California Street Manufacturing District Zoning Study

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Introduction

The California Street Manufacturing District Zoning Study proposes zoning recommendations to encourage a balanced mix of commercial, small-scale industrial, and residential development in an underdeveloped, historically industrial zone along the Charles River.

In drawing upon historic land development patterns, market data, zoning ordinances, and community input to document a long-term vision for the area, the study presents a prime opportunity to reimagine the district for more dynamic 21st century uses that can attract new businesses and foster stronger connections between the district and the surrounding residential neighborhoods.

The study was prompted in response to the conversion of 3.4 acres of industrial land in the district to residential uses through the state's Chapter 40B program. The two buildings under construction at 2-4 Los Angeles Street will house 204 rental apartments, 51 of which are permanently designated as affordable under the state program. In a city with so little commercially zoned land, and with a tax rate for commercial property that is nearly double the residential rate, ensuring that a considerable portion of the district remains preserved for commercial uses is critical to Newton's fiscal health.

To help plan for the future, this study provides research and analysis to the City staff and the City Council which oversees land use zoning. The goal of this study is to create zoning recommendations that will:

- Encourage the growth of the commercial tax base
- Enable the creation of appropriately-scaled housing, and
- Ensure that some land is preserved for 21st century commercial and industrial purposes, including light manufacturing and flexible spaces for creative economy businesses

This report is the culmination of nine months of work toward this effort by Utile, Inc, an urban design and planning firm, and Landwise Advisors, an economic development consulting firm. The study was funded by a state grant from the Community One Stop for Growth program, which focuses on economic development investments.

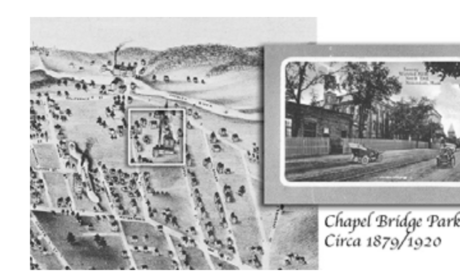
Site History and Context

Newton's patterns of development are intertwined with its history as a collection of villages - many of which had textile or other mills at their hearts - with streets and neighborhoods laid out to promote efficient adjacencies and ease of access between the villages and the Greater Boston area.

Building age map highlighting converted former mill buildings

Though the industrial uses of the California Street Manufacturing District have evolved into an eclectic collection of manufacturing and other related businesses, the area is typical of other small-scale industrial districts in New England that relied upon adjacency to residential neighborhoods to be conveniently accessible for their workforces.

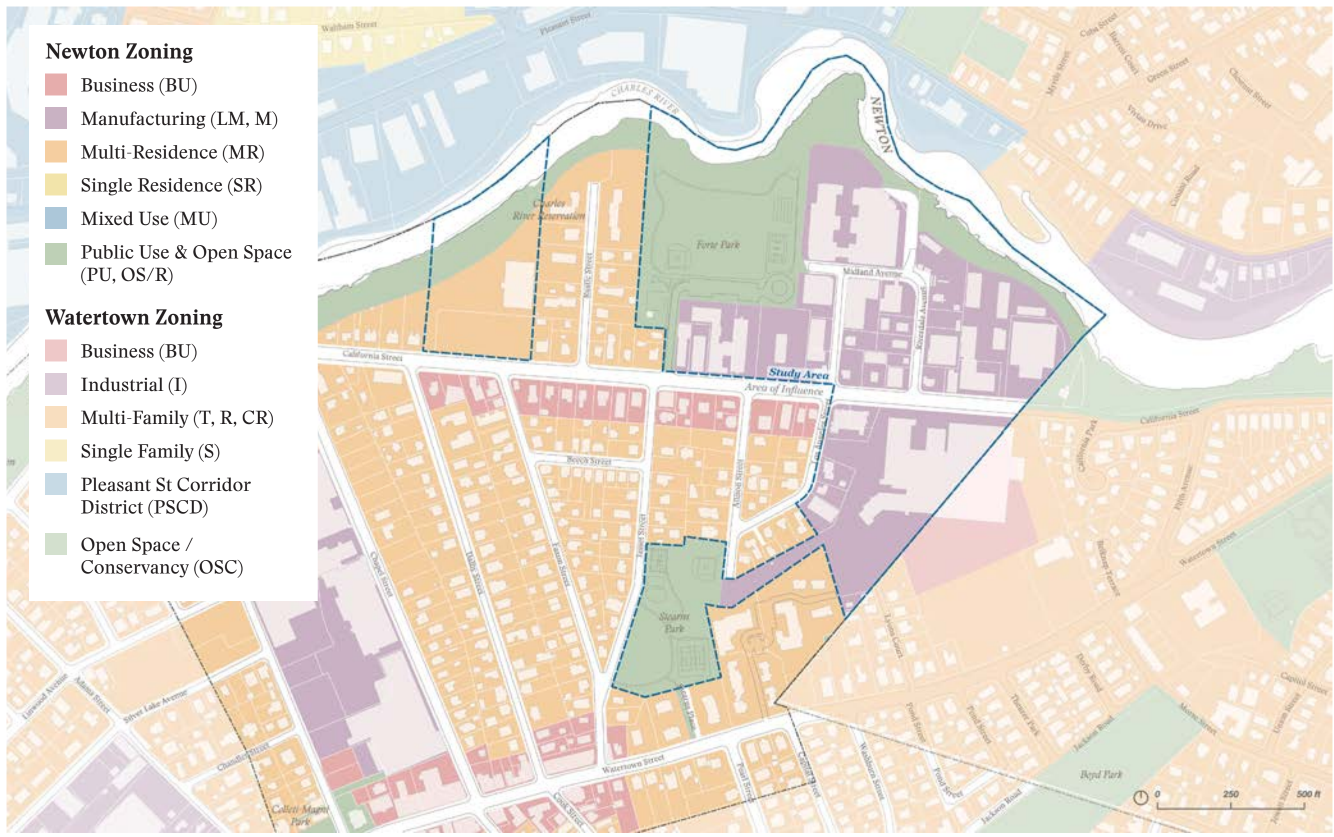
The California Street area is a part of the Charles River Mill District, which includes eight renovated historic mill buildings, many of which now house a variety of uses such as office, technology, manufacturing, and light industrial space, among retail and residential uses.



