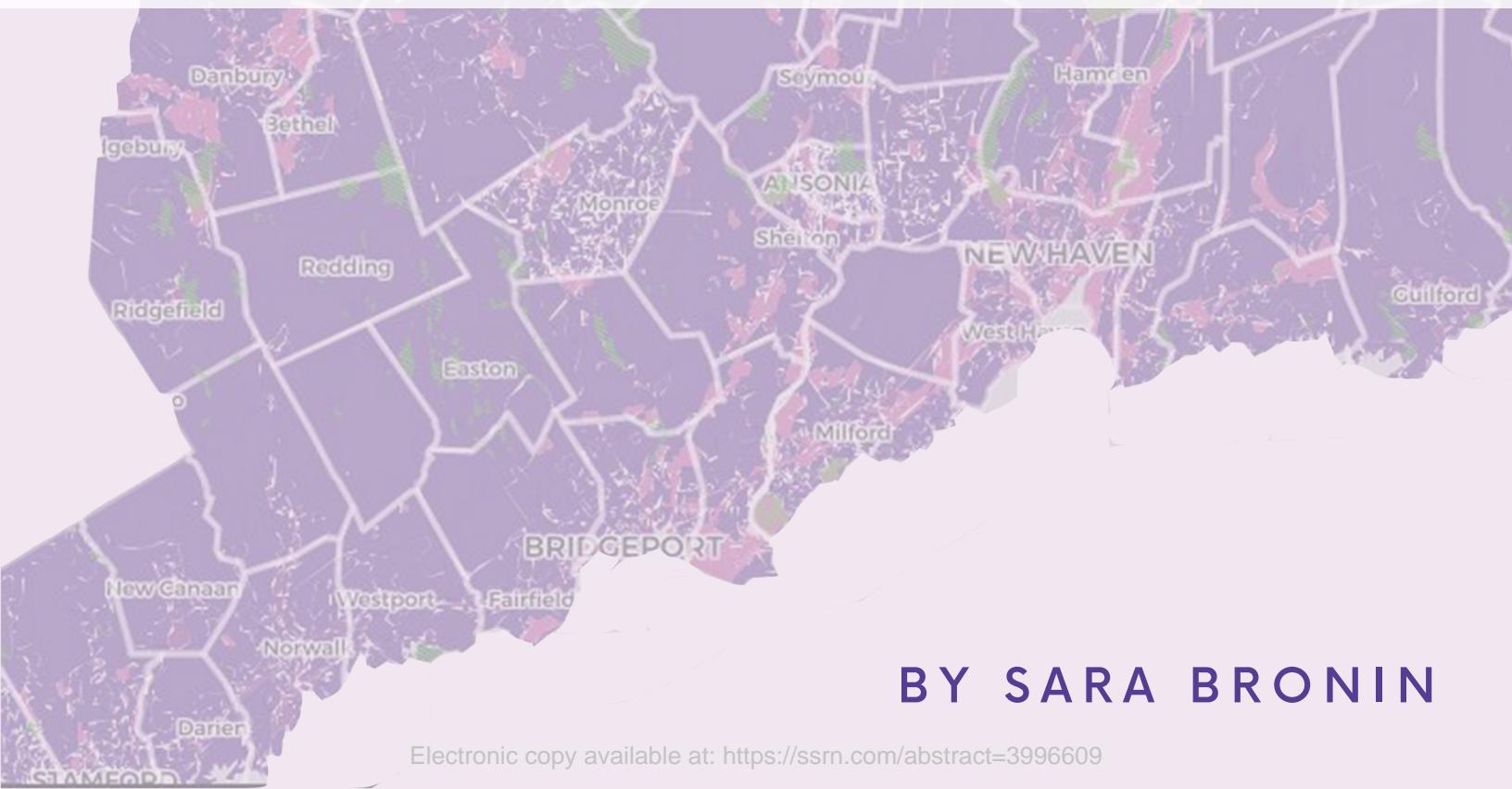




HOW TO MAKE A ZONING ATLAS

A METHODOLOGY FOR
TRANSLATING & STANDARDIZING
DISTRICT-SPECIFIC REGULATIONS



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Download the Spreadsheet at: <https://bit.ly/ZoningSpreadsheet>
For a summary of the Connecticut data, see: <https://bit.ly/Zoning1000Cuts>
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I | INTRODUCTION

Zoning – the regulation of land uses, structures, and lots through distinctly-regulated districts – is the most important, yet most underappreciated, power of local governments. Zoning’s regulatory particulars, especially regarding housing, have significant effects on equity, our economy, and the environment. If people could understand zoning, they would better understand how to improve it.

Unfortunately, zoning codes are often inscrutable documents, full of jargon unfamiliar to non-planners. Understanding one town’s zoning code can be difficult. But it is even harder to compare one town to another, because each town drafts and organizes its code in a different manner.

If you are reading this, you probably want to make it easier for people to understand zoning and to compare one town’s zoning to another.

The purpose of this methodological write-up is to help you translate and standardize zoning information at any scale: for a single town, for a region, or even for an entire state.

This methodology focuses on individual zoning districts, each of which distinctively regulate allowed uses, structures, and lots. Although district-level data is the best way to accurately understand the contours and effects of zoning, it has rarely been collected at scale. One exception to this general rule is the Connecticut Zoning Atlas, created by a team of researchers in 2021. That atlas logs up to 94 different pieces of district-specific regulatory information.

This write-up aims to empower you with the decision-making and analytical tools needed to create a compendium of zoning information similar to Connecticut’s.

It also encourages you to put some or all of the data into an online interactive map similar to desegregatect.org/atlas. Your online map could enable users to visualize the prevalence of particular regulations, compare allowances and restrictions on multi-family housing, and distinguish as of right versus discretionary residential uses, among other things.

Ultimately, my hope is that together, we can create a national dataset for every zoned community. With a standard methodology for collecting zoning information, such a dataset is more feasible.

With this background in mind, **Part II** explains how to collect the texts and maps of zoning codes.

Part III then turns to the building blocks of any zoning atlas: zoning districts. For reasons I explain below, the seemingly simple task of listing zoning districts is harder than it appears.

Part IV provides instructions on how to classify zoning districts into certain categories.

Part V covers the substantive regulation of uses, **Part VI** lots, and **Part VII** structures.

Part VIII offers tips on how to check and maintain your data, and describes briefly how to put information collected into a public online interface.

Part IX offers concluding thoughts.

NOTE: To follow along, you need an accompanying Excel document showing the headers used in the Connecticut Zoning Atlas research. I'll call this the "Spreadsheet." It contains the 94 columns that you could (theoretically) fill out for each zoning district you identify in Part III. It is easiest for your team to collaborate on data entry and management by saving a copy of the Spreadsheet to a shareable online platform, such as Google Sheets, and providing access to each team member with data-collecting responsibilities.

II GATHERING ZONING CODES

To start your atlas project, you will need to collect the zoning codes for each of the jurisdictions you wish to include. Zoning codes consist of both a text, explaining how each district within a given jurisdiction is regulated, and a map, showing the boundaries of each district. Accordingly, you will need to locate both the zoning text and the zoning map for each jurisdiction you intend to cover in your atlas project. Note that you will need the map in two formats: a PDF or image, and shapefiles.

In this Part, you will fill out the following Spreadsheet columns:

- **Jurisdiction:** The name of the jurisdiction.
- **County:** The county in which the jurisdiction is located.

A. WHERE TO FIND CODES

Finding codes can be straightforward, and ideally the codes you seek will be easy to find online. But that is not always the case, especially for smaller jurisdictions. Below, I have recommended strategies to find the text and the two map formats you will need for your atlas. I also explain how to save the information you found, which will save you headaches down the line.

1. Starting Point: The Internet Search

First, try your luck with an internet search for “[Jurisdiction X] Zoning Code” and “[Jurisdiction X] Zoning Map.” Such a search may lead you straight to a PDF of the zoning text, and an image and GIS repository of the zoning map. If that is the case, you’ve struck gold! Skip down to subsection 4, How to Save Your Information.

You can also try navigating to websites of any of the following entities, which tend to maintain copies of both the zoning text and the zoning map:

- Zoning Commission
- Planning Commission
- Planning and Zoning Commission
- Department of Development, Economic Development, or Community Development
- Department of Licenses and Inspections
- Department of Buildings, Real Estate, or Land Use

Based on our experience in Connecticut, the zoning text may be anywhere from 30 to 500 pages. The zoning map will most frequently be in PDF. And the shapefiles will most likely need to be requested from jurisdiction staff through the process described in subsection 3 below.

If no such entities exist or have websites, you will have to look separately for the text and map.

2. Zoning Text Search Tips

So you haven't found the zoning code on a land use-focused official website like the ones listed in the preceding section. Your next best bet is to navigate to the official website containing all local ordinances and regulations. This website may have any of the following titles:

- City Code or Municipal Code
- Ordinances or Code of Ordinances
- Laws
- Regulations
- Bylaws

NOTE: You may see an option to navigate to the town charter. It is unlikely that a town charter will contain a zoning code. The charter may dictate the basic structure, operation, or composition of the zoning commission administering the zoning code. As these characteristics are not logged in the zoning atlas, it is unlikely the charter will be a useful resource in creating your atlas.

If the jurisdiction does not maintain a website with its own laws, search for the name of the jurisdiction in one of these three leading online local law databases:

- Municode: library.municode.com
- Ecode360: generalcode.com/library/#
- American Legal: codelibrary.amlegal.com

If the jurisdiction you seek appears in one of these three databases, then search the jurisdiction's laws for the term "zoning." Scan for the appearance of this keyword in a section title, and you will very likely have found the section where the zoning code is located.

If you cannot find the zoning text online, you will need to contact the jurisdiction's staff. A handful of jurisdictions may only distribute it to you in paper copy for a fee, or may require you to come to the office to make your own physical copy.

3. Map Files Search Tips

You will almost always be able to find a PDF or an image of the zoning map on a land use-oriented official website. But if not, you will need to contact the jurisdiction's staff for a copy.

You are more likely to come up short searching online for the shapefiles related to the zoning map. Contact the Geographic Information Services or Data Visualization Office of the jurisdiction. Ask this office or the department administering the zoning code for the shapefiles (GIS layers) for each of the districts. (A shapefile is a digital format for storing the geometric location and other information about a geographic feature.) You might be able to download the shapefiles from the jurisdiction's website or from another resource like ESRI.

Some jurisdictions may not have zoning-district shapefiles but may provide parcel data with zones associated with each parcel. (A parcel is a piece of land with distinct property boundaries – essentially, a zoning lot.) If you are given information in this format, manually dissolve the parcels into zoning districts. Note that jurisdictions that only provide parcel data omit roads from zoning districts, which has the specific consequence of making the total zoned area of the jurisdiction less than the total jurisdiction area according to the U.S. Census. Jurisdictions that provide zoning-district

shapefiles will more likely depict the total jurisdiction area according to the U.S. Census. This difference is relevant if you plan to use a percentage of total area as a measurement of interest when analyzing different jurisdictions in your atlas. If so, you will need to pay attention to ensuring you have properly calculated the total-area denominator.

Some jurisdictions will have neither shapefiles nor parcel data. Small and rural jurisdictions, in particular, may not digitize their maps. In these cases, you will have to manually create layers using the official zoning map as a georeferenced base image.

NOTE: Shapefiles provided by the jurisdiction are not the official zoning map. The official zoning map is a static document adopted by the zoning authority, showing where each of the districts is located. You may find that some shapefiles are more accurate and updated than the publicly available zoning map, or vice versa; the jurisdiction's staff can confirm whether this is the case if you find discrepancies. There are other times where sloppy shapefiles will cause serious issues; some issues are described in Part III.C.

4. How to Save Your Information

At the end of this information-gathering effort, you now have three pieces of information: the zoning text, the zoning map, and the zoning shapefiles.

The first thing to do before saving is to confirm their accuracy. If your search yielded several different copies of these documents, check their dates to choose the most recent one. If the document is undated or if it appears to be more than three years old, then visit the jurisdiction's website or contact the jurisdiction's staff to confirm you have the correct version.

Next, you should save them as follows:

- Zoning Text: Save it in PDF or Word/text format and label the file with the name of the jurisdiction and date on which you downloaded it. Because zoning codes can be amended, you will want to know the point in time on which your atlas is based. You must only have one saved zoning text document per jurisdiction. If you found the zoning code in pieces (e.g., on several websites), manually append the pieces together into a single Word/text document or PDF. Having the zoning text in a stable, searchable format will be useful for the next steps.
- Zoning Map: Save it in PDF or graphic format (JPEG, PNG, etc.) and label the file with the name of the jurisdiction and the date on which you downloaded it.
- Zoning Shapefiles: Save these in folders with the name of the jurisdiction, and again, the date of download.

B. INPUTTING THE CODES

Once you have completed this information-gathering, I suggest you create a new spreadsheet (or a separate tab in the Spreadsheet) containing the following information:

- Name of jurisdiction
- County
- Direct URL for zoning text; if PDF/Word document is not directly linked in a public URL, include the link to your shared drive containing the downloaded and consolidated zoning

text, not to sites (e.g., Municode) where someone would have to click on multiple sections to see the full code.

