

ENVISION CAMBRIDGE

Alewife District Plan

May 16, 2018

Alewife: Stakeholder and public engagement

The Alewife scenarios and plan have been developed through:

- 15 Alewife Working Group Meetings
- 2 Advisory Committee Meetings
- 2 Public Workshops
- 3 Interdepartmental Working Group Meetings
- 2 City Council Roundtable
- 1 Planning Board Update
- 3 Focus Groups with CET

= **28 Meetings**, not counting meetings with the core project team



Alewife Visioning Workshop, Tobin School, July 21, 2016.

Alewife Key Objectives



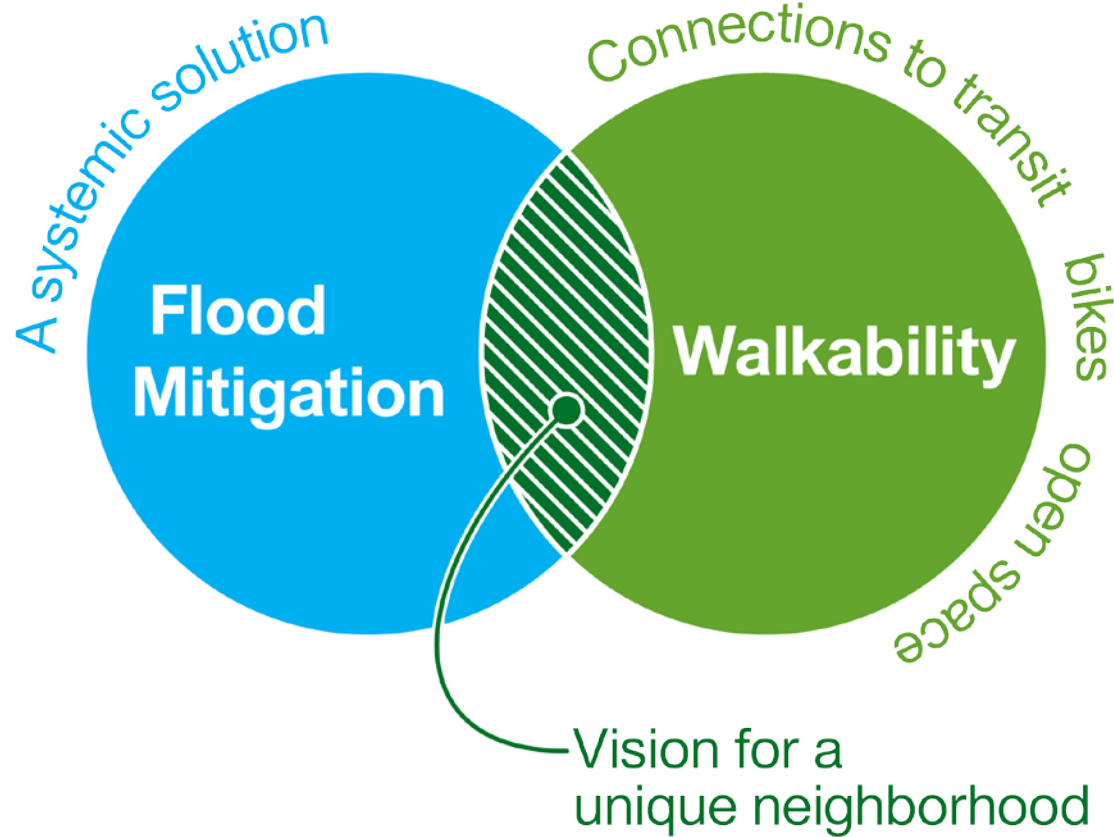
Create an identity and sense of place for the whole Alewife District.

- Better integrate the district with the rest of the city through new walking and biking paths, streets, and open spaces.
- Ensure that both new development and existing infrastructure, neighborhoods, and community resources are prepared for climate change, in particular the challenges of flooding and heat.
- Encourage forms of development, a mix of uses, and a range of improvements that will facilitate and encourage walking, biking, and transit use and reduce the growth of vehicular trips.
- Ensure that new development benefits the adjacent residential neighborhoods by introducing new amenities and services and creating neighborhood destinations.

Urban design framework

Find a systemic solution to the impacts of climate change by aligning with the preparedness planning process

- Build to an elevation of 4' or over for the first habitable floor level, which reduces flood risk from 2070 SLR/SS



Create a mixed-use walkable neighborhood that also promotes bicycles and transit

- Create a distributive multimodal transportation network by “completing the street grid” and making better connections to the T
- Create a “there there” for daytime and evening populations and to improve the “quality of address”
- Achieve a scaled transition of new development towards Cambridge Highlands

In order to realize our vision of transforming Alewife into a resilient neighborhood with strong amenities and sense of place, we need to retain a sufficient amount of value in order to encourage redevelopment.

District Character Objectives

- Transform Alewife from a peripheral district, dominated by surface parking lots into an urban neighborhood with a full complement of building types, uses, and public amenities.
- Coherent, beautiful, walkable, and livable urban environment.
- Public spaces and buildings will be the foundation of Alewife's sense of place, and will connect it to the surrounding neighborhoods.
- Resilient to flooding and extreme hot weather, and will protect the public during extreme weather events.



Built Form Objectives

- Alewife’s buildings will frame the spaces of the district’s public realm, enrich them with visual interest and beauty, and reinforce the district’s sense of place.
- Ground floor uses will include shops, restaurants, cafés, and community spaces. Design features will include elevated sidewalks, frequent entrances, transparent ground floor facades, canopies, and courtyards.
- A variety of building types, including mixed-use buildings are encouraged.
- Buildings will be energy efficient and resilient to flooding.



Open Space Objectives

- Alewife's streets, squares, and parks will interconnect to constitute its public realm.
- Welcoming, engaging, and memorable places for public use and enjoyment.
- Harmonious landscape and architectural design to create a varied, programmatically rich, and continuous pedestrian experience.
- Alewife's open spaces will organize its urban fabric, interconnect its subdistricts, and connect it to the surrounding neighborhoods.
- Trees and other plantings, and the water features they incorporate, will reduce the urban heat island effect and absorb stormwater.



A Network of Green Infrastructure



Bloomington Trail, Chicago



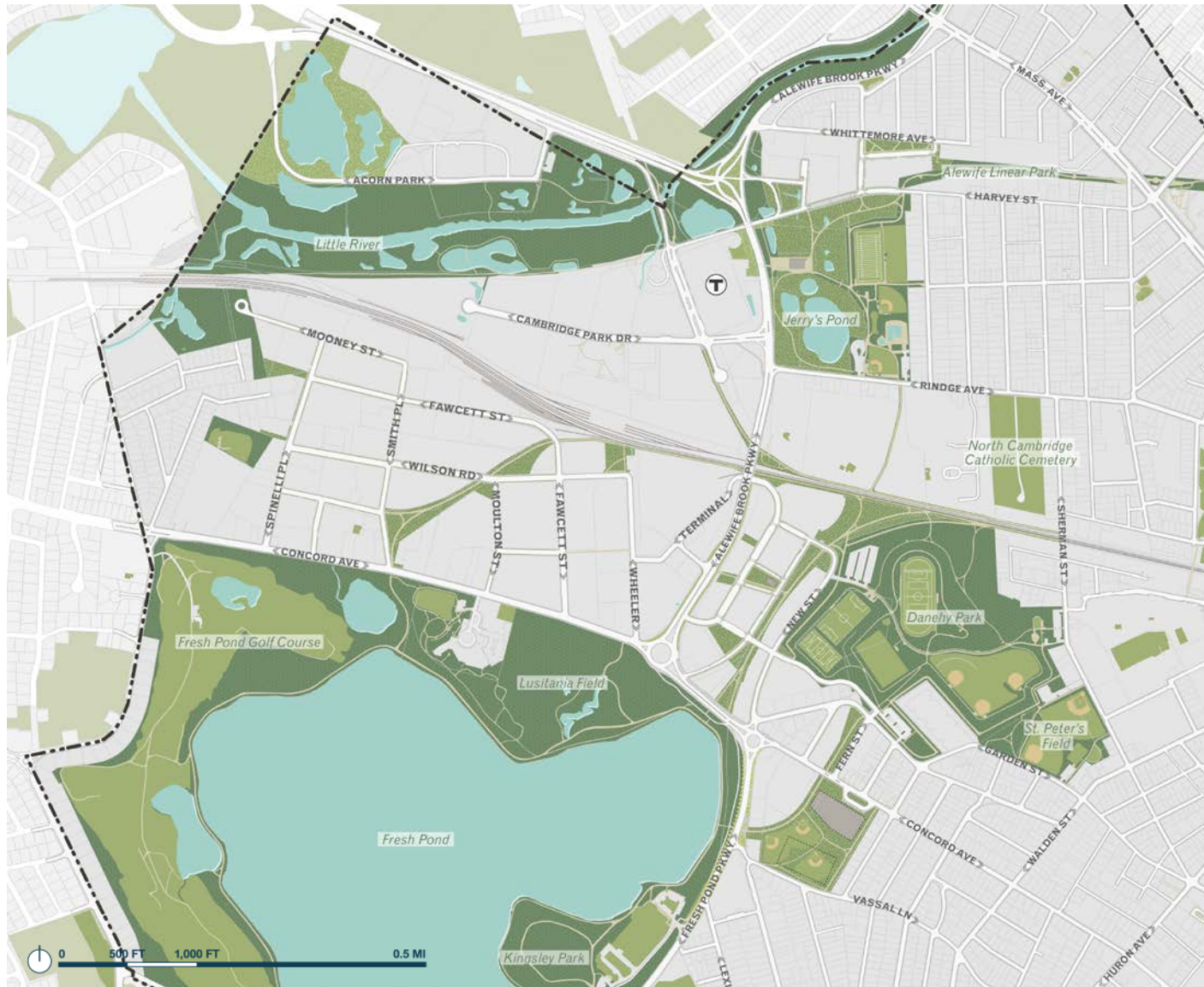
Existing Open Space Network



Opportunities

- Encourage walking and biking to reduce growth vehicular trips.
- Provide off-street connections between disconnected existing open spaces.
- Create recreation loops at two scales in Alewife.
- Reduce urban heat island affect through increased shading and permeable surfaces.
- Increase storm water storage options using existing City-owned parcels.