Nonantum Worsted Mills, built in the 1850s

Current Zoning

Present-day land use regulations date to the 1920s, a period when industrial operations could be dangerous and often generated noise and pollution. The underlying regulations for “manufacturing” uses around California Street have not changed, greatly limiting what can be located in the district today.



Current zoning map of Watertown and Newton

Municipal zoning was created in the early 20th century to separate industrial operations from residential neighborhoods and to create distance between conflicting uses. However, early zoning could only focus on the types of uses that existed at that time, unable to anticipate the benefits that a synergistic mix of uses would bring to both the district and the City.

The outdated rules prohibit a wide range of uses that might now be welcome in the neighborhood: animal grooming, banking, dry cleaning, hotels, personal service establishments like hair salons, laboratories, research & development firms, restaurants, or retailers. Some of these businesses have existed in this area in some form prior to the current regulations, however the current zoning greatly restricts what can be located here today.

Existing businesses in the district

Market Considerations

The long-term fiscal health of any municipality requires a well-balanced mix of residential and commercial tax revenue. Newton is largely residential, so most of the municipal tax burden falls on homeowners.

That share has increased over the past 30 years, from 72.7% in 1992 to 83.3% today. With commercial development lagging relative to residential development, the City's residents may bear an increasing share of the property tax burden into the future.

Newton has a split tax rate, which means commercial and industrial properties pay almost twice as much tax per assessed value as residential properties. Less than one of Newton's 18.2 square miles (4.5%) is commercial property. That includes all of the village centers, commercial corridors, and office parks combined. Industrial uses are even more restricted, allowed on only 73 (0.6%) of the city's 11,618.6 acres.

Given this significant imbalance, the California Street Manufacturing District is one of the largest remaining opportunity areas in Newton to create new commercial and industrial development. Located in close proximity to a commercial and industrial corridor that borders the Charles River, the study area lies at the nexus of Newton, Watertown and Waltham. This area has seen significant redevelopment in recent years and is likely to experience continued development pressure for both multi-family residential and life science lab development.

Apart from the large 40B multi-family residential development under construction on 2-4 Los Angeles Street, a 20-unit luxury condominium building was recently completed on 68 Los Angeles Street. There are also several planned life science developments in nearby Watertown, including the conversion of the former Russo's property at 560 and 580 Pleasant Street, the adaptive reuse of 64 Pleasant Street, and the new construction of two buildings on 66 Galen Street and 99 Water Street.

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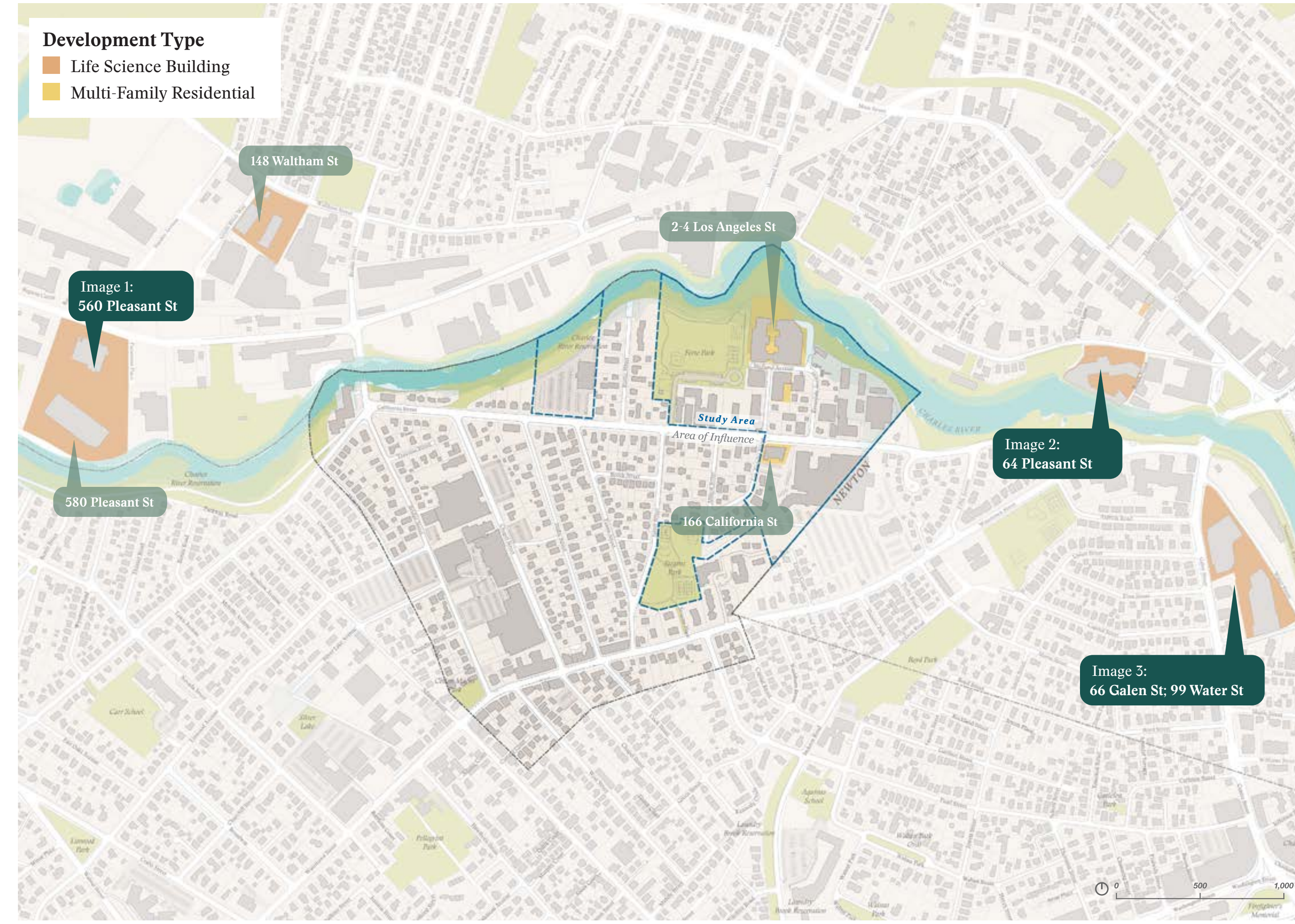