- Direct URL for zoning map; same instructions as for zoning text
- Direct URL for site containing shapefiles/GIS layers (if any)
- Jurisdiction land use staff member name
- Jurisdiction land use staff member contact information

Once you have your files in order, fill out the Jurisdiction and County columns of the Spreadsheet. While initially you will have one entry for each jurisdiction, you'll be duplicating these entries to match the number of zoning districts that you find in the jurisdiction, which is the activity we turn to next.

III LISTING ZONING DISTRICTS

Zoning districts are the building blocks of any zoning atlas, and properly identifying them is essential to the success of your project.

To do so, you must consult three resources: the zoning text, the zoning map, and the GIS layers. Only after consulting all three resources can you accurately input the names of the districts into the Spreadsheet.

In this Part, you will fill out the following Spreadsheet columns for every district:

- **Abbreviated District Name:** The abbreviation used for the district, often two or three letters combined with numbers.
- **Full District Name:** The full name of the district.
- **District Mapped:** A binary Yes/No entry indicating whether the district is on the zoning map.
- **District Mapped but Extinct:** A binary Yes/No entry indicating whether the district is on the zoning map but not in the zoning text.
- **Overlay:** A binary Yes/No entry indicating whether the district is an overlay district, meaning that it is, or can be, layered on top of another district(s).

A. SEARCHING THE ZONING TEXT

Open the file containing the zoning text to begin making a preliminary list of the districts. While districts are sometimes called zoning districts, they can also be called districts, zones, or overlays.

Try one or more of these strategies to find a list of districts:

- Scan the table of contents: Sometimes, but not always, it will have the list of the districts.
- Search for the words “divided into”: There is often a page somewhere early in the code that says something like the “[Jurisdiction X] is divided into the following districts.”
- Search for the words “zone” and/or “district”: If either of these words appears five or more times on a single page, scan the page to see if the page contains a list of the districts.
- Search for charts which show different district-specific characteristics, such as minimum lot sizes or lot coverage requirements: The rows or columns of these charts will be labeled with different districts.

NOTE: Even if you locate a consolidated list of districts using one of the means above, do not be lulled into a false sense of security that your job is done. Here are three reasons why you must continue:

- Lists may not include districts added to a zoning code after it is first adopted.
- Lists may include districts that have never made it to the zoning map, which means that such districts exist only in theory.
- The zoning text may not include districts that remain in the zoning map but have been eliminated from the zoning code.

Before moving on to the zoning map and GIS layers, scan the table of contents one last time for mentions of other districts not included in the list.

Once you have completed these steps, fill out the following Spreadsheet columns with the information so far:

- Abbreviated District Name
- Full District Name

In the Spreadsheet, every district must be a separate row. Often, you will see the abbreviation and name of the district together in one phrase or sentence in the zoning text. For example, you might see:

- R-40 Residential-40 Zoning District
- ID 2 Industrial District 2
- HOZ Housing Overlay Zone

For these districts, put “R-40,” “ID 2,” and “HOZ” in the Abbreviated District Name column. Before putting the longer district title in the Full District Name column, delete the words “Zone,” “Zoning District,” and “District.” Accordingly, in the examples given, you would put “Residential-40,” “Industrial 2,” and “Housing Overlay” in the Full District Name column.

Sometimes, you will only see the abbreviation of a district used in the zoning map, while the full name of the district is used in the zoning text. In these cases, use educated guesses and the process of elimination to determine which full name matches which abbreviation. Using the examples above, seeing “R-40” on the zoning map would clearly point you to the Residential-40 district.

B. CONFIRMING WITH THE ZONING MAP

After completing your scan of the zoning text, turn next to the zoning map.

Open the file containing the zoning map and locate the legend. The legend shows the districts that actually appear in the zoning map. Often but not always, the legend will list both the full district name and the abbreviation for the district. This will help you continue to fill out the Abbreviated District Name and Full District Name columns of the Spreadsheet.

In addition, in this section, you will fill out the following Spreadsheet columns:

- District Mapped
- District Mapped but Extinct
- Overlay

Use the legend to cross-check the names of the districts you have already logged. If they appear in the map, log a “Yes” in the District Mapped column of the Spreadsheet.

You are likely to find district names in the zoning map key which you did not notice in your scan of the zoning text. Enter these new districts in the Abbreviated District Name and Full District Name columns, and log a “Yes” in the District Mapped column of the Spreadsheet.

When you have completed your review of the zoning map, return to the zoning text to see if these new districts actually appear in the zoning text. If they do not appear in the zoning text, then log a “Yes” in the District Mapped but Extinct column of the Spreadsheet. It is uncommon for districts to appear on the map but not in the text: of 2,622 districts we logged in the Connecticut Zoning Atlas, only 11 were mapped but extinct. For each of these 11 districts, we contacted staff of the jurisdiction or staff of the regional councils of governments, or used online research to identify previous versions of zoning codes in which these districts appeared. In the Spreadsheet, we logged information about the 11 districts using the most recent zoning text in which they were mentioned. While this method is not perfect, it is the only option.

Finally, review the zoning map to discern whether any zoning districts are overlays, defined as districts which are overlain over another district and provide certain distinct regulatory characteristics that supplement the regulations of the underlying district. Distinguishing between base and overlay districts is important for an accurate atlas, because there will be some cases where overlays override the depicted characteristics of underlying districts. As an example, a “higher education housing overlay” might allow dormitories in a residential area, after a college or university applies for this overlay. As another example, a “historic overlay” might require different standards for historic buildings. Graphically, overlays are often depicted with a hatch (i.e., diagonal stripes), cross-hatch, or dots over an existing layer. They often include the name “Overlay” in the title.

NOTE: Not every district labeled an overlay actually functions as an overlay; some so-called overlays actually function as base districts that replace underlying zoning altogether. The only districts which should be logged in the Spreadsheet as overlays are those that actually satisfy the definition of the overlay above and are depicted on the zoning map overlying another district. You will be able to confirm this status by looking at the zoning map for hatches or similar graphic conventions. For these districts, log a “Yes” in the Overlay column of the Spreadsheet.

C. CONFIRMING WITH THE GIS LAYERS

After completing your scan of the zoning map, turn now to the GIS layers you have collected.

Scan the full list of layers. Often, these layers will use the abbreviation for the district, rather than the full district name. However, the layers will sometimes use full district names or have an entirely independent numbering system. You will very likely have to consult with the official zoning map, and manually rename the layers. I recommend renaming the layers using the Abbreviated District Name you logged in the Spreadsheet.

NOTE: For the Connecticut Zoning Atlas, we found 1,917 layers that matched the names of the zoning districts we had logged in the Spreadsheet. However, as many as 6 layers (usually depicting noncontiguous elements of a district) corresponded to a single zoning district. In these cases, we simply merged the multiple layers into one layer per district.

Unfortunately, you are likely to find more serious discrepancies between the GIS layers and the zoning map. From a legal perspective, the officially adopted zoning map prevails. Here are some of the issues that you might spot in the GIS layers:

- Incomplete layer names (e.g., “A” instead of “R-A” or “D” instead of “T-3-D”)
- “Sliver” layers that are strewn about randomly, without corresponding to even a single lot

- Layers included in the shapefile that have no corresponding area on the zoning map (e.g., federal or state land, or layers recently adopted)
- Layers that are not overlays on the zoning map but that nonetheless overlap other layers
- Layers labeled with both the name of the underlying district and the name of the overlay
- An entire neighborhood or area with entirely different, yet plausible, layer names than are in the surrounding jurisdiction's zoning text or zoning map
- Areas in the overall region or state where you are looking for which there are no corresponding layers (i.e., an area is blank)

For the Connecticut Zoning Atlas, there were 810 layers with issues like the above. To resolve each issue presented, we consulted the zoning text and zoning map. Generally, here is how we resolved each of the issues:

- We manually consulted the zoning map against the shape and location of the GIS layer to match the name of the layer to an actual district name.
- We deleted virtually all “sliver” layers.
- We deleted layers without a corresponding area on the zoning map, except in the handful of cases where the layers were recently adopted (something we discerned either by scanning recent meeting minutes or by contacting jurisdiction officials).
- We reconciled erroneous overlays by redrawing the boundaries for the overlapping districts after consulting with the zoning map.
- We separated layers with both the name of the underlying district and the name of the overlay into layers with the names of both.
- The last two issues listed above may expose submunicipal jurisdictions or unzoned areas. We originally believed that there were 169 zoning jurisdictions in Connecticut, corresponding to the 169 towns. Yet we realized we were incorrect after assembling the GIS layers and seeing that blank areas emerged or that neighborhoods with new layers appeared. In the end, we found 11 submunicipal jurisdictions: 5 private associations granted authority by special acts of the legislature; the rest boroughs, villages, or other subdivisions recognized as such by Connecticut statute.

After you sift through the shapefiles, a more complete picture of the zoning districts will emerge. You will identify more zoning districts than you found using just the zoning text and map. Some of these layers may not yet feature in, or were previously excised from, the zoning text or map. You will be able to identify overlays more clearly. You may even find new submunicipal jurisdictions or unzoned areas. Throughout your review, be sure to update the 5 columns in the Spreadsheet that are the subject of this Part III.

NOTE: One column you will want to scour before proceeding is the District Mapped column. When a district is listed in the zoning text but not included in the official map, be sure that this column is marked “No.” Continue to collect information about these districts as indicated in the text, but note you will omit them when you are finally assembling the user interface for your atlas. This is because an unmapped district only has “paper” status until it is mapped.

Now that I have finished explaining this process, you can see why reviewing all three resources – the zoning text, the zoning map, and the GIS layers – is necessary to finalize the list of districts you will use as the building block of your atlas. With this list of districts in hand, you can proceed to Part IV, classifying the zoning districts.

IV CLASSIFYING ZONING DISTRICTS

At this point, you have completed 7 critical columns in the Spreadsheet. In one of those columns, you classified whether zoning districts are overlay districts. You made that assessment based on the way districts are depicted graphically. This Part proceeds with three additional classifications of zoning districts – classifications that rely solely on descriptions in the zoning text, and not on graphic depictions in the map or GIS layers. So for this Part, you will only be using the zoning text.

In this Part, you will fill out the following Spreadsheet columns for every district:

- **Type of Zoning District:** One of the following three options, each indicating the general nature of the district: Primarily Residential, Mixed with Residential, or Nonresidential.
- **Elderly Housing District:** A binary Yes/No entry indicating whether the entire zoning district requires all of its housing to be occupied by elderly persons.
- **Affordable Housing District:** A binary Yes/No entry indicating whether the entire zoning district requires all of its housing to satisfy an affordable housing definition.

A. TYPE OF ZONING DISTRICT

Each zoning district allows or prohibits different uses – a topic we will delve into in further detail in Part V. For now, we want to generally classify the districts based on the uses they allow.

The Type of Zoning District column shows whether the district generally falls into one of three categories: Primarily Residential, Mixed with Residential, or Nonresidential. Distinguishing districts in this manner allows an assessment of the amount and nature of land devoted to residential uses.

NOTE: This classification is not clear-cut. It requires some judgment on your part as you weigh whether a particular district falls into these categories.

1. Where to Look

To assess whether residential uses are allowed in a particular district, you will need to locate in the zoning text:

- The “use table” (also sometimes called the “table of principal uses” or “table of allowed uses”), which is a chart listing the uses allowed in each district
- If there is no use table, search for:
 - Chapters or sections of the code devoted to individual districts, which will likely list allowed uses
 - Descriptions of each district, sometimes found at the beginning of the zoning code, which describe the overall nature of each district in a few sentences

2. Principal and Accessory Housing Uses

To properly classify the districts, you must know that residential uses can be principal uses (i.e., the main use on a single zoning lot) or accessory uses (i.e. subordinate uses to a principal use on the

lot). When you are evaluating whether a district is Primarily Residential or Nonresidential, you must only consider principal residential uses.

A jurisdiction permitting a single accessory dwelling unit per lot, and no other housing types, must be classified as Nonresidential. For example, a retail district that only allows a shopkeeper to have a single apartment over her store must be classified as Nonresidential. (You will nonetheless log the regulatory characteristics of that accessory dwelling unit in Parts V. through VII.)

On the other hand, a retail district that allows for two apartments on the upper stories of a retail structure should be classified as Mixed with Residential, even if the apartments are limited in size to be smaller than the retail footprint. In such a district, all categories for 2-family housing should be filled out.

For the purposes of the zoning atlas, where two or more housing units are allowed on the same lot as a non-housing use, such housing should be considered a principal use. We will discuss this further in Part V.

NOTE: Assisted living facilities, congregate housing, group dwellings, other institutional residential settings, hotels, and motels must not be counted as residential uses in the Zoning Atlas. While many people live in these settings, the settings have different social, economic, and environmental implications than the non-institutional housing that tends to be the subject of inquiries about zoning and its effects. By contrast, elderly housing (where individuals or households occupy units as tenants or owners, without daily institutionalized care) and active adult communities must be counted as residential uses. This point is repeated below.