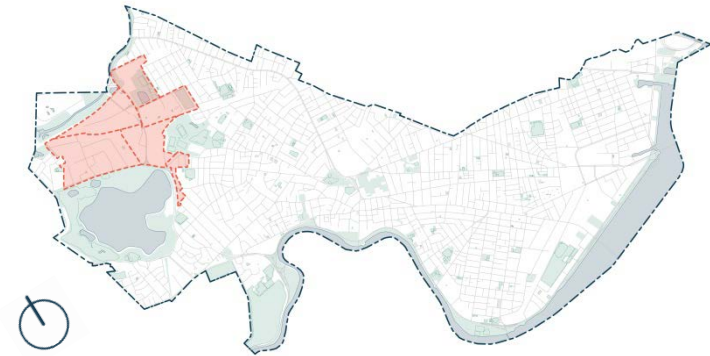
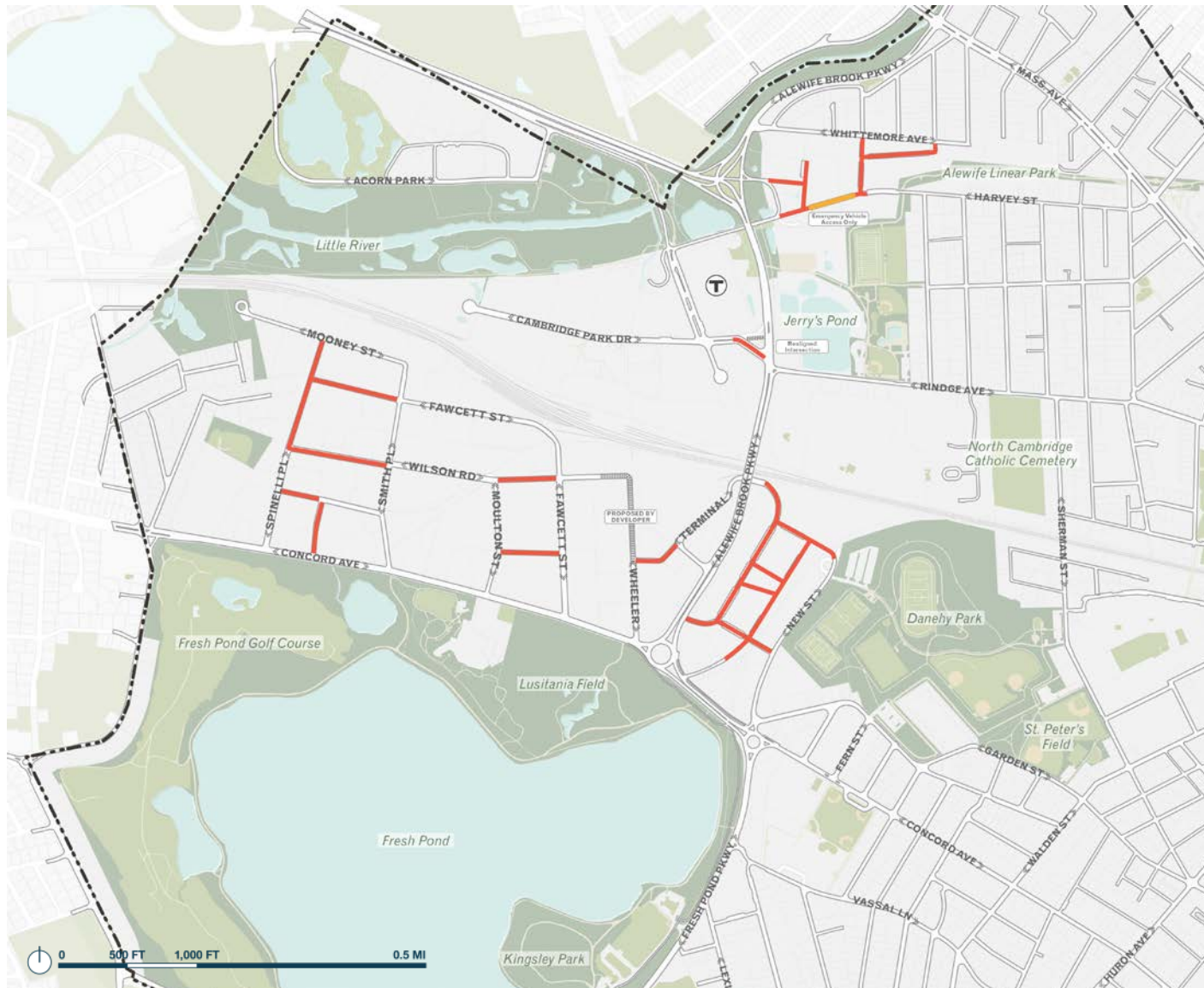
Proposed Open Space Network



Benefits of Achieving the Vision

- Potential for new publicly accessible open space.
- New connections can help rationalize the existing street grid, catalyze development, and facilitate achievement of the vision set out in the plan.
- Additional off-street pedestrian and bicycle as an alternative to vehicular transit.
- Balance of new housing units and jobs.
- Flood mitigation that also strengthens the urban street edge and pedestrian experience.

