Envision Cambridge Advisory Committee Meeting

Affordable Housing Overlay Analysis

August 15, 2018

Envision Cambridge identified several community goals that require a new approach to housing development citywide

Relevant Envision Cambridge Goals:

- Provide a variety of housing options for people of different socioeconomic levels, life stages, and physical needs.

- Expand affordable rental and homeownership opportunities to enable Cambridge to thrive as a mixed-income community.

- Foster neighborhoods of opportunity and equitable distribution of affordable housing citywide.

- Provide access to opportunities for all people regardless of differences.

- End race-based disparities and achieve racial equity.

- Maintain the existing patterns of the city through a mix of preservation and complementary infill development.
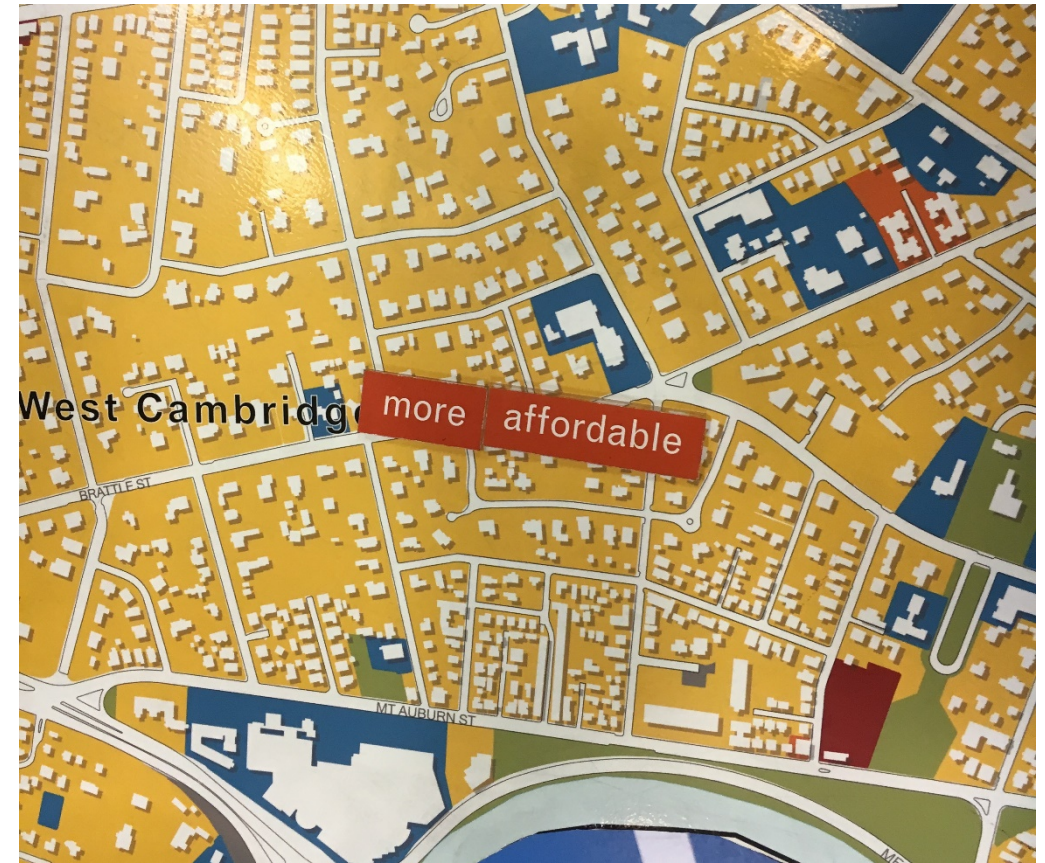
Increasing the number of 100% affordable housing developments can help us achieve our housing goals

- The City currently partners with affordable housing developers, who are often nonprofits, to create 100% affordable projects across the city.

- These developments are often designed to complement the existing urban fabric, while including units accessible to people with disabilities.

- This work depends on public subsidy, often from both the City and Commonwealth of Massachusetts.

- Recently, the City has facilitated about two to three of these developments per year.

New 100% affordable housing developments like 625 Putnam Ave (foreground) respond well to the surrounding neighborhood context.

Examples of 100% affordable housing development

Four-story affordable development with accessible units and public art (625 Putnam).

Four-story affordable development with family-sized homeownership units (821-825 Main Street).

Examples of 100% affordable housing development


New
Structure

Historic
Structure

Affordable development can also include renovations and additions to
historic structures, such as the development at 273 Harvard Street.

However, 100% affordable development is increasingly hard to build

- Market-rate developers can pay much more per unit for land acquisition than 100% affordable developers. Affordable developers cannot justify high per-unit acquisition costs, even when they have enough money to pay the total amount.

- To make projects financially feasible, 100% affordable projects often need zoning relief (e.g. relaxing restrictions on height, parking, setbacks, etc.). This opens projects up to lengthy and unpredictable permitting processes.

- Zoning and land costs make 100% affordable developments entirely unfeasible in large areas in the city, especially the historically wealthier neighborhoods of western Cambridge.

Affordable development in Residential A & B zoning districts is largely infeasible
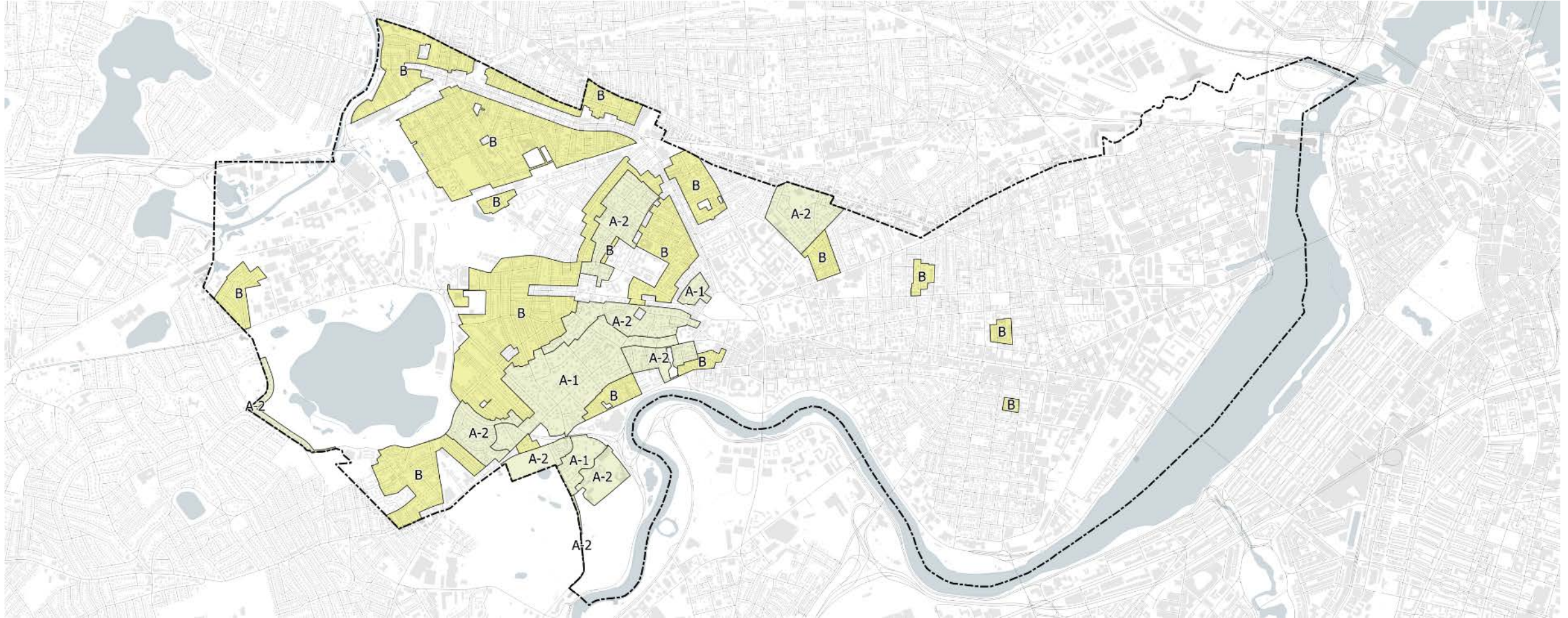
Affordable Housing Overlay will help make 100% affordable development feasible

- What is an affordable housing overlay?
  - Special zoning rules for 100% or nearly 100% affordable housing development
  - Relief for density, height, setbacks, open space, and parking where necessary
  - A special approval process that ensures good design without creating uncertainty about a project's fundamental viability
  - Zoning relief varies by district conditions

- Why establish special rules?
  - Lower per-unit cost for affordable developers
  - Remove permitting uncertainty
  - Expand affordable housing's viability in areas where it's been more difficult to create new affordable units
  - Enable affordable housing developers to better compete with market-rate developers

Residential A & B Overlay Analysis

- CDD analyzed recent property transactions in Residential A & B zoning districts, and calculated the number of units and floor area ratio (FAR) that would be required to make an affordable housing development feasible at that location.

- The typical FAR required was approximately 2.0.

- These neighborhoods' historic urban fabric includes some parcels with such relatively dense development, but current zoning does not allow it.

- The present analysis asks: How can a contemporary building meet that density requirement while complementing the surrounding neighborhood?

- Methodology: "test-fit" analysis

  – Test-fits take a real or hypothetical parcel condition and quickly **test** how a real building would **fit** on that parcel, given other constraints

Finding a generic parcel condition across A & B zones

- **Representative Size: Three land area size-classes**
  - **I: Less than 5,000 sf**
  - **II: 5,000-10,000 sf**
  - **III: Greater than 10,000 sf**
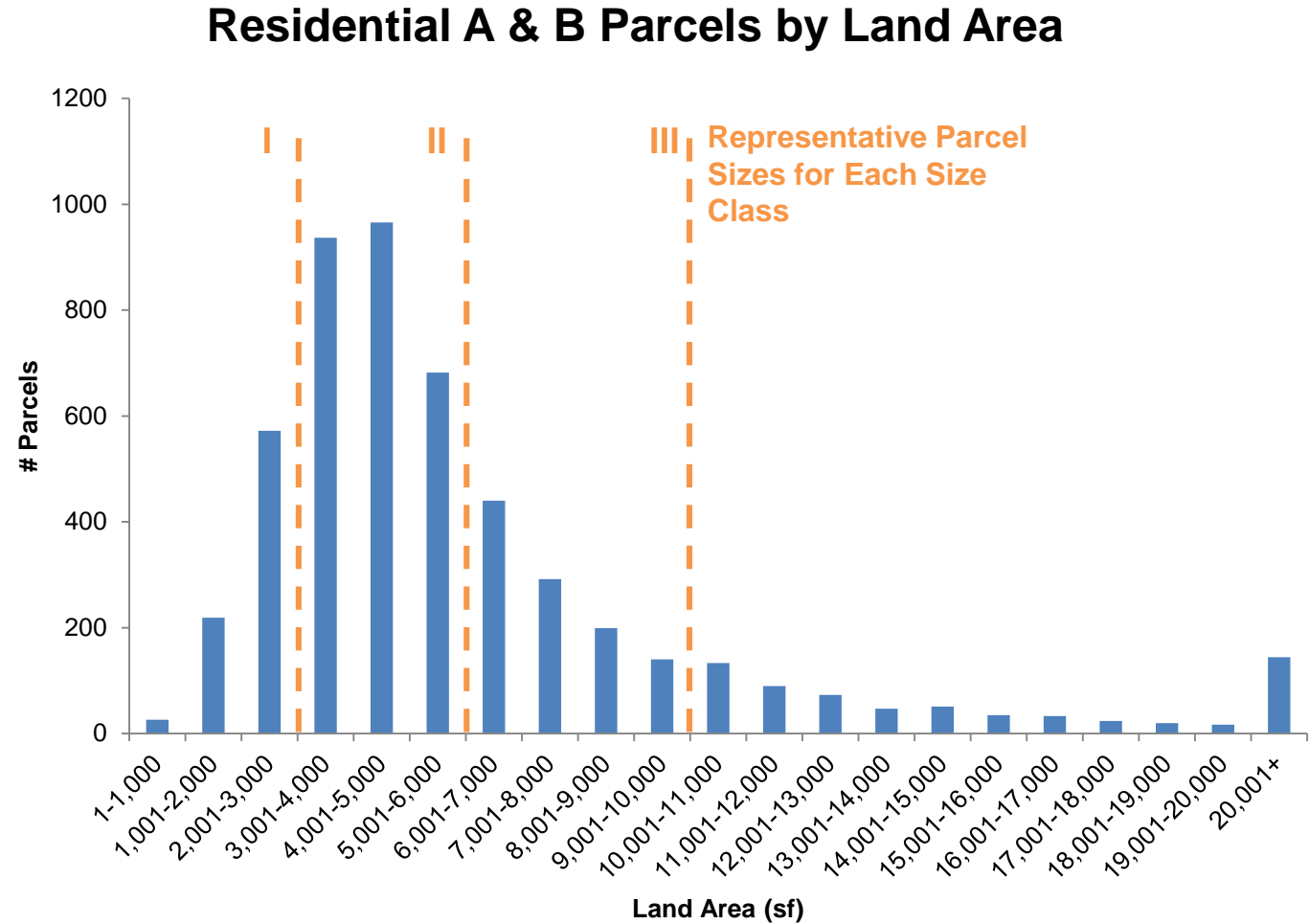
Residential A & B Parcels by Land Area

Finding a generic parcel condition across A & B zones

- Representative Size: Three land area size-classes
  - A: Less than 5,000 sf
  - B: 5,000-10,000 sf
  - C: Greater than 10,000 sf

- **Representative Context: Mixed Density**

The Avon Hill area features a mix of historic buildings at various densities.