3. Primarily Residential

A Primarily Residential designation should be given to districts allowing: housing only; housing and assorted uses customarily allowed in residential areas, including religious institutions and schools; or housing and agricultural uses.

While you must always verify allowed uses with the zoning text, one of the easiest ways to preliminarily classify a Primarily Residential district is its name:

- Any district abbreviated R-1, R-2, R-3, R-4, R-5, R-6, R-15, R-20, R-40, or R-80 (where “R” stands for “Residential”) will almost certainly be a Primarily Residential district.
- Any district full name including the words “residence,” “residential,” “multifamily,” “housing,” “apartment,” or “mobile home” will likely be Primarily Residential – but not always. For example, a district called “Multifamily Residence-Retail” will not be Primarily Residential, even though it has the word “Residence” in the title.
- Any district full name including the words “agriculture” or “agricultural” will likely be Primarily Residential, and certainly if “residence” or “residential” also appears.
- Any district full name including the words “planned residential,” “planned residence,” “planned unit development,” or “active adult” will almost certainly be Primarily Residential.
- Any district full name including the words “elderly” or “elderly housing” may be Primarily Residential if the type of housing permitted allows occupancy by tenants or owners, without nursing or other daily supervision.

- Any overlay district full name including the words “residence,” “residential,” “multifamily,” “housing,” “apartment,” “active adult,” “elderly,” or “elderly housing” will almost certainly be a Primarily Residential district.

4. Mixed with Residential

A Mixed with Residential designation should be given to districts allowing: nonresidential uses and housing, whether the housing is stand-alone housing (e.g., apartment buildings) or housing integrated with nonresidential uses (e.g., buildings with retail on the ground floor and residential above).

Again, while you must always verify allowed uses with the zoning text, you can get a sense of the likely classification based on the name of the district:

- Any district where the words “mixed use,” “mixed-use,” “village,” “main street,” “center,” or “central business” appear in the full name will likely be Mixed with Residential, but not always.
- Some districts with the words “commercial” or “industrial” in their titles also allow housing as a principal use, so do not dismiss these districts as Nonresidential.

5. Nonresidential

A Nonresidential designation should be given to districts: either prohibiting residential uses entirely or allowing one accessory dwelling on the same lot as a nonresidential use.

Common examples of the latter included a caretaker apartment for a factory or an apartment for a retailer to live above her shop.

- Any district full name including the words “open space” or “conservation land” will almost certainly be Nonresidential, unless they include the words “development” or “subdivision,” which would likely render them Primarily Residential.
- Any district full name including the words “airport,” “office park,” “public utility,” “public service utility,” or “cemetery” will almost certainly be Nonresidential.

Once you have classified a district as Nonresidential, you can skip to Part V.F. and focus only on whether the district allows accessory apartments.

NOTE: Let me close this section by saying that you could wait to fill out the Type of Zoning District column until after you have completed the analysis in Parts V.A. through V.E. Do not be surprised to find a few corrections will be needed in the Type of Zoning District column. On the other hand, filling out this column first will ensure a familiarity with the zoning code of a particular jurisdiction, and may help you prioritize certain districts in the tasks ahead.

B. AFFORDABLE HOUSING DISTRICT

The Affordable Housing District column logs those Primarily Residential or Mixed with Residential districts that allow housing, but require that all housing satisfy certain affordability criteria – usually that all or some units be subject to rent caps, deed restrictions, or occupancy limitations.

1. Where to Look

To start identifying districts that should be logged “Yes” in the Affordable Housing District column, search for these terms in the Full District Name column:

- Affordable
- Opportunity
- Workforce
- Incentive Housing
- Specialty Housing
- Acre: A district created to allow affordable housing on a specific site may include the size of the plot in the title of the district (e.g., the “3.7 Acre Affordable Housing District”).

Also search the districts for which you will log in Part IV.C. a “Yes” in the Elderly Housing District column, as elderly-only requirements sometimes also have affordable-only requirements.

Of course, there are some districts whose name will give you no indication as to what type of housing they allow. You will have to pick up these districts and modify the Affordable Housing District column as needed, in tandem with your efforts in Part V.

For districts you have identified by name or any other means, once again locate the following components of the zoning text, if any, to confirm that affordable units are required:

- The “use table” or “table of [allowed] uses” (the chart listing of uses allowed in each district), which may have a column for affordable housing specifically
- Chapters or sections of the code devoted to individual districts, which will likely list allowed uses
- Descriptions of each district, sometimes found at the beginning of the zoning code, which describe the overall nature of each district in a few sentences

2. How to Log “Yes” and “No”

It is important to re-emphasize that the Affordable Housing District column signifies whether all housing developments in a particular district must meet certain affordability criteria. Only such districts should be logged as a “Yes” in the Affordable Housing District column.

Certain districts are unlikely to be affordable-only districts. Likely “No” districts in the Affordable Housing District column are any districts called R-1, R-2, R-3, R-4, R-15, R-20, R-40, or R-80, and the “residential-agricultural” type districts – or really any district that covers a large area.

Some districts require affordability for only some types of housing. For example, some districts freely allow 1-family housing but limit multi-family housing to affordable housing. Such districts should be logged as a “No” in the Affordable Housing District column. In Part V, you will have a chance to log affordable housing requirements for particular types of housing.

C. ELDERLY HOUSING DISTRICT

The Elderly Housing District column logs those Primarily Residential or Mixed with Residential districts that allow housing, but restrict occupancy of that housing to people over a certain age.

Whether the restriction starts at age 55, 65, or some other age, all such housing should be logged as “elderly” housing (with apologies to those in that age range who do not consider themselves “elderly”). This column proved important in the Connecticut Zoning Atlas because it illustrated how many communities restrict multi-family housing to elderly occupants. While elderly housing requirements benefit income-restricted and impoverished elderly people, they also exclude families with young children and younger adults.

1. Where to Look

To start identifying districts that should be logged “Yes” in the Elderly Housing District column, search for these terms in the Full District Name column:

- Elderly
- Age-Restricted
- Senior
- Active Adult: Note that searching for “adult” will likely lead to adult establishment zones with uses such as cabarets and adult bookstores.
- Older (e.g., “55 and Older District”)
- Golf
- Planned: A planned residential/unit development district has, I would guess, about a one in five chance of being elderly only.

Also search the districts for which you logged a “Yes” in the Affordable Housing District column, as affordable-only requirements sometimes also have elderly-only requirements. Of course, there are some districts whose name will give you no indication as to what type of housing they allow. You will have to pick up these districts and modify the Elderly Housing District column as needed, in tandem with your efforts in Part V.

For districts you have identified by name or any other means, once again locate the following components of the zoning text, if any, to determine if housing is limited to occupancy by older adults:

- The “use table” (the chart listing of uses allowed in each district), which may have a column for elderly housing specifically
- Chapters or sections of the code devoted to individual districts, which will likely list allowed uses
- Descriptions of each district, sometimes found at the beginning of the zoning code, which describe the overall nature of each district in 2-4 sentences

2. How to Log “Yes” and “No”

It is important to re-emphasize that the Elderly Housing District column signifies whether all housing developments in a particular district must be occupied by older adults. Only such districts should be logged as a “Yes” in the Elderly Housing District column.

Certain districts are unlikely to be elderly-only districts. Likely “No” districts in the Elderly Housing District column are any districts called R-1, R-2, R-3, R-4, R-15, R-20, R-40, or R-80, any “residential-agricultural” type districts, and any district that covers a large area.

Some districts require elderly occupancy for only some types of housing. For example, some districts freely allow 1-family housing but limit multi-family housing to elderly occupants. Such districts should be logged as a “No” in the Elderly Housing District column. In Part V, you will have a chance to log elderly housing requirements for particular types of housing.

NOTE: As noted above, assisted living facilities, congregate housing, group dwellings, other institutional residential settings, hotels, and motels must not be counted as residential uses in your atlas. Thus they should not be considered in whether a district requires elderly housing only. Generally, these facilities are multi-unit, multi-occupant institutionalized facilities with nursing or other daily supervision. In some cases, assisted living facilities will be defined to also include non-institutionalized living (where individuals or households occupy units as tenants or owners, without daily institutionalized care). If all non-institutionalized housing in assisted living facilities is required to be elderly, then you will log the district as a “Yes” in the Elderly Housing District column.

V CATALOGUING USES

By now, you have completed the first 10 columns in the Spreadsheet, which list the districts and then classify them. This Part now turns to the way zoning codes treat different housing uses and regulate occupancy of particular types of housing uses. It covers four principal uses as well as affordable housing, accessory dwelling units, and planned residential developments. You will continue to utilize only the zoning code text to complete this section.

Four principal uses relate to the number of units permitted on the lot: 1-family, 2-family, 3-family, and four-or-more-family (symbolized as “4+”) housing. Logging the treatment of each of these principal uses separately is important because significant regulation variation exists among the categories. For example, through the Connecticut Zoning Atlas, we found that over a quarter of the land in the state allows 2-family housing as of right, while only about 2% of land allows 4+-family housing as of right. There were similarly dramatic differences between the regulation of 2-family and 3-family housing. Including 2-family, 3-family, and 4+-family housing in a general multi-family housing category would blur these distinctions and make further analysis less meaningful.

The fifth principal use is affordable housing, irrespective of the number of units permitted per lot. In other words, the affordable housing category is intended to encompass all 1-family, 2-family, 3-family, and 4+-family housing that happens to be designated affordable. It is intended to capture situations where affordable housing is regulated differently from housing that is not designated affordable. This can be revealing: for example, the Connecticut Zoning Atlas revealed that sometimes affordable housing requirements are more restrictive than requirements for housing that is not designated affordable.

This Part also covers housing as an accessory use, also called accessory dwelling units (or ADUs). An ADU is a housing unit located on the same lot as a principal use, required to be smaller than the principal use. Most often, the principal use is 1-family housing. But, as noted below, some jurisdictions permit housing as an accessory to industrial, commercial, or retail uses.

Finally, this Part covers planned residential developments, which allow for many residential units, often in different buildings, to be built on a single large lot.

In this Part, you will fill out the following Spreadsheet columns:

- **1-Family Treatment:** One of the following four options, each indicating the nature of the permission: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.
- 2-family housing:
 - **2-Family Treatment:** One of the following four options, each indicating the nature of the permission: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.
 - **2-Family Affordable Housing Only:** A binary Yes/No entry indicating whether all 2-family housing must be designated affordable.
 - **2-Family Elderly Housing Only:** A binary Yes/No entry indicating whether all 2-family housing must be occupied by elderly persons.

- 3-family housing:
 - **3-Family Treatment:** One of the following four options, each indicating the nature of the permission: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.
 - **3-Family Affordable Housing Only:** A binary Yes/No entry indicating whether all 3-family housing must be designated affordable.
 - **3-Family Elderly Housing Only:** A binary Yes/No entry indicating whether all 3-family housing must be occupied by elderly persons.
- 4+-family housing:
 - **4+-Family Treatment:** One of the following four options, each indicating the nature of the permission: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.
 - **4+-Family Affordable Housing Only:** A binary Yes/No entry indicating whether all four-or-more-family housing must be designated affordable.
 - **4+-Family Elderly Housing Only:** A binary Yes/No entry indicating whether all 4 four-or-more-family housing must be occupied by elderly persons.
- Affordable housing:
 - **Affordable Housing (AH) Treatment:** One of the following four options, each indicating the nature of the permission: Allowed/Conditional, Public Hearing, Prohibited, or Not Mentioned.
 - **AH Definition:** A quote containing the jurisdiction's definition of affordable housing.
 - **AH Elderly Housing Only:** A binary Yes/No entry indicating whether affordable housing must be occupied by elderly persons.
- Accessory housing:
 - **Accessory Dwelling Unit (ADU) Treatment:** One of the following four options, each indicating the nature of the permission: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.
 - **ADU Employee or Family Occupancy Required:** A binary Yes/No entry indicating whether an ADU must be occupied by an employee or family member of the occupant of the principal unit.
 - **ADU Renter Occupancy Prohibited:** A binary Yes/No entry indicating whether an ADU may be occupied by a homerenter.
 - **ADU Owner Occupancy Required:** A binary Yes/No entry indicating whether the principal unit or the ADU must be occupied by the owner of the lot.
 - **ADU Elderly Only:** A binary Yes/No entry indicating whether ADUs must be occupied by elderly persons.
- **Planned Residential Development (PRD) Treatment:** One of the following four options, each indicating the nature of the permission: Allowed/Conditional, Special Permit, Prohibited, or Not Mentioned.

Of these 19 columns, there are 6 that you must fill out for every district: 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, 4+-Family Treatment, Affordable Housing (AH) Treatment, and Accessory Dwelling Unit (ADU) Treatment. These 6 bring the total mandatory columns for every district to 16. All of the mandatory columns are marked in green in row 2 of the Spreadsheet. Beyond these 16 columns, the remaining columns should only be filled in if there is a value to include; otherwise, they should be left blank.