Alewife: Road Connectivity

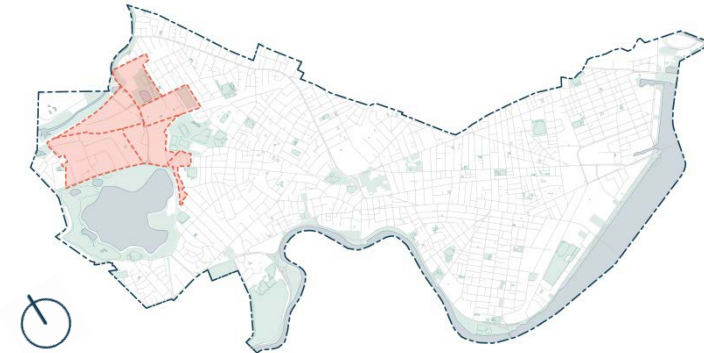






Recommended

- New Roads
- New Road—Emergency Vehicle Access Only

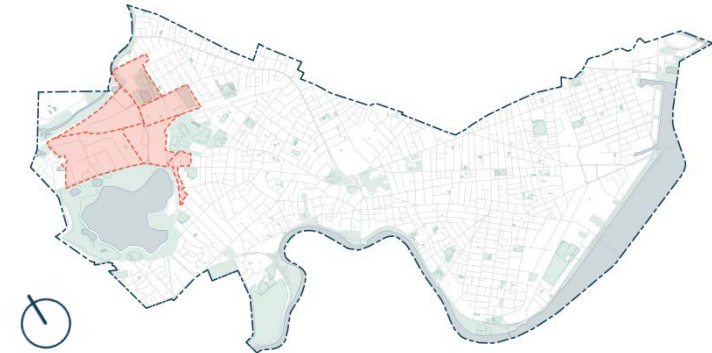
*Smith Place is preferred truck route

Alewife: Bike/Ped Connectivity - Existing



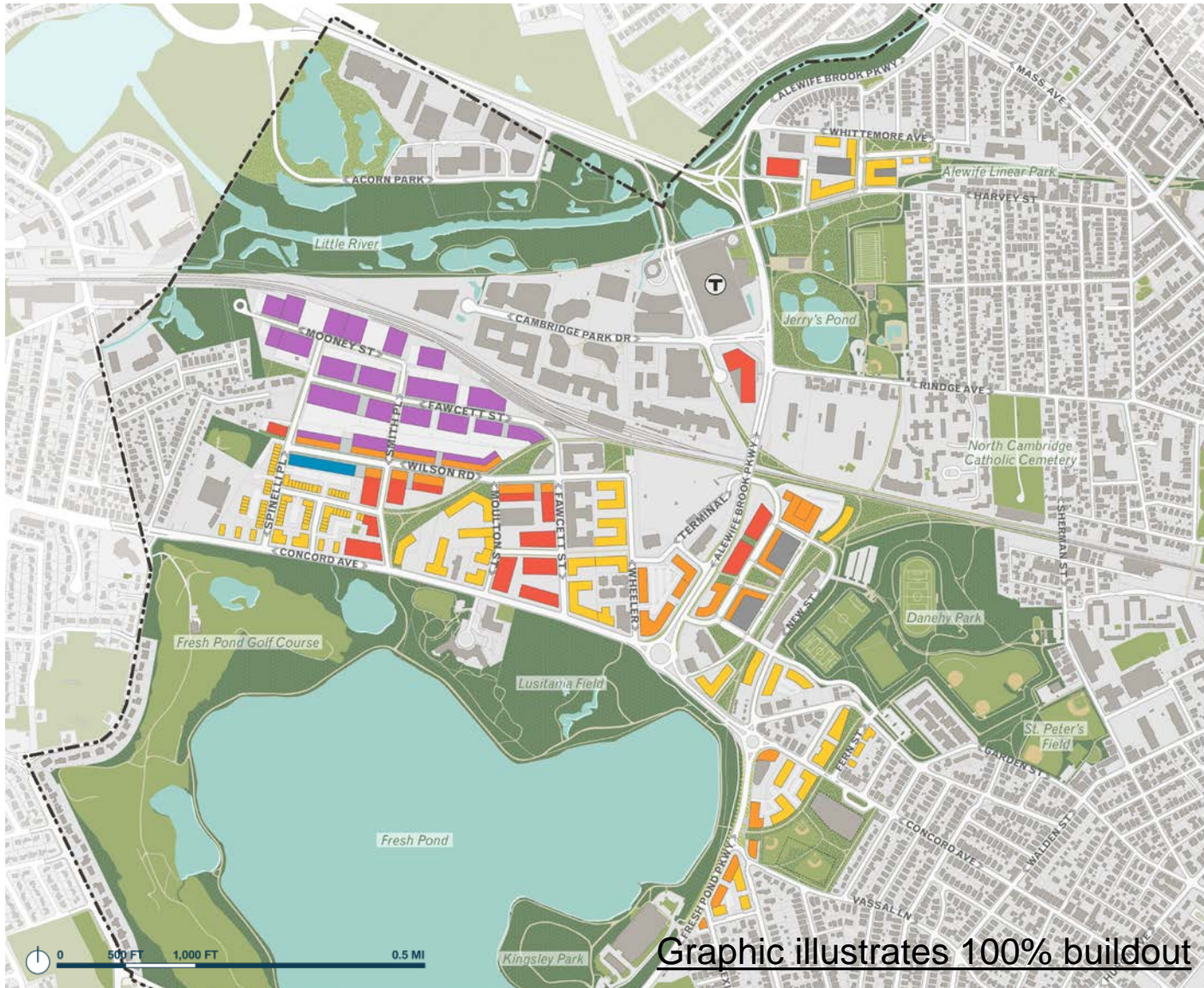
- Existing
-  Pedestrian Paths
 -  Multi-use Paths
 -  Separated Bike Paths
 -  Crosswalks

Alewife: Bike/Ped Connectivity - Proposed



- Existing
- Recommended
- Pedestrian Paths
- Multi-use Paths
- Separated Bike Paths
- Crosswalks

Alewife Vision Benefits



Graphic illustrates 100% buildout

Net New Housing Units at 60% Buildout	~2,110 units
– Quadrangle	~725 units
– Shopping Center	~745 units
– Jerry's Pond	~310 units
– Fresh Pond Parkway	~330 units

Net New Jobs at 60% Buildout	~9,290 jobs
– Quadrangle	~7,020 jobs
– Shopping Center	~1,030 jobs
– Jerry's Pond	~350 jobs
– Triangle	~720 jobs
– Fresh Pond Parkway	~170 jobs

Proposed Land Use

- Residential
- Commercial
- Mixed-use Retail
- Mixed-use Industrial
- Live/Work Space

Alewife Subdistricts



The Quadrangle: Introduce diverse innovation spaces that provide low-barrier-to-entry jobs. Increase residential living and connections. Encourage development that helps prepare the neighborhood for flooding and extreme heat.

Shopping Center: Create a walkable community destination that complements the main street proposed for the Quadrangle.

Fresh Pond Parkway: Encourage sensitive development that supports the surrounding neighborhoods.

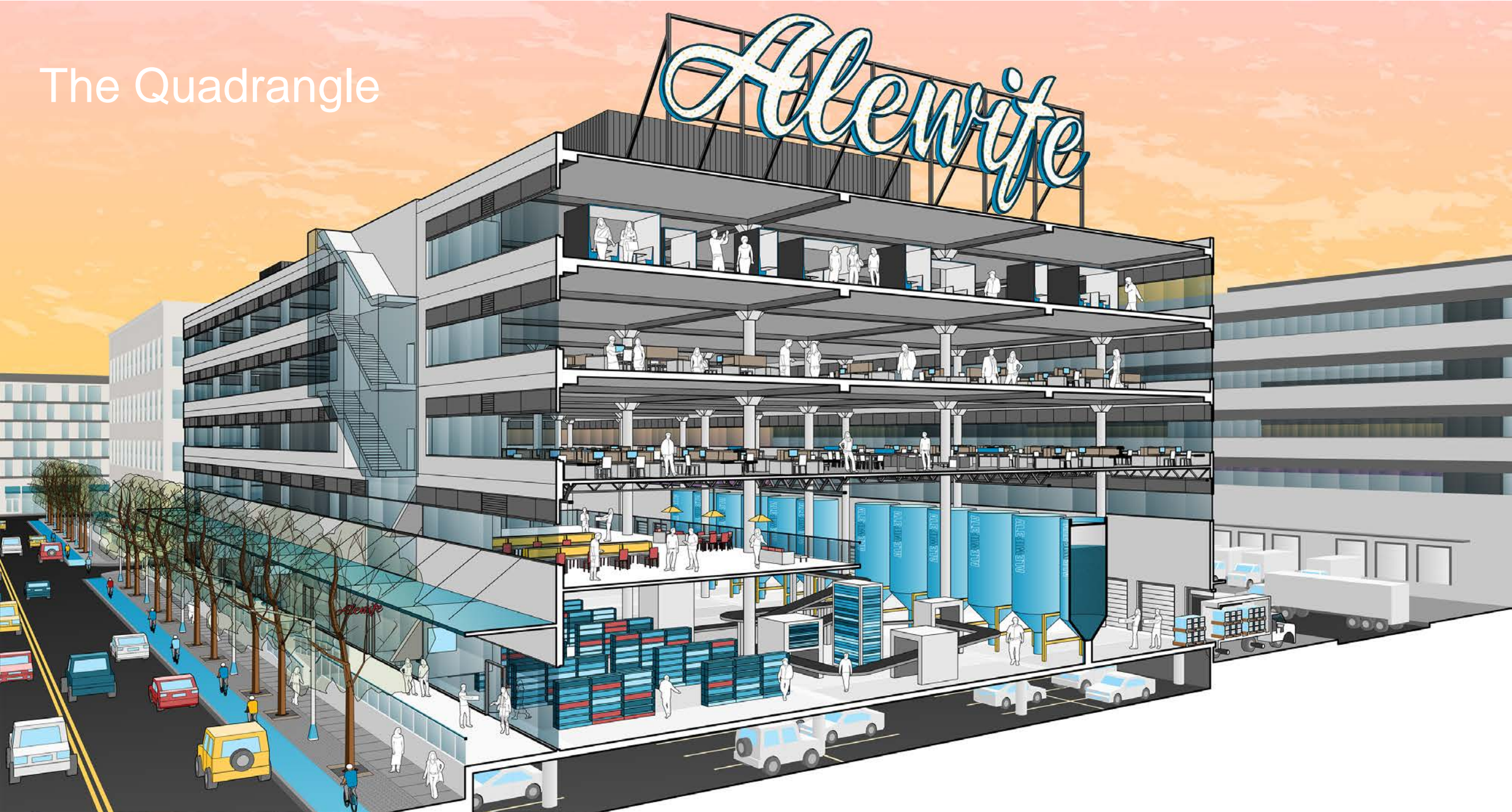
Triangle: Better connect the Triangle to the surrounding neighborhoods and improve the urban form of the area through streetscape improvements and improvements around its edges.

Rindge Ave: Improve biking and walking connections to the rest of the district.

Jerry's Pond: Identify development opportunities to enhance connections, address flooding, and support the neighborhood. Enhance Jerry's Pond as a neighborhood amenity.

The Quadrangle

Alewife



Quadrangle: Existing



Quadrangle

Introduce diverse innovation spaces that provide low-barrier-to-entry jobs. Increase residential living and connections. Encourage development that helps prepare the neighborhood for flooding and extreme heat.

