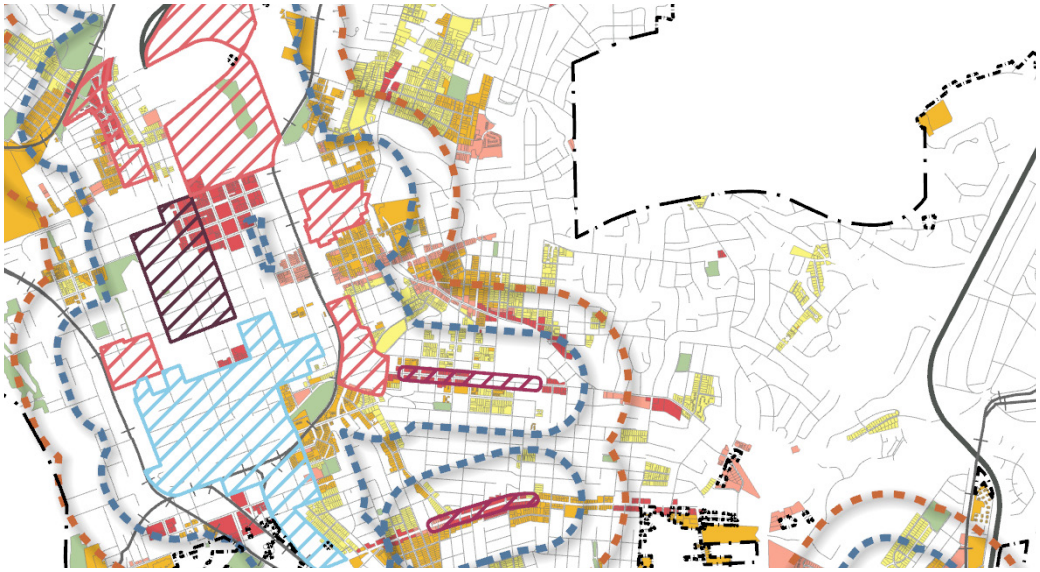
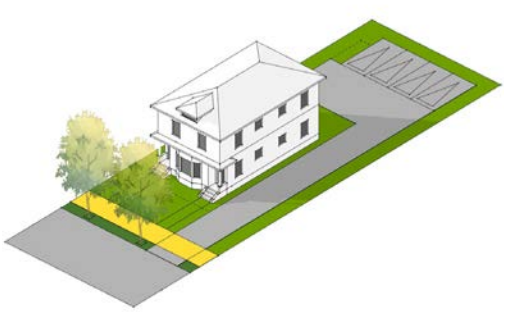
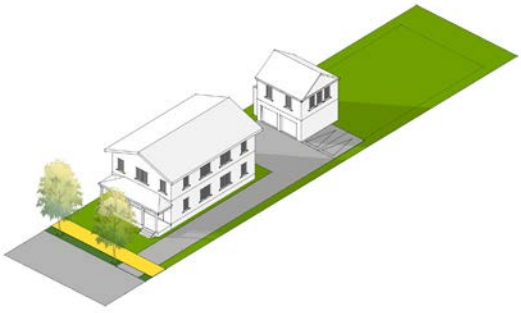
MMH Deep Dive™ Testing + Solutions for Missing Middle Housing

Prepared for:
City of Columbia

February, 2024







MISSING MIDDLE HOUSING

OPTICOS

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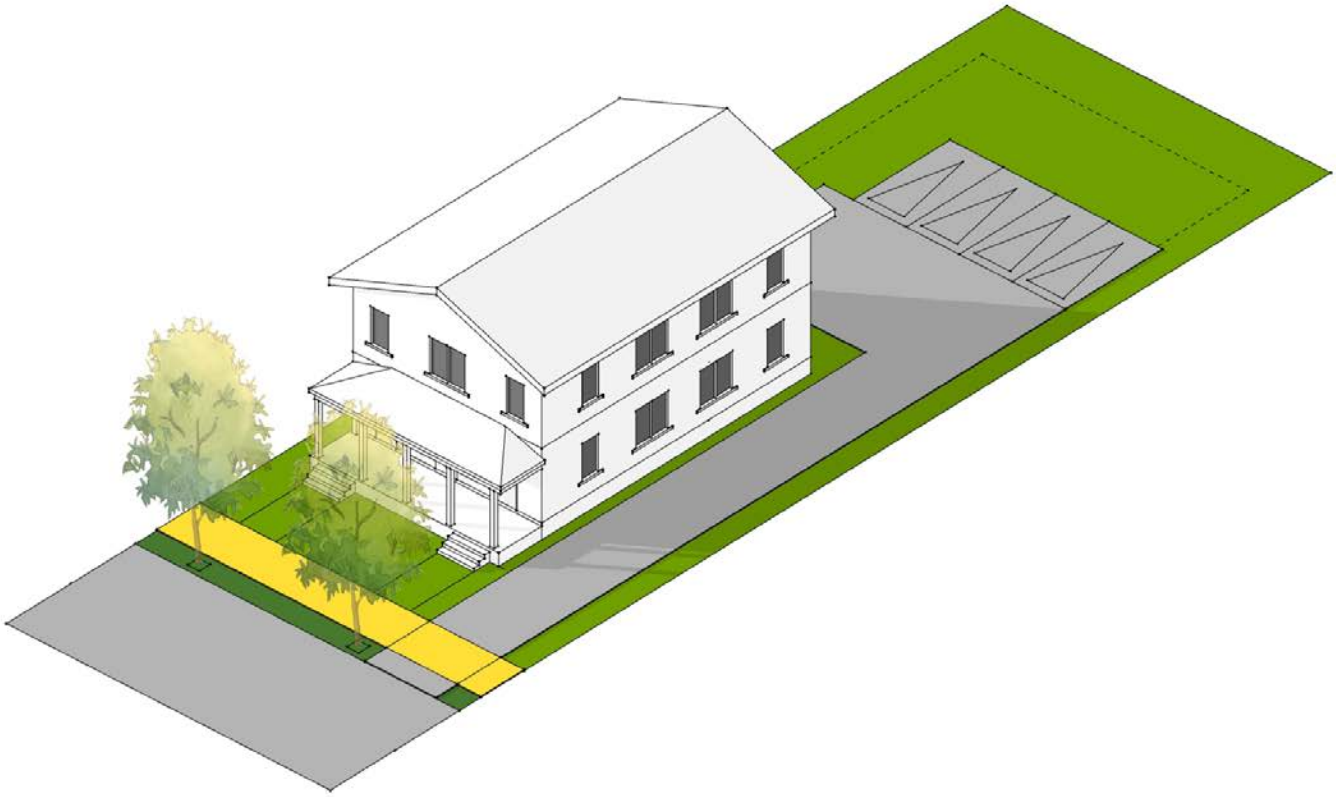
What's Inside?

MMH Deep Dive ™



Above: Example of Missing Middle Housing on a typical lot.

Introduction

CHAPTER 1

In this chapter

1.1 Purpose

The Missing Middle Housing Deep Dive™ involves detailed testing of zoning standards in selected areas in the City of Columbia to identify barriers to Missing Middle Housing, and to recommend improvements to policies and zoning standards to remove these barriers.

Testing Zoning Standards

This Missing Middle Housing Deep Dive™ is the second part of a two-part analysis of the City of Columbia's policies and zoning standards with the objective of identifying barriers to Missing Middle Housing (MMH), and propose recommendations to enable these types in suitable areas of the city.

The MMH Deep Dive™ is focused on the following:

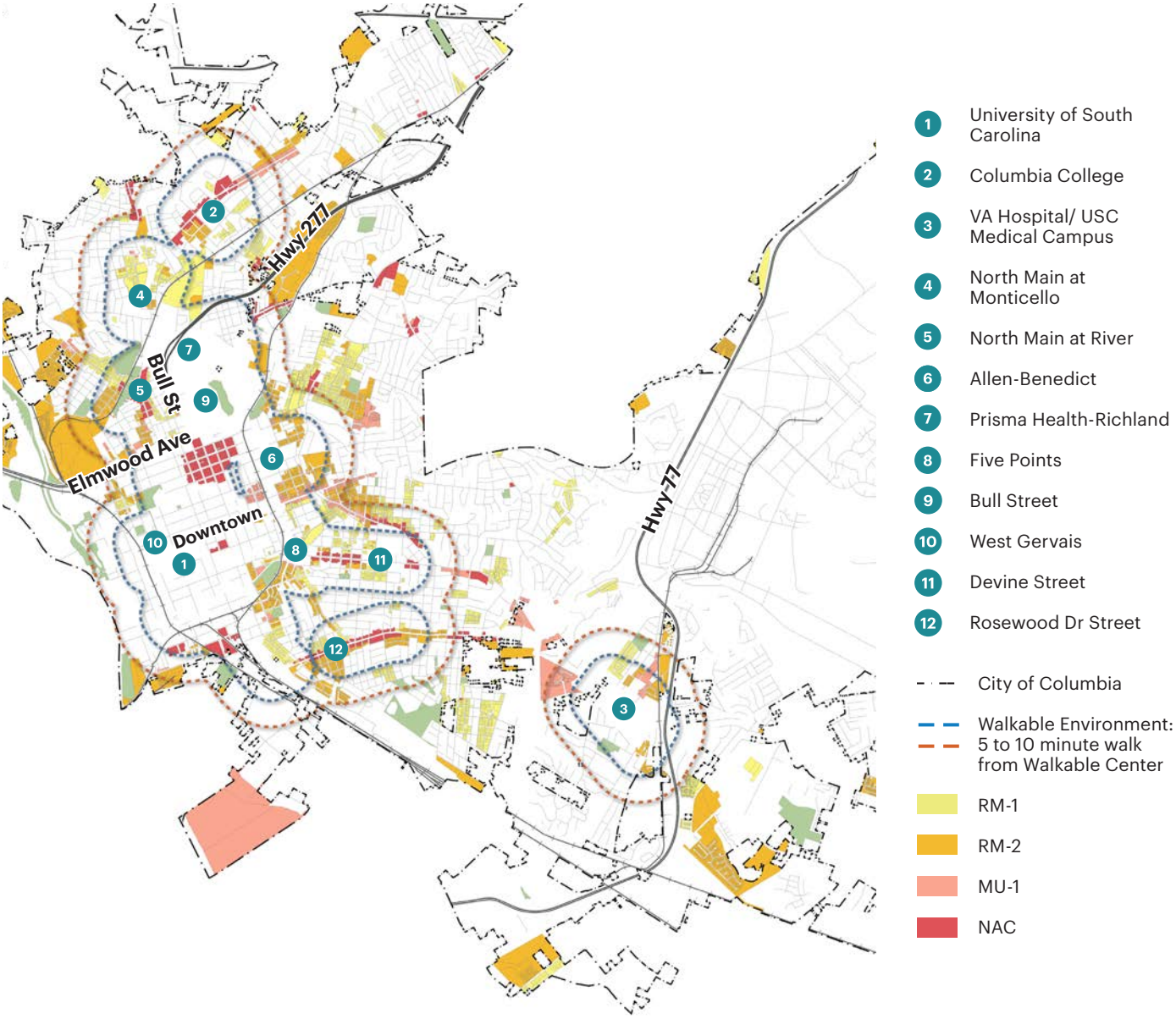
- **Test the existing zoning standards** in walkable environments in four zoning districts on a variety of commonly occurring lot sizes. The testing compares what the current zoning allows with what it actually yields when other development standards (such as parking) are also applied.

  In addition, within the context of the neighborhood, the testing explores which MMH types would fit well if allowed. The testing provides further insight for recommended improvements and changes to existing standards.

- **Identify recommended changes** to the Comprehensive Plan and/or to the zoning standards based on the results of the testing, and prioritize the recommendations to identify items that should happen first.

Figure 2.1 ***Areas to be tested***

Based on the issues and barriers identified in the MMH Scan™, the testing of Columbia's Zoning is focused on four lot sizes. By testing these lot sizes in four different zones (RM-1, RM-2, MU-1, NAC), the results inform and be applied to a larger number of lots.. The red and blue-dashed areas identify walkable environments: areas within short (5-10 minutes) walking distance of daily needs such as services, shopping, transit, recreation, or work.



1.2 Approach to Lot Testing

Lot Testing helps to identify barriers to Missing Middle Housing (MMH) and provides guidance for which MMH types can fit on typical existing lot sizes in Columbia.

Identified Barriers to MMH

The Missing Middle Housing Scan™, the first part of this two-part analysis, identified several key barriers in Columbia's zoning code:

1. Maximum density allowed in RM-1 and RM-2 is too low for many MMH types,
2. Minimum parking requirements in RM-1 and RM-2 are too high to enable MMH,
3. Driveway width and location standards are barriers on narrow lots, and
4. Buffer yard requirements reduce the available lot width for many MMH types.

In order to understand how to address these barriers, the lot testing in Chapters Two through Six of this Deep Dive™ focuses on testing commonly occurring lot sizes in Columbia to understand what the existing zoning allows, which typical MMH types can fit, and what changes might be made to the standards to allow appropriate MMH types that fit well into the surrounding context.

Walkable Neighborhoods

The zoning districts selected for lot testing are those that relate most closely to the walkable neighborhoods identified in the Missing Middle Housing Scan™. As described in the Scan™, Missing Middle Housing (MMH) types work best in walkable neighborhoods: environments that have a "walkable center" within a short walking distance of most homes.

A walkable center can be described as a place offering amenities and services such as shopping, food, and transit in some combination. The size of a walkable neighborhood can vary, but a common metric used to determine walkability is a 5 to 10 minute walk radius from the walkable center, translating to a distance of 1/4 mile to 1/2 mile. The ability to walk or bike to complete even some (if not all) daily trips such as commuting to work or school, running errands, etc. means less dependence on driving, and the option to not possess a car.

Figure 2.2 ***Walkable centers and neighborhoods identified in Columbia***

The Missing Middle Housing Scan™ identified walkable environments in Columbia, which can support existing and new Missing Middle Housing types. For additional information, refer to the Missing Middle Housing Scan™ document.

1.3 Overview of Lot Testing

Four zoning districts were selected for lot testing, using lot sizes that are typical in these areas. This ensures that the findings from the lot testing have broad applicability, and reflect existing conditions in Columbia.

Testing Scenarios

The zoning districts and lot sizes that were selected for the testing are listed below:

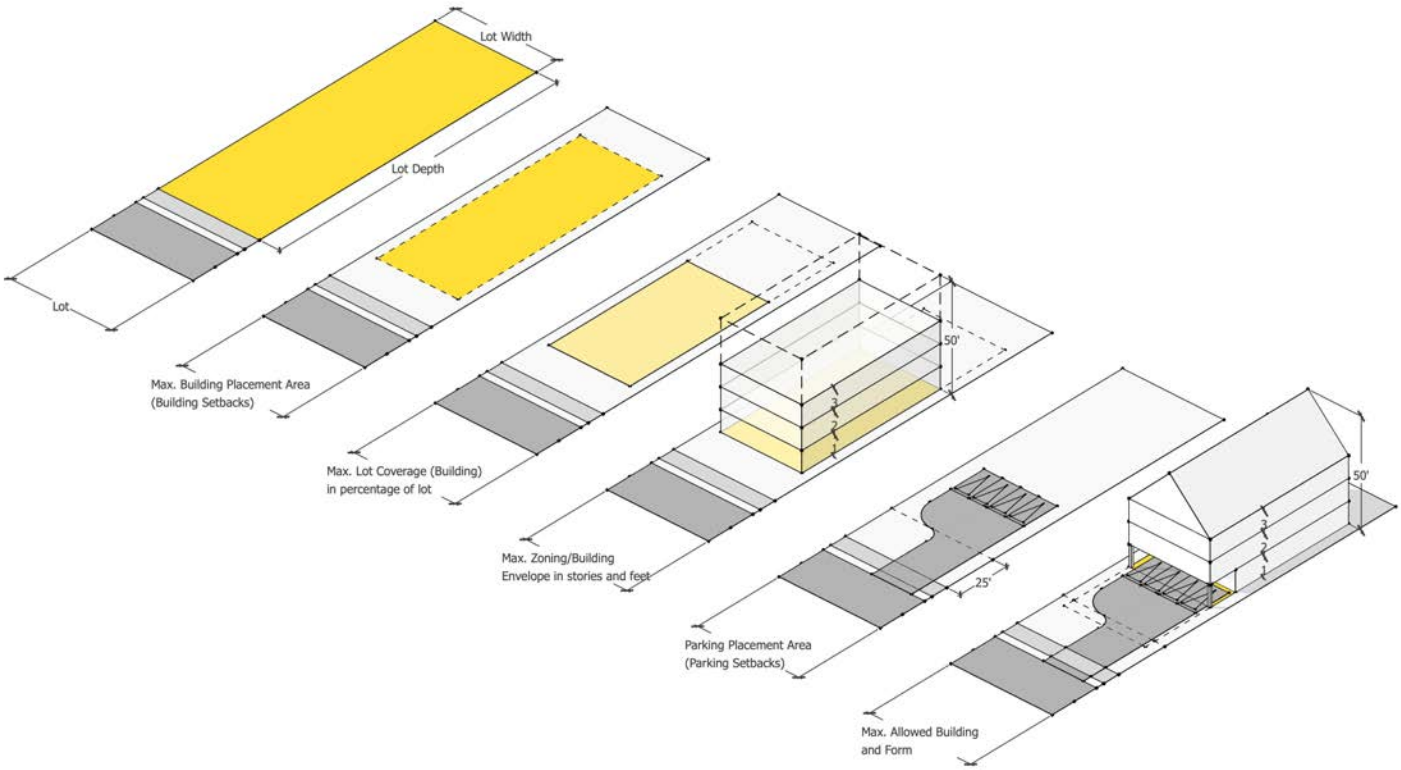
Zoning Districts	Lot Sizes
RM-1	50' x 120' and 55' x 150'
RM-2	55' x 150'
MU-1	55’ x 210’
NAC	50' x 210'

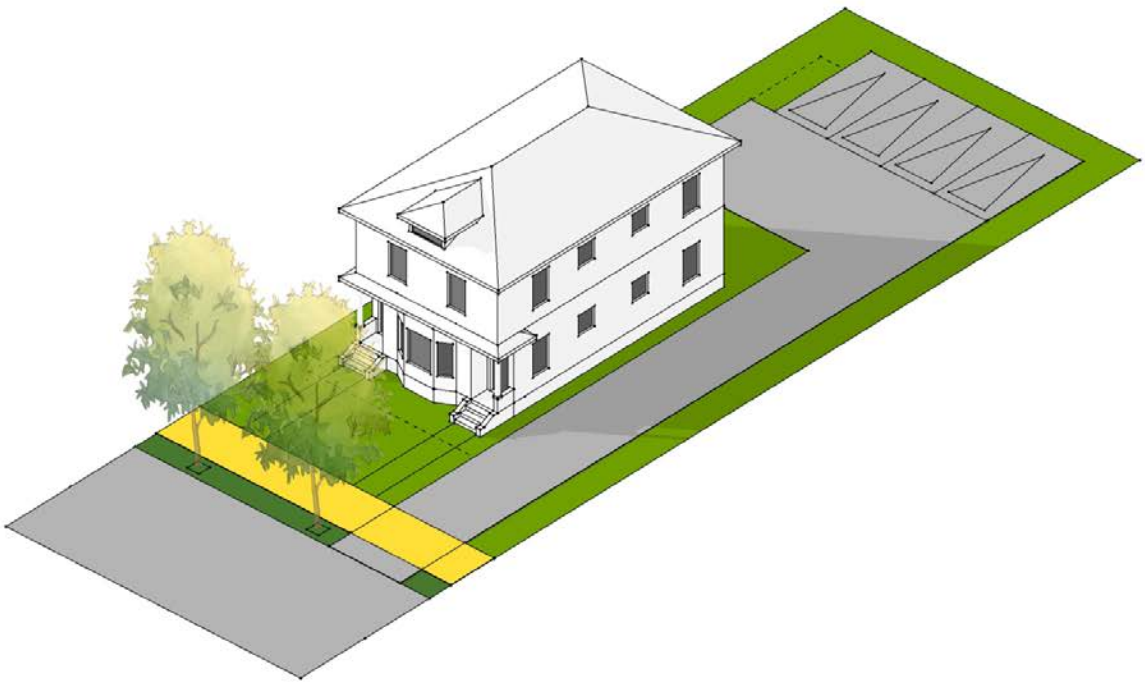
For each of the selected lot sizes, the testing process involved developing three scenarios:

- **Maximum Zoning Envelope: What the Existing Zoning Allows.** This testing applies the zoning district’s minimum setbacks, maximum height and density standards, if any, to identify what is hypothetically possible to build on the lot. This resultant three-dimensional envelope determines the limits of any new development: any new building that is proposed must fit within this zoning envelope.
- **Maximum Yield and Form: What the Existing Zoning Actually Allows.** This testing applies other development standards that are required by the zoning district or other applicable standards, such as parking, lot coverage, on-site open space, etc. This helps to identify what is actually possible to be built on the lot. In many cases the maximum allowed zoning envelope cannot be reached, once these additional requirements are factored in. The result from this lot test reveals the maximum yield and form of the building.
- **MMH Options: Which MMH Types Can Fit (Regardless of Existing Standards).** The next step in the lot testing evaluates the existing context and the built form characteristics of the adjacent lots in the neighborhood (such as prevalent building heights, setbacks, building footprints, etc.) to identify which MMH types from the palette of MMH types would be a good fit for that environment. The selected typical MMH types are then tested on the lot to identify which development standards are not met. This highlights the modifications needed to the existing development standards to allow the selected MMH types.

