB 9

5. See Conor Dougherty, *Victims of NIMBYism, Unite*, ATLANTIC (Feb. 19, 2020), <https://www.theatlantic.com/ideas/archive/2020/02/building-enough-housing-requires-unlikely-coalition/606739/> (narrating the link between economic research and the founding of the Yes In My Backyard (YIMBY) movement). See generally Michael Manville, Paavo Monkkonen & Michael Lens, *It's Time to End Single-Family Zoning*, 86 J. AM. PLAN. ASS'N 106 (2020); CONOR DOUGHERTY, GOLDEN GATES: THE HOUSING CRISIS AND A RECKONING FOR THE AMERICAN DREAM (2020); see also SONIA HIRT, ZONED IN THE USA: THE ORIGINS AND IMPLICATIONS OF AMERICAN LAND-USE REGULATION 6–7, 17–25 (2014); Emily Badger & Quoc Trung Bui, *Cities Start to Question an American Ideal: A House with a Yard on Every Lot*, N.Y. TIMES (June 18, 2019), <https://www.nytimes.com/interactive/2019/06/18/upshot/cities-across-america-question-single-family-zoning.html>.

6. See Erick Trickey, *How Minneapolis Freed Itself From the Stranglehold of Single-Family Homes*, POLITICO (July 11, 2019), <https://www.politico.com/magazine/story/2019/07/11/housing-crisis-single-family-homes-policy-227265/>.

7. See, e.g., Portland, Or., Ordinance 190093 (Aug. 12, 2020) (legalizing four homes per lot and six homes if at least three are affordable).

8. See, e.g., *100 Percent Affordable Housing Overlay*, CAMBRIDGE CMTY. DEV. DEP'T (2021), <https://www.cambridgema.gov/CDD/housing/housingdevelopment/aho>; Ida Mojadad, *Affordable Housing Wins Big in Off-Year Election*, SF WEEKLY (Nov. 11, 2019), https://www.sfweekly.com/archives/affordable-housing-wins-big-in-off-year-election/article_8a6b4b47-2d29-52ff-9cf0-9a309ea620cc.html (noting the passage of San Francisco's Proposition E, which allows for multi-family affordable housing to be built on all publicly owned land).

9. H.P. 1489, 2022 Leg. (Me. 2022) (requiring municipalities to allow two dwelling units for most lots, and up to four units for lots in designated growth areas); H.B. 2001, 2019 Or. L. Ch. 639 (Or. 2019) (requiring cities with more than 10,000 people to allow duplexes in all single-family residential zones).

10. See H.P. 1489, 130th Leg., 2d Reg. Sess. (Me. 2022) (allowing accessory dwelling units on single-family lots); 2021 Conn. Pub. Acts 21-29 (legalizing accessory apartments statewide but allowing municipalities to opt out after two supermajority votes); Assemb. B. 1866, 2001–02 Leg. (Cal. 2002); S.B. 1051, 2017–18 Leg., § 6 (Or. 2017) (requiring towns to allow for accessory dwelling units in all residential zones and prohibiting parking requirements for those units); H.B. 2001, 80th Leg. Assemb., Reg. Sess., § 2(3) (Or. 2019) (requiring cities with more than 10,000 people to allow duplexes in all single-family residential zones). Also of note, in 2021, the Massachusetts legislature included a provision in an economic development bill requiring all communities served by the Massachusetts Bay Transit Authority to zone for “a district of reasonable size” that allows a minimum gross density of fifteen units per acre. H.B. 5250, 191st Gen. Court, § 3A (Mass. 2021) (enacted). California's failed SB 50 likewise targeted density caps—it would have allowed for four-unit buildings

allowed for property owners to build duplexes, triplexes, or fourplexes in most lots previously zoned for only single-family housing.¹¹

In some ways, a focus on number-of-unit zoning makes sense. Zoning codes nearly universally establish areas exclusively for single-family housing. Lifting numerical caps in these areas brings the promise of increasing housing supply. Moreover, sympathetic members of the public appear to find the “eliminate single-family zoning” rallying cry compelling in its simplicity and directness. But simply lifting bans on multi-family housing may not actually create more housing options. Early returns on eliminations of single-family-only zoning—and even hard looks at existing areas allowing multi-family zoning—have been disappointing.¹² That’s because zoning is more complex than the number-of-units measure alone. Process requirements, like mandatory public hearings, and substantive requirements, involving lot configuration, building size, and occupancy, among other things, play a consequential, but poorly understood role in determining whether and what residential development occurs. These zoning requirements kill housing by a thousand cuts.

Unfortunately, as other scholars have pointed out,¹³ we have lacked

on all residential land and a waiver of all density controls in areas designated as “transit-rich” or “job-rich.” S.B. 50, 2019–20 Leg. (Cal. 2019) (proposed). SB 50 would have also barred municipalities from enacting more stringent setback and height requirements than those already in place and zeroed out parking minimums near transit stations. *Id.*

11. *SB 9: The California HOME Act*, CAL. STATE SENATE <https://focus.senate.ca.gov/sb9> (last visited Apr. 9, 2023).

12. *See, e.g.*, David Garcia & Muhammad Alamelid, *California’s HOME Act Turns One: Data and Insights from the First Year of Senate Bill 9*, TURNER CTR. FOR HOUS. INNOVATION (Jan. 18, 2023), <https://turnercenter.berkeley.edu/research-and-policy/sb-9-turns-one-applications/> (finding that even in cities predicted to see lot splits and additional units legalized under SB 9, very few units have actually been produced). One explanation may be that even cities that had previously planned to eliminate single-family zoning, such as Sacramento and Berkeley, have not updated their zoning codes to reflect the changes required by SB 9. *See, e.g.*, Sacramento, Cal., Zoning Ordinance § 17.204.210 R-1 (showing duplexes permitted only on single-family housing in the R-1 single-family district); Berkeley, Cal., Zoning Ordinance tbl. 23.202-1 (showing only single-family housing permitted in the R-1 single-family district); James Brasuell, *Zoning Reforms Underwhelm in Minneapolis as Development Market Holds Course*, PLANETIZEN (Sept. 2, 2020) <https://www.planetizen.com/news/2020/09/110400-zoning-reforms-underwhelm-minneapolis-development-market-holds-course> (noting that only three applications to build triplexes, as opposed to single-family homes, had been filed in the first eight months of 2020); *see infra* Section V.B (observing that where two-family housing has been allowed as of right in Connecticut’s rural areas, very little such housing has been produced).

13. *See* Stephen Menendian et al., *Single-Family Zoning in the San Francisco Bay Area*, OTHERING & BELONGING INST. (Oct. 7, 2020), <https://belonging.berkeley.edu/single-family-zoning-san-francisco-bay-area> (“[T]here is no national or even state-based reliable database or index of zoning in the United States to compare zoning codes. This makes systemic research on zoning time-intensive,

access to high-quality, reliable data that would help us better understand the incremental impact of these requirements and prioritize specific reforms of them. Instead, we have had to depend upon, and draw conclusions from, unreliable or incomplete data. Much zoning research, for example, cites to surveys of planners. But what people *say* zoning laws say in a survey may not necessarily be what zoning laws *actually say*. Even zoning research that does not rely on surveys, but analyzes zoning laws themselves, tends to log an incomplete set of variables molding residential development. As a result, current empirical zoning data cannot reliably inform a full suite of policy choices. Modest efforts around the country have tried to deal with regulatory constraints beyond minimum number-of-unit calculations.¹⁴ But the policy rationale for them could be more robust.

With that context, this Article's central contribution is to start filling the information gap with a detailed empirical analysis of the many hidden constraints on housing embedded in zoning codes. Using methods that attempt to overcome the flaws of prior research, this research focuses on Connecticut, which is arguably the best place to study zoning in the country.¹⁵ The dataset catalogues all 180 land use codes in the state, including 178 zoning codes and 2 subdivision codes functioning as zoning equivalents.¹⁶ It documents over

laborious, and difficult, especially at a larger scale.”); Graham MacDonald, Solomon Greene & Emma Nechamkin, *We Need Better Zoning Data to Address Pressing Housing and Development Issues*, URB. INST. (Jan. 15, 2019), <https://www.urban.org/urban-wire/we-need-better-zoning-data-address-pressing-housing-and-development-issues> (noting the difficulty of implementing zoning reform due to the lack of available data); John M. Quigley & Larry A. Rosenthal, *The Effects of Land Use Regulation on the Price of Housing: What Do We Know? What Can We Learn?*, 8 CITYSCAPE 69, 81 (2005) (criticizing zoning research methodology); Bengte Evenson & William C. Wheaton, *Local Variation in Land Use Regulations*, BROOKINGS-WHARTON PAPERS ON URB. AFF. 221, 223–30 (2003) (“Empirically, there has been little study of zoning regulations. In large measure this reflects the difficulty of obtaining consistent information across so many local jurisdictions.”).

14. See S. 237, 2020 Leg., Reg. Sess. (Vt. 2020) (overriding zoning that limited development on lots smaller than 5,400 square feet in areas connected to water and sewer, required towns to allow duplexes on those lots, prohibited towns from denying multi-family dwellings with four or fewer units due to an undue adverse effect on “character” of the area, and preempted several local restrictions on accessory dwelling units); S.B. 34, 2019 Gen. Sess. (Utah 2019) (requiring cities—and encouraging towns—to select strategies from a menu of more than twenty options designed to increase moderate income housing development).

15. See *infra* Part IV (noting Connecticut's unique characteristics that make it an ideal state for researching zoning).

16. See *infra* Section IV.B.1. The two municipalities that have adopted subdivision regulations that substantively resemble zoning are Bethlehem and Eastford. See BETHLEHEM, CONN., SUBDIVISION REGS.; EASTFORD, CONN., SUBDIVISION REGS. To avoid having to repeat each time that there are two subdivision codes counted in this mix, this Article henceforth uses the phrases “zoning

one hundred specific housing-related rules for 2,622 zoning districts.¹⁷ Among other findings, the dataset confirms the dominance of as-of-right¹⁸ zoning for single-family housing (90.6% of zoned land) over four-or-more-family zoning (2.1%).¹⁹ The preliminary jurisdiction-wide analysis in this Article, and more fine-grained, separate research at the neighborhood level,²⁰ demonstrates strong correlation between single-family zoning, high household incomes and the percentage of a neighborhood's White²¹ population. Given the clear gap in permitting capacity for single-family and multi-family housing and the likely correlations with problematic socioeconomic outcomes, reformers should continue to address number-of-unit zoning.

However, they must also do more. This Article for the first time exposes the prevalence and nature of a vast array of regulations other than number-of-unit caps, both for housing as a principal use and for accessory dwelling units, across an entire state. These regulations on both process and substance cover nearly every inch of Connecticut land allowing residential development. This Article aims to reveal the frequency of these regulations, and to document their substance.

Part II sets the stage by chronicling the development of housing-related

codes" or "zoning jurisdictions" to refer to these towns, even if technically they were not adopted pursuant to the zoning authority granted by the state, and it uses the term "zoning districts" to include the municipal subdivision districts in the two towns nominally lacking zoning codes.

17. See *Connecticut Zoning Atlas*, NAT'L ZONING ATLAS, <https://www.zoningatlas.org/connecticut> (last visited Mar. 29, 2023) [hereinafter *Connecticut Zoning Atlas*].

18. See CONN. GEN. STAT. Ch. 124 § 8-1a (2021). The phrase "as of right" (used interchangeably with the phrase "by-right") means able to be approved in accordance with the terms of local zoning regulations, without the need of a public hearing, special permit, special exception, variance or other discretionary zoning action or approval, but which may be subject to administrative review. *Id.*

19. See *Connecticut Zoning Atlas*, *supra* note 17.

20. Yonah Freemark, Lydia Lo & Sara C. Bronin, *Bringing Zoning into Focus: A Fine-Grained Analysis of Zoning's Relationship to Housing Affordability, Income Distribution, and Segregation in Connecticut*, URB. INST. RSCH. SERIES (forthcoming 2023).

21. I grappled with which term to use here. For some, the term "non-White" suggests that people who are not White are defined by the absence of Whiteness, rather than the presence of an independent identity formulated without Whiteness as a reference point. When used in this Article, the term "non-White" encompasses people identifying with the Census categories of Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, two or more races, and the Latino ethnicity. "White" encompasses people identifying with the Census category of a person of the "White" race alone, namely, someone with origins in Europe, the Middle East, or North Africa, excluding those with Latino ethnicity. See *Race & Ethnicity*, U.S. CENSUS BUREAU (Jan. 2017), <https://www.cosb.us/home/showpublisheddocument/5935/637356700118370000> (illustrating how the U.S. Census only considers the following regions of origin to be considered White: Europe, the Middle East, and North Africa).

zoning laws. Part III critiques the failure of zoning research to produce reliable, complete data. Part IV turns to the dataset underlying this Article, with Part V suggesting that number-of-unit zoning in Connecticut does not tell the whole story and Part VI articulating the prevalence and nature of other procedural and substantive constraints on housing. I close by reinforcing calls for a national zoning atlas tracking how zoning codes treat housing, using the Connecticut methods and data collected as a starting point.²² More complete, accurate data can inform more robust approaches to reform at the federal, state, and local levels. Ultimately, this Article seeks to expose the hidden levers of zoning and to encourage further documentation and study of the ancillary legal requirements that incrementally strangle the national housing supply.

II. HOW ZONING REGULATES HOUSING

An explanation of how zoning regulates housing can help situate the contributions of this Article. In all states, the power to zone derives from the same source: state-level enabling authority—all drawn from the same century-old federal model law, the Standard State Zoning Enabling Act (the “SZE”)—authorizes local-level regulation.²³ In adopting the SZE, states delegated very broad powers to municipalities, giving them significant discretion to develop processes for applications and to regulate “the percentage of lot that may be occupied, . . . the density of population, and the location and use of buildings” so as to “prevent the overcrowding of land” and “to avoid undue concentration of population.”²⁴ Municipalities exercise these powers

22. See *infra* Part VII. Other scholars have suggested the need for this type of resource. See, e.g., Matthew Mleczko & Matthew Desmond, *Using Natural Language Processing to Construct a National Zoning and Land Use Database*, URB. STUD. (Mar. 16, 2023), <https://t.co/sW8wwosHar> (citing the 2020–21 Connecticut advocacy effort to call for governments to make data publicly available online and calling for “more complete and timely access to data”).

23. U.S. DEP’T OF COM., STANDARD STATE ZONING ENABLING ACT (1926) [hereinafter *SZE*]; see also Ruth Knack et al., *The Real Story Behind the Standard Planning and Zoning Acts of the 1920s*, LAND USE L. & ZONING DIG. 3 (Feb. 1996) (describing the passage and proliferation of the federal government’s model zoning enabling act and its planning counterpart). According to Commerce Secretary Herbert Hoover, even before it was published in final form, 19 states had adopted the SZE, and 425 municipalities (representing more than half of the urban population) had enacted zoning codes in accordance with it. *Id.*

24. *SZE*, *supra* note 23, §§ 1, 3. Along with A Standard State Planning Enabling Act, the SZE facilitated the establishment of a constellation of decision-making bodies to be composed of volunteer residents: zoning commissions, planning commissions, and zoning boards of appeals. See *id.* §§ 7–8.

by adopting zoning codes that identify allowed uses, outline application and review processes, and articulate the ways in which both lots and buildings must be physically developed.

Local zoning codes involve two related documents: a map and accompanying text. Municipalities locate different zoning districts (also called, more simply, districts or zones) within their jurisdiction on an official map.²⁵ Different zones are often but not always contiguous; they may extend to noncontiguous areas throughout a municipality at the option of the regulating body. Each of these districts has specific features, articulated in the text, relating to the uses allowed in the district, the types of buildings and structures that may be built, and the configuration of the lots.

In prescribing the uses allowed in a district, a municipality might allow some combination of commercial, residential, recreational, industrial, or service uses, among others. As an example, a municipality may establish a central business district, which allows for commercial uses or a mix of commercial and residential uses; an industrial zone; a residential zone that allows for multi-family housing; a residential zone that allows for single-family homes on small lots; and a residential zone that allows for single-family homes on large lots. The separation of uses through zoning has had many different rationales.²⁶ Over a century ago, Los Angeles, for example, justified its zoning code as a means to separate dangerous and odorous land uses from residential areas.²⁷ Around the same time, New York City leaders publicly claimed that the construction of the Equitable Building in Lower Manhattan had inspired zoning regulations that would stop future skyscrapers from blocking the flow

The SZEA also anticipated a variety of flexibility tools to be administered by these bodies, including variances and zoning amendments accommodating changed conditions, impossibilities, and convenience. *See id.* § 5.

25. In addition to regular “base” districts, a municipality may locate overlay districts, which may trigger certain rules that override the rules of the underlying base district. Overlays may be used to protect special features like historic buildings, wetlands, steep slopes, and waterfronts, or they may promote policy goals like affordable housing by granting concessions from underlying restrictions to below market-rate developments.

26. *See* SAMUEL BASS WARNER, JR., *THE URBAN WILDERNESS: A HISTORY OF THE AMERICAN CITY* 26–30 (1972) (discussing the mix of motivations in the origin of zoning laws in the United States).

27. Andrew Whittemore, *Zoning Los Angeles: A Brief History of Four Regimes*, 27 *PLAN. PERSPS.* 393, 394 (2012) (noting that in 1921, the Los Angeles City Council created five zones, identifying “A” as single-family homes, “B” as non-residential uses, “C” as industrial uses, “D” as the most noxious industrial uses, and “E” as unlimited uses).

of light and air.²⁸ Other early codes were driven by an exclusionary impulse to zone out “undesirable” groups of people. Atlanta, Baltimore, St. Louis, and New Orleans, among many other cities, designated separate residential zones for White and Black residents.²⁹ The Supreme Court struck down explicitly race-based land restrictions as unconstitutional in 1917.³⁰ But nine years later, the Court sanctioned zoning regulations that separated people by income in *Village of Euclid v. Ambler Realty Company*,³¹ when it declared apartment buildings to be “mere parasite[s]” on single-family neighborhoods.³²

With the Court blessing zoning’s regulation of housing, the number of local zoning codes increased, and an overwhelming majority of residential land nationally was zoned for single-family housing.³³ Connecticut, which allows 90.6% of its land to be occupied by as-of-right single-family housing, exemplifies this phenomenon.³⁴ Zoning codes may also permit two-family, three-family, or four- or even more-family housing.³⁵ And given the Supreme Court’s *Euclid* decision, municipalities can articulate different requirements for such housing than the requirements for single-family housing. They often permit single-family housing “as-of-right” or “by-right,” which means a property owner may develop his or her property in a manner allowed by the code if it satisfies specific regulations.³⁶ Applications are handled ministerially, by staff, rather than a planning or zoning commission. Other kinds of housing are usually subject to public hearings in which neighboring property owners and the general public may offer their opinions about a project at an open meeting. These hearings typically involve discretion, allowing the public body to reject a proposal or condition its acceptance on the delivery of certain concessions beyond those strictly required by public regulations. Zoning codes may also allow for single-family homeowners to create accessory dwelling units: smaller units of housing that may be located on the same lot as a single-family dwelling or (in some instances) a commercial use.³⁷

28. See *Development Rights Transfer in New York City*, 82 YALE L.J. 338, 338 (1972).

29. See RICHARD ROTHSTEIN, *THE COLOR OF LAW* 45 (2017).

30. See *Buchanan v. Warley*, 245 U.S. 60, 82 (1917).

31. 272 U.S. 365 (1926).