Quadrangle: Proposed Land Use



Gross GFA at 100% buildout	~6.44m SF
District FAR	1.62

Gross GFA at 60% buildout (2030)	~4.30m SF
- New housing	~725 units
- Ground floor active uses	~68,400 SF
- Office / lab space	~1.90m SF
- Industrial	~399,500 SF

New Open Space	~4.0 acres
----------------	------------

- Artist Live/Work
- Accessory Retail Zone
- Industrial/Commercial Hybrid
- Retail (Mixed-use)
- Commercial
- Residential
- Open Space

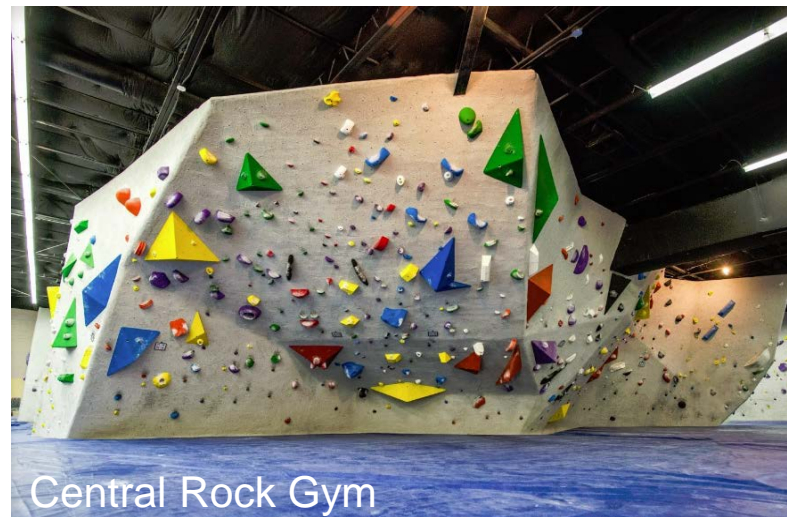
Why Light Industrial Uses

Existing businesses provide:

- Important amenities for Cambridge residents
- Diverse jobs for Cambridge residents that are different in profile than the jobs in Kendall Square

A diverse innovation jobs district can provide:

- Low barrier to entry jobs with a living wage
- Economic and environmental sustainability of the supply chain through local production of goods to local end-users



Food Manufacturing

4% job growth nationally, 2011-2015
Only 38% of regional demand for beverage manufacturing is met by local companies.

Examples:
Manufacturing of baked goods
Fruit and Vegetable Preserving
Grain Milling
Confectionery Product Manufacturing
Dairy Product Manufacturing



Beverage Manufacturing

4% job growth nationally, 2011-2015
Only 41% of regional demand for beverage manufacturing is met by local companies.

Examples:
Breweries
Wine manufacturing
Ice manufacturing
Soda or tea manufacturing



Fabricated Metal Product Manufacturing

2% job growth, 2011-2015
Only 53% of regional demand for fabricated metal manufacturing is met by local companies

Examples:
Machine shops
Makerspace
Forging and Stamping
Architectural and Structural Metals Manufacturing



Medical Equipment and Supplies Manufacturing

Level employment nationally, 2011-2015
Only 37% of regional demand for medical manufacturing is met by local

Examples:
Medical kit assembly
Manufacturing of surgical and medical instruments, appliances, and supplies
Dental equipment and supplies manufacturing



Sources: National job growth rates calculated from U.S. Census Bureau LEHD. All other stats are calculated using EMSI.

Quadrangle: Raised Plinth



Quadrangle: Raised Plinth



Shopping Center Vision



Urban Plaza with Housing over Retail

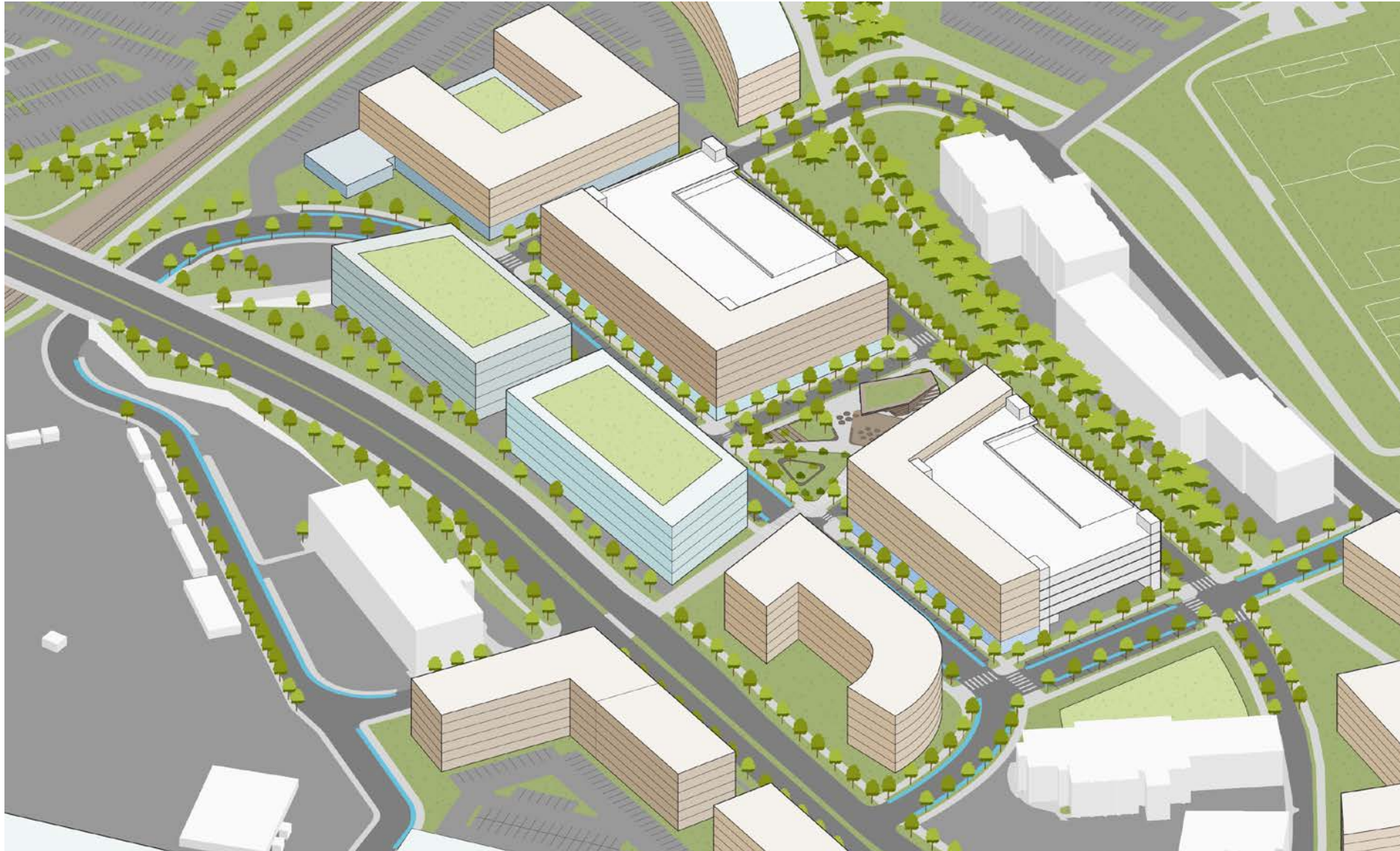


Mixed Use Residential Housing

Shopping Center

Create a walkable community destination that complements the main street proposed for the Quadrangle.