Concord Ave. at Buckingham St. features a range of densities.

Huron Ave. at Vassal Ln. has different densities together in close proximity.

Finding a generic parcel condition across A & B zones

- Representative Size: Three land area size-classes
  - A: Less than 5,000 sf
  - B: 5,000-10,000 sf
  - C: Greater than 10,000 sf

- Representative Context: Mixed Density

- **Representative Shape: Rectangular**

The majority of parcels in these areas are roughly rectangular.

Other Test-Fit Assumptions

- Approximately 1,000 square feet of gross floor area for each housing unit (this represents an average point between larger family sized units and smaller units for smaller households).

- Maintain the front setback typical of the surrounding context.

- Assume a 50-foot maximum height, and test development at both three stories (33 feet) and four stories (44 feet).

- Vary setbacks, open space, and parking requirements as necessary to fit the development

- Include at-grade ground-floor unit entrances and/or ramps to accommodate people of all ages and abilities.
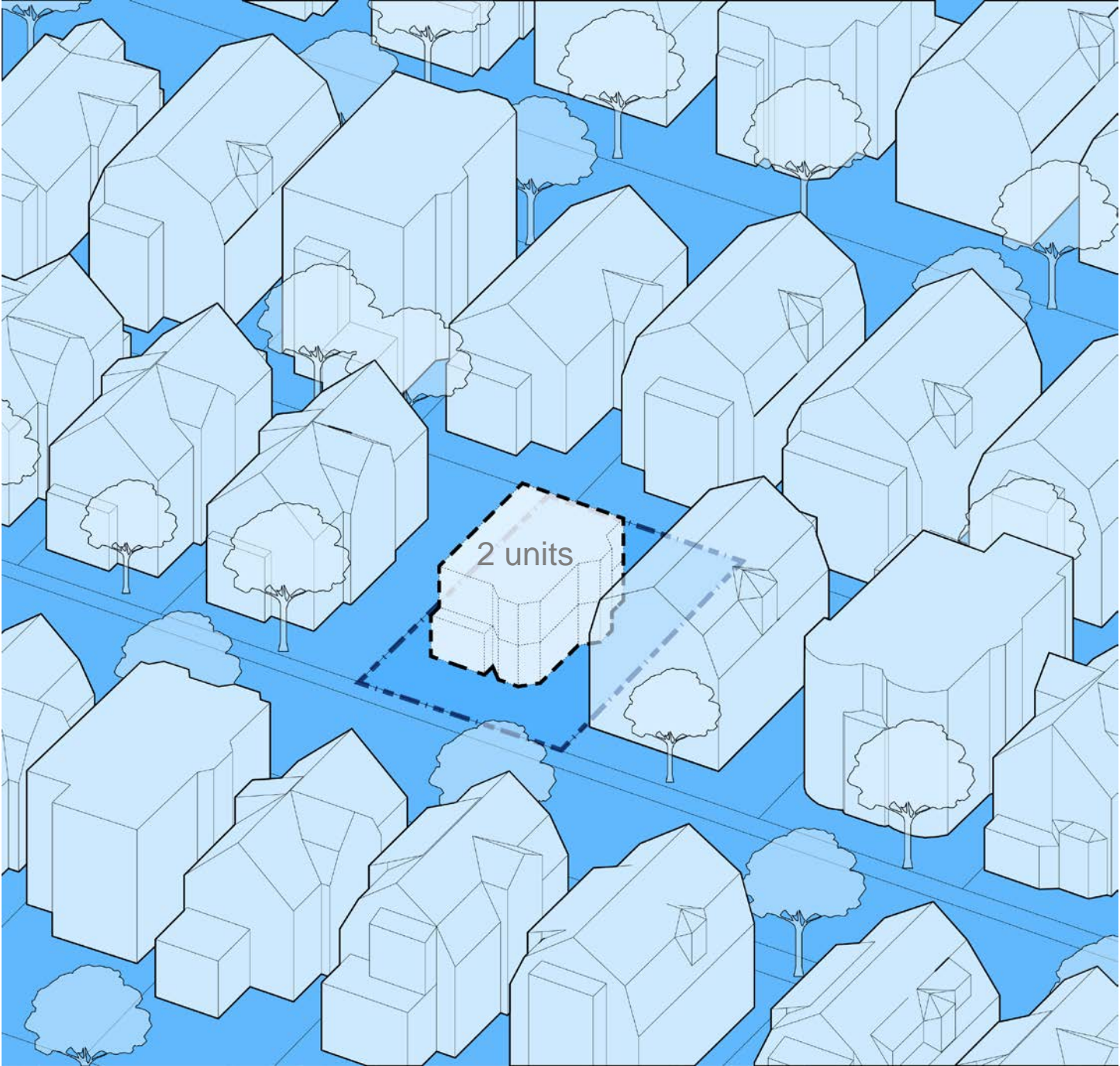
Test-fit: <5,000 sf Size Class
Residential B District

Rectangular, ~4,000 sf

Mixed-density context
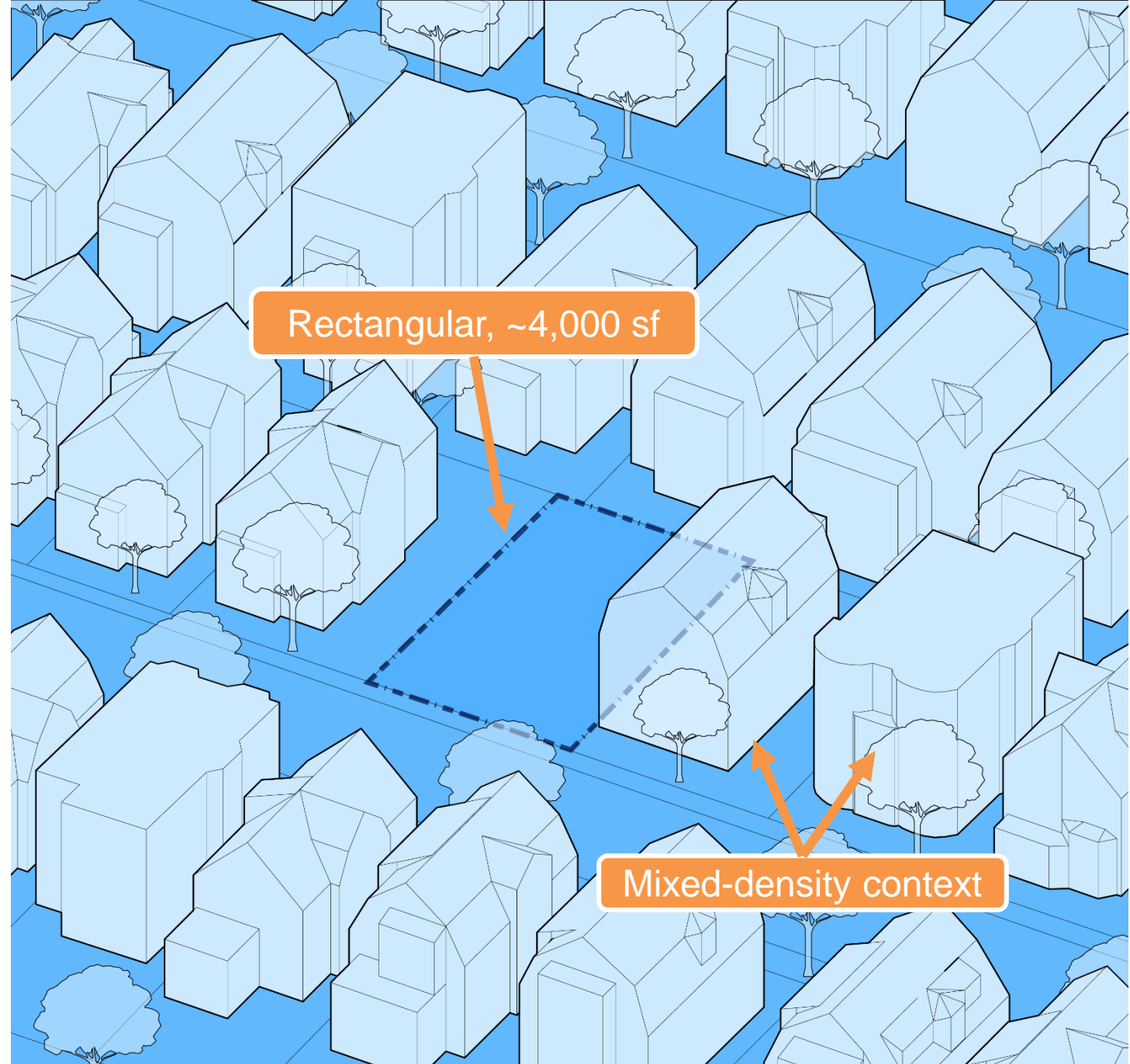
<5,000 sf Size Class

Existing Zoning (Res. B)

Parcel Area	3,971
Floors	**2**
Area Per Floor	985
GFA	1,970
FAR	**0.5**
Units	2
Open Space	75%