Recent life science and multi-family buildings proposed and under construction

Image 1:
560 Pleasant St, Watertown
R+D Life Science

Image 2:
64 Pleasant St, Watertown
Adaptive Re-use R+D Life Science

Image 3:
66 Galen St & 99 Water St, Watertown
R+D Life Science and Commercial

Redevelopment Scenarios

In order to craft zoning recommendations for future development in the district, a series of redevelopment scenarios were drafted in 3-D and analyzed for their contextuality to the neighborhood as well as their market viability. The scenarios tested considerations related to commercial, small-scale industrial, and residential uses, as well as building form, building placement, and parking, using the draft village center rezoning design standards as a starting point for creating appropriately scaled mixed-use development in the district.

The redevelopment scenarios are focused on a study area in a stretch of the district that lies north of California Street. Soft sites were selected based on their likelihood of redevelopment in the near future, using such criteria as parcel ownership, lot size, loading and circulation, and topography. The FEMA flood risk adjacent to the Charles River was another key factor in the site selection and placement of the redevelopment scenarios (see the Appendix for a series of maps that analyze these site considerations). The current site of Nonantum Post 440, toward the western portion of the district, was not tested as part of the redevelopment scenarios, but is relevant to this study given that it presents a long-term opportunity area that could use this report's recommendations toward future development.

Boutique Industrial Uses

- Small-batch manufacturing
- Make and sell with retail showroom
- Woodworking
- Metalworking, machining, fabrication
- Product design and 3D-printing
- Apparel, textiles, and leather
- Ceramics
- Brewery/Brewpub
- Local food production, packaging, bakeries
- Printing

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Building Types and Potential Development

The redevelopment scenarios explore options for new commercial and industrial development, as well as residential development, calibrating a careful balance between these uses in order to capitalize on the opportunity to preserve and expand the City's commercial tax base.

Part of this effort looked to examples of what 21st century commercial and industrial uses could look like and how they could fit into future development in such a way that would contribute positively to a vibrant and active public realm. Allowing for boutique and light industrial uses in high-bay ground floors of new commercial developments would provide flexibility for creative economy and small manufacturing businesses that might need space for prototyping and other project-based work. These uses could have a small accessory retail component to interface with the public in a dynamic way at the street level.

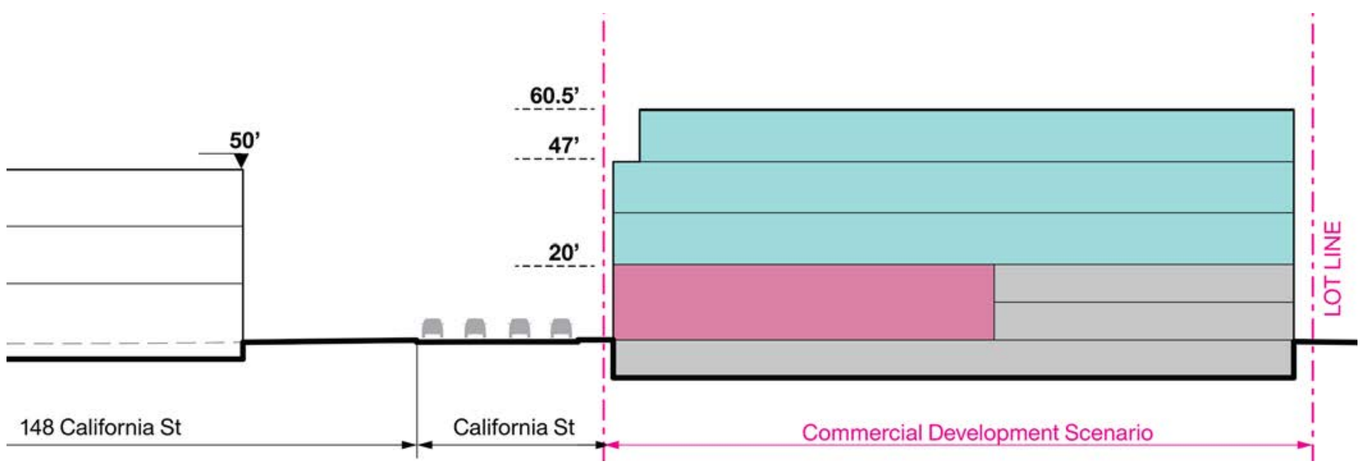
There are several local precedents for small-scale light industrial districts that are well integrated within their neighborhood. Somernova, a 7.4-acre innovation campus in Somerville, is an example of an eclectic district that combines technology and manufacturing, food and beverage, art and design, and fitness and wellness with community programming and neighborhood investment. Another noteworthy precedent is the Norwood Space Center, a 300,000 square foot mixed-use mill building campus in Norwood that similarly houses a mix of retail, commercial, creative, and entertainment space catering to a wide range of business types and needs.

Light Industrial Uses

- R&D
- Industrial Services
- Distribution
- Light Manufacturing
- Building Materials sale/storage
- Warehousing
- Contractors: plumbing, electrical

Economic Analysis

Market research shows that traditional office uses are not attractive or feasible at this time, and that lab development continues to be a profitable land use under current economic conditions. Although lab buildings are expensive to build, the high rents they are able to command allow them to cross-subsidize the dynamic boutique and light industrial ground floor uses desired within the district - a critical relationship given that those uses are not otherwise profitable for development on their own.



Preferred commercial redevelopment scenario, 3:1

- R+D Lab
- Garage
- Retail
- Boutique / Light Industrial

Both residential and commercial/industrial redevelopment scenarios are proposed for the district as part of this study. However, only the commercial/industrial development prototypes were included for economic analysis. The residential redevelopment scenarios have already been rigorously tested as part of Newton's village center rezoning process. They follow the Village Center 3 overlay district standards, which specify a maximum height of 4.5 stories and footprint of 15,000 square feet.

