



Newton Zoning Redesign

Developing a context-
based zoning code for
an evolving city.

05.11.17

Welcome!

6:35 Pattern Book Presentation

7:10 Drafting the Zoning Ordinance

7:20 Q&A

7:30 Table-top Sessions



Interactive Learning

Activity Format

Over the next 30 minutes, we will present highlights from the Pattern Book and will incorporate an interactive learning component to test your knowledge of Newton and (most likely) introduce you to some surprising new information about your city!



Before we get started...

The Pattern Book represents several months of effort collecting first-hand data and analysis and is far too comprehensive to discuss in detail today.

But! You can find a complete draft online at:

www.courbanize.com/newtonzoning



The Future of Zoning in Newton

The Zoning Redesign initiative aims to create a zoning code that is more flexible, predictable, and context-based in order to encourage development/ redevelopment within Newton that is in keeping with the city's celebrated character while directing growth and economic development to the most appropriate areas.

Traditional Zoning

Traditional or “Euclidian” zoning is designed around the principle of separation of land uses and guidelines designed to facilitate the approval process for proposed developments that conform to the code.

Context-based Zoning

Context-based zoning is an evolution in thinking when it comes to zoning policy. In place of an ordinance that attempts to regulate simply by land uses (e.g. residential, commercial, industrial, etc.), context-based zoning aims to understand, respect, and build off of the design and character of existing neighborhoods to help steer new development/ redevelopment efforts.



Pattern Book

The pattern book is a data-driven analysis of Newton's past and current development context.

1. Introduction to the Pattern Book
2. The Development of Newton
3. Newton's Patterns
4. The Pattern Book Process

Appendices:

- Community Engagement Materials
- Data Sources & Processes



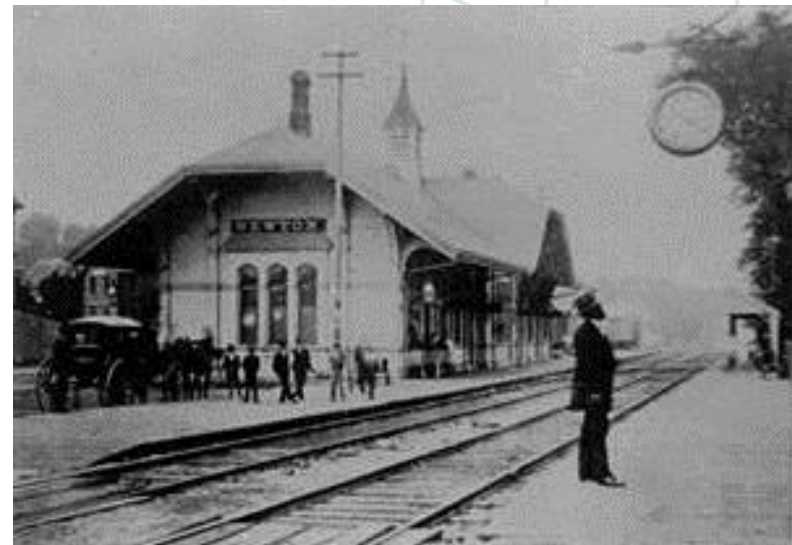


Pattern Book Trivia

Question 1:

**What year did
commuter rail service
begin in Newton?**

- A. 1824**
- B. 1844**
- C. 1861**
- D. 1902**



Question 1:

**What year did
commuter rail service
begin in Newton?**

- A. 1824
- B. 1844**
- C. 1861
- D. 1902



Question 2:

**What year did Newton
adopt its first zoning
ordinance?**

- A. 1880
- B. 1916
- C. 1922**
- D. 1928



Pattern Book

The pattern book is a data-driven analysis of Newton's past and current development context.

1. Introduction to the Pattern Book
2. The Development of Newton
3. Newton's Patterns
4. The Pattern Book Process

Appendices:

- Community Engagement Materials
- Data Sources & Processes



Citywide Analysis

This analysis shows several data sets at the city scale. The maps are intended to convey the composition of Newton and the systems operating citywide through various data lenses. The layers in these maps reveal patterns and allow users to draw conclusions from a citywide perspective.

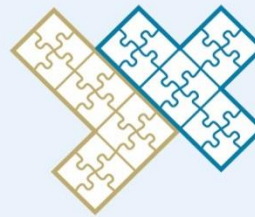
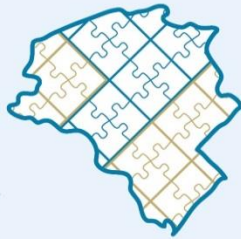


Seeing data sets on the citywide scale is useful for understanding the similarities and differences between Newton's various neighborhoods and centers. To understand these data on a more local scale, they have been broken down by CBA.

Data compiled in the citywide analysis informed the definitions of character patterns and pattern subsets.

Character Patterns & Pattern Subsets

Development types (blue squares in the diagram to the right) are broad categories describing the predominant land use and composition of Newton's neighborhoods and centers. Pattern subsets (gold puzzle pieces in the diagram to the right) are the more specific areas within character patterns that describe the more detailed form, scale, and density of development within each character pattern.



Character Patterns

Development types are large, generalized areas describing the predominant use(s) and the development composition of Newton's neighborhoods and centers. The pattern book breaks the city into six character patterns: neighborhood, village center, regional center, campus, recreation/public use, and conservation.

Pattern Subsets

Pattern subsets are the more specific and measured patterns comprising each character pattern. Each character pattern contains a menu of detailed subsets describing the scale, form, and density of development as well as the relationship of buildings to each other and to the street.

Context-Based Areas

After reviewing the city's data layers and experiencing firsthand the unique mix of styles, densities, development eras, and uses that comprise Newton's neighborhoods and village centers, the planning team broke the city into seventeen "context-based areas" (CBA). The intent of these areas is to distinguish neighborhoods from one another in order to understand the composition and shared characteristics of development within an area, and of areas relative to each other.



Area Overview

Each CBA is described in terms of its boundaries and development composition.



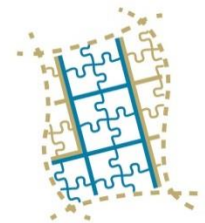
Land Use Analysis

A generalized land use map shows the patterns of development within each CBA. Key development metrics are measured by land use.



Street Type Analysis

Street types are mapped within each CBA and key development metrics are displayed by street type.



Character Patterns & Subsets

Each CBA is broken down and analyzed using the same character patterns and subsets described above.

Citywide Analysis

This analysis shows several data sets at the city scale. The maps are intended to convey the composition of Newton and the systems operating citywide through various data lenses. The layers in these maps reveal patterns and allow users to draw conclusions from a citywide perspective.

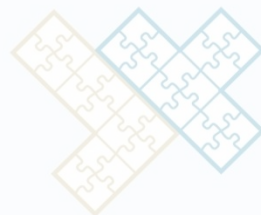


Seeing data sets on the citywide scale is useful for understanding the similarities and differences between Newton's various neighborhoods and centers. To understand these data on a more local scale, they have been broken down by CBA.

Data compiled in the citywide analysis informed the definitions of character patterns and pattern subsets.

Character Patterns & Pattern Subsets

Development types (blue squares in the diagram to the right) and building types (gold squares in the diagram to the right) are used to describe the form, scale, and density of development within land use and composition of Newton's neighborhoods and centers. Pattern subsets (gold puzzle pieces in the diagram to the right) are the more specific areas within character patterns that describe the more detailed form, scale, and density of development within each character pattern.



Character Patterns

Development types are large, generalized areas describing the predominant use(s) and the development composition of Newton's neighborhoods and centers. The pattern book breaks the city into six character patterns: neighborhood, village center, regional center, campus, recreation/public use, and conservation.

Pattern Subsets

Pattern subsets are the more specific and measured patterns comprising each character pattern. Each character pattern contains a menu of detailed subsets describing the scale, form, and density of development as well as the relationship of buildings to each other and to the street.

Context-Based Areas

After reviewing the city's data layers and experiencing firsthand the unique mix of styles, densities, development eras, and uses that comprise Newton's neighborhoods and village centers, the planning team broke the city into seventeen "context-based areas" (CBA). The intent of these areas is to distinguish neighborhoods from one another in order to understand the composition and shared characteristics of development within an area, and of areas relative to each other.



Area Overview

Each CBA is described in terms of its boundaries and development composition.



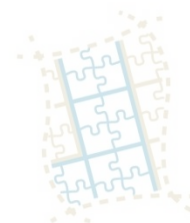
Land Use Analysis

A generalized land use map shows the patterns of development within each CBA. Key development metrics are measured by land use.



Street Type Analysis

Street types are mapped within each CBA and key development metrics are displayed by street type.



Character Patterns & Subsets

Each CBA is broken down and analyzed using the same character patterns and subsets described above.

Citywide Analysis

Citywide Analysis



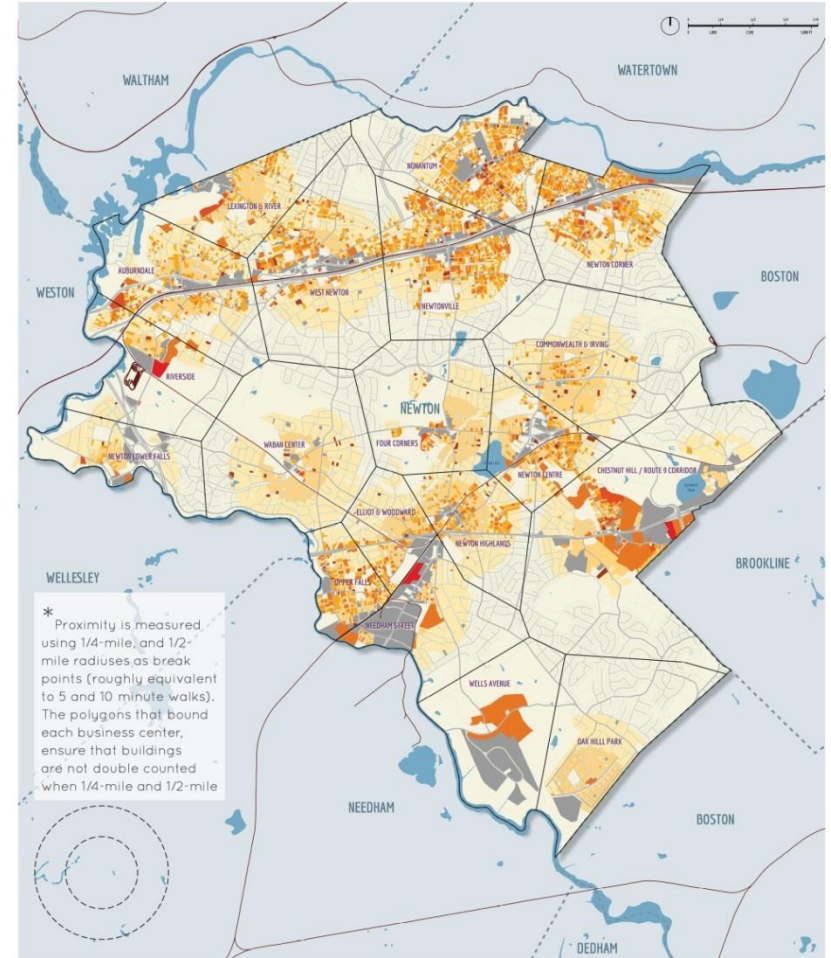
Development Forms

Business Centers

Vendam re ex es volupta eceped millupta cus dolorat. Ficiis et estenias de magnatium et aut ut la quam fugiae vero dem quam earuptati re quist qui idestiorro magnatent harcipitiis rendeles tiumquasi veliquamus.

Vendam re ex es volupta eceped millupta cus dolorat. Ficiis et estenias de magnatium et aut ut la quam fugiae vero dem quam earuptati re quist qui idestiorro magnatent.

Otatate con num fugitibus solent mi, ides pro in porrore, nimped etur, optate quam quasperum que aut quamus dolorestio consequas sitiunt plicto experch illabore, atur? Asperch itiuist, sit audit dolorro te nost officipiet et fugitio nsentur atur ma quam allam res sinulpa ipsusae aborescid ut as es ius expe consedit, sunt et fugita verunt omnis ea veliqui te pligenihici nihitate dolor sundam quunder uptaerr ovitature commosanimin commolo ritaqui accurm fuga.



Legend

- | | | |
|----------------------|--------------------|-------------------------|
| Single Family (1/4M) | Multi Family (<10) | Apartment (100+) |
| Single Family (1/2M) | Mixed Use | Commercial / Industrial |
| Two Family | Apartment (10+) | |



Pattern Book Trivia

Question 3:

What percentage of
Newton's land is
permeable?

- A. 24%
- B. 52%
- C. 62%
- D. 84%



Question 3:

**What percentage of
Newton's land is
permeable?**

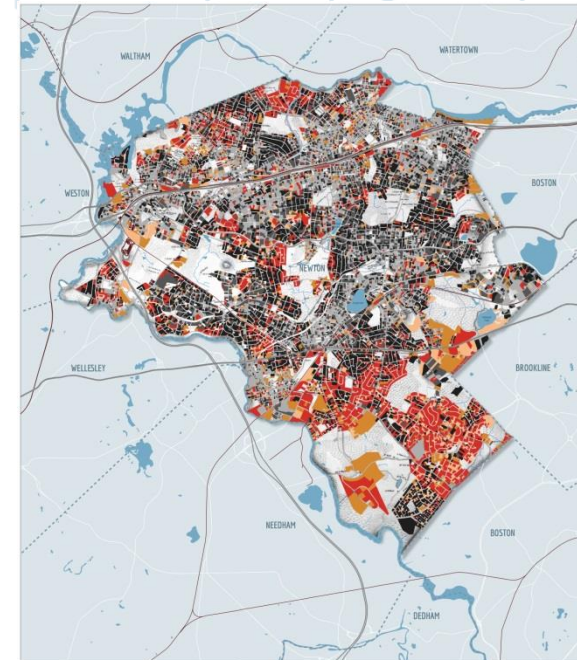
- A. 24%
- B. 52%
- C. 62%**
- D. 84%



Question 4:

What percentage of Newton's structures were built between 1860 and 1960?