Shopping Center: Walkable Retail Streets



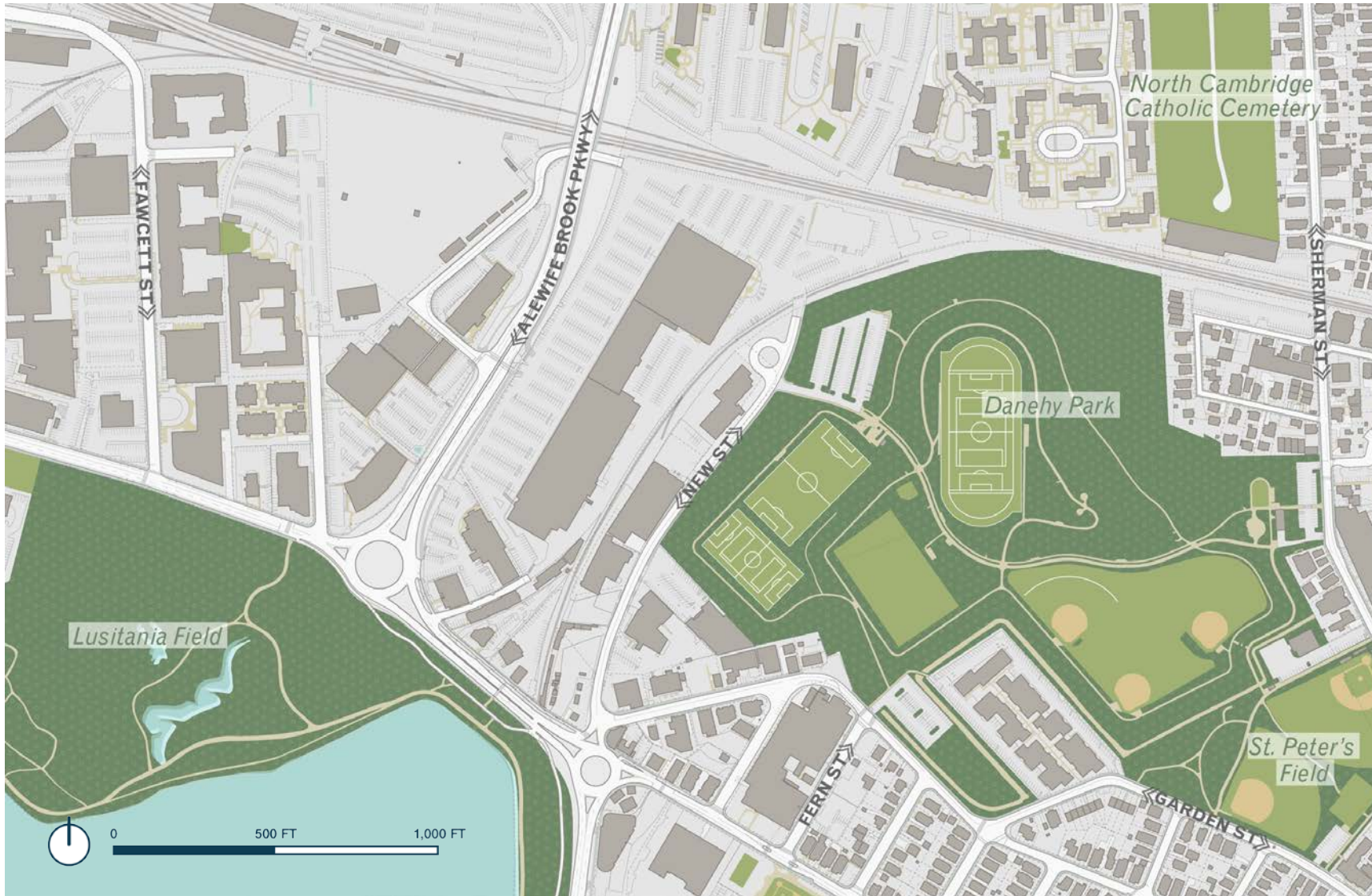
Shopping Center

Create a walkable community destination that complements the main street proposed for the Quadrangle.

Proposed Land Use

- Residential
- Commercial
- Mixed-use Retail

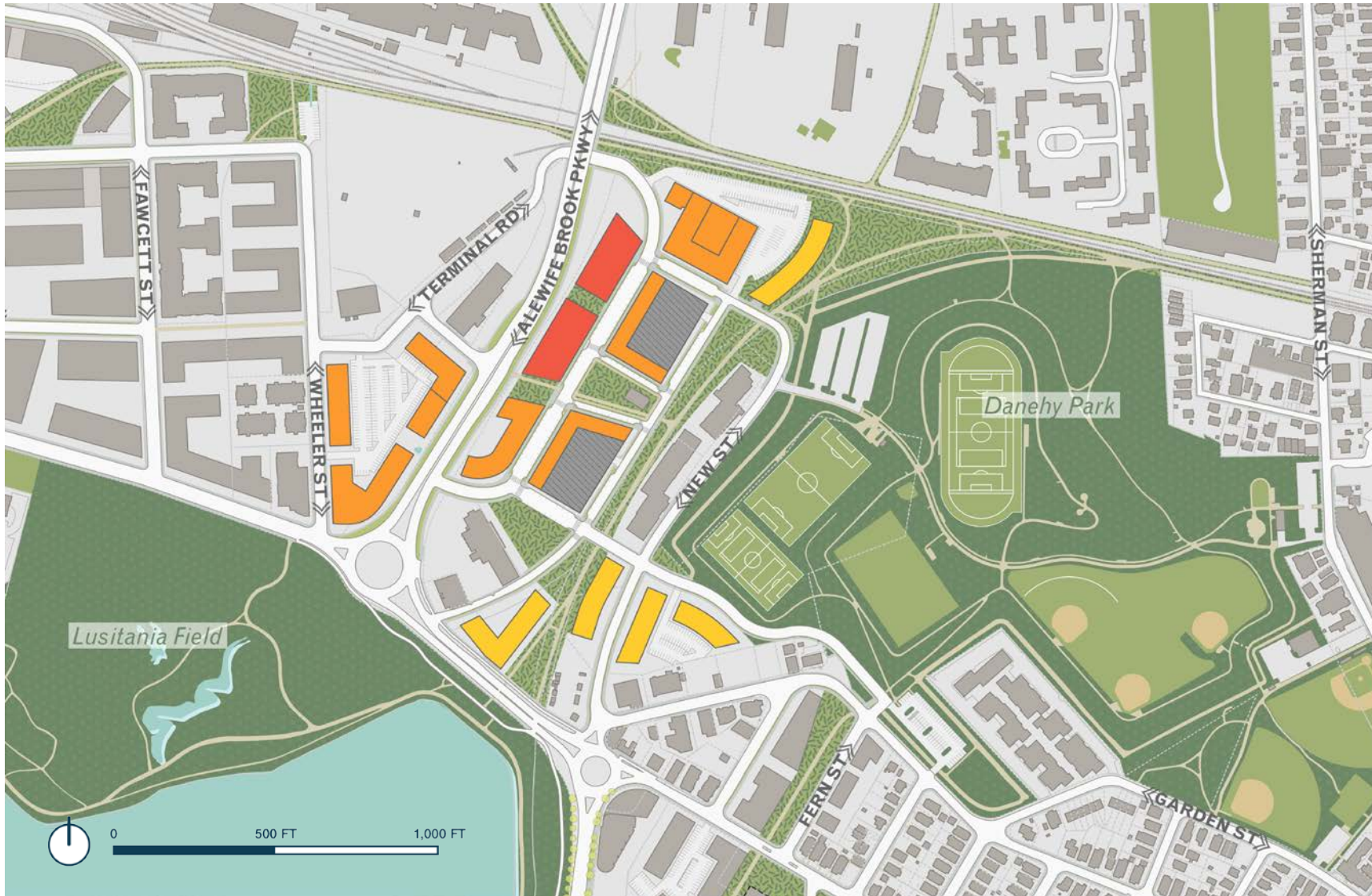
Shopping Center: Existing



Shopping Center

Create a walkable community destination that complements the main street proposed for the Quadrangle.

Shopping Center: Proposed Land Use



Gross GFA at 100% buildout	~2.05m SF
District FAR	1.54

Gross GFA at 60% buildout (2030)	~1.35m
– New housing	~745 units
– Ground floor active uses	~127,550 SF
– Commercial Office	~325,300 SF
New Open Space	~9.4 acres

Proposed Land Use

- Mixed-use Commercial
- Residential
- Mixed-Use Residential
- Open Space
- Parking Garage

Fresh Pond Parkway Vision

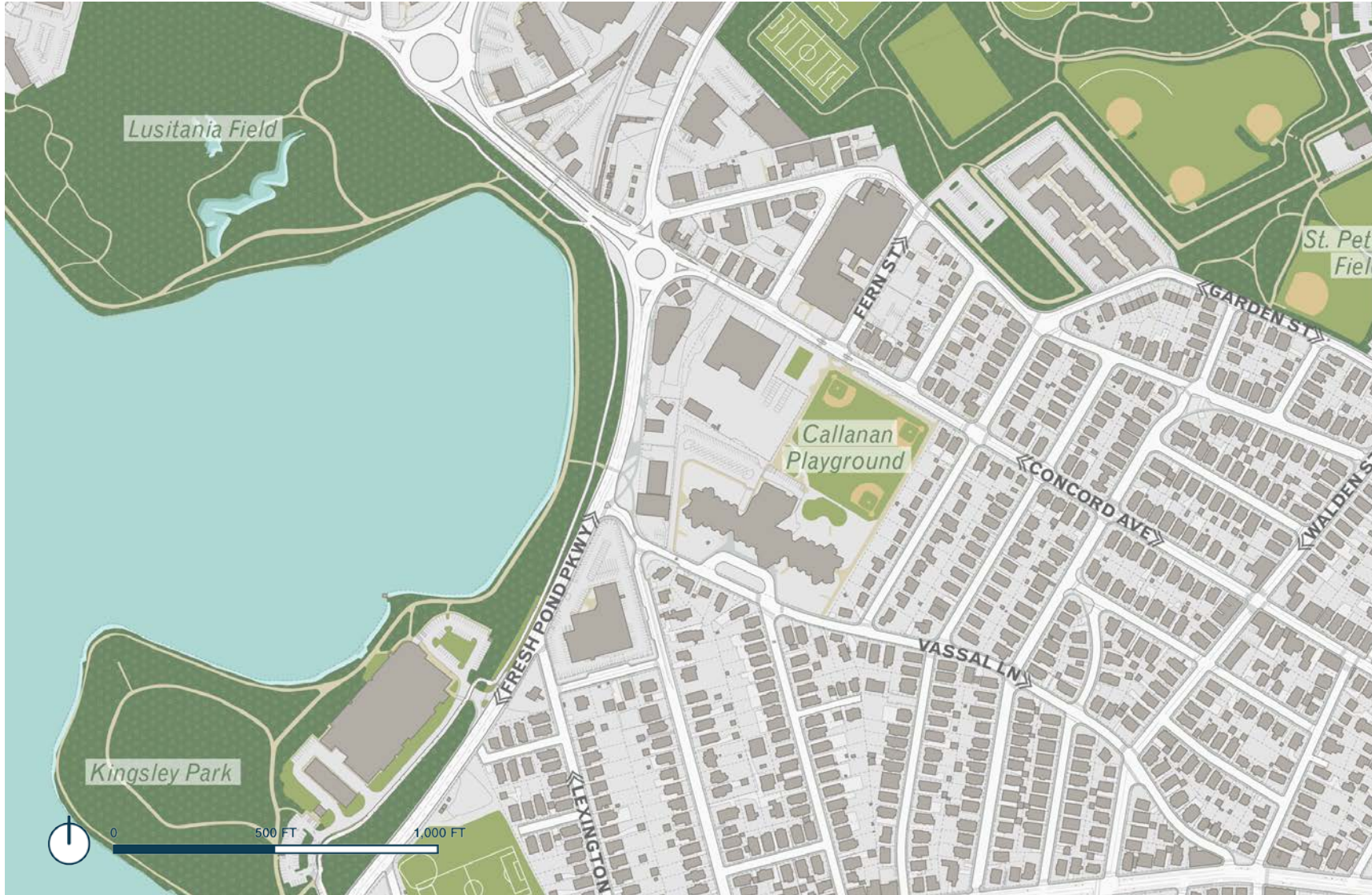


Fresh Pond Parkway

Encourage sensitive development that supports the surrounding neighborhoods.