Setbacks

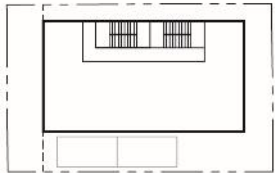| Front	Sides	Rear
15'	7.5' (sum to 20)	25'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
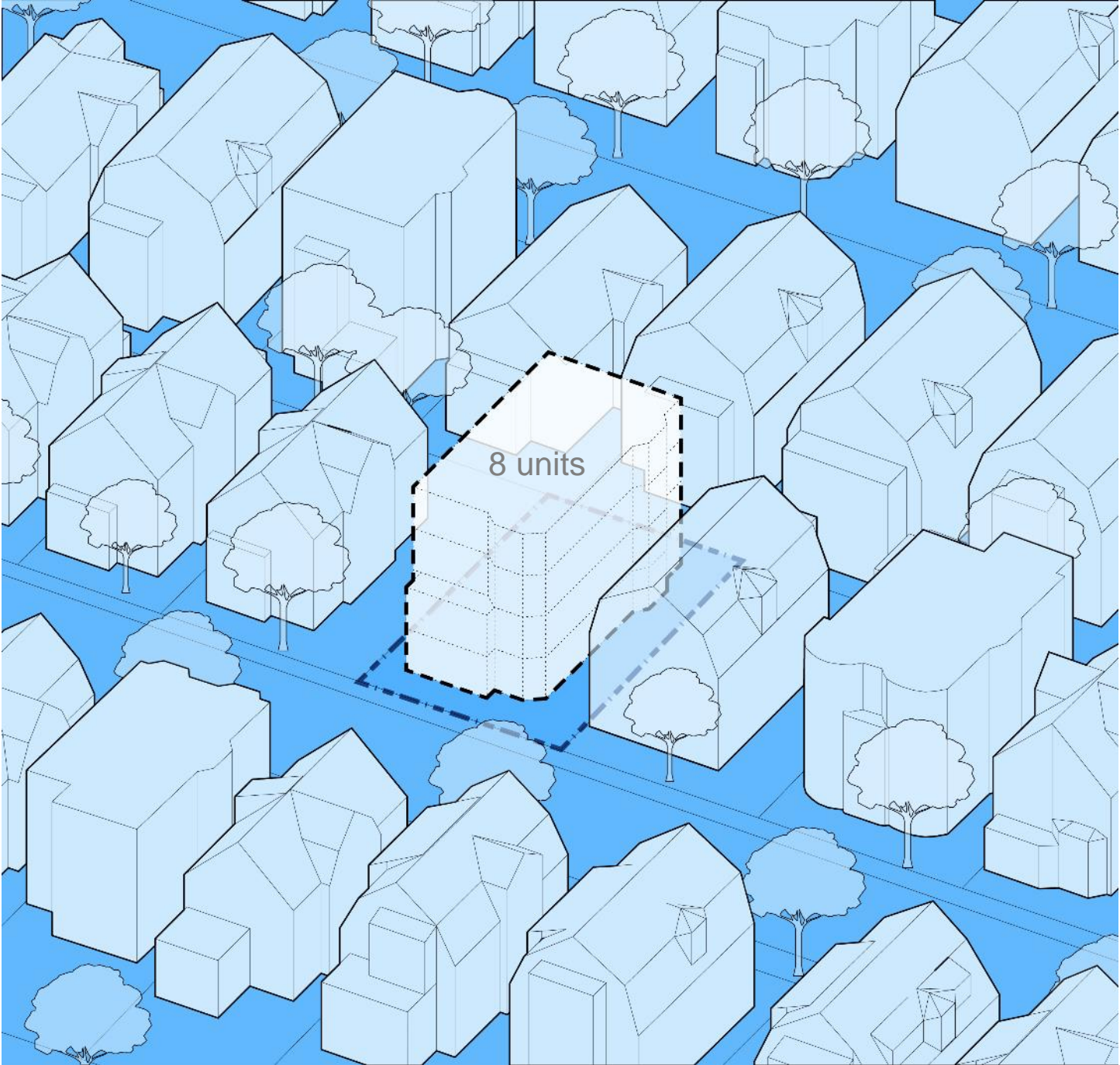

2 units

<5,000 sf Size Class

|	
Parcel Area	3,971
Floors	**3**
Area Per Floor	2,500
GFA	7,500
Leasable Area	6,100
FAR	**1.89**
Units	7
Open Space	37%

Setbacks			
Front	Side	Side	Rear
11 ft	5'	6'	6'
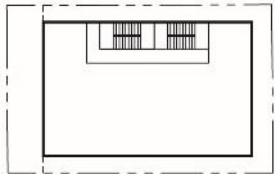
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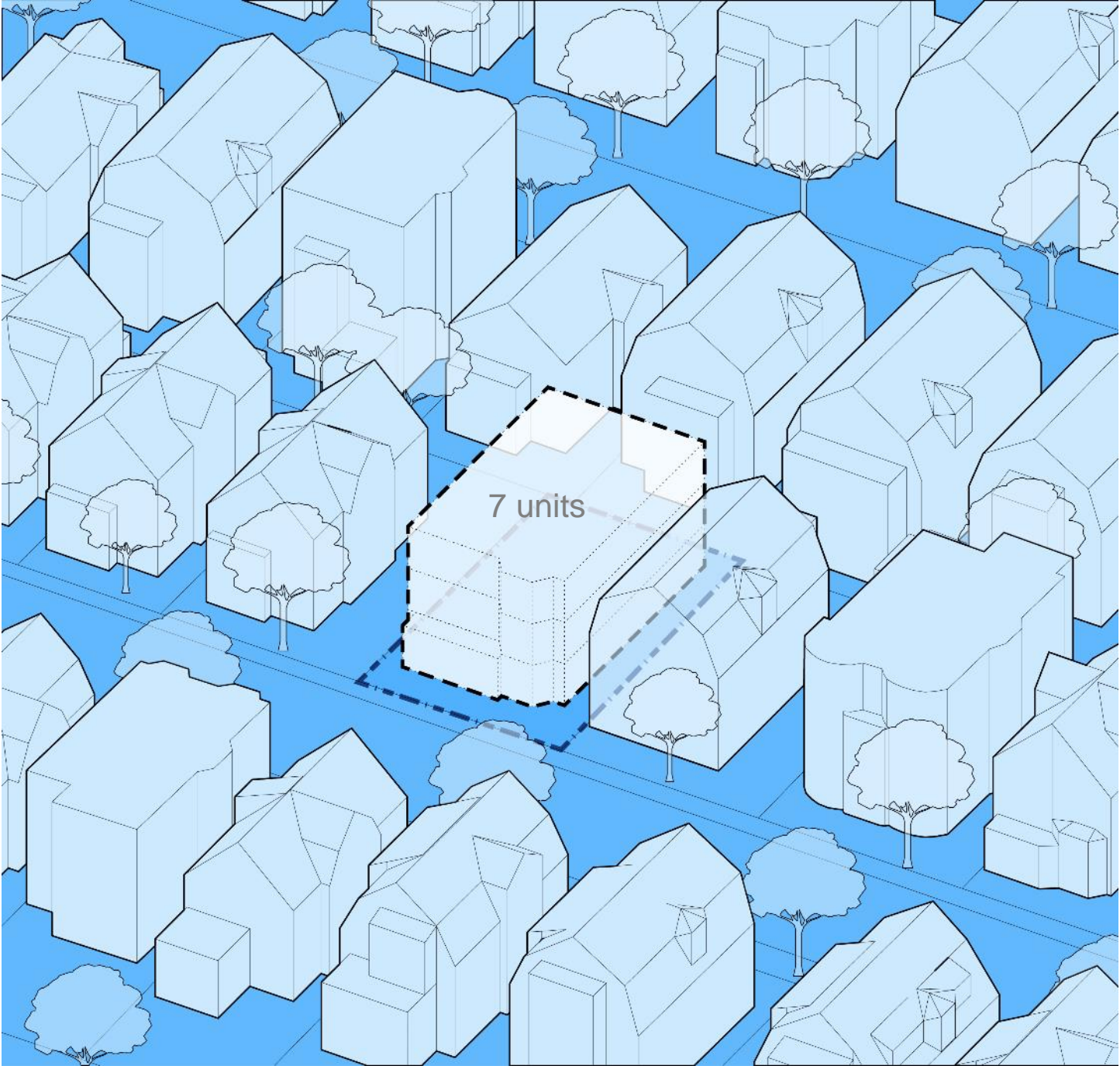
7 units

<5,000 sf Size Class

Parcel Area	3,971
Floors	**4**
Area Per Floor	1,980
GFA	7,920
Leasable Area	6,080
FAR	**2**
Units	8
Open Space	50%

Setbacks			
Front	Side	Side	Rear
11 ft	5'	12'	9'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.