After testing the economic viability of three options for commercial redevelopment, the 3:1 scenario emerged as the most compelling for developers to build. This option balances the amount of structured parking and ground level retail space relative to the amount of upper story lab. It also creates enough financial value for the developer, allows for ample and active ground floor uses, and keeps the buildings at a scale that is contextual with the existing neighborhood fabric.

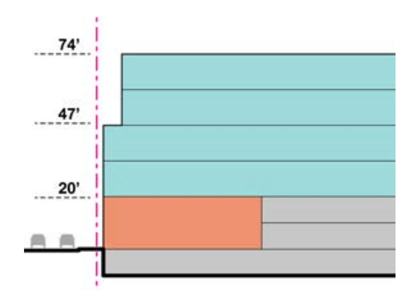
While the 3:1 scenario is the preferred option, this study includes the following scenario comparisons. With commercial R+D lab space assumed as the highest and best use for the upper floors, Landwise performed economic analysis on three commercial redevelopment scenarios in order to determine an appropriate height and building footprint recommendation for new commercial development. The options for these scenarios held the following items constant:

- Floorplates of around 25,000 square feet, which is acceptable for R+D lab use, though smaller than the ideal range of 30,000-40,000 square feet for lab floorplates
- Parking ratio of two spaces per 1,000 square feet for lab tenants, based on what developers are likely to build. Parking is accommodated in these scenarios with a two-story parking podium and one level of basement.

The following commercial redevelopment scenarios were tested:

4:1

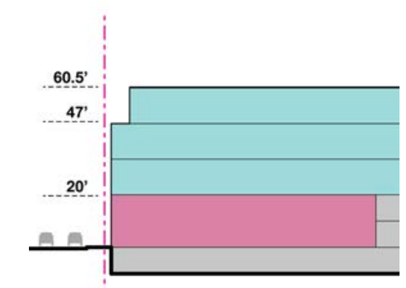
4-over-1: Four levels of lab over ground floor retail space



Sites (Acres)	1.05
FAR	2.34
Commercial Efficiency	85%
Total GSF (building only)	107,269
Total GSF (including parking)	190,987
Commercial Parking Ratio	2.42
Parking Cost (podium + underground)	$70,000
Ground Floor Rent / SF NNN	$45
Lab Rent / SF NNN	$90
Land Cost (per land foot)	$85
Hard Cost (Includes fit out)	$540
Tenant Fit Out Cost	$200
Soft Cost / Site	25%
Total Cost / GSF (Parking and Building)	$627
Total Cost / GSF (Building Only)	$1,116
Parking Fee	$100
Cap Rate	5.50%
Return on Cost	6.09%
Value Created	$12,912,416

3:1

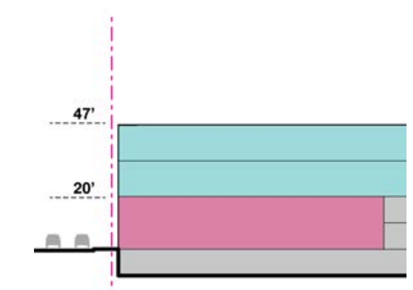
3-over-1: Three levels of lab over ground floor boutique/light industrial space with limited accessory retail space



Sites (Acres)	1.05
FAR	1.91
Commercial Efficiency	85%
Total GSF (building only)	87,409
Total GSF (including parking)	150,077
Commercial Parking Ratio	2.09
Parking Cost (podium + underground)	$70,000
Ground Floor Rent / SF NNN	$45
Lab Rent / SF NNN	$90
Land Cost (per land foot)	$85
Hard Cost (Includes fit out)	$540
Tenant Fit Out Cost	$200
Soft Cost / Site	25%
Total Cost / GSF (Parking and Building)	$643
Total Cost / GSF (Building Only)	$1,103
Parking Fee	$100
Cap Rate	5.50%
Return on Cost	6.33%
Value Created	$14,470,784

2:1

2-over-1: Two levels of lab over ground floor boutique/light industrial space with limited accessory retail space



Sites (Acres)	1.05
FAR	1.39
Commercial Efficiency	85%
Total GSF (building only)	63,848
Total GSF (including parking)	126,453
Commercial Parking Ratio	2.88
Parking Cost (podium + underground)	$70,000
Ground Floor Rent / SF NNN	$45
Lab Rent / SF NNN	$90
Land Cost (per land foot)	$85
Hard Cost (Includes fit out)	$540
Tenant Fit Out Cost	$200
Soft Cost / Site	25%
Total Cost / GSF (Parking and Building)	$584
Total Cost / GSF (Building Only)	$1,156
Parking Fee	$100
Cap Rate	5.50%
Return on Cost	6.09%
Value Created	$7,931,580

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Zoning Recommendations

The zoning recommendations that follow are the result of a monthslong iterative process, informed by community input, real estate market trends, and financial analysis, to encourage a balanced mix of commercial, small-scale industrial and residential development that is not only context-appropriate and visually compelling, but also market-feasible.

Given the City's critical need to keep part of the district for commercial and industrial uses, the team mapped out zones where such uses could be preserved, designating an area east of Los Angeles Street as a zone for commercial uses only. This area is well-situated to accommodate commercial R+D lab buildings with light industrial ground floor tenants, due to its proximity to the booming Watertown Square area and its MBTA bus connections. Concentrating future commercial development in this area will also mitigate the extent to which new traffic comes into the district, and new development within this zone would be more in keeping with the larger scale of the 40B multi-family residential project and the commercial complex at 150 California Street.

A more flexible mix of uses is proposed for the area west of Los Angeles Street, allowing for residential, commercial and mixed-use development. Multi-family residential development in this zone could house active ground floor uses such as restaurants, cafes, and other neighborhood-oriented retail that would complement the existing retail on the southern portion of California Street. Future development in this area should create urban form whose massing, facade articulation and relationship to the street is responsive to the smaller-scale residential fabric around it.

The zoning recommendations include several design standards to help shape desirable outcomes for future development, including setting maximum floorplate size, maximum number of stories, and minimum building separation distance. Additional standards apply for new development with frontage along California Street, including maximum continuous facade length and half-story stepbacks, in order to ensure that future development is appropriately broken down in scale. The zoning additionally proposes maximum parking ratios based on market analysis of nearby recent construction in the district and in Watertown.