You will also learn about this column, which can be programmed to appear when a public user of your atlas hovers over the district:

- **Special Notes:** An open-ended column which explains or qualifies an entry in another column, using the fewest words possible to communicate the point.

A. PRINCIPAL USE: 1-FAMILY

By far the most common type of residential housing is 1-family housing. I do not know of a jurisdiction in the country that declines to allow 1-family housing somewhere. Even in places that have “eliminated 1-family zoning” (e.g., Portland and Minneapolis), 1-family housing remains an allowed use.

This section focuses on the 1-Family Treatment column, but the explanations given in this section can be referenced when filling out the other five columns with the word “Treatment” in their titles.

1. Defining 1-Family Housing

1-family housing means a building with only one dwelling unit, where only one such unit is permitted on a lot.

The following phrases typically denote 1-family housing (with or without hyphens):

- Single-family dwelling
- Single-family home
- One- or 1-family dwelling
- One- or 1-family home

A 1-family unit need not be fully detached (i.e., freestanding and not attached to another unit) to count as 1-family housing for purposes of the atlas. A townhouse or rowhouse type of building may be counted as 1-family housing where each townhouse or rowhouse is one unit each and the lot lines are the same as the “party wall” between townhouses and rowhouses.

A single unit of housing located on an upper story only will generally not count as 1-family housing as a principal use, but rather accessory housing discussed in Part V.F.

Now that you know what 1-family housing is, you can start to log its treatment.

2. Where to Look

To fill out the 1-Family Treatment column, you must locate one or more of the following parts of the zoning code:

- The “use table” or “table of [allowed] uses” (the chart listing of uses allowed in each district)
- A chapter or section of the code containing in its title the words: “Uses permitted,” “Permitted uses,” “Use regulations,” “Residential use,” “Residence zones,” “Residential zones,” or “Residential districts”
- The chapter or section of the code devoted to the district, which will likely list allowed uses

One of these parts will have the information necessary to complete the 1-Family Treatment column. Search them using the phrases suggested in the preceding subsection.

3. How to Log the Four Treatment Options

In the 1-Family Treatment column (and every column with the word “Treatment” in its title), you will input one of four options indicating the nature of the permission for such uses: Allowed/Conditional, Public Hearing, Prohibited, or Overlay. You must input only one of these four options.

An “Allowed/Conditional” entry means that 1-family housing is allowed without a public hearing. In other words, permission to build this type of housing is only subject to review by town planning staff. During this review, staff may or may not be required to apply explicit criteria laid out in the zoning code. These reviews are sometimes called “as of right” or “by right” processes, although neither of those phrases is typically used in a zoning code. Rather, the most common terms used in a zoning code to designate Allowed/Conditional housing is simply “permitted” or “allowed.”

A “Public Hearing” entry means that 1-family housing use is allowed, subject to a public hearing. Logging public hearing requirements is important because when housing is subject to public hearings, the results tend to be different, and usually more contentious, than when housing undergoes simple Allowed/Conditional processes. Unfortunately, use tables and zoning code text rarely indicate clearly whether a public hearing is required. Instead, codes employ terms like “conditional use,” “special exception,” or “special permit.” To understand whether these require a hearing, you must find a definitional or administrative chapter or section of the zoning code. They will state the process required for each of these approvals. You can find these easily by searching for the name of the permit type (e.g., “conditional use”), or you can search for the terms “public hearing” or “hearing.” Make a note about what the permit type means in each jurisdiction for use in the other columns with the word “Treatment” in their titles.

NOTE: Knowing your state’s zoning rules might help you fill out this column more quickly. Some states may mandate public hearings for certain permit types; such is the case in Connecticut, which mandates public hearings for special permits, but which allows individual jurisdictions to determine whether conditional uses and special exceptions will require a public hearing.

A “Prohibited” entry means that 1-family housing is prohibited. In codes with a use table, figuring out which districts prohibit 1-family housing is relatively easy: there will be an “X,” or the table will be left blank in that location. In codes without a use table, then you will have to manually search for the chapter or section of the code relevant to residential uses or the specific district, using the phrases identified above (or more simply “dwelling” or “housing”). It is hard to search for absence. The general rule of thumb of zoning interpretation is that if a use is not expressly mentioned, it is not allowed. Instead, you will look for the omission of 1-family housing from a list of allowed uses.

An “Overlay” entry means that 1-family housing is treated the same way in the base district and the overlay district. This entry in the 1-Family Treatment column is only available for those districts marked as a “Yes” in the Overlay column. Take these steps to determine if an “Overlay” entry is appropriate for the 1-Family Treatment column:

- Double check there is a “Yes” in the Overlay column.
- Identify the base district(s) upon which the overlay district can be placed.
- Find the use table or the chapter or section of the code devoted to the overlay district to determine allowed uses.

- Determine whether there is a difference between permissions for 1-family housing in the overlay district and any base district(s) upon which it can be lain.

The last step will tell you how to mark the district. If the allowance for 1-family housing for the overlay district is always different from the allowance of housing under any base district, then do not mark “Overlay” in the 1-Family treatment column. Instead, mark “Allowed/Conditional,” “Public Hearing,” or “Prohibited” as appropriate given the overlay district’s requirements. For future reference, note that you will only fill out subsequent columns in the Spreadsheet where the overlay overrides the base district. If the cell is left blank, the base district’s characteristics prevail. This convention will reduce confusion in a public interface, especially as some types of overlay districts can be lain over many different kinds of base districts.

NOTE: What do you do if some 1-family housing is allowed by right, but other 1-family housing requires a public hearing? You should log just one entry signifying what you think is the most common permit type in the 1-Family Treatment column but make a one-sentence note in the Special Notes column about the alternate permit type. For example, let’s say you find a district that requires public hearings for 1-family homes if they are located in wetland areas. In that case, log “Approved/Conditional” in the 1-Family Treatment column and in the Special Notes column, put: “Public hearing required for 1-family housing in wetlands.” Because the Special Notes column may include notes about several different columns, be clear about the applicability of your one-sentence note.

B. PRINCIPAL USE: 2-FAMILY

In this section, you will complete three columns related to 2-family housing: 2-Family Treatment, 2-Family Affordable Housing Only, and 2-Family Elderly Housing Only.

1. Defining 2-Family Housing

2-family housing means two dwelling units, whether in one building or two separate buildings, permitted on a lot.

The following phrases typically denote 2-family housing (with or without hyphens):

- Two-family dwelling
- Two-family housing
- Two-family home
- Duplex
- No more than two units

If you do not see any of the above terms, search for the terms “multi-family,” “multi family,” “multifamily,” or “apartment.” To understand what those terms mean, go to the definition section of the zoning code or find some other location where the term is defined. In the absence of a definition identifying the minimum number of units included in such terms, assume it encompasses 2-family housing.

You should now be able to identify the term(s) used by the zoning text to mean 2-family housing.

2. Where to Look

One of the parts of the zoning text identified in V.A.2. will have the information necessary to complete the 2-Family Treatment column. Search the part(s) using the term(s) you know connote 2-family housing.

3. How to Log the Four Treatment Options

Proceed with the analysis in Part V.A.3. and input one of four options indicating the nature of the permission for such uses: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.

4. How to Log Affordable and Elderly Treatment

The 2-Family Affordable Housing Only and 2-Family Elderly Housing Only columns should be marked either “Yes” or “No” if the 2-Family Treatment is Allowed/Conditional or Public Hearing. If 2-Family Treatment is Prohibited or Overlay, do not make an entry in the 2-Family Affordable Housing Only or 2-Family Elderly Housing Only columns. Leave them blank.

The 2-Family Affordable Housing Only column identifies (with a “Yes” entry) districts that require that all 2-family housing satisfy certain affordability criteria. If the Affordable Housing Only column is marked “Yes,” then the 2-Family Affordable Housing Only column should be marked “Yes” too. If the Affordable Housing Only column is marked “No,” then assess whether the district requires 2-family housing to satisfy affordability criteria, using techniques similar to those outlined in Part IV.B. In the Connecticut Zoning Atlas, we discovered at least 10 districts that only allowed 2-family housing if it were owned or operated by the town or a nonprofit developer.

The 2-Family Elderly Housing Only column identifies (with a “Yes” entry) districts that require that all 2-family housing be occupied by people over a certain age. If the Elderly Housing Only column is marked “Yes,” then the 2-Family Elderly Housing Only column should be marked “Yes” too. If the Elderly Housing Only column is marked “No,” then assess whether the district restricts 2-family housing to elderly occupancy, using techniques similar to those outlined in Part IV.C.

C. PRINCIPAL USE: 3-FAMILY

In this section, you will complete three columns related to 3-family housing: 3-Family Treatment, 3-Family Affordable Housing Only, and 3-Family Elderly Housing Only.

1. Defining 3-Family Housing

3-family housing means three dwelling units, whether in one building or separate buildings, permitted on a lot.

The following phrases typically denote 3-family housing (with or without hyphens):

- Three-family dwelling
- Three-family housing
- Three -family home
- Triplex

- No more than three units

If you do not see any of the above terms, search for the terms “multi-family,” “multi family,” “multifamily,” or “apartment.” To understand what those terms mean, go to the definition section of the zoning code or find some other location where the term is defined. In the absence of a definition identifying the minimum number of units included in such terms, assume it encompasses 3-family housing.

You should now be able to identify the term(s) used by the zoning text to mean 3-family housing.

2. Where to Look

One of the parts of the zoning text identified in V.A.2. will have the information necessary to complete the 3-Family Treatment column. Search the part(s) using the term(s) you know connote 3-family housing.

3. How to Log the Four Treatment Options

Proceed with the analysis in Part V.A.3. and input one of four options indicating the nature of the permission for such uses: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.

4. How to Log Affordable and Elderly Treatment

The 3-Family Affordable Housing Only and 3-Family Elderly Housing Only columns should be marked either “Yes” or “No” if the 3-Family Treatment is Allowed/Conditional or Public Hearing. If 3-Family Treatment is Prohibited or Overlay, do not make an entry in the 3-Family Affordable Housing Only or 3-Family Elderly Housing Only columns. Leave them blank.

The 3-Family Affordable Housing Only column identifies (with a “Yes” entry) districts that require that all 3-family housing satisfy certain affordability criteria. If the Affordable Housing Only column is marked “Yes,” then the 3-Family Affordable Housing Only column should be marked “Yes” too. If the Affordable Housing Only column is marked “No,” then assess whether the district requires 3-family housing to satisfy affordability criteria, using techniques similar to those outlined in Part IV.B.

The 3-Family Elderly Housing Only column identifies (with a “Yes” entry) districts that require that all 3-family housing be occupied by people over a certain age. If the Elderly Housing Only column is marked “Yes,” then the 3-Family Elderly Housing Only column should be marked “Yes” too. If the Elderly Housing Only column is marked “No,” then assess whether the district restricts 3-family housing to elderly occupancy, using techniques similar to those outlined in Part IV.C.

D. PRINCIPAL USE: 4+-FAMILY

In this section, you will complete three columns related to four-or-more-family housing: 4+-Family Treatment, 4+-Family Affordable Housing Only, and 4+-Family Elderly Housing Only.

1. Defining 4+-Family Housing

4+-family housing means four or more dwelling units, whether in one building or separate buildings, permitted on a lot.

The following phrases typically denote four-or-more-family housing:

- Multi-family/multi family/multifamily
- Apartment
- Quadplex

If you have not previously referenced the definition section of the zoning code, search “multi-family,” “multi family,” “multifamily,” or “apartment,” to confirm these terms allow four-or-more-family housing.

You should now be able to identify the term(s) used by the zoning text to mean four-or-more-family housing.

2. Where to Look

One of the parts of the zoning text identified in V.A.2. will have the information necessary to complete the 4+-Family Treatment column. Search the part(s) using the term(s) you know connote four-or-more family housing.

3. How to Log the Four Treatment Options

Proceed with the analysis in Part V.A.3. and input one of four options indicating the nature of the permission for such uses: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.

4. How to Log Affordable and Elderly Treatment

The 4+-Family Affordable Housing Only and 4+-Family Elderly Housing Only columns should be marked either “Yes” or “No” if the 4+-Family Treatment is Allowed/Conditional or Public Hearing. If 4+-Family Treatment is Prohibited or Overlay, do not make an entry in the 4+-Family Affordable Housing Only or 4+-Family Elderly Housing Only columns. Leave them blank.

The 4+-Family Affordable Housing Only column identifies (with a “Yes” entry) districts that require that all four-or-more-family housing satisfy certain affordability criteria. If the Affordable Housing Only column is marked “Yes,” then the 4+-Family Affordable Housing Only column should be marked “Yes” too. If the Affordable Housing Only column is marked “No,” then assess whether the district requires four-or-more-family housing to satisfy affordability criteria, using techniques similar to those outlined in Part IV.B.

The 4+-Family Elderly Housing Only column identifies (with a “Yes” entry) districts that require that all four-or-more-family housing be occupied by people over a certain age. If the Elderly Housing Only column is marked “Yes,” then the 4+-Family Elderly Housing Only column should be marked “Yes” too. If the Elderly Housing Only column is marked “No,” then assess whether the district restricts four-or-more-family housing to elderly occupancy, using techniques similar to those outlined in Part IV.C.