Figure 2.3 ***Lot testing process***

The diagram below illustrates individual steps involved in the lot testing process, and the information generated at each step.





Above: Stacked Duplex; Example of Missing Middle Housing on a typical lot.

RM-1 Zone

CHAPTER **2**

In this chapter

2.1 RM-1 Zone Overview

Figure 2.1

The map shows the locations of the RM-1 zone relative to the "walkable centers" that were identified in the MMH Scan™. This is to illustrate the potential for achieving Missing Middle Housing, if barriers are removed.

Zone Intent

The RM-1, Residential Mixed District is intended to accomodate a walkable, moderate density mix of residential development that allows single-family, two-family, townhouse, and multi-family dwellings. The overall gross density in RM-1 will typically be 8.7 units per acre or less.

Parking Ratios

(Shown to identify different requirements depending on size or type of dwelling unit or other use)

- All development, except as noted below: 2 spaces per unit
- Multi-family dwellings: 1.75 spaces per unit
- Mixed-use buildings: in accordance with approved parking plan.

Lot Testing: Key Findings

- Density requirement is too low to accomodate many MMH types.
- Driveway width and location requirements are barriers on narrow lots.
- Parking requirements are too high.

Note: *Buffer yards, where required, are barriers to MMH because they reduce available lot area for development, particularly on narrow lots.*

2.2 RM-1 Lot 1, 50' x 120' Maximum Zoning Envelope

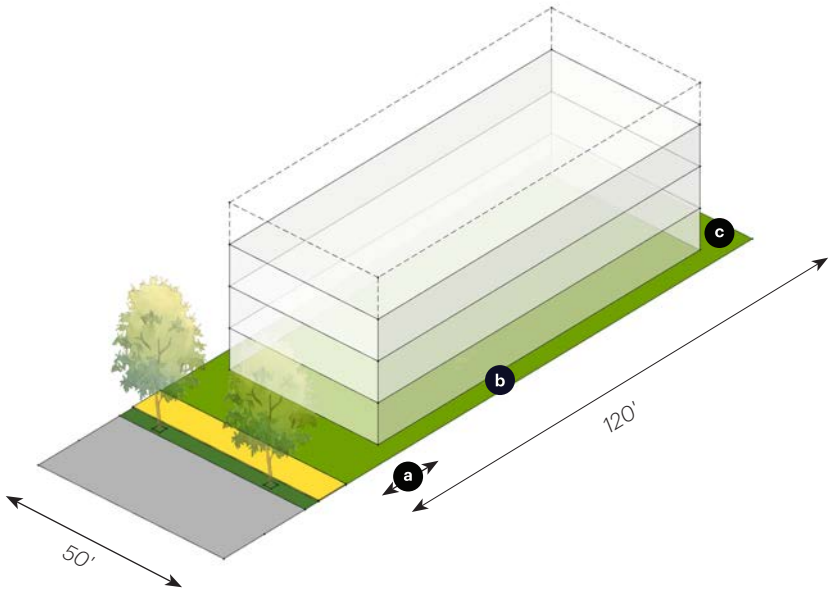
Figure 2.2

Diagram illustrating the maximum zoning envelope allowed by RM-1.

The aerial below shows the zoning envelope on a vacant lot in the RM-1 zone.

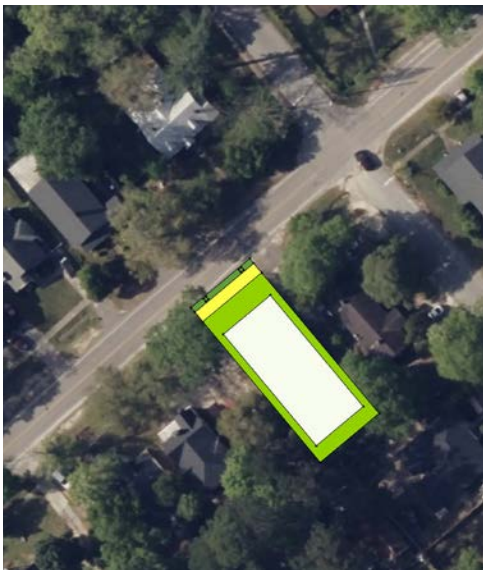
Required Setbacks (min.)

- a Front = 15'
- b Side = 5'
- c Rear = 10'



Maximum Envelope per RM-1 Standards[1]	
Building Form	
Existing Lot Area	6,000 sf
Min. Required Lot Area	5,000 sf
Max. Height	40'
Max. Lot Coverage	50%
Built Up Area	9,000 sf
Parking	
Min. Parking Spaces	2
Density	
Resultant Units	n/a
Max. Allowed Density	8.7 du/ac

[1] For building types excluding the Townhouse.



RM-1 Lot 1, 50' x 120' Maximum Yield + Form

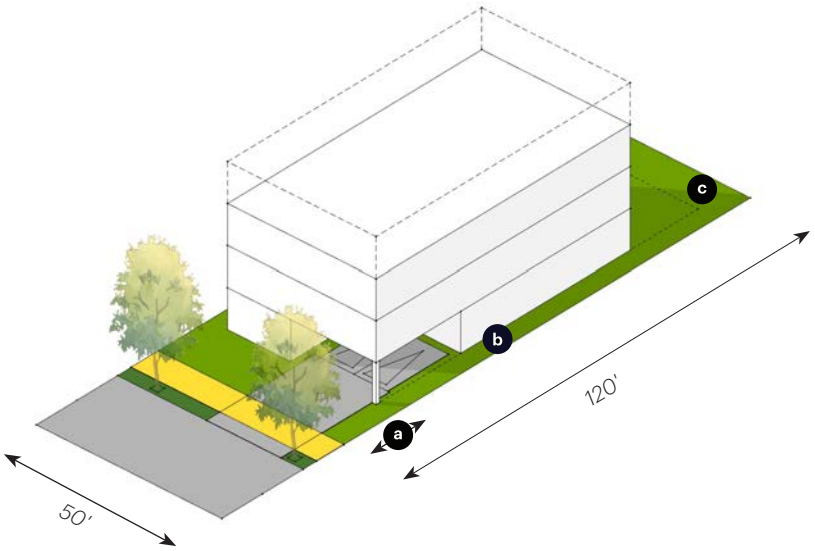


Figure 2.3

Diagram illustrating what type of development and built form is possible after applying all required development standards.

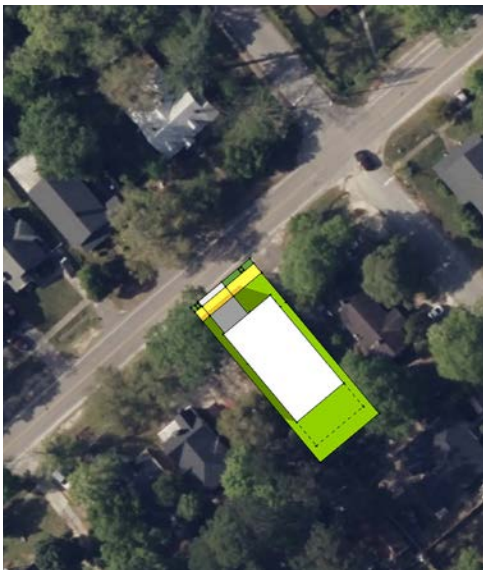
The aerial below shows the building footprint achieved on a vacant lot in the RM-1 zone.

Required Setbacks (min.)

- **a** Front = 15'
- **b** Side = 5'
- **c** Rear = 10'

Maximum Yield and Form per RM-1 Standards[1]		
Resultant		**RM-1 Stds.**
Footprint	40'x75'	n/a
Height	30'	40'
Lot Coverage	50%	50%
Built Up Area	8,425 sf	n/a
Parking		
Number of Spaces	2	2
Density		
Resultant Units	1	n/a
Resultant Density	7 du/ac	8.7 du/ac

[1] For building types excluding the Townhouse.



RM-1 Lot 1, 50' x 120' MMH Duplex Stacked

Option 1

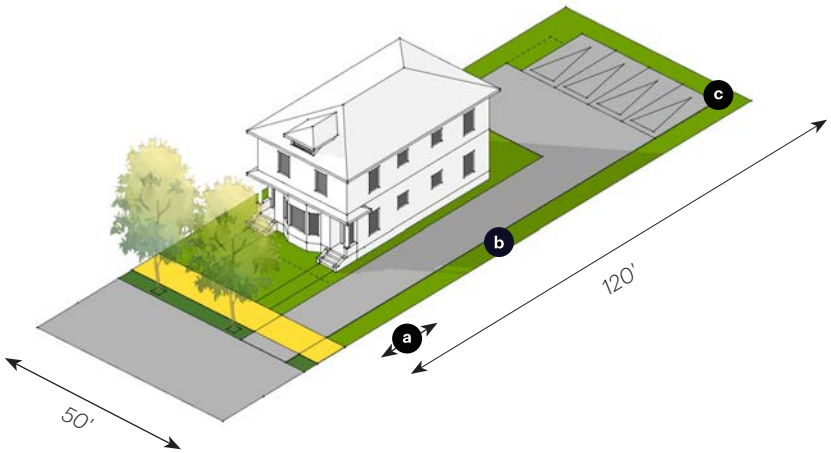
Figure 2.4

Diagram illustrating how the stacked duplex MMH type fits on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

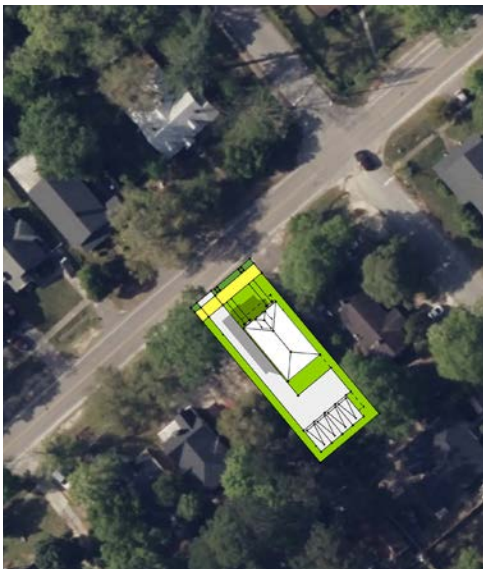
Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none



MMH Duplex Stacked		
Building Form		**RM-1 Stds.**
Footprint	24'x42'	n/a
Height	27'	40'
Lot Coverage	17%	50%
Average Unit Size	868 sf	n/a
Parking		
Number of Spaces	4	4
Density		
Resultant Units	2	n/a
Resultant Density	**15 du/ac**	8.7 du/ac

Bold = not complying with existing standards



RM-1 Lot 1, 50' x 120' MMH Duplex

Option 2

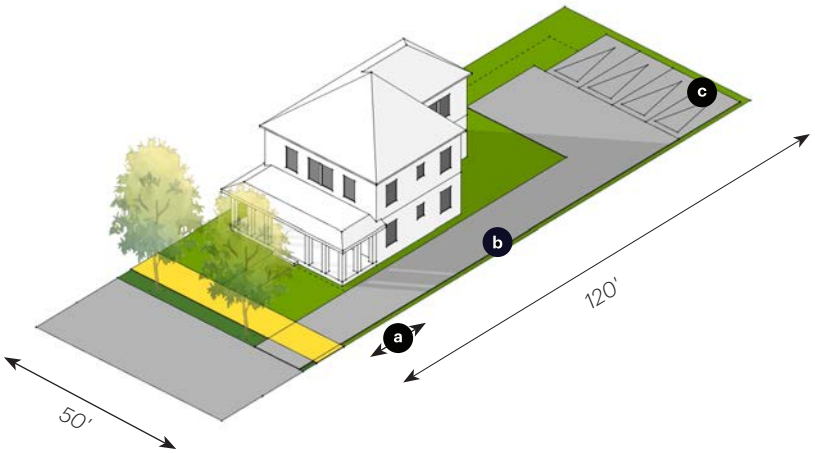


Figure 2.5

Diagram illustrating how the duplex MMH type fits on the lot providing additional units while presenting the appearance of a house.

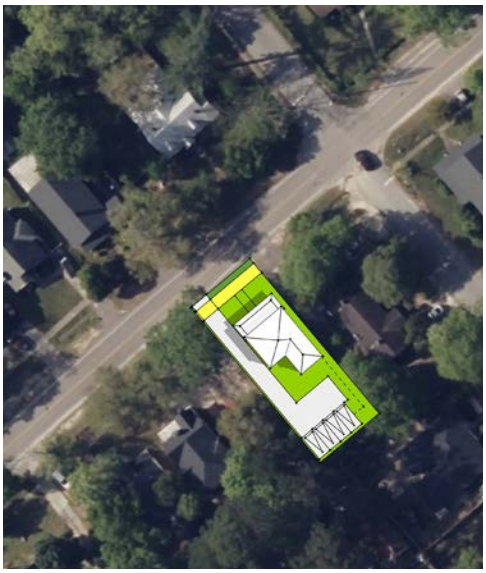
The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none

MMH Duplex		
Building Form		**RM-1 Stds.**
Footprint	30'x41'	n/a
Height	32'	40'
Lot Coverage	17%	50%
Average Unit Size	856 sf	n/a
Parking		
Number of Spaces	4	4
Density		
Resultant Units	2	n/a
Resultant Density	**15 du/ac**	8.7 du/ac

Bold = not complying with existing standards



RM-1 Lot 1, 50' x 120' MMH Triplex

Option 3

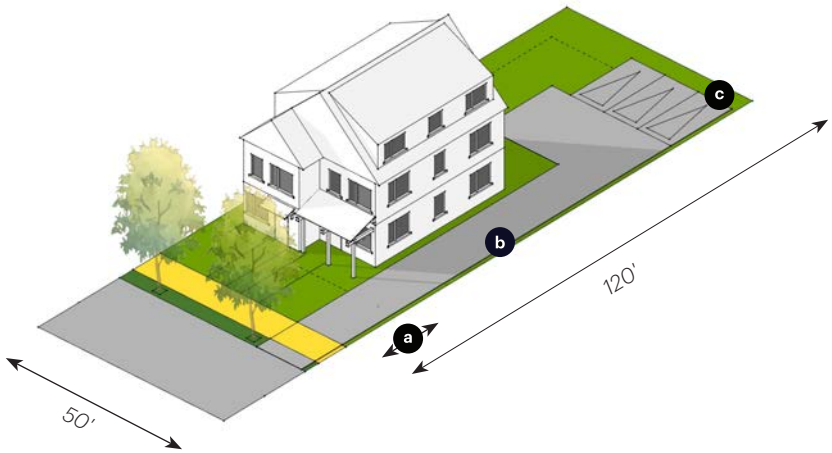
Figure 2.6

Diagram illustrating how the triplex MMH type fits on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

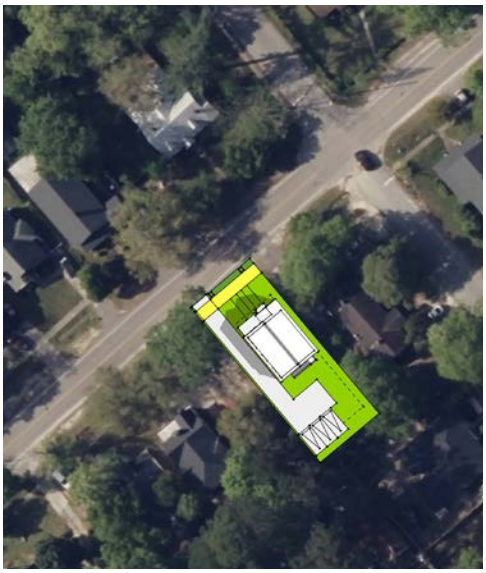
- a Front = none
- b Side = none
- c Rear = none



MMH Triplex		
Building Form		**RM-1 Stds.**
Footprint	30'x44'	n/a
Height	35'/ 2.5 stories	40'
Lot Coverage	19%	50%
Average Unit Size	950 sf	n/a
Parking		
Number of Spaces	**3**	5.25
Density		
Resultant Units	3	n/a
Resultant Density	**22 du/ac**	8.7 du/ac

Bold = not complying with existing standards

Note: the number of parking spaces shown correspond to the recommended ratio of 1 parking space per unit for MMH types



RM-1 Lot 1, 50' x 120' MMH Fourplex

Option 4

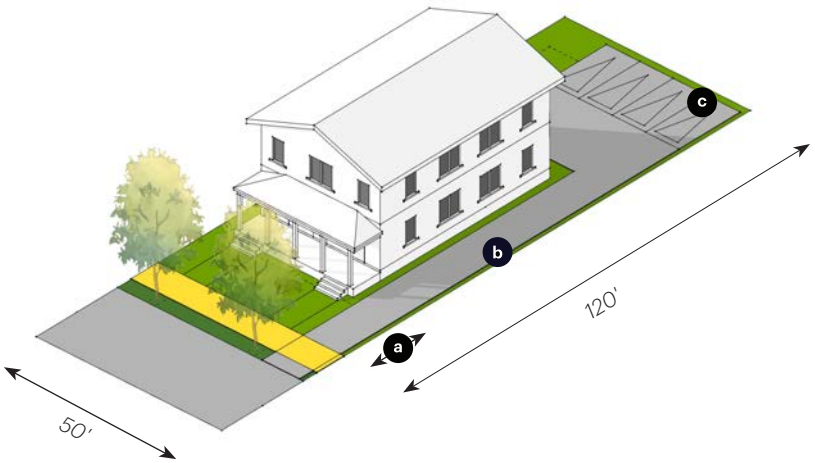


Figure 2.7

Diagram illustrating how the fourplex MMH type fits on the lot providing additional units while presenting the appearance of a house.