32. *Id.* at 394.

33. See HIRT, *supra* note 5, at 35.

34. See *infra* Section V.A.

35. HIRT, *supra* note 5, at 35 (discussing how zoning codes by the mid-twentieth century increased in intricacy to include single-, two-, and multi-family housing).

36. See *infra* note 18 and accompanying text.

37. *Accessory Dwelling Units*, AM. PLAN. ASS’N, <https://www.planning.org/knowledgebase/>

In addition to regulating uses, zoning codes regulate the configuration of lots. The bluntest instrument used by municipalities to regulate lots is the minimum lot size.³⁸ Large minimum lot sizes limit the number of separate parcels in an area and thus limit the density of structures and uses. Small minimum lot sizes have the inverse effect. Jurisdictions often pair minimum lot sizes with restrictions on residential density, quantified by a maximum number of units per acre or by a maximum number of units. The possibility or location of development on a lot may also be dictated by minimum parking requirements, which establish the amount of parking required for a particular use on a given lot.³⁹ Typically, jurisdictions require parking on a per-housing-unit basis, and sometimes they distinguish requirements on a per-bedroom basis. Though zoning codes require parking, they also cap the amount of land that can be paved or occupied by buildings.⁴⁰ When combined with parking, these “coverage” standards constrain the size of a building that may actually be built on any given lot.

Floor-to-area ratios also affect the size of buildings, although they are less common than most of the other measures discussed in this Article. When provided by a zoning code, these figures indicate the square footage of a building that may be built relative to the lot. A floor-to-area ratio of two on a 20,000-square-foot lot (just under a half-acre), for example, allows for a 40,000-square-foot building to be built; a ratio of one-half allows a 10,000-square-foot building to be built. These two scenarios must be viewed in light of related constraints on the development of the lot. For a lot that has a 25% cap on building coverage, the building in the first scenario could have a 5,000-square-foot footprint, and thus to maximize the 40,000-square-foot allowance, the property owner would have to build 8 stories high. Whether she can build so high depends on both her financial wherewithal and whether the zoning code has independent maximum building height constraints.⁴¹ The building in the second scenario could have two stories with a 5,000-square-foot footprint, subject to any independent height constraints, potentially more feasible to build than the first.

Zoning codes regulate buildings, including minimum or maximum unit

accessory dwellings/ (last visited Jan. 22, 2023) (defining accessory dwelling units).

38. *See infra* Section VI.B.1.

39. *See infra* Section VI.B.2.

40. *See infra* Section VI.B.3.

41. *See also Building Size, Shape, and Placement Regulations, Bulk Control Zoning Reexamined*, 60 *YALE L.J.* 506, 518 (1951) (examining how various zoning controls impact building size).

sizes, the location of certain uses within buildings, and even the form of buildings. Minimum unit sizes establish the smallest buildable housing within a particular district.⁴² Minimum unit size regulations imposed in areas zoned for single-family zones bar modestly-sized housing, usually including so-called “tiny homes.”⁴³ Such regulations imposed in multi-family zones require developers to either build larger buildings or build fewer units than they could without the minimums. Many jurisdictions allowing accessory dwelling units require maximum unit sizes that limit their square footage or number of bedrooms.⁴⁴ In prescribing the form buildings may take, a municipality may set maximum building heights (either in linear feet or number of stories), roof shapes, and allowable materials, among other things.⁴⁵ To provide clearer rules regarding the desired aesthetics, some municipalities have adopted “form-based” zoning, which centers the physical form of buildings, rather than their use, as the primary regulatory concern.⁴⁶

In addition to regulating lots and structures, zoning codes regulate who can occupy housing units.⁴⁷ For example, in jurisdictions allowing accessory dwellings, regulators often restrict the occupancy to blood relatives or employees of the property owners, or the elderly. Because they limit the universe of potential occupants, occupancy restrictions influence property owners’ decisions about the use, rent, or sale of properties.⁴⁸

Later, this Article will explore all of these regulatory features in greater detail.⁴⁹ Understanding their basic function now is essential to understanding

42. See *infra* Section VI.C.1.

43. See *infra* Section VI.C.1. See generally Lisa T. Alexander, *Community in Property: Lessons From Tiny Homes Villages*, 104 MINN. L. REV. 385 (2019) (describing how tiny houses provide communities with a way to “mitigate homelessness” while also building “communal relationships”).

44. See *infra* Section VI.C.1.

45. See *infra* Section VI.C.2.

46. See generally ANDRES DUANY, ELIZABETH PLATER-ZYBERK & JEFF SPECK, *SUBURBAN NATION: THE RISE OF SPRAWL AND THE DECLINE OF THE AMERICAN DREAM* (2000) (arguing for form-based coding); PETER KATZ, *THE NEW URBANISM: TOWARD AN ARCHITECTURE OF COMMUNITY* (1993). At least four communities in Connecticut utilize form-based codes: Hartford with a citywide form-based code, and Canton, Hamden, and Simsbury with form-based codes used in one or more neighborhoods. See Sara C. Bronin, *Comprehensive Rezonings*, 2019 BYU. L. REV. 725, 735 (2019) (documenting Hartford’s adoption of a form-based code).

47. See *infra* Section VI.D.

48. AM. PLAN. ASS’N, *supra* note 37 (highlighting that the accessory dwelling unit zoning restrictions “can severely limit the potential . . . to address a shortage of rental housing,” which affects the use and sale of the property).

49. See *infra* Parts V–VI.

gaps in current zoning research, to which we turn next.

III. GAPS IN CURRENT ZONING RESEARCH

As Part II explains, zoning constraints on housing go far beyond caps on the number of units that may be built on particular lots. Scholars well know that these regulatory factors exist, and prominent voices have called for various reforms related to them.⁵⁰ Yet in scouring current empirical research on zoning, one finds little accurate documentation of the prevalence or nature of either process requirements or ancillary mandates. Mostly one finds studies collecting survey results, which are not necessarily reliable, and studies collecting incomplete information about a small number of zoning code provisions.⁵¹ The methods chosen in prior research may have suited the needs of the researcher, but they do not give us an accurate and full picture of zoning in the jurisdictions studied or advance the aim of understanding zoning, across jurisdictions, on a broad scale. In providing a comprehensive review of the current state of the research, this Part clarifies what we do and do not know.

A. *Unreliable Survey Data*

Legal research analyzing the incidence and significance of certain types of laws ordinarily focuses on what the laws say, not on what people think they say. For that reason, legal scholars tend to be suspicious of surveys as a means of collecting information about laws' content. Planners and economists appear to view surveys more favorably, as they have made surveys the most commonly published method of collecting information on zoning codes across multiple jurisdictions.

50. See generally John Infranca, *The New State Zoning: Land Use Preemption Amid a Housing Crisis*, 60 B.C. L. REV. 823 (2019); Anika Singh Lemar, *The Role of States in Liberalizing Land Use Regulations*, 97 N.C. L. REV. 293 (2019); Christopher S. Elmendorf, *Beyond the Double Veto: Housing Plans as Preemptive Intergovernmental Compacts*, 71 HASTINGS L.J. 79 (2019). See also Sara C. Bronin, *The Quiet Revolution Revived: Sustainable Design, Land Use Regulation, and the States*, 93 MINN. L. REV. 231, 238–40 (2008) (making the case for state overrides of local zoning that does not achieve sustainability goals).

51. There is a third approach, which involves scholars who estimate the amount of restrictiveness of land use regulations based on the costs they speculate regulations impose, but these are uncommon, and have their own issues. See, e.g., Glaeser et al., *supra* note 4, at 336 (arguing that regulation constraining housing supply leads to higher prices in several high-priced housing markets across the country, by calculating a "regulatory tax" based on market price minus the marginal cost of building, rather than cataloguing actual height restrictions or other zoning regulations).

The first modern survey-based research on zoning codes asked local officials to estimate the restrictiveness of their zoning codes⁵² or the rates at which new development applications were approved.⁵³ As interest in zoning picked up in the 1990s and 2000s, scholars expanded the use of surveys to collect zoning information.⁵⁴ The National Longitudinal Land Use Survey (NLLUS), last administered in 2019 following previous iterations in 1994 and 2003, is most prominent.⁵⁵ It solicited from respondents detailed information about permitting processes, maximum allowable densities, and the assessment of fees on new development. That survey allowed respondents to base their answers on any location within the jurisdiction, or on estimated averages across

52. See generally David Segal & Philip Srinivasan, *The Impact of Suburban Growth Restrictions on U.S. Housing Price Inflation, 1975-1978*, 6 URB. GEOGRAPHY 14 (1985) (asking planning staff members working in fifty-one metro areas to examine the relative restrictiveness of the area's land use controls); Lawrence Katz & Kenneth T. Rosen, *The Interjurisdictional Effects of Growth Controls on Housing Prices*, 30 J. LAND ECON. 149 (1987) (relying on mail and phone surveys to study growth management programs in municipalities in the San Francisco Bay area).

53. See Peter Linneman & Isaac F. Megbolugbe, *The State of Local Growth Management* (Wharton Real Estate Center, Working Paper No. 81, 1990); Paul G. Lewis & Max Neiman, *Residential Development and Growth Control Policies: Survey Results from Cities in Three California Regions*, PUB. POL'Y INST. OF CAL. 3 (July 2000) (asking about "city planners' impressions of the review process for residential development in their cities," and finding that the planners believed the applications in their jurisdictions were processed expeditiously).

54. See generally Rolf Pendall, Robert Puentes & Jonathan Martin, *FROM TRADITIONAL TO REFORMED: A REVIEW OF THE LAND USE REGULATIONS IN THE NATION'S 50 LARGEST METROPOLITAN AREAS*, BROOKINGS INST. (2006), https://www.brookings.edu/wp-content/uploads/2016/06/20060802_Pendall.pdf; Joseph Gyourko et al., *A New Measure of the Local Regulatory Environment for Housing Markets: The Wharton Residential Land Use Regulatory Index*, 45 URB. STUD. 693 (2008); ROBERT W. BURCHELL & MICHAEL L. LAHR, *A NATIONAL SURVEY OF LOCAL LAND-USE REGULATIONS* (2008) (describing a 2004 HUD survey allowing respondent to aggregate data for one location within the jurisdiction); David D. Foster & Anita A. Summers, *Current State Legislative and Judicial Profiles On Land-Use Regulations in the U.S.*, ZELL/LURIE REAL EST. CTR. (2005), <http://realestate.wharton.upenn.edu/wp-content/uploads/2017/03/512.pdf>; Ned Levine, *The Effects of Local Growth Controls on Regional Housing Production and Population Redistribution in California*, 36 URB. STUD. 2047 (1999); MADELYN GLICKFELD & NED LEVINE, *REGIONAL GROWTH . . . LOCAL REACTION: THE ENACTMENT AND EFFECTS OF LOCAL GROWTH CONTROL AND MANAGEMENT MEASURES IN CALIFORNIA* (1992) (surveying land use officials in 407 California cities to document the enactment of growth management ordinances); Paul G. Lewis & Max Neiman, *Residential Development and Growth Control Policies: Survey Results from Cities in Three California Regions*, PUB. POL'Y INST. OF CAL. 3 (July 2000) (asking about "city planners' impressions of the review process for residential development in their cities").

55. See MEGAN GALLAGHER, LYDIA LO & ROLF PENDALL, *AN INTRODUCTION TO THE NATIONAL LONGITUDINAL LAND USE SURVEY AND DATA* (2019), <https://www.urban.org/research/publication/introduction-national-longitudinal-land-use-survey-and-data>.

zoning districts.⁵⁶ The type and quality of data submitted explicitly lay within the subjectivity of the respondent.⁵⁷

Another national survey instrument, the Wharton Residential Land Use Regulatory Index, prompted respondents to answer fifteen questions, several of which involved subjective assessments such as the importance of various factors and stakeholders in land use decision-making.⁵⁸ The Wharton survey has provided the basis for many if not most of the significant economic studies of zoning over the past fifteen years.⁵⁹

Statewide surveys of planners have also been conducted. A Florida State University researcher surveyed planners in over 300 Florida cities in 2007.⁶⁰ In 2018, researchers at UC Berkeley collected information from planners in over 250 California jurisdictions, including asking about political constraints on development.⁶¹

Survey-based methods provide impressionistic information about the restrictiveness of zoning, but they can lack accuracy about zoning rules themselves. A study-of-studies assessing nine surveys conducted between 1988 and 2018 in California identified “strikingly different responses to similar

56. *Id.* at 165 (providing an example of the survey questionnaire, asking participants to answer based on either their own jurisdiction or their best estimate).

57. *Id.* (suggesting that respondents answer hypothetically and subjectively if the question does not apply to their jurisdiction).

58. See JOSEPH GYOURKO ET AL., A NEW MEASURE OF THE LOCAL REGULATORY ENVIRONMENT FOR HOUSING MARKETS: THE WHARTON RESIDENTIAL LAND USE REGULATORY INDEX, 49–50 (2006). The survey asked three types of questions (involving the general characteristics of the zoning process, the rules of local land use regulation, and the outcomes of the regulatory process) and dealt with minimum lot size, affordable housing requirements, open space requirements, and infrastructure improvement fees. The final index was comprised of eleven sub-indices: local political pressure index; state political involvement index; state court involvement index; local zoning approval index; local project approval index; local assembly index; supply restrictions index; density restrictions index; open space index; exactions index; and approval delay index. *Id.* at 11–18.

59. See, e.g., Chang-Tai Hsieh & Enrico Moretti, *Housing Constraints and Spatial Misallocation*, 11 AM. ECON. J.: MACROECONOMICS 1 (2019) (relying on the Wharton survey).

60. See Ihlanfeldt, *supra* note 4 (constructing an index by totaling the number of regulations used, out of 13 land use restriction techniques total, over the preceding two years in 327 Florida municipalities based on a planners’ survey administered by the DeVoe L. Moore Center at Florida State University).

61. SARAH MAWHORTER & CAROLINA REID, LOCAL HOUSING POLICIES ACROSS CALIFORNIA: PRESENTING THE RESULTS OF A NEW STATEWIDE SURVEY (Dec. 2018), https://california-landuse.org/download/Terner_California_Residential_Land_Use_Survey_Report.pdf. Note that the survey asked planners to identify land within the jurisdiction allowing single-family detached units, multi-family units, or nonresidential uses—broad categories that are not necessarily mutually exclusive. *Id.* at 29–30, 34.

inventory questions about specific land use regulations in two surveys conducted months apart in the same municipalities.”⁶² Another study found significant discrepancies between responses to questions from city planners and actual data collected by researchers on housing approval processes.⁶³ Zoning scholar Sonia Hirt picked up on these criticisms when writing about the NLLUS study, saying: “[e]valuating officials’ responses may lead to different results than those reached by analyzing the actual zoning ordinances.”⁶⁴ She further observed that the survey’s designers did not account for spatial distribution of districts.⁶⁵ A survey question asking about whether a jurisdiction permits multi-family housing, for example, will yield a positive answer whether the jurisdiction permits multi-family housing on two lots or on a hundred.

Also contributing to a lack of reliability is respondent bias. When only some invited planning officials reply to zoning data requests, self-selection may sway results. For example, for the NLLUS, 55% of eligible jurisdictions responded—an impressive rate of return—but one that likely skews toward jurisdictions with greater planning staff capacity.⁶⁶ The NLLUS originally only sent surveys to planners in jurisdictions with over 10,000 people in the top 50 core based statistical areas across the country.⁶⁷ Beyond the NLLUS, other surveys also were skewed toward the study of large metropolitan areas, and of mid-to-large-sized jurisdictions within those areas.⁶⁸ Budget or logistical constraints may have dictated survey scopes, but omitting the full range

62. Paul G. Lewis & Nicholas J. Marantz, *What Planners Know: Using Surveys About Local Land Use Regulation to Understand Housing Development*, 85 J. AM. PLAN. ASS’N. 445, 458 (finding that survey evidence is ambiguous and that “it would be a mistake to confine surveys to ostensibly objective inventories of specific local regulations”).

63. See MOIRA O’NEILL, GIULIA GUALCO-NELSON & ERIC BIBER, *COMPARING PERCEPTIONS AND PRACTICE: WHY BETTER LAND USE DATA IS CRITICAL TO GROUND TRUTH LEGAL REFORM* 8–15 (2019), http://californialanduse.org/download/O’Neill_Comparing_Perceptions.pdf.

64. HIRT, *supra* note 5, at 49.

65. *Id.* (noting the critical fact that “the authors did not analyze the spatial distribution of districts”).

66. See GALLAGHER ET AL., *supra* note 55, at 2–3.

67. This sample was expanded to include *all* land-use decisionmaking jurisdictions in the top CBSAs in the later 2003 iteration, continuing with the census approach for jurisdictions over 10,000 residents but taking a sample of smaller jurisdictions in metro areas where such small jurisdictions are abundant. See *National Longitudinal Land Use Survey*, URB. INST., <https://datacatalog.urban.org/dataset/national-longitudinal-land-use-survey-nllus> (last visited Mar. 25, 2023).

68. See, e.g., Segal & Srinivasan, *supra* note 52 (asking planning staff members working in fifty-one metro areas to examine the relative restrictiveness of the area’s land use controls); Katz & Rosen, *supra* note 52 (relying on mail and phone surveys to study growth management programs in municipalities in the San Francisco Bay area).

of jurisdictions with zoning ordinances, such as small municipalities and rural areas, obscures the full story. Combining biases in response rates and jurisdiction choices with questionable data, the reliability of survey methods for collecting information about the content of zoning codes raises concern.

B. Incomplete Textual Analyses

Using textual analysis to collect information about zoning codes is more reliable than survey data, but it is more time intensive because it requires researchers to comb through unfamiliar, often lengthy texts. Perhaps as a result, few multi-jurisdictional studies using textual analysis have been published. And most such recent analyses tend to focus on a limited set of information. Five worth mentioning are studies covering, respectively: all jurisdictions in Massachusetts;⁶⁹ certain jurisdictions in eastern Massachusetts;⁷⁰ the San Francisco Bay Area, greater Los Angeles, and the Sacramento region;⁷¹ the greater Boston region;⁷² and the San Francisco, Austin, and New Haven areas.⁷³ The first four of these studies include maps, which are notable because maps provide a visual component that explain land use laws in ways that words cannot. The latter three were completed in 2020 or later, corresponding with a significant uptick in interest in this area of research.