NOW PAUSE! TIME FOR CROSS-CHECK #1.

After you have filled out these four-or-more-family housing columns, it is time for cross-checking.

Sort your Spreadsheet by the Type of Zoning District column. Locate all districts you marked as “Nonresidential.” Then look at the 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, and 4+-Family Treatment columns. If any of these four columns has something other than “Prohibited” marked in it, then you may have incorrectly coded the Type of Zoning District as “Nonresidential.” Go back to Part IV.A. and review your steps before moving any further to reconcile the discrepancy between the Treatment column and Type of Zoning District column.

Next, sort your Spreadsheet by the Type of Zoning District column. Locate all districts you marked as “Primarily Residential” or “Mixed with Residential.” Then look at the 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, and 4+-Family Treatment columns. If any district shows all four of these columns as “Prohibited,” then you may have incorrectly coded the Type of Zoning District. Go back to Part IV.A. and review your steps before moving any further to reconcile the discrepancy between the Treatment columns and Type of Zoning District column.

E. PRINCIPAL USE: AFFORDABLE HOUSING

The fifth principal use category is affordable housing. It encompasses 1-family, 2-family, 3-family, and four-or-more-family housing.

Affordable housing can only be indicated as permitted if the 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, or 4+-Family Treatment columns indicate Allowed/Conditional or Public Hearing. The columns in the Spreadsheet dealing with affordable housing (labeled “AH”) are intended to identify zoning districts where affordable housing is treated differently than housing not designated affordable, or, in districts where only affordable housing is allowed, to articulate definitions and requirements for such housing.

In this section, you will complete three columns related to affordable housing: Affordable Housing (AH) Treatment, AH Elderly Housing Only, and AH Definition.

1. Starting Point: Look at Other Columns

Start by filling out the Affordable Housing (AH) Treatment column using the logic in this subsection, all of which depends on the way you have previously filled out certain other columns.

If a district is marked as Nonresidential or as an Overlay in the Type of Zoning District column, and if all entries for 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, and 4+-Family Treatment are marked “Prohibited,” then mark the Affordable Housing (AH) Treatment column “Prohibited.”

If any remaining district has been marked “Yes” in the Affordable Housing District, 2-Family Affordable Housing Only, 3-Family Affordable Housing Only, or 4+-Family Affordable Housing only columns, then simply repeat the entry logged for 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, or 4+-Family Treatment, as applicable, in the Affordable Housing (AH) Treatment

column. In addition, simply repeat the entry in the AH Elderly Housing Only column. Then skip to the next subsection and fill out the AH Definition.

For all remaining districts marked as Primarily Residential, Mixed with Residential, or Overlay (allowing housing) in the Type of Zoning District column, but which have not been identified as affordable per the preceding paragraph, continue to the next subsection, where you will be given instructions on how to fill out the AH Definition column. You will wait to fill out the Affordable Housing (AH) Treatment column for these districts until after you find (or do not find) a definition of affordability that has regulatory consequence.

2. Defining Affordable Housing

So now onto how the zoning code defines affordable housing. This definition is important because it shows what the jurisdiction means by affordable housing and often contains substantive limitations on its nature and occupancy. You should copy the full, word-for-word definition of affordable housing, usually 10-30 words long, and paste the description into the Affordable Housing Definition column.

Some components of this definition may include:

- A required percentage of area median income or average household income for residents, or a cap on the amount residents may pay for such housing
- Requirements as to the recordation of a covenant or deed that would render such housing affordable for an established period of time or in perpetuity
- Restrictions as to what types of entities can own or develop the units, most often limited to housing authorities, nonprofits, or the jurisdictional government itself
- Identification of specific federal or state agencies who must subsidize, finance, or sponsor the units
- Reference to a state affordable housing statute
- A percentage of housing units that must be set aside to satisfy affordability requirements
- Restrictions as to who may occupy affordable housing units, including some who limit such housing to employees of the jurisdiction or its school system, people who work in the jurisdiction, existing residents or relatives thereof, or specific types of workers (e.g., firefighters or ambulance personnel, as we have seen in several Connecticut towns)

To find such definitions, search for the following terms:

- Affordable housing
- Affordability
- Income-restricted
- Assisted housing
- Set-aside development
- Workforce
- Average income, annual income, median income, household income
- Pay: Captures definitions where residents' payments are capped at a percentage of income
- Convey, record, covenant deed-restrict, deed restrict: Capture definitions where affordability is tied to a covenant placed on the property; capture both "restricted" and "restrictions"
- Subsidized, financed, sponsored

- HUD, Housing and Urban Development
- Housing authority: Captures definitions limiting qualifying owners/developers to housing authorities
- Non-profit, nonprofit: May produce false positives in that nonprofit organizations may be mentioned in the use table or in other parts of the zoning code, but could capture definitions limiting qualifying owners/developers to nonprofits
- Statutes
- Specific numerical statutory reference to housing law dealing with affordable housing: e.g., in Connecticut, searching for “8-30g,” the section number for the affordable housing provisions in state law, would locate definitions tied to those provisions

If none of these words or phrases appear in the zoning code, you can mark “Not Mentioned” in the Affordable Housing (AH) Treatment column. The “Not Mentioned” entry is meant to indicate a neutral stance on affordable housing – neither prohibiting the use, as would be the case in a Nonresidential district, nor expressly treating affordable housing differently than other types of housing. You will notice that the “Not Mentioned” option replaces the “Overlay” option of the other principal use housing Treatment columns, because you only fill out the Affordable Housing (AH) Treatment column if it is treated differently than other types of housing within the same district.

3. How to Log the Remaining 2 Treatment Options

If the above words or phrases appear in the zoning code, proceed with the analysis in Part V.A.3. and input one of two options indicating the nature of the permission for such uses: Allowed/Conditional or Public Hearing.

If either of these two options is marked, then at least one of the following four columns must also be marked as allowing housing: 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, and 4+-Family Treatment. Thus a positive indication for affordable housing in the Affordable Housing (AH) Treatment column will always duplicate another housing entry.

4. How to Log Elderly Treatment

The AH Elderly Housing Only column identifies (with a “Yes” entry) districts that require that all affordable housing be occupied by people over a certain age.

If the Elderly Housing Only column is marked “Yes” and the Affordable Housing (AH) Treatment column is marked “Allowed/Conditional” or “Public Hearing,” then the AH Elderly Housing Only column should be marked “Yes” too.

If the Elderly Housing Only column is marked “No,” then assess whether the district restricts affordable housing to elderly occupancy, using techniques similar to those outlined in Part IV.C.

F. ACCESSORY DWELLING UNITS

In this section, you will complete five columns related to ADUs and their occupancy: Accessory Dwelling Unit (ADU) Treatment, ADU Employee or Family Occupancy Required, ADU Renter Occupancy Prohibited, ADU Owner Occupancy Required, and ADU Elderly Only.

1. Defining ADUs

An accessory dwelling unit (ADU) is a single unit of housing located on the same lot as a principal use, usually a 1-family home, and typically smaller than or in some other way subordinate to that principal use.

The following phrases typically denote ADUs:

- Accessory dwelling
- Accessory apartment
- In-law apartment
- Caretaker(s) apartment
- Garage apartment
- Carriage house
- Granny flat

Search the zoning text for these phrases to identify the term(s) used by the zoning text to mean an ADU.

2. Where to Look

To find out how ADUs are treated, first search for term(s) you found above in the table of contents. I suggest starting with the table of contents because there is often a single section in a zoning code that deals with ADUs.

If the term(s) does not appear in the table of contents, search the use table for that term(s). If you find it in the use table, you can easily complete the Accessory Dwelling Unit (ADU) Treatment column for all districts in the jurisdiction.

If there is no use table, search for the term(s) throughout the zoning code.

NOTE: Recall that ADU treatment is independent of your entry in the Type of Zoning District column. While a Nonresidential district prohibits principal-use housing, it may nonetheless allow an ADU to coexist with a commercial or industrial use. Thus you should search for accessory housing across all zoning districts, and not limit your search to Primarily Residential or Mixed with Residential Districts.

3. How to Log the Four Treatment Options

Proceed with the analysis in Part V.A.3. and input one of four options indicating the nature of the permission for such uses: Allowed/Conditional, Public Hearing, Prohibited, or Overlay.

NOTE: The Connecticut Zoning Atlas suggests that most jurisdictions expressly enable ADUs in some form. Jurisdictions that do not expressly enable ADUs may allow them as a traditional and customary use pursuant to staff review. Accordingly, the number of districts that you log in your atlas may be an undercount of the districts where ADUs might be allowed.

What do you do if some ADUs are allowed by right, but other ADUs require a public hearing? You should log just one entry signifying what you think is the most common permit type in the Accessory Dwelling Unit (ADU) Treatment column but make a one-sentence note in the Special Notes column about the alternate permit type. For example, let's say you find a district that requires public hearings for ADUs only if they are over 1,000 square feet. In that case, log "Approved/Conditional" in the 1-Family Treatment column and in the Special Notes column, put: "Public hearing required for ADUs over 1,000 SF." Because the Special Notes column may include notes about several different columns, be clear about the applicability of your one-sentence note.

NOTE: The ADU category is intended to cover situations where one ADU is permitted per lot. More than one ADU may be permitted on a lot, particularly in commercial areas. Treat these uses as 2-family, 3-family, or 4+-family housing as a principal use, and do not account for multiple-ADU situations in the Accessory Dwelling Unit (ADU) Treatment column.

4. How to Log ADU Occupancy Rules

Once you have completed the Accessory Dwelling Unit (ADU) Treatment column, you can turn to the four columns regarding occupancy of ADUs. It is important to note these occupancy restrictions because excessive occupancy restrictions can limit the incentive, feasibility, or endurance of ADUs.

These occupancy requirements will not be found in a use table or any other chart, but rather in the section of the zoning text in which ADUs are generally described. To fill out the relevant columns, you will simply need to do some common-sense reading of the definitions and general requirements around ADUs.

The ADU Employee or Family Occupancy Required column tracks whether the jurisdiction requires an employment or familial relationship between the occupant of the ADU and the occupant of a principal dwelling. See if you can find phrases like "must be an employee" or "must be a relative." If the jurisdiction only requires one relationship but not both, still mark the column with a "Yes." If you feel the need to be more precise, feel free to separate this single column into two columns (one for an employment relationship and one for a familial relationship).

The ADU Renter Occupancy Prohibited column tracks whether the jurisdiction allows renters to occupy ADUs. The ADU Owner Occupancy Required column confirms whether the jurisdiction allows renters to occupy both units, or whether one unit must be owner-occupied. While these two columns are related and have similar effects, they are not the same. If a district allows ADU renter occupancy (that is, has a "No" in the ADU Renter Occupancy Prohibited column) but also requires owner occupancy (that is, has a "Yes" in the ADU Owner Occupancy Required column), then the ADU may be occupied by a renter but only if the principal home is occupied by the lot's owner. If a district prohibits renter occupancy but requires owner occupancy, then the owner may let any person occupy the ADU as long as they do not pay rent. In practice, this means that a family member or employee is most likely to occupy the ADU.

The ADU Elderly Housing Only column confirms whether the jurisdiction requires that the ADU be occupied by people over a certain age. You should search for keywords and use techniques similar to those used in Part IV.C. to complete the ADU Elderly Housing Only column.

NOTE: The four ADU occupancy columns may seem puzzling in their framing. One column calls for you to log a prohibition on occupancy by renters, while the other three columns call for you to

log affirmative occupancy requirements (owner, employee/family, and elderly). Even though they are phrased in what seem like opposite ways, a “Yes” answer to all of these columns indicates greater restrictiveness. Later, this framing will enable consistency in any public interface.

5. Other Notes

While perusing the portions of the zoning code dealing with ADUs, you might find that the jurisdiction requires permits to be renewed on an annual or periodic basis. If this information is of interest to you, please note the following in the Special Notes column: “ADU permit requires renewal every [X] years.”

One final tip: Often, all ADU-related provisions are located in the same section of the zoning code. Accordingly, you may wish to skip ahead to browse and complete the ADU-specific columns on lots and structures described in Parts VI. and VII.

G. PLANNED RESIDENTIAL DEVELOPMENT

In this section, you will complete the Planned Residential Development (PRD) Treatment column.

1. Defining PRDs

Planned residential developments (PRDs) allow for many residential units, often in different buildings, to be permitted at one time and built on a single large lot.

The following phrases typically denote PRDs:

- Planned residential
- Planned unit
- Planned development
- Active adult
- Planned community
- Master planned
- Cluster

Search the zoning text for these phrases to identify the term(s) used by the zoning text to mean an PRD.

2. Where to Look

To find out how PRDs are treated, first search for term(s) you found above in the table of contents. I suggest starting with the table of contents because very often, there is a single section in a zoning code that deals with PRDs.