Note: This model shows a 10 foot driveway which is not compliant with existing standards.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

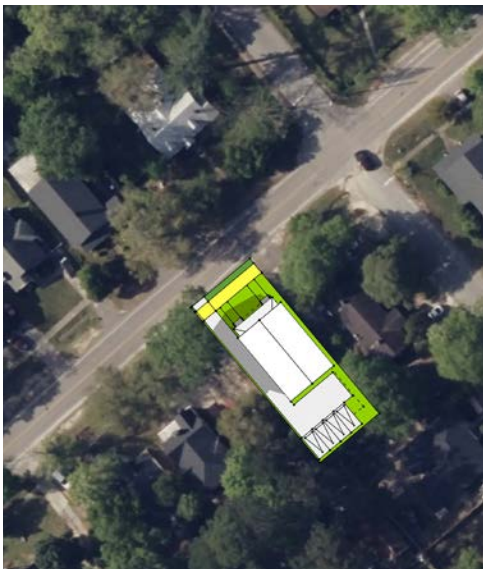
Proposed Setback Changes

- **a** Front = none
- **b** Side = none
- **c** Rear = none

MMH Fourplex		
Building Form		**RM-1 Stds.**
Footprint	32'x50'	n/a
Height	32'	40'
Lot Coverage	27%	50%
Average Unit Size	680 sf	n/a
Parking		
Number of Spaces	**4**	7
Density		
Resultant Units	4	n/a
Resultant Density	**29 du/ac**	8.7 du/ac

Bold = not complying with existing standards

Note: the number of parking spaces shown correspond to the recommended ratio of 1 parking space per unit for MMH types



2.3 RM-1 Lot 2, 55' x 150' Maximum Zoning Envelope

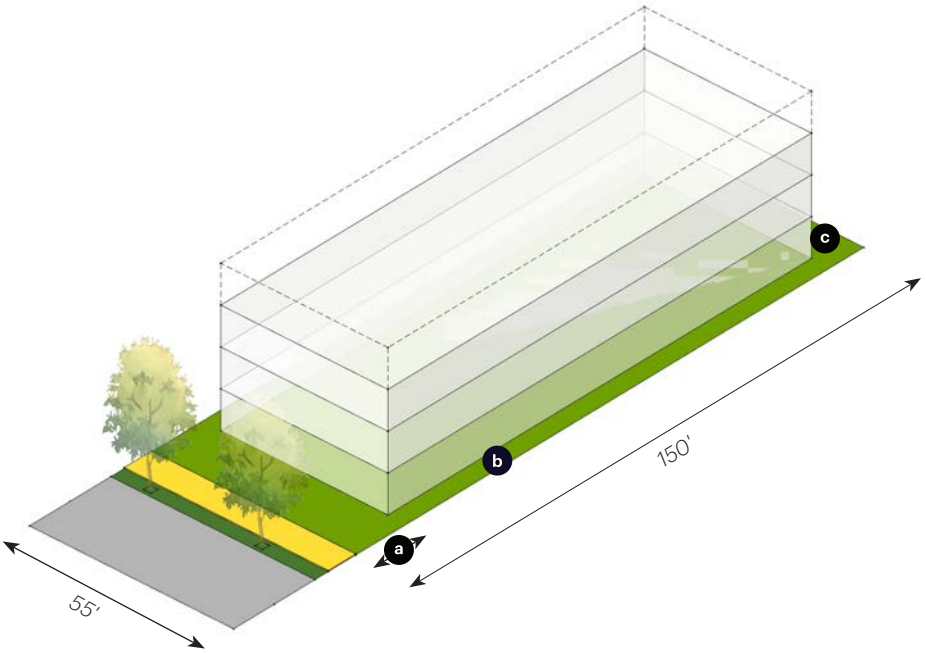
Figure 2.8

Diagram illustrating the maximum zoning envelope allowed by RM-1.

The aerial below shows the zoning envelope on a vacant lot in the RM-1 zone.

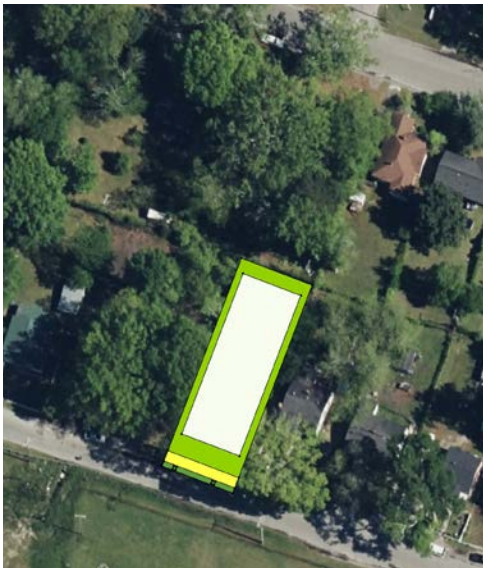
Required Setbacks (min.)

- a Front = 15'
- b Side = 5'
- c Rear = 10'



Maximum Envelope per RM-1 Standards [1]	
Building Form	
Lot Area	8,250 sf
Min. Required Lot Area	5,000 sf
Max. Height	40'
Max. Lot Coverage	50%
Total Floor Area	16,875 sf
Parking	
Min. Parking Spaces	2
Density	
Resultant Units	n/a
Max. Allowed Density	8.7 du/ac

[1] For building types excluding the Townhouse



RM-1 Lot 2, 55' x 150' Maximum Yield + Form

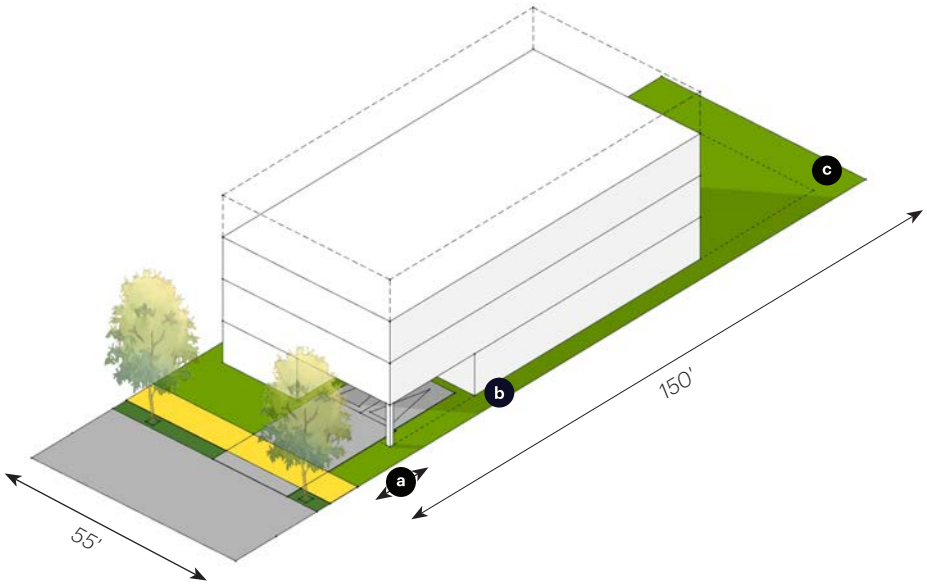


Figure 2.9

Diagram illustrating what type of development and built form is possible after applying all required development standards.

The aerial below shows the building footprint achieved on a vacant lot in the RM-1 zone.

Required Setbacks (min.)

- **a** Front = 15'
- **b** Side = 5'
- **c** Rear = 10'

Maximum Yield and Form per RM-1 Standards[1]		
Building Form		**RM-1 Stds.**
Footprint	45'x92'	n/a
Height	30'	40'
Lot Coverage	47%	50%
Built Up Area	11,739 sf	n/a
Parking		
Number of Spaces	2	2
Density		
Resultant Units	1	n/a
Resultant Density	5 du/ac	8.7 du/ac

[1] For building types excluding the Townhouse

RM-1 Lot 2, 55' x 150' MMH Triplex

Option 1

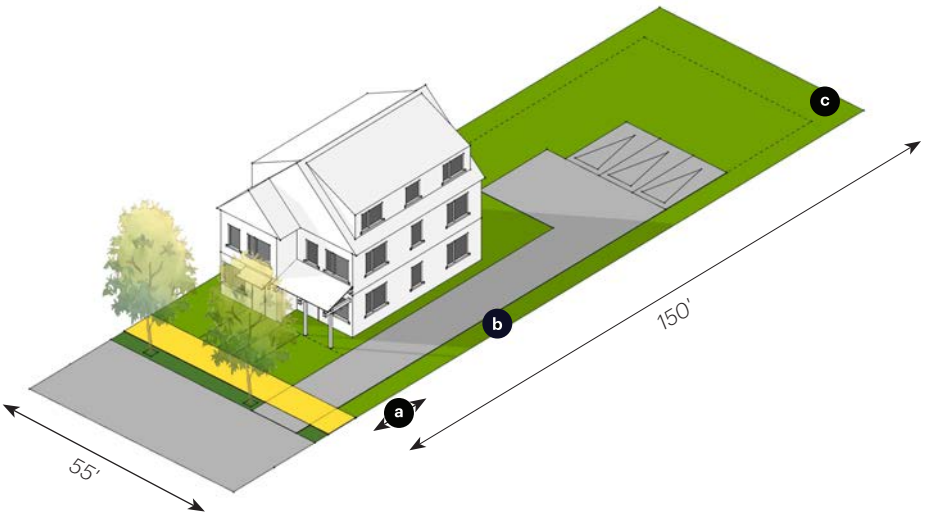
Figure 2.10

Diagram illustrating how the triplex MMH type fits on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

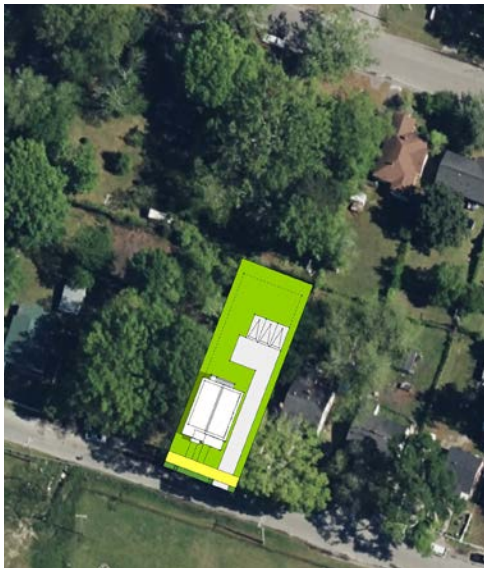
- a Front = none
- b Side = none
- c Rear = none



MMH Triplex		
Resultant Building Form		**RM-1 Stds.**
Footprint	30'x44'	n/a
Height	35'/ 2.5 stories	40'
Lot Coverage	14%	50%
Average Unit Size	950 sf	n/a
Parking		
Number of Spaces	**3**	5.25
Density		
Resultant Units	3	n/a
Resultant Density	**16 du/ac**	8.7 du/ac

Bold = not complying with existing standards

Note: the number of parking spaces shown correspond to the recommended ratio of 1 parking space per unit for MMH types



RM-1 Lot 2, 55' x 150' MMH Fourplex

Option 2

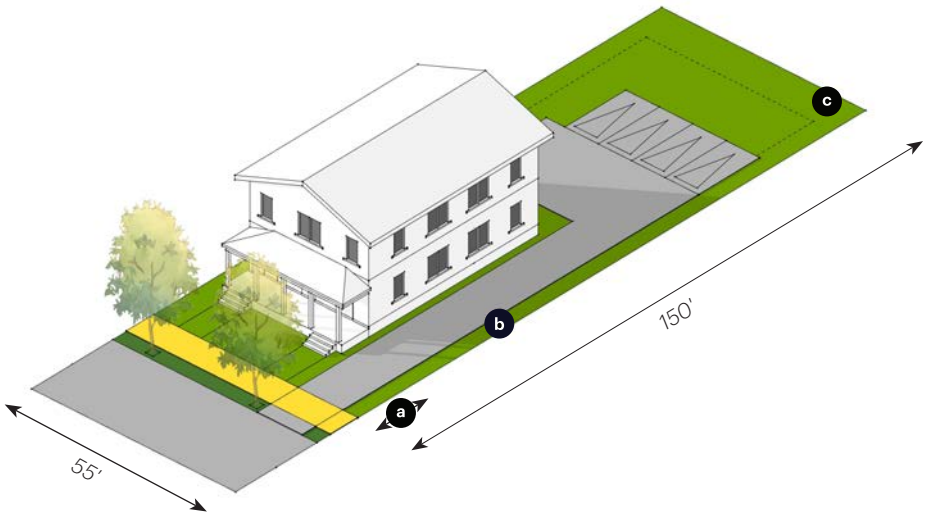


Figure 2.11

Diagram illustrating how the fourplex MMH type fits on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

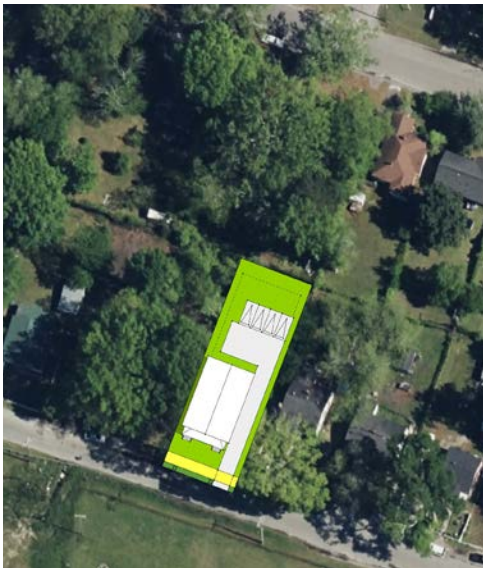
Proposed Setback Changes

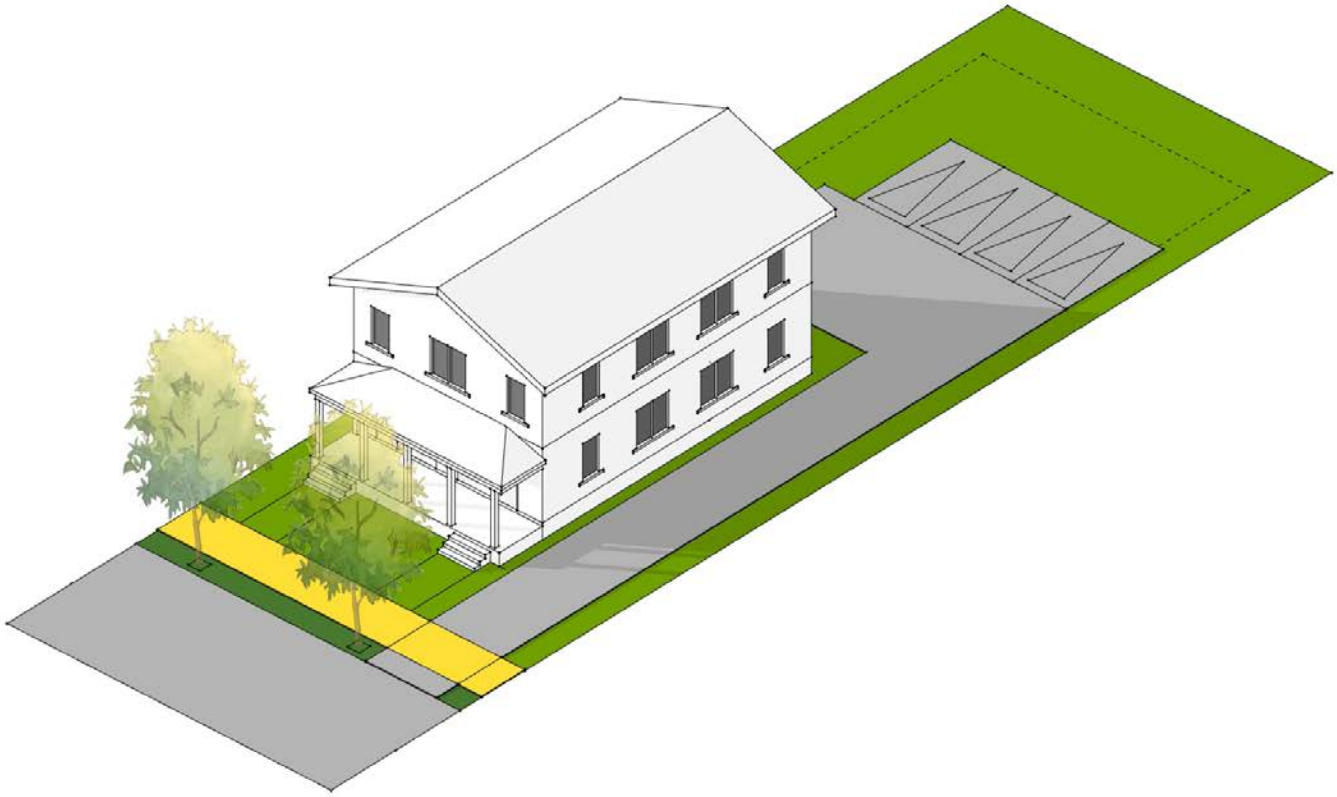
- a Front = none
- b Side = none
- c Rear = none

MMH Fourplex		
Resultant Building Form		**RM-1 Stds.**
Footprint	32'x50	n/a
Height	32'	40'
Lot Coverage	19%	50%
Average Unit Size	680 sf	n/a
Parking		
Number of Spaces	**4**	7
Density		
Resultant Units	4	n/a
Resultant Density	**21 du/ac**	8.7 du/ac

Bold = not complying with existing standards

Note: the number of parking spaces shown correspond to the recommended ratio of 1 parking space per unit for MMH types





Above: Fourplex; Example of Missing Middle Housing on a typical lot.

RM-2 Zone

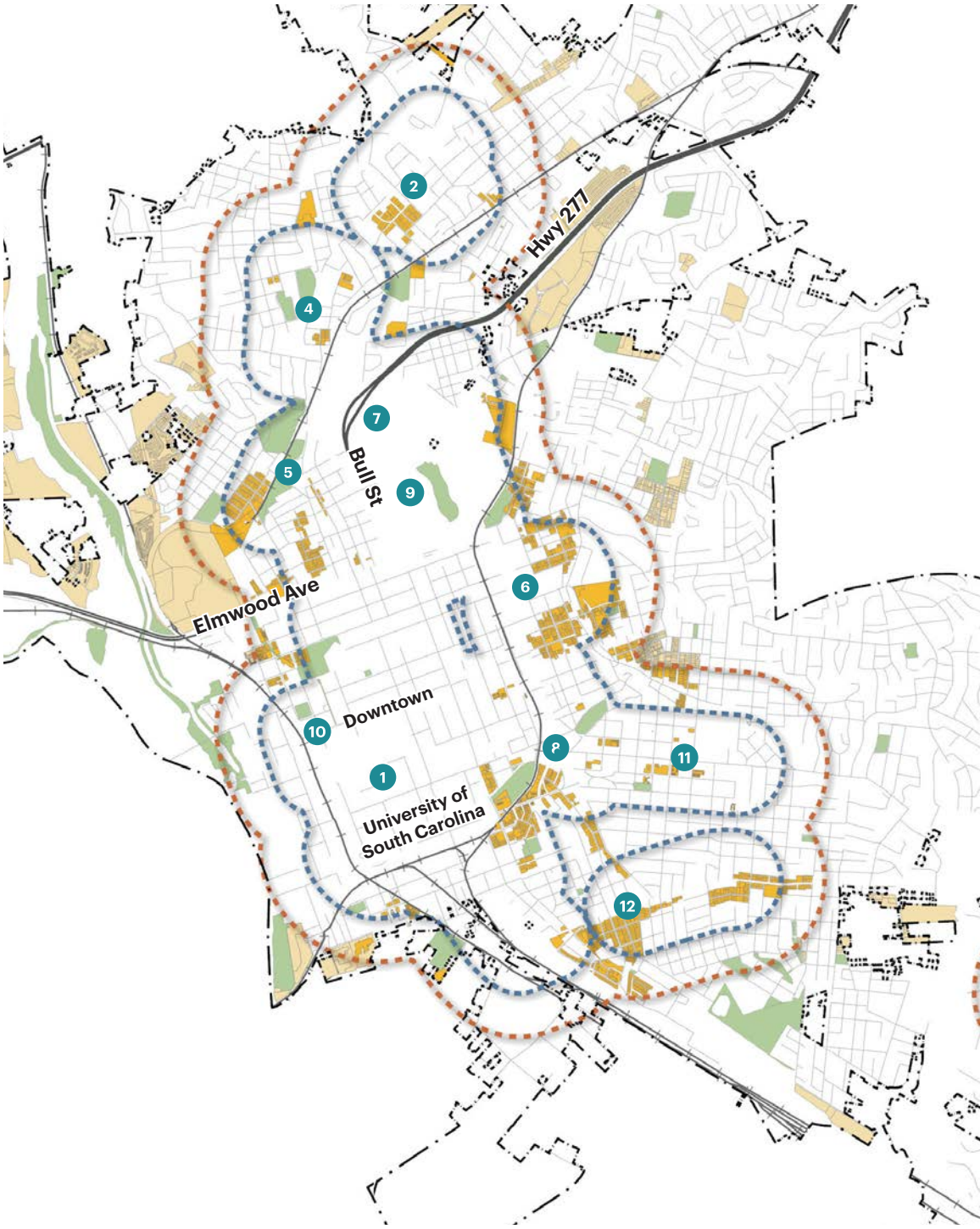
CHAPTER **3**

In this chapter

3.1 RM-2 Zone Overview

Figure 3.1

The map shows the locations of the RM-2 zone relative to the "walkable centers" that were identified in the MMH Scan™. This is to illustrate the potential for achieving Missing Middle Housing, if barriers are removed.