8 units

Test-fit: 5,000–10,000 sf Size Class

Residential B District
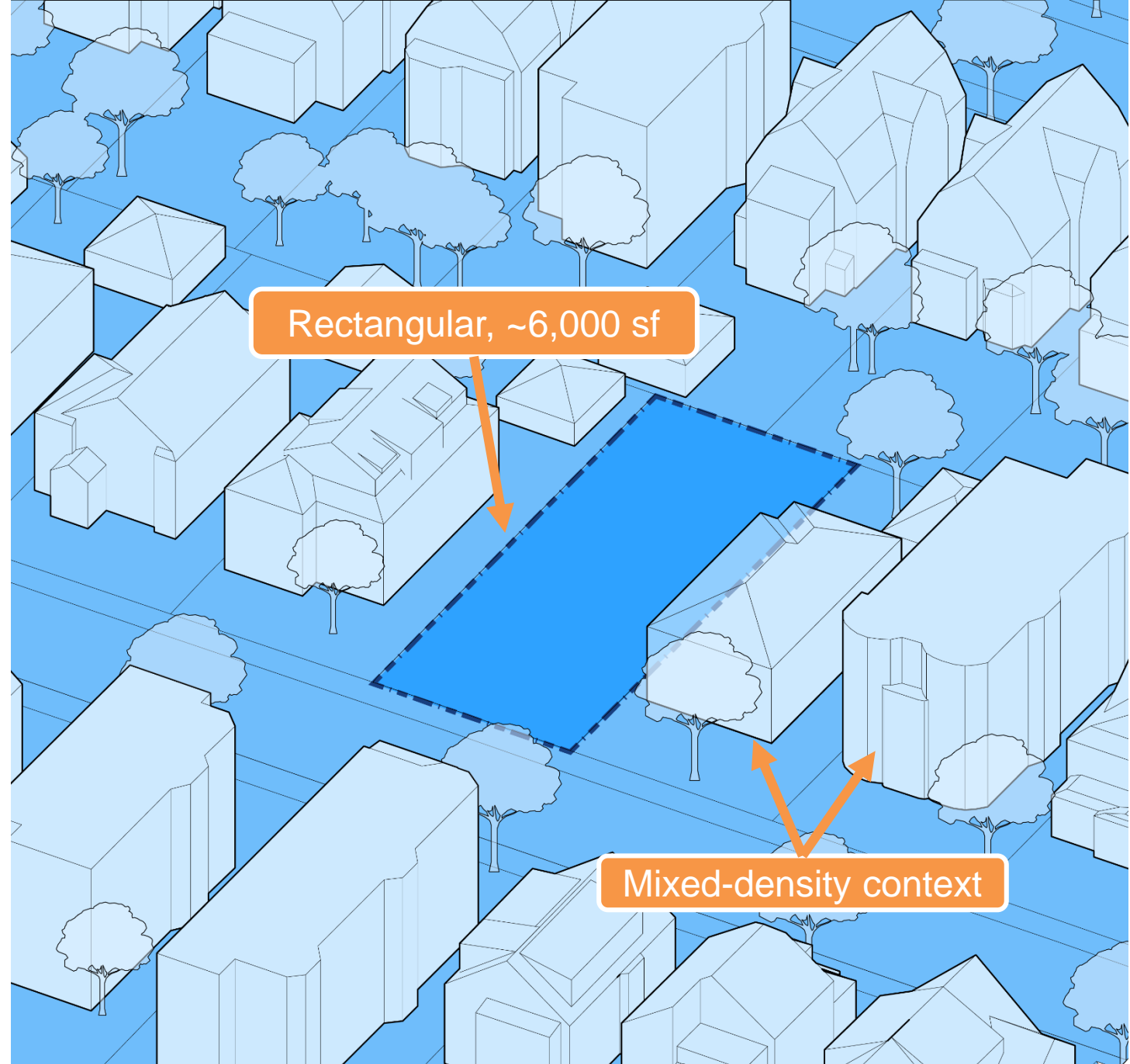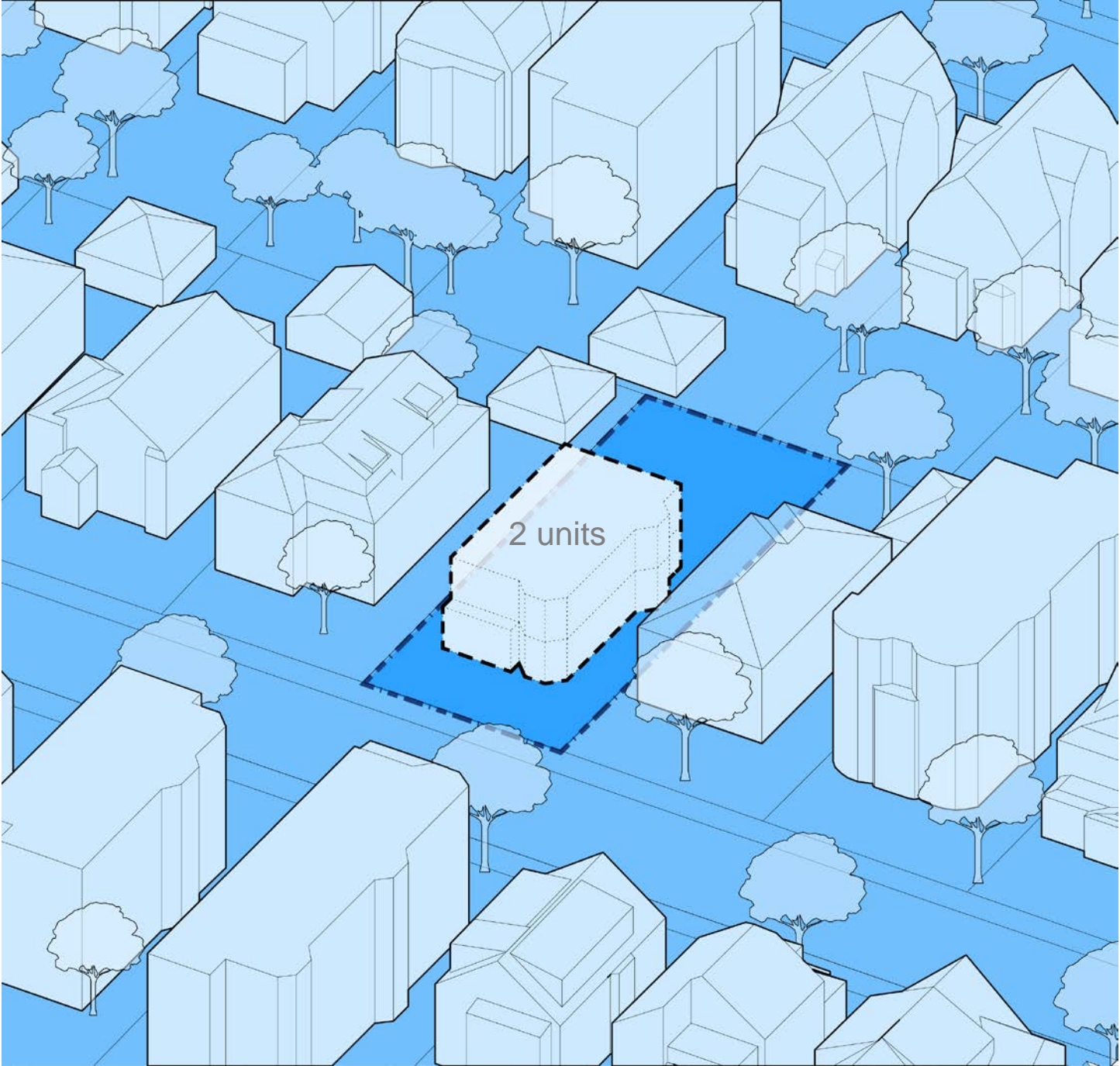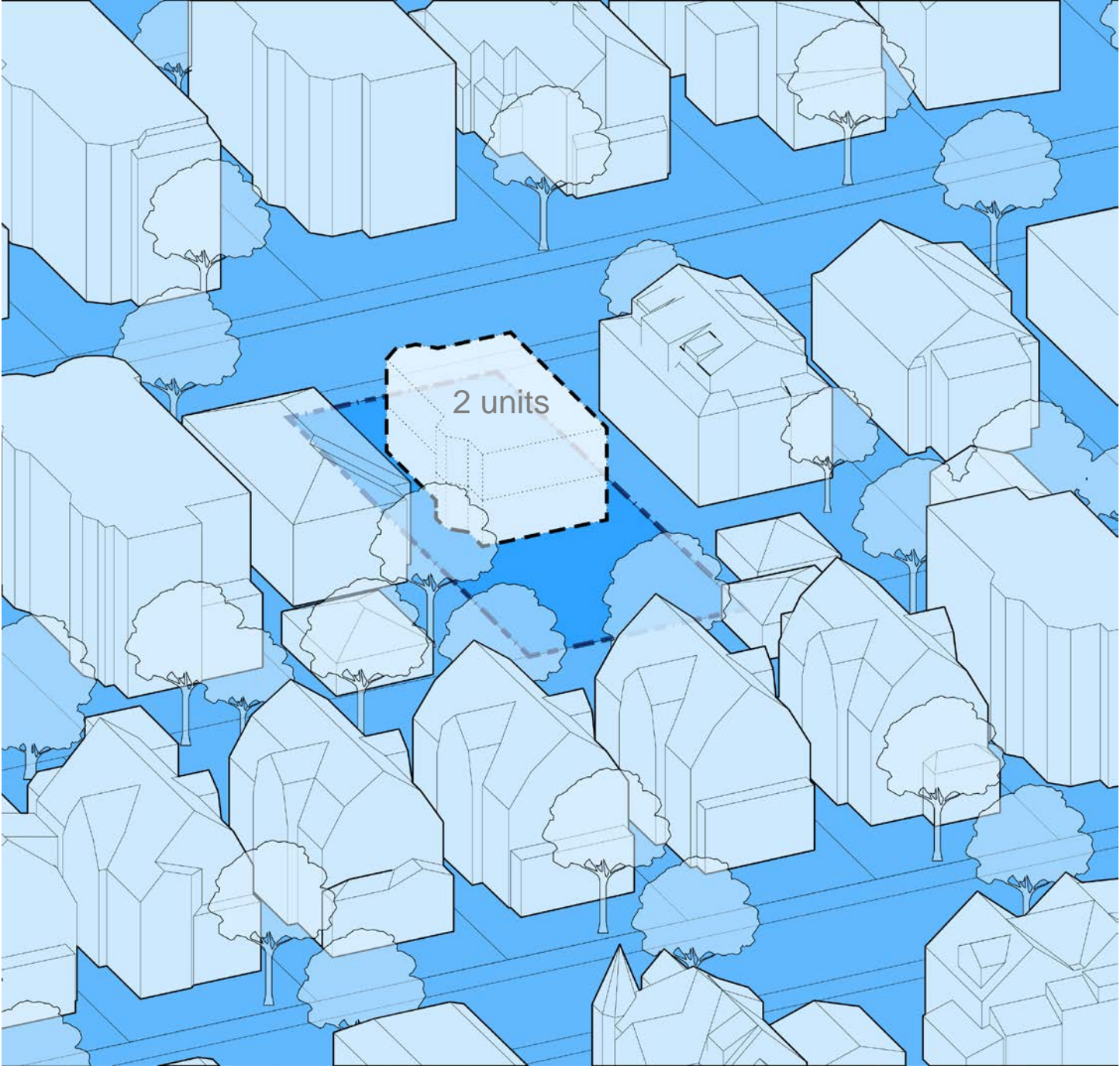

Rectangular, ~6,000 sf

Mixed-density context

5,000-10,000 sf Size Class

Existing Zoning (Res. B)	
Parcel Area	6,025
Floors	**2**
Area Per Floor	1,500
GFA	3,000
FAR	**0.5**
Units	2
Open Space	75%

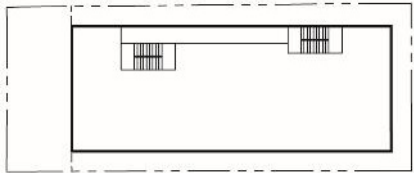| Setbacks		
Front	Sides	Rear
15'	7.5' (sum to 20)	25'

2 units

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.

5,000-10,000 sf Size Class

Existing Zoning (Res. B)	
Parcel Area	6,025
Floors	**2**
Area Per Floor	1,500
GFA	3,000
FAR	**0.5**
Units	2
Open Space	75%

Setbacks		
Front	Sides	Rear
15'	7.5' (sum to 20)	25'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
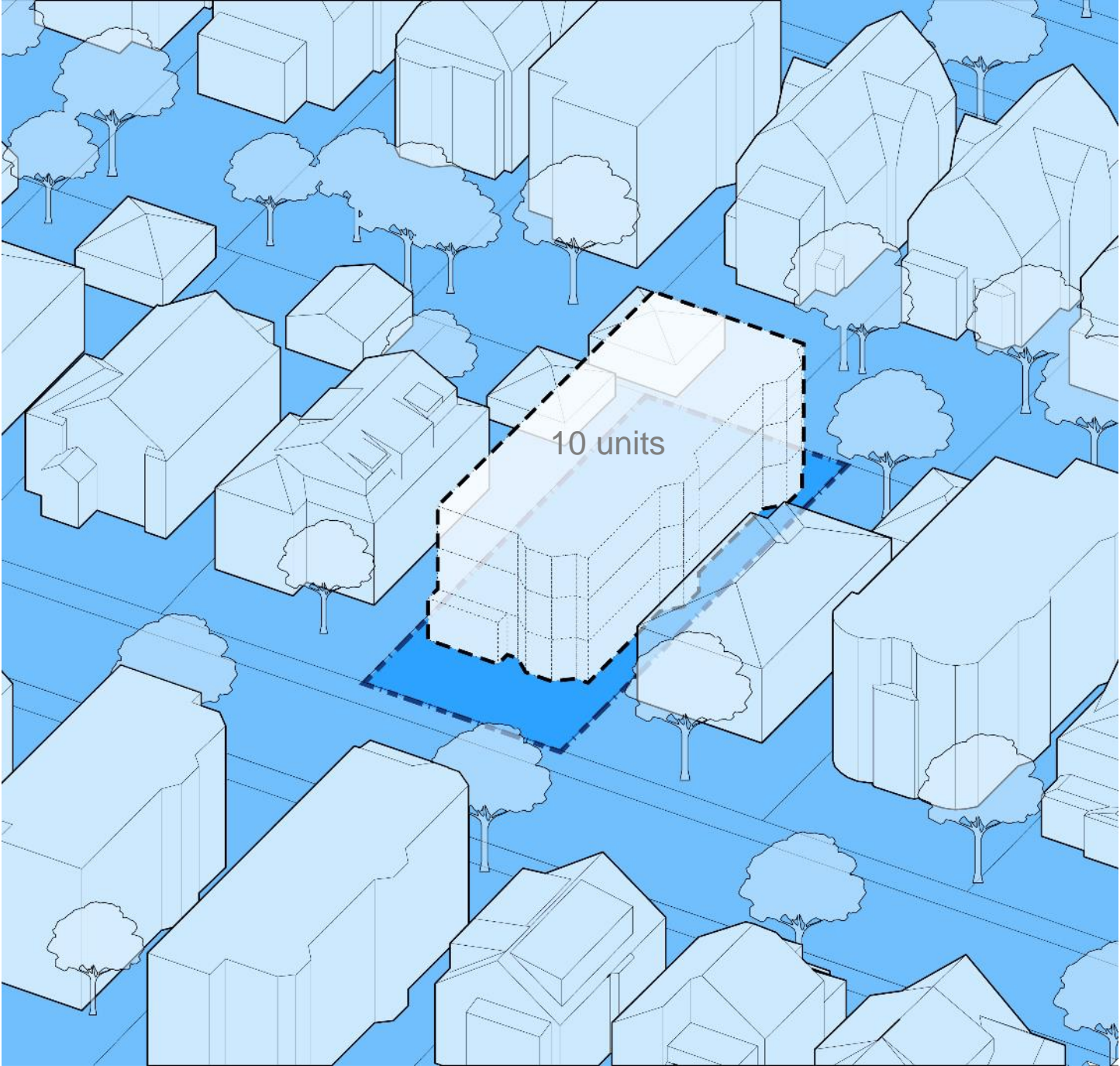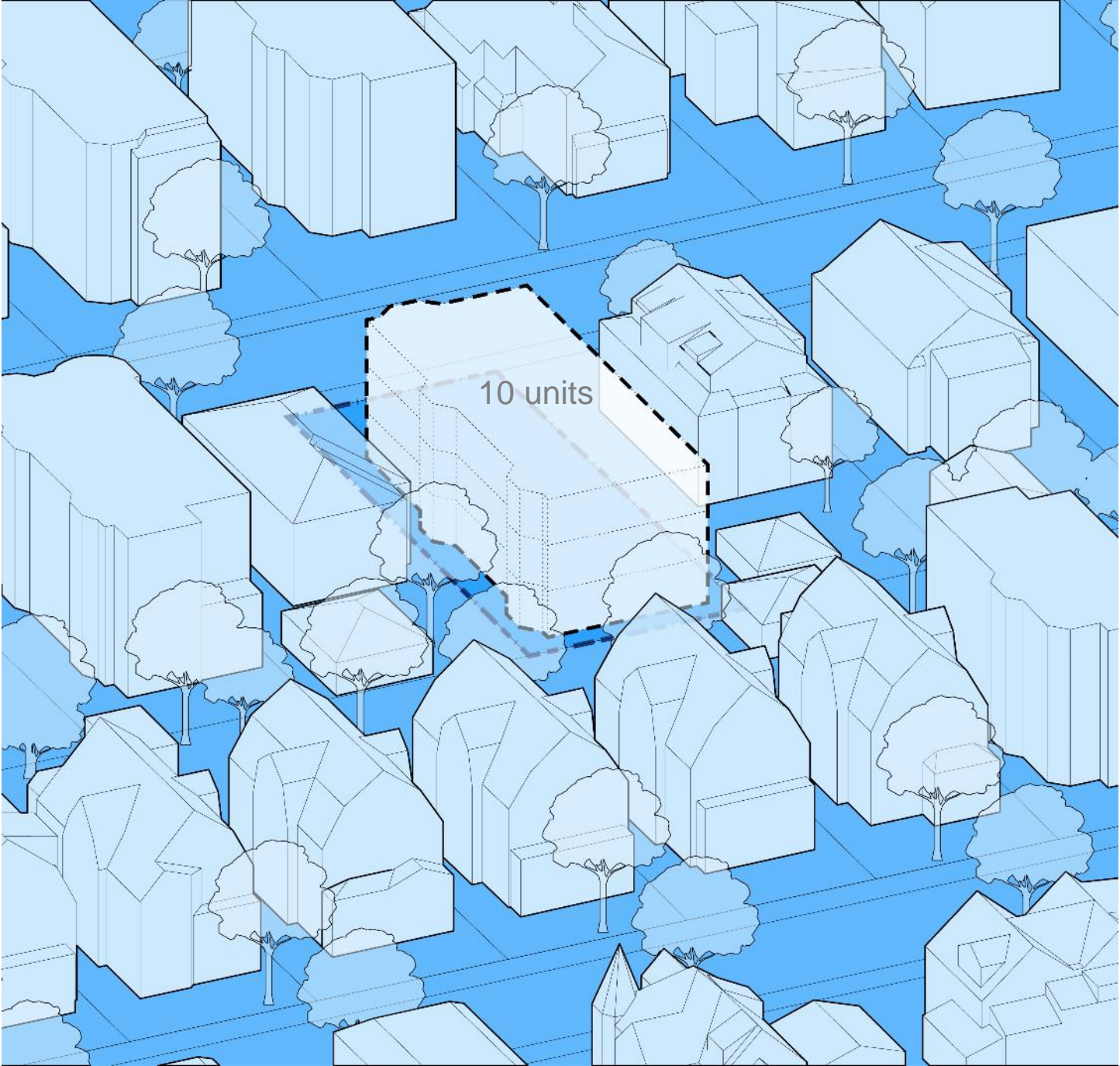