If the term(s) does not appear in the table of contents, search the use table for that term(s). If you find it in the use table, you can easily complete the Planned Residential Development (PRD) Treatment column for all districts in the jurisdiction.

If there is no use table, search for the term(s) throughout the zoning code.

3. How to Log the Four Treatment Options

For PRDs, we should follow a similar logic to the logic we followed in logging the treatment of affordable housing.

If a district is marked as Nonresidential or as an Overlay in the Type of Zoning District column, and if all entries for 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, and 4+-Family Treatment are marked “Prohibited,” then the Planned Residential Development (PRD) Treatment column must also be marked “Prohibited.”

If none of these words or phrases appear in the zoning code, you can mark “Not Mentioned” in the Planned Residential Development (PRD) Treatment column. The “Not Mentioned” entry is meant to indicate a neutral stance on PRDs – neither prohibiting the use, as would be the case in a Nonresidential district, nor expressly treating it differently than other types of housing. You will notice that the “Not Mentioned” option replaces the “Overlay” option of the other principal use housing Treatment columns, because you only fill out the Planned Residential Development (PRD) Treatment column if it is treated differently than other types of housing within the same district.

In the vast majority of districts, the zoning code will be silent on PRDs, so do not be surprised if this column is most often left blank (as I have marked it as an optional column) or indicated as “Not Mentioned.”

If, however, you find a section dealing with permission for these uses, you will proceed with the analysis in Part V.A.3. and input one of two options indicating the nature of the permission for such uses: Allowed/Conditional or Public Hearing. Where PRDs are permitted, they are most often permitted pursuant to a public hearing, even if 1-family housing (individually developed and permitted) is permitted as of right.

As is the case with affordable housing, the PRD encompasses 1-family, 2-family, 3-family, and four-or-more-family housing. Thus in districts where PRDs are allowed, at least one of the four Treatment columns – 1-Family Treatment, 2-Family Treatment, 3-Family Treatment, and 4+-Family Treatment – must indicate Allowed/Conditional or Public Hearing. The columns in the Spreadsheet dealing with PRDs are intended to identify zoning districts where PRDs are expressly permitted in the zoning code.

One final tip: Often, all PRD-related provisions are located in the same section of the zoning code. Accordingly, you may wish to skip ahead to browse and complete the PRD-specific columns on lots and structures described in Parts VI. and VII.

VI CATALOGUING LOTS

At this point, you have completed 29 columns in the Spreadsheet, from the district names to their classification and uses, and you have been introduced to a 30th column, Special Notes, which you will continue to fill out.

This Part now turns to how zoning codes treat the way lots are developed. It logs the development of lots in all seven of the housing types discussed in Part V.

Specifically, this Part covers minimum lot size requirements, maximum density, minimum parking requirements, lot coverage, and requirements that housing be connected to particular infrastructure or structures.

NOTE: These requirements do not always exist. Where the zoning code is silent, leave the entry blank. You should also take care to not make entries in columns corresponding to housing that is not permitted in the zoning district.

In this Part, you will fill out the following Spreadsheet columns:

- Minimum lot size: The minimum acres of land required for residential development.
 - **1-Family Min. Lot**
 - **2-Family Min. Lot**
 - **3-Family Min. Lot**
 - **4+-Family Min. Lot**
 - **AH Min. Lot**
 - **ADU Min. Lot**
 - **PRD Min. Lot**
- Maximum density: The maximum number of units per acre.
 - **2-Family Max. Density**
 - **3-Family Max. Density**
 - **4+-Family Max. Density**
 - **AH Max. Density**
 - **PRD Max. Density**
- Lot coverage: The percentage of land allowed to be covered by particular materials (buildings or buildings and impervious surface).
 - **1-Family Max. Lot Coverage – Buildings**
 - **1-Family Max. Lot Coverage – Buildings and Impervious Surface**
 - **2-Family Max. Lot Coverage – Buildings**
 - **2-Family Max. Lot Coverage – Buildings and Impervious Surface**
 - **3-Family Max. Lot Coverage – Buildings**
 - **3-Family Max. Lot Coverage – Buildings and Impervious Surface**
 - **4+-Family Max. Lot Coverage – Buildings**
 - **4+-Family Max. Lot Coverage – Buildings and Impervious Surface**
- Parking minimum: The minimum number of parking spaces required per specific type of unit.
 - **1-Family Min. # Parking Spaces**
 - **2-Family Min. # Parking Spaces Per Studio or 1BR**
 - **2-Family Min. # Parking Spaces Per 2+ BR**

- **3-Family Min. # Parking Spaces Per Studio or 1BR**
 - **3-Family Min. # Parking Spaces Per 2+ BR**
 - **4+-Family Min. # Parking Spaces Per Studio or 1BR**
 - **4+-Family Min. # Parking Spaces Per 2+ BR**
 - **AH Min. # Parking Spaces Per Studio or 1BR**
 - **AH Min. # Parking Spaces Per 2+ BR**
 - **ADU Min. # Parking Spaces**
- Connectivity requirements: A binary Yes/No entry indicating whether housing is required to be connected to particular infrastructure or structures.
 - **3-Family Connection to Sewer and/or Water Required**
 - **3-Family Connection or Proximity to Public Transit Required**
 - **4+-Family Connection to Sewer and/or Water Required**
 - **4+-Family Connection or Proximity to Public Transit Required**
 - **AH Connection to Sewer and/or Water Required**
 - **AH Connection or Proximity to Public Transit Required**
 - **ADU Restricted to Only Primary Structure**

Overlay districts require special instruction. If any district has a “Yes” in the Overlay column, then only complete subsequent columns for the district in the Spreadsheet if the overlay overrides the base district and is different than the base district. If the cell is left blank, the base district’s characteristics prevail. If the cell differs from the base district’s equivalent cell, then the overlay district will automatically override the base district.

A. MINIMUM LOT SIZE

Local jurisdictions can require that a certain parcel of land be a minimum size before being developed.

In this section, you will complete up to seven columns in the Spreadsheet, each relating to minimum lot size. These correspond to all seven of the housing types discussed in Part V.

You will most often find the minimum lot size requirements in the zoning code chart that details certain district characteristics, sometimes contained in an appendix to the zoning code. These charts might be called:

- Lot Requirements
- Lot and Building Requirements
- Area Requirements
- Area and Bulk Requirements
- Dimensional Requirements

If you find such a chart, keep it handy for Parts VI.B. and VI.C.

You will also find minimum lot size requirements in district-specific sections of the zoning code. When it comes to ADUs and PRDs, you are more likely to find minimum lot size requirements in the sections of the zoning code dealing specifically with ADUs and PRDs. (Hence the notes in Parts V.F. and V.G. suggesting that you fill out ADU- and PRD-specific columns once you find the appropriate section of the zoning code.)

Where zoning codes require a minimum lot size, they will indicate the requirement as a number in square feet or in acres. Since people often think of residential lots in acres, convert square footages to acres, and extend your number to the hundredth place. Here's why: Many zoning codes using square feet use round numbers, like 40,000 square feet, instead of the 43,560 square feet contained in an acre. For this reason, after you convert, you will often see 1.84 acres instead of 2 acres, 0.92 acres instead of 1 acre, 0.46 acres instead of half an acre, or 0.23 acres instead of a quarter acre. Extending to the hundredth place can ensure you track these differences. The categories for the minimum lot size toggle in the Connecticut Zoning Atlas reflect those strangely-specific figures.

When you have your acreage number, input it into the Spreadsheet as a number only, without units (e.g., if the zoning district requires a 1-acre minimum lot size, insert "1" instead of "1 acre"). The higher the number, the more restrictive the lot size requirement.

Not every district allowing housing will require a minimum lot size. That said, 1-family housing almost always has a minimum lot size: In Connecticut, we found that over 98% of 1-family land in Primarily Residential districts was subject to a minimum lot size. Four-or-more-family housing, by contrast, only had minimum lot sizes about half the time.

What do you do if a district requires one minimum lot size for apartment buildings generally, and a smaller lot size for, for example, elderly housing? You should log just one entry signifying what you think is the most common permit type in the 4+Family Min. Lot column but make a one-sentence note in the Special Notes column about the alternate lot size. For example, let's say you find a district that requires a 4-acre minimum for large apartment buildings, but a 1-acre minimum for elderly housing. In that case, log "4" in the 4+Family Min. Lot column and in the Special Notes column, put: "1-acre minimum lot for elderly 4+-family housing." Because the Special Notes column may include notes about several different columns, be clear about the applicability of your one-sentence note.

NOTE: If a district requires one minimum lot size for apartment buildings generally, and a different (usually larger) lot size for affordable housing, you need not use Special Notes, because you have the AH Min. Lot column to indicate the different treatment. The same is true for planned residential developments, for which you have the PRD Min. Lot column to indicate different treatment.

B. MAXIMUM DENSITY

Minimum lot size is not the only way to regulate density. Alternatively, or sometimes simultaneously, zoning codes can also cap the number of units per acre.

In this section, you will complete up to five columns capping density on principal-use housing developments with two units or more.

You might find maximum density requirements in the chart you found in Part VI.A., if any. If you are not so lucky, search the zoning text for the following phrases:

- Units Per Acre or Units/Acre

- Dwellings Per Acre or Dwellings/Acre
- Density Per Acre or Density/Acre

When you find the ratio, input it into the Spreadsheet as a number only, without units (e.g., if the zoning district caps 4+-family housing at 6 units per acre, insert “6” instead of “6 units/acre”). The lower the number, the more restrictive the density requirement.

NOTE: Separate from maximum density requirements, some jurisdictions will cap housing at bedrooms per acre, which usually has the effect of increasing the number of studio and one-bedroom units created. You may wish to log bedroom-per-acre caps that you see in the Special Notes section. For example, you might say: “Maximum density capped at [x] bedrooms/acre.” Maximum bedroom requirements will be further discussed in Part VII.D.

C. MAXIMUM LOT COVERAGE

Lot coverage requirements cap the amount of land upon which buildings, or buildings and other impervious surfaces, can be constructed.

Lot coverage requirements are always expressed as a percentage of the lot as a whole. These requirements are common: In Connecticut, between two-thirds and three-quarters of districts had some kind of lot coverage requirements.

In this section, you will complete up to eight columns related to lot coverage, two each for each of the four principal housing types.

The first column will cover the amount of land that may be covered by buildings, and the second column will cover the amount of land that may be covered by buildings and other impervious surfaces, such as asphalt (e.g. driveways). While most jurisdictions will have figures for both columns, some will have one or the other, and some will have none. If the jurisdiction fails to mention lot coverage requirements, leave the relevant columns blank.

We only suggest logging the four principal housing types because we found in Connecticut that codes did not distinguish affordable housing, and we only saw a handful of additional lot-coverage requirements for ADUs. If you run across lot coverage requirements for ADUs, feel free to log in the Special Notes column as, “ADU maximum lot coverage [x]%.”

You might find lot coverage requirements in the chart you found in Part VI.A., if any. If you are not so lucky, search the zoning text for district-specific provisions or search for the following phrases:

- Lot Coverage
- Building Coverage
- Imperious Surface
- Pervious Surface
- Coverage (if all else fails)
-

When you find the percentage of allowable lot coverage, input the whole number associated with the percentage into the Spreadsheet as a number only, without the percentage sign. The lower the number, the more restrictive the lot coverage requirement.

D. PARKING REQUIREMENTS

Ah, parking requirements! Zoning codes will often mandate that each housing unit have a certain number of parking spaces.

Parking requirements impact housing production because the more parking spots required, the fewer housing units can be built on any given lot—and the more expensive it is to build that housing. Minimum parking requirements also impact cities because people are more likely to choose to drive when more parking is provided. Parking requirements are unfortunately common: 87% of the land allowing housing in Connecticut requires parking.

In this section, you will fill out 10 different columns related to parking requirements.

Zoning codes will often differentiate between required parking for 1-family housing and required parking for duplexes, triplexes, or apartments. There is only one column devoted to 1-family housing, because codes will not differentiate parking requirements based on the number of bedrooms in 1-family housing. By contrast, there are two columns each devoted to 2-Family, 3-Family, 4+-Family, and AH housing, because zoning codes often differentiate parking requirements based on the number of bedrooms in such housing. There is also a column for ADUs, which logs the number of parking spaces additional to the main unit.

You will often find minimum parking requirements in a chart or table specifically relating to parking in the zoning text. Even where there is a chart or table specific to parking, you will need to search for the term “parking” and manually review the term each time it appears in the zoning code to be sure you have logged everything correctly.

NOTE: Do not be surprised if you find, for example, instances where elderly housing has a different parking requirement than non-elderly housing. In such cases, follow the convention you have already heard several times, which is to log one entry signifying what you think is the most common parking requirement for that housing type in that zone but make a one-sentence note in the Special Notes column about the alternative. For example, let’s say you find a district that requires two parking spaces for 1-family housing, but only one parking space for elderly housing. In that case, log “2” in the 1-Family Min. # Parking Spaces column and in the Special Notes column, put: “1 parking space per elderly 1-family housing unit.” Because the Special Notes column may include notes about several different columns, be clear about the applicability of your one-sentence note.