Aside from shaping building form, public realm considerations and access to the district's parks and natural resources are also of key importance in the recommended zoning. To improve north-south access to the Charles River Greenway, new development on lots greater than 150'-wide with frontage along both California Street and the river shall provide a pedestrian connection.

Building Floorplate & Height

Building Floorplate Area, max.	
Commercial	30,000 sf
Residential	15,000 sf
Any Development West of Los Angeles Street	15,000 sf

Building Height max. (along California St)	
Commercial	4 stories (2.5 : 1)
Residential	

Building Height max. (70' N. of California St)	
Commercial	5 stories (3.5 : 1)
Residential	

Half-story Stepback, min.	
Commercial	7'
Residential	

Building Placement

Commercial Building Setbacks	
Front, min.	0'
Side, min.	5'
Rear, min.	5'

Residential Building Setbacks	
Front, min.	0' / 10'
Side, min.	5'
Rear, min.	5'

Building Separation Distance, min.	
Commercial	25'
Residential	

Note: Lots > 150' in width abutting California St and the river shall provide public connection

Facade articulation

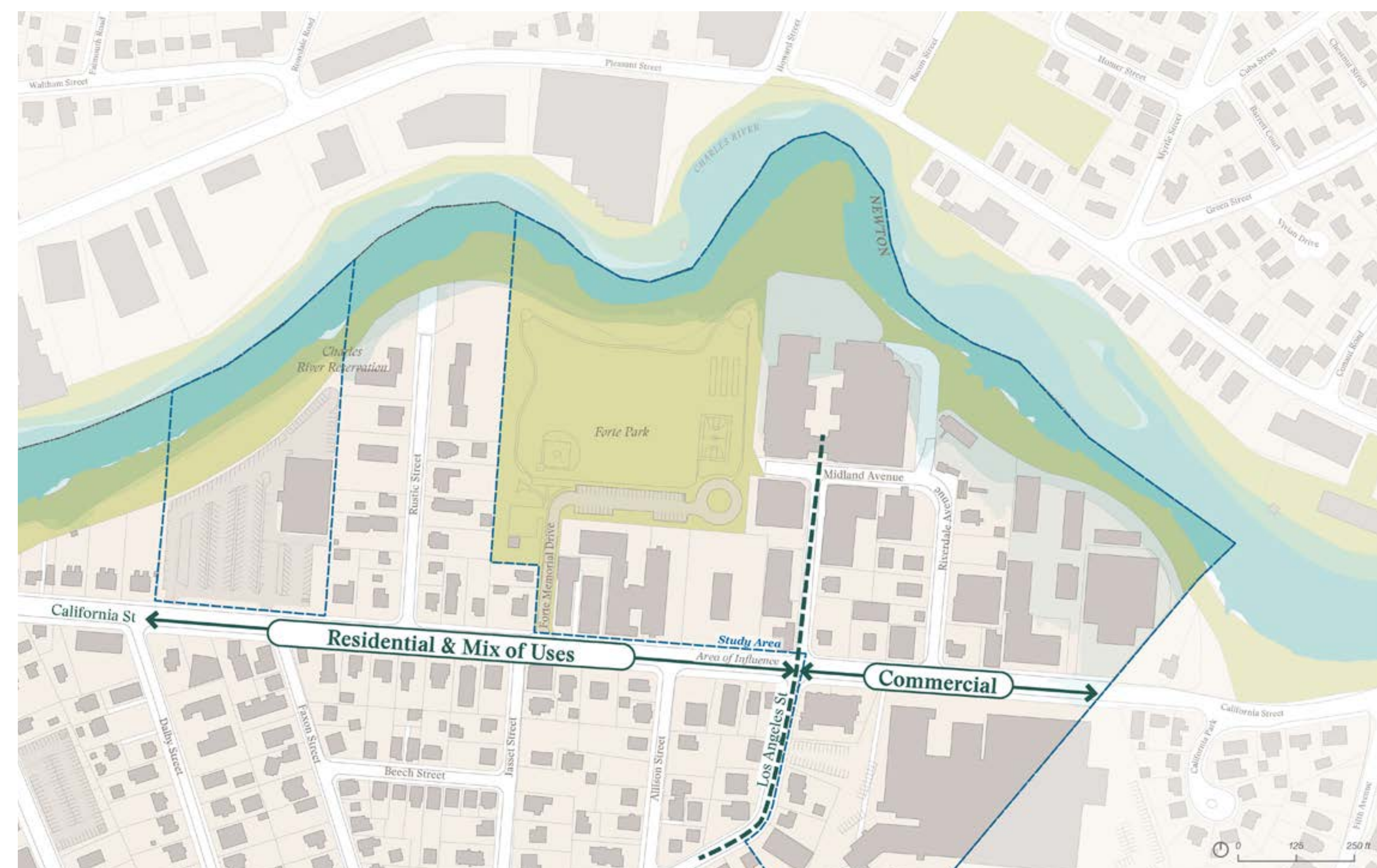
*Continuous Facade Length, max.	
Commercial	140'
Residential	100'

* Applies to facades along California Street

Facade Recess / Offset, min.	
Commercial	7' wide x 10' deep
Residential	

Parking Requirements

Parking Ratios, max.	
Ground Floor Retail	None
Commercial	2 / 1,000 sf
Residential	1 / unit



Zones of primary uses

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In this example of a potential commercial building under the recommended zoning, two and a half stories of lab R+D space rest on top of a high bay industrial ground floor that hosts a distillery and associated tasting room and retail space along California Street. Parking is accommodated in a garage toward the rear of the building, adjacent to a loading zone tucked away from public view.