2 units

5,000-10,000 sf Size Class

Parcel Area	6,025
Floors	**3**
Area Per Floor	3,580
GFA	10,740
Leasable Area	9,140
FAR	**1.78**
Units	10
Open Space	41%

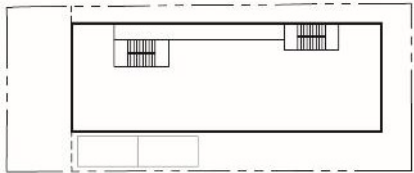| Setbacks			
Front	Side	Side	Rear
20 ft	5'	6'	6'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.

10 units

5,000-10,000 sf Size Class

Parcel Area	6,025
Floors	**3**
Area Per Floor	3,580
GFA	10,740
Leasable Area	9,140
FAR	**1.78**
Units	10
Open Space	41%

Setbacks			
Front	Side	Side	Rear
20 ft	5'	6'	6'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
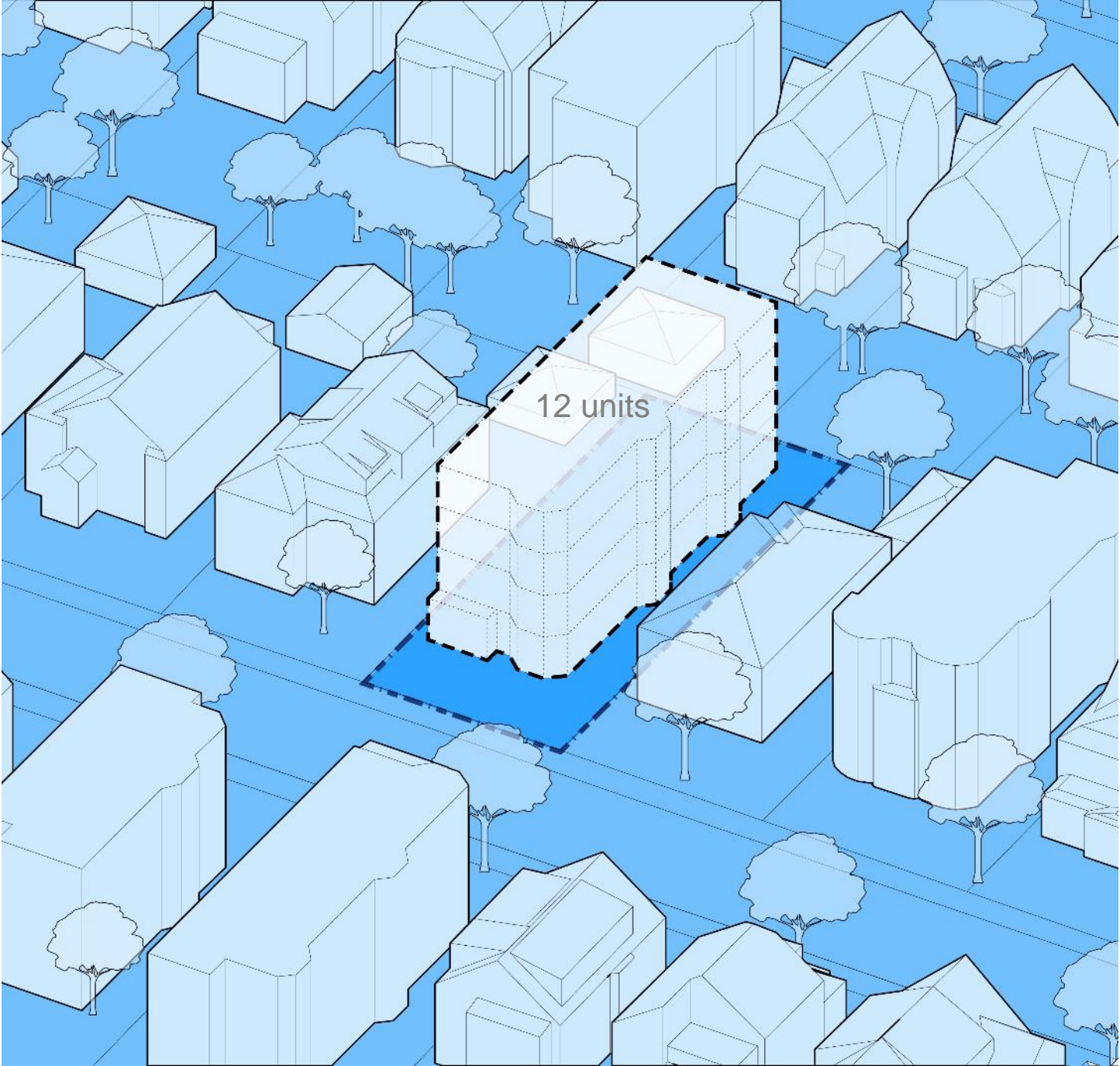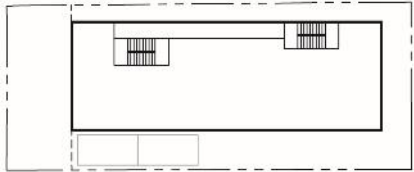

10 units

5,000-10,000 sf Size Class

Parcel Area	6,025
Floors	**4**
Area Per Floor	3,000
GFA	12,000
Leasable Area	9,875
FAR	**2**
Units	12
Open Space	50%

Setbacks			
Front	Side	Side	Rear
20 ft	5'	12'	9'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
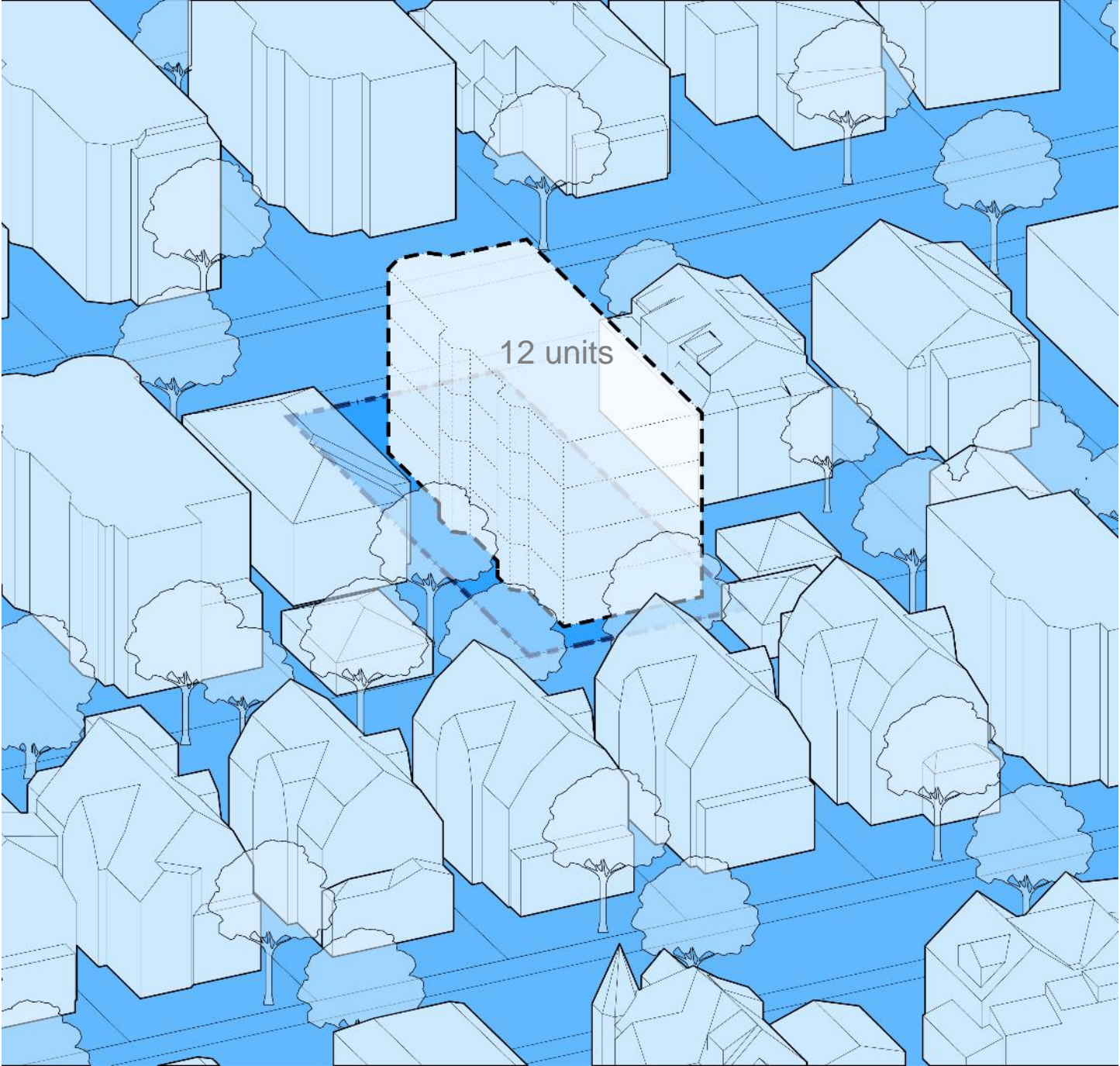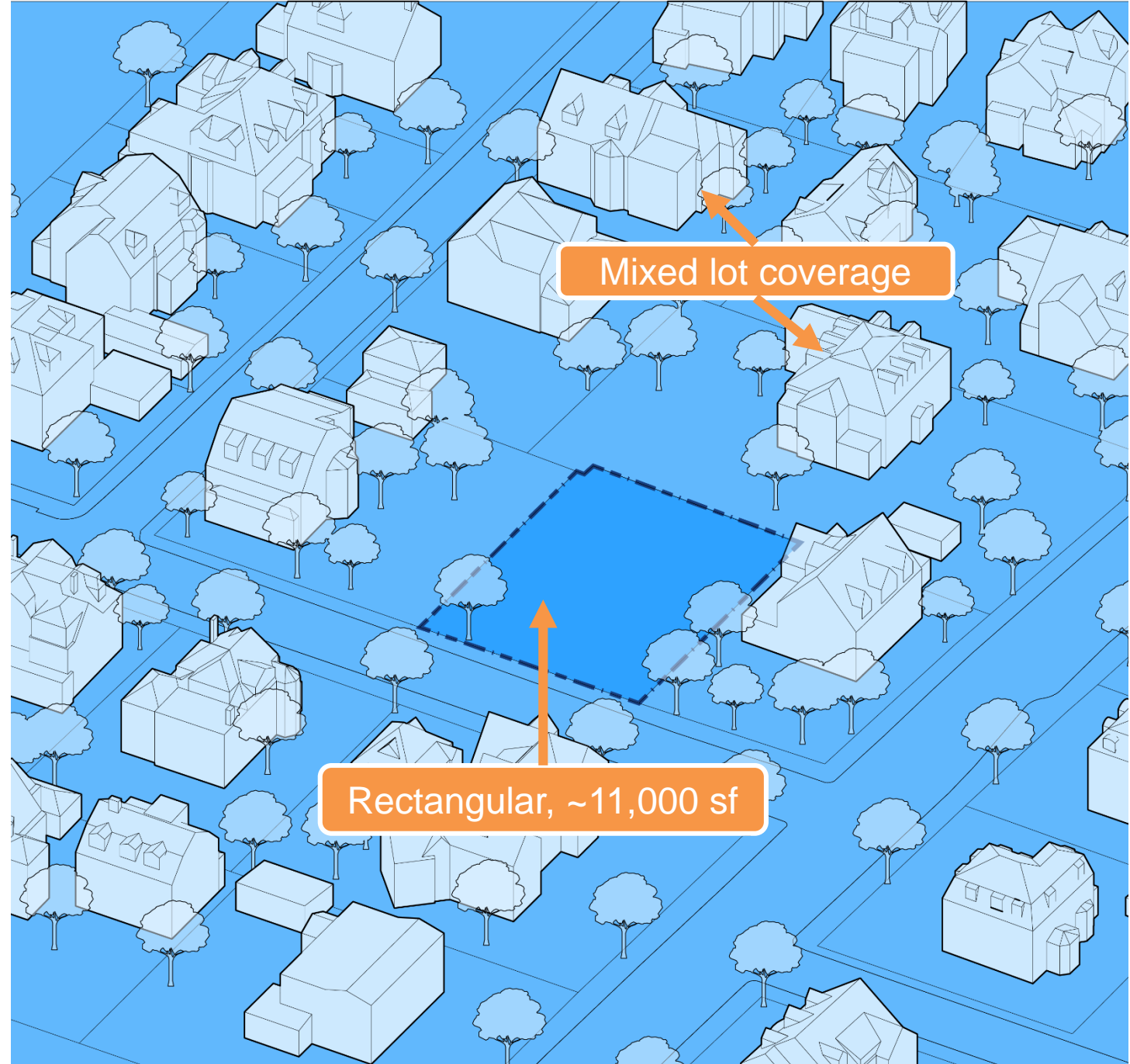