- A. 39%
- B. 66%
- C. 72%
- D. 87%



Question 4:

What percentage of Newton's structures were built between 1860 and 1960?

- A. 39%
- B. 66%
- C. 72%
- D. 87%**



Question 5:

What percentage of Newton's developed parcels are non-conforming with the current zoning ordinance?

- A. 53%
- B. 68%
- C. 87%
- D. 95%



Question 5:

What percentage of Newton's developed parcels are non-conforming with the current zoning ordinance?

- A. 53%
- B. 68%
- C. 87%**
- D. 95%

Question 6:

Which village center has the most street parking as a percentage of total parking?

- A. Newton Centre
- B. Waban
- C. Newton Highlands
- D. Newtonville



Question 6:

Which village center has the most metered street parking as a percentage of total parking?

- A. Newton Centre (32%)
- B. Waban
- C. Newton Highlands
- D. Newtonville

Question 7:

Which of Newton's village centers has the most multifamily residential square footage within $\frac{1}{2}$ -mile of the geographic center?

- A. Nonantum
- B. West Newton
- C. Newton Corner
- D. Auburndale



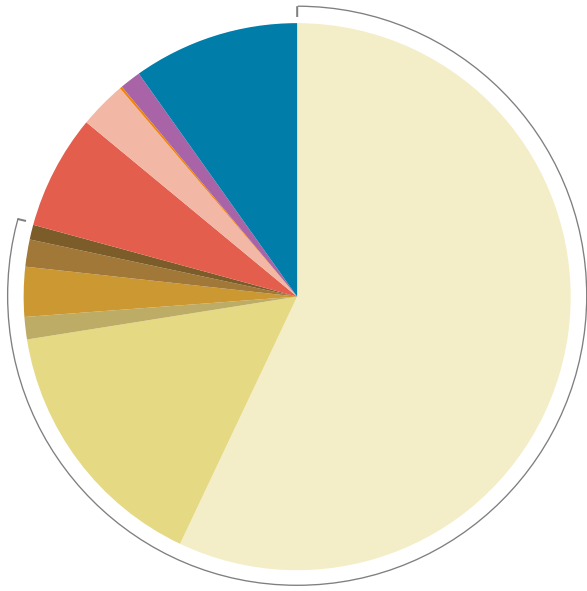
Question 7:

Which of Newton's village centers has the most multifamily residential square footage within $\frac{1}{2}$ -mile of the geographic center?

- A. Nonantum
- B. West Newton
- C. Newton Corner
- D. Auburndale

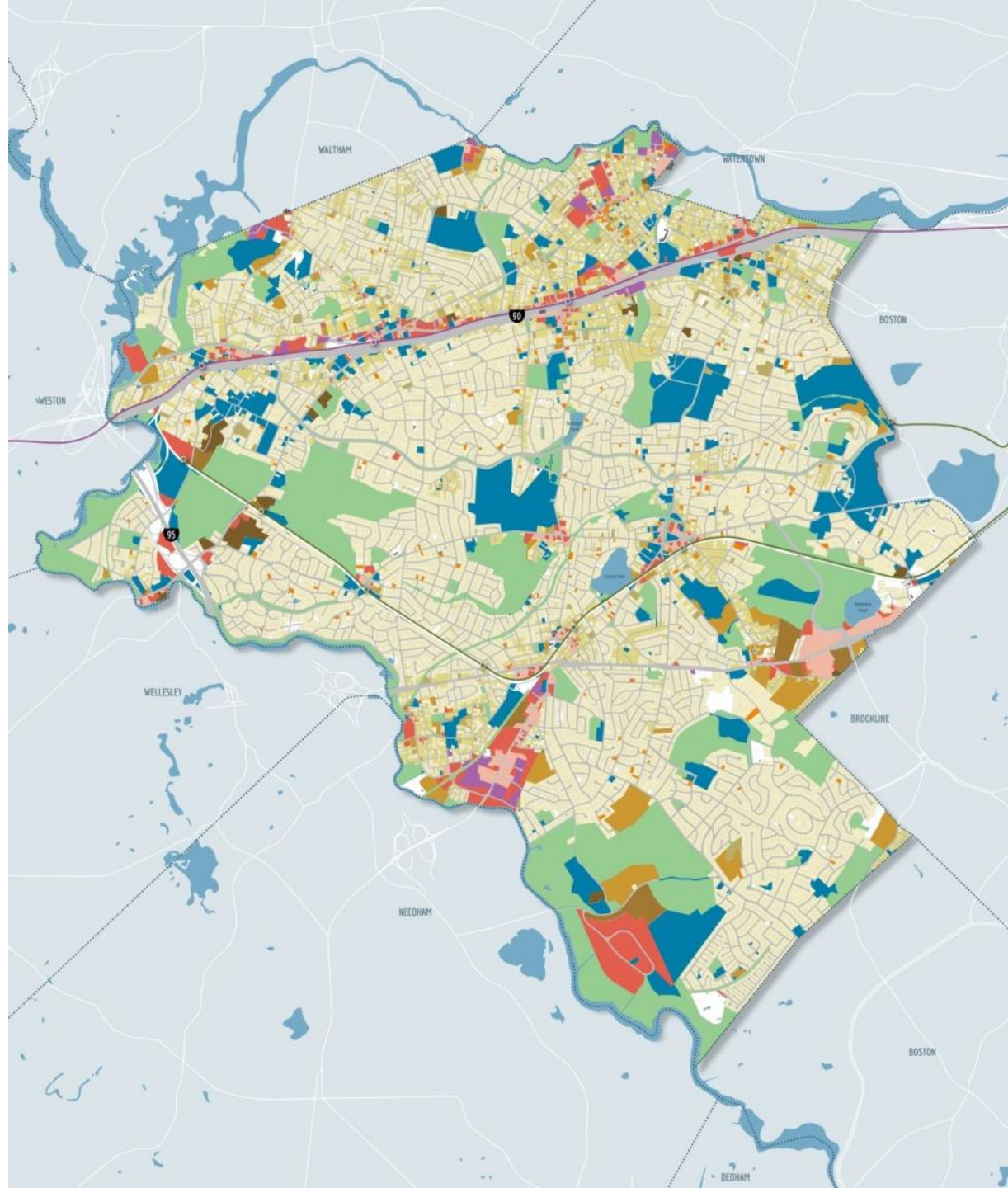
Total Development

Development Square Footage By Land Use



79%

Residential: SF	57%
Residential: 2/3 Units	15.5%
Residential: 4-8 Units	1.3%
Residential: 9-99 Units	2.9%
Residential: 100+ Units	1.6%
Residential: Other	0.9%
Commercial	6.8%
Retail	2.8%
Industrial/Manufacturing	1.3%
Civic/Institutional	9.8%



Citywide Analysis

This analysis shows several data sets at the city scale. The maps are intended to convey the composition of Newton and the systems operating citywide through various data lenses. The analysis is presented from a citywide perspective.



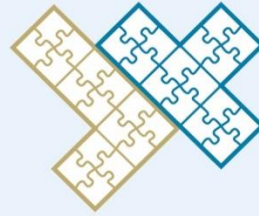
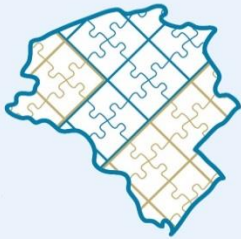
Seeing data sets on the citywide scale is useful for understanding the similarities and differences between Newton's various neighborhoods and centers. To understand these differences, the analysis has been broken down into...

Data compiled in the citywide analysis informed the definitions of character patterns and...

Character Patterns & Pattern Subsets

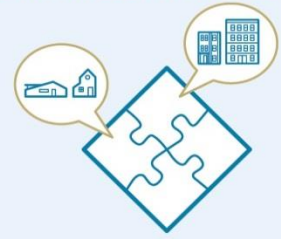
Character Patterns & Pattern Subsets

Development types (blue squares in the diagram to the right) are broad categories describing the predominant land use and composition of Newton's neighborhoods and centers. Pattern subsets (gold puzzle pieces in the diagram to the right) are the more specific areas within character patterns that describe the more detailed form, scale, and density of development within each character pattern.



Character Patterns

Development types are large, generalized areas describing the predominant use(s) and the development composition of Newton's neighborhoods and centers. The pattern book breaks the city into six character patterns: neighborhood, village center, regional center, campus, recreation/public use, and conservation.



Pattern Subsets

Pattern subsets are the more specific and measured patterns comprising each character pattern. Each character pattern contains a menu of detailed subsets describing the scale, form, and density of development as well as the relationship of buildings to each other and to the street.

Context-Based Areas

After reviewing the city's data layers and experiencing firsthand the unique mix of styles, densities, development eras, and uses that comprise Newton's neighborhoods and village centers, the planning team broke the city into seventeen "context-based areas" (CBA). The intent of these areas is to distinguish neighborhoods from one another in order to understand the composition and shared characteristics of development within an area, and of areas relative to each other.



Area Overview

Each CBA is described in terms of its boundaries and development composition.



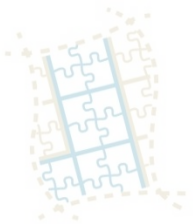
Land Use Analysis

A generalized land use map shows the patterns of development within each CBA. Key development metrics are measured by land use.



Street Type Analysis

Street types are mapped within each CBA and key development metrics are displayed by street type.



Character Patterns & Subsets

Each CBA is broken down and analyzed using the same character patterns and subsets described above.

Character Patterns

Character Patterns & Pattern Subsets

Character Patterns

After a comprehensive analysis of the many layers that together compose Newton's neighborhoods and village centers, the planning team assigned different character pattern designations to each area of the city. These character patterns are one of the two primary organizing features of the pattern book (the other being context-based areas), defining areas of the city by predominant use.

Neighborhood

Newton is today a predominantly residential community. Over the course of its three centuries of history, the majority of structures within the city have been single family homes. While the neighborhood classification is primarily composed of residential structures, neighborhoods in cities like Newton are almost always dotted with additional uses and building typologies.

Village Center

Newton is understood by locals as a city of villages. These villages follow a conventional arrangement when it comes to the organization of constituent parts, with a relatively dense commercial center serving as the hub of activity for each village and primarily residential, less dense, uses growing out from the center. Newton's village centers represent a great diversity of form, development era, density, intensity, and predominant use.

Commercial Cluster

Commercial clusters in Newton, while providing significant economic benefit and commercial/retail activity for the city, generally serve a larger, more regional constituency. These areas typically comprise large commercial zoned areas clustered along or in close adjacency to major regional thoroughfares. In Newton's case, the largest of these clusters are located at the edges of the city, serving local employees and shoppers and those from surrounding communities.

Campus

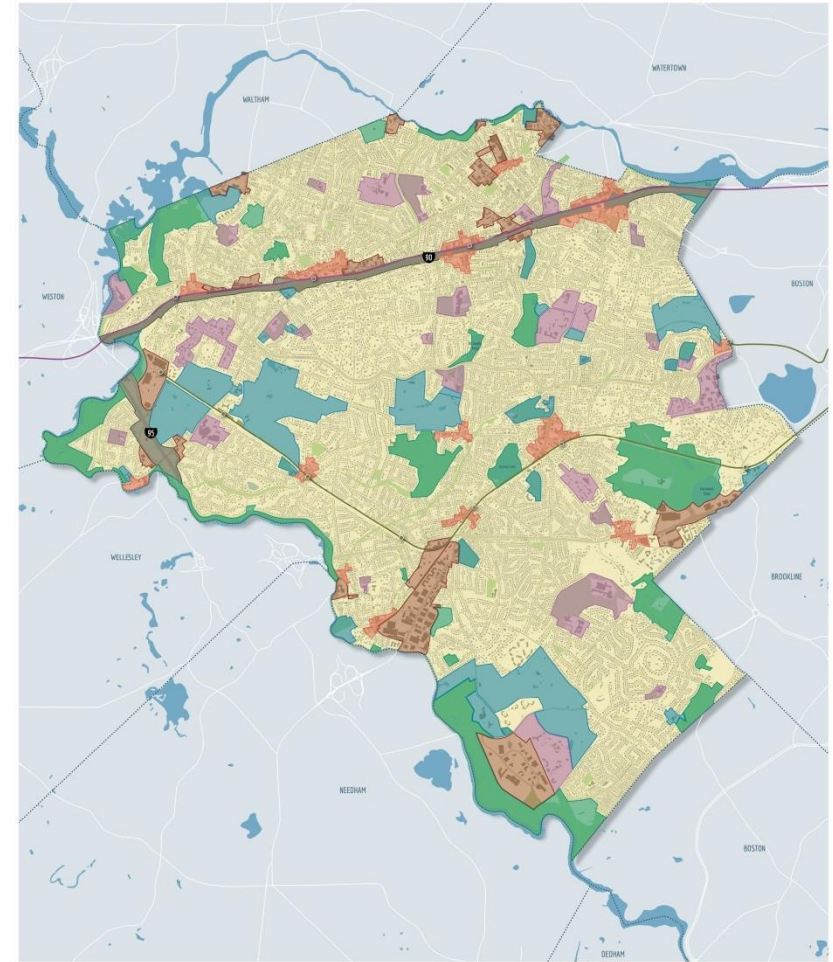
The campus classification refers to a civic, religious, institutional, and corporate uses with substantial assemblages of buildings and/or buildings accompanied by substantial landscaped grounds. In Newton, this classification often describes public school and higher education facilities, religious institutions including houses of worship and accompanying residential or educational facilities, and commercial/office parks.

Recreation & Public Use

The recreation/public use classification includes both formal and informal public and private outdoor recreation fields, courts which are open to public use. This is primarily an open space classification, though ancillary/support structures are included.

Natural/ Landscape

The natural/landscape classification captures all natural and designated lands which are to remain free from development in perpetuity. This includes all lands with conservation easements, forests, cemeteries, waterways/water bodies, wetlands, and any other designated natural/constructed features deemed conserved/preserved by the city of Newton or other administrative entities.



