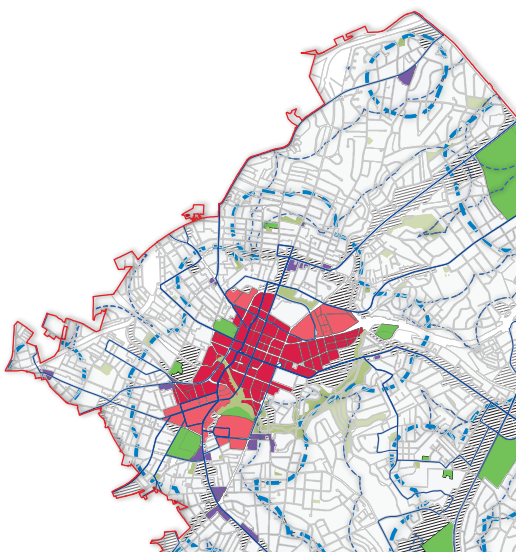


MMH Scan™

Analysis + Definition of Barriers to Missing Middle Housing

Prepared for:
Impact Greenville
December 3, 2019



Greenville, South Carolina



Impact Greenville

Funding Partners:

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Purpose and Objectives

CHAPTER
1

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Left: Street view of Missing Middle Housing and Single-Family houses along W. Earle Street.

1.1

What this study is about

Impact Greenville hired Opticos Design Inc. to prepare a two-part study: Part 1 is this MMH Scan™, aimed at identifying barriers in policy and zoning for the City of Greenville and Greenville County; Part 2 is the MMH Deep Dive: Testing + Solutions, aimed at detailed testing of the City and County zoning on a variety of lots to identify issues with the standards and to recommend changes.

The Greenville region is experiencing strong growth and reinvestment but it is not realizing the variety of housing choice and affordability that are key for the future.

The need for more housing choices.

Increasingly, millennials and baby boomers are looking for more choices and smaller places to live that are within walking distance of their lifestyle. But the choices primarily continue to be single-family houses and large apartment projects. In the City of Greenville, since 2014, single-family homes, townhouses and large apartments (over 24 units) have been 87% of the total 5,941 units built, approved, or planned¹. Smaller apartment projects (less than 24 units) have been 13% of the total.

Meanwhile, Greenville County has the fastest growing population in upstate South Carolina; 14% since 2010². Over the next 5 years that growth rate is expected to lessen. But still, at 8% represents substantial growth pressure and need for housing.

The need for regulatory change.

Too often, the types and size of new dwellings that the market wants are not allowed by local policy or zoning regulations. This leaves innovative developments needing to go through complex and uncertain review processes when they are trying to respond to the shifting market. Regulatory change is needed to make new investment predictable and simple.

Location of available U.S. housing stock.

90% of available housing in the U.S. is located in a conventional neighborhood of single-family homes, adding up to a 35 million unit housing shortage³.

Sources:

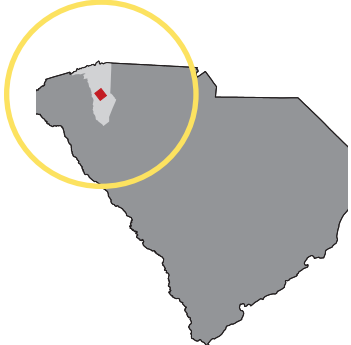
¹City of Greenville.

²County of Greenville Comprehensive Plan Baseline Conditions Report, June 2019.

³Dr. Arthur C. Nelson "Missing Middle: Demand and Benefits", Utah ULI Conference, October 21, 2014

Greenville, South Carolina

The City of Greenville and Greenville County are located in upstate South Carolina.



Overview of Population and Housing

Population Projections Through 2040 for the County and City

By 2040, Greenville County is projected to become home to an additional 220,000 residents (across incorporated and unincorporated areas within the county). Using the average household size for

Greenville County (2.58), that means an additional 85,270 units over the next 20 years, or an annual average of 4,264 units. To put this in perspective, in 2018, the County produced 4,669 new units (3,537 single-family) and the City produced 1,083 new units (261 single-family).

City of Greenville

City Population Characteristics ¹	
Total Population	68,563
Average Household Size	2.13
Homeowners	46% ²
Renters	54% ²
Renter Vacancy Rate	10% ²
Median Household Income	\$43,484 ²
Median Home Value	\$147,592 ²
Median Monthly Rent	\$736 ²
Total Amount of Land	28.67 sq. mi.
Amount of Land Zoned for Multifamily Housing	2.5%
¹ U.S. Census Bureau	
² Greenville Affordable Housing Strategy 2015	

City Housing Types ²	
Single-family Homes	54%
Buildings >10 Units	25%
Mobile Homes	1%
Buildings with 5-9 Units	15%
Duplexes	5%
Total:	100%

Greenville County

County Population Characteristics ¹	
Total Population	513,431
Average Household Size	2.58
Homeowners	66.1%
Renters	33.9%
Median Household Income	\$53,739
Median Home Value	\$165,900
Median Monthly Rent	\$798
Total Amount of Land	785.12 sq. mi. ²
Amount of Land Zoned for Multifamily Housing	12%
¹ County of Greenville Comprehensive Plan Baseline Report, June 2019.	
² U.S. Census Bureau	

County Housing Types	
Single-family Homes	67%
Buildings >10 Units	11%
Mobile Homes	9%
Buildings with 5-9 Units	5%
Attached Single-family	4%
Buildings with 3-4 Units	2%
Duplexes	2%
Total:	100%

1.2

Why Missing Middle Housing (MMH) is important in the future of Communities

Eight key trends point to MMH as an essential part of communities' strategy for reinvestment.

Cities are prioritizing walkability for its triple bottom line benefits.

- Improved physical and mental health of residents.
- Environmental stewardship.
- Economic benefits.

Walkable living in demand.

- There is a 20 to 35% gap between the demand and supply of walkable urban living choices. Essentially two housing products, single-family houses and mid/high-rise apartments are creating the gap.
- 60% favor neighborhoods with a walkable mix of houses and stores rather than neighborhoods that require more driving between home, work, and play.¹

Housing choices have been at extreme ends of the spectrum

For the past 75 years we have primarily been building detached single-family houses and mid-rise/high-rise apartments, without addressing the market needs between these two ends.

Millennials and Baby Boomers.²

- 56% of millennials and 46% of baby boomers want to live in more walkable neighborhoods.
- 59% of millennials and 27% of baby boomers are looking for Missing Middle Housing.

Office Tenants.³

- Office tenants prefer locations in walkable environments over typical suburban office parks by a ratio of 4 to 1.

Changing Demographics.⁴

By 2025, it is projected that 85% of households won't have children, but we are building as if they will. Millennials, baby boomers, single woman households, don't need or want large yard or house to maintain. Further, nearly 30% of households are single person.

10,000 baby boomers retire every day.⁵

Half of them have no retirement savings and depend on their social security payment (avg \$1,341 per month), requiring smaller and more affordable housing choices.

Shortage of 3 million units.

Across the U.S., we're short of the demand for small lot and attached housing units.

Sources:

¹National Association of Realtors

²American Planning Association

³NAIOP Commercial Real Estate Development Association

⁴U.S. Census Bureau

⁵Home.one





About Missing Middle Housing

CHAPTER 2

In this chapter

2.1 What is Missing Middle Housing?	14
2.2 Missing Middle Housing in the City of Greenville	28
2.3 Walkable Centers in the City of Greenville	30

Left: This example illustrates the interspersing of MMH types among single-family houses consistent with their building size and footprint.

2.1

What is Missing Middle Housing?

House-scale buildings with multiple units in walkable neighborhoods

Responding to the Demand for Walkable Urban Living

The mismatch between current US housing stock and shifting demographics, combined with the growing demand for walkable urban living, has been poignantly defined by recent research and publications by Christopher Nelson and Chris Leinberger, and most recently by the Urban Land Institute’s publication. *What’s Next: Real Estate in the New Economy*. Now it is time to stop talking about the problem and start generating solutions! Are you ready to be part of the solution?

Unfortunately, the solution is not as simple as adding more multifamily housing stock using the models/types of housing that we have been building. Rather, we need a complete paradigm shift in the way that we design, locate, regulate, and develop homes. As *What’s Next* states, “It’s a

time to rethink and evolve, reinvent and renew.” Missing Middle Housing types, such as duplexes, fourplexes, bungalow courts, mansion apartments and live-work units, are a critical part of the solution and should be in the tool box of every architect, planner, real estate agent, and developer.

Well-designed, simple, Missing Middle Housing types achieve medium-density yields and provide high-quality, marketable options between the scales of single-family homes and mid-rise flats for walkable urban living. They are designed to meet the specific needs of shifting demographics and the new market demand, and are a key component in neighborhoods of diverse housing choices. They are called “missing” because very few of these housing types have been built since the early 1940s due to regulatory constraints, the shift to

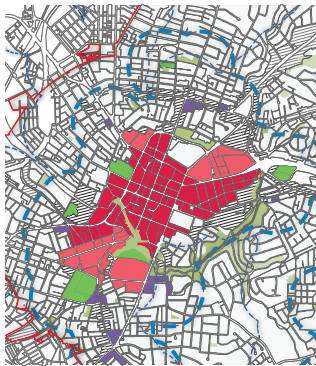


Diagram 2.1.A

Walkable neighborhoods (within blue dashed areas) surrounding a variety of centers.

Q CLOSER LOOK

Walkable Neighborhood

These are places where a person can easily walk or bike to home, work, or to fulfill most daily needs, including shopping and recreation. The compact form and mix of uses found in a Walkable Neighborhood are anchored by “walkable centers”: neighborhood-serving retail, food, services, and public transit,

thereby affording multi-modal access throughout the area. These environments accommodate but do not depend on the use of automobiles for most daily needs. This was the standard model developed prior to the 1940s. See Section 2.3 for more information on “walkable centers”.



auto-dependent patterns of development, and the incentivization of single-family home ownership. Before the 1940s, they were a natural part of the housing mix, helping to provide housing choices to people at a variety of stages in their life and income levels. Communities, including AARP, are realizing that Missing Middle Housing is important in helping neighborhoods thrive while providing housing choices as people age and are able to stay in their community.

A Walkable Context

Probably the most important characteristic of the Missing Middle housing types is that they need to be built within an existing or newly created walkable urban context. Buyers or renters of these housing types are choosing to trade larger suburban housing for less space, no yard to maintain, and proximity to services and amenities such as restaurants, bars, markets, services, and often work. Linda Pruitt of the Cottage Company, who is building creative bungalow courts in the Seattle area, says the first thing her potential customers ask is, “What can I walk to?”

So this criteria becomes very important in her selection of lots and project areas, as is it for all Missing Middle Housing space. This is reflected in Diagram 2.1.A which shows this “walkable” area surrounding centers that are not car-dependent.

Medium-density but lower perceived densities

As a starting point, these building types typically range in density from 8 dwelling units per acre (du/acre) to up to 70 du/acre, depending on the building type and lot size. It is important not to get distracted with the density numbers when thinking about these types. Due to the small footprint of the building types and the fact that they are usually mixed with a variety of building types, even on an individual block, the perceived density is usually quite lower—they do not look like dense buildings.

A combination of these types provides a neighborhood with a minimum average of 16 du/acre. This is generally the threshold at which an environment has enough people to be transit-supportive and when neighborhood-serving, walkable retail and services become viable.

Small footprint and blended densities

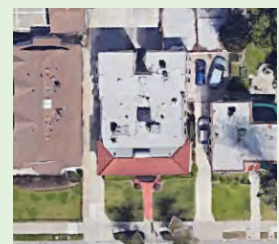
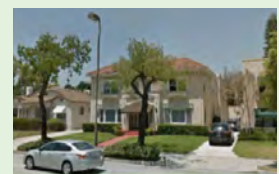
A common characteristic of these housing types is their small-to-medium-sized building footprints. The largest of these types, the mansion apartment or side-by-side duplex, could have a typical main body width of about 50 to 60 ft., which is very comparable to a large estate home. This makes these types ideal for urban infill, even in older neighborhoods that were originally developed as single-family

Density is an unpredictable factor that depends on many variables; see Diagrams 2.1.B and 2.1.C as an example.

Diagram 2.1.B
60 units; 30 du/ac.
Building 175' x 165' ; 3 Stories



Diagram 2.1.C
5 units; 29 du/ac.
Building 40' x 65' ; 2 Stories





The Palette of Missing Middle Housing Types:



Duplex Side-by-Side:

2 units; Density: 8-20 du/ac



Duplex Stacked:

2 units; Density: 11-37 du/ac



Cottage Court:

3-10 units; Density: 18-44 du/ac



Fourplex:

3-4 units; Density: 15-35 du/ac

Palette of MMH Types

This offers an overview of each MMH Type. The complete description and ideal characteristics for each are identified in pages 18 to 27.



Carriage House (ADU)

The Carriage House can be applied to any MMH type, but it is recommended only near or in centers.

but could be designated to allow slightly higher intensities. As a good example, a courtyard housing project in the West-side Guadalupe Historic District of Santa Fe, NM, sensitively incorporates six units and a shared community-room building onto a quarter-acre lot representing 24 du/ac. This project, like all MMH types, consists of house-scale buildings that relate well to the existing single-family context.

Smaller, well-designed units

A common mistake by architects or builders new to the urban housing market is trying to force suburban unit types and sizes into urban contexts and housing types. The starting point for Missing Middle Housing is smaller-unit sizes (500 to 1,000 sq. ft.). The challenge is to create small spaces that are well designed, comfortable, and usable. As an added benefit, smaller-unit sizes can help developers keep their costs down, improving the proforma performance of a project, while keeping the housing available to a larger group of buyers or renters at a lower price point.

Off-street parking does not drive the site plan

The other non-starter for Missing Middle Housing is trying to provide too much on-site parking. This ties back directly to the fact that these units are being built in a walkable urban context. If large parking areas are provided or required, these buildings become very inefficient from a development potential or yield standpoint, reducing the 16 du/acre density threshold discussed on page 15. As a starting point, these units should provide no more than one off-street parking space per unit. A good example of this is newly constructed mansion apartments in the new East Beach neighborhood in Norfolk, VA. To enable these lower off-street parking requirements, on-street parking is required to be available adjacent to the units. Housing design that forces too much on-site parking also compromises the occupant’s experience of entering the building or “coming home” and the relationship with its context, especially in an infill condition, which can greatly impact marketability.

Simple Construction

The days of easy financing and of building complicated and expensive Type I or II buildings with podium parking are behind us. An alternative for providing walkable urban housing with more of

**Multiplex Small:**

6-10 units; Density: 39-61 du/ac

**Multiplex Large:**

7-18 units; Density: 44-70 du/ac

**Courtyard Building:**

6-25 units; Density: 54-70 du/ac

**Townhouse:**

1 unit; Density: 14-28 du/ac

**Live/Work:**

1 unit; Density: 14-28 du/ac

a simple, cost-effective construction type is necessary. *What's Next* states, "Affordability—always a key element in housing markets—is taking on a whole new meaning as developers reach for ways to make attractive homes within the means of financially constrained buyers." Because of their simple forms, smaller size, and Type V construction, Missing Middle building types can help developers maximize affordability and returns without compromising quality by providing housing types that are simple and affordable to build.

Creating Community

Missing Middle Housing creates community through the integration of shared community spaces within the types, as is the case for courtyard housing or the cottage court, or simply from the proximity they provide to the community within a building and/or the neighborhood. This is an important aspect, in particular within the growing market of single-person households (which is at nearly 30% of all households) that want to be part of a community. This has been especially true for single women who have proven to be a strong market for these Missing Middle Housing types, in particular cottage courts and courtyard housing.