The first comprehensive research initiative using textual analysis was conducted by researchers merging and analyzing data collected by the Commonwealth of Massachusetts GIS Department (MassGIS) in 2003.⁷⁴ The study collected information on land use regulations in all 351 cities and towns in Massachusetts using a combination of methods, including aerial photographs, local tax assessor maps, open space plans, and federal and state land

69. See Evenson & Wheaton, *supra* note 13.

70. See AMY DAIN, RESIDENTIAL LAND-USE REGULATION IN EASTERN MASSACHUSETTS 3 (2005).

71. See Menendian et al., *supra* note 13; Stephen Menendian, Samir Gambhir, & Chih-Wei Hsu, *Single-Family Zoning in Greater Los Angeles*, OTHERING & BELONGING INST. (Mar. 2, 2022), <https://belonging.berkeley.edu/single-family-zoning-greater-los-angeles>; Stephen Menendian, Samir Gambhir & Marina Blum, *Single-Family Zoning in the Sacramento Region*, OTHERING & BELONGING INST. (July 13, 2022), <https://belonging.berkeley.edu/single-family-zoning-sacramento-region>.

72. See *Zoning Atlas*, METRO. AREA PLAN. COUNCIL, <https://zoningatlas.mapc.org/> (last visited Nov. 29, 2021).

73. See Ellickson, *supra* note 3, at 1615.

74. *MassGIS Data: 2001 & 2003 Aerial Imagery*, MASSGIS (Apr. 2001 & Apr. 2003), <https://www.mass.gov/info-details/massgis-data-2001-2003-aerial-imagery#overview->.

holdings.⁷⁵ The study linked various maps to digital zoning data submitted by cities and towns.⁷⁶ Researchers sorted land into residential, commercial and industrial, open land, other, and unbuildable with the open land category further subdivided into open land zoned for future residential use, open land zoned for future commercial or industrial use, open land protected, and open land not currently zoned.⁷⁷ In addition, in conjunction with the state's thirteen regional planning boards, MassGIS conducted a buildout analysis of all "open land" to determine how much density could be built on such parcels based on geographic constraints and regulatory barriers including minimum lot sizes and floor-to-area ratios.⁷⁸ Relative to surveys, this study provided more reliable data because it drew from actual regulations. Further, it covered every jurisdiction in Massachusetts, avoiding the selection bias problem outlined above. Regrettably, however, the researchers dropped Boston and Worcester from their final analysis, prematurely claiming that "[t]hese cities effectively have no land use decisions left to make."⁷⁹ On the whole, the study collected only limited information on land use regulations.⁸⁰

The second of the five research projects, the Eastern Massachusetts database by the Pioneer Institute for Public Policy Research and Harvard Kennedy School's Rappaport Institute for Greater Boston, relied on a mixed methods approach to collect data on land use regulations in 187 municipalities.⁸¹ Researchers initially reviewed zoning regulations published on municipal websites and, when those were unavailable, on the website of a commercial firm that provided information on local regulations.⁸² This collection effort was supplemented by a survey sent to several departments in each town to verify the data drawn from the published regulations and to elicit responses to short answer questions with qualitative information.⁸³ The study collected information on sixty-four variables, including lot size, buildable area requirements, multi-family housing, flexible or cluster zoning, inclusionary or incentive

75. See Evenson & Wheaton, *supra* note 13, at 221, 223, 229.

76. See *id.* at 230.

77. See *id.* at 229.

78. See *id.* at 230–31.

79. *Id.* at 232.

80. *Id.* at 230. The zoning component of the dataset includes only sparse information on the use allowed within each district, the minimum lot size, and the maximum height allowed.

81. See *Housing Regulation Database*, PIONEER INST. <http://www.masshousingregulations.com/> (last visited Jan. 19, 2023).

82. See DAIN, *supra* note 70, at 10 (explaining this methodology).

83. See *id.* at 10.

zoning, accessory apartments, and permit caps.⁸⁴ The study further collected information on subdivision regulations, wetlands ordinances, and septic requirements.⁸⁵ But while the information collected in this database is exhaustive, its utility for researchers and policymakers is limited because it does not break out these variables by zoning district, instead aggregating data by municipality.⁸⁶ As with other datasets, this one also only indicates whether a particular regulation applies or a given housing type is permitted in some part of a town, but it does not quantify these measures by the percentage of land area or the zoning districts to which they apply.

The third major project—a UC Berkeley Othering and Belonging Institute study covering the Bay Area, Greater Los Angeles, and the Sacramento region—offers some benefits and drawbacks relative to the Eastern Massachusetts database. The Bay Area portion of the project analyzed 101 municipalities across the nine Bay Area counties,⁸⁷ while the Greater Los Angeles portion analyzed 191 municipalities across six counties⁸⁸ and the Sacramento portion covered 22 municipalities across six counties.⁸⁹ These studies used parcel-level data based on general plan land use designations and municipal zoning maps, disaggregating the different zoning schemes applied within jurisdictions.⁹⁰ This level of detail allowed the researchers to map the data using GIS software, producing effective visualizations of the underlying data. But in terms of regulatory details, these studies offer only basic information about zoning, focusing on allowable density but not minimum lot size, permitting requirements, and the like.⁹¹ They classify parcels into three designations: single-family residential, multi-family residential, and non-residential.⁹² This method comes with the benefits of simplicity but collapses a great deal of heterogeneity—for example, by placing zoning that allows duplexes, townhouses, mobile home parks, and two-family attached dwellings all within the same category.⁹³

84. *See id.* at 12.

85. *See id.* at 4–5.

86. *See id.* at 10.

87. Menendian et al., *supra* note 13.

88. Menendian et al., *Single-Family Zoning in Greater Los Angeles*, *supra* note 71.

89. Menendian et al., *Single-Family Zoning in the Sacramento Region*, *supra* note 71.

90. *See id.*; Menendian et al., *supra* note 13.

91. *See* Menendian et al., *Single-Family Zoning in Greater Los Angeles*, *supra* note 71.

92. *See id.*

93. *See id.* (“We realize that our simplified taxonomy of myriad zoning designations into three categories (in order to draw out the degree to which single-family-only zoning predominates

The fourth effort—the Greater Boston Zoning Atlas (“GBZA”)⁹⁴ created by the Metropolitan Area Planning Commission—builds on the strengths of previous efforts. Like the Eastern Massachusetts database, the GBZA offers detailed data beyond the multi-family/single-family dichotomy. And like the Bay Area study, the GBZA distinguishes between zoning districts within municipalities, providing data at the district-level. The GBZA offers data on 1,775 zoning districts in 101 cities and towns, an accomplishment achieved over a ten-year project timeline.⁹⁵ Information collected includes a range of regulatory characteristics: the zone use, whether multi-family housing is allowed by-right or by special permit, minimum lot size, lot coverage percentages, minimum lot area per dwelling unit, maximum height, maximum dwelling units per lot and per acre, and floor-to-area ratios.⁹⁶ The research team compiled this data using both public sources and electronic zoning data submitted by local officials and third-party consultants, eschewing the unreliable and imprecise survey-based approach.⁹⁷ Though the researchers came from a regional government agency upon whom municipalities frequently rely, they still encountered difficulty collecting data. As of this writing, they are still waiting on up-to-date data from more than a dozen cities and towns. The data already gathered has started to drive important inquiries about the impacts of particular regulations on housing affordability.⁹⁸ Note that while two more recent studies have reviewed zoning codes across Massachusetts, these studies covered only particular aspects of zoning, namely minimum lot sizes and town-boundary zoning.⁹⁹

residential areas) conceals many other aspects of zoning codes that impede or restrict development or certain types of developments.”).

94. See METRO. AREA PLAN. COUNCIL, *supra* note 72.

95. See *id.*

96. See *id.*

97. See *id.*

98. See, e.g., Amrita Kulka et al., *How to Increase Housing Affordability? Understanding Local Deterrents to Building Multifamily Housing* (Apr. 11, 2022) (unpublished working paper) (available at https://aradhyasood.github.io/HousingAffordability_Kulka_Sood_Chiumenti_April2022.pdf) (assessing three land use regulations documented in the Greater Boston Zoning Atlas—the allowance of multi-family housing, maximum height restrictions, and maximum dwelling units per acre—to assess how they impact housing affordability). Preliminary results suggest that relaxing density restrictions, or relaxing all three restrictions, can increase the supply of multi-family housing and decrease multi-family rents and single-family home prices. *Id.* at 35.

99. See, e.g., Brendan Shanks, *Land Use Regulation and Housing Development: Evidence from Tax Parcels and Zoning Bylaws in Massachusetts 4* (Dec. 8, 2020) (unpublished working paper) (on file with author) (focusing on minimum lot sizes); Matthew Resseger, *The Impact of Land Use Regulation on Racial Segregation: Evidence from Massachusetts Zoning Borders*, 2–4, 7 (Nov. 26, 2013)

Legal scholar Robert Ellickson has also entered the field of non-survey-based studies of zoning regulations. Ellickson's study focused on forty-one localities in across Silicon Valley, Greater New Haven, and Greater Austin. The study distilled zoning codes into three metrics: the presence (or absence) of large-lot zoning, small-lot zoning, and zoning to permit multi-family housing.¹⁰⁰ Ellickson calculated the percentage of residentially zoned land that required large lots,¹⁰¹ the percentage of such land that allows residences on small lots,¹⁰² and the percentage of such land that allows for multi-family housing as of right.¹⁰³ This strategy produced digestible numbers that are legible to non-planners and comparable across jurisdictions. However, it belies a tremendous degree of complexity underneath.¹⁰⁴ While this method achieves the purposes of Ellickson's work—which seeks to quantify and compare the impact of a specific provision across specific jurisdictions and regions—it does not illuminate the totality and granularity of municipal zoning regulations beyond the studied regulation.

C. *What We Don't Know*

The previous Subparts have told us what we know about zoning in the United States: not so much, actually. Prior research has only given us a patchwork of information in a few jurisdictions. Some of the survey-based information is likely inaccurate due to human error and participant bias. Some of the text-based information has been aggregated for an entire jurisdiction, which necessarily means either an overinclusive or an underinclusive account of aggregated factors. None of the information has been harmonized across studies or jurisdictions. Other than the National Longitudinal Land Use Survey, none of the older surveys or datasets have been updated to take into account changed regulatory frameworks.

(Ph.D. thesis, Harvard University) (on file with author) (available at https://scholar.harvard.edu/files/resseger/files/resseger_jmp_11_25.pdf) (using MassGIS data to study town boundary zoning).

100. See Ellickson, *supra* note 3, at 13.

101. See *id.* at 22 tbl.1 (showing the percentage of residentially zoned land that set minimum lot sizes above 0.5 acres, 1 acre, 1.5 acres, and 2 acres).

102. See *id.* at 25 tbl.3 (showing the percentage of residentially zoned land that set minimum lot sizes below 6,000, 8,000, and 10,000 square feet).

103. See *id.* at 28 tbl.5.

104. See *id.* at 16 (“My methodology nonetheless may distort political realities in some instances, both by exaggerating restrictions, and by understating them.”).

Problems with the existing data are compounded by the fact that many later scholarly works have drawn conclusions from that data about the impact of zoning on things ranging from the cost of housing to the number of construction permits to the segregation of schools.¹⁰⁵ Even minor errors in the underlying data can skew results. Hopefully, most prior researchers conducting secondary research took care to address the methodological concerns raised in this Article. But more accurate and complete data might have allowed them to take their research further.

IV. THE CONNECTICUT DATASET

Zoning data gathered by economists, geographers, and legal scholars has to date been both unreliable and incomplete. A novel dataset exhaustively chronicling a variety of zoning constraints in every jurisdiction in Connecticut offers a starting point for overcoming methodological issues of prior research.

Before delving into its details, it is important to explain the transferability of the Connecticut study to other jurisdictions. As noted in Part II, individual zoning codes vary, owing to the extremely decentralized manner of their adoption. The differences matter, as this Article and others argue. Yet codes so often share fundamental structural elements that holdings from zoning cases have developed into a coherent body of common law.¹⁰⁶ Even though codes' specific contents differ, courts across the country can apply the same black letter principles when reviewing zoning cases.¹⁰⁷ Indeed, the forthcoming Fourth Restatement of Property Law—part of the American Law Institute's

105. See *supra* Section II.B. Many studies have relied on the surveys described in this Subpart. See, e.g., Jonathan Rothwell, *Housing Costs, Zoning, and Access to High-Scoring Schools*, BROOKINGS (Apr. 19, 2012), <https://www.brookings.edu/research/housing-costs-zoning-and-access-to-high-scoring-schools/> (appearing to combine the lot-size findings of the Pendall survey and the Wharton Index, which both relied on survey data, and the Eastern Massachusetts Index described in Section II.B., which relied on textual analysis); Edward L. Glaeser & Bryce A. Ward, *The Causes and Consequences of Land Use Regulation: Evidence from Greater Boston*, 65 J. URB. ECON. 265, 278 (2009) (relying on the eastern Massachusetts database, which aggregated data by municipality without weighing the amount of land or the prevalence of the particular factor studied, to find that for each extra minimum lot acre within a community, there was a 40% decrease in construction permits between 1980 and 2002); Quigley & Raphael, *supra* note 4, at 324 (looking at the incidence of regulation in 407 cities by relying on data from the Glickfeld & Levine survey, published in 1992, of California land use officials).

106. See *id.* at 792–807.

107. See Michael Allan Wolf, *A Common Law of Zoning*, 61 ARIZ. L. REV. 771, 799 (“Judges in zoning cases, as they have in other disputes over the use of real property, have grafted equitable principles onto the body of zoning law.”).

ongoing effort to restate and clarify the common law—will include a land use volume for the first time.¹⁰⁸

Although this zoning study could have been rooted anywhere, Connecticut is particularly well-suited to illustrate the hidden complexity of zoning laws. Its regulatory framework matches every other state, as it has adopted the standard State Zoning Enabling Act and local governments zone pursuant to that authority.¹⁰⁹ Connecticut’s demographics also track other states’, and its New Haven-Milford metropolitan area most demographically resembles the United States as a whole.¹¹⁰ Every state has communities like Connecticut’s: mid-sized central cities, wealthy suburbs, post-industrial mill towns, and rural areas.¹¹¹ In addition to sharing common place features, Connecticut has a local government structure that encourages universal zoning. Unlike other states, which have large unincorporated areas, every inch of Connecticut belongs to a municipality, making it all eligible for zoning.¹¹² And zoning, indeed, touches all of it.

This Part proceeds with a brief history of Connecticut zoning laws, then describes the methodology used in collecting its zoning data.

A. Connecticut’s Regulatory Framework

Like every other state, Connecticut has adopted a state zoning enabling act delegating power to localities to establish zoning regulations.¹¹³ The legislature closely followed the draft SZE in its own statute, enacted in 1924.¹¹⁴

108. See RESTATEMENT (FOURTH) OF PROP. LAW: SERVICITUDES AND LAND USE (AM. L. INST., Proposed Official Draft 2022). I am the lead author of this volume.

109. See CONN. GEN. STAT. Title 8, Ch. 124, §§ 8-1-8-13a (2021).

110. See Jed Kolko, “*Normal America*” Is Not a Small Town of White People, FIVETHIRTYEIGHT (Apr. 28, 2016, 12:55 PM), <https://fivethirtyeight.com/features/normal-america-is-not-a-small-town-of-white-people/> (analyzing age, educational attainment, race, and ethnicity data from the U.S. Census, American Community Survey 2012–17).

111. See AM. SOC’Y PLAN. OFFICIALS, A SUMMARY REPORT: NEW DIRECTIONS IN CONNECTICUT PLANNING LEGISLATION: A STUDY OF CONNECTICUT PLANNING, ZONING, AND RELATED STATUTES 1 (1967) (“Connecticut development is widely varied, in spite of the State’s relatively small size. Only 5,000 square miles in area, Connecticut ranges from bustling metropolitan centers to quiet rural towns. Subtle changes in character mark its landscape—the bedroom commuter communities in the southwest, tied to New York City more than to the rest of Connecticut; the diversified cities of New Haven and Hartford with their rapidly expanding suburbs . . .”).

112. STATE OF CONNECTICUT REGISTER AND MANUAL § 7, 367–94 (OFF. SEC’Y STATE 2020), https://portal.ct.gov/-/media/SOTS/RegisterManual/RM_Archive/CT2020.pdf.

113. See CONN. GEN. STAT. Ch. 124 § 8-1 (2021).

114. See *id.* § 8-2 (2021). There is one exception to the SZE framework, namely that Connecticut,

Other than a few minor revisions, for the most part the statute's core provisions have not changed, with much of the original 1926 U.S. Department of Commerce language remaining.¹¹⁵ Local governments across Connecticut adopted zoning codes pursuant to the authority granted by the SZEA, through home rule provisions, or by special acts at a steady pace.¹¹⁶ By 1930, 21 of the state's 169 municipalities had adopted a zoning code; by 1950, 69 had; and by 1966, 134 had.¹¹⁷ Today, 167 municipalities have zoning, across 178 municipal and submunicipal jurisdictions in total, with the remaining 2 municipalities using subdivision codes to effectively zone.

For a time, local zoning rules facilitated the creation of new residential areas. Even shoreline towns allowed the division of large estates into moderate density housing.¹¹⁸ Perhaps this relatively lax period of municipal regulation resulted from property owners' understanding that restrictive covenants, including racially restrictive covenants, could keep neighborhoods homogeneous.¹¹⁹ That changed in 1948, when the U.S. Supreme Court struck down racially restrictive covenants as violative of the Fourteenth Amendment.¹²⁰

The postwar period precipitated a housing development boom in Connecticut's suburbs,¹²¹ provoking a fierce backlash and marking the beginning of Connecticut's embrace of exclusionary zoning. Municipalities—

uniquely among all states, grants the ability to draft and amend zoning codes to zoning commissions, not just local legislative bodies. *Id.* §§ 8-1, 8-4a (2021).

115. *See* AM. SOC'Y PLAN. OFFICIALS, *supra* note 111.

116. *See id.* at 23 ("A number of communities have been granted special acts to enable them to administer zoning and planning in a way other than that authorized by the General Statutes. Other municipalities have adopted home-rule charter provisions for administration of their land-use control programs. These special acts and municipal charter provisions have been largely prompted by the rigid organizational structure dictated by the general enabling acts.")

117. *See id.* at 5 tbl.2.

118. *See, e.g.*, Hilda Pui Lee, *The Impact of the Hedge Fund Economy on Social Structure: Housing in Greenwich, Connecticut 10–11* (Dec. 2011) (M.S. thesis, Southern Connecticut State University) (ProQuest).