Character Patterns of Newton

Neighborhood Character Pattern

Character Patterns & Pattern Subsets

Neighborhood

Newton is today a predominantly residential community. Over the course of its three centuries of history, the majority of structures within the city have been single family homes. These homes when clustered together form unique neighborhoods comprising approximately 68% of Newton's land area.

While the neighborhood character pattern is primarily composed of residential structures, neighborhoods in cities like Newton are almost always dotted with additional uses and building typologies. It is not at all uncommon for small commercial and retail establishments to become embedded in these areas, in the form of doctors' offices, dental practices, small commercial offices, banks, coffee shops, small grocers, and restaurants. These outliers offer local residents the benefit of convenience and small instances of the vitality that comes with a mix of uses in a neighborhood.

Traditional Neighborhoods

These neighborhoods evolve over time and are typically arranged on grid-like streets with both natural and planned lots, pedestrian infrastructure, parks, etc.

Community Neighborhoods

These neighborhoods are typically developed over a short period of time by one or a few builders and are represented by an architectural uniformity. Street patterns are often more curvilinear and can be disconnected from the larger urban fabric; feeder streets connect to larger arterials.

Manor Neighborhoods

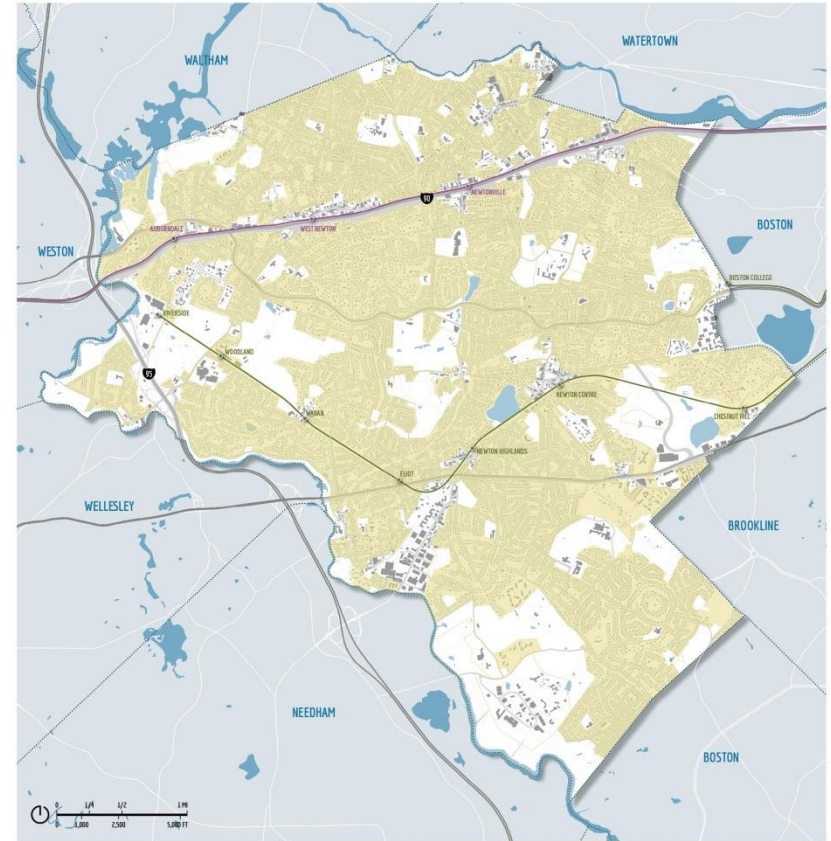
Manor neighborhoods are defined by large houses on large lots with deep and inconsistent setbacks, which can reduce the feeling of walkability through the neighborhood. These neighborhoods are often designed to feel more private than other residential typologies.

Multifamily Neighborhoods

While multifamily structures can exist in any neighborhood pattern, neighborhoods with a multifamily designation typically comprise larger multifamily structures clustered together. These are often found in denser areas of the city or along major transportation routes.

68%

of Newton's total
area is designated as
Neighborhood.



Newton's Neighborhoods

Newton's neighborhoods are mapped above in yellow. As is evident, this character pattern constitutes the majority of this largely residential city. While most of the city's development comes in the form of homes, its various neighborhoods take on a wide variety of characteristics ranging from centuries-old manor style estates to tall residential "towers in the park" as was in vogue in more recent planning history.

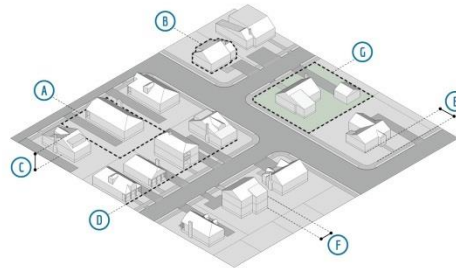
Neighborhood Pattern Subsets

Character Patterns & Pattern Subsets

Neighborhood

1. Traditional - Small

Small traditional neighborhoods have a grid-like street structure with a relatively high frequency of intersections, creating small, walkable blocks. They are characterized by their small lot size and short, mostly uniform front setbacks, which contribute to a continuous streetwall defining the public realm. These neighborhoods often have contiguous sidewalks on both sides of the street, interrupted for driveway curb cuts that are most typically wide enough for one car.



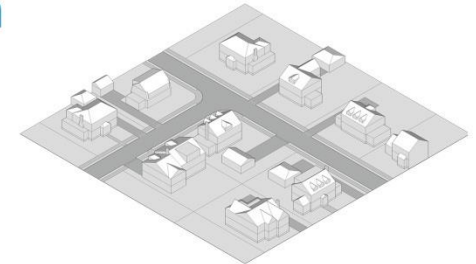
Typical Dimensions

A LOT SIZE	3,500 - 8,500 SF
B DEVELOPMENT SIZE	1,500 - 2,700 SF
C HEIGHT	1.0 - 1.75 stories
D STREETWALL	Continuous
E FRONT SETBACK	20 - 30 FT
F SIDE SETBACK	10 - 20 FT
G PERMEABLE SURF.	65 - 85%
DEVELOPMENT ERA	Consistent presence
DEVELOPMENT FORM	Buildings are relatively small for Newton. They range from single-story to 1.75 stories, which are as tall as two-story homes but have steeply pitched roofs which limit the habitable space on the second floor. They may be accentuated with window dormers that allow for light, but are not large enough to accommodate significant additional habitable space.



2. Traditional - Medium

Medium traditional neighborhoods have a grid-like street structure with a relatively high frequency of intersections, creating small, walkable blocks. Lot sizes range from 7,500 gross square feet to 15,000 gross square feet, which typically allows for a driveway, backyard, and side yards between structures. Uniform building setbacks, contiguous sidewalks, and limited curb cuts enhance the pedestrian quality of the public realm, though generous front setbacks ranging between 25 and 35 feet separate the public realm from the private homes.



Typical Dimensions

A LOT SIZE	7,500 - 15,000 SF
B DEVELOPMENT SIZE	2,700 - 4,500 SF
C HEIGHT	2.0 - 2.5 stories
D STREETWALL	Continuous
E FRONT SETBACK	15 - 35 FT
F SIDE SETBACK	25 - 25 FT
G PERMEABLE SURF.	35 - 65%
DEVELOPMENT ERA	Consistent presence
DEVELOPMENT FORM	Most buildings in these neighborhoods are medium-sized single family homes. They range from two stories to 2.25 stories, which are two-story homes but have pitched roofs with small dormers and small attics that may have a limited amount of habitable space. On occasion, an office or a corner store is present in these neighborhoods.



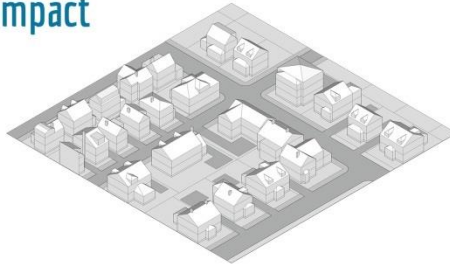
Neighborhood Pattern Subsets

Character Patterns & Pattern Subsets

Neighborhood

3. Traditional - Large Compact

Large compact traditional neighborhoods have a grid-like street structure with a relatively high frequency of intersections, creating small, walkable blocks. They have small and medium lot sizes, ranging in size from 1,500 gross square feet to 7,500 gross square feet. This range of lot size often allows for a driveway and side yards large enough to accommodate some landscaping and a pathway around the building, but still have a building width to lot width ratio that contributes to a continuous streetwall. Contiguous sidewalks and small, uniform building setbacks ranging from 10 feet to 30 feet encourage pedestrian activity in the public realm.



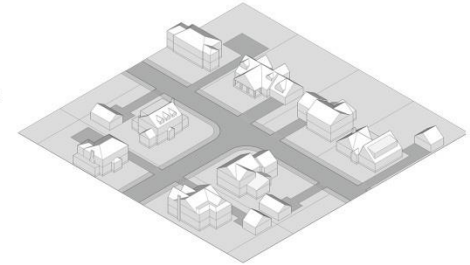
Typical Dimensions

A LOT SIZE	1,500 - 7,500 SF
B DEVELOPMENT SIZE	4,000 - 10,000 SF
C HEIGHT	2.5 - 3.0 stories
D STREETWALL	Continuous
E FRONT SETBACK	10 - 30 FT
F SIDE SETBACK	5 - 15 FT
G PERMEABLE SURF.	65 - 80%
DEVELOPMENT ERA	1850 - Present
DEVELOPMENT FORM	These buildings range in height from 2.5 stories to 3 stories. A 2.5 story building is as tall as a three-story building, but has a steeply pitched roof, limiting the habitable space on the third floor. It is not uncommon for shed dormers to increase the habitable space on the third floor. These are mostly single family homes, two-family homes, and two-family homes that have been converted into condominiums, though a few offices and corner stores are notably present. This pattern subset is often situated between village centers and neighborhoods, providing a transition across the intensity of uses.



4. Traditional - Large

Large traditional neighborhoods have a grid-like street structure with a high frequency of intersections, creating small, walkable blocks. They have medium lot sizes, ranging in size from 15,000 gross square feet to 25,000 gross square feet. This range of lot size often allows for a driveway and side yards large enough to accommodate some landscaping and a pathway around the building, while maintaining a building width to lot width ratio that contributes to a continuous streetwall. Contiguous sidewalks and uniform building setbacks ranging from 25 feet to 60 feet also enhance the pedestrian character of the public realm.



Typical Dimensions

A LOT SIZE	15,000 - 25,000 SF
B DEVELOPMENT SIZE	4,000 - 8,500 SF
C HEIGHT	2.5 - 3.0 stories
D STREETWALL	Continuous
E FRONT SETBACK	25 - 60 FT
F SIDE SETBACK	20 - 40 FT
G PERMEABLE SURF.	60 - 80%
DEVELOPMENT ERA	1850 - Present
DEVELOPMENT FORM	These buildings range in height from 2.5 stories to 3 stories. A 2.5 story building is as tall as a three-story building, but has a steeply pitched roof, limiting the habitable space on the third floor. It is not uncommon for shed dormers to increase the habitable space on the third floor. These are mostly single family homes, two-family homes, and two-family homes that have been converted into condominiums, though a few offices and corner stores are notably present. This pattern subset is often situated between village centers and neighborhoods, providing a transition across the intensity of uses.

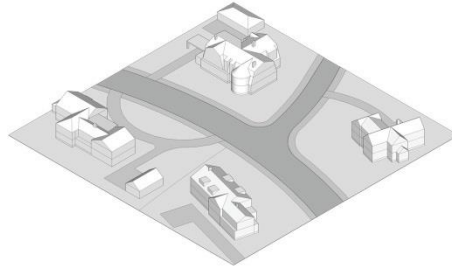


Neighborhood Pattern Subsets

Character Patterns & Pattern Subsets

5. Manor

Manor neighborhoods have curvilinear streets replete with cul-de-sacs and loop roads, as well as a low frequency of intersections. Lot sizes are very large, with large, uneven front setbacks and generous street frontage. These dimensions allow for generous front, side, and backyards, and in many instances the buildings are fully or partially obscured from view from the street. Sidewalks are not always contiguous or present. All of these characteristics create a public realm that is less conducive to pedestrian movement and more appropriate for vehicles. There is complete separation between the public realm and the private realm.



Typical Dimensions

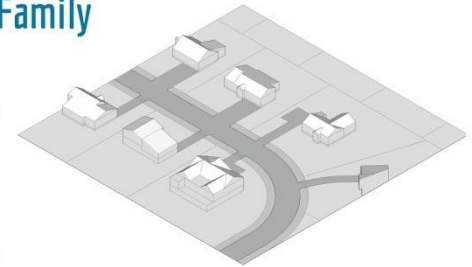
A LOT SIZE	20,000 - 100,000 SF
B DEVELOPMENT SIZE	6,000 - 15,000 SF
C HEIGHT	2.0 - 3.5 stories
D STREETWALL	Discontinuous
E FRONT SETBACK	30+ FT
F SIDE SETBACK	30 - 100 FT
G PERMEABLE SURF.	80 - 95%
DEVELOPMENT ERA	1850 - Present
DEVELOPMENT FORM	Buildings in manor neighborhoods are predominantly single family homes. They are typically very large in terms of gross square feet, however the large lot sizes do not encourage or necessitate compact development and buildings range in height from 2.0 stories to 3.5 stories.



Neighborhood

6. Community - Single Family

Community neighborhoods primarily differ from traditional neighborhoods in that they were often developed at a single point in time. In form, the layout of the streets and the size of the lots relative to the size of the buildings that sit on them is also different than the more organic character of traditional development. The local street network is characterized by series of cul-de-sacs which feed into larger arterial roads. Sidewalks and pedestrian pathways are generally present and contiguous. Lot sizes tend toward a medium 7,000 to 15,000 GSF, with moderately-sized uniform front setbacks. Altogether, these characteristics create a neighborhood that feels insular, promoting the public realm and pedestrian activity for residents while creating physical and psychological buffers for non-residents.