1. University of South Carolina
2. Columbia College
3. VA Hospital/ USC Medical Campus
4. North Main at Monticello
5. North Main at River
6. Allen-Benedict
7. Prisma Health-Richland
8. Five Points
9. Bull Street
10. West Gervais
11. Devine Street
12. Rosewood Dr Street

- City of Columbia
- Walkable Environment: 5 to 10 minute walk from Walkable Center
- Parcels zoned RM-2 within Walkable Environments
- Parcels zoned RM-2 outside Walkable Environments

Zone Intent

The RM-2, Residential Multi-Family District is primarily intended to accommodate moderate density mixed residential development that allows single-family, two-family, townhouse, and medium-scale multi-family dwellings at a density of 17.2 units per ac or less. The street network in this zone is gridded and buildings are located close to, and oriented towards, the street.

Parking Ratios

(Shown to identify different requirements depending on size or type of dwelling unit or other use)

- All development, except as noted below: 2 spaces per unit
- Multi-family dwellings: 1.75 spaces per unit
- Mixed-use buildings: in accordance with approved parking plan.

Lot Testing: Key Findings

- Density requirement is too low to accomodate many MMH types.
- Driveway width and location requirements are barriers on narrow lots.
- Parking requirements are too high.

Note: *Buffer yards, where required, are barriers to MMH because they reduce available lot area for development, particularly on narrow lots.*

3.2 RM-2 Lot 1, 55' x 150' Maximum Zoning Envelope

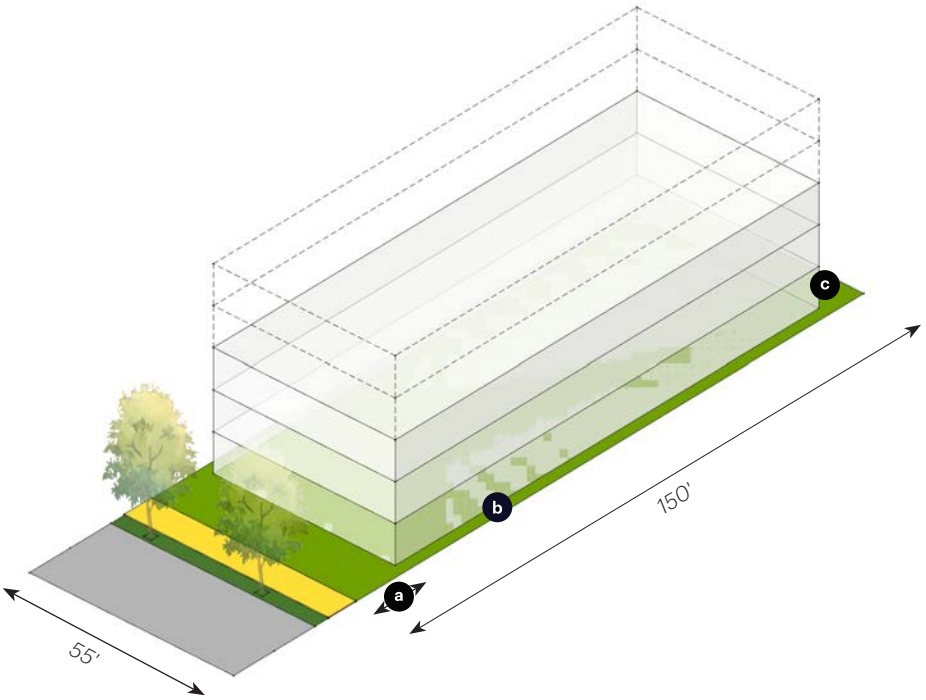
Figure 3.2

Diagram illustrating the maximum zoning envelope allowed by RM-2.

The aerial below shows the zoning envelope on a vacant lot in the RM-2 zone.

Required Setbacks (min.)

- a Front = 15'
- b Side = 5'
- c Rear = 10'



Maximum Envelope per RM-2 Standards		
Building Form	**All Other Uses** 1	**Townhouse** 2
Min. Required Lot Area	3,000 sf	8,000 sf [1]/1,500 sf [2]
Min. Required Lot Width	40'	75' [1]/18' [2]
Max. Lot Coverage	50%	50%
Max. Height	50'	50'
Max. Allowed Density	17.2 du/ac	n/a
Existing Lot Area	8,250 sf	
Setbacks		
Front: Facade	15'	15'
Side	5'	[1]
Rear	10'	10'

[1] Applies to the development lot as a whole rather than individual lots under individual units.

[2] Applies to individual lots under individual units.

[1] A minimum of five feet required between end units and side yard and ten feet between end units and any secondary front yard.

RM-2 Lot 1, 55' x 150' Maximum Yield + Form

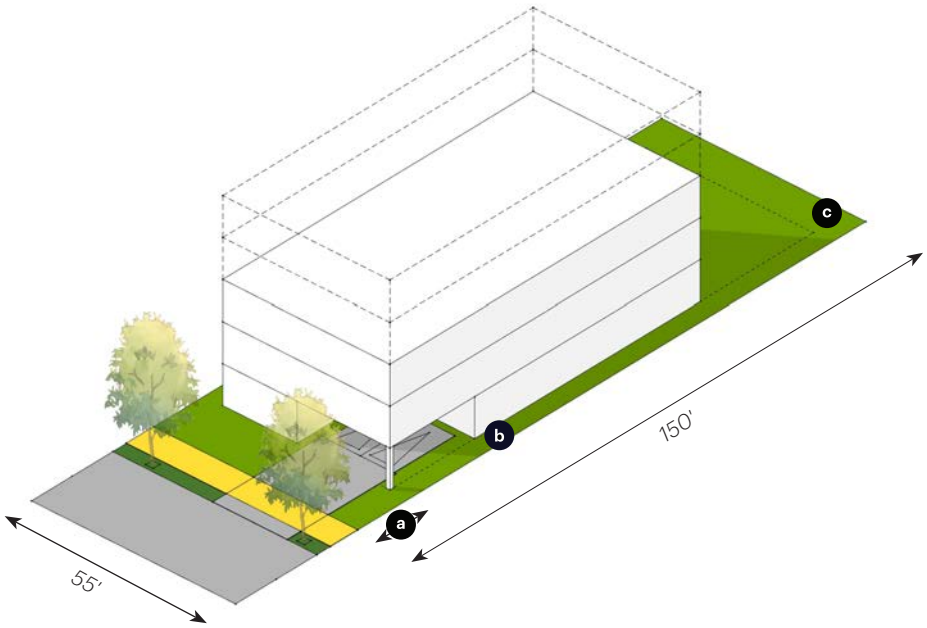


Figure 3.3

Diagram illustrating what type of development and built form is possible after applying all required development standards.

The aerial below shows the building footprint achieved on a vacant lot in the RM-2 zone.

Required Setbacks (min.)

- a Front = 15'
- b Side = 5'
- c Rear = 10'

Maximum Yield and Form per RM-2 Standards[1]		
Resultant Building Form		**RM-2 Stds.**
Footprint	45'x92'	n/a
Height	30'	50'
Lot Coverage	47%	50%
Built Up Area	11,739 sf	n/a
Parking		
Number of Spaces	2	2
Density		
Resultant Units	1	n/a
Resultant Density	5 du/ac	17.2 du/ac

[1] For building types excluding the Townhouse.

RM-2 Lot 1, 55' x 150' MMH Fourplex

Option 1

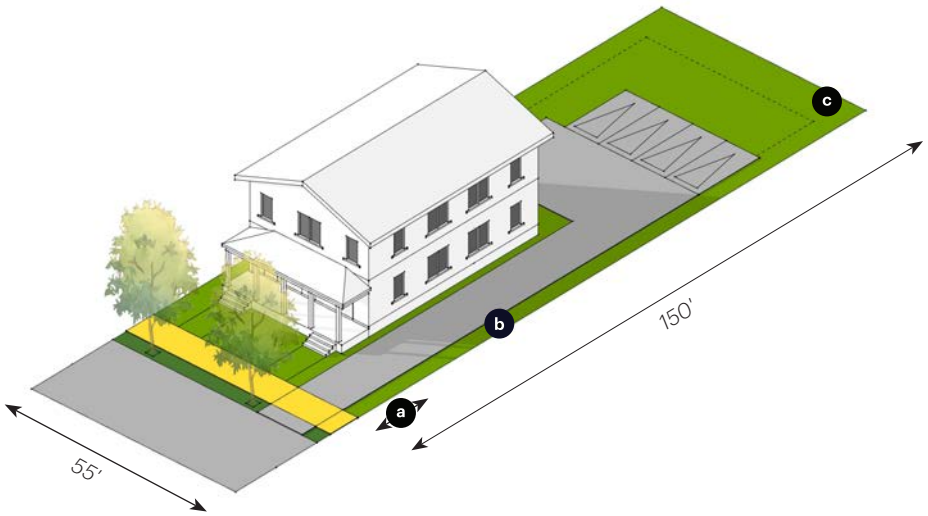
Figure 3.4

Diagram illustrating how the fourplex MMH type fits on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-2 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none



MMH Fourplex		
Resultant Building Form		**RM-2 Stds.**
Footprint	32'x50'	n/a
Height	32'	50'
Lot Coverage	19%	50%
Average Unit Sizes	680 sf	n/a
Parking		
Number of Spaces	**4**	7
Density		
Resultant Units	4	n/a
Resultant Density	**21 du/ac**	17.2 du/ac

Bold = not complying with existing standards

Note: the number of parking spaces shown correspond to the recommended ratio of 1 parking space per unit for MMH types

RM-2 Lot 1, 55' x 150' MMH Multiplex Small

Option 2

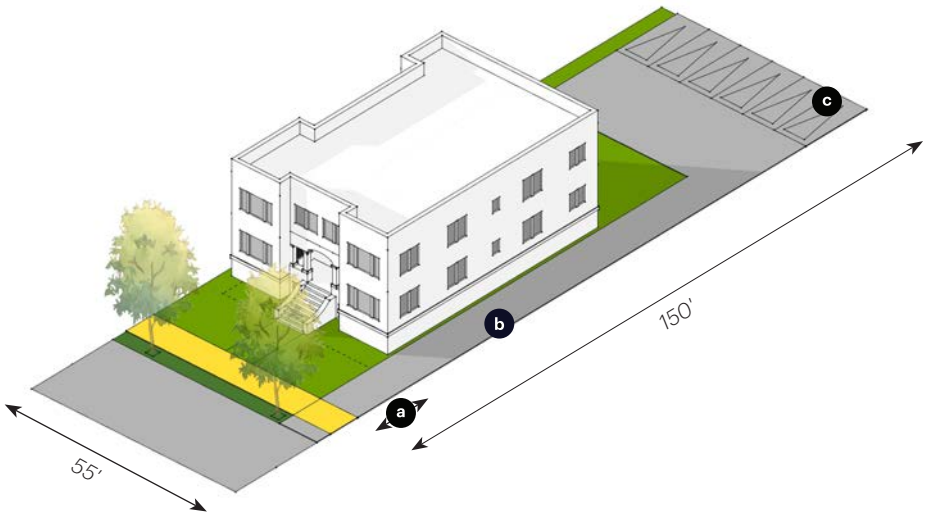


Figure 3.5

Diagram illustrating how the multiplex small MMH type fits on the lot providing additional units while presenting the appearance of a house.

Note: This model shows a 10 foot driveway which is not compliant with existing standards.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot in the RM-2 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none

MMH Multiplex Small		
Resultant Building Form		**RM-2 Stds.**
Footprint	42'x62'	n/a
Height	28'/ 2.5 stories	50'
Lot Coverage	29%	50%
Average Unit Sizes	580 sf	n/a
Parking		
Number of Spaces	**6**	12.25
Density		
Resultant Units	7	n/a
Resultant Density	**37 du/ac**	17.2 du/ac

Bold = not complying with existing standards

Note: the number of parking spaces shown correspond to the recommended ratio of 1 parking space per unit for MMH types

Above: Multiple MMH Types on a typical lot.

MU-1 Zone

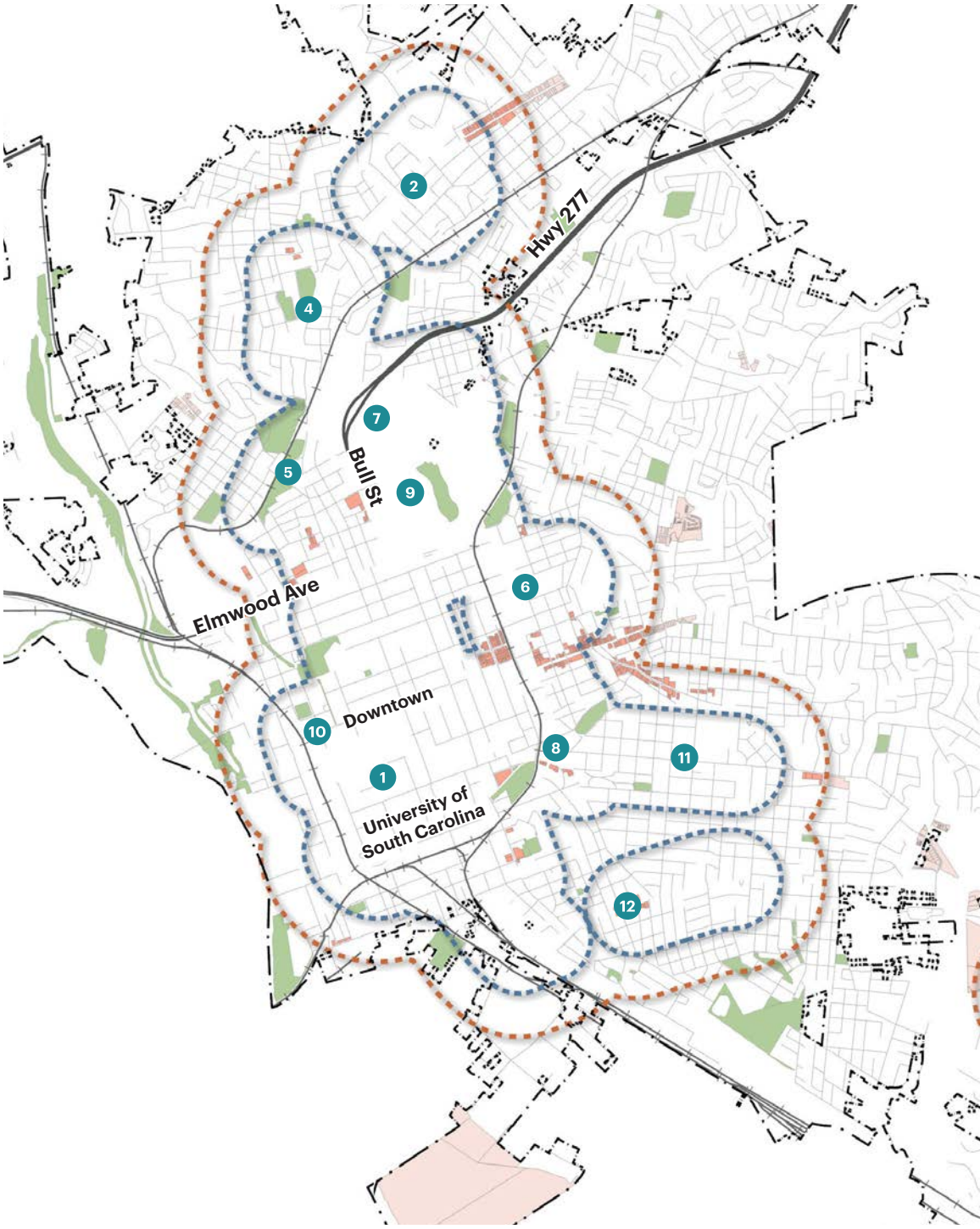
CHAPTER **4**

In this chapter

4.1 MU-1 Zone Overview

Figure 4.1

The map shows the locations of the MU-1 zone relative to the "walkable centers" that were identified in the MMH Scan™. This is to illustrate the potential for achieving Missing Middle Housing, if barriers are removed.



Zone Intent

The MU-1, Mixed-Use District is primarily intended to accommodate low-density, walkable, mixed-use development in a gridded street pattern with varied lot sizes. Its allowed uses include single-family, two-family, townhouse, and multi-family dwellings as well as neighborhood-serving, small-scale, mixed-use retail, office, personal services, and institutional development.

Parking Ratios

- No parking minimums in this zone.

Lot Testing: Key Findings

- The MU-1 development standards accommodate more intense housing than typical MMH types such as duplexes and triplexes. However, larger MMH types, such as multiplexes and courtyard buildings, can integrate well into this environment. If these types are to be introduced, some standards to consider are front parking setback standards and frontage standards to ensure that buildings interface appropriately with the street.

Note: *Buffer yards, where required, are barriers to MMH because they reduce available lot area for development, particularly on narrow lots.*

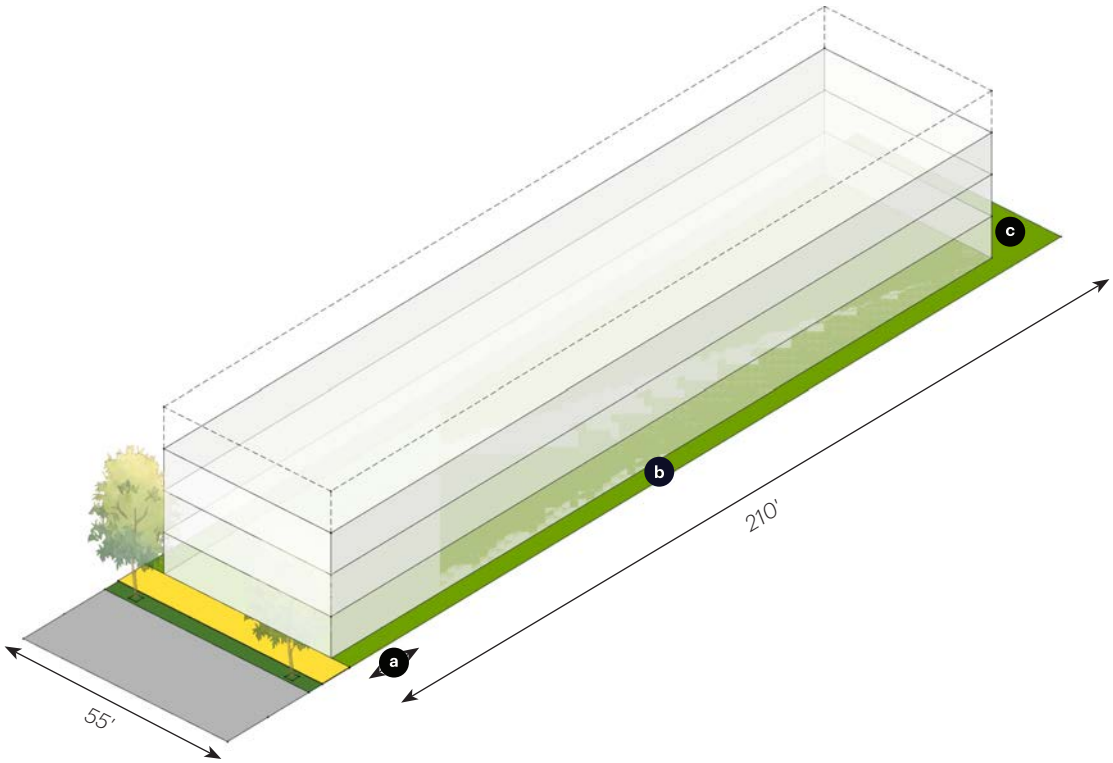
4.2 MU-1 Lot 1, 55' x 210' Maximum Zoning Envelope

Figure 4.2

Diagram illustrating the maximum zoning envelope allowed by MU-1.