1 Lab R+D
2 Accessory Retail
3 High Bay Boutique / Light Industrial
4 Parking Garage
5 Loading
6 Recessed Mechanical Penthouse
7 Half-story Stepback
8 Multi-family Residential

Cross-section through potential R+D lab / light industrial commercial building

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- Residential
- R+D Lab
- Garage
- Retail
- Boutique / Light Industrial

1 Upper level R+D lab spaces with high bay ground floor accessory retail and boutique/light industrial uses

2 Multi-family residential development with ground floor retail space

3 Activated ground floor uses and public realm improvements along California Street

4 Parking and loading located away from the front elevation along California Street

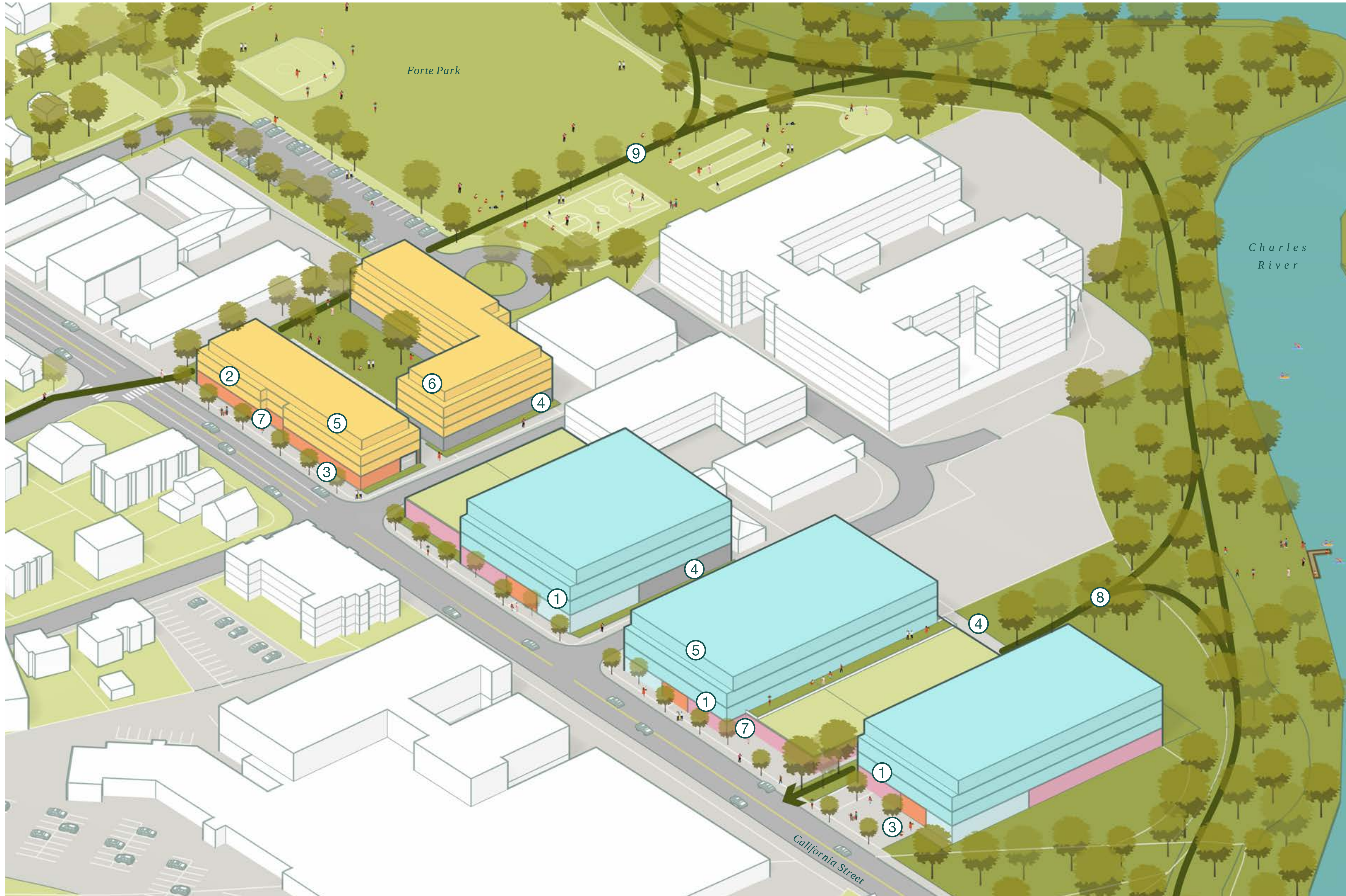
5 Half-story setback to reduce height along California Street