Typical Dimensions

A LOT SIZE	7,000 - 15,000 SF
B DEVELOPMENT SIZE	1,200 - 2,500 SF
C HEIGHT	1.0 - 2.0 stories
D STREETWALL	Continuous
E FRONT SETBACK	25 - 40 FT
F SIDE SETBACK	10 - 20 FT
G PERMEABLE SURF.	60 - 85%
DEVELOPMENT ERA	1945 - 1975
DEVELOPMENT FORM	Buildings in single family community neighborhood patterns are typically small in scale and stature. These homes have less than 2,500 gross square feet, and less than two full stories, though partial second stories can be augmented with small dormers to add light or increase habitable space.

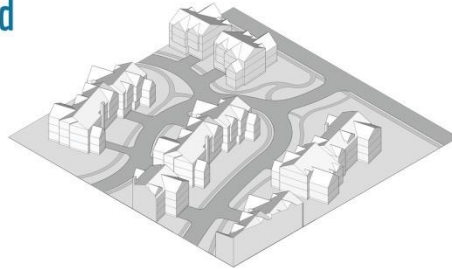


Neighborhood Pattern Subsets

Character Patterns & Pattern Subsets

7. Community - Attached

Attached community developments exist to a limited extent across the city. Unlike most other areas of Newton, the attached community typologies were built within a short timeframe in the last several decades. They are often separated from the rest of the urban fabric by natural features such as rock formations or wooded buffers, and have an internal street network that connects to the city street grid through one or more arterial roads. Due to the nature of these developments, the architectural and urban design patterns are strict, and unique to each community.



Typical Dimensions

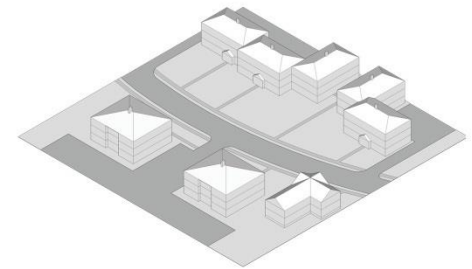
A LOT SIZE	85,000 - 1,200,000 SF (total)
B DEVELOPMENT SIZE	5,000 - 30,000 (structure)
C HEIGHT	2.0 - 3.0 stories
D STREETWALL	Discontinuous
E FRONT SETBACK	N/A
F SIDE SETBACK	Units attached and clustered
G PERMEABLE SURF.	80 - 95%
DEVELOPMENT ERA	1970 - 1990
DEVELOPMENT FORM	Communities of attached homes share similar, if not identical, architectural characteristics. Each individual community has a different material and color palette and unique architectural details.



Neighborhood

8. Multifamily - Small

Small multifamily neighborhoods are present in many areas of the city, but are not found in every village. They are often embedded within other neighborhood character patterns, or serve as a transition between the intensity of uses of a village center and neighborhood. These low-rise apartment complexes have large lots that largely conform to the city street grid. Front setbacks for these complexes generally align with the retail, mixed-use, or residential parcels adjacent to them, though internal courtyards can disrupt the streetwall.



Typical Dimensions

A LOT SIZE	15,000 - 100,000 SF (total)
B DEVELOPMENT SIZE	10,000 - 50,000 SF (structure)
C HEIGHT	2.0 - 4.0 stories
D STREETWALL	Discontinuous
E FRONT SETBACK	15 - 30 FT
F SIDE SETBACK	Varies
G PERMEABLE SURF.	80 - 95%
DEVELOPMENT ERA	1960 - Present
DEVELOPMENT FORM	Buildings in these neighborhoods range in height from two to four stories. They are quite large in size, ranging from 10,000 GSF to 50,000 GSF. The buildings are typically oriented toward the street, and the large front façade is often broken up by a courtyard, minimizing the visual impact of the massing.

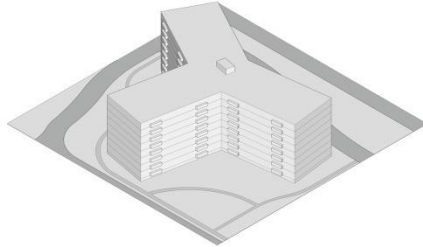


Neighborhood Pattern Subsets

Character Patterns & Pattern Subsets

9. Multifamily - Large

Large multifamily developments exist throughout the city, but are not present in every village. They are located on extra-large lots and do not conform to the standard street grid, often relying on an internal network of private roadways. Setbacks vary, but are typically greater than 90 feet. Internal circulation and landscaping separate these buildings from the fabric of the city. The relatively large lot sizes also accommodate significant amounts of landscaped area as well as substantial surface parking lots.



Typical Dimensions

A LOT SIZE	200,000- 1,000,000 SF (total)
B DEVELOPMENT SIZE	50,000 - 500,000 SF (structure)
C HEIGHT	5.0 - 17.0
D STREETWALL	Discontinuous
E FRONT SETBACK	90+ FT
F SIDE SETBACK	50 - 100 FT
G PERMEABLE SURF.	35 - 95+%
DEVELOPMENT ERA	1955 - Present
DEVELOPMENT FORM	This pattern is primarily characterized by large multifamily complexes/towers. These developments are five or more stories tall, and can be as tall as 17 stories in Newton. This pattern is often referred to as "towers in the park" due to low lot coverage ratios.



PAGE INTENTIONALLY LEFT BLANK

Village Center Character Pattern

Character Patterns & Pattern Subsets

Village Center

Village centers are Newton's primary mixed-use areas serving as the commercial and retail hearts of the city. These centers often provide an identity for the neighborhoods that encompass them through placemaking and practical functions. Though storefronts range in size, they are all generally suited for smaller retail establishments owned by local and regional operators, as was the predominant retail model throughout the period of their development and growth. They are eminently walkable and pedestrian friendly, and serve as places for community members to gather, socialize, and shop. Many are accessible by at least one form of public transit. The different character pattern subsets are largely categorized based on their scale and offerings, as the general architectural and urban design characteristics are similar throughout most of the village centers.

Convenience Center

Convenience centers are the smallest of Newton's village centers both in terms of total land area and development square footage. These centers primarily serve a small, local population living in close proximity to the center, largely offering convenience goods and common services.

Neighborhood Center

Neighborhood centers are traditional urban New England village centers serving a local population and generally comprise convenience goods, general services, coffee and dining options, and some small speciality and commodity retailers.

Town Center

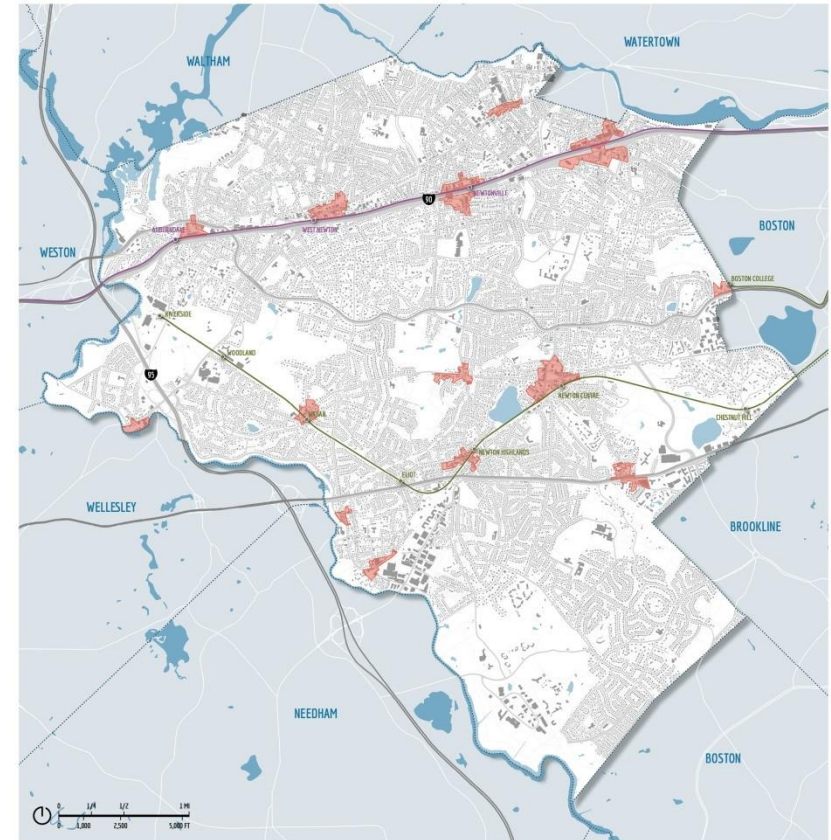
Town centers generally offer the most robust mix of uses, often introducing multifamily housing and institutional uses to an extensive mix of commercial and retail options. These centers serve a citywide, and sometimes regional population and focus on a greater density of patrons at any given time.

Gateway Center

Gateway centers are typically located at the edges of the city, in close adjacency to the city's main transportation gateways. These centers usually support a large commercial footprint and associated retail and dining options.

2%

of Newton's total area is designated as Village Center.



Newton's Village Centers

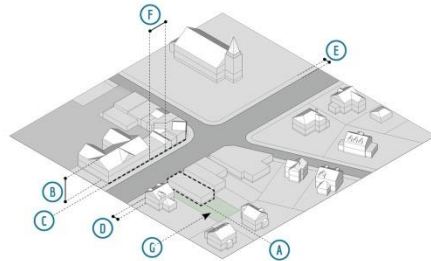
Newton's village centers can be found throughout the city, though are most often situated alongside the city's transportation infrastructure (namely rail lines). These centers developed over centuries as the primary retail and commercial destinations for the city's neighborhoods and today serve a local and regional population for employment, shopping, dining, entertainment, civic, religious, and a variety of other uses.

Village Center Pattern Subsets

Character Patterns & Pattern Subsets

1. Convenience Center

Convenience Centers are those where the total commercial and retail square footage does not exceed 200,000 square feet. They typically comprise five to 25 storefronts catering to retail establishments supporting daily errands, including one or two banks, a dry-cleaner, small goods, and cafes. Building heights range from one story to three stories. Development often presents a continuous streetwall. Uses are predominantly restricted to retail and commercial offices, though occasionally apartments are found on the second or third story. Sidewalks are approximately ten feet wide on average, suitable for the steady but light pedestrian traffic. Public parking is found on the street, or in rear communal lots.



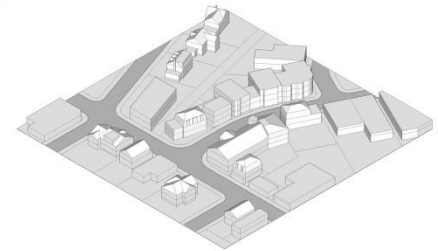
Typical Dimensions

A RETAIL DEV. SIZE	750 - 2,500 SF
B HEIGHT	1.0 - 3.0 stories
C STREETWALL	Continuous
D SETBACK	0 FT
E SIDEWALK WIDTH	8 - 12 FT
NUMBER OF STORES	10 - 25
F STOREFRONT WIDTH	20 - 25 FT
G PERMEABLE SURF.	0 - 75%
PARKING LOCATION	Street, rear lots



2. Neighborhood Center

Neighborhood Centers generally comprise an average commercial and retail square footage range of 250,000-500,000 square feet, and 20 to 50 storefronts. The retail mix is often suited for convenience and light shopping, including a selection of banks, small goods, salons, boutiques, and restaurants. Building heights range from one story to three stories. Architecturally, these buildings face the street and are well-articulated, representing a diversity of building eras. There is often a continuous streetwall. Uses are predominantly restricted to retail and commercial offices, though apartments can be found on the second or third story. Sidewalks are suitable for the steady, moderate pedestrian traffic. Public parking is found on the street, or in communal lots behind buildings.



Typical Dimensions

A RETAIL SIZE	750 - 5,000 SF
B HEIGHT	1 - 3 stories
C STREETWALL	Continuous
D SETBACK	0 FT
E SIDEWALK WIDTH	10 - 15 FT
NUMBER OF STORES	25 - 60
F STOREFRONT WIDTH	20 - 25 FT
G PERMEABLE SURF.	0 - 25%
PARKING LOCATION	Street, rear lots



Village Center

Commercial Cluster Character Pattern

Character Patterns & Pattern Subsets

Commercial Cluster

In many areas of Newton, large concentrations of land and development square footage are—by virtue of circumstance, regulation, or intention—dominated by one primary commercial use. Whether it is a cluster of office buildings, retail establishments or industrial/manufacturing uses, these areas create a unique development pattern within Newton. Typically, these areas serve a regional population, attracting residents of Newton and the surrounding communities to large employers and retailers. The form of development is often auto-oriented, with close proximity to major vehicular infrastructure, giving primacy to automobile access and parking, and considering pedestrian and bicycle access secondarily.

Employment Cluster

Employment clusters typically comprise office parks, service areas, and clusters of unrelated commercial/office uses adjacent to major transportation infrastructure. While these areas may mix a handful of retail establishments and other uses, their predominant use is commercial/office.