119. *See* Ken Dixon, *Whites-Only Rules Still Surface in CT Property Records*, MIDDLETOWN PRESS, (Mar. 2, 2020, 9:30 AM), <https://www.middletownpress.com/news/article/Whites-only-rules-still-surface-in-CT-property-15096547.php>; Mary Daly, *Race Restrictive Covenants in Property Deeds*, CONN. HIST. (Feb. 23, 2016), <https://connecticuthistory.org/race-restrictive-covenants-in-property-deeds/>.

120. *See* *Shelley v. Kraemer*, 334 U.S. 1, 20–21 (1948).

121. Maya Lopez-Ichikawa, *Wesleyan Hills Helps Redefine Suburbia*, CONN. HIST. (June 12, 2015), <https://connecticuthistory.org/wesleyan-hills-redefines-suburbia/> (noting that the suburban sprawl that occurred after World War II impacted the evolution of Connecticut's land use patterns in what Lopez-Ichikawa calls "farmland-to-suburbs").

particularly burgeoning suburban communities—began tightening zoning regulations to inhibit new development and population growth in the 1950s, and imposed increasingly severe restrictions in the 1960s.¹²² Real estate agents at the time continued to engage in racial steering and blockbusting,¹²³ and banks formalized race-based neighborhood classifications through redlining policies.¹²⁴ Together, these policies and practices had the effect of shutting out poorer residents and racial minorities, culminating in the maturation of exclusionary zoning by the early 1970s.¹²⁵

The town of Greenwich is an instructive example. Following World War II, demand for housing there boomed thanks to nationwide economic growth, the expansion of the interstate highway system, and the availability of FHA-backed mortgages.¹²⁶ In areas south of the Merritt Parkway,¹²⁷ the town liberally allowed property owners to subdivide property,¹²⁸ feeding a massive expansion of Greenwich's housing stock and a near-doubling of the town's population between 1940 and 1970.¹²⁹ In response to this growth—and the arrival of more racially and socioeconomically diverse populations into a community previously dominated by luxury estates—municipal officials moved to stem the tide. Greenwich replaced its Town Plan Commission, which had speedily processed and freely allowed new development, with a stricter planning and zoning commission in 1952;¹³⁰ doubled the residential minimum lot size in several of Greenwich's neighborhoods in the following

122. See RACHEL CARLEY, *BUILDING GREENWICH: ARCHITECTURE AND DESIGN, 1640 TO THE PRESENT* 221 (2005).

123. See *Jackie Robinson Buys a Home in Connecticut*, NEW ENG. HIST. SOC'Y, <https://www.new-englandhistoricalsociety.com/jackie-robinson-buys-home-connecticut/> (last visited Feb. 23, 2023).

124. See Robert K. Nelson et al., *Stamford, Darien, and New Canaan, CT*, MAPPING INEQUALITY: REDLINING IN NEW DEAL AMERICA, <https://dsl.richmond.edu/panorama/redlining/#loc=10/41.116/-73.466&city=stamford,-darien,-and-new-canaan-ct> (last visited Jan 22, 2023).

125. Daniel Hertz, *The Origins of the Housing Crisis*, CITY OBSERVATORY (2015), <https://cityobservatory.org/the-origins-of-the-housing-crisis/> (noting how the zoning revolution of the 1970s affected population diversity, changing the economic and racial geography of American cities).

126. See CARLEY, *supra* note 122.

127. See Nicholas Abbott, *How Restrictive Zoning Shut the Middle Class out of Greenwich, Conn.*, BROOKINGS (Apr. 14, 2021) <https://www.brookings.edu/blog/the-avenue/2021/04/14/how-restrictive-zoning-shut-the-middle-class-out-of-greenwich-conn> (noting that in 1947, Greenwich zoned virtually all land north of the Merritt Parkway for four-acre minimum lot sizes).

128. See Lee, *supra* note 118, at 147.

129. See *Quick Facts: Greenwich, Connecticut*, U.S. CENSUS BUREAU, [hereinafter *Quick Facts*] <https://www.census.gov/quickfacts/fact/table/greenwichtownfairfieldcountyconnecticut,greenwichcdconnecticut,US/PST045219> (last visited Jan. 25, 2023).

130. Lee, *supra* note 118, at 146.

years;¹³¹ and downzoned multi-family zones in several neighborhoods to allow for only single-family homes in 1968.¹³² With the pipeline of new housing supply cut off, the town's population has remained flat from 1970 through the present-day.¹³³ This story is remarkably similar to those of other nearby suburbs from Darien to New Canaan to Westport, whose populations doubled or tripled in the post-war period but have plateaued or shrunk since 1970 due to the constriction on new housing supply.¹³⁴

As the effects of tight land use regulations began to be felt, calls for reform emerged.¹³⁵ In 1978, a state agency issued two reports documenting exclusion of minority and low-income populations, observing “[d]ebates over local autonomy are thrown up as smokescreens, masking the continuing discrimination against racial minorities, no matter what their income levels may be.”¹³⁶ In 1989, a blue ribbon commission on affordable housing, convened by the governor, resulted in the Affordable Housing Land Use Appeals Act, known broadly by its statutory location, Section “8-30g,” to allow new developments to overcome local zoning restrictions if the developments included a set aside percentage of affordable housing.¹³⁷ This project-by-project remedy

131. *See id.* at 146 n.46.

132. *See* SUSAN RICHARDSON, GREENWICH BEFORE 2000: A CHRONOLOGY OF THE TOWN OF GREENWICH 1640–1999 164 (2000).

133. *See Quick Facts*, *supra* note 129.

134. *See id.*

135. Nicholas Abbott, *A Brief History of Zoning in Greenwich: Part II*, INVEST IN GREENWICH (Mar. 11, 2021), <https://investingreenwich.com/2021/03/11/a-brief-history-of-zoning-in-greenwich-part-ii/> (claiming that the period following the increase in Greenwich's zoning regulations “was punctuated by vocal advocacy on both sides of the issue,” especially by groups challenging the restrictions). Calls for statewide zoning reform go back to at least the 1960s, when a national planning association assessed Connecticut's zoning scheme and found that “[t]he State must decide, in some measure, what statewide goals of development should be achieved,” and that “limits should be placed on those local powers and practices that virtually always lead to ineffective, unnecessary, or inappropriate development regulation.” *See* AM. SOC'Y PLAN. OFFICIALS, *supra* note 111, at 12–13.

136. CONN. COMM'N ON HUM. RTS. & OPPORTUNITIES, THE STATUS OF EQUAL HOUSING OPPORTUNITY XXI (1978); *see also* CONN. COMM'N ON HUM. RTS. & OPPORTUNITIES, A STUDY OF ZONING IN CONNECTICUT (1978).

137. *See* CONN. GEN. STAT. ANN. § 8-30g (West 2022). *See generally* Terry J. Tondro, *Connecticut's Affordable Housing Appeals Statute: After Ten Years of Hope, Why Only Middling Results?*, 23 W. NEW ENG. L. REV. 115 (2001). To some, 8-30g has been a national model. *See* John Infranca, *supra* note 50, at 839 (commenting favorably on “antisnob zoning” legislation like 8-30g); Megan Haberle & Philip Tegeler, *Coordinated Action on School and Housing Integration: The Role of State Government*, 53 U. RICH. L. REV. 949, 973 (2019) (citing 8-30g as a positive example of statewide limits on exclusionary zoning). To others, 8-30g has been a disappointment because it has only created a small number of housing units and because it can only be exercised if a property owner sues a municipality. *See* Daniel Chapple, *Relief for Those Who Need It Least: How Conn. Gen. Stat. § 8-30g's*

did not require local governments to change their zoning codes as generally applied. And indeed, few appear to have significantly changed their codes to allow more housing. We found zoning codes that were not digitally available and had not been amended since the 1990s.¹³⁸ This stagnation supports my observation in separate research that in recent years, zoning codes rarely change significantly: only about two dozen U.S. cities over 100,000 people undertook comprehensive rezonings in the 2010s.¹³⁹ In its stagnation—as well as in the basic structure of its regulatory framework, the adoption of local zoning, and the shift toward exclusionary tactics—Connecticut seems typical of other states.

B. Methodology

Illustrating the current state of zoning laws in Connecticut is the unique dataset underlying this Article, which, for the first time, collects information about key housing-related zoning requirements for each zoning district in a single state. A full technical methodology has been separately published,¹⁴⁰ but this section summarizes the information collected and distinguishes the methods from previous studies.

1. Information Collected

Over a four-month period, a team of researchers assembled zoning texts, analyzed specific provisions, collected zoning maps delineating specific districts, and translated some of the information into an interactive, online map called the Connecticut Zoning Atlas.

The team assumed at the outset that Connecticut having 169 municipalities meant that the state had 169 zoning codes. However, during the process of collecting information, the team found eleven submunicipal districts granted zoning authority by the state, including five private associations

Moratorium Provision Rewards Towns for Making Inadequate Strides in Addressing Housing Segregation in Connecticut and Offers Lessons for the Nation, 29 J. AFFORDABLE HOUS. & CMTY. DEV. L. 299, 322–23 (2020); Robert D. Carroll, *Connecticut Retrenches: A Proposal to Save the Affordable Housing Appeals Procedure*, 110 YALE L.J. 1247, 1274–78 (2001).

138. See, e.g., HARTLAND, CONN., ZONING REG. (1999) (not digitally available); THE OLD QUARRY ASS'N, INC., ZONING REGULATIONS (1991) (last amended in 1991).

139. See Bronin, *supra* note 46, at 736.

140. Sara C. Bronin & Ilya Ilyankou, *How to Make a Zoning Atlas* (Oct. 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3996609.

granted authority by special acts,¹⁴¹ four boroughs, one village, and one “city” (a dependent political subdivision of a town). In a total of 180 zoning jurisdictions, there were 2,622 zoning districts, an average of about fifteen districts per jurisdiction. Eighteen towns, which were predominantly rural, had five or fewer districts. All told, the team reviewed 32,378 pages of zoning text.

After assembling the codes, the research team developed a spreadsheet to log specific information. Each district was classified as Primarily Residential, Mixed with Residential, or Nonresidential. The Primarily Residential category encompassed districts allowing principal uses of the following: housing only¹⁴²; housing and assorted neighborhood uses, such as religious institutions and schools; or housing and agricultural uses. The Mixed with Residential category encompassed districts allowing principal uses of both nonresidential uses and housing, either stand-alone or integrated with nonresidential uses. The Nonresidential category encompassed districts prohibiting principal residential uses entirely. Districts allowing accessory dwelling units were also logged in the dataset and appeared in all three types of districts.

From there, the team tracked regulatory characteristics that have already earned public and scholarly attention: the number of housing units allowed in the district (single-family, two-family, three-family, and four-or-more family), public hearing requirements, and minimum lot sizes. The team also logged minimum parking spaces per housing unit (both principal and accessory housing). For two-, three-, and four-or-more-family housing, the team documented parking requirements for studios and one bedrooms, and separately, parking requirements another for two-or-more bedrooms. In addition, the team documented two key features that determine development capacity of individual lots: maximum impervious lot coverage (for buildings and for total impervious surface) and floor-to-area ratios. Minimum unit size for principal uses and maximum unit size for accessory dwellings were also logged, as were building height caps and other technical requirements including proximity to water, sewer, and transit and location of accessory dwelling units. Finally, the team documented elderly-only occupancy requirements for principal-use housing and occupancy requirements for relatives, workers, and the

141. H.B. 5540, 2014 Conn. Gen. Sess. (amending the Charters of the Civic Association of Short Beach in the Town of Branford and the Mattabassett District); H.B. 5495, 2012 Conn. Gen. Sess. (making revisions to the Sachem's Head Association Charter; Special Act No. 306 (1947), as amended by Conn. Special Act No. 43 (1971) (The Old Quarry Association, Guilford)).

142. Assisted living facilities and institutionally-managed group dwellings were not counted in the definition of housing.

elderly in accessory dwelling units.¹⁴³

Once the codes were analyzed, usually by two separate people, we sent jurisdiction-specific information to planners associated with the particular zoning jurisdiction. Feedback from sixty-three planners improved the quality of the data, though we rejected feedback that was not substantiated by the zoning text, zoning map, or meeting minutes. The fact that some of the feedback from planners could not be substantiated with written documentation underscores the observation, in Section III.A., that survey data cannot be trusted to tell us what zoning codes actually say. I was the final substantive reviewer, managing multiple flushes through the data to ensure accuracy and definitional consistency.

Simultaneously, the team collected or created GIS maps for every zoning district in the state. Most jurisdictions have converted their zoning maps into GIS layers, though these vary in quality. A handful of zoning jurisdictions, including two relying on hand-drawn maps, had yet to create GIS maps. In those instances, the team digitized maps, approximating the location of the districts. The maps also confirmed that nearly one in ten districts appearing in zoning code text had not “landed” on zoning maps, meaning they had no legal import. Some of these districts were aquifer protection, flood hazard overlays, or similar districts that by their terms would have no effect on housing. But about 150 unmapped districts allowed residential development—one in ten affordable-housing-only districts. Some jurisdictions included affordable housing districts in the text of their zoning codes because they received funding from a state technical assistance program supporting the creation of these districts.¹⁴⁴ But those excluded from the map essentially do not exist. With the unmapped layers removed, the team used the remaining GIS data to create the Connecticut Zoning Atlas, which depicts in graphic form many key characteristics collected.

143. The dataset tracks several other regulatory characteristics that do not bear on this Article’s claims. For example, it documents whether a district was an overlay district, allowed large planned residential developments (somewhat uncommon in Connecticut), or specifically promoted historic industrial heritage.

144. CONN. GEN. STAT. ANN. tit. 8, ch. 124B (West 2023) (establishing the incentive housing zone program providing such assistance for the creation of incentive housing zones).

2. Distinctions from Prior Studies

Joseph Gyourko and Raven Molloy characterize existing empirical research as trading off between “deep but narrow” and “shallow but wide” approaches.¹⁴⁵ I think the Connecticut dataset avoids this tradeoff, and that it differs from previous studies in other ways, too.

First, it is the only study that covers zoning regulations in an entire state in such detail. The 2003 MassGIS study¹⁴⁶ mentioned above collected information for Massachusetts cities and towns, but not with the detail of the Connecticut dataset. Two more recent studies¹⁴⁷ have reviewed zoning codes across Massachusetts, but these studies covered only particular aspects of zoning, namely minimum lot sizes and town-boundary zoning. No other survey of statewide land use regulations has been assembled.

Second, the Connecticut dataset resulted from a multi-step process that ensured quality control and accuracy, combining two rounds of textual analysis with requests of zoning-authority officials to review collected information. Only one study cited in this Article has taken a similar approach.¹⁴⁸ Most studies have relied on surveys to gather regulatory data, which as discussed above, may be inaccurate.¹⁴⁹ The Connecticut dataset avoided the subjectivity of surveys by relying exclusively on the texts and maps of zoning codes themselves.

Third, and most importantly, the Connecticut dataset collects district-level data rather than aggregating data by municipality or county. District-level data most accurately conveys the scope of zoning regulation, the specific characteristics of particular regulations, and the relationships between regulations and covariates. Yet most zoning studies reviewing particular regulations have collected only municipal-level, not district-level, data.¹⁵⁰ The Bay Area and Greater Boston studies completed in 2020, Los Angeles and Sacramento region studies completed in 2022, come the closest to our effort by translating

145. Joseph Gyourko & Raven Molloy, *Regulation and Housing Supply* 13 (Nat'l Bureau of Econ. Rsch., Working Paper No. 20536, 2014), https://www.nber.org/system/files/working_papers/w20536/w20536.pdf.

146. See Evenson & Wheaton, *supra* note 13.

147. See, e.g., Shanks, *supra* note 99; Resseger, *supra* note 99.

148. See DAIN, *supra* note 70, at 11–16 (relying on a mixed-methods approach of reviewing zoning regulations published on municipal websites and surveying departments to verify data).

149. See *supra* Section III.A.

150. See, e.g., BURCHELL & LAHR, *supra* note 54; DAIN, *supra* note 70; GYOURKO ET AL., *supra* note 58 (aggregating regulatory characteristics across an entire jurisdiction).

textual analysis of district-level regulation into online public maps. The three California analyses convey three principal use classifications (single-family residential, multi-family residential, and non-residential) and tracks no other information about zoning districts. This method masks important information about distinct housing types. The Greater Boston atlas features nearly two thousand zoning districts, documenting a variety of use, structure, and lot characteristics.¹⁵¹ That atlas most resembles the Connecticut dataset, but it does not have a statewide reach, and it focuses primarily on a highly urbanized region.

V. FINDINGS ABOUT NUMBER-OF-UNIT ZONING

Local governments make many choices in creating or amending their zoning regimes. Yet for all of the variety embedded in zoning regulations, just one measure has attracted the most attention from zoning reformers and scholars: the number of units allowed on a single lot.¹⁵² With an explanation of the methods of the Connecticut dataset behind us, we now turn to its findings about number-of-unit zoning as it pertains to both principal and accessory dwellings. This Part primarily covers as-of-right zoning, which allows a use without requiring the property owner to undergo a public hearing.¹⁵³

A. *Principal Use Housing*

With accurate mapping for all zoning districts across Connecticut, the most significant finding is the simplest: zoning assigns 90.6% of the state's land to as-of-right single-family housing.¹⁵⁴ Forty-seven municipalities issue as-of-right permits for only single-family housing, and thirty-eight exercise discretion in permitting other types of housing, only after a public hearing. Nine municipalities, all under 15,000 people, prohibit every type of housing except single-family housing, declining to allow two-or-more-unit housing

151. See Dain, *supra* note 70, at 9–10.

152. See *supra* text accompanying notes 4–11.

153. For a discussion about public hearing requirements, see Section VI.A.

154. All calculations in this Part derive from the author's analysis of the database behind and map for Connecticut Zoning Atlas, *supra* note 17. All percentage figures contained herein rely on the concept of zoned land. The atlas shows 2,865,388 acres of zoned land. Zoned land excludes federal public lands, state public lands, and some land specifically excluded from municipal zoning (usually public municipal facilities).

even after a public hearing.¹⁵⁵ By contrast, zoning assigns just 2.5% of land for three-family housing and 2.2% of land for as-of-right four-or-more-family housing. Thus, forty-three times more land allows as-of-right single-family housing than as-of-right four-or-more-family housing. Ninety-two municipalities decline to allow any four-or-more-family housing within their bounds. Of the remaining 77 communities, 21 allow this housing on less than 1% of their land, and 54 allow it in less than 5% of their land. Only 14 communities, mostly the large cities, allow as-of-right four-or-more-family housing on more than 10% of their land. Here's how those numbers play out graphically:

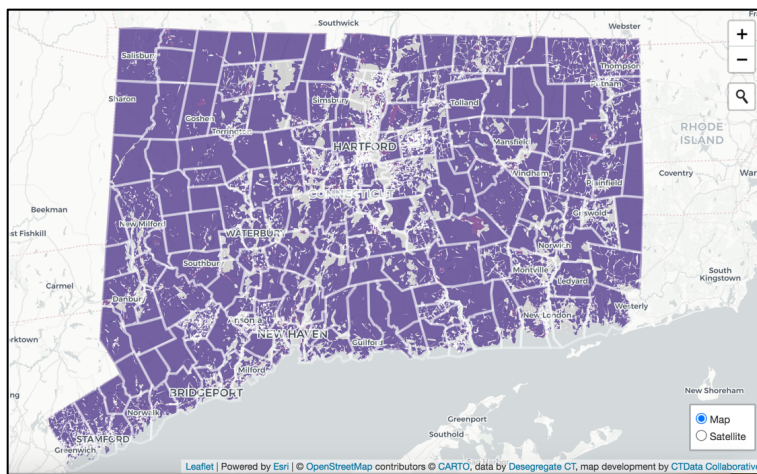


Figure A: As-of-Right Single-Family Housing (Purple)

155. Columbia, Easton, Goshen, Plymouth, Pomfret, Prospect, Roxbury, Sherman, and Weston are the nine municipalities that prohibit housing types other than single-family housing.