Required Setbacks (min.)

- a Front = 0'
- b Side = 5'
- c Rear = 10'



Maximum Envelope per MU-1 Standards				
Building Form	**Single-Family and Two-Family** 1	**Townhouse** 2	**Multi-Family and Mixed-Use** 3	**All Other Uses** 4
Min. Required Lot Area	5,000 sf	8,000 sf[1]/1,500 sf[2]	10,000 sf	5,000 sf
Min. Required Lot Width	50'	75'[1]/18'[2]	75'	50'
Max. Lot Coverage	n/a	50%	n/a	n/a
Max. Density	n/a	n/a	n/a	n/a
Existing Lot Area	11,550 sf			
Setbacks				
Front: Facade	0'	15'	0'	0'
Side	5'	[1]	5'	5'
Rear	10'	10'	10'	10'

[1] Applies to the development lot as a whole.

[2] Applies to individual lots under individual units.

[1] A minimum of five feet required between end units and side yard and ten feet between end units and any secondary front yards

MU-1 Lot 1, 55' x 210' Maximum Yield + Form

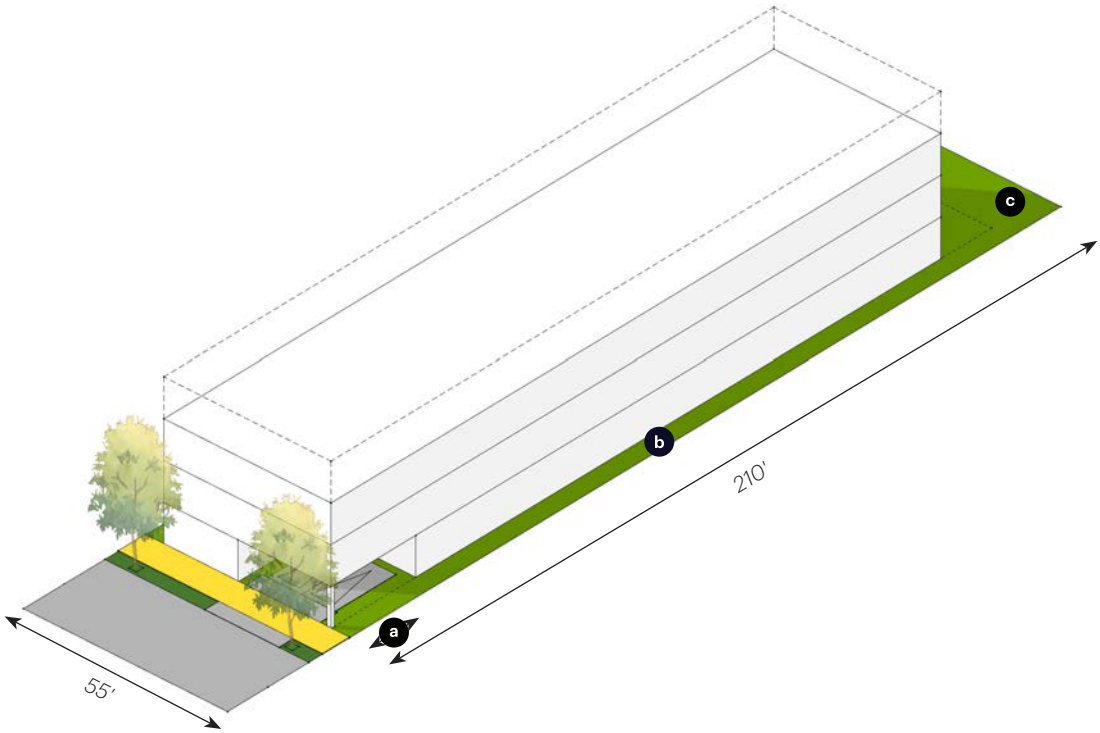


Figure 4.3

Diagram illustrating what type of development and built form is possible after applying all required development standards.

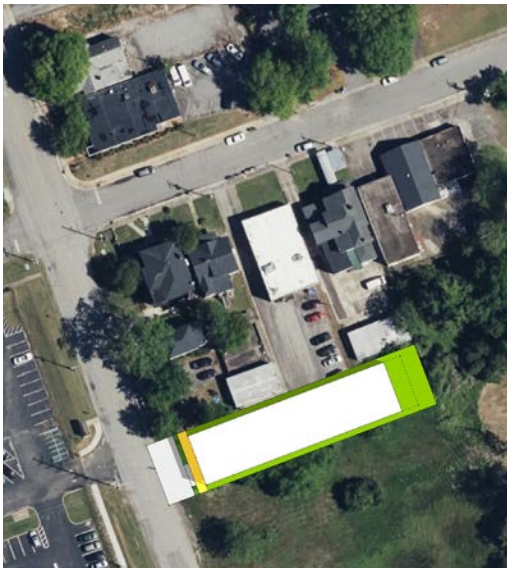
The aerial below shows the building footprint achieved on a vacant lot in the MU-1 zone.

Required Setbacks (min.)

- a Front = 0'
- b Side = 5'
- c Rear = 10'

Maximum Yield and Form per MU-1 Standards [1]		
Resultant Building Form		**MU-1 Stds.**
Footprint	45'x180'	n/a
Height	30'	40'
Lot Coverage	68%	n/a
Built Up Area	23,675 sf	n/a
Parking		
Number of Spaces	2	n/a
Density		
Resultant Units	1	n/a
Resultant Density	4 du/ac	n/a

[1] These standards are for Multi-family building types.



MU-1 Lot 1, 55' x 210' MMH Triplex + ADU

Option 1

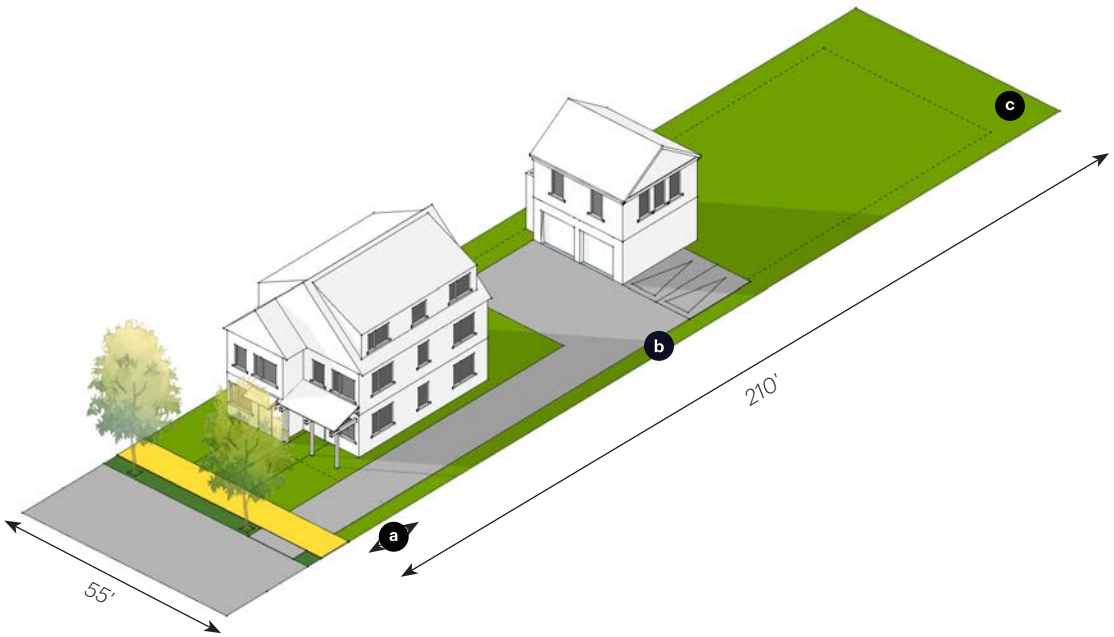
Figure 4.4

Diagram illustrating how the triplex MMH type and an ADU fit on the lot providing additional units while presenting the appearance of a house.

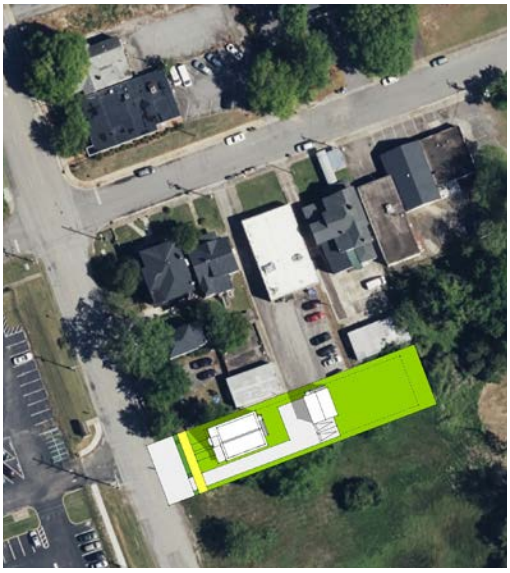
The aerial below shows a hypothetical buildout of this MMH type on a vacant lot: in the MU-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none



MMH Triplex + ADU		
Resultant Building Form		**MU-1 Stds.**
Footprint	30'x44', 22'x24' (ADU)	n/a
Height	35'/ 2.5 stories	40'
Lot Coverage	15%	n/a
Average Unit Size	950 sf 528 sf (ADU)	n/a
Parking		
Number of Spaces	4	n/a
Density		
Resultant Units	4	n/a
Resultant Density	15 du/ac	n/a



MU-1 Lot 1, 55' x 210' MMH Fourplex + ADU

Option 2

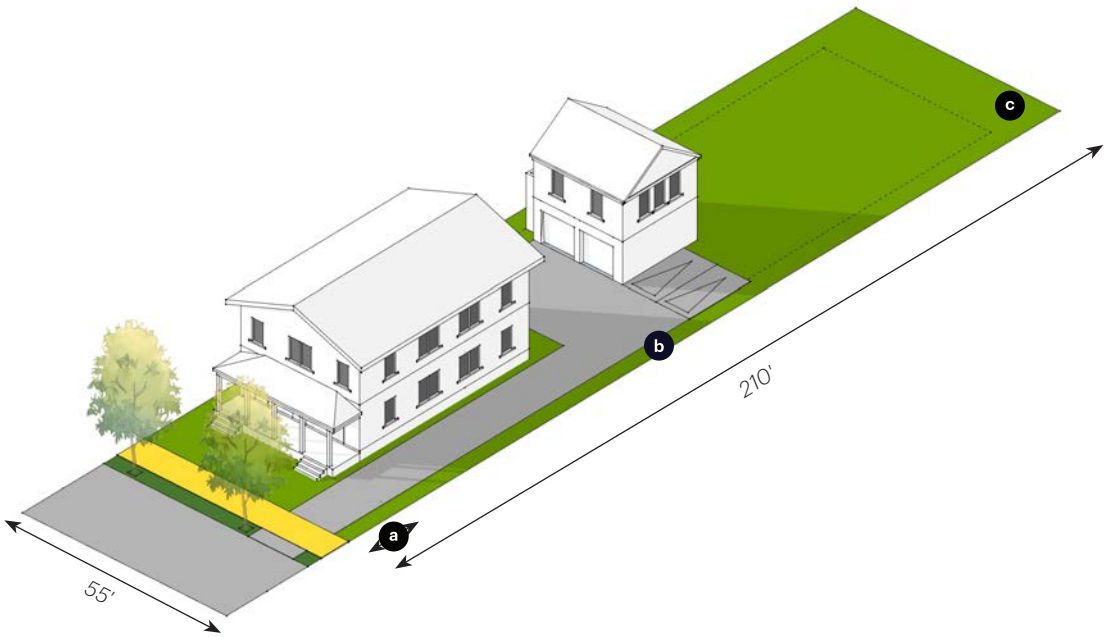


Figure 4.5

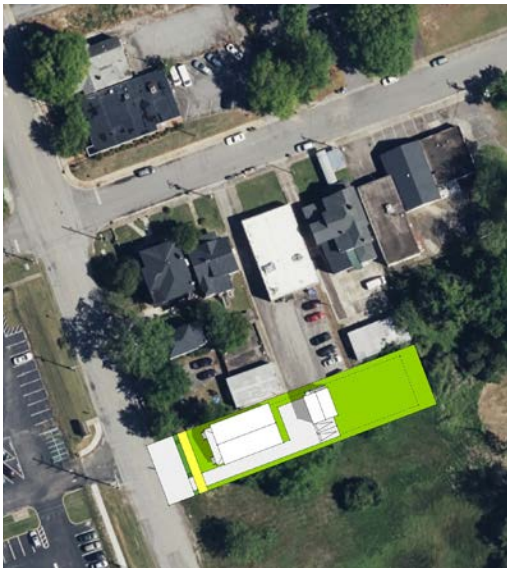
Diagram illustrating how the fourplex MMH type and an ADU fit on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot: in the MU-1 zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none

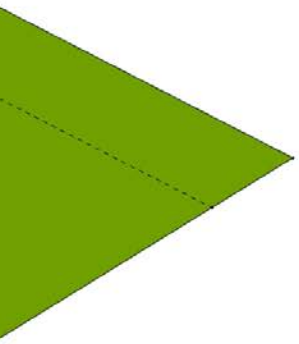
MMH Fourplex + ADU		
Resultant Building Form		**MU-1 Stds.**
Footprint	32'x50', 22'x24' (ADU)	n/a
Height	32'	40'
Lot Coverage	18%	n/a
Average Unit Size	680 sf 528 sf (ADU)	n/a
Parking		
Number of Spaces	4	n/a
Density		
Resultant Units	5	n/a
Resultant Density	19 du/ac	n/a



Above: Triplex + ADU; Example of Missing Middle Housing on a typical lot.

NAC Zone

CHAPTER **5**

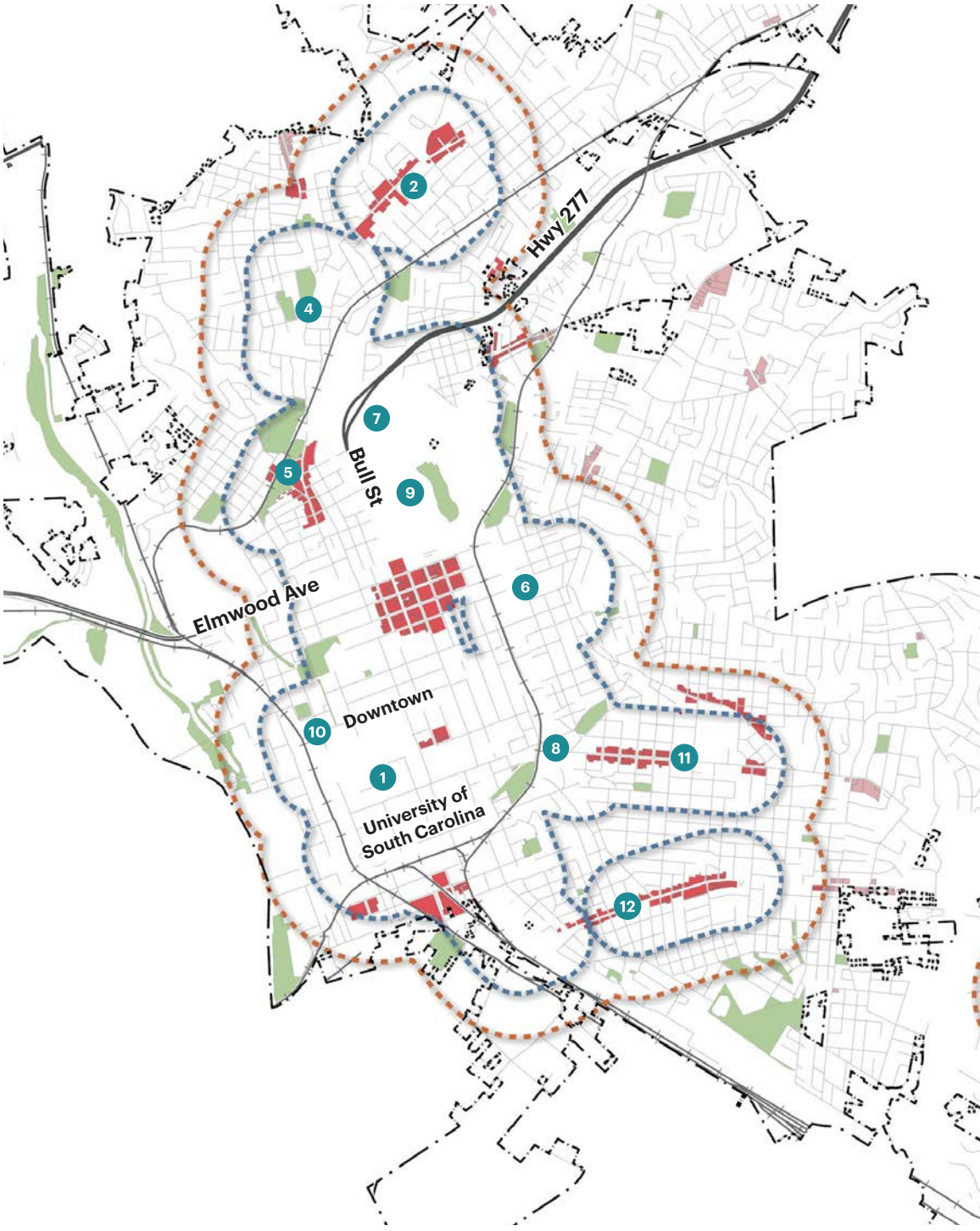


In this chapter

5.1 NAC Zone Overview

Figure 5.1

The map shows the locations of the NAC zone relative to the "walkable centers" that were identified in the MMH Scan™. This is to illustrate the potential for achieving Missing Middle Housing, if barriers are removed.



1. University of South Carolina
2. Columbia College
3. VA Hospital/ USC Medical Campus
4. North Main at Monticello
5. North Main at River
6. Allen-Benedict
7. Prisma Health-Richland
8. Five Points
9. Bull Street
10. West Gervais
11. Devine Street
12. Rosewood Dr Street

- City of Columbia
- Walkable Environment: 5 to 10 minute walk from Walkable Center
- Parcels zoned NAC within Walkable Environments
- Parcels zoned NAC outside Walkable Environments

Zone Intent

The NAC, Neighborhood Activity Center/ Corridor District is primarily intended to accommodate moderate-density, walkable, neighborhood-scale mixed-use development with neighborhood serving commercial development within Columbia's urban neighborhoods. The allowed uses in this district include live/ work, multi-family dwellings, mixed-use, offices, personal service uses, and community services uses.

Parking Ratios

- No parking minimums in this zone.

Lot Testing: Key Findings

- The NAC development standards accommodate more intense housing than typical MMH types such as duplexes and triplexes. However, larger MMH types, such as multiplexes and courtyard buildings, can integrate well into this environment. If these types are to be introduced, some standards to consider are front parking setback standards and frontage standards to ensure that buildings interface appropriately with the street.