Marketability

The final and maybe the most important characteristic is that these housing types are very close in scale to single-family homes and provide a similar user experience. For example, in these types, you enter through a front porch facing the street instead of walking down a long corridor to get to your unit. This makes the mental shift for potential buyers and renters much less drastic than making a shift to live in a large mid-rise or high-rise project. This, combined with the fact that many baby boomers likely grew up in or near to similar housing types in urban areas or had relatives that did, enables them to easily relate to these housing types.

This is a call for architects, planners, real estate professionals, and developers to think outside the box and to begin to create immediate, viable solutions to address the mismatch between the housing stock and what the market is demanding: vibrant, diverse, sustainable, walkable urban places. Missing Middle Housing types are an important part of this solution and should be integrated into comprehensive and regional planning, zoning code updates, TOD strategies, and business models for developers and builders who want to be at the forefront of this paradigm shift.

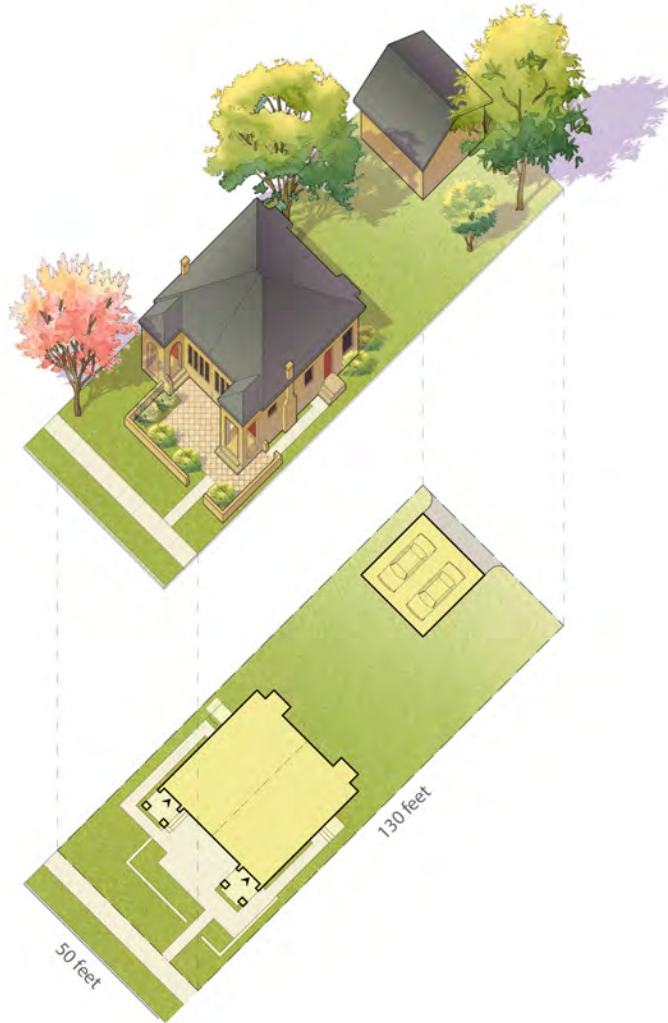
Duplex Side-by-Side

Description:

A small- to medium-sized building that consists of two dwelling units, one next to the other, both of which face and are entered from the street.

Variation:

A variation of this is the "front-to-back" duplex. Both of these are distinct from the non-recommended practice of attaching two single-family houses to form two attached units. This latter approach often results in a building that is larger and is out of scale with its single-family neighbors.

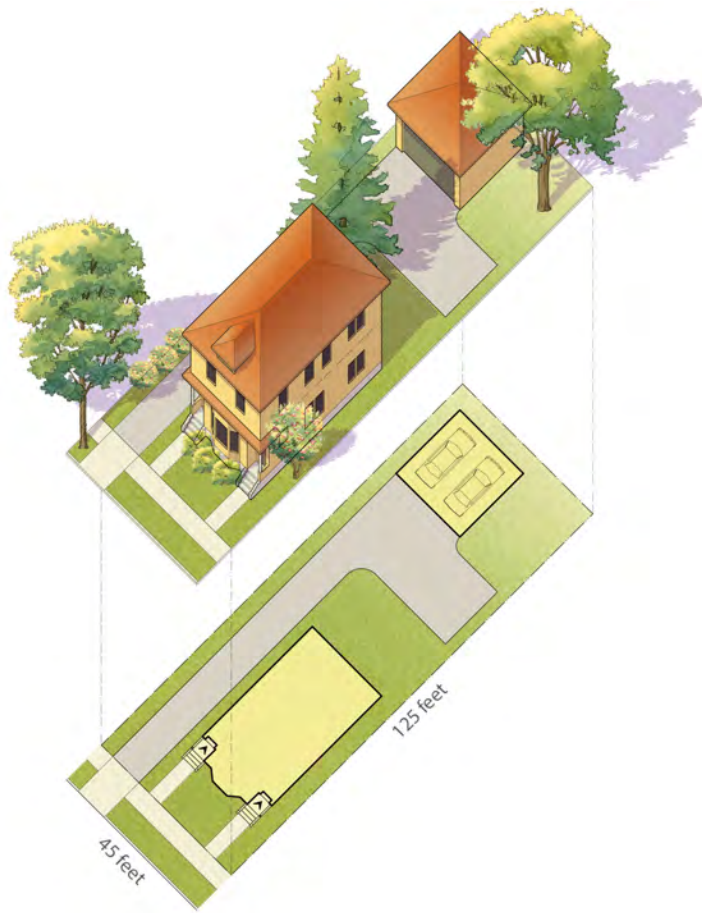


Carriage House (ADU)

The Carriage House can be applied to provide an additional unit separate from the main building.

Duplex Side-by-Side					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
2	Front	55' - 75'	100' - 150'	8 - 16	11 - 24
	Rear	40' - 70'	100' - 150'	8 - 20	12 - 30

Duplex Stacked



Description:

A small- to medium-sized building that consists of two stacked dwelling units, one on top of the other, both of which face and are entered from the street.



Carriage House (ADU)

The Carriage House can be applied to provide an additional unit separate from the main building.

Duplex Stacked					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
2	Front	45' - 75'	100' - 150'	8 - 19	11 - 29
	Rear	35' - 70'	100' - 150'	8 - 25	12 - 30

Cottage Court (Bungalow Court)

Description:

A series of small, detached buildings on a lot arranged to define a shared court that is typically perpendicular to the street. The shared court takes the place of a private rear yard and is an important community-enhancing element.

The Carriage House (ADU) is not recommended for this type due to the limited number of parking spaces.

Variation:

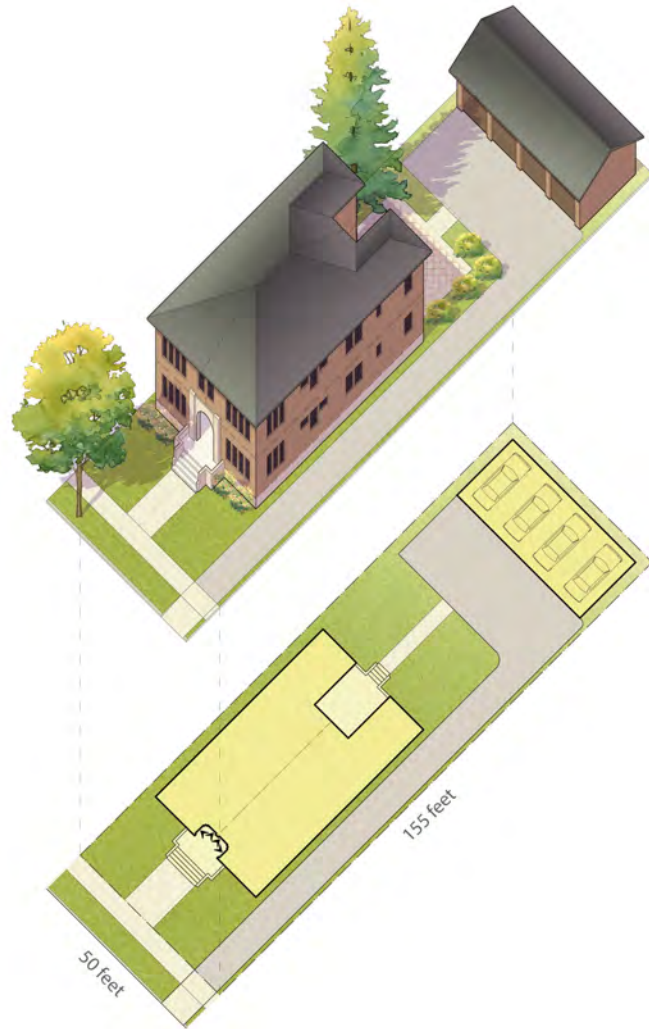
A larger version of this type is known as the "Pocket Neighborhood". This type differs from the Cottage Court primarily by site size. Typically, the Pocket Neighborhood is on a site at least twice as large as the cottage court, has larger dwellings and a variety of housing types (houses, duplexes, etc.).



Cottage Court					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
3-10	Front	115' - 160'	100' - 150'	18 ¹ - 38	N/A
	Rear	100' - 150'	100' - 150'	19 - 44	N/A

¹Randolph Commons is a local example of the "pocket neighborhood" version of this type. It is in the RM-1 zone on a large site with 10 units and a density of 10 units per acre.

Fourplex



Description:
 A medium-sized building that consists of three to four units: typically two on the ground floor and up to two above with a shared entry from the street.



Carriage House (ADU)
 The Carriage House can be applied to provide an additional unit separate from the main building.

Fourplex					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
3-4	Front	60' - 75'	100' - 150'	15 - 29	19 - 36
	Rear	50' - 65'	100' - 150'	18 - 35	22 - 43

Multiplex Small (Mansion)

Description:

A medium-sized building that consists of five to 10 side-by-side and/or stacked dwelling units, typically with one shared entry or individual entries along the front and sometimes along one or both sides.

The Carriage House (ADU) is not recommended for this type due to the limited number of parking spaces.



Multiplex Small					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
5-10	Front	60' - 75'	100' - 150'	39 - 51	N/A
	Rear	50' - 65'	100' - 150'	45 - 61	N/A

Multiplex Large



Description:

A medium-to-large-sized structure that consists of 7 to 18 side-by-side and/or stacked dwelling units, typically with one shared entry or individual entries along the front and sometimes along one or both sides.

Due to the relatively low number of parking spaces, this type is recommended only in areas very near or within a center.

The Carriage House (ADU) is not recommended for this type due to the limited number of parking spaces.

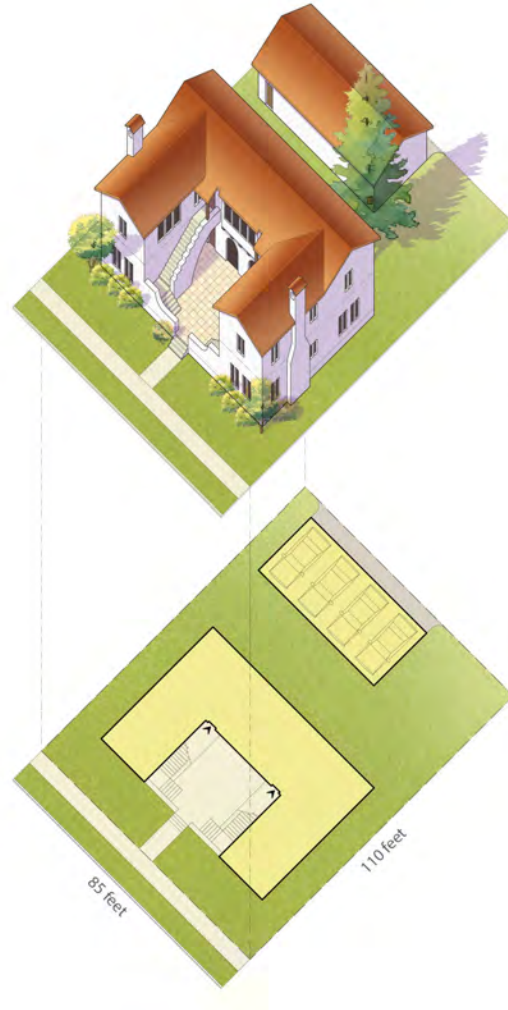
Duplex Stacked					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
7-18	Front	96' - 120'	100' - 150'	44 - 55	N/A
	Rear	75' - 100'	100' - 150'	52 - 70	N/A

Courtyard Building

Description:

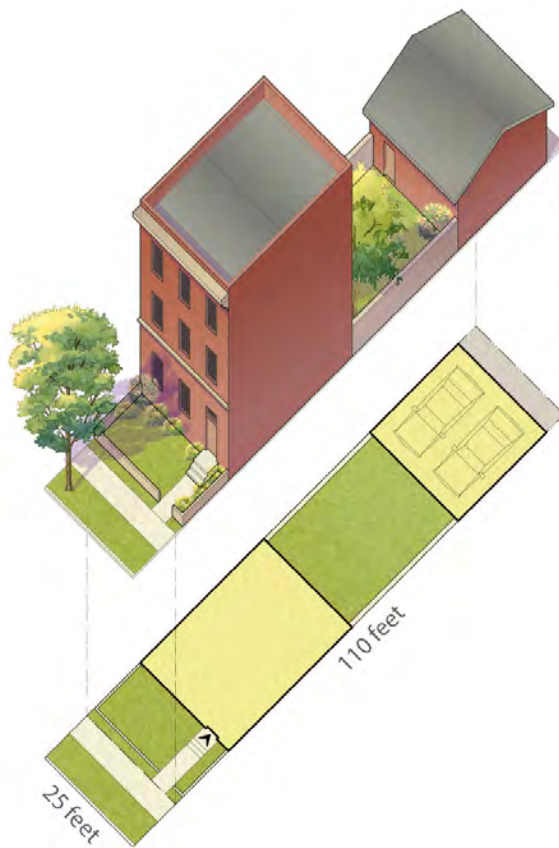
A medium- to large-sized building or up to three small- to-medium size detached buildings consisting of multiple side-by-side and/or stacked dwelling units arranged around a shared courtyard. Dwelling are accessed from the courtyard. Typically, each unit has its own individual entry or shares a common entry with up to three units.

The Carriage House (ADU) is not recommended for this type due to the limited number of parking spaces.



Multiplex Small					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
6-25	Front	100' - 135'	110' - 150'	54 - 60	N/A
	Rear	85' - 125'	110' - 150'	58 - 70	N/A

Townhouse



Description:

A small- to medium-sized building with one dwelling that is attached to other townhouses in an array of typically four.

Variation:

A more intense version of this type is the “townhouse flat”. This variation divides the building vertically into two to three flats.



Carriage House (ADU)

The Carriage House can be applied to provide an additional unit separate from the main building.

Duplex Stacked					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
1	Front	n/a	n/a	n/a	n/a
	Rear	18' - 25'	85' - 120'	14 - 28	29 - 57

Live/Work

Description:

A small- to medium-sized attached or detached building consisting of one dwelling unit above or behind a flexible ground floor space for residential, service, or retail uses. Both the primary ground-floor flex space and the second unit are owned by one entity. These types can be arranged to form what looks like a neighborhood main street building.



Carriage House (ADU)

The Carriage House can be applied to provide an additional unit separate from the main building.