Retail Cluster

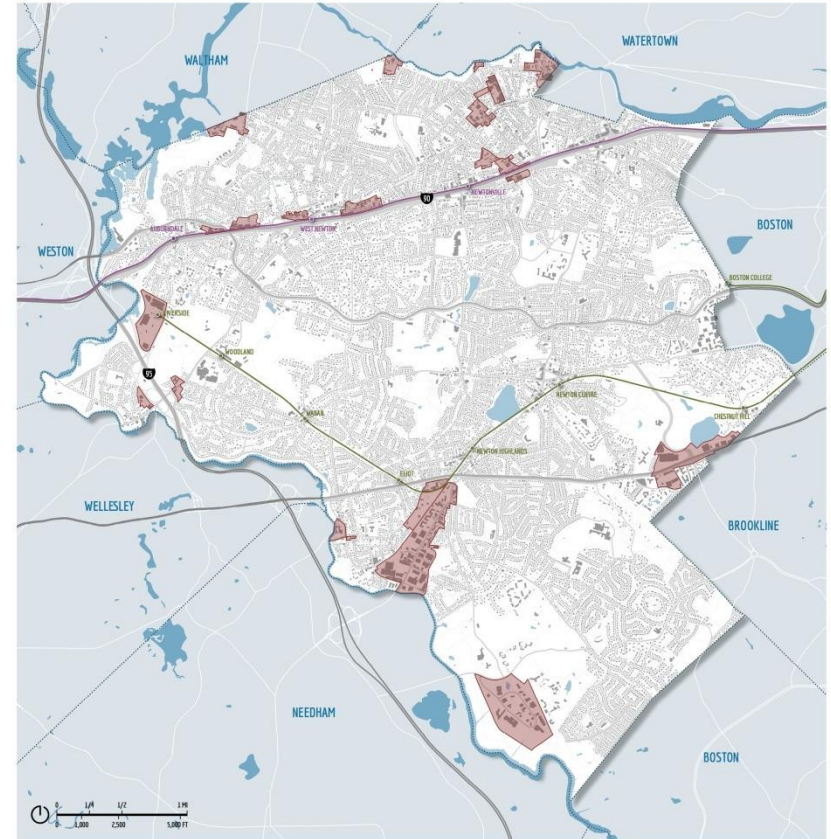
Retail clusters take on a variety of forms, but foremost among them is the shopping mall. This uniquely 20th century development typology takes on a variety of forms in Newton, ranging from indoor suburban shopping mall to strip mall to the more recent pedestrian-oriented type commonly described as a "lifestyle center".

Legacy Industrial Cluster

Legacy industrial clusters are common in historic cities like Newton that have substantial rail and water access. These areas include some of New England's earliest manufacturing facilities and include a unique architectural character and site design. In many cases, these clusters still operate as industrial/manufacturing facilities.

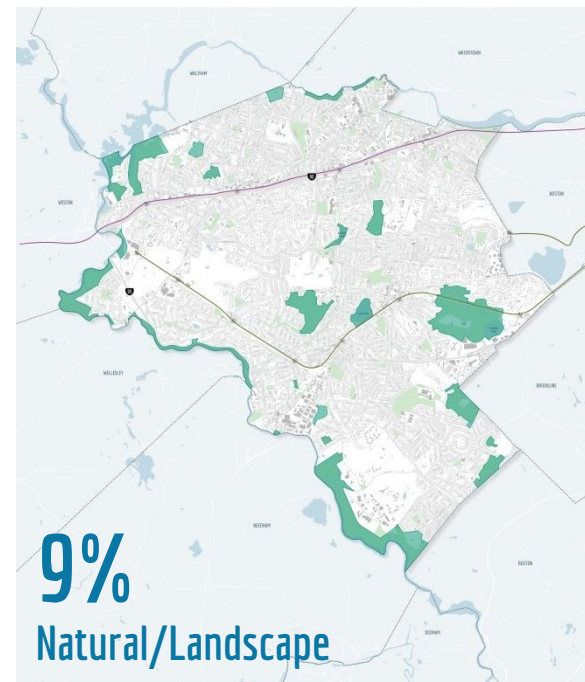
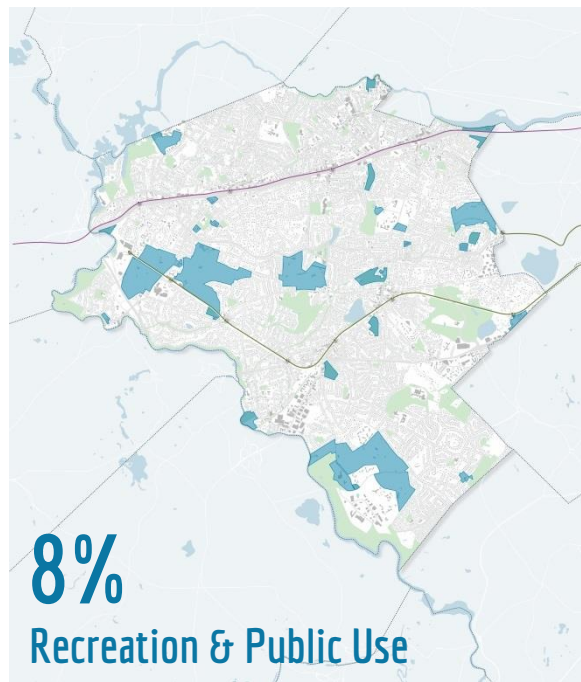
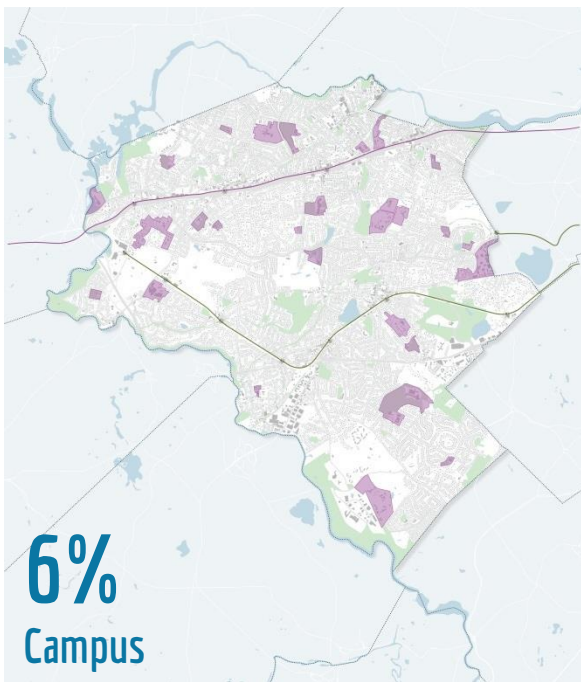
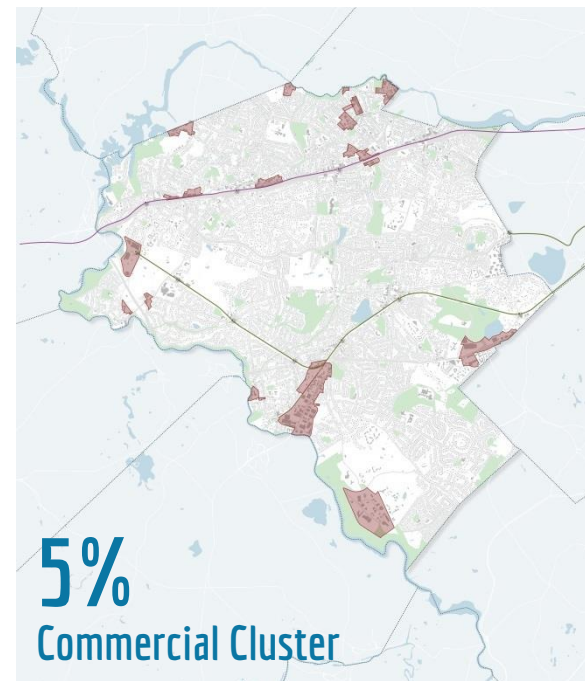
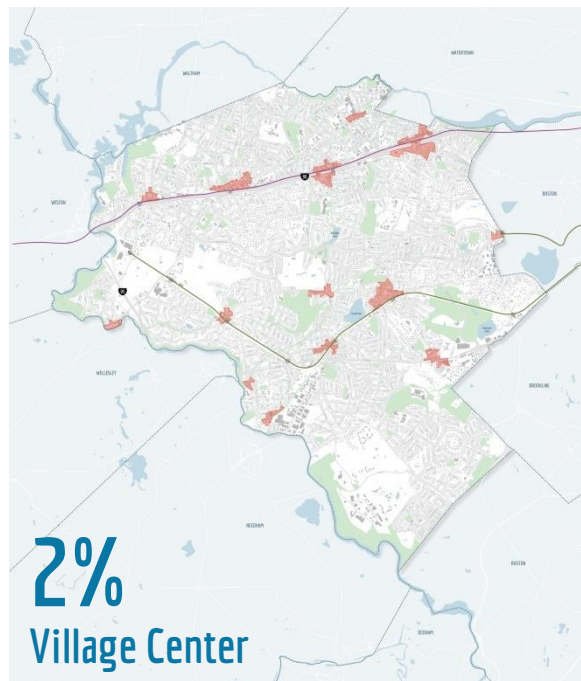
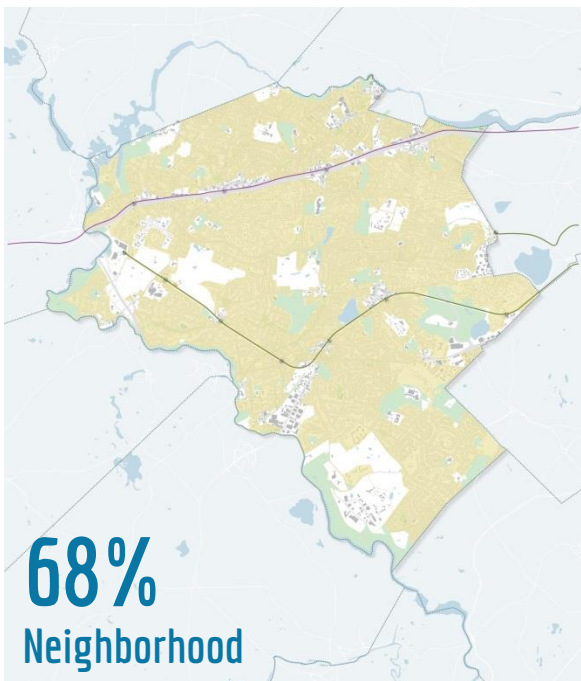
5%

of Newton's total area is designated as Commercial Cluster.



Newton's Commercial Clusters

Similar to village centers, commercial clusters are largely situated along major routes of access, including highways, rail lines, and waterways. Newton's commercial clusters range in development era from the earliest mill facilities to more modern office parks and shopping malls. In some cases, these clusters are in the process of evolving in form and diversifying in use. It is reasonable to expect that some will be more reasonably classified as village centers in the near future.



Citywide Analysis

This analysis shows several data sets at the city scale. The maps are intended to convey the composition of Newton and the systems operating citywide through various data lenses. The layers in these maps reveal patterns and allow users to draw conclusions from a citywide perspective.

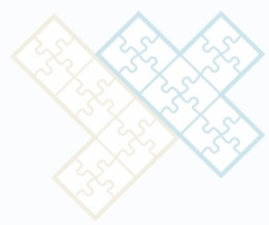


Seeing data sets on the citywide scale is useful for understanding the similarities and differences between Newton's various neighborhoods and centers. To understand these data on a more local scale, they have been broken down by CBA.

Data compiled in the citywide analysis informed the definitions of character patterns and pattern subsets.

Character Patterns & Pattern Subsets

Development types (blue squares in the diagram to the right) are broad categories describing the predominant land use and composition of Newton's neighborhoods and centers. Pattern subsets (gold puzzle pieces in the diagram to the right) are the more specific pieces within a character pattern, describing the predominant use(s) and development composition of Newton's neighborhoods and centers. The pattern book breaks the city into six character patterns: neighborhood, village center, regional center, campus, recreation/public use, and conservation.



Character Patterns

Development types are large, generalized categories describing the predominant use(s) and development composition of Newton's neighborhoods and centers. The pattern book breaks the city into six character patterns: neighborhood, village center, regional center, campus, recreation/public use, and conservation.



Pattern Subsets

Pattern subsets are the more specific and measured patterns comprising each character pattern. Each character pattern contains a menu of detailed subsets describing the scale, form, and density of development as well as the relationship of buildings to each other and to the street.

Context-Based Areas

Context-Based Areas

After reviewing the city's data layers and experiencing firsthand the unique mix of styles, densities, development eras, and uses that comprise Newton's neighborhoods and village centers, the planning team broke the city into seventeen "context-based areas" (CBA). The intent of these areas is to distinguish neighborhoods from one another in order to understand the composition and shared characteristics of development within an area, and of areas relative to each other.



Area Overview

Each CBA is described in terms of its boundaries and development composition.



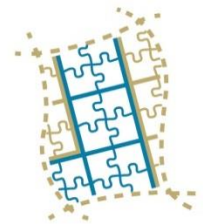
Land Use Analysis

A generalized land use map shows the patterns of development within each CBA. Key development metrics are measured by land use.



Street Type Analysis

Street types are mapped within each CBA and key development metrics are displayed by street type.



Character Patterns & Subsets

Each CBA is broken down and analyzed using the same character patterns and subsets described above.

Context-Based Areas

Context-Based Areas

What is a Context-Based Area?

Newton is a city defined by its villages. Whether resulting from historical settlement patterns, transit and transportation decisions made decades ago, or the interventions of mid-twentieth century city planners, Newton's many villages and centers take on a variety of character types and patterns. To best understand the unique character of the city's many areas, it made sense to use these villages to inform a more localized analysis. As there are no official boundaries to Newton's villages—as well as some debate about how many there are—these context-based areas will serve as the basic unit of geographic analysis for the purposes of this pattern book.

How were the Context-Based Areas generated?

While these 17 areas may not directly correspond to popular understanding of a village's composition, they serve as a good starting point for the in-depth pattern analysis on the following pages. By analyzing patterns in a more finite geography than the city as a whole, we can understand the differences between

areas and compare development dimensions between neighborhoods. Since these serve only as tools for understanding and comparison, context-based areas should be understood only as units of analysis in the pattern book. The following factors generally contributed to the location of the CBA area outlines.



Physical Barriers

Physical barriers include rivers, railways, large open spaces and natural features, and any other permanent features that inhibit movement and connectivity.



Nearest Center

In many of Newton's neighborhoods, one village center defines the area and give identity to the residential neighborhoods surrounding it.



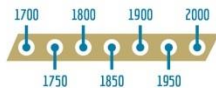
Built & Use Patterns

In some cases, it is easy to identify differences between neighborhoods based on the size, density, and type of development. In other cases, the predominant uses of areas create natural lines of division.