When you find the number of parking spaces required for the housing type, bedroom type, and district, input it into the Spreadsheet as a number only, without units. Take the number to the hundredth place, because you will see some zoning requirements with “.25” or “.75” parking spaces per unit. The higher the number, the more restrictive the parking requirement.

E. CONNECTIVITY REQUIREMENTS

In this section, you will complete up to seven columns requiring housing to be connected to other infrastructure or structures.

Three of the columns relate to whether the housing must be located near public transportation, and three relate to whether the housing must connect to existing water or sewer requirements. You will log these restrictions for three-family, four-or-more-family, and affordable housing. In Connecticut, we saw these connectivity requirements most often when related to four-or-more-family affordable housing—but they are rare. The seventh column relates to whether ADUs must be physically attached to or connected to the principal dwelling unit; such a requirement was found in about half of the districts allowing ADUs in Connecticut.

To complete these columns, search for the following phrases:

- Connected to
- Sewer
- Water
- Public transportation
- Public transit
- Attached to

These requirements will often be found within the description of an individual district or the ADU housing type description, and not in a chart. Because the first six columns (on transit and water/sewer connectivity) are rare, you could decline to log them systematically. You might choose instead to log these connectivity requirements, when you see them, in the Special Notes column.

NOTE: Even if the zoning code does not require connectivity to water/sewer or transit, the code may still make special provisions for housing near such areas. Where, for example, a district requires a different lot size or building height for lots near a train station, you can log a note in the Special Notes column stating as much.

NOW PAUSE! TIME FOR CROSS-CHECK #2.

After you have filled out these lot-related columns, it is again time for cross-checking.

Sort your Spreadsheet by the Type of Zoning District column. Locate all districts you marked as “Nonresidential.” Then look at the lot-related columns that you just filled out. If any 1-Family, 2-Family, 3-Family, 4+-Family, or Affordable Housing (AH), or Planned Residential Development (PRD) columns discussed in this Part contain values of any kind, then you either incorrectly coded the Type of Zoning District as “Nonresidential,” or you incorrectly inserted a lot-related characteristic in the wrong column. Go back to Part V. and review your steps for the relevant type of housing before moving any further to reconcile the discrepancy between the lot-related column and Type of Zoning District column.

Next, sort your Spreadsheet by the 1-Family Treatment column. For any districts marked “Prohibited,” confirm whether there is any value in any of the 1-Family lot-related columns you just filled out. If any “Prohibited” district has a value in any 1-Family lot-related column, then you either incorrectly coded the 1-Family Treatment column or you incorrectly inserted a lot-related characteristic in the wrong column. Go back to Part V.A. and review your steps to reconcile the discrepancy between the 1-Family Treatment column and 1-Family lot-related columns.

Repeat the steps in the preceding paragraph for the 2-Family Treatment column (and 2-Family lot-related columns), 3-Family Treatment, 4+-Family Treatment, Affordable Housing (AH) Treatment, and Planned Residential Development (PRD) Treatment columns.

Finally, sort your Spreadsheet by the Accessory Dwelling Unit (ADU) Treatment column. Locate all the districts you marked as “Prohibited.” Then, look at the lot-related columns that you just filled out. If any ADU columns discussed in this Part contain values of any kind, then you either incorrectly coded the Accessory Dwelling Unit (ADU) Treatment column as “Prohibited,” or you incorrectly inserted a lot-related characteristic in the wrong column. Go back to Part V.F. and review your steps to reconcile the discrepancy between the Accessory Dwelling Unit (ADU) Treatment column and ADU lot-related columns.

It will only take a few minutes to locate any errant entries, and a few more to correct them, but this check will ensure that your data is clean down the line.

VII CATALOGUING STRUCTURES

You're in the home stretch, having completed up to 66 columns in the Spreadsheet, plus the 67th Special Notes column, which you should continue filling in, as appropriate.

This Part concludes with the final 26 columns, all dealing with the way zoning codes treat the development of structures used for housing. It logs this treatment across all seven of the housing types discussed in Part V.

This Part covers the maximum height of residential structures, floor to area ratios, unit size requirements, maximum bedroom requirements, and maximum units per development.

NOTE: Again, these structure-related requirements do not always exist. Where the zoning code is silent, leave the entry blank. Take care to not make entries in columns corresponding to housing that is not permitted in the zoning district.

In this Part, you will fill out the following Spreadsheet columns:

- Maximum height: The maximum height of residential construction.
 - **1-Family Max. Height (# of stories)**
 - **1-Family Max. Height (# of feet)**
 - **2-Family Max. Height (# of stories)**
 - **2-Family Max. Height (# of feet)**
 - **3-Family Max. Height (# of stories)**
 - **3-Family Max. Height (# of feet)**
 - **4+-Family Max. Height (# of stories)**
 - **4+-Family Max. Height (# of feet)**
- Floor to area ratio: A single number which constrains building square footage relative to lot area by capping building square footage as a multiple of the lot area.
 - **1-Family Floor to Area Ratio**
 - **2-Family Floor to Area Ratio**
 - **3-Family Floor to Area Ratio**
 - **4+-Family Floor to Area Ratio**
- Unit size: The minimum or maximum square footage for a single dwelling unit.
 - **1-Family Min. Unit Size**
 - **2-Family Min. Unit Size**
 - **3-Family Min. Unit Size**
 - **4+-Family Min. Unit Size**
 - **AH Min. Unit Size**
 - **ADU Max Size (% of Main Unit)**
 - **ADU Max. Size (SF)**
- Maximum bedrooms per unit: The maximum number of bedrooms within a single dwelling unit.
 - **3-Family Max. # Bedrooms Per Unit**
 - **4+-Family Max. # Bedrooms Per Unit**
 - **AH Max. # Bedrooms Per Unit**

- **ADU Max. # Bedrooms Per Unit**
- Maximum units: The maximum number of units per building or per development, as applicable.
 - **4+-Family Max. # Units Per Building**
 - **AH Max. # Units Per Building**
 - **PRD Maximum # Units Per Development**

Again, overlay districts require special instruction. Any district has a “Yes” in the Overlay column, then only complete subsequent columns for the district in the Spreadsheet if the overlay overrides the base district and is different than the base district. If the cell is left blank, the base district’s characteristics prevail.

A. MAXIMUM HEIGHT

Zoning codes can restrict the height of buildings. Such a restriction can dampen housing supply by constraining the amount of building that can be devoted to housing. In Connecticut, on average over 90% of districts permitting housing have height restrictions. Four-or-more-family housing is capped at around four stories, which means that even where apartment buildings are allowed, they are extremely limited.

In this section, you will fill out up to eight columns dealing with the maximum height of housing of the four principal housing types.

Some jurisdictions will cap height in terms of number of stories, while others will use linear feet; some will use both stories and feet and will say that whichever is shorter/smaller prevails. The Spreadsheet contains one column for stories and one for feet, for each of the four principal housing types. Fill out what you find and leave the rest blank.

You will most often find the maximum height requirements in the chart in the zoning text detailing certain district characteristics, sometimes contained in an appendix to the zoning code. These charts might be called:

- Area and Bulk Requirements
- Dimensional Requirements
- Lot and Building Requirements
- Area Requirements

If you do not find any such charts, search for height restrictions manually, using the following phrases:

- Maximum height
- Height
- Stories
- Story

You could also search for the term “feet,” but this will give you a huge number of results, from the height of trees to the length of signs. See what you find with the first three terms before resorting to “feet.”

When you find the number of stories or feet, input it into the Spreadsheet as a number only, without units. You can input your number to the tenth place, because often height restrictions based on the number of stories will include half stories (0.5). The lower the number, the more restrictive the height requirement.

B. FLOOR-TO-AREA RATIO

Zoning codes, especially older codes, often offer what is called a “floor to area ratio,” which constrains building square footage relative to lot area by capping building square footage as a multiple of the lot area. In Connecticut, these ratios appear in about a quarter of districts allowing four-or-more-family housing, but only in about 15% of 1-family districts.

In this section, you will fill out up to four columns, each dealing with the floor to area ratio for the four principal housing types.

You might find floor-to-area requirements in the chart you found in Part VII.A., if any. If you are not so lucky, search the zoning text for these phrases:

- FAR
- F.A.R.
- Floor to area
- Floor-to-area
- Floor area ratio
- Floor-area ratio

On the last two search terms, be sure to include the word “ratio,” as the term “floor area” alone will give you false positives, capturing everything from minimum unit size (the subject of VII.C.) to cellar size. When you find a floor-to-area ratio, input it into the Spreadsheet as a number only, without units, and take it to the hundredth place. The lower the number, the more restrictive the floor-to-area requirement.

NOTE: In Connecticut, we did not distinguish between gross and net floor area. Gross area includes all area within the outer exterior surfaces of a building, while net area often excludes unusable or mechanical space. There is no clever way to convert between gross and net floor area, and usually the distinction will only make a negligible difference to the actual amount of housing. If this matters to you, feel free to make a note in the Special Notes column.

C. UNIT SIZE

Zoning codes may also constrain the size of housing units. For principal-use housing, codes sometimes impose minimum unit sizes, which eliminate smaller (and more affordable) housing types. In Connecticut, 40% of districts requiring a minimum unit size for 1-family housing required a size of 1,000 square feet or more. For accessory dwelling units, codes very often impose maximum unit sizes; in Connecticut, about three-quarters of districts do. Maximum sizes can hinder the effectiveness of ADUs, rendering them too small to meet housing needs.

In this section, you will fill out up to seven columns dealing with unit size.

The first five columns deal with the four principal housing types and affordable housing, and require you to collect information in terms of square feet. For these five columns, you are collecting the minimum unit size, meaning the smallest number of square feet a housing unit is allowed to be. The last two columns deal with ADUs, and here, you are collecting the maximum unit size, meaning the largest number of square feet an ADU is allowed to be. One column logs maximum ADU size as a percentage of the principal dwelling, while the other logs maximum ADU size in square feet. Some jurisdictions will use a percentage, while others will use square feet; some will use both percentage and square feet and will say that whichever is smaller prevails.

You might find minimum unit size requirements in the chart you found in Part VII.A., if any. But more likely they will be found in district-specific sections of the zoning code. Search for these phrases:

- Unit size
- Minimum size
- Floor area

When you find a unit size as expressed in square feet, input it into the Spreadsheet as a whole number. When you find a maximum ADU size expressed as a percentage, input the whole number associated with the percentage into the Spreadsheet as a number only, without the percentage sign. For sixteen percent, you insert the number "16." The higher the minimum unit size for principal-use housing, and the lower the maximum unit size for ADUs, the more restrictive the requirement.

Some regulations will not have a maximum size for an ADU. In such an instance leave the ADU Max. Size column blank.

NOTE: You may come across language indicating that an ADU can be the same size as the principal dwelling. If the jurisdiction allows an ADU to be the same size as a principal 1-family home on the lot, this is not an ADU at all. It is more accurately coded as 2-family housing. Return to Parts V.B. and V.F. and make changes accordingly.

D. MAXIMUM BEDROOMS

Some zoning codes will cap the number of bedrooms for three-or-more-family housing and for ADUs. The rationale for these caps appears to be to limit the number of schoolchildren who will impose themselves on public school systems. There are essentially no maximum-bedrooms caps on 1-family housing, calling into question why children living in multi-family housing or ADUs must be zoned out. In any event, these caps are more common than one would hope, and thus worth logging in your Spreadsheet.

In this section, you will complete up to four columns, relating to three-family housing, four-or-more-family housing, affordable housing, and accessory dwelling units.

This requirement may be tricky to find, but you could start by searching the phrases:

- Maximum bedroom
- Max. bedroom
- Maximum number of bedrooms

In addition, searching the ADU-related section of the zoning code for the term “bedroom” will give you what you need to fill out the ADU Max. # Bedrooms Per Unit column. The lower the number, the more restrictive the bedroom requirement.

When you find a maximum number of bedrooms, input it into the Spreadsheet as a whole number, without units. If needed, take the number to the tenth decimal place.

NOTE: You may find descriptions regarding a cap on a total number of rooms permitted in a housing unit, without reference to a particular number of bedrooms. Usually this total number of rooms excludes bathrooms and utility spaces. If given this number, you could take the total number of rooms and subtract 2 (for a kitchen and living room) to estimate the number of bedrooms that might be allowed. If you do this, include in the Special Notes: “Maximum bedrooms estimated per cap of [#] total number of rooms.”

E. MAXIMUM UNITS

Finally, some zoning codes will cap the number of housing units that can be developed in four-or-more-family housing, affordable housing, or planned residential developments. The rationale for this type of restriction may be purely exclusionary, or it may be genuinely related to some infrastructure concern. Collect the information regardless!

In this section, you will complete up to three columns. To complete them, search for any of the following phrases in the zoning text:

- Maximum units
- Max. units
- Maximum number of units

You could also search the word “maximum” in the section of the zoning code dealing with affordable housing and the section of the zoning code dealing with PRDs. While the term may give you false positives, it will be a manageable number if you limit the search to just those specific sections.