Live/Work					
MMH Type (No. of Units)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Resultant Density (du/ac)	
				Without Carriage House	With Carriage House
1	Front	n/a	n/a	n/a	n/a
	Rear	18' - 25'	85' - 120'	14 - 28	29 - 57

Summary of Ideal Missing Middle Housing Characteristics

Ideal Characteristics of Missing Middle Housing Types							
MMH Type (No. of Units)	Max. Height (Stories)	Vehicular Access	Lot Width (ft.)	Lot Depth (ft.)	Area of Lot (sq. ft.)	Resultant Density (du/ac)	
						Without Carriage House	With Carriage House
Duplex: Side-by-Side (2)	2.5	Front Rear	55' - 75'	100' - 150'	5,500 - 11,300	8 - 16	11 - 24
			40' - 70'	100' - 150'	4,400 - 10,500	8 - 20	12 - 30
Duplex: Stacked (2)	2.5	Front Rear	45' - 75'	100' - 150'	4,500 - 11,300	8 - 19	11 - 29
			35' - 70'	100' - 150'	3,500 - 10,500	8 - 25	12 - 37
Cottage Court¹ (5-10)	1.5	Front Rear	115' - 160'	100' - 150'	11,500 - 24,000	18 - 38	n/a
			100' - 150'	100' - 150'	10,000 - 22,500	19 - 44	n/a
Fourplex (3-4)	2.5	Front Rear	60' - 75'	100' - 150'	6,100 - 11,250	15 - 29	19 - 36
			50' - 65'	100' - 150'	5,000 - 9,750	18 - 35	22 - 43
Multiplex Small (6-10)	2.5	Front Rear	60' - 75'	100' - 150'	6,000 - 11,250	39 - 51	n/a
			50' - 65'	100' - 150'	5,000 - 9,750	45 - 61	n/a
Multiplex Large (7-18)	3.5	Front Rear	96' - 120'	100' - 150'	9,600 - 18,000	44 - 55	n/a
			75' - 100'	100' - 150'	7,500 - 15,000	52 - 70	n/a
Courtyard Building (6-25)	3.5	Front Rear	100' - 135'	110' - 150'	11,000 - 20,250	54 - 60	n/a
			85' - 125'	110' - 150'	9,350 - 18,750	58 - 70	n/a
Townhouse (1)	3.5	Front Rear	n/a	n/a	n/a	n/a	n/a
			18' - 25'	85' - 120'	1,530 - 3,000	14 - 28	29 - 57
Live/Work (1)	3.5	Front Rear	n/a	n/a	n/a	n/a	n/a
			18' - 25'	85' - 120'	1,530 - 3,000	14 - 28	29 - 57

¹ Variation: Pocket Neighborhood. The lot is the size of most of a block or up to an entire block, and the shared court is much larger, or there are several shared courts. The individual cottages are expanded to include a mix of duplex, fourplex, multiplex small, and courtyard buildings.

Missing Middle Housing Palette

The palette of MMH types above identifies the ideal **lot dimensions** for each type. The minimum is what each type needs to function and the maximum is the size at which physical compatibility works with existing single-family neighborhood contexts. These dimensions need to be adjusted to each community and its particular lot patterns.

The **resultant density** is the number that results from designing what reasonably fits in each MMH type. This is different from density regulations that predetermine how

many units are allowed without record for what can actually fit well. In addition, the results vary depending on front or rear vehicular access to parking.

Although lot area can be used as a regulating factor, it should not be the primary factor. Instead, lot width and the resulting building width should be the primary regulating factors.

The same is true for Residential density. If used as a regulatory factor, the resulting density that reflects the lot dimensions that enable these types is the density number to use.

2.2

Missing Middle Housing in the City of Greenville

Local Examples

Like most U.S. cities built before the 1940's, Greenville has several areas with examples of Missing Middle Housing. Diagram 2.2A shows the general location of Missing Middle Housing in Greenville.

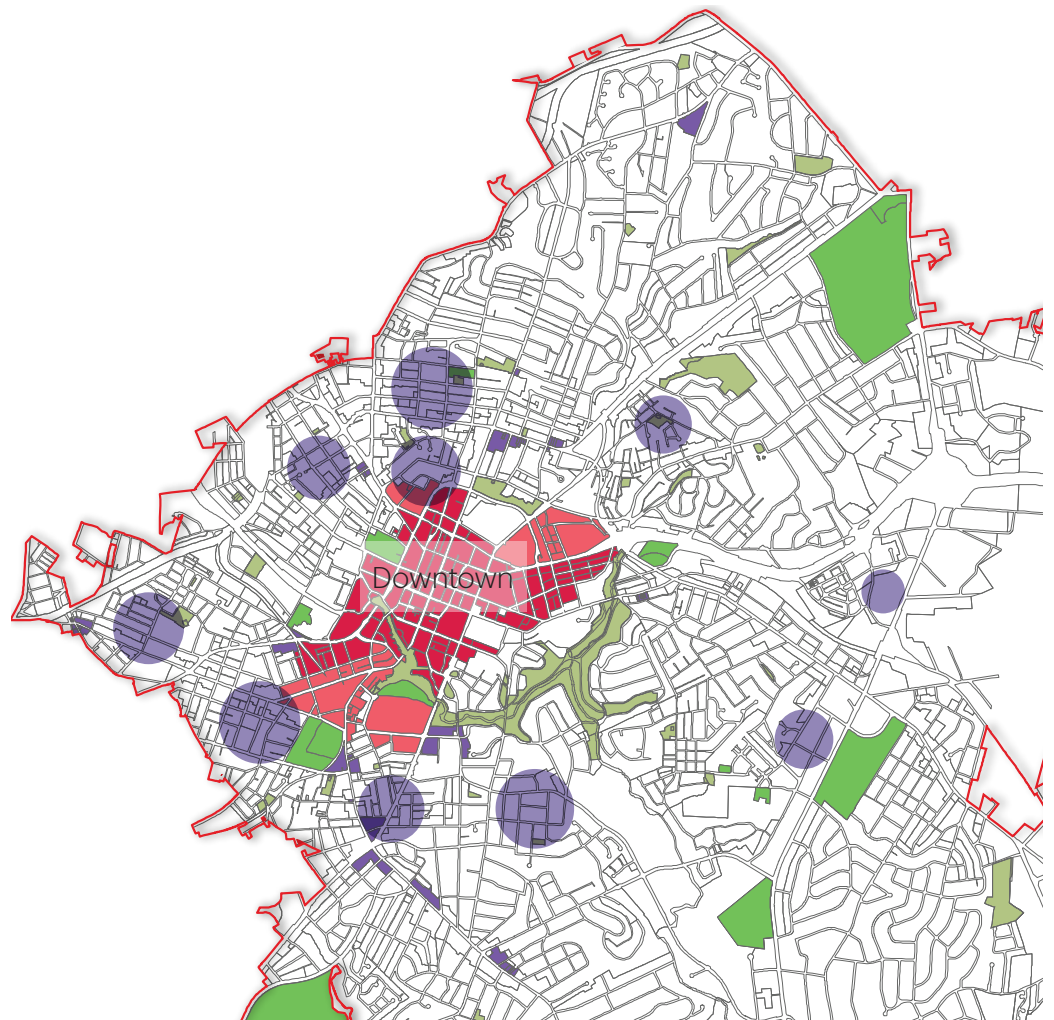
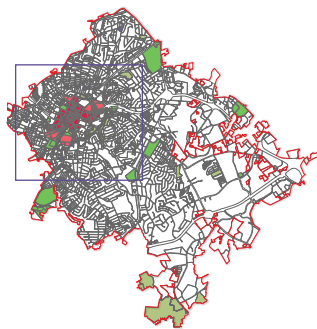
How were these built?

Most of the examples were built before the 1940's when previous regulations allowed them. Newer projects have had to use other methods such as the PD, FRD, or other zoning tools and processes because the zoning does not allow any or a very limited range of the MMH types. The most common barrier is that the maximum allowed density is too low.

Missing Middle Housing in the City of Greenville

Key

● Areas Containing Missing Middle Housing





Townhouse
302 Arlington Avenue
1 unit; resultant density: 27 du/ac



Courtyard Building
600 University Ridge
8 units (but could accommodate up to 16);
resultant density: 14 du/ac (28 du/ac)



Multiplex Small
218 E. Park Avenue
5 units; resultant density: 17 du/ac



Multiplex Small
105 S. Memminger Street
4 units in building, 1 in each Townhouse;
resultant density: 30 du/ac



Multiplex Small
22 W. Earle Street
4 units; resultant density: 24 du/ac



Multiplex Small
14 Atwood Street
4 units; resultant density: 15 du/ac



Multiplex Large
300 W. Earle Street
6 units (but could accommodate up to 12);
resultant density: 18 du/ac (36 du/ac)



Duplex (Side-by-Side)
201 W. Park Avenue
2 units; resultant density: 12 du/ac

2.3 Walkable Centers in the City of Greenville

Local Examples

As discussed earlier, Missing Middle Housing is part of areas that are anchored by “walkable centers” that provide amenities such as shopping, services, transit, food and employment. In Greenville, transit is enhanced by Greenlinks' 11 bus routes and 5 trolley routes through these centers.

In reviewing Greenville's variety of existing centers, they can be grouped into the four categories below.

- Downtown Core.
Greenville has one of these centers.
- Urban Center/Downtown Transition.
Greenville has four of these centers.
- Neighborhood Main Street.
Greenville has twelve of these centers.
- Medical/Institutional.
Greenville has ten of these centers.

Each type of center is described and illustrated with a photo on the facing page.

Downtown Core

A citywide destination for retail, food uses, service, entertainment and recreation that includes significant housing and office that use this center as their amenity.



Urban Center/Downtown Transition

A neighborhood destination for retail, food uses, service and recreation that is more intense than the Neighborhood Main Street and is amenity for several adjacent neighborhoods.



Neighborhood Main Street

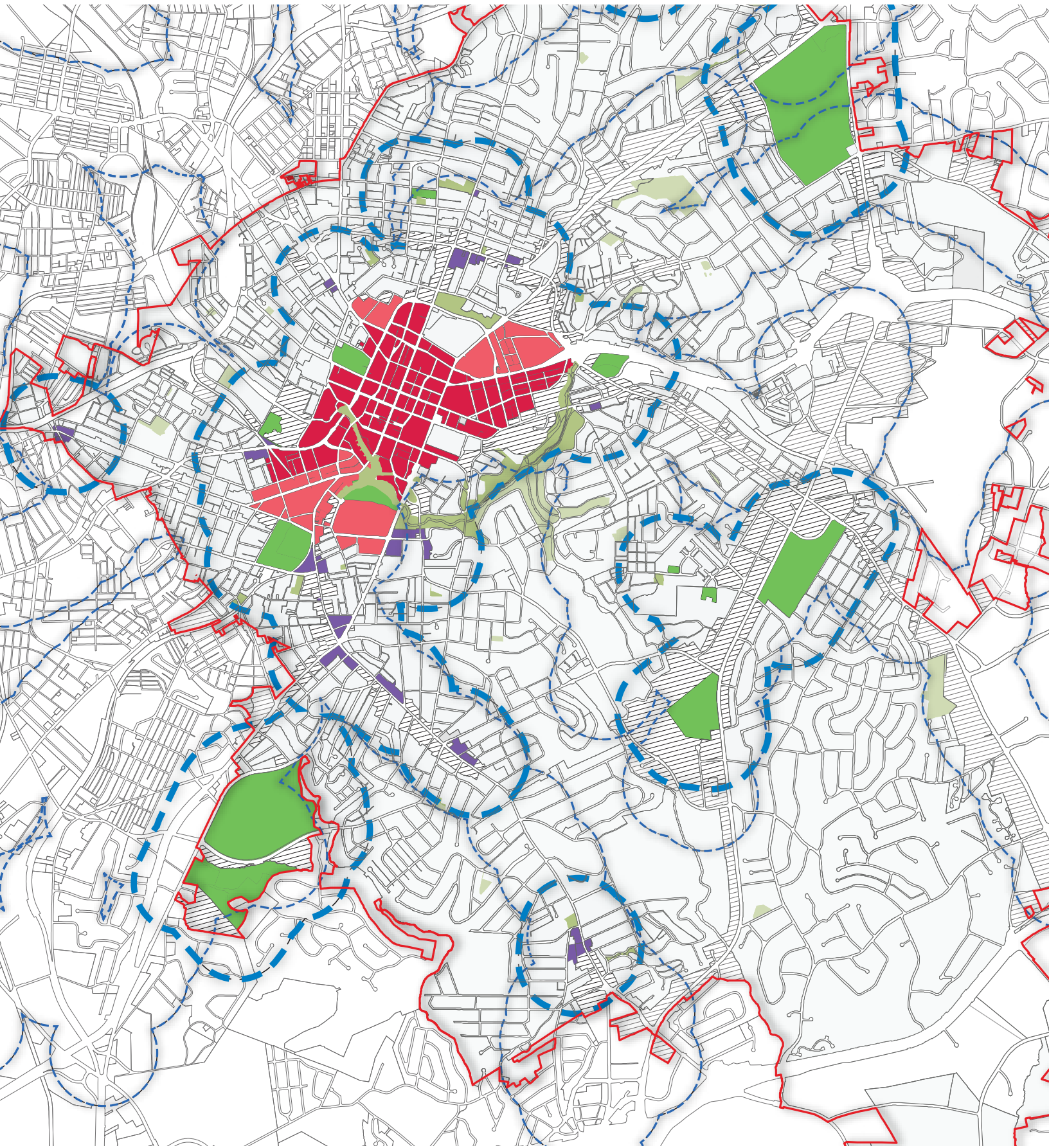
A neighborhood destination for retail, food uses, and services that is the most common type of center and amenity for adjacent neighborhoods.

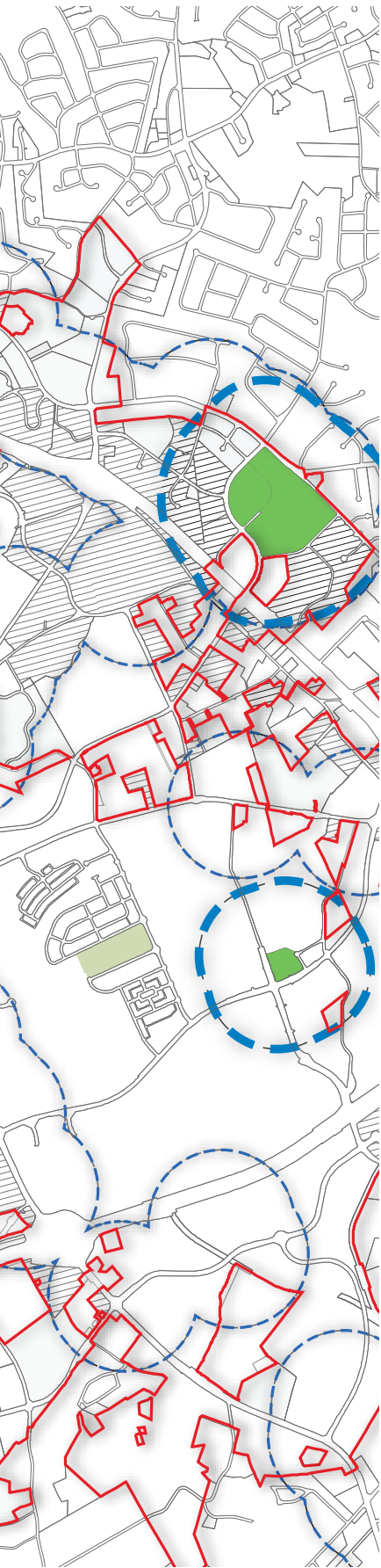


Medical/Institutional

A concentration of hospital, related medical office, institutional services and offices. These centers offer services and employment as an amenity within the community and for adjacent neighborhoods.