6 Increased height for development 70' north of California Street

7 Facade articulation to break down building scale and mass along California Street

8 Pedestrian connections to the Charles River for properties that abut both California Street and the Greenway Path

9 Potential for improved pedestrian connections from Stearns Park to Forte Park and the Charles River Greenway



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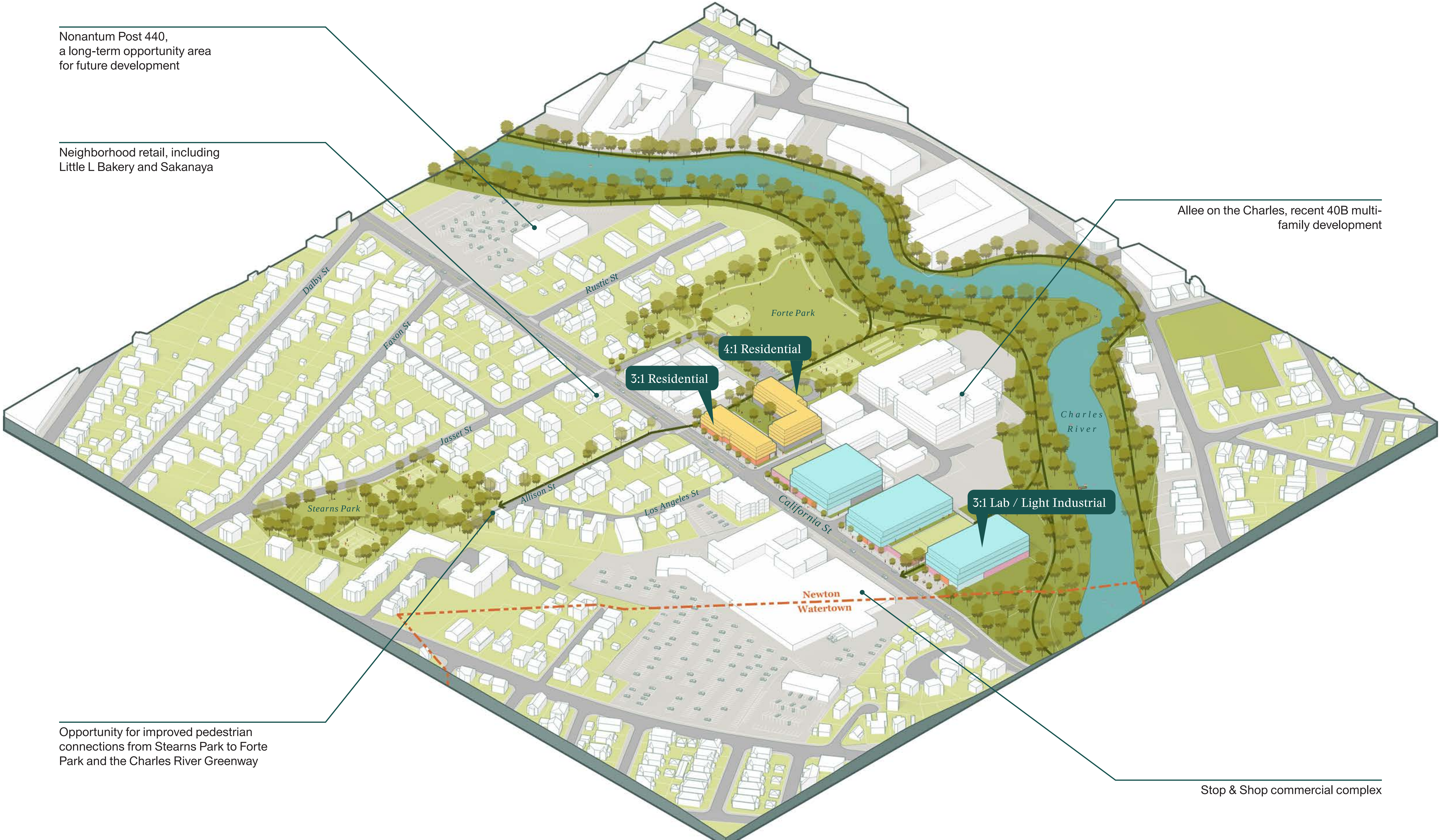
Nonantum Post 440,
a long-term opportunity area
for future development