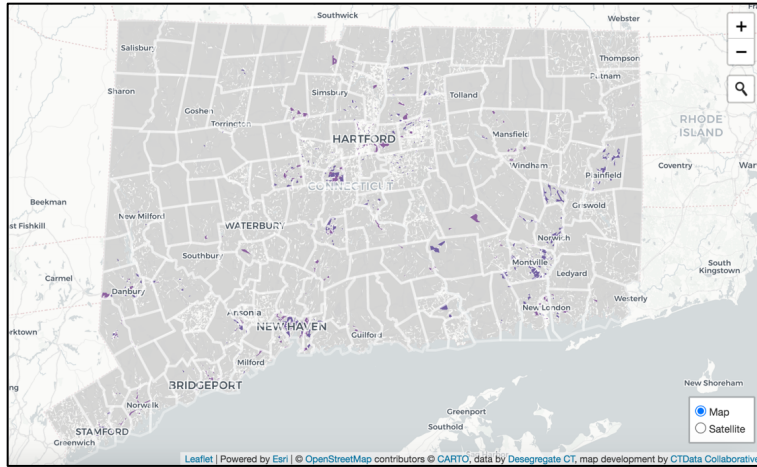


Figure B: As-of-Right Four-or-More-Family Housing (Purple)

Isolating districts identified as Primarily Residential¹⁵⁶ sheds additional light on housing patterns. Zoning codes allow as-of-right single-family housing on 99.6% of Primarily Residential land, and 70.2% of land zoned as PRZ only allows single-family housing as of right, and no other type of housing as of right. Two-family housing is allowed as-of-right on a surprisingly high 29.5% of Primarily Residential land, a fact further discussed in the next Subpart.¹⁵⁷ Zoning devotes 1.69% of residential land to three-family housing, and 1.46% to four-or-more-family housing. Put another way, over two-thirds of residential land allows only as-of-right single-family homes, while developments with four-or-more units are only allowed as-of-right on less than 2% of residential land statewide. Single-family zoning dominates more in residential areas than in mixed-use areas.

These summary statistics belie enormous variation among Connecticut's towns and cities. Dividing municipalities into four groupings based on population size, and reviewing the percentage of all land that allows two-or-more family types of housing yields this chart:

156. See *supra* Section III.A (defining “Primarily Residential”).

157. See *infra* Section V.B.

Population (# of towns)	2-Fam as-of-right (% of total land)	3-Fam as-of right (% of total land)	4+-Fam as-of right (% of total land)
< 7,500 (54)	41.1%	0.2%	0.3%
7,501-15,000 (37)	30.4%	1.1%	1.0%
15,001-40,000 (36)	16.7%	2.7%	2.9%
40,001+ (19)	16.6%	13.7%	11.0%

Figure C: Different-Sized Towns and As-of-Right Two-or-More-Family Housing

On average, the smaller the town, the smaller the share of three-or-more-family housing. The larger the town, the larger the share of three-or-more family housing. Translated into acreage, more than 60% of the land zoned for three-or-more-family housing is located in Connecticut cities of more than 40,000 people.¹⁵⁸ Within these larger towns, municipalities of comparable sizes differ greatly. For example, six cities and towns have populations of 60,000 each, give or take 2,500 people.¹⁵⁹ Of these, two—Bristol and Manchester—allow four-or-more units as of right on roughly 11% of land. The remaining three—Hamden, Fairfield, and Greenwich (each wealthier on average than the other towns)—allow this housing on just 0-2% of land. The state’s large cities, including New Haven (41.5%), Hartford (44.6%), and Bridgeport (46.5%), more generously permit such housing. These larger cities tend to be more racially diverse and poorer than their surrounding suburbs and rural towns.¹⁶⁰

With those differences in mind, Figures D and E offer the most basic analysis of the relationship between zoning, income, and race. They plot all 169 municipalities, each a separate red dot, against Census data for household income and percentage of people identifying as anything other than the White race and the percentage of population that identifies as the Hispanic

158. Sixty percent of land that allows three-family housing as- of-right is situated in cities of 40,000 or more. For four-or-more-family housing as of right, that number is 53.7%.

159. See *Connecticut Town Profiles*, CTDATA COLLABORATIVE (last visited Jan. 25, 2023), <https://profiles.ctdata.org/> (allowing users to view each town in Connecticut and view economic and demographic data).

160. *Id.*

ethnicity.¹⁶¹ Figure D, whose x-axis tracks the percentage of land in the jurisdiction allowing as of right single-family housing, shows that as the percentage of land allowing such housing rises, income levels also rise, and the percentage of non-White population decreases. Figure E shows converse trends in four-or-more-family housing: as the percentage of land allowing more as-of-right four-or-more-family housing increases, income levels decrease, and the percentage of non-White population increases. These preliminary analyses at the jurisdiction level have since been reinforced with separate, fine-grained research at the neighborhood level, showing that neighborhood zoning restricting housing to only single-family housing correlates with high housing prices, high household incomes, and high percentage of White residents.¹⁶² While this Article and separate research proves correlation, further research is required to show causation.

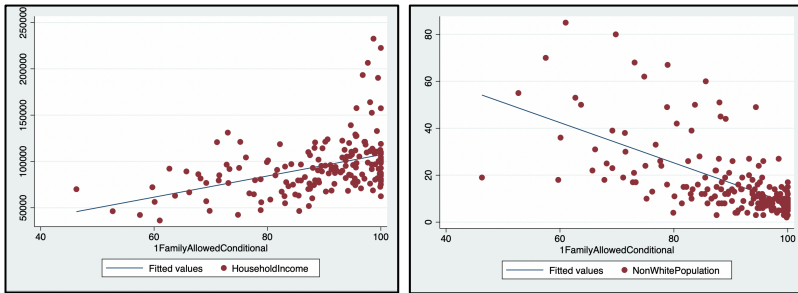


Figure D: Income, Non-White Population, and As-of-Right Single-Family Zoning

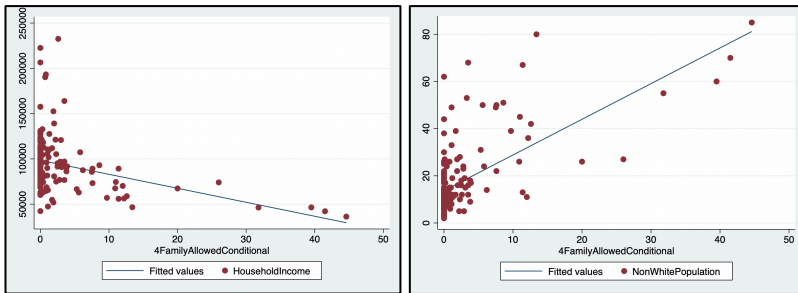


Figure E: Income, Non-White Population, and As-of-Right Four-or-More-Family Zoning

161. These scatterplots use 169 towns, rather than 180 zoning jurisdictions, because most of the submunicipal zoning jurisdictions are extremely small in size, and they would have skewed the results if depicted independently.

162. See Yonah Freemark et al., *supra* note 20.

Whether number-of-unit zoning has consequences for housing production also requires further study. Currently, of the state's 1.5 million housing units, about 64% are single-family homes.¹⁶³ The 64% figure does not precisely track the percentage of land actually zoned for single-family housing (90.6%) because the majority of land zoned single-family has minimum lot size requirements limiting development density.¹⁶⁴ On the other side of the spectrum, about 26.7% of housing units are located in buildings with three-or-more units.¹⁶⁵ Again, this figure does not track the percentage of land actually zoned for as-of-right housing for three-or-more units (just over 2%), because larger multi-family buildings can generally be developed densely, with more units on less land. Even small expansions to the amount of land allowing multi-family housing seem likely to increase its production, but only if ancillary requirements described in Part VI do not constrain it.

B. The Two-Family Puzzle

Among the most puzzling findings of the Connecticut research is that zoning already allows two-family housing as of right in over a quarter of the state's land. As Figure C reveals, small towns account for much of this land, as they permit duplexes more freely than larger cities. The amount of land allowing duplexes as of right soars to 41.1% of land on average in the fifty-four Connecticut towns with 7,500 or fewer people. Many of these towns tend to be rural in nature and predominated by agricultural uses. Perhaps the permissive stance towards duplexes can be explained by the fact that the construction of two dwellings on the large lots typical in such communities would have little to no practical impact on neighbors.

Whatever the reason, the large amount of land zoned for as-of-right two-family housing suggests that Connecticut should have a robust amount of two-family housing. In some places, it does: for example, in the state's two largest cities, Bridgeport and New Haven, about 18% of housing units are located in

163. See 2019 ACS 5-Year Estimates Data Profile: Selected Housing Characteristics, U.S. CENSUS BUREAU, <https://data.census.gov/cedsci/table?g=0400000US09&tid=ACSDP5Y2019.DP04> (last visited Nov. 29, 2021). Of the housing units, 975,363 of them are single-family housing, and 893,531 of those are detached. *Id.*

164. See *infra* Section VI.B.1.

165. See 2019 ACS 5-Year Estimates Data Profile: Selected Housing Characteristics, *supra* note 163. 124,082 are two-unit housing; 130,863 are three- or four-unit housing; and 274,069 are in buildings have five or more units. *Id.* Note that 11,826 units are mobile homes and 426 are boats, RVs, or vans. *Id.*

two-family buildings.¹⁶⁶ However, of the state's 1.5 million housing units, just 8.2% of the units are located in two-family buildings.¹⁶⁷

Drilling down to specific towns, the numbers get stranger. Consider the thirty-eight towns that allow as-of-right two-family housing in over 80% of zoned land.¹⁶⁸ These towns have on average 7,500 people (less than the 21,000-person average for towns across the state) and have a 91.3% White population (versus 82.8% for the state on average). Nine towns in this group have over 10,000 people and are considered more suburban than rural.¹⁶⁹ Few duplexes have actually been produced in these thirty-eight towns.¹⁷⁰ On average, only 3.4% of their housing units are located in two-family buildings—a rate much lower than the Connecticut state average of 5.2%.¹⁷¹ Just four of the thirty-eight towns have two-family housing constituting 8% or more of the town's housing units.¹⁷² The one town with over 25,000 people on this list—a town whose population might suggest a more diverse set of demands—has just 2.1% of units in two-family buildings.¹⁷³

If zoning does not prohibit two-family housing in these towns, other factors must be thwarting production. Could it be that people living in suburban and rural areas prefer open space to dense living?¹⁷⁴ Or that banks fail to provide financing for this type of housing, thus discouraging its construction?

166. *Housing Data Profiles: Data on Housing and Affordability for Each of Connecticut's 169 Towns and Cities*, P'SHIP FOR STRONG CMTYS. (2022), <https://housingprofiles.psychousing.org/profile/>.

167. *2019 ACS 5-Year Estimates Data Profile: Selected Housing Characteristics*, *supra* note 163.

168. *See Housing Data Profiles: Data on Housing and Affordability for Each of Connecticut's 169 Towns and Cities*, *supra* note 166. They are Ashford, Beacon Falls, Bethlehem, Bolton, Bridgewater, Brooklyn, Burlington, Cheshire, Colchester, Coventry, East Haddam, Eastford, Franklin, Griswold, Haddam, Hampton, Kent, Killingly, Killingworth, North Canaan, Orange, Salem, Scotland, South Windsor, Sterling, Thompson, Union, Voluntown, Wolcott, and Woodbury.

169. *See id.* These towns are Canton, Cheshire, Colchester, Coventry, Griswold, Killingly, Orange, Southbury, and Wolcott.

170. *See id.*

171. *See id.*

172. *See 2019 ACS 5-Year Estimates Data Profile: Selected Housing Characteristics*, *supra* note 163. These towns are Griswold, Killingly, North Canaan, and Southbury.

173. *See Housing Data Profiles: Data on Housing and Affordability for Each of Connecticut's 169 Towns and Cities*, *supra* note 166 (showing the Cheshire's population of 29,017).

174. *See, e.g., Solangel Maldonado, Sharing a House but Not a Household: Extended Families and Exclusionary Zoning Forty Years After Moore*, 85 *FORDHAM L. REV.* 2641, 2650 (2017) (noting the disparity in constructing two-family homes as opposed to single-family homes and providing examples as to why production of two-unit homes may be sparse such as aesthetic, preference for land, and appeal).

Or it may be that land use regulations beyond the number-of-unit figure constrain the practical ability to produce duplexes. Part VI argues that we must look more carefully at the extent to which particular regulations work together to influence housing supply.

C. Accessory Dwelling Units

Like two-family housing, accessory dwelling units (ADUs)—small units of housing secondary to and smaller than a principal use—offer a small-scale alternative to single-family housing. When built in conjunction with single-family homes, ADUs benefit homeowners because they create an opportunity for extra income and provide for flexible living space.¹⁷⁵ When built as an accessory to a principal commercial use, they provide an opportunity for a shopkeeper to live above her store or a professional caretaker to keep an eye on a factory.¹⁷⁶ In either instance, they benefit communities because they provide housing that is naturally affordable because of its size.¹⁷⁷

In some states, including California, uniform statewide reforms overriding contrary zoning regulations have fast-tracked ADU creation.¹⁷⁸ In 2020, Connecticut adopted a law that legalized ADUs statewide and freed them from certain constraints, including public hearing requirements, maximum size requirements less than 1,000 square feet or 30% of the principal structure, and

175. See John Infranca, *Housing Changing Households: Regulatory Challenges for Micro-Units and Accessory Dwelling Units*, 25 STAN. L. & POL'Y REV. 53, 65 (2014) (highlighting how generating an additional income stream from ADUs can help homeowners pay off home mortgages and other property expenses).

176. See *Be My Neighbor: Untapped Solutions: ADUs and Conversions*, REG'L PLAN ASS'N (July 2020), https://s3.us-east-1.amazonaws.com/tpa-org/pdfs/RPA_Be-my-Neighbor.pdf (explaining the benefits of ADUs being built on the same lot as a primary dwelling).

177. See, e.g., *id.*; Sarah Thomaz, *Investigating ADUs: Determinants of Location and Effects on Property Values* (U.C. Irvine, Working Paper 2020) (available at https://www.economics.uci.edu/files/docs/workingpapers/JobMarketPaper_Thomaz.pdf); Ahmad Abu-Khalaf, *Overcoming Barriers to Bringing Accessory Dwelling Unit Development to Scale*, ENTER. CMTY. PARTNERS (2020), <https://docplayer.net/196026467-Overcoming-barriers-to-bringing-accessory-dwelling-unit-development-to-scale.html>; *The ABCs of ADUs: A Guide to Accessory Dwelling Units and How They Expand Housing Options for People of All Ages*, AARP (2019), <https://www.aarp.org/content/dam/aarp/livable-communities/livable-documents/documents-2019/ADU-guide-web-singles-071619.pdf>.

178. See Halsten Willis, *Accessory Dwellings Offer One Solution to the Affordable Housing Problem*, WASH. POST. (Jan. 7, 2021) (discussing how statewide zoning reform in California enabled an eleven-fold increase in ADU permits in just three years); *Accessory Dwelling Units (ADUs) and Junior Accessory Dwelling Units (JADUs)*, CAL. DEP'T HOUS. AND CMTY. DEV. (2020), <https://www.hcd.ca.gov/policy-research/accessorydwellingunits.shtml>.

requirements that they be attached to the principal unit, among other things.¹⁷⁹ However, before the end of 2022, towns were able to opt out of the law after two votes of local zoning and legislative bodies.¹⁸⁰ The following analysis on ADUs reviews local zoning codes as of mid-2022, prior to the full effective date of the state statute.

At first glance, ADUs seem to find favor in Connecticut's regulatory structure. According to the Connecticut dataset, most zoning codes across Connecticut explicitly allow ADUs: 94% of municipalities allow ADUs somewhere within their jurisdiction, either as of right or after a public hearing. Figure F manifests the incidence of these ADU allowances graphically:

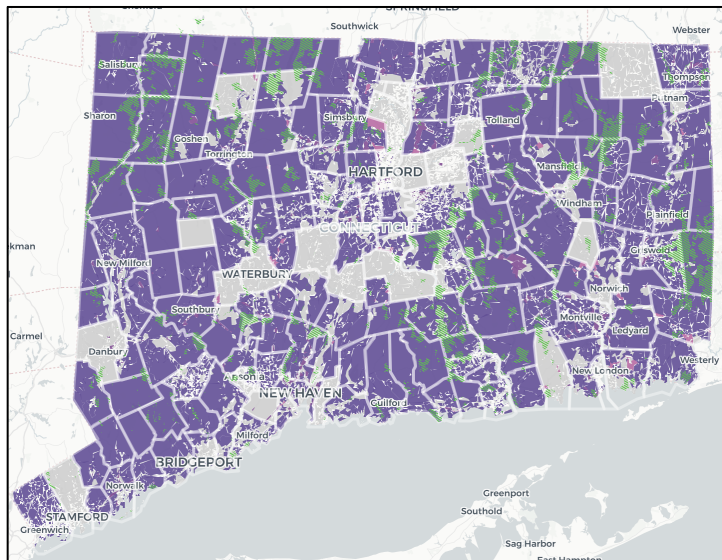


Figure F: ADUs Allowed (Purple)

89.9% of land allowing residences of any type also allows ADUs, and 49.7% of such land allows ADUs as of right. Ninety-four towns (56% of all towns) allow ADUs as of right in at least one zoning district, and 81 (48.5%) allow ADUs as of right in a majority of zoned land. These figures may

179. See H.B. 6107, Gen. Assemb., Reg. Sess. (Conn. 2021). Unlike California, Connecticut enabled towns to opt out of these provisions for a one-year period from the enactment date (*i.e.*, prior to January 1, 2023).