Analysis

CHAPTER

3

In this chapter

3.1 Missing Middle Housing in the City of Greenville	34
3.2 Missing Middle Housing in Greenville County	50

Left: Detail of map in Greenville City and County with identified walkable environments around a variety of centers.

3.1

City of Greenville

Which Missing Middle Housing Types are currently allowed?

The following analysis identifies which of the MMH Types are allowed by current City policy and zoning.

City of Greenville Comprehensive Plan

The City of Greenville’s Comprehensive Plan, contains five land use classifications that allow housing and are relevant to Missing Middle Housing. These are listed and summarized below:

- **General Residential.** This classification is for “single-family and non-single-family residential with an emphasis on infill development that strengthens neighborhoods”. It is unclear what intensity or types of housing are intended.
- **Urban Residential.** This classification is for “neighborhoods surrounding the downtown core to serve as a transition between the downtown and the nearby single-family neighborhoods. This designation specifically identifies compact development to preserve some of the historic neighborhoods with smaller lots”. It is unclear what intensity or types of housing are intended.
- **Mixed Use Neighborhoods.** This classification is for “small grocery and service uses while encouraging the General Residential and Urban Residential types of housing”. It is unclear what intensity or types of housing are intended.
- **Mixed Use Community.** This classification is for “supermarkets, specialty stores, medical offices, mid-sized employers and civic uses while encouraging the Urban Residential types of housing”. It is unclear what intensity or types of housing are intended.
- **Transit-Oriented Development.** This classification is for “supporting a blend of multifamily residential, high-intensity employment, office, civic entertainment and institutional, and limited retail”. It is unclear what intensity or types of housing are intended.

Area and Master Plans

The City's Comprehensive Plan is focused further in communities that have organized and prepared an area or master plan. This enables these communities to study the possibilities in more detail to refine the policy direction for their specific needs and issues. Each community or area plan includes policy direction for stabilizing and/or improving the housing stock, beautification, infrastructure improvements, pedestrian safety, crime prevention, and recreation. The degree to which each plan specifies this direction differs according to each area's needs and priorities. As it relates to housing, the following summary is provided for each plan:

- **Greater Sullivan Design Guidelines (no date available).**

The document aims to help preserve existing character and guide infill development. The guidelines are advisory and provide clear and effective standard-related information about the types and sizes of the lowest intensity MMH types, including lot width, building setbacks, driveways, etc. Permits for improvement are reviewed for compliance with these guidelines.

- **Green Avenue Revitalization Strategy 2002.**

The strategy focuses on rehabilitating housing, improving housing conditions, and increasing home-ownership. The strategy discusses the need for changes to or relief from RM-1 setback-standards to recognize existing housing types. It is unclear what housing types are intended for new development.

- **Greenline-Spartanburg Plan 2001.**

The plan aims to revitalize the neighborhood and attract new investment and increase single-family home-ownership. The plan encourages the lowest intensity MMH types as well as "higher density apartment homes".

This latter type appears to be larger than the largest MMH types.

- **Greenville West Side Comprehensive Plan 2014.**

This plan provides the direction for new zoning to implement the community's vision. Overall, this plan clearly identifies 5 MMH types providing diverse housing choices through infill development. A portion of the study area is in the process of updating the zoning through the Unity Park Neighborhood District Code.

- **Haynie-Sirrine Master Plan 2002.**

This plan provides the direction for new zoning to implement the community's vision because the previous zoning did not allow the desired housing types. Ultimately, replacement zoning was adopted through a Form-based code that specifically allows 7 MMH types providing diverse housing choices. To date, new development has mostly been single-family housing with some duplexes. We are not aware of why this is the situation.

- **Nicholtown Master Plan 2004.**

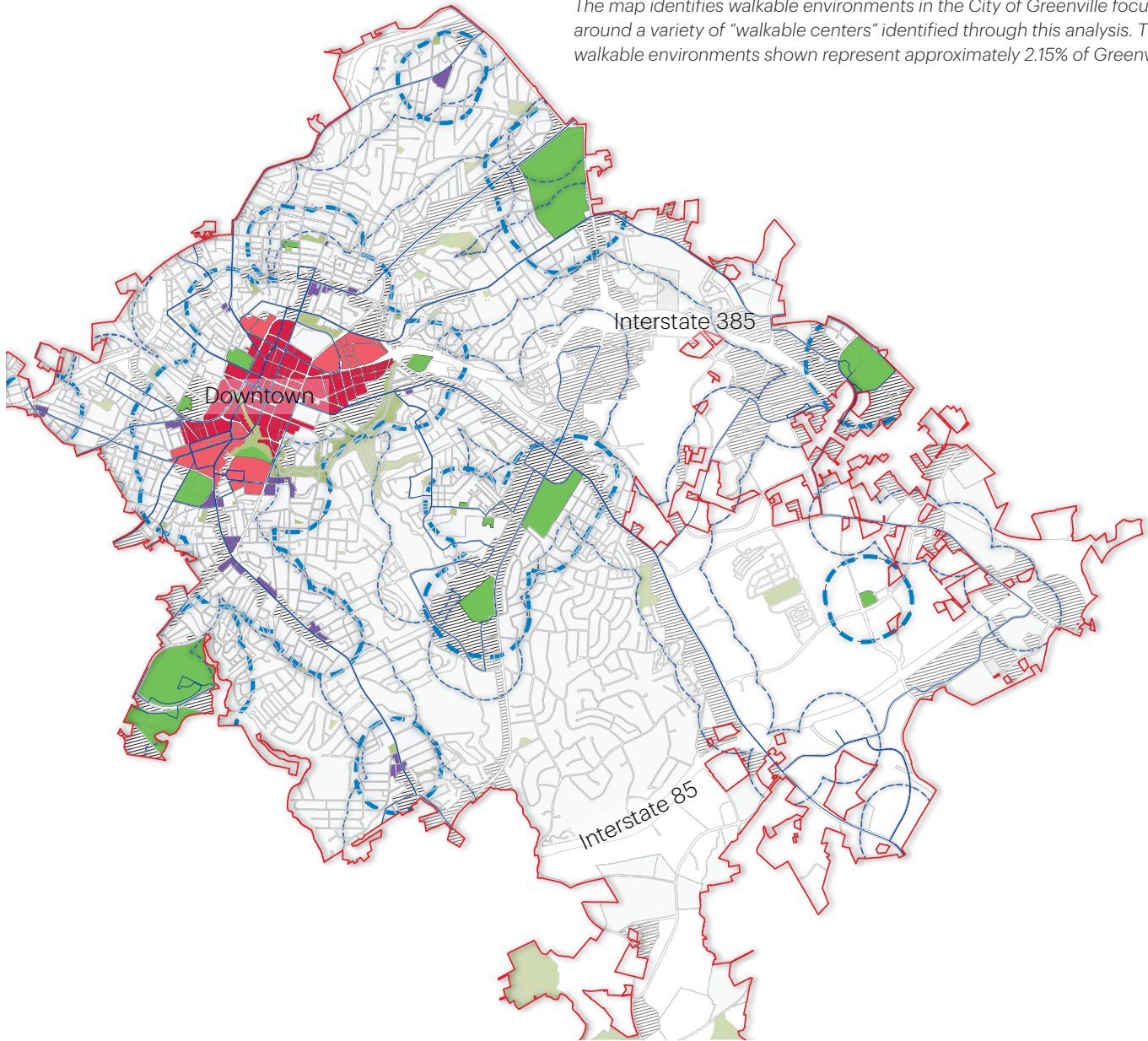
The plan aims to improve housing conditions throughout while encouraging the lowest intensity MMH types and retaining the existing multifamily zoning that covers about half of the plan area. The guidelines are advisory and provide clear information, almost to the level of regulations.

- **Southernside Vision Plan 2011.**

The plan aims to attract reinvestment and improve housing conditions through infill and redevelopment. Housing appears to be focused on single-family types with no MMH types discussed. However, in the West End Plan, MMH types are specifically identified for this area.

Where are Greenville's Walkable Centers?

The map identifies walkable environments in the City of Greenville focused around a variety of “walkable centers” identified through this analysis. The walkable environments shown represent approximately 2.15% of Greenville.



Key

Identified Walkable Centers

- Downtown Core
- Urban Center/
Downtown Transition
- Neighborhood
Main Street
- Medical/Institutional

Amenities

- Parks/Open Space

Walkable Environments

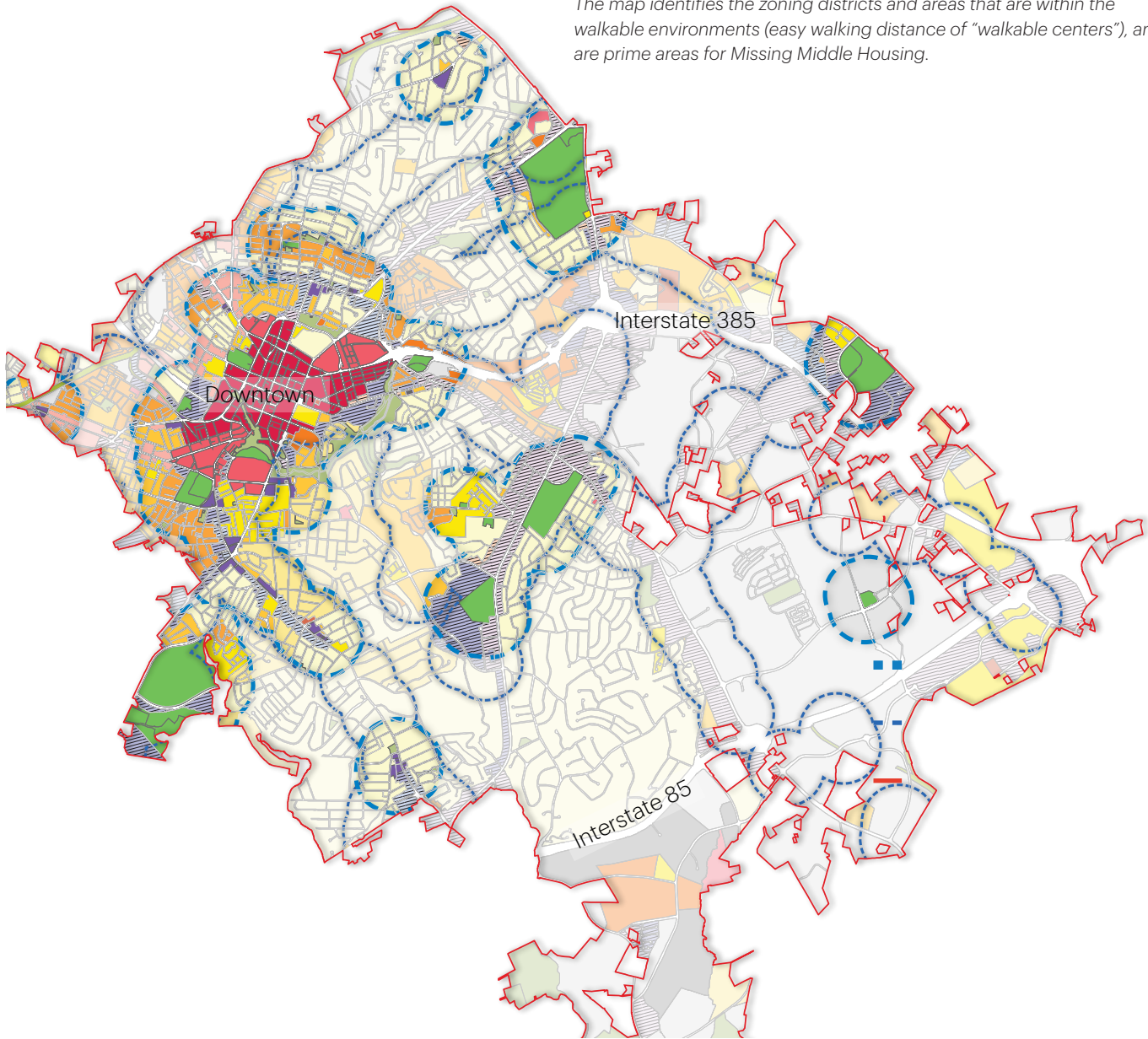
- 5 min walking distance
from Centers
- 5 min walking distance
from Bus Stops

Zoning Districts

- Residential Districts
- Commercial Districts

Current Zoning in Walkable Centers

The map identifies the zoning districts and areas that are within the walkable environments (easy walking distance of “walkable centers”), and are prime areas for Missing Middle Housing.



Key

Identified Walkable Centers

- Downtown Core
- Urban Center/
Downtown Transition
- Neighborhood
Main Street
- Medical/Institutional

Amenities

- Parks/Open Space

Walkable Environments

- 5 min walking distance
from Centers
- 5 min walking distance
from Bus Stops

Zoning Districts

- R-9
- R-6
- RM-1
- RM-1.5
- RM-2
- RM-3
- C-1
- C-2
- C-3
- I-1
- S-1
- RDV
- PD
- OD
- FRD

Area and Master Plans (Continued)

- **Sterling Master Plan 2010.**
The plan aims to address safety, improve housing conditions, address the large number of vacant properties, increase home-ownership, and increase housing choices. The lower intensity MMH types are encouraged with larger “multifamily” development mentioned but not clearly described. The majority of the area is to retain its R-M2 zoning which allows some MMH types. Like a few other plans, this one provides clear and effective information about building setbacks, height, and overall design.
- **Viola Revitalization Strategy 1996.**
The strategy aims to stabilize housing conditions and attract reinvestment and while it identifies 90 affordable homes to be built by 2000, it does not describe development plans, size, or intensity of the new housing.
- **West End (West Side) Plan 2014.**
The plan aims to address safety, blight and vacant properties, increase housing choices and home-ownership. The plan identifies several MMH types as well as “higher density apartments”. The latter may not be in the house-scale size of the MMH types. The plan provides limited but helpful design guidelines and recommendations for a form-based code to implement the vision.
- **West Washington Street Master Plan 2005.**
The plan aims to improve housing conditions, increase home-ownership through revitalization and infill housing, and preserve the historic character. Housing appears to be focused on single-family types with no MMH types discussed.

Comprehensive Plan Update

The update process is planned to begin in the summer of 2019. Among the key

items to address are affordability, housing choice, and transportation/circulation.

The findings and recommendations from the next phase of this MMH study should be incorporated into the update process.

City of Greenville Zoning

The City of Greenville’s zoning ordinance, Chapter 19, contains a total of 15 zoning districts that allow housing. Of these 15, 9 are aimed primarily at residential development and are listed below:

- **R-6** Single-Family Residential District (min 6,000 sq. ft. lot area; max 7.26 per acre).
- **R-9** Single-Family Residential District (min 9,000 sq. ft. lot area; max 4.84 per acre).

The R-6 and R-9 zoning districts are focused on single-family housing and even if they allowed some MMH types, the current maximum allowed density is not sufficient for even the lowest intensity MMH types.

- **RM-1** Single and Multifamily Residential District (up to 10 units per acre). This zone accommodates the Duplex type.
- **RM-1.5** Single and Multifamily Residential District (up to 15 units per acre). This zone accommodates the Fourplex type.
- **RM-2** Single and Multifamily Residential District (up to 20 units per acre). This zone accommodates the Duplex, Fourplex, Cottage Court and Townhouse types.
- **RM-3** Single and Multifamily Residential District (up to 20 units per acre).^{*} This zone accommodates the Duplex, Fourplex, Cottage Court and Townhouse types.