Note: *Buffer yards, where required, are barriers to MMH because they reduce available lot area for development, particularly on narrow lots.*

5.2 NAC Lot 1, 50' x 210' Maximum Zoning Envelope

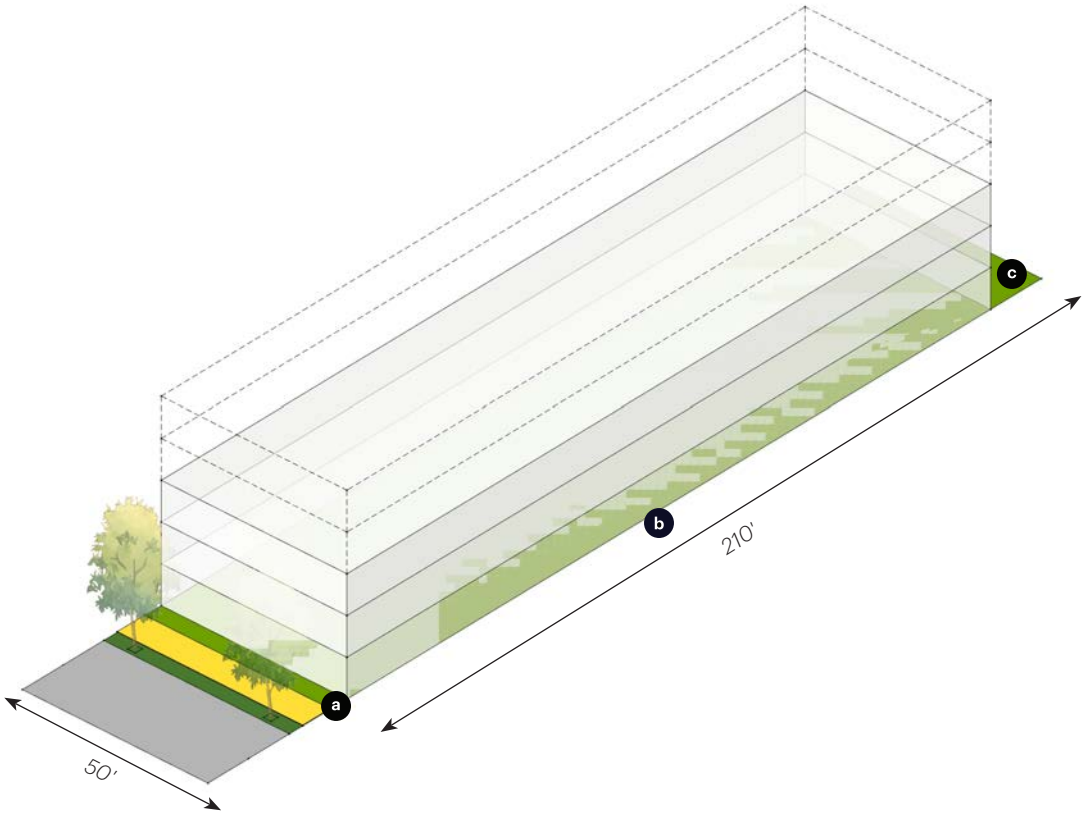
Figure 5.2

Diagram illustrating the maximum zoning envelope allowed by NAC.

The aerial below shows the zoning envelope on a vacant lot in the NAC zone.

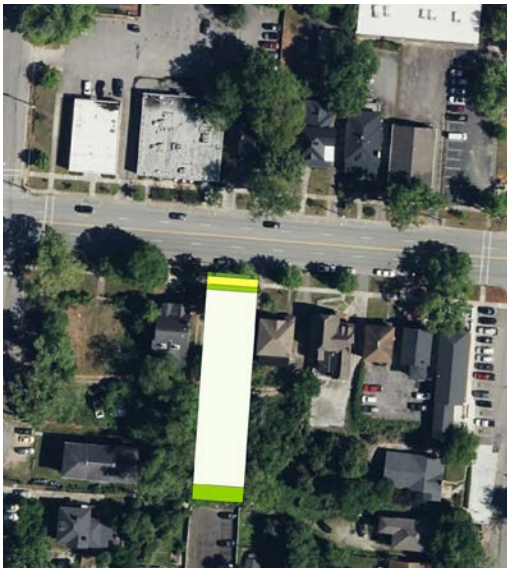
Required Setbacks (min.)

- a Front = 5'
- b Side = n/a'
- c Rear = 15'



Maximum Envelope per NAC Standards [1]	
Building Form	
Existing Lot Area	10,500 sf
Min. Required Lot Area	10,000 sf
Min. Required Lot Width	75'
Max. Height	50'
Max. Lot Coverage	n/a
Built Up Area	28,500 sf
Parking	
Min. Parking Spaces	n/a
Density	
Resultant Units	n/a
Max. Allowed Density	n/a

[1] These standards are for Multi-family and Mixed-use building types.



NAC Lot 1, 50' x 210' Maximum Yield + Form

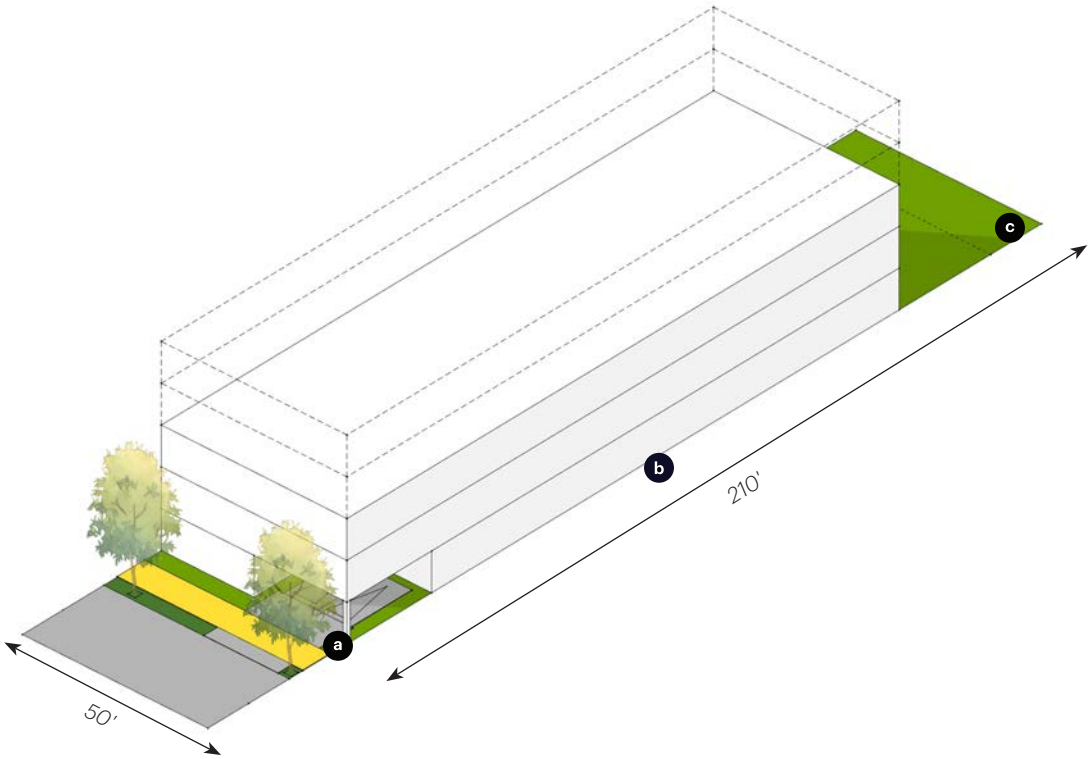


Figure 5.3

Diagram illustrating what type of development and built form is possible after applying all required development standards.

The aerial below shows the building footprint achieved on a vacant lot in the NAC zone.

Required Setbacks (min.)

- a Front = 5'
- b Side = n/a'
- c Rear = 15'

Maximum Yield and Form per NAC Standards [1]		
Resultant Building Form		**NAC Stds.**
Footprint	50'x163'	n/a
Height	30'	50'
Lot Coverage	78%	n/a
Built Up Area	24,450 sf	n/a
Parking		
Number of Spaces	2	n/a
Density		
Resultant Units	1	n/a
Resultant Density	4 du/ac	n/a

[1] These standards are for Multi-family and Mixed-use building types.

NAC Lot 1, 50' x 210' MMH Triplex + ADU

Option 1

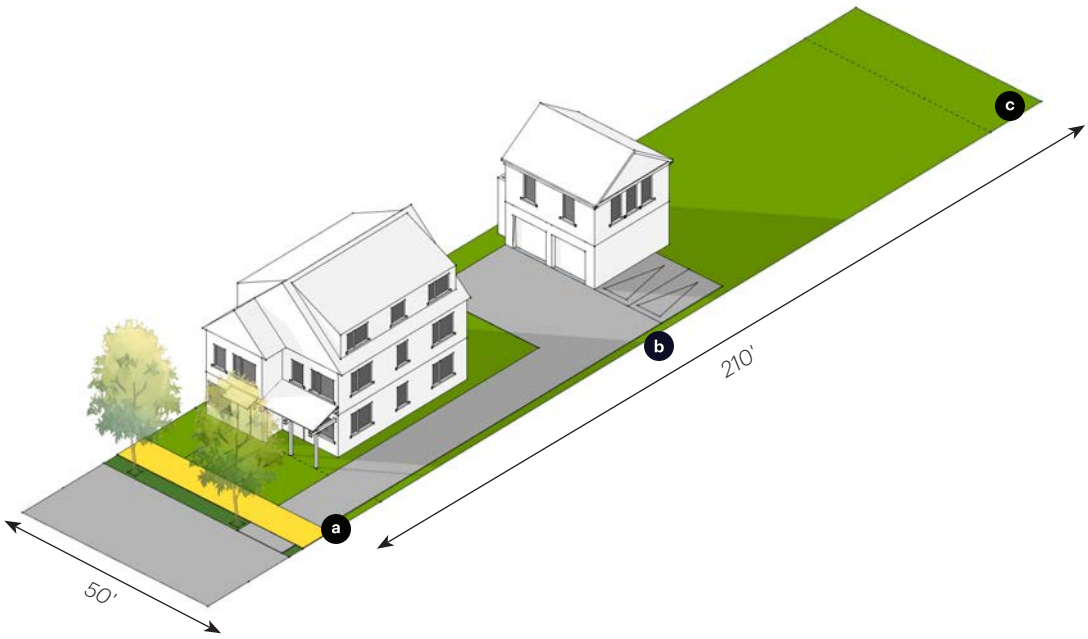
Figure 5.4

Diagram illustrating how the triplex MMH type and ADU fit on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot: in the NAC zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none



MMH Triplex + ADU		
Resultant Building Form		**NAC Stds.**
Footprint	30'x44', 22'x24' (ADU)	n/a
Height	35'/ 2.5 stories	50'
Lot Coverage	16%	n/a
Average Unit Size	950 sf, 528 sf (ADU)	n/a
Parking		
Number of Spaces	4	n/a
Density		
Resultant Units	4	n/a
Resultant Density	16 du/ac	n/a

NAC Lot 1, 50' x 210' MMH Fourplex + ADU

Option 2

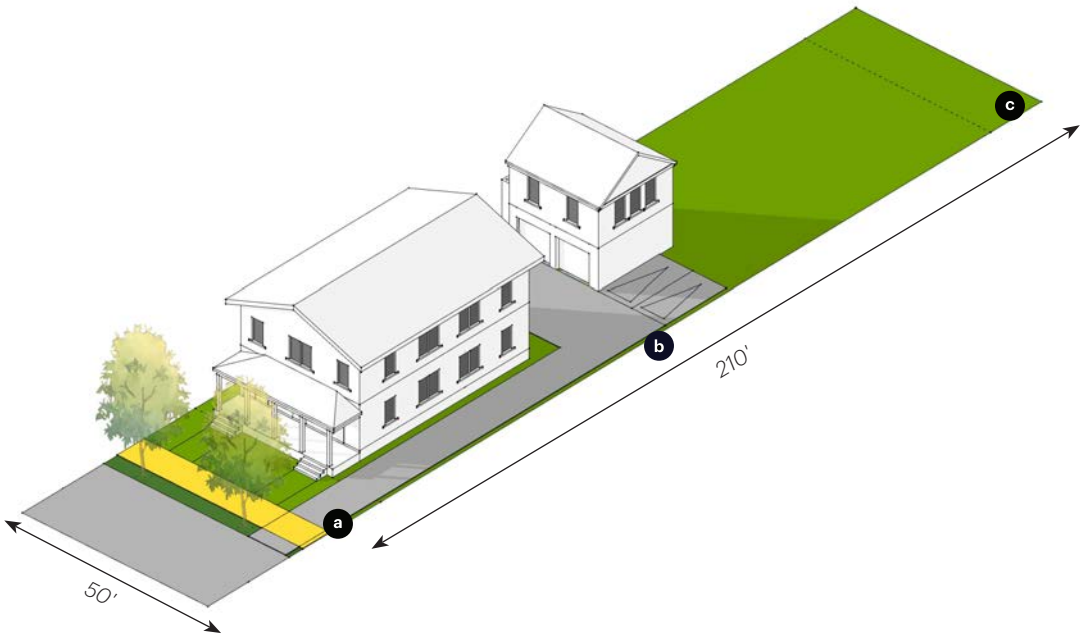


Figure 5.5

Diagram illustrating how the fourplex MMH type and ADU fit on the lot providing additional units while presenting the appearance of a house.

The aerial below shows a hypothetical buildout of this MMH type on a vacant lot: in the NAC zone to illustrate its compatibility in scale and form with existing buildings in the neighborhood.

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none

MMH Fourplex + ADU		
Resultant Building Form		**NAC Stds.**
Footprint	32'x50', 22'x24' (ADU)	n/a
Height	32'	50'
Lot Coverage	20%	n/a
Average Unit Size	680 sf, 528 sf (ADU)	n/a
Parking		
Number of Spaces	4	n/a
Density		
Resultant Units	5	n/a
Resultant Density	20 du/ac	n/a

Above: Triplex + ADUs + Multiplex Small; Example of multiple Missing Middle Housing types on a deep lot.

CHAPTER

6

Alternative Strategies

In this chapter

6.1 Larger MMH in Columbia

Figure 6.1

Larger MMH aligns most closely with the "Multi-Family Medium" building type in the Comprehensive Plan, although these types often incorporate more than 12 units—sometimes as many as 18-20 units or more.

Larger MMH in Columbia

"Larger" Missing Middle Housing refers to multi-unit buildings that are taller and deeper than typical houses, but with a footprint that allows them to fit on the size of lots found in single-unit neighborhoods. These building types are typically three to four stories tall and can be over 80 feet deep, often extending to the rear setback.

In certain areas, these types may be the optimal means of meeting the demand for new housing. Such areas could include:

- Major corridors where neither ground-floor commercial nor smaller-scale residential types are viable;
- Transitional areas between residential neighborhoods and commercial corridors or amenity-rich centers;
- Existing low-rise neighborhoods where policy and zoning envision a significant degree of change or transformation;
- Neighborhoods where high land values make smaller types financially infeasible to build.

In Columbia, many of the areas zoned MU-1 or NAC fall into these categories and therefore may be appropriate locations for enabling Larger MMH. Such a development pattern is supported by the maximum height standards and permissive setbacks in these zones.

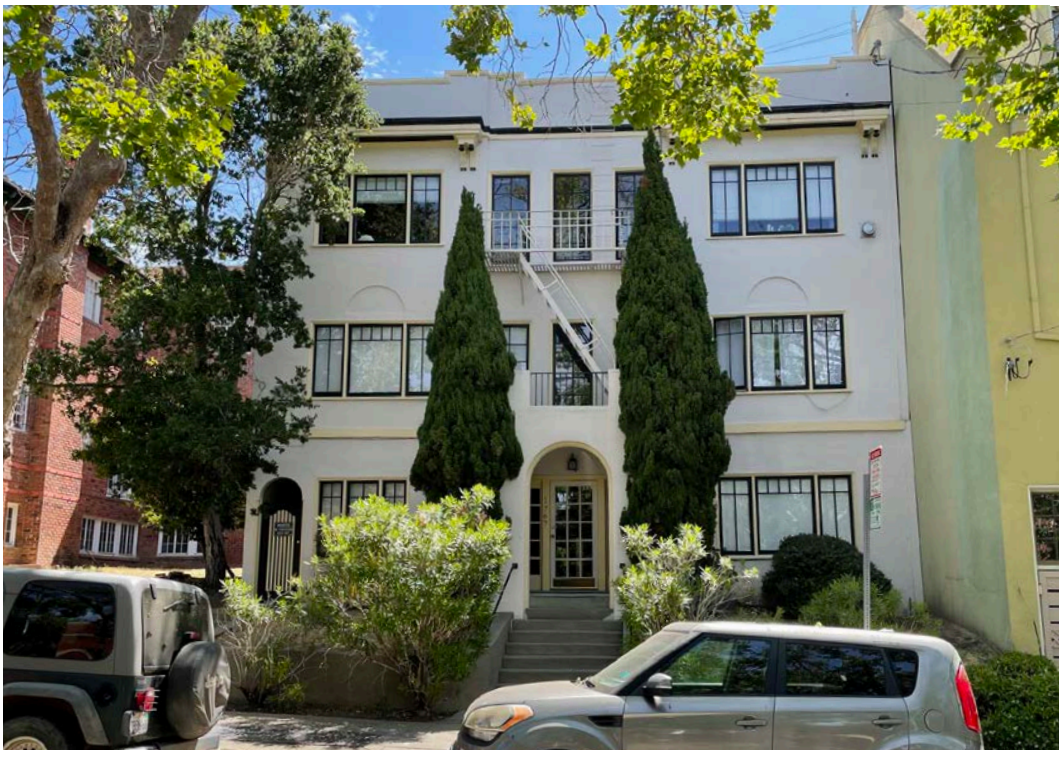


Figure 6.2

An example of Larger MMH in Berkeley, CA.

NAC Lot 1, 50' x 210' MMH Multiplex Large

Option 4

Proposed Setback Changes

- a Front = none
- b Side = none
- c Rear = none

Left: The diagram illustrates how the multiplex large type fits on the lot while presenting the appearance of a house.

MMH Multiplex Large		
Resultant Building Form		**NAC Stds.**
Footprint	42'x73'	**n/a**
Height	34'/ 3 stories	**50'**
Lot Coverage	29%	**n/a**
Average Unit Size	781 sf	**n/a**
Parking		
Number of Spaces	0	**n/a**
Density		
Resultant Units	10	**n/a**
Resultant Density	42 du/ac	**n/a**

6.2 Maximizing the Potential of Deep Lots

How to maximize development on deep lots in house-scale contexts?

In this MU-1 and NAC zones, one of the most common lot configurations is narrow and very deep. The depth of these lots, combined with the fact that alleys are not prevalent in Columbia, makes them more difficult to develop. To place a single building on these lots would not realize their full development potential because the rear of the lot would not be used for housing—but on the other hand, a single building extending from the front of the lot to the rear may be too large to be appropriate in a context characterized by house-scale buildings. The example below illustrates how much of the lot remains undeveloped when placing a single house-scale structure on this lot configuration.

One way to maximize the potential for these deep lots while ensuring that these buildings are sensitive to the existing context is to include a driveway providing parking access to multiple house-scale buildings. This idea is illustrated on the facing page which provides two examples. Both of these examples double the achieved density on the lot. In order to create or maintain a walkable, pedestrian-oriented environment, the following best practices should be considered when adding multiple MMH types to the same lot:

- Buildings should be oriented to the street. This allows new development to add to the existing streetscape.
- Parking should be located in the middle or rear of the lot to screen it from view.
- When siting buildings on a lot, it is important to consider the privacy of residents. Placing building too close together can cause privacy concerns between neighbors.