180. See *id.* (explaining the process for towns to opt out of the House Bill).

undercount towns actually allowing ADUs, as they exclude towns where local regulations are silent on ADUs but where town staff may nonetheless permit them as an implied accessory use. These findings are striking because existing literature on ADUs portrays a dynamic in which municipalities often zone for ADUs only when states require them to do so.¹⁸¹ This narrative does not fit well with Connecticut, because a majority of municipalities enacted ADU ordinances even before the state passed an ADU law in 2021.

As is the case with two-family housing, few ADUs have been produced despite regulations allowing them.¹⁸² Unfortunately, evidence of paltry production is more anecdotal than empirical, as no one has collected an accurate count of ADUs statewide. The American Community Survey of the U.S. Census, which counts housing units, does not capture the presence of an ADU on a single-family lot.¹⁸³ The Census's published methodology does not clarify whether that survey treats an ADU associated with a commercial unit as an attached single-family home.

Part VI identifies restrictions that likely dampen ADU construction. A clear majority of districts that allow ADUs require owner occupancy of the principal unit or ADU, and most zones apply at least one additional restriction. Only 18.9% of land permitting ADUs as of right allows ADUs free of certain occupancy, rental, size, and parking restrictions. The high degree of regulatory variation thwarts the development of prototype designs or prefabricated ADUs that could satisfy different rules across jurisdictions. More uniform rules and fewer restrictions will likely produce more ADUs. The effects of the state law governing ADU production will be a fruitful avenue for further study.

VI. BEYOND NUMBER-OF-UNIT ZONING

In questioning why Connecticut produces so few multi-family homes and accessory dwelling units, Part V teed up the discussion in this Part about the

181. See Margaret F. Brinig & Nicole Stelle Garnett, *A Room of One's Own? Accessory Dwelling Unit Reforms and Local Parochialism*, 45 URB. LAW. 519, 521 (2013).

182. See *P&Z Approves Text Amendment to Encourage Elderly, Affordable Accessory Apartments*, GREENWICH FREE PRESS (Sept. 13, 2020), <https://greenwichfreepress.com/news/government/pz-watch-proposed-text-amendment-aims-to-encourage-elderly-affordable-accessory-apartments-145476/> (“There have been regulations on accessory apartments since the 1980s, but still there are only 100 of these units in [Greenwich].”).

183. See *2019 ACS 5-Year Estimates Data Profile: Selected Housing Characteristics*, *supra* note 163 (showing housing units in Connecticut, but not data regarding ADUs on single lots).

prevalence and nature of specific regulations beyond number-of-unit caps. An exhaustive compendium of all the data collected, cross-referenced with unit types, district types, town types, demographic characteristics, and production numbers is impossible in this format. But in chronicling a few key findings, I hope to underscore the need for and value of accurate information about what zoning codes say.

Some key findings surprise, while others confirm the expected. Some requirements, including minimum parking and maximum height, prevail in 80–90% of all types of districts for all types of housing.¹⁸⁴ Others, like the floor-to-area ratio, are rare, even for multi-family housing in Mixed with Residential areas.¹⁸⁵ Some requirements, such as the obligation to undergo a public hearing, constrain multi-family housing more than single-family housing.¹⁸⁶ Others, such as minimum lot-size mandates, constrain single-family housing more than multi-family housing.¹⁸⁷

Connecticut's local regulatory constraints apply differently to principal and accessory housing. Three factors—public hearing requirements, minimum lot sizes, and minimum parking requirements—are common to both principal and accessory housing. Three others, all maximums (for lot coverage, floor-to-area ratio, and building height) apply to lots and buildings irrespective of use. Other restrictions apply differently to principal and accessory housing. For example, while principal dwellings are often subject to minimum unit size requirements, driving up their cost, accessory dwellings are often subject to maximum unit size requirements, limiting their utility. Similarly, zoning codes often impose occupancy restrictions limiting who can live in an accessory dwelling, but not who can live in principal dwellings.

With that preview in mind, we can now review top-level findings for each of these types of regulatory constraints.

A. Public Hearing Requirements

We start with the process by which housing may be approved, focusing on the public hearing. Zoning enabling acts adopted in every state typically require local governments to hold public hearings when adopting or amending

184. All calculations in this Part derive from the author's analysis of the database behind and map for Connecticut Zoning Atlas, *supra* note 17. See *infra* Section VI.C.2.

185. See *infra* Section VI.B.4.

186. See *infra* Section VI.A.

187. See *infra* Section VI.B.1.

a zoning code. They also enable local governments to require public hearings for individual applications. Increasingly, local governments require public hearings for individual housing applications. This trend hurts property owners and developers seeking to build housing. They prefer as-of-right zoning because clear, *ex ante* rules eliminate guesswork and reduce the need for costly revisions or conditions.

Scholars have started to criticize public hearing requirements as a significant barrier to development of all kinds, but housing in particular. Anika Singh Lemar has argued that public participation in zoning fails to serve the public interest and instead helps to cement racial segregation and reinforce exclusion.¹⁸⁸ She reasons that public hearings hurt our ability to provide enough housing that meets our needs because housing applications subject to public hearing requirements are more likely to be rejected.¹⁸⁹ Moreover, research shows that members of the public who speak at hearings are not representative of the population as a whole, have a status quo bias, and often lack an understanding of the benefits of new housing. A group of Boston University researchers found that those who participate in Massachusetts public hearings are Whiter, male, older, and more likely to be homeowners than the average person.¹⁹⁰ These findings square with prior research finding homeowners more likely to be involved in zoning processes than non-homeowners.¹⁹¹

188. See generally Anika Singh Lemar, *Overparticipation: Designing Effective Land Use Public Processes*, 90 *FORDHAM L. REV.* 1083 (2021) (describing the dysfunctional and broken public participation process). See also *Addressing Challenges to Affordable Housing in Land Use Law: Recognizing Affordable Housing as a Right*, 135 *HARV. L. REV.* 1104, 1107 (2022) (describing the administrative challenges created by public hearings); Jonathan Rothwell, *Land Use Politics, Housing Costs and Segregation in California Cities*, UC BERKELEY TERNER CTR. FOR HOUS. INNOVATION 3, 12–14 (2019); see Douglas A. Jordan & Michele A. Hentrich, *Public Participation is on the Rise: A Review of the Changes in the Notice and Hearing Requirements for the Adoption and Amendment of General Plans and Rezoning Nationwide and in Recent Arizona Land Use Legislation*, 43 *NAT. RES. J.* 865, 876 (2003) (highlighting the increase in public hearings in zoning and planning processes).

189. Lemar, *supra* note 188, at 1087 n.12.

190. See KATHERINE LEVINE EINSTEIN, DAVID GLICK & MAXWELL PALMER, *Who Are the Neighborhood Defenders*, in *NEIGHBORHOOD DEFENDERS* 95, 95–114 (2019) (surveying meeting minutes from Massachusetts zoning board meetings and comparing speaker names with voter files to ascertain that the majority of people who speak and participate in land use meetings in Massachusetts are White, male, older homeowners); see also Lemar, *supra* note 188, at 1113 (“Of the over one hundred project opponents, . . . all were white.”).

191. See, e.g., Greg Morrow, *The Homeowner Revolution: Democracy, Land Use, and the Los Angeles Slow-Growth Movement, 1965–1992* (2013) (Ph.D. dissertation, University of California, Los Angeles) (on file with author) (noting that the homeowner revolution has been problematic for various

Those increasingly viewing public hearing requirements with suspicion have little data to fall back on. As noted in Part III, prior studies either collected surveys which did not necessarily reflect what zoning codes actually said, or aggregated answers in a way that obscured their scope. Nor did we previously have much information identifying what types of projects public hearing requirements tend to apply to. The Connecticut research starts to fill this data gap. It finds that far, far more four-or-more-family projects than single-family projects must undergo a public hearing.

Distinguishing between Primarily Residential and Mixed with Residential land reveals further nuance. As Figure G shows, in areas zoned Primarily Residential, just 0.4% of land allowing for single-family housing requires a public hearing before it will be approved. This figure reflects a level of deference granted to people building single-family homes not granted to people living in any other type of housing. Even large houses the size of small apartment buildings will not generally receive a public hearing. By contrast, virtually all projects involving three-or-more-family units must undergo a public hearing before they will be approved. Odds are, a 2,000-square-foot triple decker will undergo months of review, while a 5,000-square-foot single-family home will be approved by a staff member “over the counter.” Somewhere in the middle, two-family housing is subject to a public hearing almost half the time.

reasons, one important one being that the planning process does not properly represent the sentiments of the community as a whole); WILLIAM A. FISCHER, *THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND-USE POLICIES* 74–76 (2001) (emphasizing how owning a home leads one to use their “voice,” and become more involved in the political process).

<i>Type of District</i>	<i>Permitted Housing</i>	<i>% of Total Acreage Requiring Hearings</i>
Primarily Residential	Single Family	0.4%
Primarily Residential	Two Family	45.8%
Primarily Residential	Three Family	93.5%
Primarily Residential	Four+ Family	94.3%
Mixed with Residential	Single Family	24.4%
Mixed with Residential	Two Family	41.8%
Mixed with Residential	Three Family	62.0%
Mixed with Residential	Four+ Family	68.0%

Figure G: Percentage of Land Requiring Public Hearings

In Mixed with Residential districts, Figure G shows that the gap between single-family and four-or-more-family housing narrows. Single-family housing remains less-often subject to public hearings compared to four-or-more-family housing, but zoning codes subject about a quarter of land allowing single-family housing to a public hearing. The increase in public hearing requirements for single-family housing in mixed-use districts could have one of several explanations. It could be that these districts treat all housing the same, imposing a public hearing requirement no matter how many units a development happens to include. Or, these districts could treat housing like every other use in the district, requiring public hearings for all new construction regardless of use. We have not yet broken down the data to find a clear explanation.

When it comes to four-or-more-family housing, a smaller percentage of land requires public hearings in Mixed with Residential areas than in Primarily Residential areas. Local regulators may be less wary of apartment buildings located in mixed-use areas, and thus more likely to allow such buildings to be allowed as of right. However, land zoned to allow four-or-more-family dwellings in Mixed with Residential districts is less than a tenth of land zoned to allow four-or-more-family dwellings in Primarily Residential districts. So the fact that public hearing requirements in Mixed with Residential districts are slightly less onerous than in Primarily Residential districts may not have much practical impact because of the small amount of land allowing such buildings as of right.

Perhaps the first major lesson from the Connecticut data is that reformers should more directly target public hearing requirements, which affect virtually all multi-family housing in Primarily Residential Areas and most multi-family housing in mixed-use areas. Reformers should not be distracted from this task by the fact that public hearings expand pathways for two-or-more-family housing. It is true that when considering both land that allows housing as of right and land that allows housing after a public hearing, local authorities allow two-family, three-family, and four-or-more-family housing on 50.6%, 26.3%, and 27.3%, respectively, of the state's zoned land. But that means the remaining land bars such housing entirely. And these large-seeming figures do not account for the substantive constraints on multi-family housing, which combine to dampen its production. To learn more about these constraints, keep reading.

B. Lot Requirements

Moving on from process considerations, we turn now to substantive constraints on the way a lot may be developed, considering minimum lot size requirements, minimum parking requirements, maximum lot coverage, and maximum floor-to-area ratios.

1. Minimum Lot Sizes

Local regulators frequently establish minimum lot sizes through zoning to ensure that each housing unit comes with a certain amount of land. In theory, minimum lot size mandates benefit communities because they promote light, air, and open land by spacing out housing.¹⁹² Observers these days, however, critique minimum lot sizes as a tool of intentional exclusion because they limit the growth of a community and increase land costs.¹⁹³ They push

192. *But see FAQs*, DESEGREGATE CONN., <https://www.desegregatect.org/lots> (last visited Jan. 25, 2023) (noting that zoning codes that require minimum size requirements lead to fewer homes being built in a community).

193. *See, e.g.*, Amrita Kulka, *Sorting into Neighborhoods: The Role of Minimum Lot Sizes 44–50* (Dec. 30, 2019) (unpublished manuscript) (on file with author); *Small Lots in Smart Places: A right-Sized Solution for CT*, DESEGREGATE CONN. <https://static1.squarespace.com/static/5ee8c6c9681b6f2799a4883a/t/61ea028879710056b2a90fe9/1642726053008/Issue+Brief+-+Minimum+Lot+Sizes.pdf> (last visited Jan. 25, 2023) (finding that minimum lot size requirements allow less homes be built, making the few homes actually available more expensive, which in effect restricts the housing choices for people of color due to racial wealth and income gaps).

development outward and create sprawl, which not only causes environmental degradation but burdens local governments with the costs of building roads, sewers, power lines, and schools to meet the needs of increasingly distant neighborhoods.¹⁹⁴ Like public hearings, minimum lot size requirements have been identified by scholars as being a significant factor in housing development.¹⁹⁵

In addition to critiquing the impacts of minimum lot sizes, these scholars question the supposed consumer preferences for single-family and large-lot zones, which may result from constrained choice, not preference.¹⁹⁶ Two scholars doing research in Texas have asserted that consumers prefer lots built on 5,000 to 7,000 square feet, a size rarely allowed by zoning laws.¹⁹⁷ Those who have never known anything different than large-lot single-family housing may think they prefer them. But with studies showing that such development contributes to a deterioration in individuals' physical and mental wellbeing, one might question whether the supposed preference for large lot zoning is either true, or truly preferable. Whether arising out of regulatory stasis or consumer choice, most scholars agree that minimum lot sizes hinder new housing creation.¹⁹⁸

Minimum lot size mandates have been high in Connecticut for half a century. In 1978, a state agency dealing with human rights observed that 106 of 169 towns had "no vacant residential land zoned under ¼ acre."¹⁹⁹ Today, 81% of the state (*i.e.*, both residential and nonresidential areas) allows single-

194. See *Small Lots in Smart Places: A Right-Sized Solution for CT*, *supra* note 193, at Part IV (noting these various effects).

195. See, *e.g.*, Ellickson, *supra* note 3 (identifying minimum lot size as a major distinction between the three regions in his title); see also Shanks, *supra* note 99 (focusing on minimum lot sizes); Paul Boudreaux, *Lotting Large: The Phenomenon of Minimum Lot Size Law*, 68 ME. L. REV. 1, 5 (2016); Glaeser & Ward, *supra* note 105, at 278 (finding that for each extra minimum lot acre within a community, there was a 40% decrease in construction permits); GYOURKO ET AL., *supra* note 58, at 17; Jeffrey M. Lehman, *Reversing Judicial Deference Toward Exclusionary Zoning: A Suggested Approach*, 12 J. AFFORDABLE HOUS. & CMTY. DEV. L. 229, 233 (2003). See generally Sara C. Bronin & Dwight D. Merriam, *Density*, 3 RATHKOPF'S THE LAW OF ZONING AND PLANNING § 51 (4th ed. Apr. 2023) (discussing zoning control of density and lot size).

196. See, *e.g.*, Manville et al., *supra* note 5, at 108 (highlighting the problems inherent in the argument perpetuated by journalists, neighborhood groups, and some academics that most Americans prefer detached single-family homes).

197. Nolan Gray & Salim Furth, *Do Minimum-Lot-Size Regulation Limit Housing Supply in Texas?*, MERCATUS CTR, GEO. MASON UNIV. 1, 4 (May 1, 2019), file:///Users/robertstern/Downloads/gray-minimum-lot-size-mercatus-research-v3%20(1).pdf.

198. See, *e.g.*, Manville et al., *supra* note 5, at 108.

199. A STUDY OF ZONING IN CONNECTICUT, *supra* note 136, at 54.

family housing only if its lot exceeds 0.92 acres, while 49% of the state allows single-family housing only if its lot exceeds 1.84 acres. Figure H further breaks these figures down, showing the amount of land requiring a minimum lot size, as a percentage of the overall acreage of land allowed (as of right and after a public hearing) particular types of housing in both Primarily Residential and Mixed with Residential districts:

<i>Type of Permit</i>	<i>Permitted Housing</i>	<i>% of Total Primarily Residential Acreage Permitting the Housing Type with MLS</i>	<i>% of Total Mixed with Residential Acreage Permitting the Housing Type with MLS</i>
As of Right	Single Family	94.4%	70.3%
	Two Family	76.0%	54.1%
	Three Family	59.3%	42.9%
	Four+ Family	49.5%	41.5%
Public Hearing	Single Family	65.5%	59.2%
	Two Family	57.1%	42.6%
	Three Family	58.2%	45.6%
	Four+ Family	59.2%	52.5%

Figure H: Percentage of Land Requiring Minimum Lot Sizes (MLS)

Figure H shows that zoning codes require a minimum lot size for nearly every single-family house that gets built in Connecticut: 94.4% of land permitting single-family housing as of right.²⁰⁰ Since as-of-right single-family housing is allowed in 90.6% of the state, that means at least 85.5% of the land in the state requires a minimum lot size for housing. Zoning codes require single-family housing subject to public hearings to have minimum lot sizes about two-thirds of the time in Primarily Residential districts, and 59.2% in mixed-use districts.

Land allowing other types of housing requires minimum lot sizes less often than minimum lot sizes are required for single-family housing, as shown in Figure H. Two-family housing has minimum lot sizes about three-fourths of the time, while three-family housing has minimum lot sizes under two-

200. Sixty-four percent of land permitting single-family housing after a public hearing requires a minimum lot size, but as noted above, only 0.4% of land allowing single-family housing requires a public hearing.

thirds of the time. For four-or-more-family housing, an equal amount of land requires minimum lot sizes as does not. As noted in Figure G, nearly all Primarily Residential land allowing four-or-more-family housing also requires applications for that housing to undergo a public hearing. The small amount of Primarily Residential land (just 5.7%) that allows four-or-more-family housing without a public hearing requires a minimum lot size over half the time. We do not know what accounts for this difference, other than speculation that jurisdictions so seldom permit as-of-right four-or-more-family housing in Primarily Residential areas that they have either selected only large lots for such permissions or written the various zoning rules tightly enough to virtually dictate results. Similarly, Mixed with Residential land allowing four-or-more-family housing as of right requires minimum lot sizes less frequently than Mixed with Residential land allowing four-or-more-family housing after a public hearing. Again, perhaps this difference results from such housing only being permitted as of right in very specific places.