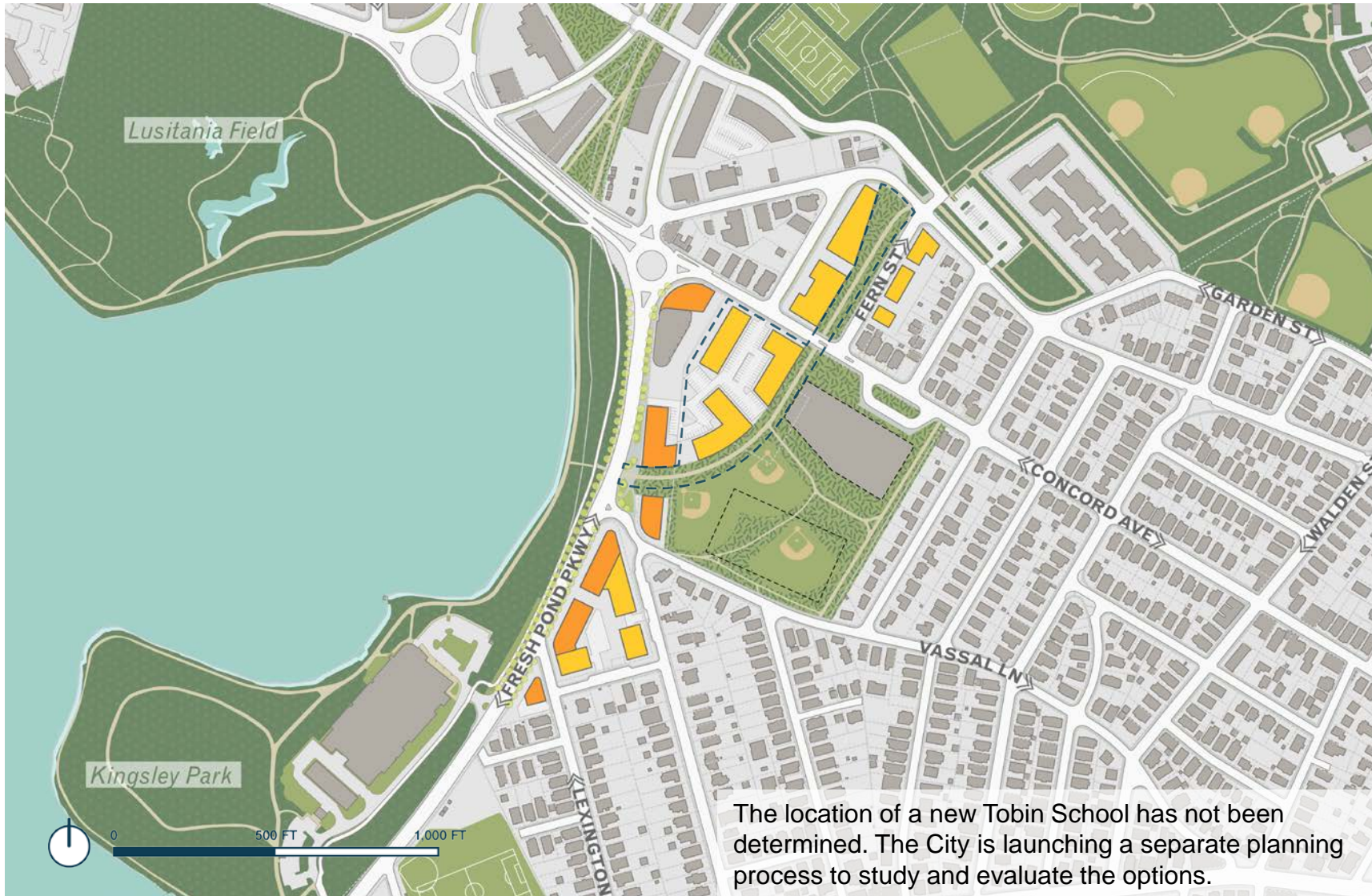
Fresh Pond Parkway: Existing



Fresh Pond Parkway

Encourage sensitive development that supports the surrounding neighborhoods.

Fresh Pond Parkway: Proposed Land Use



Gross GFA at 100% buildout	~600,000 SF
District FAR	1.80
Gross GFA at 60% buildout (2030)	~414,550 SF
– New housing	~330 units
– Ground floor active uses	~44,550 SF
New Open Space	~2.5 acres

Armory is a long term vision.
School location to be determined.

Proposed Land Use

- Long Term Vision
- Residential
- Mixed-Use Residential

Jerry's Pond Vision



Photo Source: <https://lowrypei.wordpress.com/posts/>

Jerry's Pond

Identify development opportunities to enhance connections, address flooding, and support the neighborhood. Enhance Jerry's Pond as a neighborhood amenity.

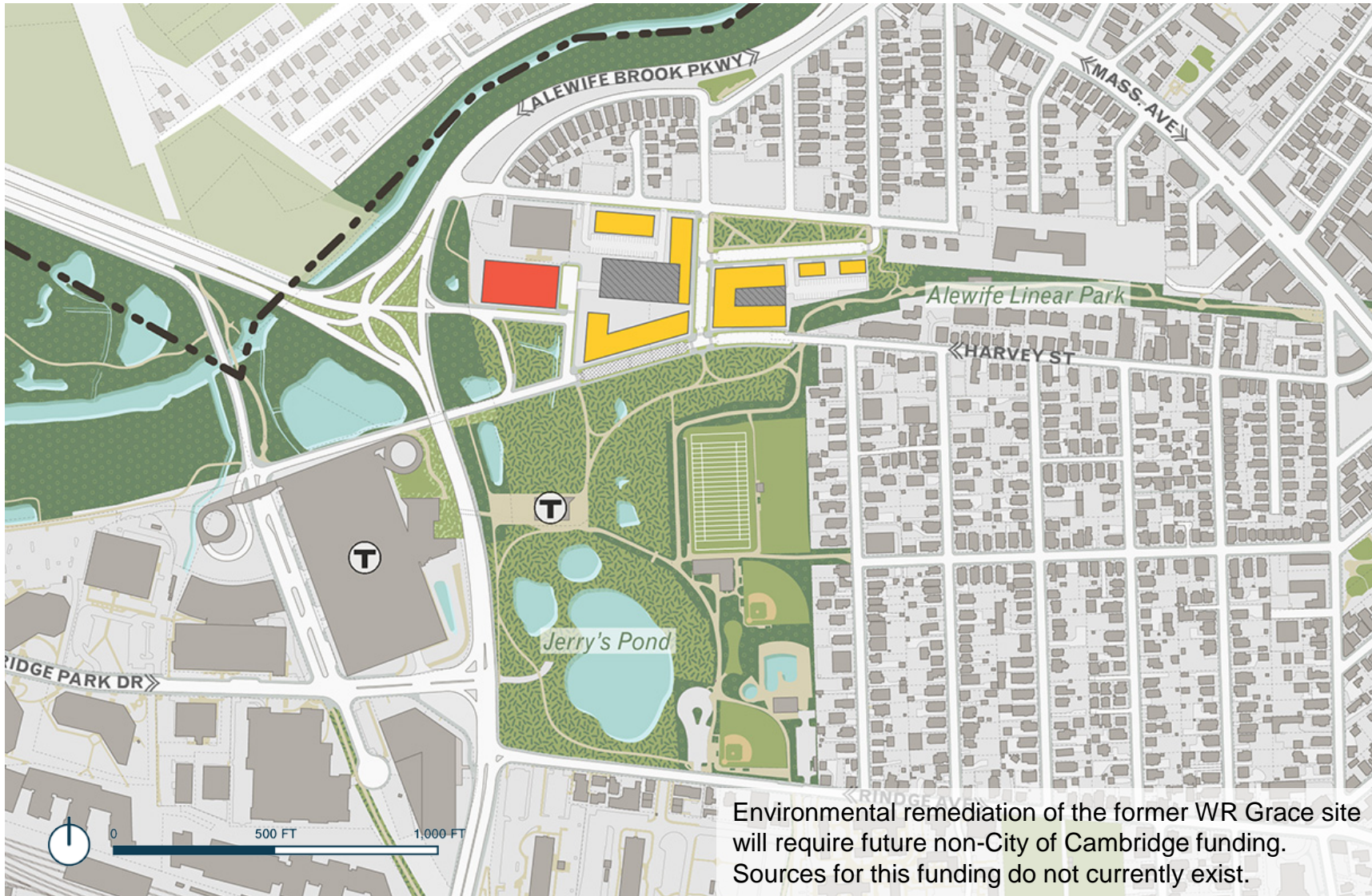
Jerry's Pond: Existing



Jerry's Pond






Identify development opportunities to enhance connections, address flooding, and support the neighborhood. Enhance Jerry's Pond as a neighborhood amenity.