12 units

5,000-10,000 sf Size Class

Parcel Area	6,025
Floors	**4**
Area Per Floor	3,000
GFA	12,000
Leasable Area	9,875
FAR	**2**
Units	12
Open Space	50%

Setbacks			
Front	Side	Side	Rear
20 ft	5'	12'	9'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
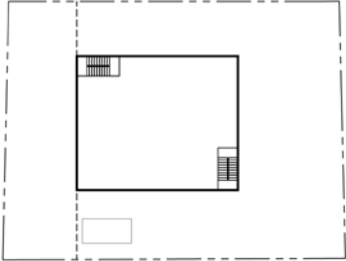
12 units
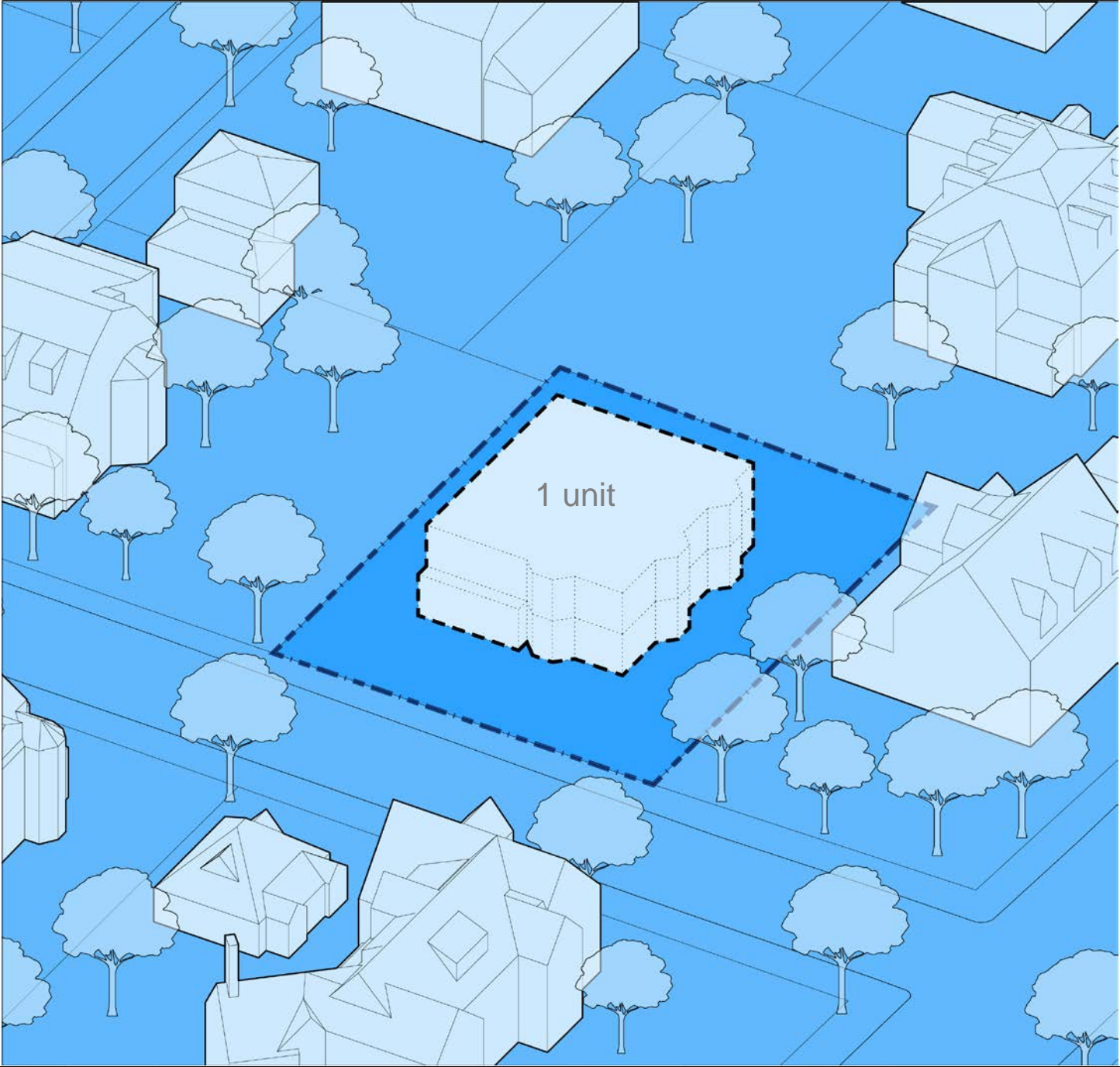
Test-fit: >10,000 sf Size Class
Residential A-1 District

Mixed lot coverage

Rectangular, ~11,000 sf

>10,000 sf Size Class

Existing Zoning (Res. A-1)	
Parcel Area	11,650
Floors	**2**
Area Per Floor	2,900
GFA	5,800
FAR	**0.5**
Units	1
Open Space	75%

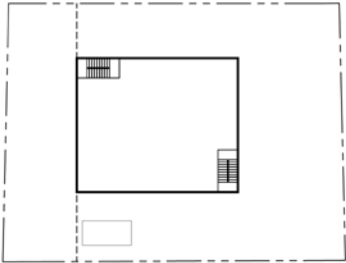| Setbacks		
Front	Sides	Rear
25 ft	15' (sum to 35)	25'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
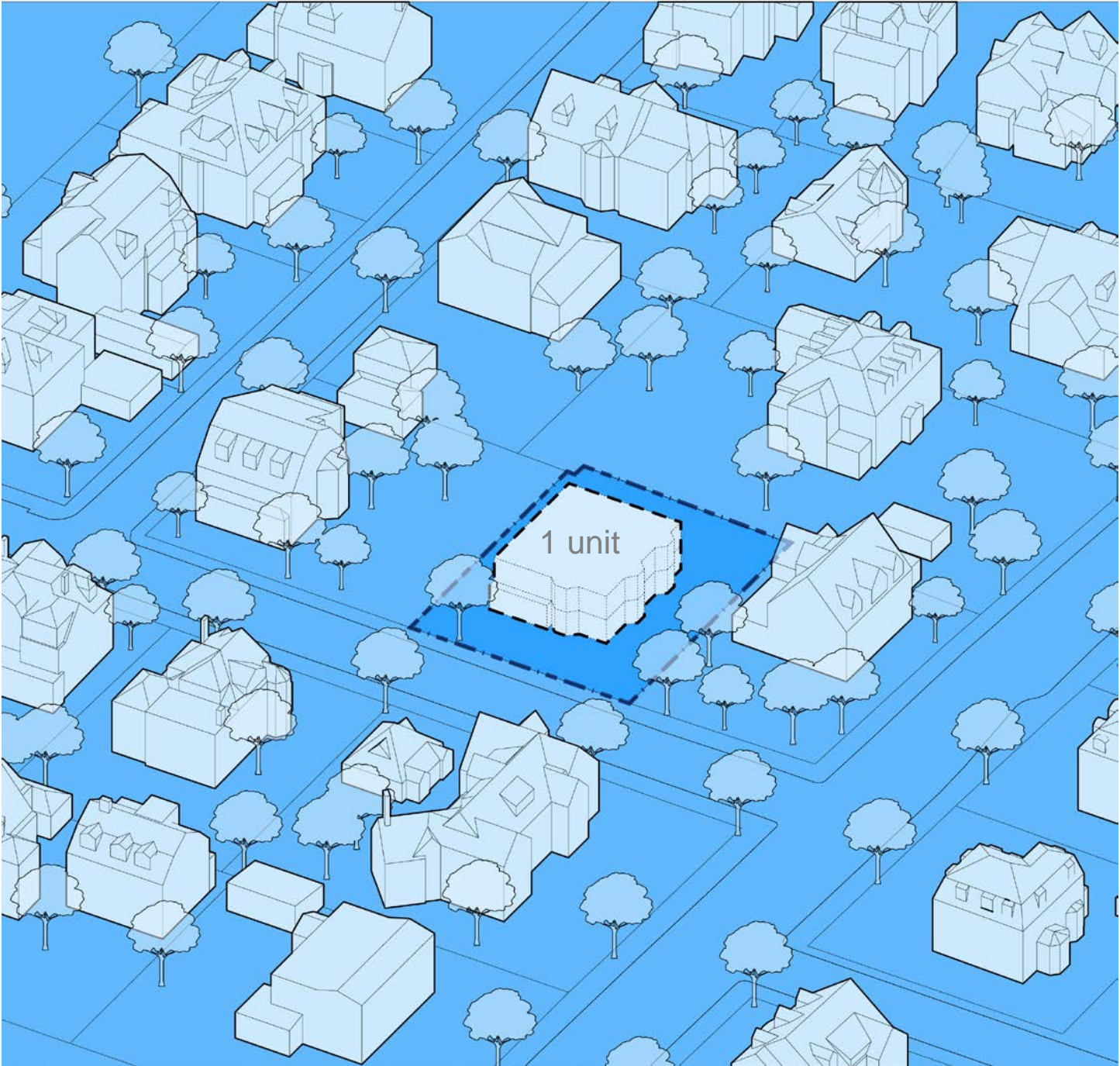