Neighborhood retail, including
Little L Bakery and Sakanaya

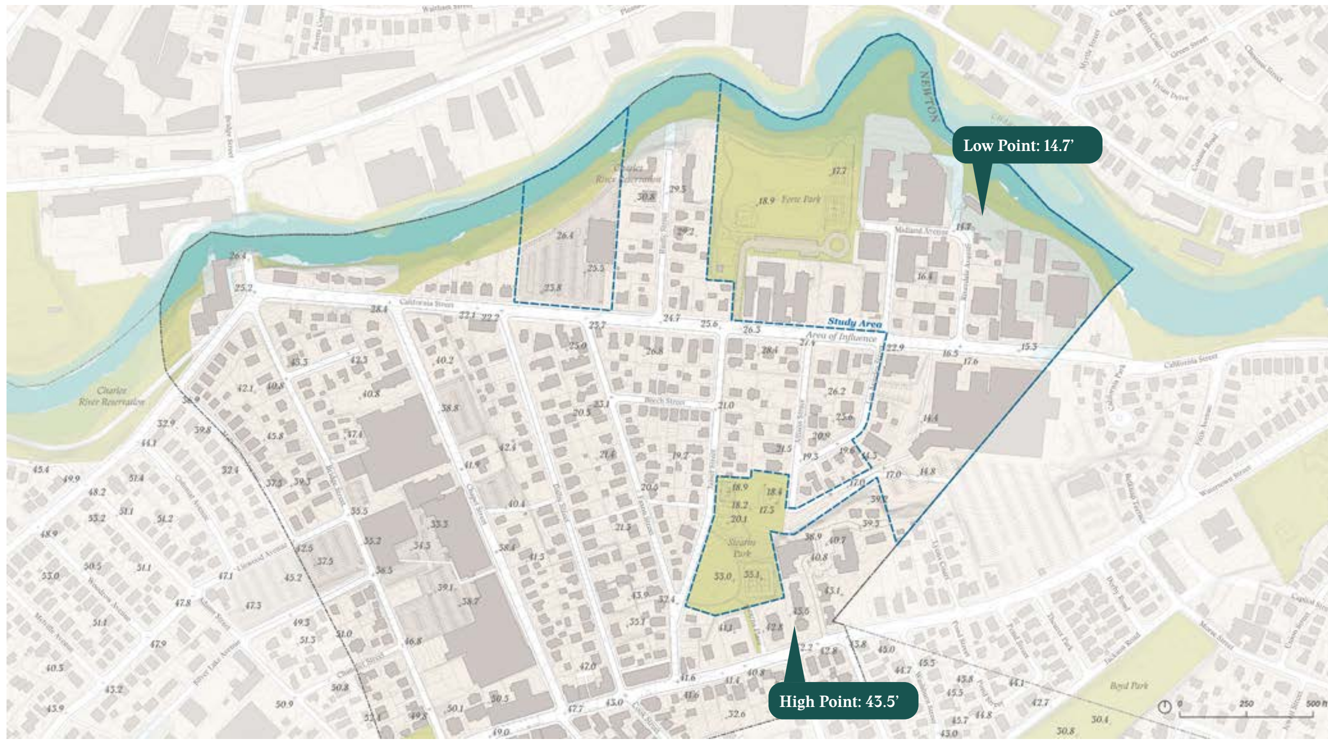


Allee on the Charles, recent 40B multi-family development

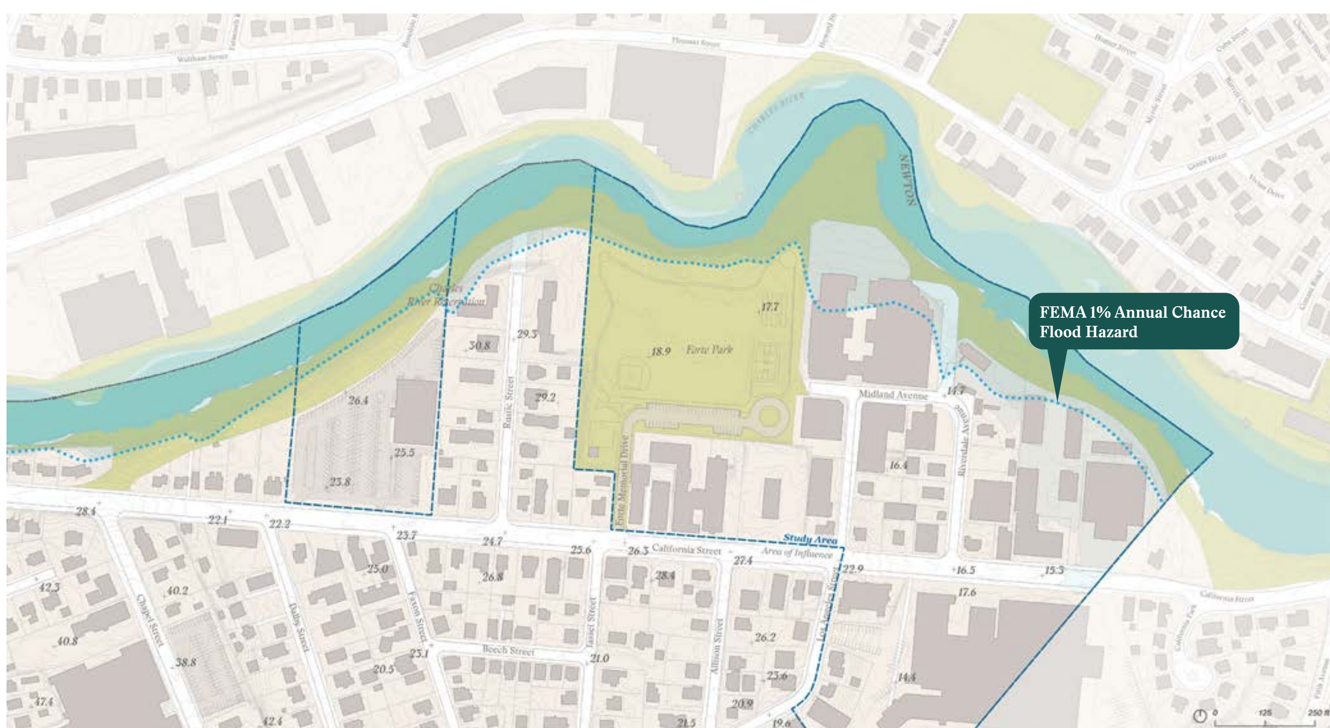
Opportunity for improved pedestrian connections from Stearns Park to Forte Park and the Charles River Greenway

Stop & Shop commercial complex

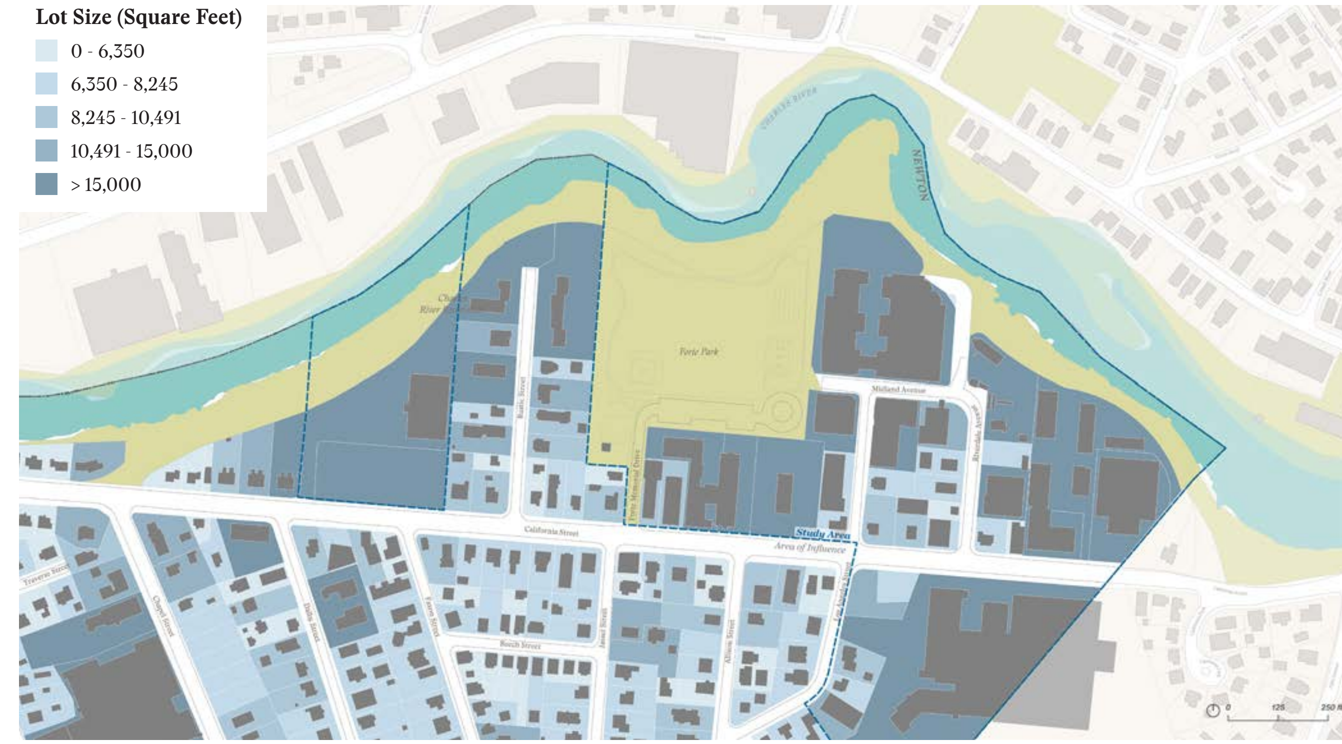
Appendix



Site Topography: 30' grade change between the Charles River and Watertown Street



Flood Risk: areas along the Charles River have a 1-in-100 chance of a major flood in any given year



Lot Size Map: lots north of California Street are large enough for developments with the proposed standards

Lot Frontage Map: wide frontages are ideal for viable commercial developments