^{*} It is not clear why the RM-3 district allows the same maximum as the RM-2.

Based on the palette of MMH types on pages 16 and 17, the minimum density needed to begin allowing these types is 8 per acre. With the maximum allowed density of 20 per acre, this means that in addition to Duplexes, only 3 other types are allowable and only at their lowest intensity.

- **Plan Development District.** The PD district is a tool for projects that propose development different from what is allowed by the existing zoning districts. In addition to allowing different standards from those in the existing zoning districts, the PD is available to increase the density of a project for sites of at least two acres and typically takes 90 days and sometimes 6-8 months for processing and approval or denial. This is not effective for MMH because of the unpredictability of the process and needing to regenerate it each time. In addition, opponents can use this process to prevent or significantly alter a MMH project.
- **Flexible Review District.** The FRD is a tool for projects that propose development different from what is allowed by the existing zoning districts. In addition to allowing different standards from those in the existing zoning districts, the FRD is available to increase the density of a project for sites of at least two acres and typically takes only 3 months for processing and approval or denial. In addition, the FRD does not require residential in the project. This is not effective for MMH because of the unpredictability of the process and needing to regenerate it each time. In addition, opponents can use this process to prevent or significantly alter a MMH project.
- **Redevelopment District.** The RDV district is intended to spur reinvestment and provide a physical transition

between residential and commercial. The zone allows up to 40 ft. in height. It allows both residential and commercial but doesn't require vertical mixed use. This height is more than most of the MMH types need and needs to be coordinated with each MMH type or can result in buildings that are out of scale with houses.

- **Neighborhood Revitalization Overlay District.** This overlay is for housing and non-housing related projects. It is aimed at achieving better architectural design and consists only of guidelines and does not override the underlying zoning. This could be helpful for MMH but needs to be combined with other zoning districts.
- **Form-Based Codes (FBC's).** There are two FBC's in Greenville. One implements the Haynie Sirrine master plan and the other upon adoption (Unity Park Neighborhood District Code) will implement part of the West Side Comprehensive Plan. Each clearly identifies and allows 3 and 5 MMH types respectively. Both codes enable the MMH types by acknowledging some of the physical parameters that MMH needs to be developed effectively and to be physically in scale with its neighbors. However, we recommend adding maximum building foot print standards to both FBC's to ensure physical compatibility within and near single-family neighborhoods. Neither of these codes include density or floor area ratio standards. This is a key characteristic of effective FBC's. In preparing the standards, the intended size, scale, and functional characteristics of different buildings and the existing lots are identified and turned into standards. We recommend this approach.

In addition to the zoning districts and two FBC's, the City has two other zoning tools adopted or in-progress.

Cottage Subdivision Ordinance

The City adopted the cottage subdivision ordinance in 2015 and updated it in 2019. This ordinance is the result of advocacy about the need for more housing choices several years before. As part of this MMH Scan, we provide the following primary observations on the ordinance and its standards. In the next phase of this work, MMH Strategic Plan, we will test this ordinance on selected lots to understand specifically, what adjustments or improvements should be made.

- **Subdivision Required.** The ordinance requires that these developments be subdivided. In our experience, this is not necessary to generate small, affordable housing choices. This requirement is great for ownership purposes but not necessarily for rental options. In addition, it puts a small project into similar complexity as larger projects, potentially reducing the number of developers interested in this type.
- **Name of Project Type.** The term "subdivision" should not be in the name

of this type of project. We recommend cottage "court" to emphasize the shared open space that is key to this type and let subdivision be an option.

- **Requirement to Front on a Street.** This is typically an essential requirement for any building. But it is not advisable to require this for the cottage court type because the individual cottages already front on a shared open space and except for those nearest the street, the cottages cannot also front on a street. The 2019 updates help moderate this requirement by allowing up to 40% of the units to front on an unpaved access easement. We recommend extending this allowance to all units.
- **Minimum Lot Area.** The ordinance requires at least 21,780 sq. ft.. This is an overly specific requirement and clearly, there is some background to why it is so specific. In our experience, this size reflects the size of a "pocket neighborhood" development and is too high for a cottage court. We have seen good examples of a cottage court on a lot of 14,250 sq. ft. (95 ft. wide by 150 ft. deep). Further, there is no need to require that each cottage be on its own lot unless



The cottage court provides small, affordable dwellings around a shared garden. This type fits into a variety of neighborhoods.

subdivision is involved. Also, we have found that the lot width is as or more effective than lot area in developing effective cottage court developments. We recommend either reducing the requirement to enable cottage courts of as few as 3 cottages or renaming the ordinance a pocket neighborhood ordinance, and then prepare a set of cottage court standards.

- **Required Open Space.** The ordinance requires a minimum of 30% of the total size. At the minimum required lot area of 21,780 sq. ft., this translates to a central green of 6,534 sq. ft. or 65 ft. by 100 ft.. This works for a pocket neighborhood but it is too much for a Cottage Court. We recommend allowing this space to be as small as 35 ft. by 75 ft. in size in coordination with maximum building footprint and height standards.
- **Minimum and Maximum Dwelling Size.** The ordinance requires at least 600 sq. ft.. We have seen positive examples of these dwellings as small as 400 sq. ft.. Often, this minimum can be for a portion of the total units, providing variety even within the cottage court itself. We recommend a maximum size

of 30 ft. by 30 ft. (900 sq. ft.) to maintain the pattern of small, detached cottages.

- **Maximum Height.** The ordinance allows up to 1.5 stories and 24 ft.. We have found that this is key and effective to keeping the cottage court development as a site with cottages and not oversized houses that will appear as packed on to the site. The exception to this is the cottage at the rear of the lot which sometimes is larger, 2 stories, and is often a duplex (see photo below).
- **Minimum Parking.** The ordinance requires at least one space per unit plus one guest parking space for every four units. As discussed on page 16, parking needs for MMH are less because of the dwellings' proximity to services, retail, and transit whenever possible. For this reason, we recommend not requiring off-street parking in or very near "walkable centers". In walkable areas, further from centers, we recommend keeping the off-street parking requirement low while allowing the on-street parking spaces adjacent to the development to be used for guest parking.



The one-story character of this cottage court is in physical balance with the shared, central garden and the neighboring single-family houses.

ADU Ordinance

The City considered an accessory dwelling unit (ADU) ordinance a few years ago. The intent is to allow the ADU in all zoning districts as an accessory use. In general, the ordinance has not been finalized for adoption because staffing levels have not enabled completion of this ordinance. We support Greenville's approach to include ADU's in single-family neighborhoods and other types of neighborhoods to provide as wide a variety of housing choices as possible. The ADU will be tested on selected sites in the next phase of this work, the MMH Strategic Plan to identify recommended adjustments to the approach and/or standards.



An ADU can be on top of a garage or at grade near or attached to the garage, but always is smaller than the primary building on the lot. This ADU contains approximately 600 sq. ft..

What are the barriers for Missing Middle Housing in the City?

Zoning Standards

After reviewing the city's policy documents and zoning standards, several barriers were identified. These are summarized below. The most common barrier is that the maximum allowed density is too low. The second most common barrier is closely related, minimum lot area, is too high. The next most common barrier is the side setback standards that make lots less than 75 feet wide virtually not able to achieve multifamily development.

Amount of Area zoned for Multifamily development is low. The City of Greenville has a total of 1,936 acres zoned for Multifamily development (12% of the City).

Lack of clarity in area plans about MMH. The 12 area plans are not consistent about the types of non-single-family housing that are intended. Some are very clear but most only refer to “Duplex, Townhouse and Multifamily”.

On-site Stormwater Standards

A potential barrier that was not identified but can become a problem through the review process is the requirement for on-site treatment of stormwater runoff. This

requirement is best coordinated on a scale larger than the individual lot or parcel: on a district or area-wide basis.

The primary issue here is that this requirement ultimately reduces building coverage while adding expense for providing open space that can handle on-site runoff. This requirement is relatively simple to address on large suburban sites where land is plentiful, but can be more challenging on individual lots that accommodate MMH.

Greenville's requirements apply when more than 0.25 acres of impervious surfaces are proposed. This effectively means that lots less than 20,000 sq. ft. typically do not trigger the requirement: lots less than 130 ft. by 150 ft.. This is helpful and is important to help infill lots receive reinvestment. However, policy direction is needed to distinguish between solutions and standards for infill MMH development on infill sites that could be half of an existing block. These sites are infill sites within an existing context and need to be treated differently from larger sites that are not infill development.

On the next page, the barriers found in each policy document and the zoning code are identified.

Barriers for MMH in the City of Greenville							
Barriers to MMH	Plan-it Greenville Comp Plan	Greater Pleasant Valley	Greater Sullivan	Green Avenue	Greenville Spartanburg	Greenville West Side	Haynie-Sirrine FBC
Max. Density Allowed: (Too Low)	●	●	?	?	?	●	?
Min. Lot Area: Too High	●	●	●	●	●	●	●
Max. Lot Coverage: Too Low	?	?	?	?	?	●	●
Max. Lot Coverage: Too High	?	?	●	?	?	●	●
Min. Off-Street Parking: Too High	?	?	?	?	?	●	●
Buffer Yards Required	?	?	?	?	?	●	●
Min. Open Space: Too High	?	?	?	?	?	●	●
Fire Sprinklers Required 3<units ²	●	●	●	●	●	●	●
Content is Supportive of MMH	●	●	●	●	●	●	●
MMH Types Identified	2 ¹	?	2 ¹	2 ¹	2 ¹	5	7

Notes:

¹Only reference to duplex, townhouses and multifamily.

²Townhouses are exempt.

³Most of area zoned R-6; small portion of area is RM-2, allows up to 20 units per acre.

⁴Resulted in a very long Front-to-Back Duplex that presents scale and size issues.

The PD, FRD, RDV and NRD are not shown because it is unclear what they allow given that each is reviewed on a case-by-case basis.

Key:

- Barrier
- ? Unclear
- Not a Barrier

Is MMH Allowed in the City of Greenville?

The chart below identifies the various types of barriers to MMH within the City's Comprehensive Plan, its Area Plans, and the Zoning Code. There are 9 MMH types and this analysis looks for how or if all 9 types are possible given the current policy plans and regulations.

Barriers for MMH in the City of Greenville (Continued)							
Barriers to MMH	Nicholtown	Southern Side	Sterling	Viola	West End Comp Plan	West Washington Street	Zoning Code Ch 19
Max. Density Allowed: Too Low	?	?	●	?	●	?	●
Min. Lot Area: Too High	●	●	●	●	●	●	●
Max. Lot Coverage: Too Low	?	?	?	?	●	?	●
Max. Lot Coverage: Too High	?	?	?	?	●	?	●
Min. Off-Street Parking: Too High	?	?	?	?	●	?	●
Buffer Yards Required	?	?	?	?	●	?	●
Min. Open Space: Too High	?	?	?	?	●	?	●
Fire Sprinklers Required 3<units ²	●	●	●	●	●	●	●
Content is Supportive of MMH	●	●	●	●	●	●	●
MMH Types Identified	2 ¹	2 ¹	2 ¹	2 ¹	●	2 ¹	2 ¹

Notes:

¹Only reference to duplex, townhouses and multifamily.

²Townhouses are exempt.

³Most of area zoned R-6; small portion of area is RM-2, allows up to 20 units per acre.

⁴Resulted in a very long Front-to-Back Duplex that presents scale and size issues.

The PD, FRD, RDV and NRD are not shown because it is unclear what they allow given that each is reviewed on a case-by-case basis.

Key:

- Barrier
- ? Unclear
- Not a Barrier

Maximum Allowed Density

City of Greenville

Most of Greenville's zones do not allow any or much of individual Missing Middle Housing types because of current density limits that are too low. However, simply increasing the maximum allowed density could create other issues such as massive, unwelcoming apartment complexes, and large buildings.

Increasing the maximum allowed density needs to be coordinated with carefully

identifying the appropriate Missing Middle Housing building types for Greenville's different areas and then incorporating the resultant density range of those types along with standards for maximum building footprint and lot width.

We recommend one of two approaches: a) Increasing the maximum allowed density for MMH types; or b) Not regulating by density.

Key:

- Range of MMH Type
- Range Allowed



Duplex Side-by-Side
8-20 du/ac



Duplex Stacked
8-25 du/ac

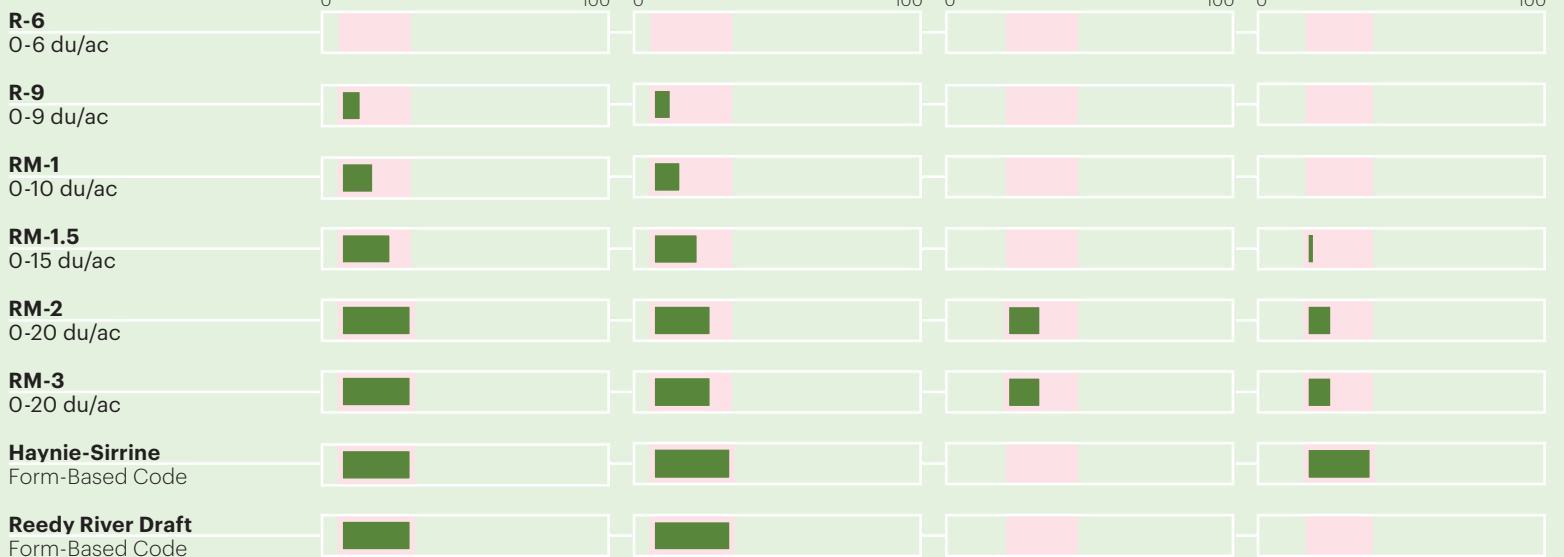


Cottage Court
18-44 du/ac



Fourplex
15-35 du/ac

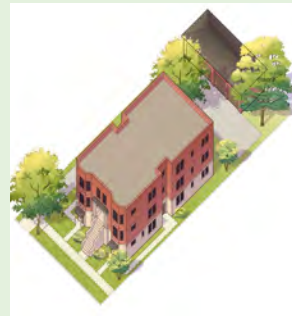
Zoning:



MMH Types Allowed by Current Density Standards

The chart below shows which and how much of each MMH type is allowed in each zone based on the maximum allowed density. When the pink area does not contain any green, that type is not allowed.