1 unit

>10,000 sf Size Class

Existing Zoning (Res. A-1)	
Parcel Area	11,650
Floors	**2**
Area Per Floor	2,900
GFA	5,800
FAR	**0.5**
Units	1
Open Space	75%

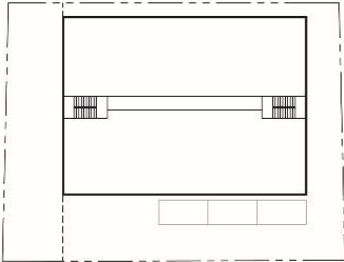| Setbacks		
Front	Sides	Rear
25 ft	15' (sum to 35)	25'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
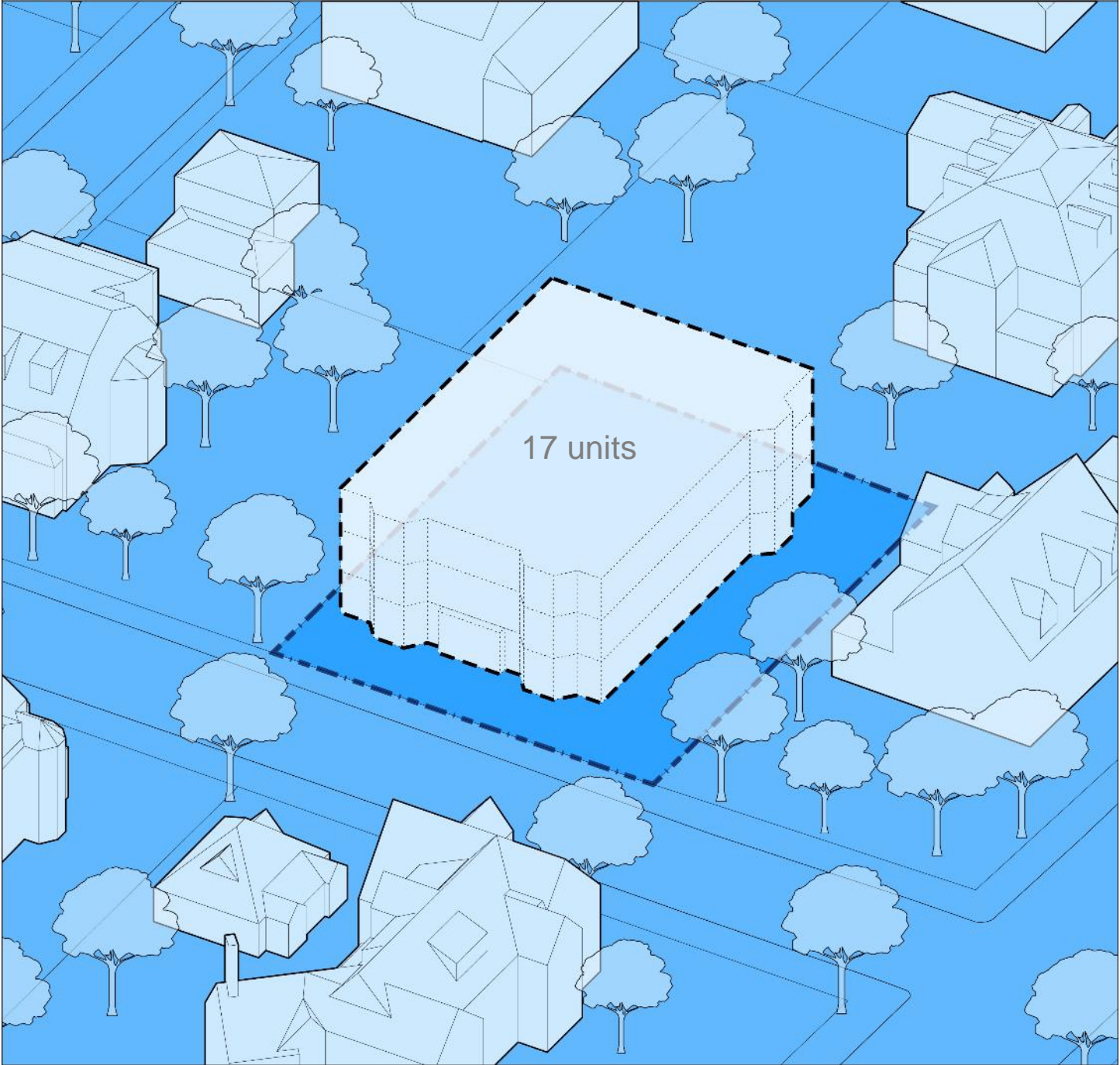

1 unit

>10,000 sf Size Class

Parcel Area	11,650
Floors	**3**
Area Per Floor	5,790
GFA	17,370
Leasable Area	15,660
FAR	**1.49**
Units	17
Open Space	50%

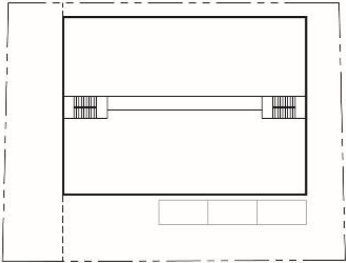| Setbacks			
Front	Side	Side	Rear
20 ft	5'	24'	13'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.

17 units

>10,000 sf Size Class

Parcel Area	11,650
Floors	**3**
Area Per Floor	5,790
GFA	17,370
Leasable Area	15,660
FAR	**1.49**
Units	17
Open Space	50%

Setbacks			
Front	Side	Side	Rear
20 ft	5'	24'	13'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
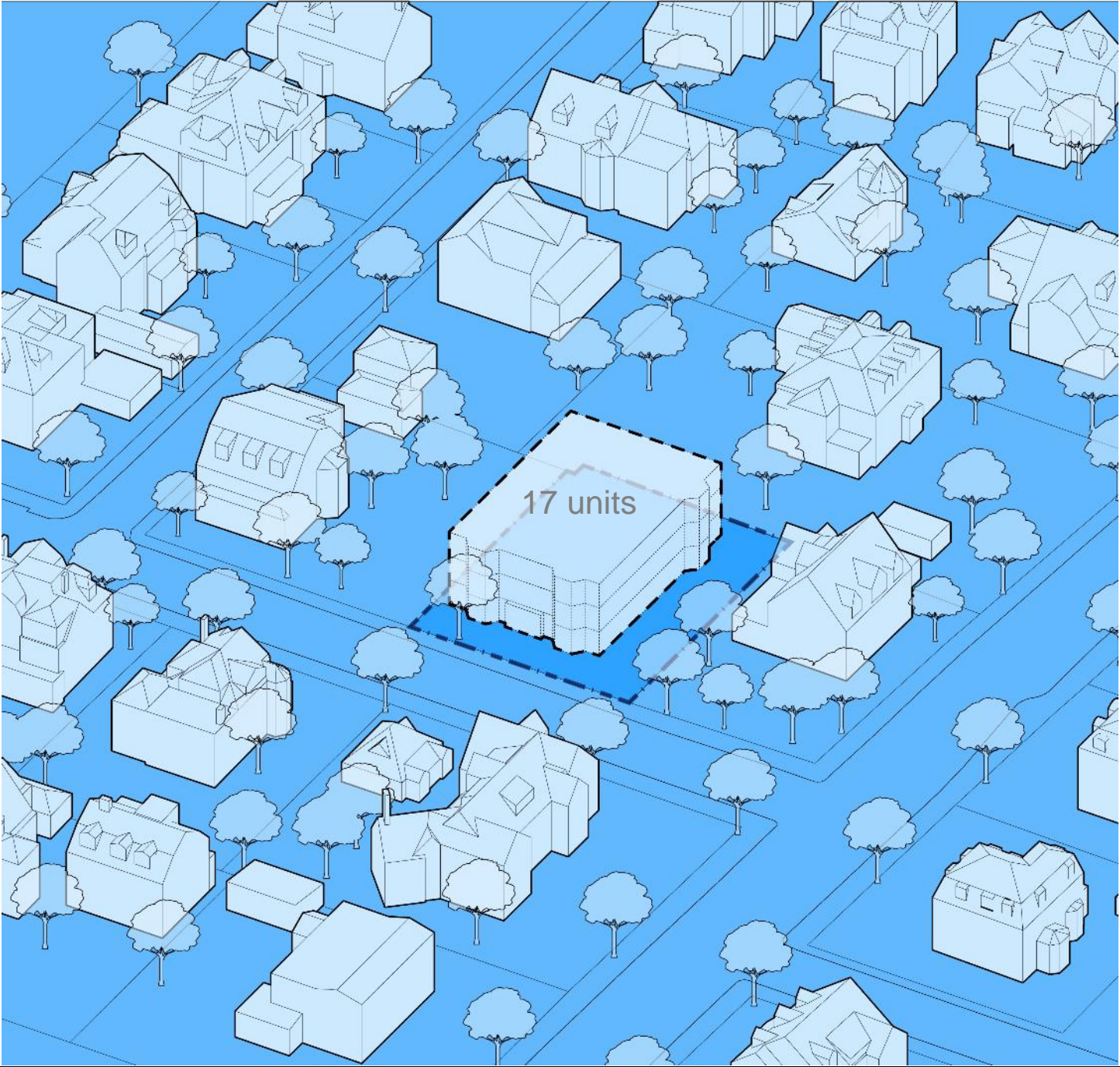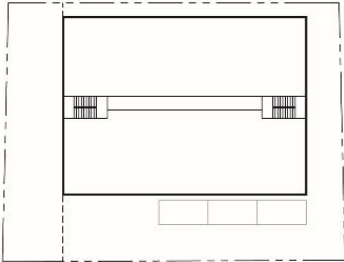

17 units

>10,000 sf Size Class

Parcel Area	11,650
Floors	**4**
Area Per Floor	5,790
GFA	23,160
Leasable Area	20,905
FAR	**2**
Units	23
Open Space	50%

Setbacks			
Front	Side	Side	Rear
20 ft	5'	24'	13'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
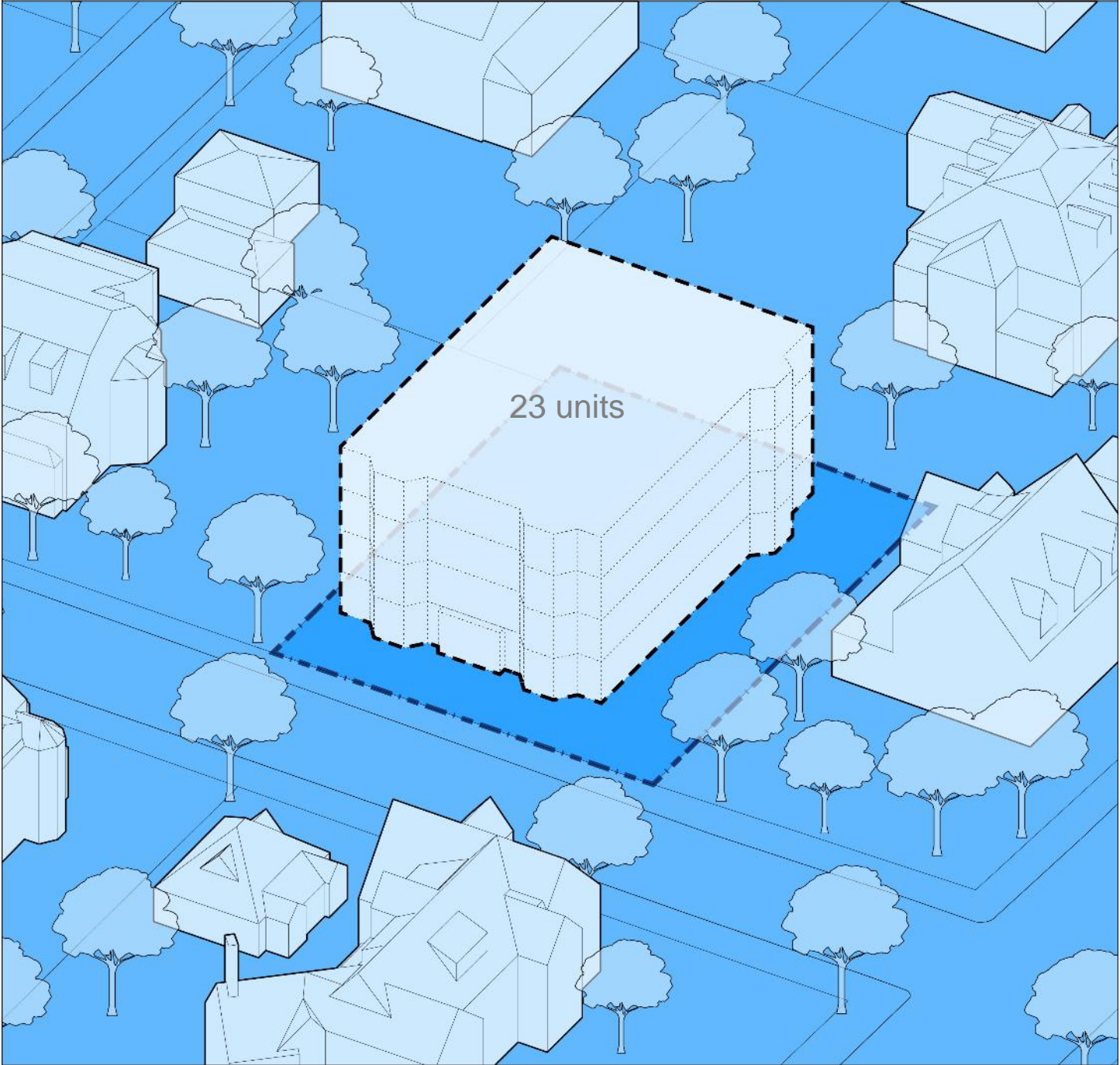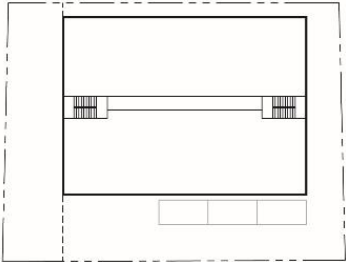