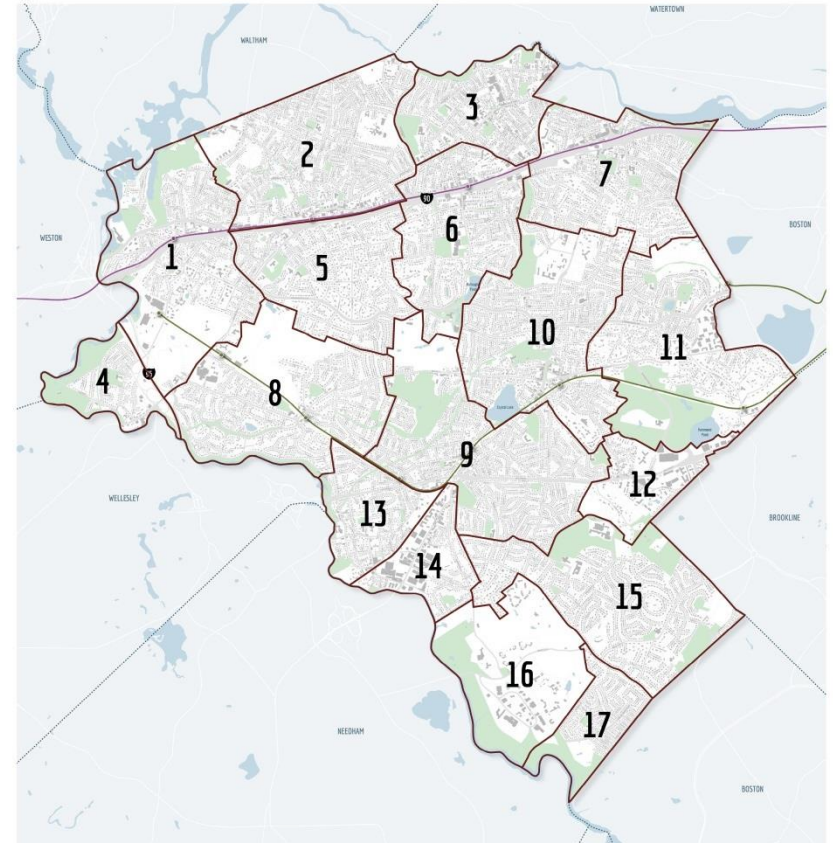
Local Wisdom

Many Newtonians can identify their own villages and neighborhoods. Through close consultation with city staff, residents, and workshop visitors, our analysis considers this local wisdom.



Historical Development

Newton's neighborhoods and villages developed over the course of multiple centuries. By tracking development patterns and key features of development eras, the historical patterns of Newton can serve as significant lines of demarcation between neighborhoods.



Context-Based Areas

The map above shows the 17 context-based areas delineated for the analysis purposes of this pattern book. While, in some cases, these shapes bear a resemblance to the colloquial villages of Newton (as understood by the local population), that popular understanding was only one of the many factors that contributed to their creation. The box to the left explains how the lines fell where you see them here.

Context-Based Areas

Context-Based Areas

2. West Newton Area

Area Overview

The West Newton Area is one of the most diverse collections of neighborhoods and centers in all of Newton. Representing a wide range of uses and building types, and spanning multiple centuries of development, the area has changed significantly over time and represents pieces of many eras and bygone character patterns.

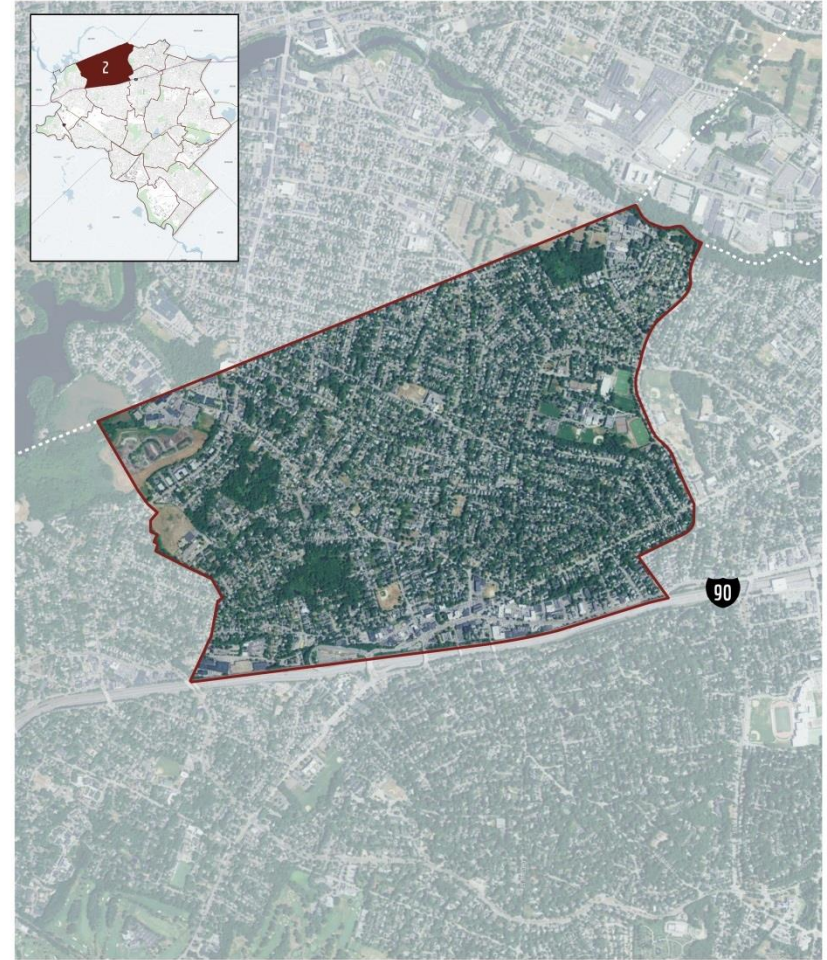
West Newton contains some of the city's most dense and walkable neighborhoods. With an intersection density of 171 intersections per square mile as compared to the city's average of 112 per square mile, the area contains relatively little acreage of permeable surfaces comprising 56% of the area's 939 acres, counting it among the most urban areas of Newton as measured by this metric.

939 total acres

171 intersections per square mile

56% permeable surfaces

\$37k Average tax revenue per acre



Aerial photograph of the West Newton context-based area.

Context-Based Areas

Context-Based Areas

2. West Newton Area

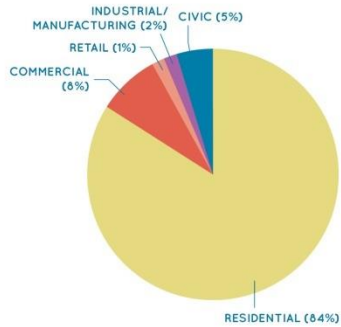
Land Use Analysis

The West Newton area is framed by the Newton city boundary to the north, I-90 to the south, the Burr Elementary school to the west, and Albermarle Road to the east. This area is one of Newton's most diverse with respect to land uses and residential typologies. This area is home to the West Newton village center, which comprises a variety of

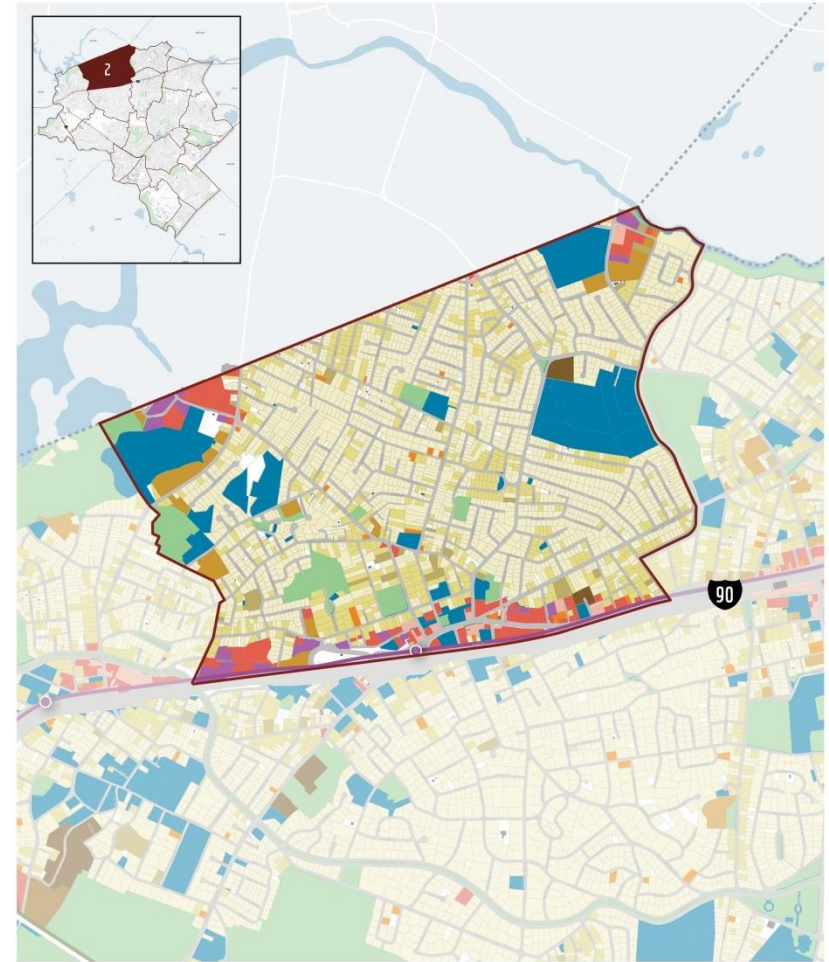
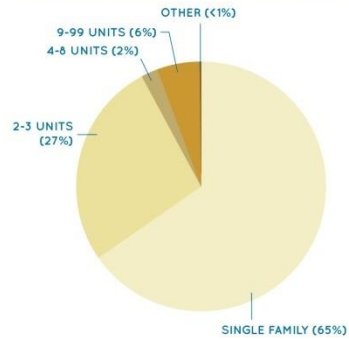
commercial, retail, industrial/manufacturing uses strung along I-90. This is where the greatest concentration of multifamily residential products can be found in this area. As West Newton was one of the earlier areas of the city to develop, building and development lots tend to be smaller than those found in other parts of the city.

USE CATEGORY	PARCEL COUNT	BUILDING SQ. FOOTAGE (TOTAL)	PARCEL AREA (MED.)	BUILDING SQ. FOOTAGE (MED.)	SETBACK (MED.)	STORIES (MED.)
RESIDENTIAL	2,824	10,282,170 SF	7,400 SF	3,200 SF	23.4'	2.0
SINGLE FAMILY	2,044	6,665,019 SF	7,500 SF	3,015 SF	24.3'	2.0
2-3 FAMILY	600	2,735,617 SF	7,274 SF	4,230 SF	20.4'	2.0
MULTIFAMILY (4-8)	21	218,146 SF	17,088 SF	9,081 SF	12.8'	---
MULTIFAMILY (9-99)	17	563,096 SF	45,725 SF	24,570 SF	26.7'	---
MULTIFAMILY (100-)	0	0	---	---	---	---
OTHER	1	20,174 SF	124,845 SF	20,174 SF	---	2.0
COMMERCIAL	96	976,440 SF	10,680 SF	5,396 SF	5.1'	---
RETAIL	21	198,172 SF	9,224 SF	7,750 SF	0'	---
MIXED USE	0	0	---	---	---	---
INDUST./MANUF.	13	206,822 SF	26,404 SF	13,976 SF	10.3'	---
CIVIC/INSTIT.	78	571,602 SF	11,511 SF	---	---	---

Total Development Square Footage by Land Use



Total Residential Development Square Footage by Building Type



Context-Based Areas

Context-Based Areas

2. West Newton Area

Average Development Form Metrics by Street Type

The West Newton area includes at least one of each major street type—arterial, major collector, minor collector, and local. As is the case with many of Newton's village centers, the West Newton village center developed at the confluence of several major roadways, including Washington Street, Watertown Street, and Waltham Street. As is typical, the greatest development density is clustered within this village

center, with most of the lower density residential products distributed along minor collector and local streets to the north of the West Newton village center. As shown in the table below, dimensional patterns can be seen with respect to the various uses and building types that have built up along each street type within this area.