Jerry's Pond: Proposed Land Use



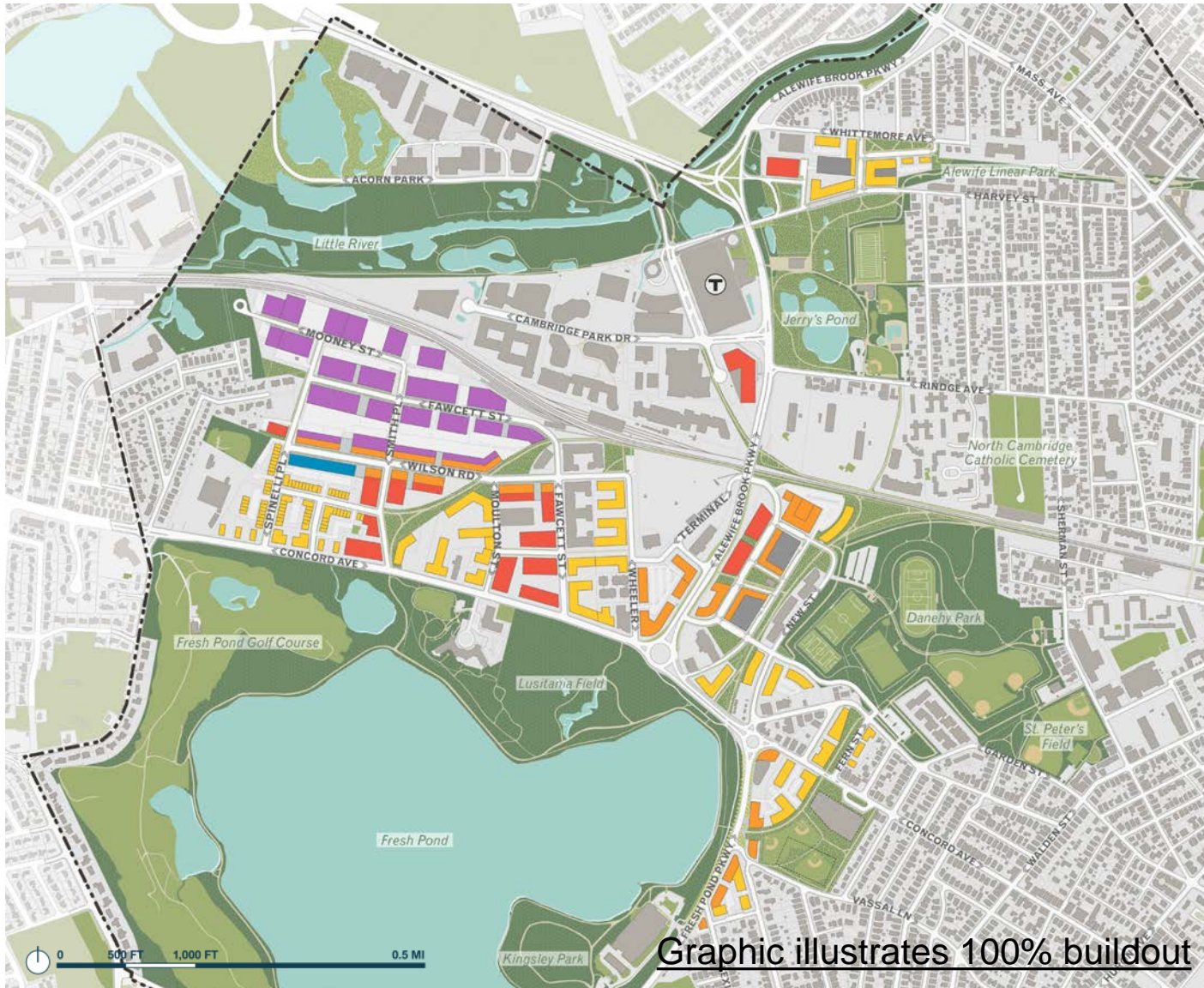
Gross GFA at 100% buildout	~803,750 SF
District FAR	0.60
Gross GFA at 60% buildout (2030)	~524,050 SF
– Housing Units	~310 units
– Commercial Office	~202,350 SF
– MBTA	7,484 SF
New Open Space	~16.8 acres

Proposed Land Use

-  Long Term Vision
-  Commercial
-  Residential
-  Parking Garage
-  Emergency Access Only

Environmental remediation of the former WR Grace site will require future non-City of Cambridge funding. Sources for this funding do not currently exist.

Alewife Vision Benefits



Graphic illustrates 100% buildout

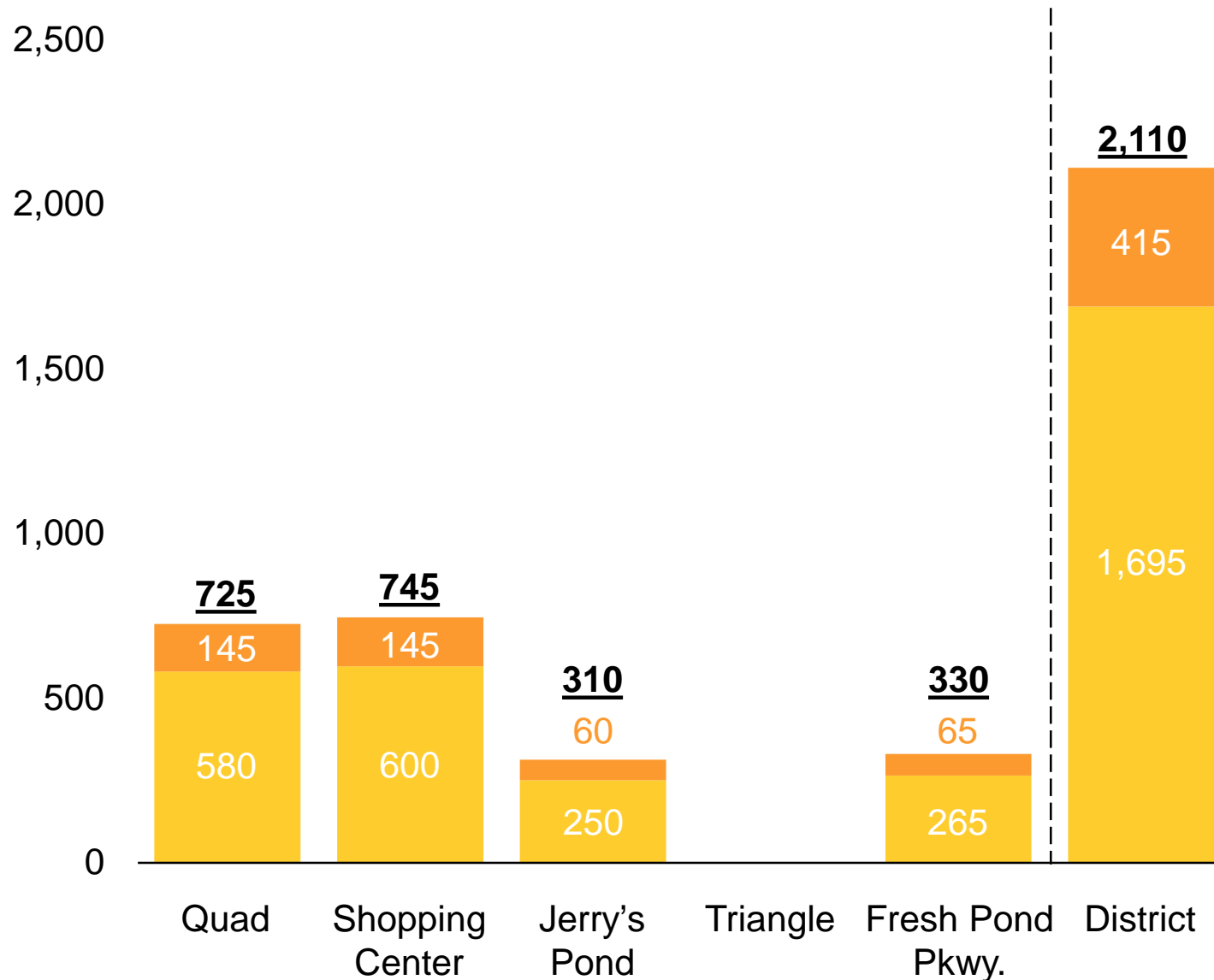
Net New Housing Units at 60% Buildout	~2,110 units
– Quadrangle	~725 units
– Shopping Center	~745 units
– Jerry's Pond	~310 units
– Fresh Pond Parkway	~330 units

Net New Jobs at 60% Buildout	~9,290 jobs
– Quadrangle	~7,020 jobs
– Shopping Center	~1,030 jobs
– Jerry's Pond	~350 jobs
– Triangle	~720 jobs
– Fresh Pond Parkway	~170 jobs