If there is little to no support for changing existing zoning, the MMH types and their standards could be adopted as an overlay that only applies to identified walkable neighborhoods. The standards could include density standards or they could be silent on density. In either approach, the characteristics of each MMH type need to be publicly discussed and tested for the specific areas where they want to be used.



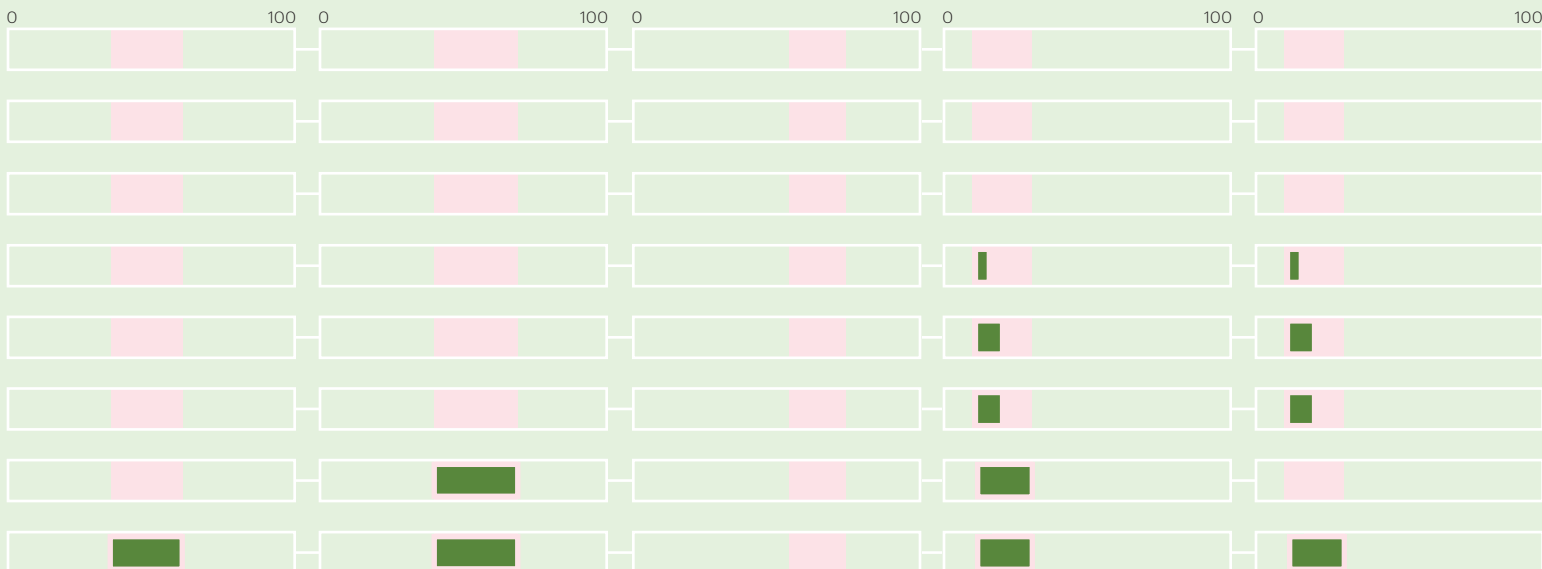
Multiplex Small
39-61 du/ac

Multiplex Large
44-70 du/ac

Courtyard Building
54-70 du/ac

Townhouse
14-28 du/ac

Live/Work
14-28 du/ac



Minimum Lot Area/Width

City of Greenville

Conventional Zoning regulates development by using lot area as another way to reinforce maximum allowed density. Unfortunately, this approach prevents some housing choices that are physically compatible with single-family houses.

Experience shows that lot “width” is a more effective regulation than lot area. This is primarily because a project can comply with the minimum lot area but still result in a building that could be too large for its context. This often happens with low density housing like a duplex that is

allowed to fill up the building envelope and create a building that is within the density limits but is larger than the houses around it. Such buildings can be as large as the apartment buildings that the standards were designed to prevent.

In contrast, regulating by lot width allows for Missing Middle Housing, increasing housing choice, while providing standards for maximum building footprint that are coordinated with a variety of lot widths that fit well and make sense in lower intensity neighborhoods.

The palette of MMH types is provided for reference to the ideal lot width range of each type.



Duplex Side-by-Side
40'-75'



Duplex Stacked
35'-75'



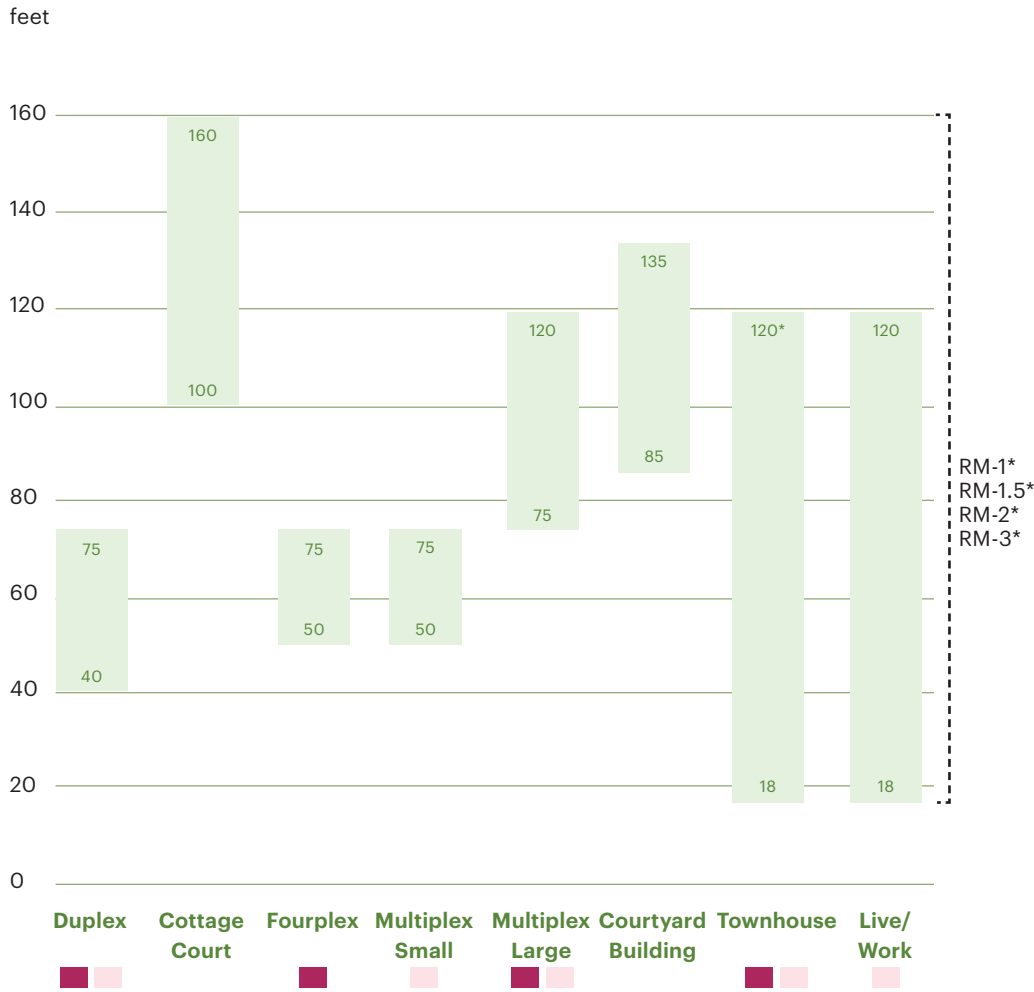
Cottage Court
100'-160'



Fourplex
50'-75'

MMH Types Allowed by Current Lot Width Standards

The green bars show the ideal lot width range for each MMH type based on front or rear vehicle access.



R-6 and R-9 Zones are not included here because their standards do not allow any of these types.

Key

(*) No Minimum (Only for Single-Family detached)
The limiting factor is the maximum allowed density, see pages 40 and 41 for allowed types.



Multiplex Small
50'-75'



Multiplex Large
75'-120'



Courtyard Building
85'-135'



Townhouse
18'-25'



Live/Work
18'-25'

3.2

Greenville County

Which Missing Middle Housing types are currently allowed?

The following analysis identifies which of the MMH Types are allowed by current County Policy and Zoning.

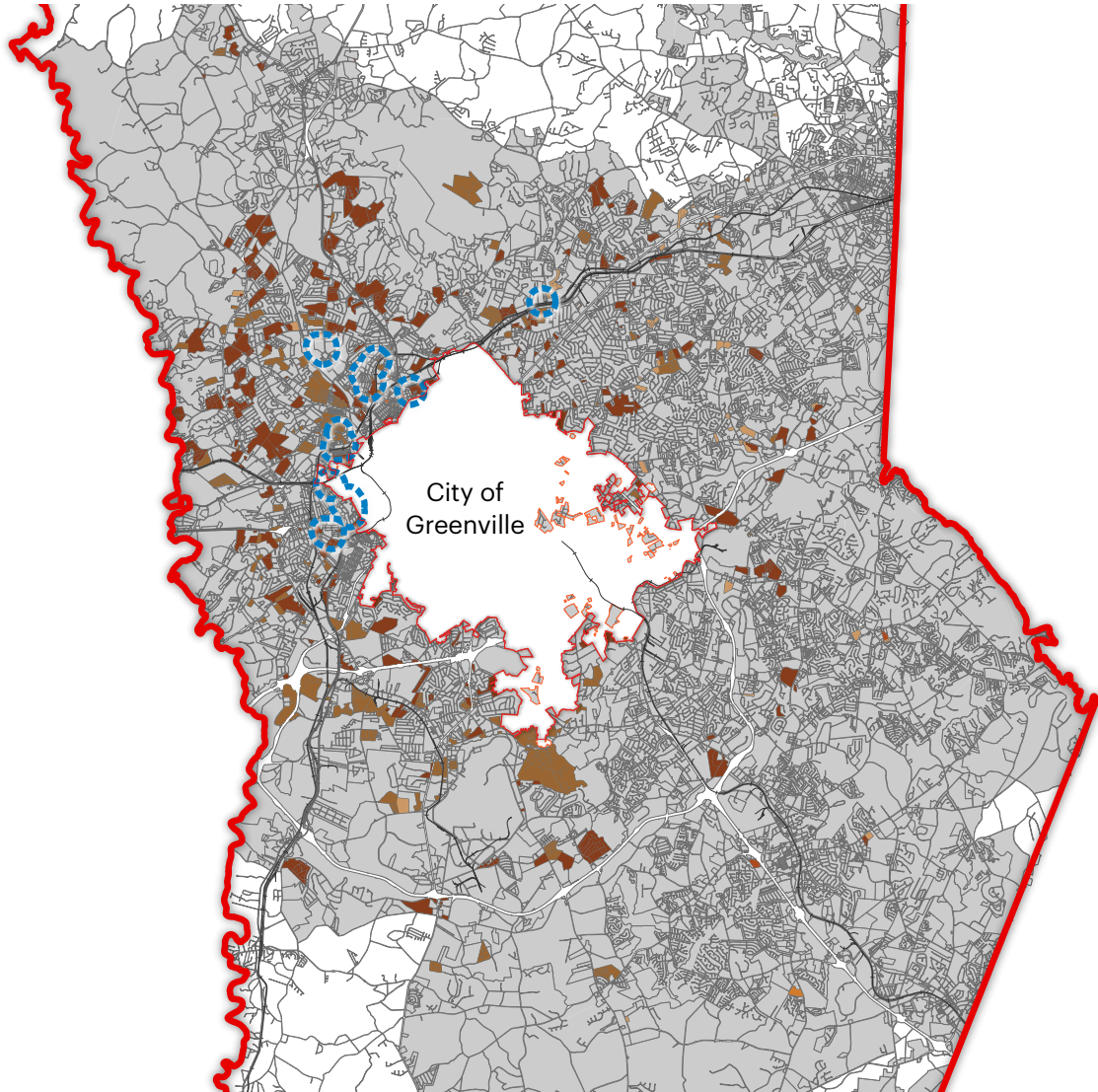
Greenville County Comprehensive Plan

Greenville County's Comprehensive Plan, contains 15 land use classifications that allow housing. Of those, 6 are relevant to Missing Middle Housing. These are listed and summarized below. An observation that applies to most of these classifications, is that the intended scale and intensity of housing is not specified which could be helpful for MMH but the language is unclear.

- **Residential Land use #3.** "Ideal density of 6 or more units per acre". The upper limit of "or more" is not clarified leaving many questions unanswered.
- **Sub-Regional Center.** This type of center is "designed to service multiple surrounding neighborhoods and the larger community for daily or weekly trips...and would ideally support higher density suburban and urban residential".
- **Regional Center.** This type of center "serves one or more contiguous regions in the County for weekly or bi-weekly trips...and ideally supports higher density residential including both single-family attached and multifamily residences".
- **Employment Center.** This type of center "is located strategically throughout the region to take advantage of existing high-capacity transportation networks. With such a high concentration of jobs, medium to high density workforce housing may also be appropriate within this type of center".
- **Transit Corridors.** This type of corridor "is primary, linking the County's urban areas, major employment centers, municipalities, and other regional and community centers. The form and function will vary along the corridor from the highest level of urban, with tall buildings oriented to the street, to a more typical suburban with shorter buildings and larger setbacks".
- **Neighborhood Corridors.** This type of corridor "is predominantly residential in form and function but allows for some limited non-residential use". There is no further description of what scale and intensity are intended by these classifications. While the classifications do not explicitly prevent MMH, the lack of clarity can make MMH implementation difficult due to what is and is not intended.

Current Zoning in the County's Walkable Centers?

The County's zoning is limited in its ability to allow MMH because only the R-M and R-MA Zones allow enough density to begin using some of the MMH types. The PD and FRD are available but require discretionary review and approval. Without more clear policy direction and standards, it is unknown if MMH types would be approved. In addition, very little of the area in RM and R-MA zones is within existing "walkable centers".



Key

Zoning Districts

- R-MA
- R-M10
- R-M14
- R-M15
- R-M16
- R-M20
- Not zoned for Multifamily
- No zoning

Boundaries

- Greenville County
- City of Greenville
- Train Lines
- Highway
- Walkable Centers

Area and Master Plans

The County's Comprehensive Plan is detailed further in communities that have organized and prepared an area or community plan. This enables these communities to study the possibilities in more detail to refine the policy direction for their specific needs and issues. Each community or area plan includes policy direction for stabilizing and/or improving the housing stock, beautification, infrastructure improvements, pedestrian safety, crime prevention, and recreation. The degree to which each plan specifies this direction differs according to each area's needs and priorities. As it relates to housing, the following summary is provided for each plan:

- **Berea Community Plan 2016.**
The plan emphasizes single-family housing and limits non-single-family housing to 8 units per acre which is at the lowest end of the MMH palette of types.
- **Brandon Community Plan 2015.**
The plan emphasizes single-family housing but does not specifically discuss intended non-single-family housing types or present any barriers to MMH.
- **Cherrydale Community Plan 2008.**
The plan aims to increase housing and identifies "higher density residential zones" for consideration along with a "mixture of uses and housing types". However, the plan's allowed maximum density in its most intense residential category is very low at 10 units per acre.
- **City View Community Plan 2019.**
The plan aims to increase / improve housing and identifies duplexes, cluster townhouses, and townhouses but does not provide any guidance on allowed intensities.
- **Conestee Master Plan 2012.**
The plan aims to improve existing neighborhoods through maintenance and better utility infrastructure. The plan includes multifamily areas but they are minimal and not intended to expand.
- **Dublin Road Area Plan 2018.**
The plan focuses on maintaining the existing character, primarily rural and single-family with little multifamily zoning.
- **Dunean Community Plan 2011.**
The plan aims to establish a neighborhood center and improve the existing neighborhood. The multifamily areas are minimal and not intended to expand.
- **East Woodruff Area Plan—County 2007.**
One key barrier to MMH was identified: The maximum of 6 units per acre is not enough to start using the lowest end of the MMH palette of types.
- **Fountain Inn Master Plan 2017.**
The plan aims to increase housing options, including multifamily housing choices. However, the allowed densities are all too low to enable Missing Middle Housing.
- **Judson Community Plan 2011.**
The plan aims to increase housing options, including multifamily housing choices and provides a diagram identifying potential infill housing and multifamily developments. The size and scale of the multifamily buildings shown in this diagram indicate that they are larger than the house-scale Missing Middle Housing types.