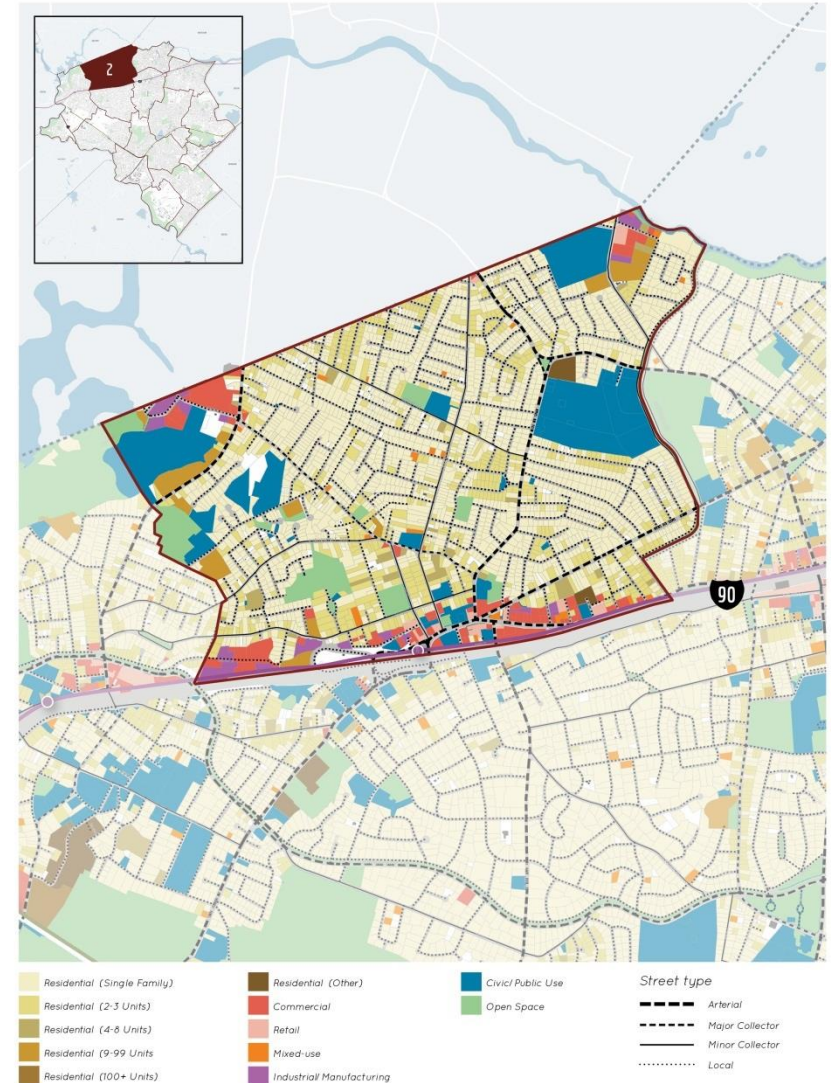
USE CATEGORY	ARTERIAL ROAD				MAJOR COLLECTOR STREET				MINOR COLLECTOR STREET				LOCAL STREET			
	GSF MED.	PARCEL AREA MED.	STORIES MED.	SETBACK MED.	GSF MED.	PARCEL AREA MED.	STORIES MED.	SETBACK MED.	GSF MED.	PARCEL AREA MED.	STORIES MED.	SETBACK MED.	GSF MED.	PARCEL AREA MED.	STORIES MED.	SETBACK MED.
RESIDENTIAL	3,800	8,437	2.0	24.6'	3,118	6,983	2.0	19.1'	3,324	7,929	2.0	21.3'	3,144	7,300	2.0	23.7'
SINGLE FAMILY	3,389	8,303	2.0	25.0'	2,685	6,200	2.0	21.5'	3,001	7,883	2.0	22.4'	2,994	7,437	2.0	24.4'
2-3 UNITS	4,611	8,835	2.0	24.0'	3,926	7,982	2.0	17.2'	4,243	8,518	2.0	20.1'	4,200	7,026	2.0	20.3'
4-8 UNITS	7,876	18,363	---	47.0'	12,092	17,088	---	11.1'	13,248	21,398	---	10.4'	7,056	13,290	---	21.7'
9-99 UNITS	21,120	42,377	---	22.4'	25,653	21,472	---	45.7'	43,092	77,478	---	25.9'	25,610	57,035	---	35.0'
100+ UNITS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OTHER	20,174	124,845	2.0	0'	---	---	---	---	---	---	---	---	---	---	---	---
COMMERCIAL	---	---	---	---	5,327	7,176	---	2.8'	4,984	13,617	---	6.1'	5,786	14,289	---	4.8'
RETAIL	6,372	8,910	---	0'	---	---	---	---	6,578	21,140	---	6.9'	22,296	13,000	---	6.1'
MIXED USE	---	---	---	---	---	---	---	---	12,478	31,668	---	17.0'	19,131	26,327	---	13.0'
INDUST./MANUF.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CIVIC/INSTIT.	3,480	21,154	---	22.1'	---	70,560	---	---	---	163,837	---	0'	---	9,040	---	---



Washington Street in West Newton (2016)



Washington Street in West Newton (1920's)



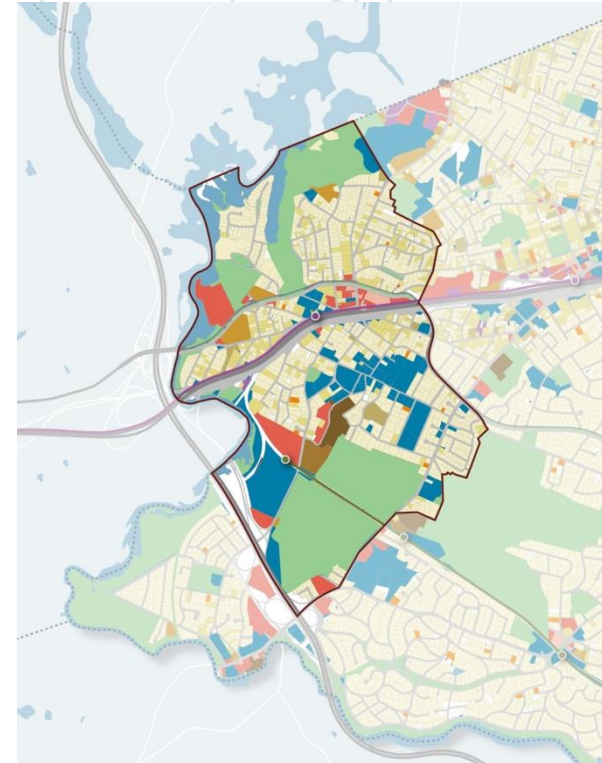


Pattern Book Trivia

Question 8:

What percentage of the Auburndale CBA development (as measured by square footage) is residential?

- A. 32%
- B. 92%
- C. 72%
- D. 46%



Question 8:

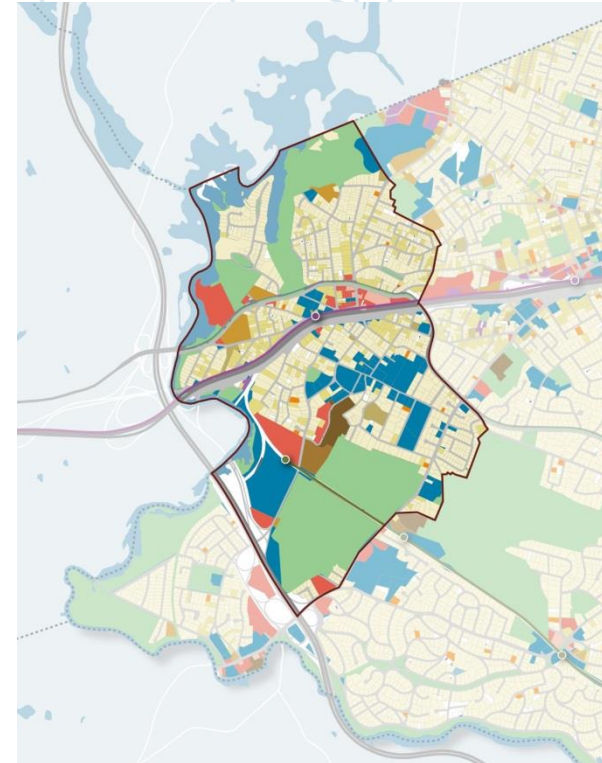
What percentage of the Auburndale CBA development (as measured by square footage) is residential?

- A. 32%
- B. 92%
- C. 72%**
- D. 46%

Question 9:

What percentage of the Auburndale CBA residential development (as measured by square footage) is single family?

- A. 19%
- B. 65%
- C. 49%
- D. 83%



Question 9:

What percentage of the Auburndale CBA residential development (as measured by square footage) is single family?

A. 19%

B. 65%

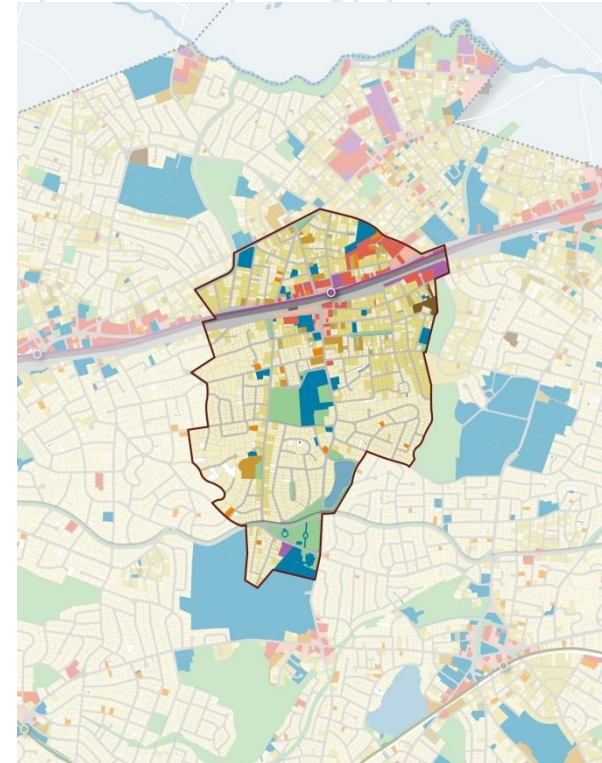
C. 49%

D. 83%

Question 10:

What is the median square footage of a residential parcel in the Newtonville CBA?

- A. 6,500 SF
- B. 8,900 SF
- C. 12,300 SF
- D. 15,500 SF



Question 10:

What is the median square footage of a residential parcel in the Newtonville CBA?

A. 6,500 SF

B. 8,900 SF

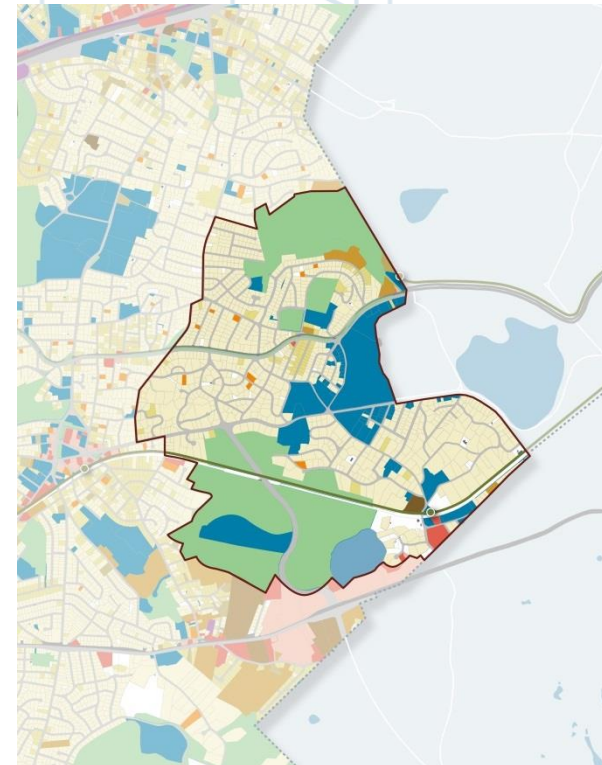
C. 12,300 SF

D. 15,500 SF

Question 11:

What is the median setback of a single family home in the Chestnut Hill CBA?

- A. 20 FT
- B. 25 FT
- C. 30 FT
- D. 45 FT



Question 11:

What is the median setback of a single family home in the Chestnut Hill CBA?

A. 20 FT

B. 25 FT

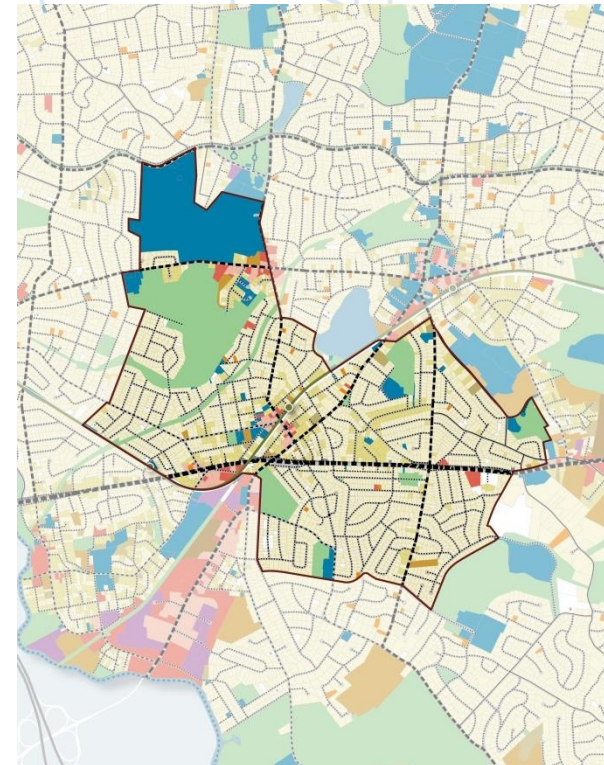
C. 30 FT

D. 45 FT

Question 12:

What is the median square footage of a single family home on a local street in the Newton Highlands CBA?

- A. 2,540 SF
- B. 1,990 SF
- C. 5,220 SF
- D. 3,660 SF



Question 12:

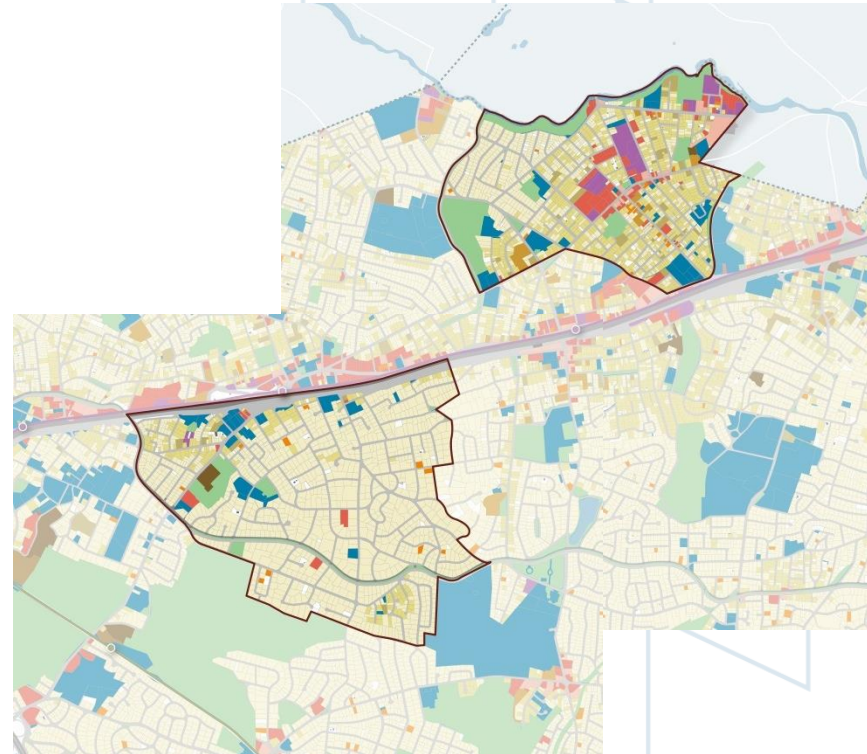
What is the median square footage of a single family home on a local street in the Newton Highlands CBA?