23 units

>10,000 sf Size Class

Parcel Area	11,650
Floors	**4**
Area Per Floor	5,790
GFA	23,160
Leasable Area	20,905
FAR	**2**
Units	23
Open Space	50%

Setbacks			
Front	Side	Side	Rear
20 ft	5'	24'	13'

Illustrations are shown without off-street parking. Parking could be accommodated for certain parcels but would result in a decrease in green open space.
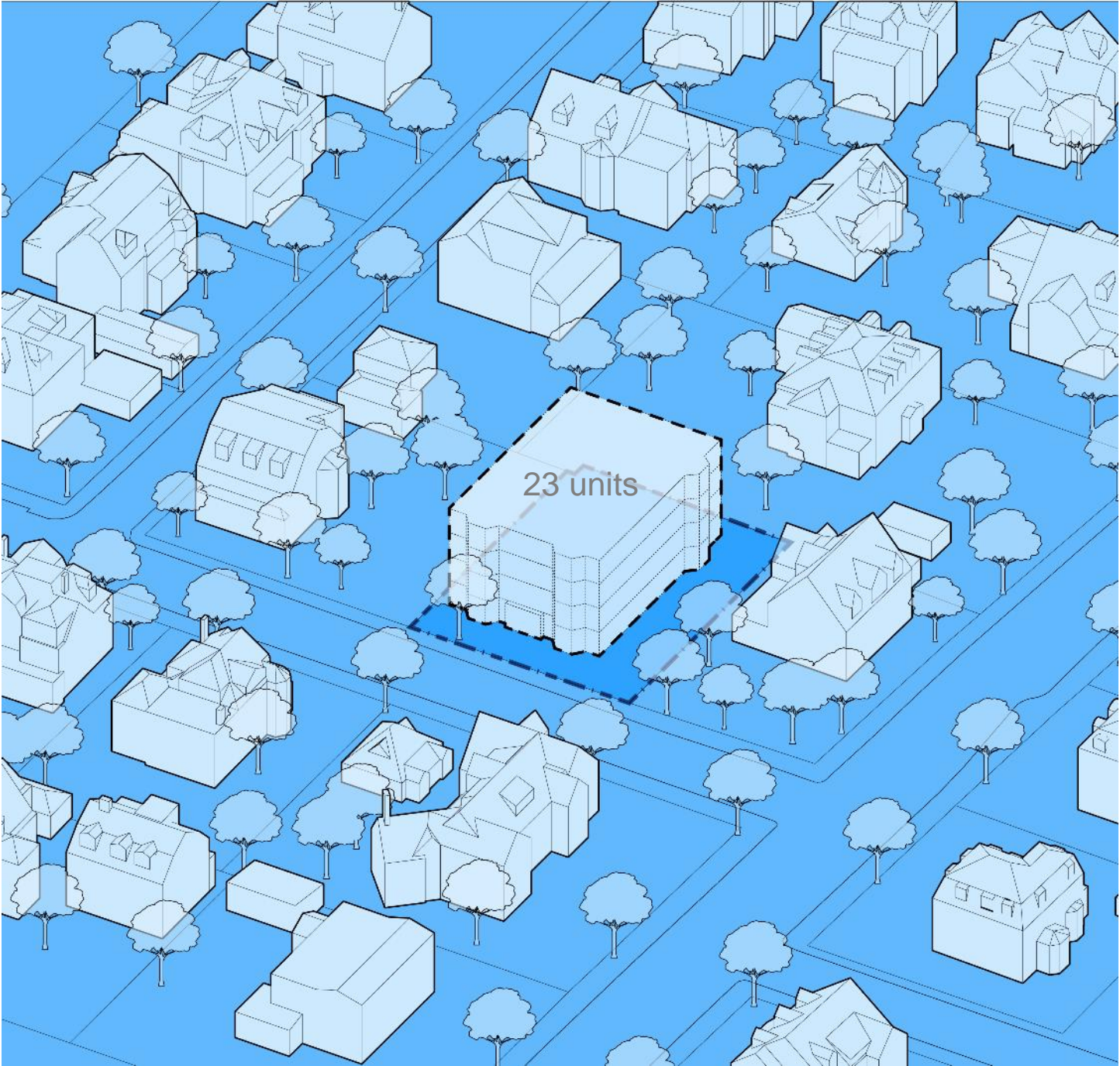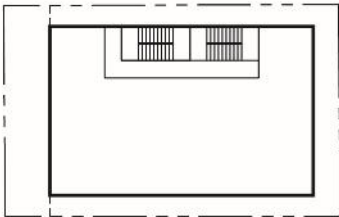

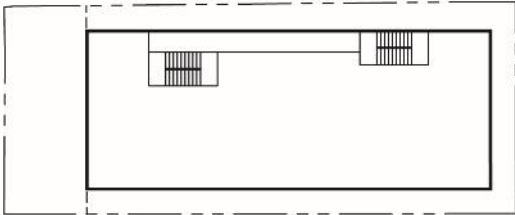23 units

Test-fits Comparison

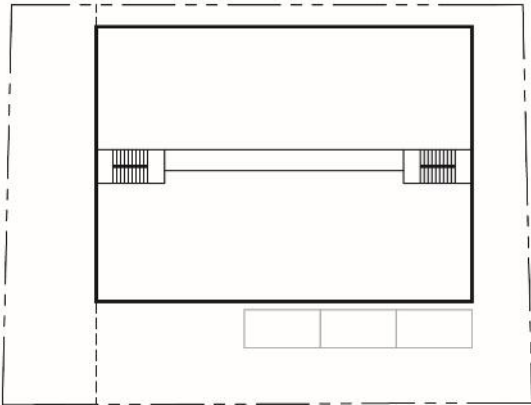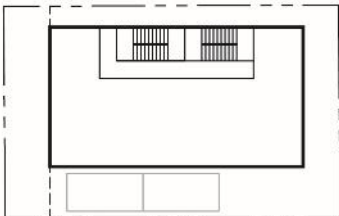| <5,000 sf	5,000- 10,000 sf	>10,000 sf

3 Floors

FAR 1.89
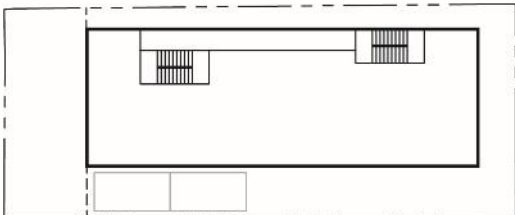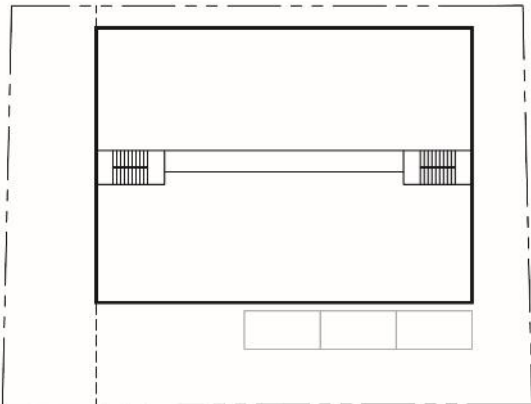

FAR 1.78

FAR 1.49

4 Floors

FAR 2

FAR 2

FAR 2

Test-fits Comparison

Size Class	Parcel Area	Floors*	Area per Floor	GFA	Leasable Area	FAR	Units**	Open Space**
<5,000 sf	3,971	3	2,500	7,500	6,100	1.89	7	37%
		4	1,980	7,920	6,080	2	8	50%
5,000-10,000 sf	6,025	3	3,580	10,740	9,140	1.78	10	41%
		4	3,000	12,000	9,875	2	12	50%
>10,000 sf	11,650	3	5,790	17,370	15,660	1.49	17	50%
		4	5,790	23,160	20,905	2	23	50%

Setbacks			
Front	Side	Side	Rear
11 ft	5'	6'	6'
11 ft	5'	12'	9'
20 ft	5'	6'	6'
20 ft	5'	12'	9'
20 ft	5'	24'	13'
20 ft	5'	24'	13'

*Recommended Maximum Building Height: 50 ft. (typical older triple decker is 35 - 40 ft. tall)

  3 floors = 33 ft.

  4 floors = 44 ft.

** Average Unit GFA = 1,000 sf.

  Unit count = Building GFA / Average Unit GFA

  Open space percentage assumes all non-building space is used for open space

Zoning Constraints

District	Max FAR	Min Lot Area / DU	Min Front Setback	Min Side Setback	Min Rear Setback	Max Height	Min OS Ratio	Parking Ratio	Multifamily Allowed?
A-1	0.50	6,000	25	15 (sum to 35)	25	35	50%	1 per DU	No
A-2	0.50	4,500	20	10 (sum to 25)	25	35	50%	1 per DU	No
B	0.50	2,500	15	7.5 (sum to 20)	25	35	40%	1 per DU	No

- Zoning rules in red are violated by at least one of the test-fits.

- Use restrictions, FAR, side and rear setbacks, and minimum lot area per dwelling unit are the most significantly affected rules.

- Given parking ratios apply to non-multifamily housing (multifamily housing is not allowed presently). The zoning code authorizes the Planning Board to reduce parking requirements when issuing a Special Permit, particularly for affordable housing.

Other Considerations

- Max height of 50 feet is recommended, in order to allow for a raised first floor for stoop, flood protection, and/or tuck-under parking.

- Parking considerations:
  - At-grade spaces require compromise with open space requirements; tuck-under parking is also a possibility, but raises cost of development.
  - Parking ratios like 0–0.5 spaces per unit are more typical in affordable developments.
  - Many existing homes in these districts have driveways, putting less pressure onto on-street parking compared to other parts of the city.

- Open space requirements require compromise with height requirements (in order to achieve the optimal density), as well as parking requirements. Green roofs and stormwater management infrastructure can mitigate the impacts of less open space.

Design Considerations

- Though an affordable overlay should provide for an easier process of development approval, 100% affordable development should still be subject to design review, to ensure the best viable outcomes for open space siting, maintenance of existing trees, and complementary designs.

- Cambridge can build on the design innovation currently underway in similar cities that manage infill development to achieve their housing goals.

Mid-density infill housing is increasingly common in cities across the country

Allston

Seattle