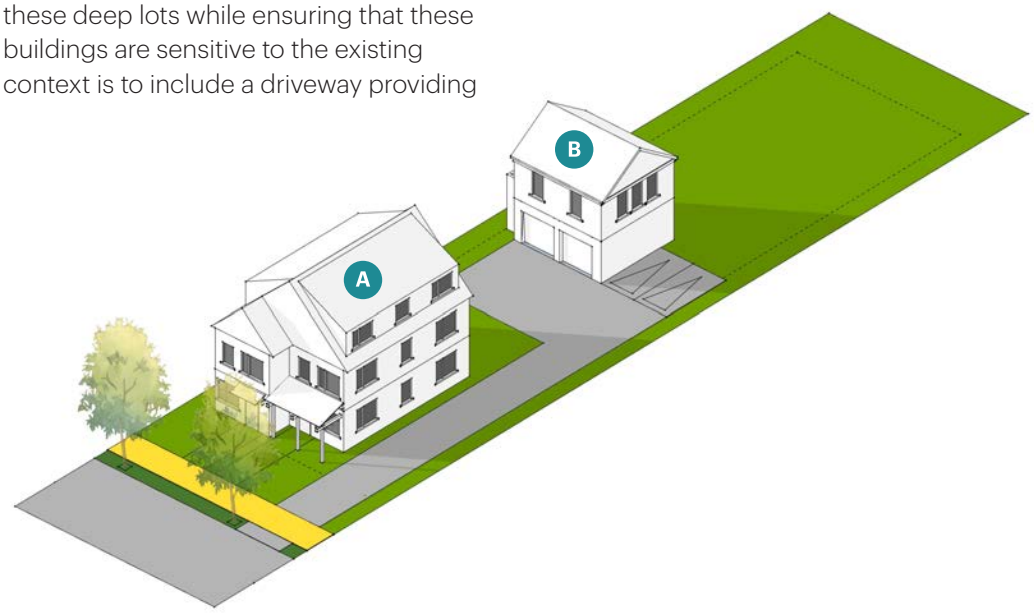


Figure 6.3

This example shows a triplex and carriage house ADU but leaves the rear of the lot undeveloped. This option shows a total of 4 units and achieves a density of 15 du/ac

Building Types

A *Triplex*

B *Carriage House*

Possible Solutions: MU-1 Lots

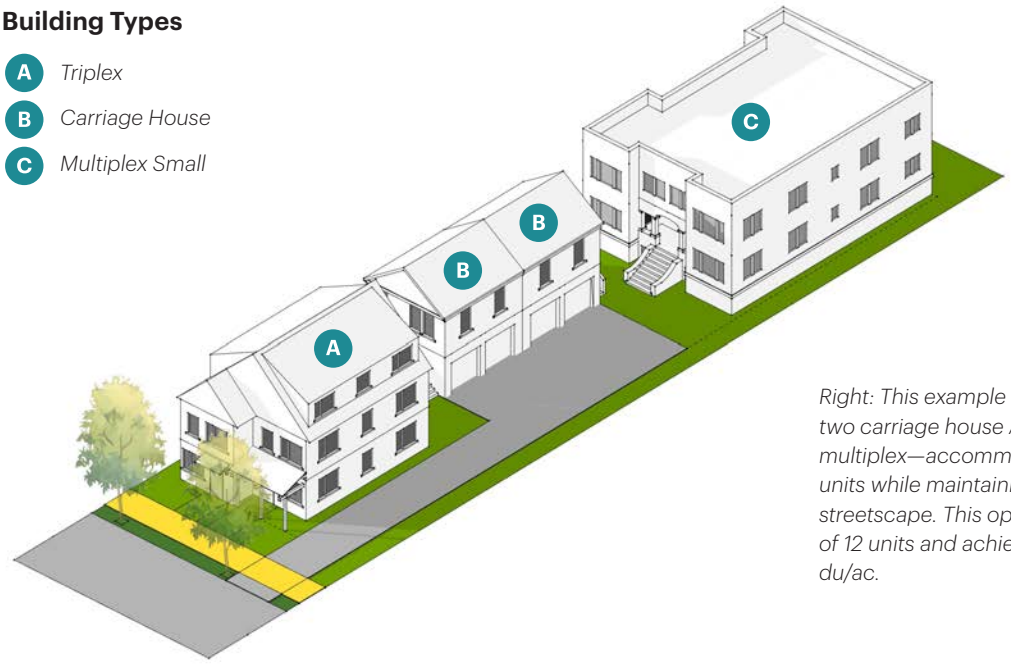
Building Types

- A *Triplex*
- B *Carriage House*
- C *Fourplex*

Left: This example shows a triplex, two carriage house ADUs, and a fourplex. Shared open space contributes to the livability of this configuration. This option shows a total of 9 units and achieves a density of 33 du/ac.

Building Types

- A *Triplex*
- B *Carriage House*
- C *Multiplex Small*



Right: This example shows a triplex, two carriage house ADUs, and a small multiplex—accommodating even more units while maintaining the house-scale streetscape. This option shows a total of 12 units and achieves a density of 45 du/ac.

Maximizing the Potential of Deep Lots, Cont'd

How to maximize development on deep lots in more intense contexts?

For the MU-1 zone, the deep lot problem can be addressed by proposing multiple small buildings on a lot, because the size and scale of the proposed structures are similar to structures in the existing neighborhood. A different solution is needed in the NAC district because the desired built outcome has higher development intensity than in the MU-1 district. Some of these parcels are located along corridors which contain large, block-scale buildings.

The examples on the facing page illustrate an approach for the NAC zone in which the deep lot problem is resolved through more intense building types—still with an eye toward privacy, livability, and the character of the existing context.

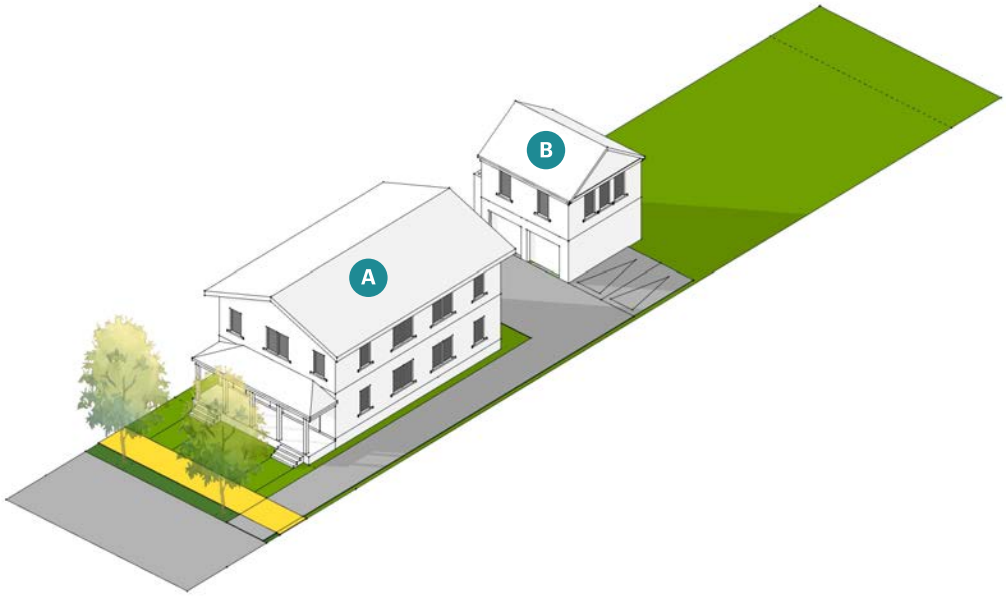


Figure 6.4

This example shows a fourplex and carriage house ADU but leaves the rear of the lot undeveloped. This option shows a total of 5 units and achieves a density of 20 du/ac

Building Types

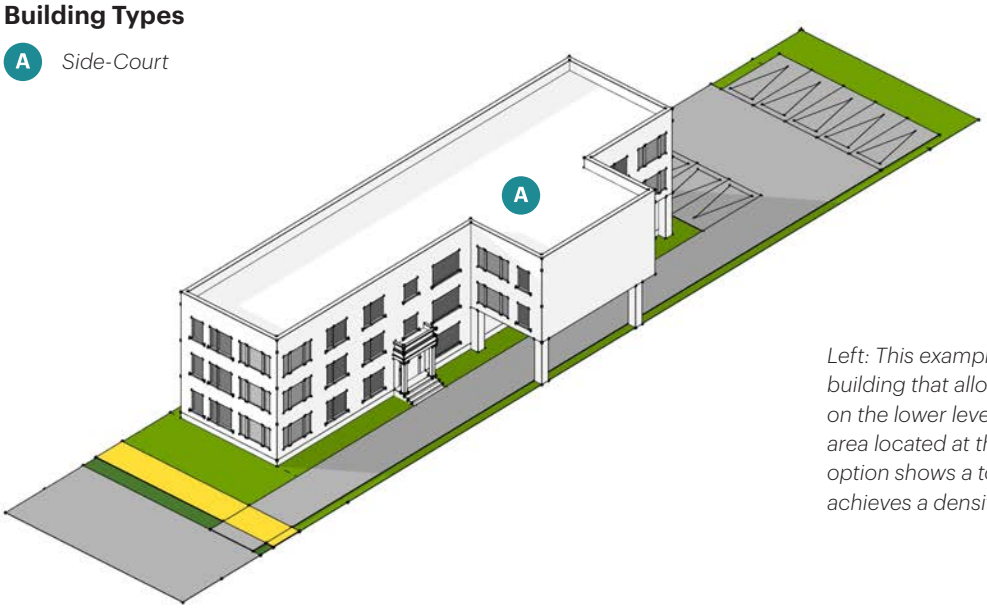
A *Fourplex*

B *Carriage House*

Possible Solutions: NAC Lots

Building Types

A *Side-Court*



Left: This example shows a side-court building that allow cars to pass through on the lower level to access a parking area located at the rear of the lot. This option shows a total of 11 units and achieves a density of 45 du/ac.

Building Types

A *Townhouse*

B *Multiplex Small*

Right: This example shows three townhouses and a multiplex small. This configuration allows the townhouses to activate the street, the internal courtyard, and the pedestrian path. This option shows a total of 10 units and achieves a density of 41 du/ac.

6.3 Lot Consolidation

Lot Consolidation

Lot consolidation, which involves merging two adjacent lots into one lot, can also be a solution to the deep lot problem. The depth of the lot is not necessarily a barrier, as long as space for a driveway and building can be found within the width provided; the issue is that a narrow and deep lot configuration makes this task more difficult. Lot consolidation eliminates the width as a barrier to development, increasing the lot's development potential and making it more likely to develop in the future.

Lot consolidation has many benefits from a builder's standpoint, helping to maximize the development potential of deep lots in the following ways:

- A single driveway can serve the new consolidated lot, which allows more space to be used for development, parking, and shared open space.
- Setbacks only reduce the buildable area at the perimeter of the consolidated lot rather than along each individual lot line.
- Since alleys are not common in Columbia, lot consolidation creates more space for infrastructure, such as driveways and parking, which would have previously been accommodated on each individual lot.

Example:

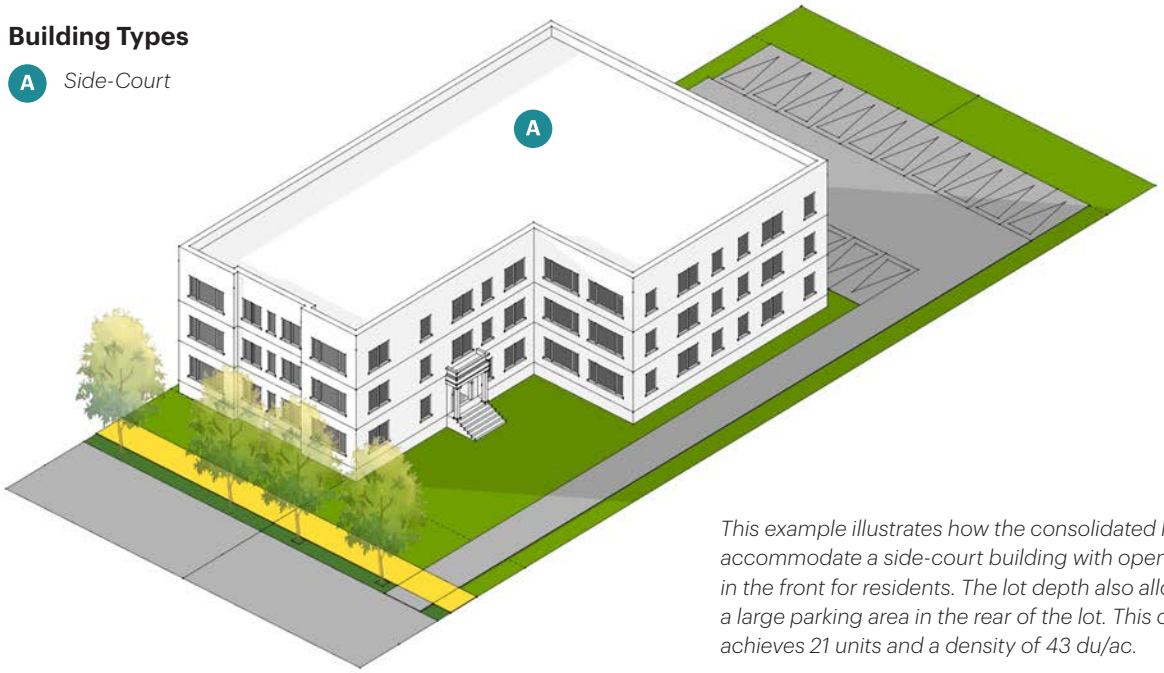
Building Types

- A *Triplex*
- B *Carriage House*
- C *Fourplex*

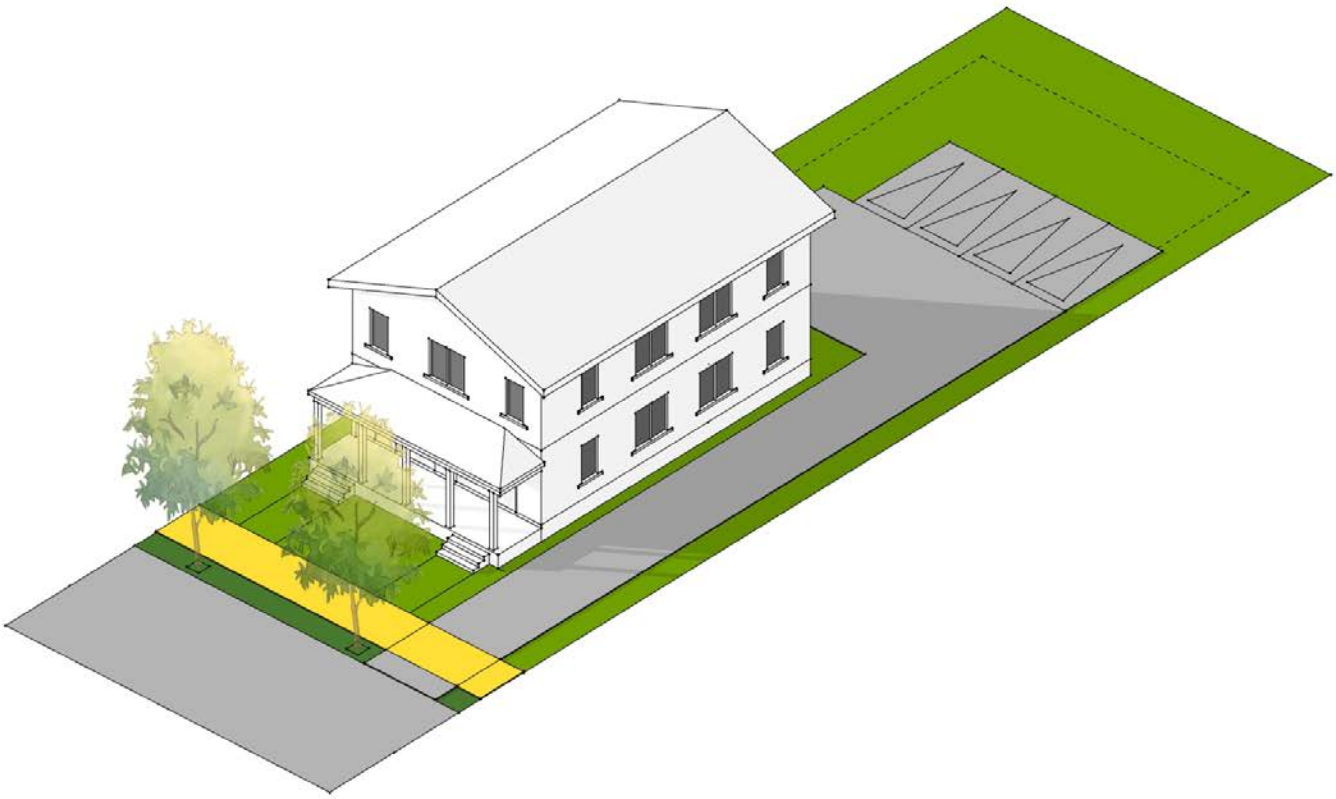
This example shows two adjacent lots, one containing a fourplex + ADU and the other containing a triplex + ADU. These lots individually are not meeting their development potential as evident in undeveloped land at the rear of the lot.

Building Types

- A *Side-Court*



This example illustrates how the consolidated lot can accommodate a side-court building with open space in the front for residents. The lot depth also allows for a large parking area in the rear of the lot. This option achieves 21 units and a density of 43 du/ac.



Above: Fourplex; Example of Missing Middle Housing on a typical lot.

Recommendations

CHAPTER 7

In this chapter

7.1 Policy-Related Recommendations

Figure 7.1

City of Columbia Comprehensive Plan: Envision 2036

Columbia Compass: Envision 2036

A.1 | Retain and build upon "development types" and "building types."
The way these typologies are presented in Chapter Six (Land Use) is a major step forward for housing diversity. The fact that none of the development types is limited to single-family residential sets Columbia apart from its peers and demonstrates a policy direction that is notably favorable to MMH.

The "Single Family Attached," "Two-Family," "Three-Family," and "Multi-Family Small" building types can serve as means of implementing MMH in the development types where they appear. The use of these types clarifies that MMH has a role in low-to-moderate intensity neighborhoods and is distinct from generic multi-family development. The "Multi-Family Medium" building type can give direction as to where larger MMH (see pp. 18-19 in the MMH Scan™and Section 6.1 in the Deep Dive™) may be appropriate.

A.2 | Calibrate the selection of MMH types to different neighborhoods.
The analysis identifies the MMH types that fit well on the tested lots and in their context, but not all MMH types are recommended everywhere they fit. Ultimately, the MMH types that best serve each neighborhood will be identified through discussing the analysis in the MMH Deep Dive™ and the recommended changes to zone standards with each neighborhood to evaluate interest and to further understand issues to address.

A.3 | Identify walkable centers and walkable environments.
Expand on the information in Chapter Six (Land Use) to include and describe "walkable centers" and the short walking distance area around them ("walkable environments/neighborhoods"). Specify that this is where MMH is intended.

A.4 | The Fourplex building type is missing from the typology.
There is a category for "Three-Family," but the next category up ("Multi-Family Small") is defined as accommodating "more than four households." It is important to enable fourplexes because the stacked unit configuration they allow, in combination with favorable financing options for up to four units, make them one of the most efficient forms for adding units to residential infill lots—particularly where the neighborhood context suggests a two-story height limit. The fourplex is similar enough to the triplex in form and use that the two could be combined in a single "Three-Family/Four-Family" category, to be included in all development types where "Three-Family" is listed currently.