- A. 2,540 SF
- B. 1,990 SF
- C. 5,220 SF
- D. 3,660 SF**

Question 13:

How much larger is the median single family home in the West Newton Hill CBA than the Nonantum CBA?

- A. 512 SF
- B. 1,662 SF
- C. 2,081 SF
- D. 2,421 SF



Question 13:

How much larger is the median single family home in the West Newton Hill CBA than the Nonantum CBA?

- A. 512 SF
- B. 1,662 SF
- C. 2,081 SF
- D. 2,421 SF**



Want a closer look?

We've only covered the very basics today. To download and review the full draft pattern book, go to:

[www.courbanize.com/
newtonzoning](http://www.courbanize.com/newtonzoning)

And click on the “info” tab at the top.

A blurred background image of a brick building with a large tree in the foreground. The text is overlaid on the right side of the image.

Drafting the Zoning Ordinance

Phase 6: Draft Zoning Ordinance

Track 1:

Zoning districts and dimensional standards

- Base and overlay zones informed by pattern book and neighborhood context
- By-right vs. special permit allowed uses and densities
- Urban design standards (shape, bulk, design, relationship to street)
- Areas for growth
- Transition zones

Track 2:

Development standards/policies

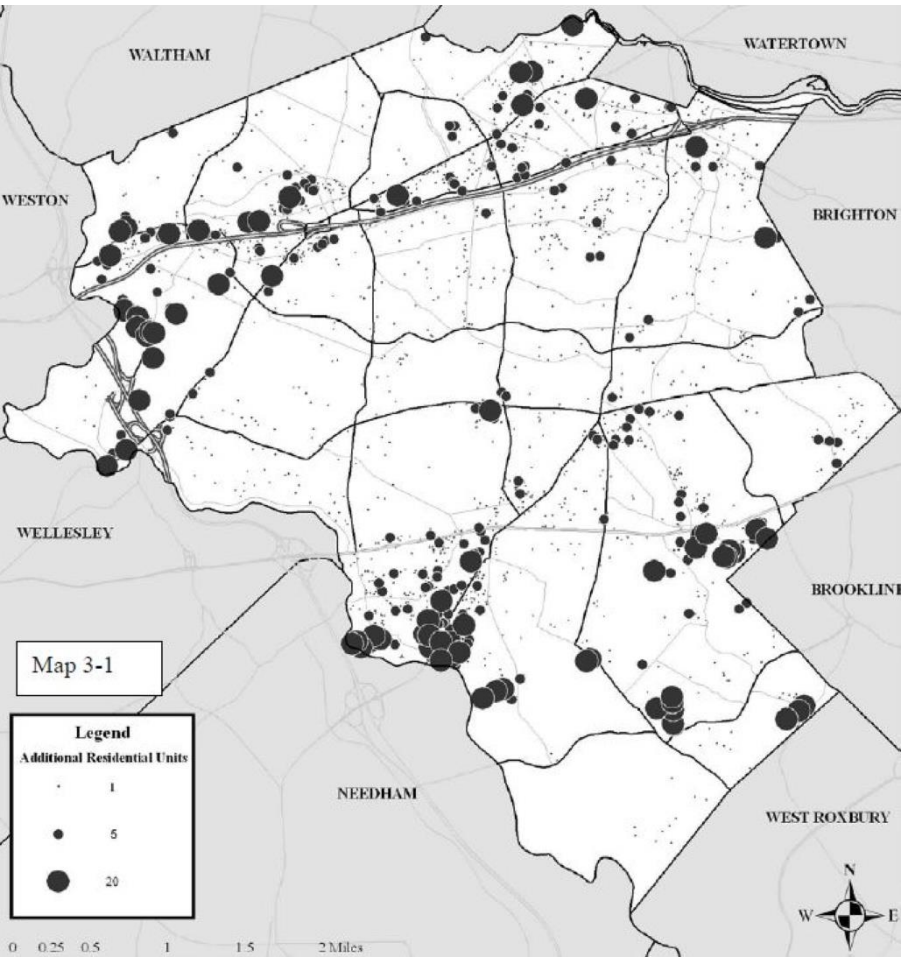
- Sign standards
- Parking regulations
- Inclusionary zoning
- Development incentives
- Public and open space requirements
- Natural resources
- Sustainability/Energy efficiency/retrofitting
- Stormwater management
- Lighting/Noise

Track 3:

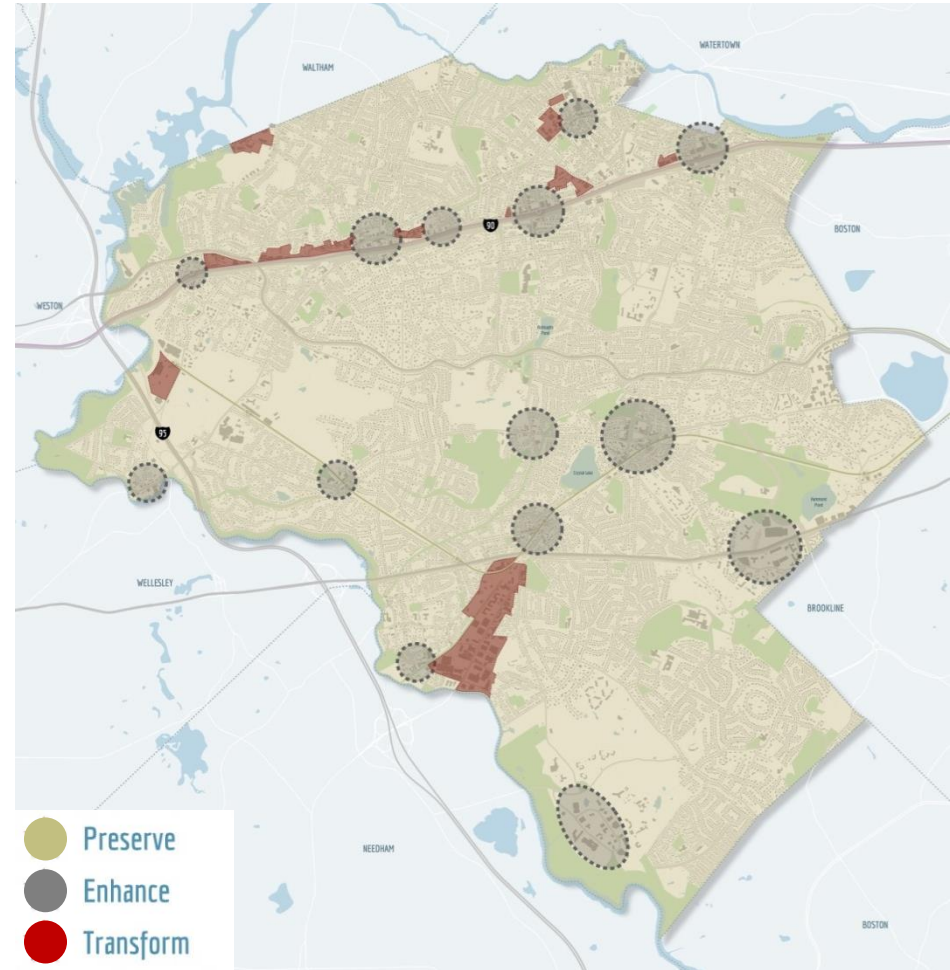
Administration and review procedures

- Special permit approval process
- Rules for existing nonconforming properties
- Institutional master plans

Preserve, Enhance, Transform

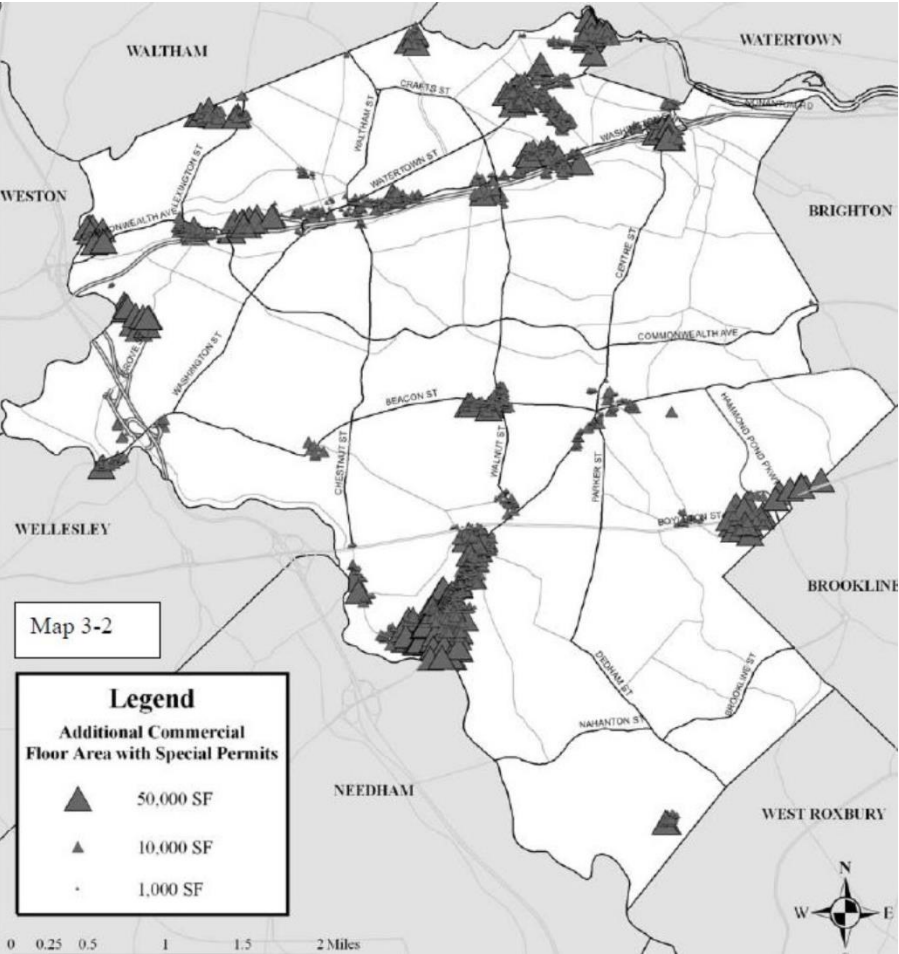


Additional Dwelling Units at Build Out

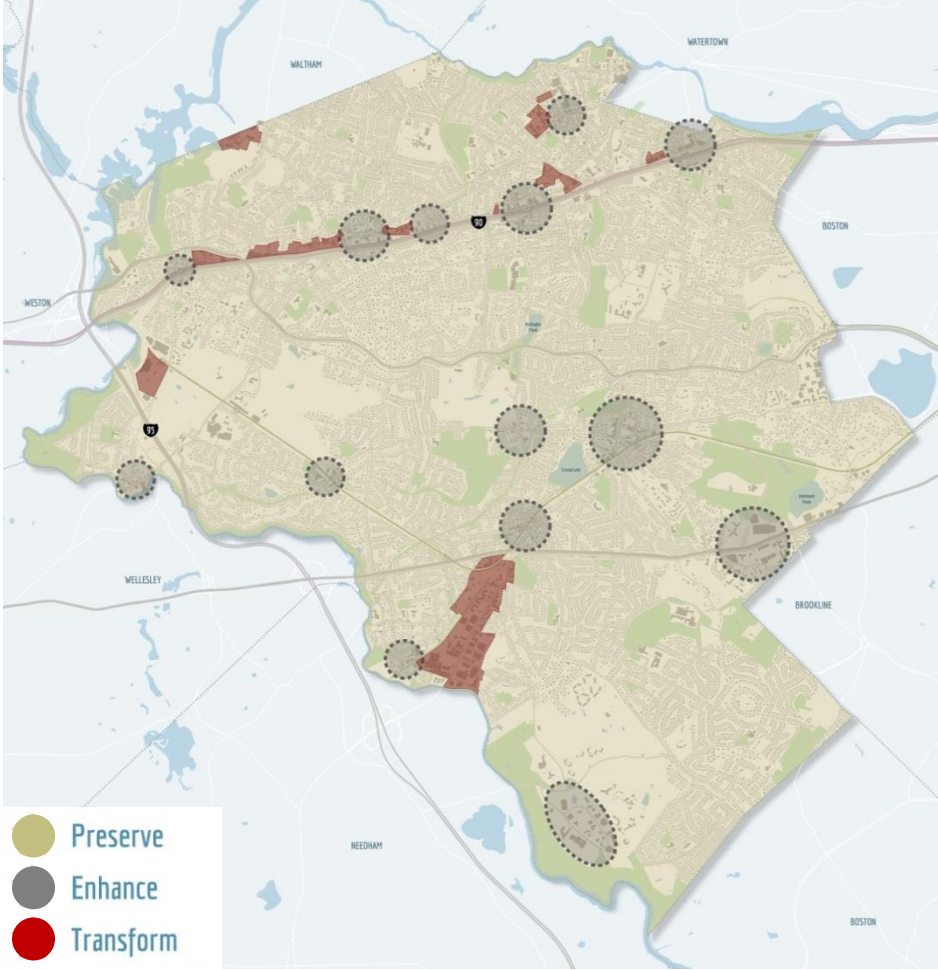


Base Interpretation

Preserve, Enhance, Transform



Additional Commercial Floor Area at Build Out



Base Interpretation



Q & A

A blurred night scene of a city street. In the foreground, there is a red and white striped barrier. The background shows out-of-focus lights and buildings, suggesting an urban environment at night.

Table-top Sessions

Parking Standards



Inclusionary Zoning



Environment



Public Art



Design Review



Economic Development



Other





Next Steps