The Connecticut data does not just yield the prevalence of minimum lot sizes. We also collected information about the size of the minimum lot required. Codes require very large minimum lot sizes for most single-family housing, especially when those houses are located in residential areas, as most are. In land zoned Primarily Residential, 81.1% of land has a minimum lot size requirement of 0.92 acres or more for single-family homes; 51.4% of Primarily Residential land has a minimum lot size requirement of 1.84 acres or more for such homes. To put these numbers in context, legal scholars classify lots above 0.5 acres as large.²⁰¹ Thus, the vast majority of Connecticut's residentially zoned land has not just large but very large minimum lot sizes for single-family housing.

In areas allowing four-or-more-family housing, very large minimum lot size mandates are less common. Across Primarily Residential and Mixed with Residential categories, Connecticut zoning codes require four-or-more-family housing to have a minimum lot sizes exceeding 0.92 acres 45.7% of land, and exceeding 1.84 acres on 38.8% of land. Thus the percentage of land with large minimum lot size mandates for single-family housing exceeds the percentage for four-or-more-family housing. Perhaps of note is the further difference between the minimum lot size mandates in districts allowing four-or-more-family housing after a public hearing and districts allowing such housing as of right. Of the less than 8% of land allowing four-or-more-family housing as

201. See Ellickson, *supra* note 3, at 22 tbl.1.

of right, just 15.3% requires minimum lot sizes over 0.92 acres. In absolute terms, more single-family land requires a minimum lot size than any other type of land, and single-family lot minimums exceed multi-family lot minimums. These findings suggest that reformers should prioritize lot-size reforms in single-family neighborhoods over lot-size reforms in multi-family areas. They should also review the size of lot mandates, eyeing half-acre mandates with suspicion.

2. Minimum Parking Requirements

A typical American zoning code requires a property owner to build a certain amount of parking for each housing unit created. Scholars have argued that these requirements and other policies favoring parking have had serious negative effects on our economy and well-being.²⁰² Among other things, minimum parking requirements drive up the price of developing housing and have the effect of restricting the area of a lot that can actually be used for housing.²⁰³ Often, the parking required goes unused.²⁰⁴ Moreover, researchers have found that the more parking is provided, the more people drive,²⁰⁵ resulting in increased greenhouse gas emissions.²⁰⁶

While many scholars have complained about the negative impacts of parking, no research documents parking requirements across many

202. See, e.g., DONALD C. SHOUP, *THE HIGH COST OF FREE PARKING* 157-59 (2011) (highlighting the damage that parking requirements cause to the urban economy).

203. See, e.g., C.J. Gabbe & Gregory Pierce, *Hidden Costs and Deadweight Losses: Bundled Parking and Residential Rents in the Metropolitan United States*, 27 HOUS. POL'Y DEBATE (2017) (finding garage parking provided with rent increases the price of housing by 17%); VICKI BEEN & SIMON MCDONNELL, *SEARCHING FOR THE RIGHT SPOT: MINIMUM PARKING REQUIREMENTS AND HOUSING AFFORDABILITY IN NEW YORK CITY* (2012); *Ending Costly Parking Mandates*, DESEGREGATE CONN. <https://www.desegregatect.org/parking> (last visited Apr. 4, 2023) (summarizing research on the subject).

204. See Elise Harmon, *Most Metro Boston Residential Developments Overbuild Off-Street Parking*, METRO. AREA PLAN. COUNCIL (July 24, 2019, 12:36 PM), <https://www.mapc.org/planning101/most-metro-boston-residential-developments-overbuild-off-street-parking/> (“Nearly 30 percent of off-street parking spaces at multifamily developments in cities and towns around Boston are sitting empty at peak demand time . . .”).

205. Christopher T. McCahill et al., *Effects of Parking Provision on Automobile Use in Cities: Inferring Causality*, 2543 TRANSP. RSCH. REC.: J. TRANSP. RSCH. BD. (2016) (finding an increase in parking spaces from 0.1 to 0.5 spaces per person increased automobile mode share by roughly 30%).

206. See, e.g., BEEN & MCDONNELL, *supra* note 203, at 3 (detailing how in 2007 the mayor of New York released a plan to modify parking regulations in an effort to curb these problematic greenhouse gas emissions).

jurisdictions in any detail. The Connecticut data fills this gap by definitively chronicling that most jurisdictions mandate parking. Statewide, 86.7% of zoned land allowing housing also imposes minimum parking requirements. One might have hypothesized these requirements to be largely uniform, drawing from parking-standards guidance issued decades ago by the Institute for Traffic Engineers.²⁰⁷ Indeed, jurisdictions share basic methods, such as mandating parking on a per-unit basis, and converge on similar substantive standards. But some variety revealed itself. For example, while most jurisdictions require parking, eleven municipalities, including several small- and mid-sized towns as well as the large cities of Hartford and Bridgeport, had no residential parking requirements. Ten more had residential parking requirements applying to less than 25% of their total area.²⁰⁸ Even similar jurisdictions do things differently. While Hartford became the first city in the country to completely eliminate minimum parking requirements,²⁰⁹ and Bridgeport followed in 2022, New Haven still maintains onerous parking burdens.²¹⁰ More fine-grained distinctions require further study.²¹¹

The data also showed that parking regulations treat types of housing differently. Most Connecticut jurisdictions have one parking mandate for single-family homes, and another for apartments. On average, districts allowing as-of-right single-family homes—including districts that do not have any minimums—require 1.56 parking spaces for single-family homes. In just districts with parking mandates, the average district requires 1.93 spaces per single-family home. Almost 900 districts, about 70% of total single-family districts, require 2 spaces per home, making that requirement by far the most dominant. Given that most single-family homes sit on very large lots, parking mandates seem less consequential than parking mandates for four-or-more-family dwellings. Perhaps that is why about 20% of districts allowing single-family

207. See KEVIN G. HOOPER, PARKING GENERATION MANUAL (Institute for Traffic Engineers: 5th ed. 2019) (providing parking standards guidance).

208. Bethlehem, Bolton, Bridgeport, Canterbury, Eastford, Hartford, Sharon, Sterling, Thompson, Weston, and Woodstock have no minimum parking requirements; Coventry, Greenwich, Manchester, Marlborough, Putnam, Trumbull, Wethersfield, Winchester, Windsor Locks, and Woodbridge have less than 25% of acreage zoned to allow residential land with parking requirements.

209. Bronin, *supra* note 46, at 746–47 (documenting Hartford’s removal of parking requirements).

210. See *Parking Mandates Map*, PARKING REFORM NETWORK, <https://parkingreform.org/resources/mandates-map/> (last visited Jan. 23, 2023) (showing New Haven still has parking requirements, while Hartford and Bridgeport do not).

211. For example, if both elderly housing and non-elderly housing is permitted in a district, the zoning code may require one number of parking spaces for an elderly-housing unit and another number for a non-elderly housing unit.

housing lack minimum parking requirements for their large-lot residential areas.

When regulating apartments, many zoning codes differentiate between apartments depending on the number of bedrooms. The Connecticut data thus logs two types of parking mandates: mandates for studios and one-bedrooms, and mandates for two-or-more bedrooms. On average, the 327 districts allowing as-of-right four-or-more-family homes—including districts without minimums—require 1.05 spaces for studio apartments in four-or-more-family housing, and 1.13 spaces for two-or-more-bedroom apartments in four-or-more-family housing. In just districts with parking minimums, the average district requires 1.74 spaces per studio and 1.89 spaces for two-or-more-bedroom apartments. Thirty-three towns, across 166 districts covering nearly 150,000 acres of land, require more than two parking spaces per two-bedroom apartment in two-or-more-family housing. That some towns—including the wealthy town of Darien and the smaller towns of Lebanon and Naugatuck—require three parking spaces for every new studio or one-bedroom apartment defies any reasonable justification.

Adding to the somewhat irrational nature of local parking mandates, high parking requirements persist even in areas served by mass transportation. In forty towns with a commuter rail station or bus rapid transit station, 169 zoning districts allow four-or-more-family housing as of right. On average, these districts require more than 1.7 parking spaces for every new apartment, including new studio apartments. Darien and Naugatuck, which require three parking spaces for each studio apartment, both have train stations. These requirements beg the question: What kind of person would rent a studio apartment near a train station and need three cars? These onerous requirements seem to have no other purpose than to prevent new apartments from ever being built at all.

A final restriction, overlapping with discussion in Section V.C., involves parking for accessory dwelling units (ADUs). Zoning codes commonly require parking for ADUs. About two-thirds of land that allows ADUs has a parking mandate additional to the parking mandate of the principal use. In districts with mandates, these requirements average about 1.5 spaces per ADU, whether permitted as of right or after a public hearing. In zones that allow ADUs as of right, 58.9% of land has a parking minimum; for zones that allow ADUs after a public hearing, that number climbs to 70.7%. That parking requirements are more prevalent with public hearing reviews contrasts with the finding that minimum lot size requirements are less prevalent in

public hearings.²¹²

In sum, the Connecticut figures on parking suggest wild variation, even in similarly situated communities and housing types. It seems unlikely that parking requirements constrain the development of single-family housing in Connecticut, where large-lot zoning dominates. However, parking requirements likely hinder the creation of three-or-more-family housing, because this type of housing does not necessarily have a minimum lot requirement and is likely to be proposed for locations with limited land area.²¹³ In forthcoming work, a co-authored piece will use GIS modeling combining the Connecticut Zoning Atlas with parcel data to show that parking requirements reduce the number of buildable units in walkable communities already zoned to allow multi-family housing.²¹⁴ In Bridgeport alone, prior to its 2022 rezoning, minimum parking requirements on parcels allowing four-or-more-family housing single-handedly barred production of over one hundred thousand housing units.²¹⁵

Based on these findings, reformers may consider focusing on parking reform for multi-family housing, including lifting minimum requirements around transit stations or in walkable areas, prohibiting or limiting parking requirements for ADUs, and capping mandates based on the number of bedrooms.

3. Maximum Coverage

Maximum lot coverage requirements tell property owners the percentage of a lot that may be occupied by a building, or by a building and other impervious improvements, such as driveways and pools. Very small lot coverage requirements mean that most of a lot must remain pervious surface, usually landscaping or grass, and little may be built. On the positive side, lot coverage requirements can improve stormwater management by increasing the amount of land that can absorb stormwater. But they also limit the amount of land

212. *See supra* Section VI.B.1.

213. *See also* David Garcia & Julian Tucker, *How AB 1401 May Impact Residential Parking Requirements*, Turner Ctr. for Hous. Innovation (Apr. 13, 2021), <https://turnercenter.berkeley.edu/research-and-policy/ab-1401-residential-parking-requirements/#:~:text=Specifically%2C%20AB%201401%20would%20prohibit,prioritization%20of%20easy%20automobile%20access> (discussing California's proposed parking restrictions on residential and commercial properties).

214. *See* Sara C. Bronin & Ilya Ilyankou, *How Minimum Parking Requirements Hinder Housing Production*, (unpublished manuscript) (on file with author).

215. *Id.*

that can accommodate housing. According to the Connecticut data, about three-quarters of the state’s total zoned land has a lot coverage requirement of some kind. Figure I shows both the percentage of districts allowing such housing and the percentage of lot coverage actually required.

	1-Family		2-Family		3-Family		4-or-More-Family	
	Bldg	Bldg or All	Bldg	Bldg or All	Bldg	Bldg or All	Bldg	Bldg or All
% of All Districts Allowing Such Housing with Coverage Requirements ²¹⁶	66.8%	78.5%	64.6%	78.0%	61.9%	75.2%	60.3%	73.5%
Average Coverage ²¹⁷	25.8%	43.1%	29.4%	47.9%	32.9%	59.0%	33.8%	58.8%

Figure I: Districts Requiring Lot Coverage and Lot Coverage Averages

Thus, around three-quarters of zoning districts either have building coverage requirements or have building coverage and overall impervious coverage requirements (the “Bldg or All” category). This holds true for districts allowing one, two, three, and four-or-more- family housing, though single-family districts are more likely to require lot coverage (either building or overall).

The average coverage required also tells a story. As is to be expected, the average coverage allowed is lower for buildings only than for buildings plus other impervious surfaces. Jurisdictions with building coverage maximums set aside roughly 30% of land for buildings.²¹⁸ Jurisdictions with coverage maximums for buildings and other impervious set aside 43.1% in districts allowing single-family housing, and 58.8% in districts allowing four-or-more-

216. To calculate the figures in this line, the number of districts requiring the respective lot coverage requirements were divided by the overall number of districts allowing one, two, three, or four-or-more-family housing, respectively. Thus, the denominator for both one-family categories, for example, stayed the same. Note that this Figure excludes overlay districts from the calculations altogether.

217. The figures in this line include the average amounts of the substantive requirements in the zoning districts with such requirements, without adjusting for the size of the district or amount of land in each of the districts. It does not include, in the numerator or denominator, districts without lot coverage requirements.

218. The figures range from 25.8% for single-family districts to 33.8% in four-or-more-family districts.

family housing. Put another way, zoning authorities reserve more land for landscaping in single-family districts than districts allowing four-or-more-family housing. The amount of land also varies by type of community. Wealthy suburban communities tend to have lower lot coverage caps than urban centers. One extremely wealthy community, New Canaan, for example, caps building coverage at between 5% and 8% in its largest residential zones.²¹⁹ Hartford, meanwhile, allows 90% of a lot to be covered by buildings in its downtown.²²⁰

These differences likely contribute to temperature differences between the communities, with the urban heat island effect more pronounced in communities with less green space.²²¹ Cooling cities should be an important imperative. But we should not overlook the negative environmental impacts of lot coverage requirements. When combined with prevalent minimum lot size requirements for single-family homes, sprawl results.²²² These two requirements work together to outlaw the dense development necessary to reduce the demand for driving and thus reduce transportation-related emissions. Currently, transportation is the largest contributor to U.S. greenhouse gas emissions, at 29% of total emissions, with ordinary cars and trucks accounting for the majority of these emissions.²²³ The problem is getting worse. Emissions from transportation increased by 23.8% between 1990 and 2019.²²⁴ Vehicle-related emissions increased more in absolute terms than in any other sector (*i.e.*, electricity generation, industry, agriculture, industry, residential, commercial), due in large part to increased demand.²²⁵ Lot coverage requirements

219. NEW CANAAN, CONN., ZONING REGS. § 3.5(D)(1) (as amended, effective Dec. 19, 2022).

220. HARTFORD, CONN., ZONING REGS. § 4.42 (as amended, effective June 5, 2020).

221. *See Learn About Heat Islands*, EPA (Sept. 2, 2022), <https://www.epa.gov/heatislands/learn-about-heat-islands#causes> (explaining causes of heat islands, including reduced natural landscapes in urban areas).

222. *Rethinking Urban Sprawl: Moving Towards Sustainable Cities*, ORG. FOR ECON. COOP. & DEV. 1, 10–11 (June 2018), <https://www.oecd.org/environment/tools-evaluation/Policy-Highlights-Rethinking-Urban-Sprawl.pdf> (explaining how such density restrictions cause urban sprawl).

223. *See Sources of Greenhouse Gas Emissions*, EPA, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation> (last visited Jan. 20, 2023). Of the greenhouse gases emitted by the transportation sector, passenger cars contribute 33.7%, freight 23.1%, light-duty trucks (sport utility vehicles, pickup trucks, and minivans) 17.2%, and commercial aircraft 5%. *Fast Facts: U.S. Transportation Sector Greenhouse Gas Emissions*, EPA 1, 2 (2022), <https://nepis.epa.gov/Exec/ZyPDF.cgi?Dockey=P10153PC.pdf>. Transportation also emits more carbon dioxide (one GHG) into the air than industrial, residential, or commercial uses. *See Monthly Energy Review*, U.S. ENERGY INFO. ADMIN. 206, 208 (Dec. 2022), <https://www.eia.gov/totalenergy/data/monthly/pdf/sec11.pdf>.

224. *Sources of Greenhouse Gas Emissions*, EPA, *supra* note 223.

225. *See Fast Facts: U.S. Transportation Sector Greenhouse Gas Emissions*, EPA, *supra* note 223,

thus not only have the effect of limiting the amount of land on which housing may be built and driving up its costs, but they also likely compound our negative environmental impact.

4. Maximum Floor-to-Area Ratio

A floor-to-area ratio (FAR) caps the amount of buildable square footage by controlling the bulk of the building through a ratio tied to the size of the lot. Mid-twentieth century proponents of the FAR touted its potential to control density and provide light, air, and open space to the community.²²⁶ Yet it has not become as prevalent as other constraints on building size. In Connecticut, only 6.8% of the state's total zoned land is subject to an FAR of any kind, and only about 15% of Connecticut zoning districts include an FAR. The vast majority of single-family housing, approved as of right within a Primarily Residential district, is free of FAR requirements (88% of such districts).

The highest prevalence of FAR requirements is in four-or-more-family housing in Mixed with Residential districts—26% of such districts have FAR requirements. In Mixed with Residential districts allowing as-of-right four-or-more-family housing, the average FAR is 1.33. Now match this to the average building coverage requirements shown in Figure I above: 33.8%. If the largest building that can be built on a lot has a minimum floor plate of one-third of the lot size, and the FAR is 1.33, the building would have to be four stories tall to maximize the amount of square footage allowed by the FAR. However, the jurisdiction may not even allow buildings that tall. The numbers get worse for Mixed with Residential districts where four-or-more-family housing is allowed after a special permit: the average FAR is just 0.94, allowing a property owner who can only build on one-third of her lot to cap out at just a three-story building. The average FAR for four-or-more-family housing in Primarily Residential districts is just 0.64.

Zoning authorities in Connecticut seldom use FAR requirements for residential development, even in commercial areas. However, when used, FAR requirements impose extremely onerous restrictions on housing construction. If jurisdictions already cap lot coverage and building heights, the significance

at 2–3.

226. See, e.g., *Building Size, Shape, and Placement Regulations*, *supra* note 41, at 507 (“Bulk controls are used to achieve three similar ends: control over density of population in living and working areas, adequate daylighting of buildings, and sufficient open space around buildings for rest and recreation.”).

of FAR requirements likely diminishes.²²⁷ But we need high-quality research to assess the interaction between these and other factors.

Existing research touching on FAR requirements starts to weigh this interaction, though it would benefit from more detailed compilations of actual zoning data. Authors of a 2020 paper, for example, used existing and “estimated” FAR as a proxy for building height regulation.²²⁸ The authors analyzed sales prices and vacant land potential in five cities (New York, Washington D.C., Chicago, San Francisco, and Boston). They imputed values for FAR by “grouping observations (which were not geocoded) into clusters of parcels located on the same street.”²²⁹ If one wonders why the authors did not consider actual FAR, height, or lot coverage requirements (likely all common in these cities’ codes), the answer is that they probably could not easily obtain it in these large cities with complicated zoning rules. Without accurate, district-specific zoning data, economists are left to make assumptions, sometimes flawed, about the law.