- **Monaghan Community Plan 2017.**
The plan aims to improve and increase housing options, specifically identifying townhouses, duplexes and triplexes as intended housing types in single-family residential. In the multifamily residential category, fourplexes and “apartments” are identified. However, the long-term plan is to change the majority of the multifamily zoning to single-family zoning.
- **New Washington Heights Community Plan 2012.**
The plan identifies a variety of multifamily housing types including three Missing Middle Housing types. The other types are described too generally that it’s not clear if they could be MMH types. The plan provides a clear diagram of where the different housing types are intended but it’s not clear how the existing zoning is intended to be changed to accommodate this direction.
- **Pelham Road Corridor Plan 2006.**
The plan was modified to minimize commercial uses to emphasize residential neighborhoods and does not provide clarity on the intensity or types of housing.
- **Riverdale/Tanglewood Community Plan 2019.**
The plan consolidates the single-family, multifamily and commercial zones for more clear boundaries and containment of each type of area. The multifamily zoning is being applied to a few vacant areas and is the R-M20 which allows some of the Missing Middle Housing types. However, a key recommendation of the plan is to “limit...apartment style housing...”. It is not clear which if any MMH types are allowed or intended.
- **Sans Souci Community Plan 2019.**
No barriers to MMH were identified. The community has identified duplexes, townhouses, and cluster housing as priorities.
- **Scuffletown Area Plan 2015.**
The plan is focused on addressing the high rate of growth and the corresponding loss of rural and natural environments. The plan strengthens its direction for rural development and preservation of nature. The plan’s most intense land use category allows up to 6 units per acre which is not enough to allow even the lowest intensity MMH types. However, the update future land use map identifies a “traditional neighborhood development” category for a large-scale master planned development with different residential types. This appears to allow MMH types. Because the direction is for an overall density up to 1.7 units per acre, this might accommodate MMH types if there is enough acreage in the project at this density.
- **South Greenville Area Plan 2017.**
The plan is in response to the high rate of growth and corresponding loss of rural and natural environments. As a result, there is very little multifamily included in the land use map but that category is being implemented through the multifamily R-M20 Zone. This zone allows some of the Missing Middle Housing types.
- **Taylors Community Plan 2016.**
The plan provides for MMH types through the Residential Land Use 3 category which is to be implemented by the R-M6 through R-M20 Zone. The RM-8 through RM-20 zones allow some of the MMH types.
- **Travelers Rest Master Plan 2018.**
The plan aims to stabilize and improve housing while allowing alternative types such as pocket neighborhood and other more dense types. The area has R-M zoning up to the maximum R-M20. This zone allows some of the Missing Middle Housing types.

Comprehensive Plan Update

The County is midway through the Comprehensive Plan update process. Among the key items to address will be affordability/housing choice and transportation/circulation. We recommend that the findings from this MMH Scan Memo and the MMH Strategic Plan be incorporated into the update process.

Greenville County Zoning

The County's zoning ordinance contains a total of 11 zoning districts that allow housing. Of those, the following are relevant to MMH and are summarized below:

- **R-M8/R-M20** Multifamily Residential Districts. (Up to 8 and 20 units per acre respectively; min lot area 2 acres but within the 2 acres, no min lot size). The "principal intended use of land is for one-family, two-family, and multiple-family dwellings and recreational, religious, and educational facilities normally associated with residential development". These multifamily residential districts are designed to allow variable densities ranging from a maximum of 8 dwellings per acre in the R-M8 district to a maximum of 20 dwelling units per acre in the R-M20 multifamily residential district.
- **R-MA** Multifamily Residential District. (Up to 20 units per acre; min lot size 12,000 sq. ft.). This residential district is established "to provide for high population density. The principal use of land is for two-family and multiple-family dwellings, manufactured homes and manufactured home subdivisions, and the recreational, religious, and educational facilities normally required to provide an orderly and attractive residential area".

Of all the MMH types, the R-M8 only allows the duplex type which typically begins at 8 units per acre. This zone has very limited MMH possibilities, the R-M20 and R-MA Zones allow more MMH types but are also at the low end of the needed density range for MMH types.

- **Planned Development District.** The PD district is for "innovative and creative design to permit a greater amount of flexibility" by removing some of the restrictions of conventional zoning. This tool can only be used on sites of at least 5 acres. PD's require discretionary approval by the Planning Commission and County Council. Although this district could be used for MMH, it is not clear if some or all of the MMH types are intended and the development would have to be at least 5 acres, which is not helpful to infill sites within existing blocks.
- **Flexible Review District.** The FRD is for "inventive design" and to allow development that cannot be achieved through conventional zoning districts. There is no minimum site size for the FRD. FRD's require discretionary approval by the Planning Commission and County Council. Although this district could be used for MMH, it is not clear if some or all of the MMH types are intended.
- The PD and FRD are intended to provide for innovative and creative development. However, this is defined on a case-by-case basis, producing a level of uncertainty about potential development ideas. We recommend integrating the standards needed for MMH into the R-M Zones or the creation of a MMH overlay or zone that can only be used in walkable neighborhood contexts. This approach provides the clarity about what is intended and where it's allowed, providing certainty for investors and the community.

What are the barriers for Missing Middle Housing in the County?

Zoning Standards

After reviewing the County's policy documents and zoning standards, several barriers were identified. The two most common barriers are that the maximum allowed density is too low and the minimum lot area is too high.

Amount of Area zoned for Multifamily development is low. The Greenville County has a total of 12,306 acres zoned for Multifamily development (2.5% of the County).

Lack of clarity in area plans about MMH. The 19 area plans are not consistent about the types of non-single-family housing that are intended. Some are very clear but most only refer to "Duplex, Townhouse and Multifamily".

On-site Stormwater Standards

As stated in the City's barriers to MMH, the on-site stormwater standards, if applied as to a housing subdivision, can pose a barrier to infill development in general, and to MMH infill development. See page 38 for discussion and recommendation.

On the next page, the barriers found in each policy document and the zoning code are identified.

Barriers for MMH in Greenville County											
Barriers to MMH	Imagine Greenville Comp Plan	Berea Plan	Brandon Plan	Conestee Plan	Monaghan Mill Plan*	Cherrydale Plan	City View Plan	Dublin Road Plan	Dunean Plan	East Woodruff Plan	Fountain Inn Plan
Max. Density Allowed: Too Low	●	●	?	?	●	●	●	●	?	●	●
Min. Lot Area: Too High	●	●	●	●	●	●	●	●	●	●	●
MMH Types Identified ¹	●	2	2	2	2	2	2	2	2	2	2
Content is Supportive of MMH	●	●	●	●	●	●	●	●	●	●	●

Notes:

¹Only reference to duplex, townhouses and multifamily.

²Plan update proposes down-zoning from multifamily to single-family, and down-zoning R-7.5 to R-10.

³Policy direction to limit “apartment” style of multifamily housing leaves it unclear if MMH is intended or not.

⁴Majority of area is zoned for single-family.

⁵The future land use map includes a TND category that allows mixed residential types within a maximum overall density of 1.7 units per acre for the master planned area.

⁶In R-M and R-MA, multifamily requires a min. of 2-acre site size and 12,000 sq. ft. size respectively.

⁷In R-M, once 2-acre site is provided, no individual lot minimum.

⁸Duplexes through Fourplexes mentioned but majority of R-M Zoning being changed to Single-Family Zoning.

* In Progress version reviewed

The PD and FRD are not shown because it is unclear what they allow given that each project is reviewed on a case-by-case basis.

Key:

- Barrier
- ? Unclear
- Not a Barrier

Is MMH Allowed in Greenville County?

The chart below identifies the various types of barriers to MMH within the County's Comprehensive Plan, its Area Plans, and the Zoning Code. There are 9 MMH types and this analysis looks for how or if all 9 types are possible given the current policy plans and regulations.

Barriers for MMH in Greenville County (Continued)										
Barriers to MMH	Judson Plan	New Washington Heights Plan	Pelham Road East Side Plan	Riverdale Tanglewood Plan	Sans Souci Plan	Scuffletown Plan	South Greenville Plan	Taylor's Plan	Travelers Rest Plan	County Zoning Code
Max. Density Allowed: Too Low	?	●	●	?	●	●	●	●	●	●
Min. Lot Area: Too High	●	●	●	●	●	●	●	●	●	●
MMH Types Identified ¹	2	2	2	2	2	2	2	2	2	2
Content is Supportive of MMH	●	●	●	●	●	●	●	●	●	●

Notes:

¹Only reference to duplex, townhouses and multifamily.

²Plan update proposes down-zoning from multifamily to single-family, and down-zoning R-7.5 to R-10.

³Policy direction to limit "apartment" style of multifamily housing leaves it unclear if MMH is intended or not.

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⁶In R-M and R-MA, multifamily requires a min. of 2-acre site size and 12,000 sq. ft. size respectively.

⁷In R-M, once 2-acre site is provided, no individual lot minimum.

⁸Duplexes through Fourplexes mentioned but majority of R-M Zoning being changed to Single-Family Zoning.

* In Progress version reviewed

The PD and FRD are not shown because it is unclear what they allow given that each project is reviewed on a case-by-case basis.

Key:

- Barrier
- ? Unclear
- Not a Barrier

Maximum Allowed Density

Greenville County

Most of the County's zones do not allow any or much of individual Missing Middle Housing types because of current density limits that are too low. However, simply increasing the maximum allowed density could create other issues such as massive, unwelcoming apartment complexes, and large buildings.

Increasing the maximum allowed density needs to be coordinated with carefully

identifying the appropriate Missing Middle Housing building types for Greenville's different areas and then incorporating the resultant density range of those types along with standards for maximum building footprint and lot width.

We recommend one of two approaches: a) Increasing the maximum allowed density for MMH types; or b) Not regulating by density.

Key:

- Range of MMH Type
- Range Allowed



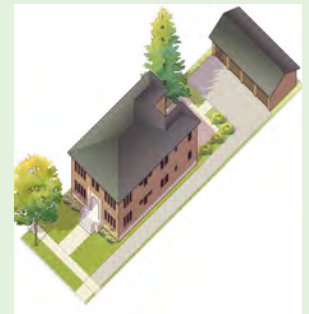
Duplex Side-by-Side
8-20 du/ac



Duplex Stacked
8-25 du/ac

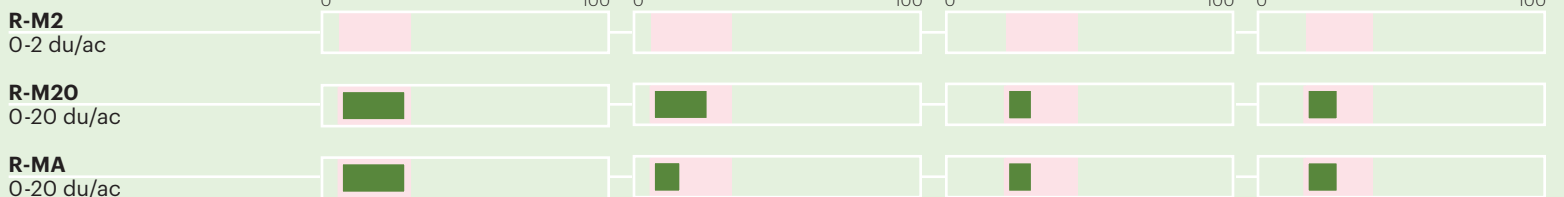


Cottage Court
18-44 du/ac



Fourplex
15-35 du/ac

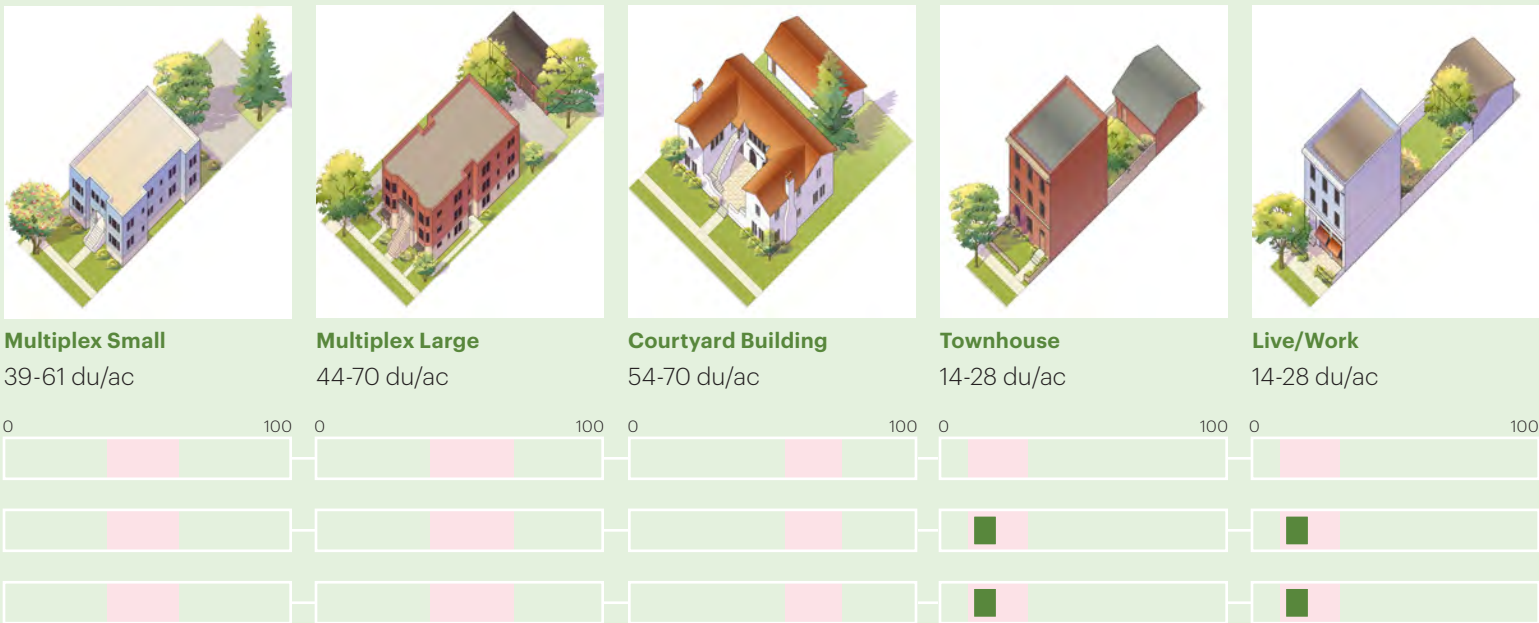
Zoning:



MMH Types Allowed by Current Density Standards

The chart below shows which and how much of each MMH type is allowed in each zone based on the maximum allowed density. When the pink area does not contain any green, that type is not allowed.