When you find a maximum number of units, input it into the Spreadsheet as a whole number, without units. The lower the number, the more restrictive the unit requirement.

NOW PAUSE! TIME FOR CROSS-CHECK #3.

After you have filled out these structure-related columns, it is time for cross-checking.

Sort your Spreadsheet by the Type of Zoning District column. Locate all districts you marked as “Nonresidential.” Then look at the structure-related columns that you just filled out. If any 1-Family, 2-Family, 3-Family, 4+-Family, Affordable Housing (AH), or Planned Residential Development (PRD) columns discussed in this Part contain values of any kind, then you either incorrectly coded the Type of Zoning District as “Nonresidential,” or you incorrectly inserted a structure-related characteristic in the wrong column. Go back to Part V. and review your steps for the relevant type

of housing before moving any further to reconcile the discrepancy between the structure-related column and Type of Zoning District column.

Next, sort your Spreadsheet by 1-Family Treatment. For any districts marked “Prohibited,” confirm whether there is any value in any of the 1-Family structure-related columns you just filled out. If any “Prohibited” district has a value in any 1-Family structure-related column, then you either incorrectly coded the 1-Family Treatment column or you incorrectly inserted a structure-related characteristic in the wrong column. Go back to Part V.A. and review your steps to reconcile the discrepancy between the 1-Family Treatment column and 1-Family structure-related columns.

Repeat the steps in the preceding paragraph for 2-Family Treatment (and 2-Family structure-related columns), 3-Family Treatment, 4+-Family Treatment, Affordable Housing (AH) Treatment, and Planned Residential Development (PRD) Treatment columns.

Finally, sort your Spreadsheet by Accessory Dwelling Unit (ADU) Treatment column. Locate all the districts you marked as “Prohibited.” Then, look at the structure-related columns that you just filled out. If any ADU columns discussed in this Part contain values of any kind, then you either incorrectly coded the Accessory Dwelling Unit (ADU) Treatment column as “Prohibited,” or you incorrectly inserted a structure-related characteristic in the wrong column. Go back to Part V.F. and review your steps to reconcile the discrepancy between the Accessory Dwelling Unit (ADU) Treatment column and ADU structure-related columns.

It will only take a few minutes to locate any errant entries, and a few more to correct them, but this check will ensure that your data is clean down the line.

VIII FINISHING THINGS UP

You have now collected a significant amount of substantive information in the Spreadsheet, and you have a collection of shapefiles to match. Congrats!

You just need to do a few more things before sharing it publicly.

First, you need to be sure you've verified your Spreadsheet data one last time. Then, you need to make sure you have a maintenance plan. And finally, you need to decide what Spreadsheet columns will be displayed in your public interface.

This Part contains some lessons learned from the Connecticut Zoning Atlas to start the conversation among your own team members.

A. DATA VERIFICATION

No one is perfect. You will inevitably find errors in the data collected in your Spreadsheet. For the Connecticut Zoning Atlas, our team checked its work in several different ways.

First, we did our own cross-checking of data at various intervals. Above, I provided 3 sets of cross-checking instructions for you at key points. Of particular note, ensure that: Nonresidential districts are not indicated to allow principal-use residential in later columns; farming-residential districts are classified as Primarily Residential; and lot and structure characteristics are not included in columns for housing types not allowed in the district.

When you've done all the above-recommended cross-checks, do this last one: Sort each column with numerical inputs in ascending order to identify outliers and errant inclusions of units. Sorting in this manner will enable you to see whether numbers are too small or too large to be appropriate to the unit of measurement.

In addition, delete all zeroes your team may have inputted. If the zoning code was silent on a numerical measure, the cell should be left blank.

Second, we reached out to public officials seeking corrections to data specific to their jurisdictions. Using Google Sheets, we created 180 spreadsheets, one for each zoning jurisdiction, and sent links to local planning officials. (This is where the information you collect for jurisdiction officials in Part II.B. will come in handy!). In all, sixty-three planners provided feedback improving the quality of our data. Note, however, that planners are fallible, too. Trust, but verify their suggestions with the text of the published zoning code and map.

Third, once the Atlas was online, we put out general calls for community members to assist with map updates and corrections. To this day, we continue to receive messages, and we gladly take any edits that can be verified against published zoning code text.

B. MAINTENANCE

Zoning codes change. Even if you are successful in assembling all relevant data, your atlas will quickly become obsolete if you do not develop a system for updating it. I suggest setting up an email address or webpage so that planners and the public can proactively make your team aware of any errors. I also recommend identifying a single person charged with collecting and effectuating both textual and graphic updates. If you have an independent data visualization team, as we did, be sure you fairly anticipate and communicate your future needs for their time.

Special efforts must be made after any statewide enabling act change that affects the jurisdictions in your atlas. If this happens, you should comprehensively update relevant components of your atlas.

For example, in Connecticut, after we completed the Connecticut Zoning Atlas, the state legislature passed a law legalizing accessory dwelling units, unless a jurisdiction opted out by supermajority votes of its planning and zoning commission and legislative body. As different jurisdictions responded to this new state law, we updated our atlas.

A full update to the data should be done every three to five years.

C. YOUR PUBLIC INTERFACE

Now, you're finally ready to unveil your work to the public! What should you include in your public interface?

Certainly, when you choose a base layer, you will want to include streets. People orient themselves using street grids, and your base layer or your zoning-specific layers should be searchable by street name and address, so that people can locate the zoning characteristics of a specific address. We used the Open Street Map, online at openstreetmap.org. We also included an option for users to move between a map image and satellite image.

In addition, you may want to include the following three user-orienting features:

- Waterways, including rivers and lakes
- Federal and state public lands
- Transit stations

The first two features can help illustrate lands not subject to zoning. Portraying these in blue and green, respectively, can help people visually see how much of some towns are dedicated to open space and natural features. You should be able to get the waterways and state public lands layers from your state GIS office or state environmental agency.

As for federal lands, try the ArcGIS USA Federal Lands layer, which includes lands of the Bureau of Land Management, Bureau of Reclamation, Department of Defense, National Park Service, Fish and Wildlife Surface, and Forest Service. And for transit stations (which for Connecticut included passenger rail and bus rapid transit stations), try your state transit authority or department of transportation.

In the public interface of the Connecticut Zoning Atlas, we created a toggle (an on/off switch) for waterways, federal and state lands, and transit stations. You may also wish to include sewer and water infrastructure as a fourth toggle.

With those base map issues aside, we can turn to zoning characteristics. If you've completed all the columns in the Spreadsheet, you'll have too much information for the public to comfortably view.

With that in mind, in Connecticut, we only included 28 columns in our public interface. View our legend at desegregatect.org/atlas to follow along with these descriptions:

- **Type of Zoning District**
 - Depicted on the base map in related shades of purple, which allows users to read "hits" as one yet still differentiate between Primarily Residential, Mixed with Residential, and Nonresidential districts.
- **Full District Name, Jurisdiction**
 - Featured together (with Full District Name in all caps, Jurisdiction in upstyle below) in a white box upon a user's hover over any particular zoning district.
- **1-Family Treatment, 2-Family Treatment, 3-Family Treatment, 4+-Family Treatment, Accessory Dwelling Unit (ADU) Treatment**
 - Shown in the legend as individual options, where the user can choose which type of housing to select and then further select between "Allowed As of Right" (corresponding to the Allowed/Conditional entry) and "Allowed Only After Public Hearing" (corresponding to the Public Hearing entry).
- **Elderly Housing District, 2-Family Elderly Housing Only, 3-Family Elderly Housing Only, 4+-Family Elderly Housing Only**
 - Shown after the user selects one of the four principal housing types, with the prompt "Not Restricted to Elderly Only" (to ensure that "hits" show permissiveness).
 - A "No" entry in the Spreadsheet appears as purple on the Atlas.
- **1-Family Min. Lot Size, 2-Family Min. Lot Size, 3-Family Min. Lot Size, 4+-Family Min. Lot Size**
 - Shown after the user selects one of the four principal housing types, with five prompts for users – None, .01-.46, .47-.91, .92-1.83, and 1.84+ – which correspond to the round numbers used by jurisdictions using square feet to measure lot size.
- **1-Family Min. Unit Size, 2-Family Min. Unit Size, 3-Family Min. Unit Size, 4+-Family Min. Unit Size**
 - Shown after the user selects one of the four principal housing types, with the prompt "No Minimum Unit Size Requirement" (to ensure that "hits" show permissiveness).
 - To depict these in the same way we do, you will need to convert these columns into a binary option (i.e., a Yes/No depending on whether the district requires a unit size for that particular principal use or not).
- **ADU Employee or Family Occupancy Required**
 - Shown after the user selects "Accessory Dwelling Units," with the prompt "Allows Non-Family/Non-Employees" (to ensure that "hits" show permissiveness).
 - A "No" entry in the Spreadsheet appears as purple on the Atlas.
- **ADU Renter Occupancy Prohibited**
 - Shown after the user selects "Accessory Dwelling Units," with the prompt "Allows Renters" (to ensure that "hits" show permissiveness).
 - A "No" entry in the Spreadsheet appears as purple on the Atlas.

- **ADU Owner Occupancy Required**
 - Shown after the user selects “Accessory Dwelling Units,” with the prompt “Allows Non-Owner Occupancy” (to ensure that “hits” show permissiveness).
 - A “No” entry in the Spreadsheet appears as purple on the Atlas.
- **ADU Elderly Only**
 - Shown after the user selects “Accessory Dwelling Units,” with the prompt “Not Restricted to Elderly Only” (to ensure that “hits” show permissiveness).
 - A “No” entry in the Spreadsheet appears as purple on the Atlas.
- **ADU Max Size (% of Main Unit), ADU Max. Size (SF)**
 - Shown after the user selects “Accessory Dwelling Unit,” with the prompt “No Maximum Size Limitation” (to ensure that “hits” show permissiveness).
 - To depict these in the same way we do, you will need to convert these columns into a binary option (i.e., a Yes/No depending on whether the district caps unit size or not).
- **ADU Restricted to Only Primary Structure**
 - Shown after the user selects “Accessory Dwelling Units,” with the prompt “Not Restricted to Primary Structure” (to ensure that “hits” show permissiveness).
 - A “No” entry in the Spreadsheet appears as purple on the Atlas.
- **Tooltip Notes:**
 - Featured in the white box normally containing only the Jurisdiction and Full District Name, after the word “Note.”
 - Throughout this document, I have liberally suggested that you include notes in the Special Notes column.
 - If you have chosen to represent the data referenced in the Special Notes column in your public interface, then you must manually pull specific Special Notes text into the Tooltip Notes column.
 - Not all Special Notes will need to appear in the public interface.

As an added feature in our online interface, we allowed users to click on the map within a particular jurisdiction, enabling a static white box to appear containing six pieces of information:

- The number of acres satisfying the criteria chosen by the user in the legend
- The percentage of zoned municipal area represented by these acres
- The total number of zoned municipal area
- Household income in the jurisdiction per table B19013 of the Census
- Percentage of jurisdiction’s population not recognized as White, non-Hispanic per table B03002 in the 2019 ACS 5-year estimates
- Percentage of jurisdiction’s population recognized as cost-burdened

Obviously, for the Census data (or any other data) to appear in your public interface, you will need to collect the data and add it to your Spreadsheet.

NOTE: The way local jurisdictions calculate “zoned municipal area” varies, with the biggest variable being that some jurisdictions include bodies of water, such as lakes and rivers, from some zoning districts, while others exclude them. Another issue is that a handful of jurisdictions exclude non-buildable area, such as open space, from their zoned areas. We neglected to find a perfect way to reconcile these discrepancies, though we do note them in our published materials.

I wish I could help you with all of the technical details of how to create and code for the public interface. Unfortunately, my capacity in this area is limited, as the CT Data Collaborative masterfully handled that aspect, using a combination of Python and GeoPandas. As you get further along in your project, be in touch so that we can consider ways to somehow link your interface with ours.

IX CONCLUSION

How to Make a Zoning Atlas was intended to encourage and empower you to embark on the process of creating a zoning atlas for your town, region, or state. I wish I could say we followed the orderly instructions laid out here, but the reality is that the path described here was clearest only in retrospect.

If you are ready to set a schedule, consider the timeline for the Connecticut Zoning Atlas. The first big push for data and map collection took place over a five-month period, September 2020 to January 2021. Additional data and map collection and analysis continues now, as I expect it will for years to come.

You might also consider how you will staff your project. Any atlas will be a team effort. Connecticut's contributors, listed online at desegregatect.org/atlas, were numerous and played different roles! Some people devoted just a few hours, while others, including a core initial team from the Yale Policy Institute, devoted many more. Graduate and undergraduate students are well-suited to this work. The very process of sifting through zoning codes may inspire them to become the generation that takes up and truly achieves zoning reform.

Thank you for considering collecting zoning data in your community. With your help, we can get one step closer to a national zoning dataset that can help us better understand the impact of zoning, and in turn help us make better decisions about the regulatory constraints that dictate our lives.



www.desegregatect.org

Electronic copy available at: <https://ssrn.com/abstract=3996609>