C. *Building Requirements*

Just as they constrain lot configuration, zoning codes also constrain the way individual buildings must be developed. Related to the lot requirements considered in the preceding Subpart are maximum caps on building height, very common across all types of housing. Another key but understudied constraint in this regard is the requirement that a housing unit be a minimum or maximum size. Worth mentioning are other types of requirements that were logged in our research but may not be as consequential.²³⁰

227. See, e.g., Jan K. Brueckner & Ruchi Singh, *Stringency of Land-Use Regulation: Building Heights in US Cities*, 116 J. URB. ECON. 1, 32 (2020) (explaining how lot coverage and FAR interact, in turn showing how lots limited by lot coverage and building height requirements would be less affected by a FAR).

228. See *id.*; see also Alain Bertaud & Jan K. Brueckner, *Analyzing Building-Height Restrictions: Predicted Impacts and Welfare Costs*, 35 REG’L SCI. & URB. ECON. 109 (2005) (using similar methods in Bangalore to show that height restrictions force sprawl and reduce household income in an amount of about 2%).

229. Brueckner & Singh, *supra* note 227, at 4.

230. See, e.g., *infra* Section IV.C.3.

1. Maximum Building Height

The regulation of height of buildings has long been recognized as a valid exercise of zoning authority. At the same time, height limitations have come under fire in recent years, particularly when applied to multi-family housing, because they decrease supply and thus decrease affordability.²³¹ The Connecticut dataset reveals the incidence and restrictiveness of height requirements, as summarized by Figures J and K. Over four in five districts have a height requirement across the board, whether in Primarily Residential or Mixed with Residential districts, and whether as of right or requiring a public hearing. The highest percentage of districts with height requirements (94.1%) occurs in the most common category in Connecticut: single-family, as-of-right housing in Primarily Residential districts. The lowest percentage of districts with height requirements (80.0%) occurs in single-family housing subject to public hearings in Primarily Residential districts. The rest fall somewhere in the middle.

	1-Family		2-Family		3-Family		4-or-More-Family	
	As of Right	Public Hearing	As of Right	Public Hearing	As of Right	Public Hearing	As of Right	Public Hearing
% of Primarily Residential Districts ²³²	94.1%	80.0%	92.2%	85.2%	88.6%	84.8%	84.4%	86.9%
% of Mixed with Residential Districts ²³³	87.6%	85.4%	86.8%	85.8%	85.9%	87.0%	84.2%	82.9%

Figure J: Districts with Height Requirements as a Percentage of All Districts Allowing the Shown Housing Type

231. See, e.g., Michael D. Eriksen & Anthony W. Orlando, Returns to Scale in Residential Construction: The Marginal Impact of Building Height 1, 28 (Apr. 12, 2021) (unpublished manuscript), <https://dx.doi.org/10.2139/ssrn.3674181> (“Most major U.S. cities have height limits that restrict the number of stories a developer can choose in construction.”).

232. To calculate the figures in this line, the number of districts with height requirements were divided by the overall number of Primarily Residential districts allowing one, two, three, or four-or-more-family housing, respectively. Note that this Figure excludes overlay districts from the calculations altogether.

233. To calculate the figures in this line, the number of districts with height requirements were divided by the overall number of Primarily Residential districts allowing one, two, three, or four-or-more-family housing, respectively. Note that this Figure excludes overlay districts from the calculations altogether.

The Connecticut dataset also logs the nature of the height constraints. As shown in Figure K, the vast majority of districts limit the number of stories to less than four. For single-family housing, the average limit of just over three stories seems reasonable, albeit unnecessary. Few single-family homeowners would be constrained, as most single-family homes cap out at one or two stories. More research should be done, but I doubt height restrictions in single-family zones make a big difference. For two-family housing, the average limit of 3.6 stories also seems reasonable, and likely inconsequential. Even the caps on three-family housing, which would allow three- or four-story structures, are workable. Less workable are the severe constraints on four-or-more-family housing. Districts allowing four-or-more-family housing as of right cap out, on average, at 4.4 stories, while districts subjecting such housing to public hearings cap that housing at just 3.4 stories. The median height requirement for as-of-right housing yields 3.5 stories, suggesting that a few larger numbers may be inflating the mean, and that the constraints on four-or-more-family housing are even more severe than the average shows.

	1-Family		2-Family		3-Family		4-or-More-Family	
	As of Right	Public Hearing	As of Right	Public Hearing	As of Right	Public Hearing	As of Right	Public Hearing
Number of Stories Allowed²³⁴	3.2	3.3	3.6	3.6	4.1	3.3	4.4	3.4

Figure K: Average Maximum Height Requirements²³⁵

Extremely common, height caps likely play a significant role in the ability to construct four-or-more family housing. Future research should tie incremental changes in the numbers of stories allowed to housing prices. For now, data on the height requirements for Connecticut’s zoning districts completes the inquiry into zoning regulations governing buildings’ bulk.

234. To calculate the figures in this line, the number of districts with height requirements were divided by the overall number of Mixed with Residential districts allowing one, two, three, or four-or-more-family housing, respectively. Note that this Figure excludes overlay districts from the calculations altogether.

235. Most zoning codes provide maximum heights measured in number of stories; many provide both number of stories and linear feet and say that whichever is less controls. To allow for the harmonization of the numbers, I selected the number of stories figure for each district that offered it (whether alone or as an alternative to linear feet); for zoning districts that just offered a linear-foot measure, I divided that number by ten to obtain the average number of stories.

2. Unit Size Requirements

As important as the size of the building may be what happens on the interior. Local zoning regulators have at times construed their regulatory authority to include the ability to require housing to be a certain size. While towns impose minimum unit sizes on principal-use housing, they impose maximum unit sizes on accessory dwellings. Very little scholarship has explored the issue of the unit size, nor have unit size requirements been tracked in any detail.

Minimum unit sizes have been an issue for housing as a principal use in Connecticut—so much so that in 1988, the Connecticut Supreme Court virtually banned the practice of minimum unit sizes established through zoning, holding that such requirements could only be justified for health or safety reasons.²³⁶ We almost did not track this piece of information because we believed the judicial decision had ended the exclusionary practice. However, we were compelled to add it after seeing the requirement appear again and again, and in the end, we counted 586 mapped zoning districts in Connecticut that still require a minimum unit size. This finding confirms both the slow speed at which zoning laws are updated, and the intransigence of municipalities in complying with judicial precedent.

Even though minimum unit sizes are illegal in Connecticut, it is worth noting how they are articulated, because they likely continue to be enforced by local regulators. In the zoning code, zoning officials may give one simple number to establish a minimum unit size or may offer multiple numbers or even a formula depending on various factors. Common factors in our research included the location of the unit (first or second-or-higher floor), the number of bedrooms (with additional square footage required for each bedroom), and the location of the unit (attached to another unit or detached).²³⁷

Of the 471 districts requiring a minimum unit size for single-family housing, about 40% require a size of 1,000 square feet or more. Several require single-family housing to be more than 2,000 square feet. The smallest minimum unit size is established in a small-town business district, at 350 square feet. Two hundred twenty-five of the 1,008 districts allowing two-family housing require a minimum unit size—a handful as large as 2,000 square feet.

236. *Builders Serv. Corp. v. Planning & Zoning Comm'n*, 208 Conn. 267, 534 (1988).

237. For this reason, my calculations in this paragraph are estimates, and I use the word “about” to express some fuzziness about the precise number of districts that should reasonably belong in each category (e.g., “1,000 square feet or more”) used.

One hundred thirty-eight of those districts allow two-family housing as of right, so it is possible that a minimum unit size has contributed to the dearth of two-family housing actually being built. For four-or-more-family housing, one jurisdiction establishes a minimum unit size of 300 square feet, while the wealthy town of Darien establishes a minimum unit size of 1,600 square feet per unit in one of its districts.²³⁸ About 37 districts require between 750 and 1,200 square feet per unit for four-or-more-family housing.

There does not appear to be a particular rhyme or reason to the requirements establishing a minimum unit size. The larger requirements could significantly constrain the number of units that may be built on a particular parcel, and even modest requirements may change the dynamic of construction on small parcels. Understanding the practical ramifications of these requirements would require significant effort to model, and it may not be predictive given the many other variables that affect the amount of land that is used. Reformers might note that this project's documentation of minimum unit size requirements helped to support a 2021 state statute codifying the Connecticut Supreme Court decision by prohibiting local mandates on minimum unit size.²³⁹ Reformers might use the Connecticut data, court decision, and state law to encourage a ban on the practice of requiring minimum unit sizes.

When it comes to accessory dwellings, local jurisdictions very often establish *maximum* unit sizes. In establishing maximums, jurisdictions seem to be adhering to the philosophy that an ADU is only truly accessory if the ADU is smaller in size. Accordingly, many ADU size caps tie the size of the ADU to the size of the principal housing unit, though others create a specific square footage requirement, or constrain size to the lower of either of these measures. In Connecticut, 728 districts have a cap of some kind, while 220 districts that allow ADUs (either as of right or with a public hearing) have no cap. Five hundred thirty-five zoning districts cap size as a percentage of the main unit. Of those, 102 districts generously allow the ADU to be 50% or more of the principal unit, while 20 limit the ADU to 25% or less of the principal unit.

Five hundred thirty-six zoning districts (including many that also provided a percentage) cap ADU size in absolute numbers. Overall, 21.8% of

238. See DARIEN, CONN., ZONING REGS. §§ 591–96 (added Oct. 25, 2012) (showing the minimum unit size is 1,600 square feet).

239. See H.B. 6107, 2021 Gen. Assemb., Reg. Sess. (Conn. 2021) (“Zoning regulations adopted pursuant to subsection (a) of this section shall not . . . [e]stablish for any dwelling unit a minimum floor area that is greater than the minimum floor area set forth in the applicable building, housing, or other code.”).

land that allows ADUs permits them to be 1,000 square feet or greater. In areas that allow ADUs as of right, 16.1% allows ADUs of 1,000 square feet or more, while in areas that only allow ADUs by special permit this number jumps to 28.8%. Some towns allow ADUs up to 1,500 square feet or 40% of the main unit as of right. While these examples are outliers to some extent, there are myriad municipalities that allow 1,000–1,200 square foot ADUs as of right. For example, the wealthy town of New Canaan allows 1,000 square foot ADUs (up to 40% of the main unit) as of right in all residential zones, as long as the ADU is attached to the main unit. Meanwhile, several towns with equal or greater density, infrastructure, and sewer capacity set much lower square footage requirements in the 500 to 700 square foot range.

The variety of maximum unit size requirements for ADUs across jurisdiction reinforces a recurring theme: variety without reason. ADUs are a relatively straightforward land use, with well-documented, and largely minimal, spillover effects. The consequences of unit size constraints for ADUs are more direct than the consequences of minimum unit sizes on principal dwellings—very small ADU size caps will make it less likely a property owner creates an ADU in the first place.²⁴⁰ Without a rational basis to treat ADUs so differently from town to town, the ADU unit size restrictions seem to be a ripe target for reform, and one that could have significance for the viability of ADUs.

3. Other Technical Requirements

Before turning to occupancy requirements, it may be worth mentioning that zoning codes also sometimes require buildings to meet other specific criteria.

Accessory dwelling units, for example, may sometimes be required to be attached to a single-family dwelling, rather than detached. In Connecticut, there is about an even split between zoned land that allows for detached ADUs and zoned land that requires the ADU to be contained within the primary dwelling structure. Interestingly, unlike unit size requirements, a higher share of land that allows ADUs as of right allows detached structures (50.3%) than the comparable percentage of land in zones that allow ADUs by special permit

240. See Christina Stacy et al., *Designing Accessory Dwelling Unit Regulations* 10, URB. INST. (Nov. 2020), <https://www.urban.org/sites/default/files/publication/103275/designing-accessory-dwelling-unit-regulations.pdf> (explaining how restrictions on ADUs can discourage potential builders due to the cost, time, and uncertainty of ADU regulations).

(48.7%). Taken together, these findings indicate that municipalities allow for larger ADUs when they can exercise discretionary review over their approval, but that this same hesitancy does not apply to allowing ADUs in detached structures.

Shifting gears to another locational requirement: For principal-use housing, our data tracks whether the locality requires four-or-more-family housing to be near public transportation or be connected to sewer and water infrastructure. Only 14 districts total, representing 1.6% of all districts allowing four-or-more-family housing, require such housing be close to public transportation. Sixty-five districts required such housing to be connected to water and sewer infrastructure, representing about 7% of all districts allowing four-or-more-family housing. The fact that these factors are not prevalent does not mean that they do not thwart new multi-family housing. However, given their relative rarity, it would probably be advisable for scholars and reformers to focus on other regulatory barriers.

D. Occupancy Requirements

Occupancy requirements are a final, often-overlooked aspect of zoning regulations. I first note an occupancy requirement on which our dataset did not focus: the definition of “family.” All Connecticut jurisdictions except Hartford define the term and articulate the relationships between people that qualifies them for familial status. In another article, I have dissected zoning definitions of family, including Connecticut’s varied treatment of it.²⁴¹ That article concludes that it is virtually impossible to satisfactorily define family, or develop an alternative to the term, in a manner that satisfies the competing goals of maintaining privacy, allowing freedom of association, and protecting community “character” (itself a loaded term).²⁴² Accordingly, I do not focus on the term in this Article. Rather, I consider other aspects of occupancy that appeared often in our Connecticut project, including the following: requirements that principal-use housing be occupied by elderly people only, and requirements that accessory dwellings be occupied by owners, family members or employees, or the elderly.

241. See Sara C. Bronin, *Zoning for Families*, 95 IND. L.J. 1, 1 (2020) (“Zoning, which is the local regulation of land use, almost always defines family, limiting those who may live in a dwelling unit to those who satisfy the zoning code’s definition. Often times, this definition is drafted in a way that excludes many modern living arrangements and preferences”).

242. See *id.* at 37.

Theoretically, requiring entire zoning districts to allow only elderly housing may benefit the towns creating such districts, as residents are taxpayers without children burdening the school systems. Twelve districts (out of 339) allowing three-family housing as of right require elderly occupancy, all in mid-sized suburban towns, while 43 (out of 484) districts allowing three-family housing after a public hearing require elderly occupancy. Nineteen districts allowing four-or-more-family housing as of right (out of 112) and 64 districts allowing four-or-more-family housing after a public hearing (out of 231) require elderly-only housing. While many of these districts are small, or have been zoned to meet the needs of planned residential developments, the number of districts specifically devoted to elderly housing is still significant. From a scholarly perspective, the impact or importance of elderly occupancy requirements in zoning has been largely ignored. The Connecticut research suggests that work should be done in this area to determine to what extent reformers seeking to create more affordable housing embrace or reject the elderly-only phenomenon.

Local authorities also place restrictions on who can reside in accessory dwelling units. Our research logged three occupancy-related factors: owner occupancy, occupancy by either a family member or an employee, or occupancy by an elderly person. The most common of these restrictions is for owner-occupancy, which requires the property owner to reside either in the main unit or the ADU. This restriction applies in 70.4% of land that allows ADUs, although this number drops to 66.7% of land that allows ADUs as of right. Somewhat common—although less widespread—are requirements that the occupant of the ADU be related to or employed by the owner (applicable to 25.0% of land that allows ADUs), bans on renting ADUs (13.7%), or elderly only requirements (4.9%). Overall, 79.2% of land that allows ADUs contains at least one of these occupancy restrictions. In zones that allow ADUs as of right, at least one of these restrictions applies in 74.2% of land; for zones that allow ADUs by special permit, one or more of these restrictions applies in 85.3% of land. Restrictions on ADU occupancy have been discussed by reformers, less so by scholars, but details on which occupancy restriction may be worth striking first have been spotty. Our research confirms that the most prevalent restrictions on ADU occupancy are requirements that the owner occupy one of the units. Lifting that requirement should therefore be a primary target in reform efforts. That said, requirements that the occupant be a family member or an employee of the owner also affect one in four prospective ADU sites in Connecticut. Prior to this study, such requirements

have not been well-documented. Occupancy requirements, whether for principal or accessory dwellings, are sufficiently common that they deserve more attention.

VII. CONCLUSION

Local-government control of housing through zoning regulation has undeniable consequences for the way we live. The 67% of Americans who own a home²⁴³ and live in a jurisdiction subjecting them to land use regulations must abide by a range of constraints on construction and alteration of their structures, and the uses those structures may serve. For homerenters, zoning regulations can determine how much and what type of housing is available to rent and at what price. Indeed, zoning plays a part in leaving some Americans without anywhere to call home at all.

To provide more housing options, reformers have set their sights on zoning. The most common call to action among national reform efforts has been a call to “eliminate single-family zoning.” As catchy and memorable as this phrase may be, it is deceiving in its simplicity. As this Article has shown, even if we increase the number of units allowed on individual lots in a district, a multitude of other, hidden factors may prevent more units from actually being built. Documenting the prevalence of public hearing requirements and minimum lot sizes and maximum height caps, the extreme variety in parking and unit size requirements, and the intrusive occupancy requirements, this Article identified regulatory factors deserving of further study. To really change the housing landscape, we must delve into these details—and understand exactly what we don’t know.

The Connecticut dataset underlying this Article represents a starting point to understanding the prevalence of the variety of factors that dictate the type and quantity of our housing. But to draw broader conclusions, we must have more information about zoning codes nationally. To organize and catalyze scattered efforts across the country, my lab launched the National Zoning Atlas in April 2022.²⁴⁴ It uses a standard methodology, based on the Connecticut methodology described here, to track the myriad zoning regulations that affect

243. *Quarterly Residential Vacancies and Homeownership, Third Quarter 2021*, U.S. CENSUS BUREAU (Nov. 2, 2021), <https://www.census.gov/housing/hvs/files/currenthvspress.pdf>.

244. See *The National Zoning Atlas*, NAT’L ZONING ATLAS (Apr. 2023), <https://www.zoningatlas.org/> (providing a platform to input and analyze data about zoning codes nationally).

housing.²⁴⁵ So far, over fifty institutions are working across twenty-one states to collect and analyze information about zoning and display it in the online atlas. And we are working to expedite the data collection process even further. We have received funding to embark on a machine learning project that will enable faster analysis of zoning codes and are collaborating on an open specification like the general transit feed specification to ease data collection and display.

As its coverage expands, the National Zoning Atlas will become a treasure trove for researchers who want to more definitively understand zoning particulars—and for reformers who need more information to strengthen their diagnoses of zoning and to expand their impact. Moreover, the atlas will unlock secondary research on education, transportation, climate response, infrastructure funding, and economic development, among many other things. We must undertake deeper inquiries into the relationship between regulation and built reality, delving more rigorously into the spatial and socioeconomic consequences of zoning. This collective effort will shed light on zoning realities and has the potential to improve zoning decision-making—ultimately improving the places we call home.

245. Bronin & Ilyankou, *supra* note 140.