If there is little to no support for changing existing zoning, the MMH types and their standards could be adopted as an overlay that only applies to identifies walkable neighborhoods. The standards could include density standards or they could be silent on density. In either approach, the characteristics of each MMH type need to be publicly discussed and tested for the specific areas where they want to be used.



Residential zones not listed are not included because their standards do not allow any of these types. Although the R-M2 Zone does not allow any of the MMH types, it is listed because it is a Multifamily zone.

Minimum Lot Area/Width

Greenville County

Conventional Zoning regulates development by using lot area as another way to reinforce maximum allowed density. Unfortunately, this approach prevents some housing choices that are physically compatible with single-family houses.

Experience shows that lot “width” is a more effective regulation than lot area. This is primarily because a project can comply with the minimum lot area but still result in a building that could be too large for its context. This often happens with low density housing like a duplex that is

allowed to fill up the building envelope and create a building that is within the density limits but is larger than the houses around it. Such buildings can be as large as the apartment buildings that the standards were designed to prevent.

In contrast, regulating by lot width allows for Missing Middle Housing, increasing housing choice, while providing standards for maximum building footprint that are coordinated with a variety of lot widths that fit well and make sense in lower intensity neighborhoods.

The palette of MMH types is provided for reference to the ideal lot width range of each type.



Duplex Side-by-Side
40'-75'



Duplex Stacked
35'-75'



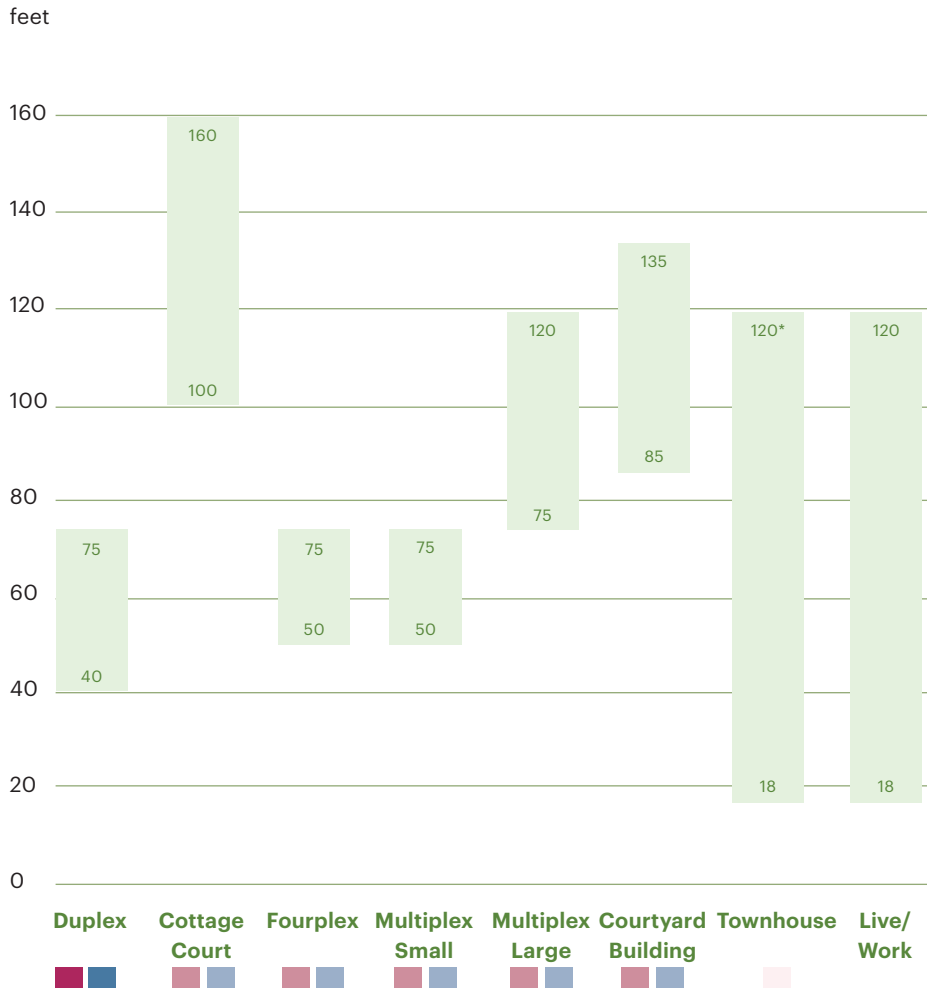
Cottage Court
100'-160'



Fourplex
50'-75'

MMH Types Allowed by Current Lot Width Standards

The green bars show the ideal lot width range for each MMH type based on front or rear vehicle access.



In order to satisfy current lot area requirements, the ideal lot widths shown need to be increased and/or the lot depths need to be increased.

Residential zones not listed are not included here because their standards do not allow any of these types.

Key

R-MA:

- Duplex: Min. 7,500 sq. ft.
- "Apartments": Min. 12,000 sf
- Townhouses: No Minimum

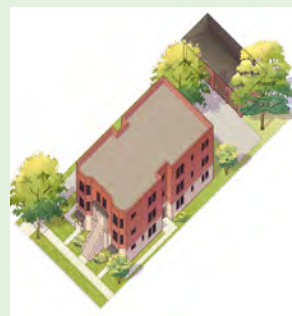
R-M2 through R-M20

- Duplex: Min. 7,500 sq. ft.
- "Apartments": Min. 2 acres¹
- Townhouses: No Minimum

¹None of the identified types are allowed unless part of 2-acre development.



Multiplex Small
50'-75'



Multiplex Large
75'-120'



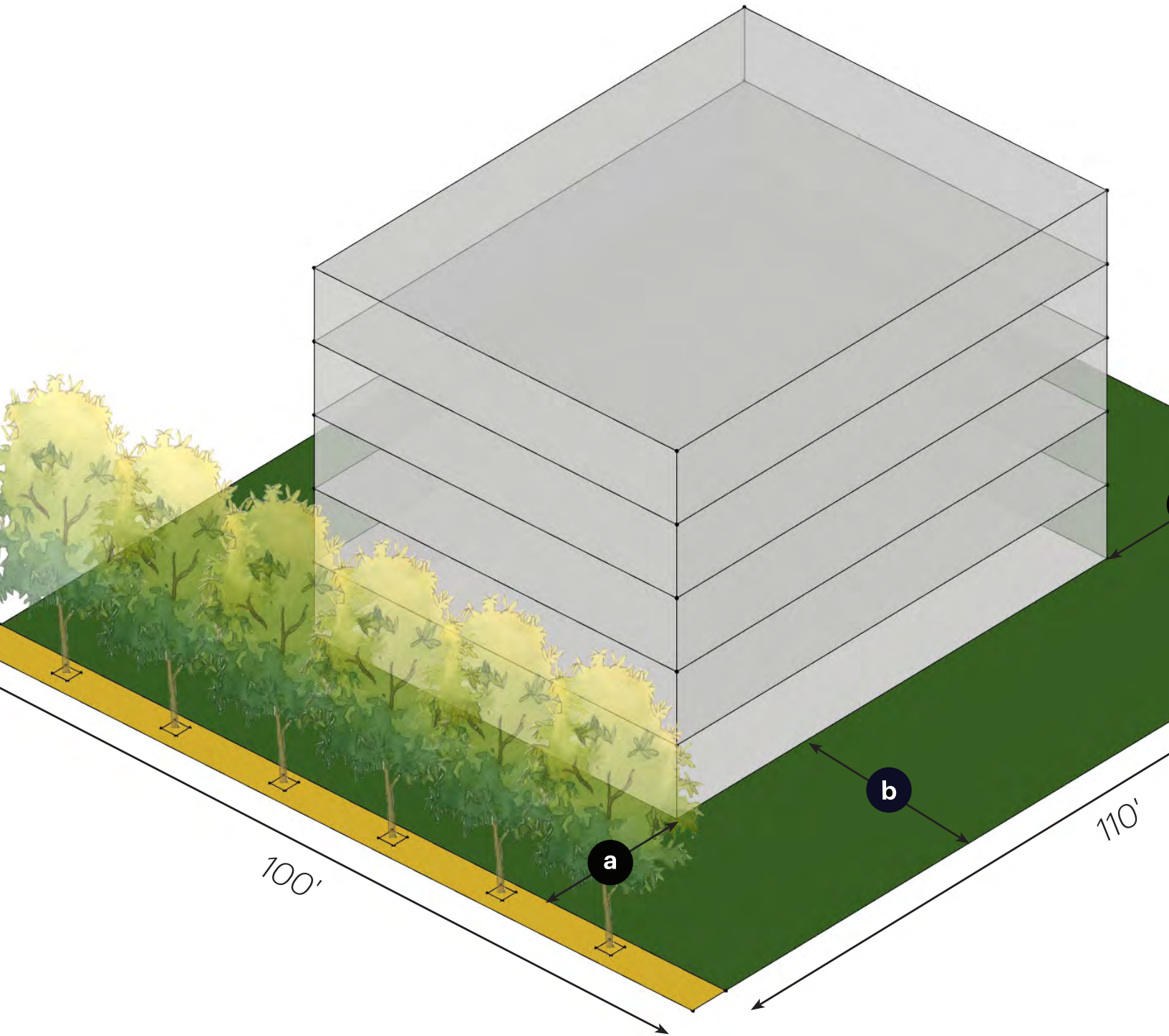
Courtyard Building
85'-135'



Townhouse
18'-25''



Live/Work
18'-25''



Next Steps

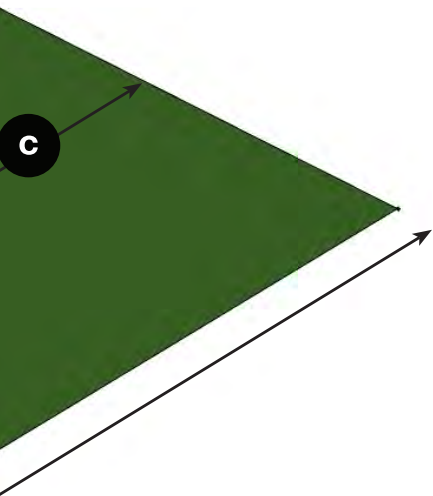
CHAPTER

4

In this chapter

4.1 Missing Middle Housing Deep Dive

64



Left: Example of lot testing analysis based on existing zoning standards.

4.1

MMH Deep Dive™

Testing + Solutions for Missing Middle Housing

Identify recommended improvements to Policy and Zoning

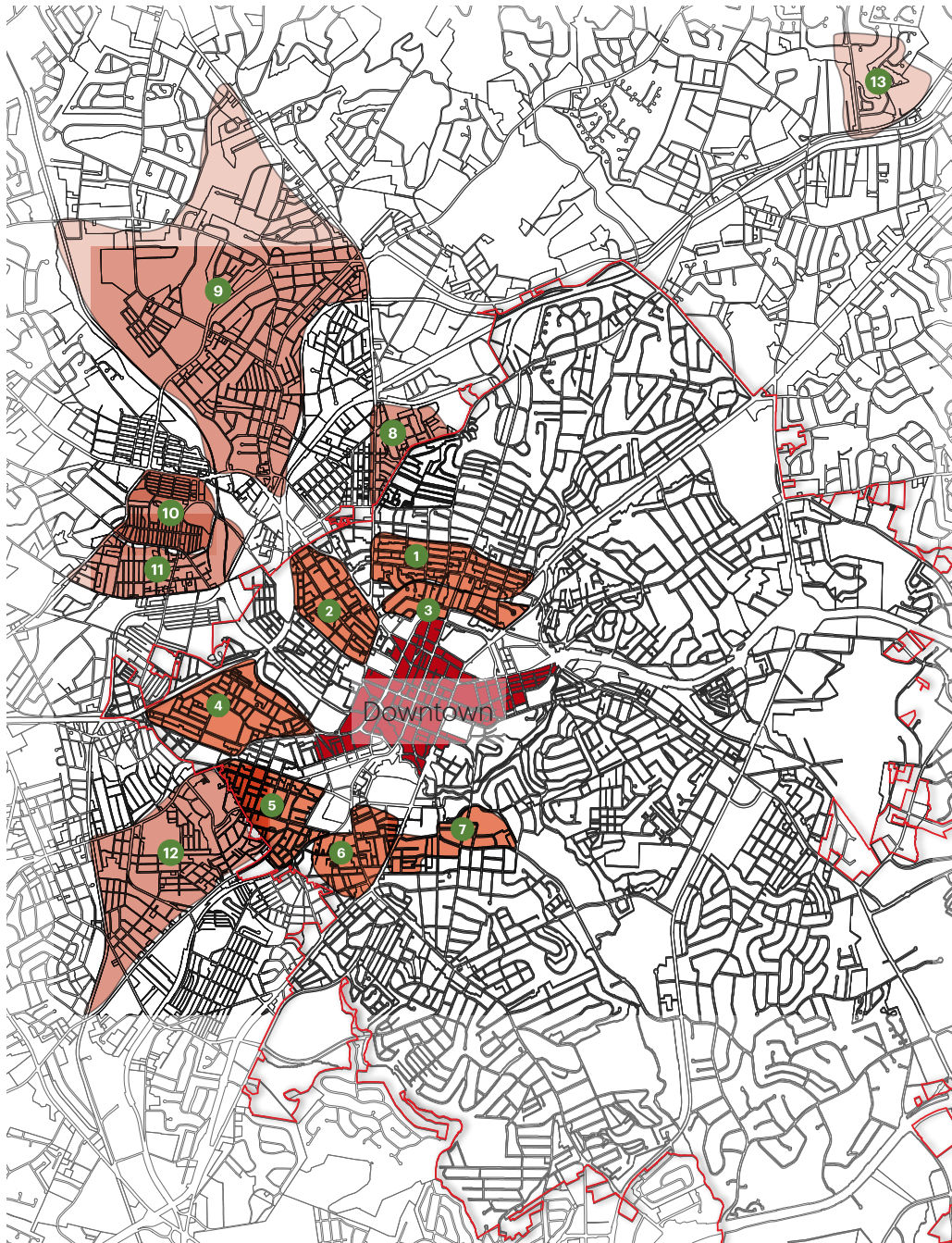
City and County

This MMH Scan™ (Analysis + Definition of Barriers to MMH) is the first of a two part analysis and focuses on identifying barriers to MMH. The second part, MMH Deep Dive™ (Testing + Solutions for MMH) is a more detailed analysis of both the City's and County's zoning. Part 2 will:

- Test the existing zoning in walkable contexts on a variety of selected sites to identify the number of dwellings allowed and the maximum building size under two scenarios: a) existing zoning, and b) existing physical conditions without limitation by existing zoning but within the context of the neighborhood. In other words, what would fit well if it was allowed? This is intended to provide further insight about recommended improvements and changes to existing standards.
- Identify recommend changes to the Comprehensive Plans of the City and County as well as recommended changes to zoning standards.
- Prioritize the recommendations to identify those items that need to happen first.

Target Areas for Testing of Zoning

This map identifies the targeted areas within the City and County where the zoning standards will be tested. It is expected that testing in these areas will also address lots in and near other “walkable centers”.



Key

City

- 1 West Earle Street
- 2 Hampton-Pinckney Historic District
- 3 Heritage Historic District
- 4 West Greenville
- 5 Sterling
- 6 Greater Sullivan
- 7 Haynie-Sirrine

County

- 8 Brutontown
- 9 Sans Souci
- 10 Monaghan Mill
- 11 City View
- 12 Judson
- 13 North Greenville