A.5 | Refine definitions for "Multi-Family Small" and "Multi-Family Medium."
Both are listed as "typically two to four stories," but because height has specific implications for building code requirements and can also be a sensitive issue from a neighborhood standpoint, it would be advantageous to redefine "Multi-Family Small" as typically two stories with potential for three (depending on context) and "Multi-Family Medium" as typically three stories with potential for four. (See the descriptions for "Multiplex Small" and

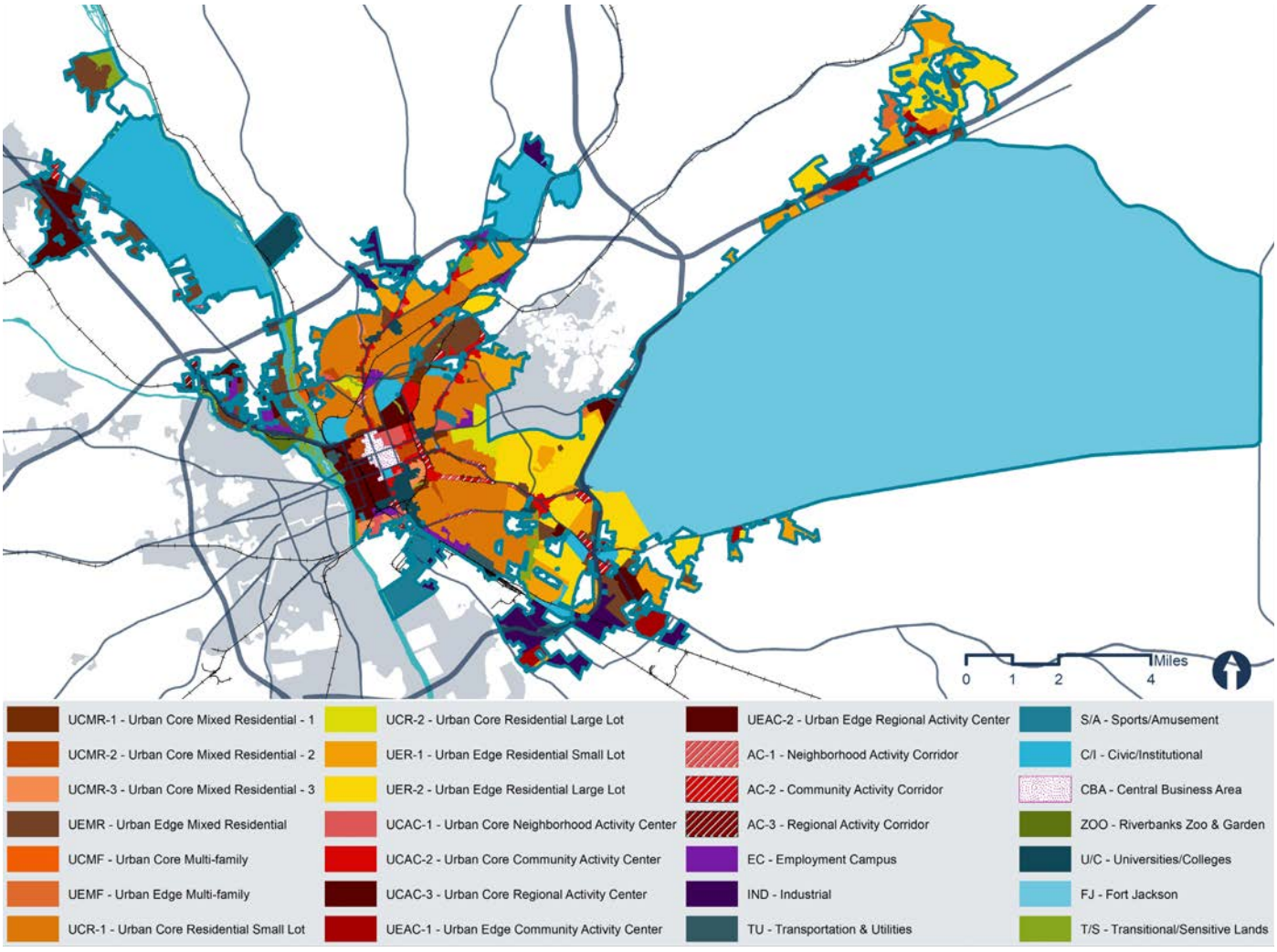
"Multiplex Large" in the MMH Scan™ for more details on the relevant MMH types.) This would help integrate these building types with others comprising the overall development type or neighborhood mix.

A.6 | Add Cottage Court and Courtyard Building to the list of building types. Because of their form, these types can fit well into neighborhoods where a standard "multi-family" building with the same number of units would not be appropriate. Having these options available would enable further refinement to the development types and further support diversity of housing options.

A.7 | Develop new standards for MMH. Write an implementation action directing that new standards be created, or that adjustments to certain zoning districts be made, for MMH within short walking distance of "walkable centers," recognizing its lower need for off-street parking and its more compact development pattern.

A.8 | Provide continuing education. Provide education on MMH to explain how it is different from conventional multi-family development and where it works.

Figure 7.2 *Future Land Use Map for the City of Columbia*



7.2 Zoning-Related Recommendations

Figure 7.3

The palette of MMH Types ranges from buildings with 2 units to Multiplex Buildings with up to 20 units and represents a resultant density range that exceeds most existing density maximums.

Zoning Process and Standards

B.1 | Use "development types" from Columbia Compass: Envision 2036 as a tool to guide future zoning updates.
Use the development types identified in the Comprehensive Plan as a tool to guide conversations with the community and other stakeholders when considering future zoning updates. Determine the desired and anticipated degrees of change, or the level to which certain neighborhoods want to develop, for different locations within Columbia.

B.2 | Consider a form-based approach.
The form-based approach to zoning is highly recommended as an approach instead of piecemeal modifications to existing zoning. This is because form-based standards are more clear and predictable about the form they will generate—providing a direct path to desired outcomes.

B.3 | Allow a wider range of housing options through by-right review instead of a lengthier discretionary review process.
Approach the implementation of MMH in walkable environments/neighborhoods through clear standards that enable by-right processing and remove or reduce the need for discretionary review. To do this, the standards need to be objective while still ensuring compatibility with the existing neighborhoods. This may be achieved by coordinating the standards with the characteristics and size of MMH types, as described in the MMH Scan™ and the Deep Dive™.

B.4 | Be specific and objective on intended physical character.
Add information to the existing zoning districts about the intended physical character in addition to the types of housing that are intended. For example, are the buildings mostly detached or attached? How tall are the buildings? Are the multi-unit buildings allowed intended as MMH or as larger buildings? Within the walkable environments, provide additional clarity about the intended physical character to inform the updating of existing zoning standards or the creation of new standards in these areas.

B.5 | Define “multi-family” to provide more distinction in building typologies.
The current definition of "multi-family" and related standards do not distinguish between large-scale multi-unit types and MMH types. This makes it difficult to develop MMH on existing lots in neighborhoods and tends to encourage builders to buy up multiple adjoining lots in order to make their large projects viable. It is also important to distinguish between small, medium, and large MMH types in order to propose housing types that best fit with the surrounding neighborhood context.

B.6 | Remove the distinction between "single-family" and "multi-family" in terms of land use.
In land use standards, discontinue terms such as "single-family," "two-family," and “multi-family” and instead identify the use as “residential" or "household living"—relying on supplemental standards in the zone to describe the allowed types and sizes of residential buildings.

B.7 | Introduce a palette of MMH types with associated standards.
Adopt the palette of MMH types presented in the MMH Scan™ into the Unified Development Ordinance to give a clear basis for MMH zoning standards. Standards for each building type can cover maximum building width, depth, and height, as well as orientation of entrance(s) and the configuration of on-site open space, access, and parking.

B.8 | Incentivize MMH types for infill development by substituting building type standards for density limits.
Given that density limitations are a major barrier to MMH infill development, allowing projects that opt-in to compliance with building-type-based standards to either achieve higher density or waive density limits altogether can be a strong incentive for builders to deliver such buildings.

B.9 | Update zoning districts to allow MMH in walkable environments.
Allow the MMH types in existing zones only within the approximate boundaries of the walkable environment(s) mapped in the MMH Deep Dive™ as follows:

- Zones that are intended primarily for single-family residential: apply the lower end of the MMH palette;
- Zones that are intended primarily for non-single-family residential: apply the middle to upper end of the MMH palette.

B.10 | Apply a MMH overlay.
If there is not enough support to modify the base zoning and standards, apply the MMH standards as a MMH overlay that can be mapped over time as individual areas desire to allow MMH.

B.11 | Establish frontage type standards.
To continue to enhance the public realm and maintain the character of the most historic neighborhoods, create frontage type for typical elements like porches, stoops, and forecourts as a requirement for new housing. A framework for these standards are described in Chapter 2: About Missing Middle Housing. All frontage types must be designed to meet local and state accessibility standards.

B.12 | Identify areas requiring additional massing and articulation standards.
For locations of particular interest or where more intense development is occurring, explore options to provide objective standards that offer more predictability on massing and articulation. Frontage standards, active ground floor standards, and best practices for basic massing may be needed. Provide objective standards rather than guidelines or another level of design review, to prevent adding barriers to future housing development.

B.13 | Allow adjustments on sites with challenging site conditions.
Consider options for administrative approval of variances for sites constrained by steep slopes or buffers related to water resource regulations. For steep slopes potential adjustments may include setback reductions, parking location adjustments, and open space location adjustments. For buffers, consider reductions to the buffer or combining the buffer with existing setbacks.

B.14 | Encourage streetscape improvements.
For large sites and developing walkable centers, consider requiring streetscape improvements with pedestrian and bike facilities to improve walkability.

B.15 | Establish a staff working group.
Establish a working group of staff members to implement the zoning improvements on a daily basis. This group can work out the details of updating the standards. Close coordination is necessary between all of these people to make sure that everyone is clear on what is changing, why it's changing, and where the changes apply. In this way, communication with neighborhoods and the development community will be clear and effective.

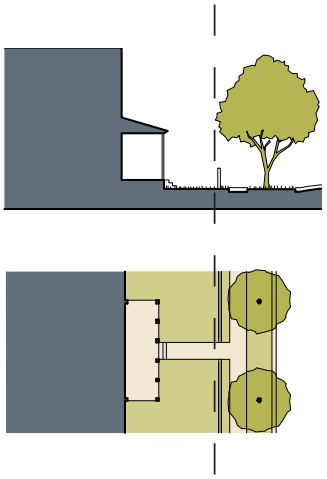


Figure 7.4

Frontage standards are an important aspect of MMH types. For more information on frontage types, see Section 2.3 of the MMH Scan™.

Zoning-Related Recommendations, Cont'd

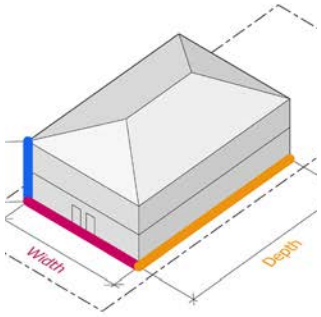


Figure 7.5

Additional explanation and diagrams related to on best practices for each zoning standard listed on this page is provided in Chapter 2 of the MMH Scan™.

Best Practices for Missing Middle Housing

C.1 | Embed MMH Types into the Code.
List each allowed MMH type directly in the zone development standards, so that it's clear which types are intended from the full palette of types.

C.2 | Building Height.
The majority of MMH types can fit within 32 feet overall and accommodate 2.5 stories. To enable MMH, allow a max of 2.5 stories and a max overall height of 32 feet. In more intense areas, a third story may be allowed, but this should be the exception and carefully regulated.

C.3 | Building Footprint.
In addition to building height, a building's footprint is a significant factor in how building size is perceived. Regulate building footprints to consist of a main body and wings with the maximum size defined by the zone. These standards need to be coordinated with the different lot sizes in each zone.

C.4 | House-Scale Buildings.
Define "house-scale" as up to 2.5 stories in height and up to 80 feet for the maximum overall footprint dimension, including wings. The "0.5" identifies an attic story, allowing an additional story contained within the roof form that is not perceived as a third story.

C.5 | Main Body and Wings.
Define the "main body" as no larger than 60 feet in width and depth. Define "wings" as extensions of the main body to allow for additional floor area but at a smaller size. For example, if the main body is 2 stories, the wings are 1 story and less wide than the main body. This allows a building to be up to 80 feet maximum overall footprint while reducing the scale as seen from the street and along side yards with neighbors.

C.6 | Density Standards.
Discontinue regulating by density, because it is a barrier to MMH and does not necessarily contribute to good form or building design. Substituting building-type-based development standards for density-based standards—either across the board or on an opt-in basis—can generate neighborhood-compatible multi-unit buildings more effectively, as discussed in B.8 above.

- If this strategy cannot be used, and density limits must remain, first identify the desired MMH types and the number of units that will ultimately be allowed on each size of lot. Then use the "resultant" density range to calibrate the regulation.
- In addition, allow additional density if unit size decreases. For example, if the maximum density allows a building with up to four units, allow an additional unit if the average unit size for all units is 750 square feet or less.

C.7 | Lot Width Standards.
Lot width is more important than lot area for how buildings fit on their lot and in a neighborhood. Discontinue regulating minimum lot area and instead regulate minimum lot width. As a guide for considering new or modified regulations, lots that are between 40 and 125 feet wide are the most appropriate for MMH types. See palette of MMH types for recommended ranges of lot widths.

C.8 | Private Open Space Standards.
Except for the Cottage Court and Courtyard Building types, do not require on-site open space. Most MMH types will have a rear yard that can serve as common space for the units. Requiring balconies and decks is a common practice but it unnecessarily complicates these small buildings. It is expected that the nearby "walkable center" will provide public space for gathering and/or recreation.

Global Changes to Enable Missing Middle Housing in Columbia

D.1 | Parking.
As discussed, MMH units are intended in walkable environments where driving is not necessary to access nearby services, shopping and food uses. Some of the standards already recognize on-street parking and other alternatives, but overall, changes are needed.

For lots within a walkable environment (within approximately 1,500 feet of a "walkable center"), change off-street parking requirements to the following:

- Maximum 1 off-street space per unit, not unit-type (e.g. Townhouse, Duplex, Multi-family), for lots within a "walkable environment."
- Maximum 0.5 off-street space per unit for lots within 1 block of a "walkable center."
- Do not require guest parking.
- Be clear that adjacent on-street spaces count toward the lot's parking requirement.
- Minimum parking setback of at least 20 feet behind the front facade or minimum 40 feet from the front lot line.

D.2 | Driveway Standards.
Currently, the code contains dimensional standards for driveways in two categories of property: "single-family or duplex residential property," and "industrial and commercial properties." The industrial and commercial standards require 25 feet of width for a two-way drive and a driveway flare that may be up to 10 feet wide. If these standards are applied to multi-family infill development on standard lot sizes, they pose a significant barrier.

Although the code provides an alternative for "other properties," where "[t]he "standards… shall be those determined reasonable by the building official," this lack of clarity and objectivity is an obstacle to small projects and could easily stymie them.

Redefine driveway categories in terms of the number of parking spaces served rather than the number of housing units. Allow small MMH types to comply with the same clear-cut driveway requirements as single family homes, because they are similar in scale to a single family home—allowing 10 or 12 foot wide driveways for as many as eight spaces. The City should also consider ways to allow a reduced minimum driveway width for larger MMH types with over 8 spaces.

D.3 | Remove the buffer yard requirement for MMH types.
Remove the buffer yard requirement for Missing Middle Housing types, because the form of these building types is compatible with single family homes.

Zoning-Related Recommendations, Cont'd

The following recommendations are specific to each of the four tested zones and intended to work in combination with the Global Changes.

Recommendations for RM-1

- For projects that comply with clear form-based standards designed to ensure compatibility in scale between new buildings and neighboring houses (see B.7 and B.8 above), allow at least 35 dwelling units per acre. This density is necessary to enable a fourplex on a typical lot.

Recommendations for RM-2

- For projects that comply with clear form-based standards designed to ensure compatibility in scale between new buildings and neighboring houses (see B.7 and B.8 above), allow at least 45 dwelling units per acre. This density is necessary to enable a small multiplex on a typical lot.

Recommendations for MU-1

- Revise minimum lot width to 50 feet for multi-family and mixed-use in order to comfortably accommodate a triplex or fourplex in this zone.
- Incorporate frontage standards to ensure that new buildings interface appropriately with the street, regardless of ground floor use. Frontages to consider include commercial shopfronts and/or types that provide a more gradual transition into private space, such as dooryards and forecourts.
- Introduce a front parking setback of 40 feet or more to prevent vehicles from interfering with pedestrian access and activation of the streetscape.

Recommendations for NAC

- Revise minimum lot width to 50 feet for multi-family and mixed-use in order to comfortably accommodate a triplex and a fourplex in this zone.
- Incorporate frontage standards to ensure that new buildings interface appropriately with the street, regardless of ground floor use. Frontages to consider include commercial shopfronts and/or types that provide a more gradual transition into private space, such as dooryards and forecourts.
- Introduce a front parking setback of 40 feet or more to prevent vehicles from interfering with pedestrian access and activation of the streetscape.

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7.3 Implementation-Related Recommendations

Implementation Processes

Build support for zoning updates to enable Missing Middle Housing.

- **Short Term.** Start to work on minor updates to the zoning regulations to remove the most impactful barriers to MMH development per recommendations listed in Section 7.2 of this chapter.
  - Provide a path for MMH types to circumvent existing density limits
  - Lower parking standards
  - Modify driveway requirements
  - Remove buffer yard requirement for MMH
- **Medium Term.** Establish an in-house team to lead the coordination and work through the details of updating the standards. Close coordination is necessary between City departments, the Planning Commission, and any potential consultants to make sure that everyone is clear on the changes, the reason for the changes, and where changes apply.
- **Long Term.** At the time of the zoning ordinance update, it is recommended to establish an advisory committee to provide feedback and serve as a liaison for the community while rewriting the residential zoning standards. The local development community should test out any new standards to provide feedback on potential unintended barriers or challenges. In this way, communication with neighborhoods and the development community will be most effective and clear.

Utility connection requirements.

Review how the City's public works department requires utility connections and identify potential issues with "smaller multi-unit" buildings. Often, public works standards are set up for large projects and can unintentionally burden smaller buildings with requirements that are unnecessary for this type of smaller infill.

Allow shared access easements.
Eliminate the requirement for a parcel to have front street frontage. Instead, allow newly created lots from a parent lot to have reasonable street access by means of an access easement. Work with public works to allow utility connections to newly created lots, without direct street frontage, within a single utility trench and easement. Regulations should still require good frontage conditions for rear units that do not front onto parking lots.

Development Tools

Reduce soft costs for Missing Middle developments.
Allowing MMH is sometimes not enough to pique developer interest in building MMH. Lowering soft costs can incentivize developers to opt for MMH developments over single-unit development.

- Identify funding such as a utility tap rebate or waiving sewer hookup fees to offset development costs for MMH.
- Charge impact fees based on square feet of structure, not a flat rate per unit.

Allow additional units for deeper affordability.
Another way to incentivize MMH and increase attainability is to allow more units in exchange for a certain number of family-size or affordable units.

Pre-approve building plans.
Columbia could create a library of pre-approved plans of small single-unit houses, ADUs, and MMH types for existing infill lots or larger greenfield sites based on the standards in this report. These plans can promote predictable infill and reduce design fees, permitting costs, and time spent on the permit process.

Do a pilot project.
Work with local partners to facilitate the development of one or more MMH types to show how the concept could work in Columbia. Pilot projects provide valuable local feasibility comparisons, and allow Staff to test new zoning and entitlement procedures. Provide streamlined standards and approval, mortgage guarantees, and/or free or discounted land. City-owned parcels can often provide ideal sites for testing.

Community Land Trusts (CLTs).
Look for local partners to create a CLT for unsubsidized housing that is more attainably priced than market-rate. The unit is owned by the resident, but the land is owned by a nonprofit CLT who then leases the land to the homeowner for a small fee. A CLT keeps property taxes low for homeowners and allows them to profit from a marginal increase in unit value while maintaining a degree of affordability for the next buyer.

Partnerships

Continue to foster relationships established throughout the process of this study and the Comprehensive Plan with stakeholders who can champion MMH projects and share knowledge. These partnerships may include:

- Local developers who can continue to advise on development barriers, especially in the zoning update process.
- Local housing financiers who can advise on financing strategies suited to local regulations and context.
- Non-profits and institutions with developable land can continue to be valuable partners in testing new zoning standards, providing land at low to no cost, and develop housing on City-owned land with affordability as a bottom line.
- Major employers can help identify the housing needs of their employees. The City can work with major employers to facilitate and streamline the development of MMH types while utilizing the employers' broad access to financing options for housing development.

Next Steps

The recommendations presented in this report shall continue to be vetted by City Staff, particularly their relationship to the Columbia Compass: Envision 2036 Comprehensive Plan. Recommendations are specific to Columbia but include references to Chapter 2 of the MMH Scan™ for zoning and design best practices that enable MMH.

The City should continue to test its standards with local developers and builders, monitor progress, and lean on national case studies to inform future decision making related to housing. Further engagement with the community is recommended to confirm housing preferences and build support for any future zoning amendments.