Proposed Land Use

- Residential
- Commercial
- Mixed-use Retail
- Mixed-use Industrial
- Live/Work Space

Housing Unit Breakdown



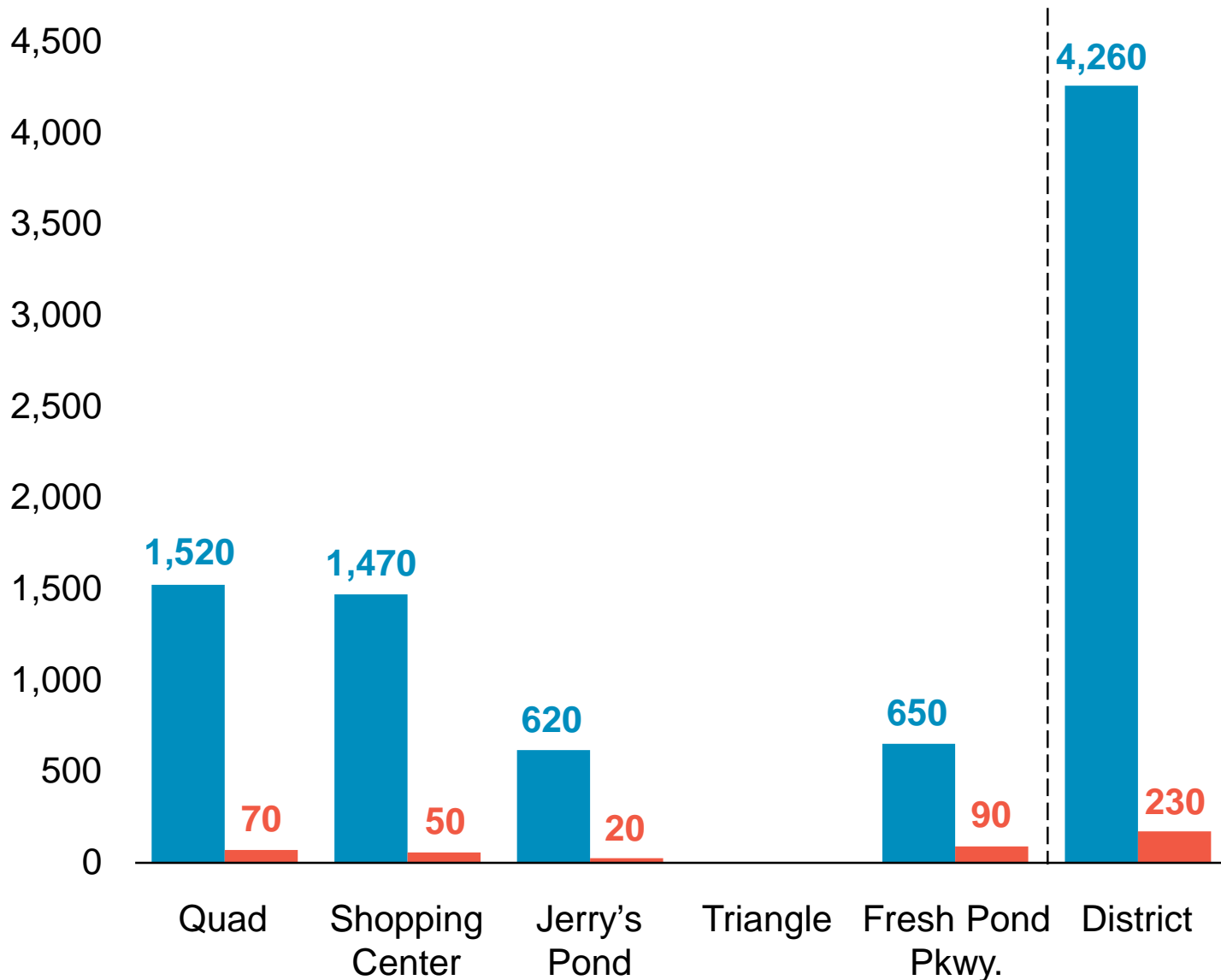
Net New Housing Units at 60% Buildout (2030)	Market-Rate	Affordable	Total Units
– Quadrangle	~580	~145	~725
– Shopping Center	~600	~145	~745
– Jerry's Pond	~250	~60	~310
– Triangle	0	0	0
– Fresh Pond Parkway	~265	~65	~330
District Total	~1,695	~415	~2,110

Housing Units

- Affordable
- Market-rate

Net new units do not include permitted projects. Calculations rounded to the nearest 5 units and based on an average unit size of 1000 SF, not including townhouses.

Residents & Public School Students

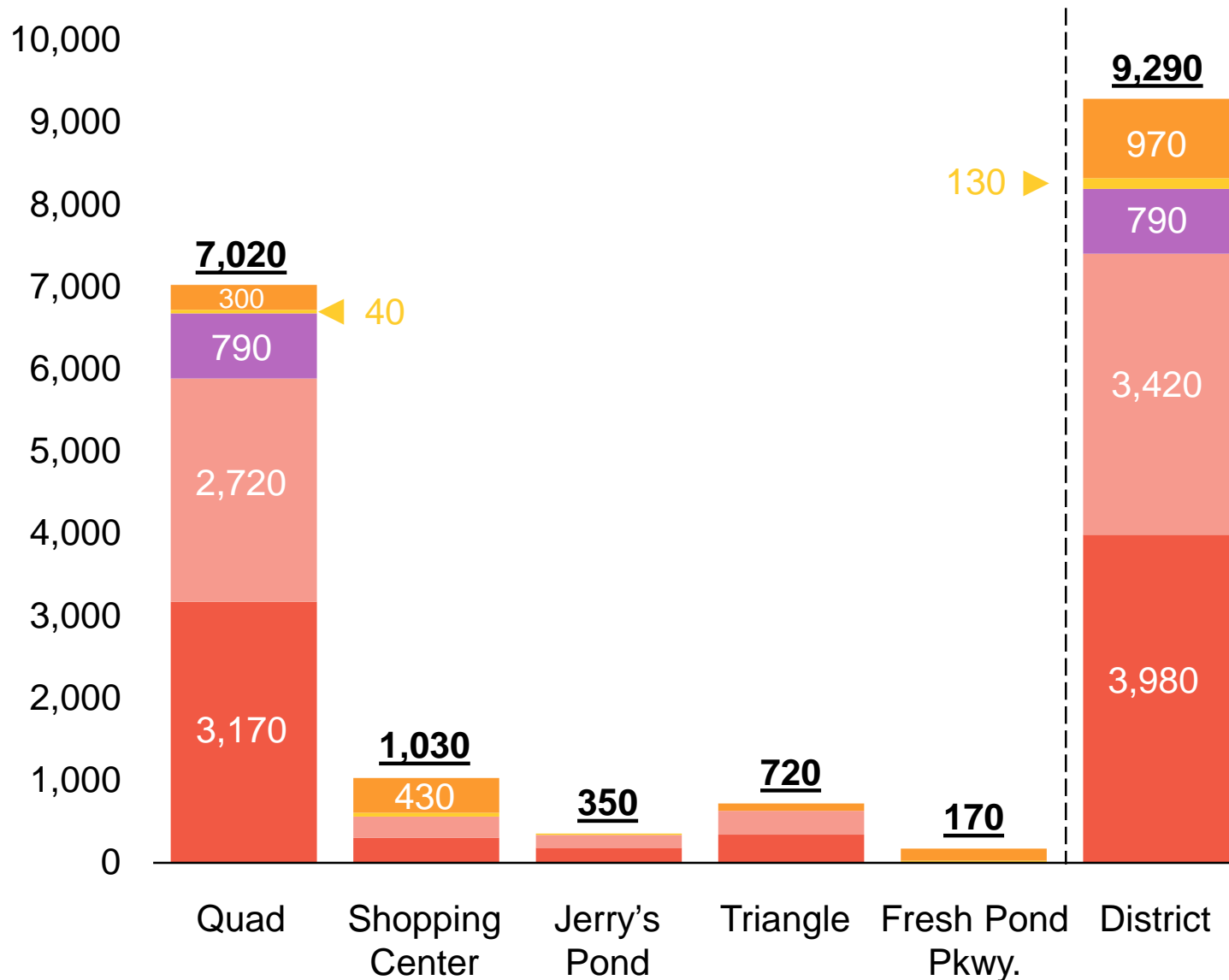


Net New at 60% Buildout (2030)	Residents	Students
– Quadrangle	~1,520	~70
– Shopping Center	~1,470	~50
– Jerry's Pond	~620	~20
– Triangle	0	0
– Fresh Pond Parkway	~650	~90
District Total	~4,260	~230

■ Residents
■ Public School Students

Estimates are based on Census Bureau data for the City of Cambridge and data from Cambridge Public Schools, while taking into account the effect of the updated Inclusionary Housing Program.

Jobs Breakdown



Net New Jobs at 60% Buildout (2030)	Total Jobs
– Office	~3,980
– Lab	~3,420
– Industrial	~790
– Retail	~970
– Residential	~130

Jobs Total	<u>~9,290</u>
-------------------	----------------------

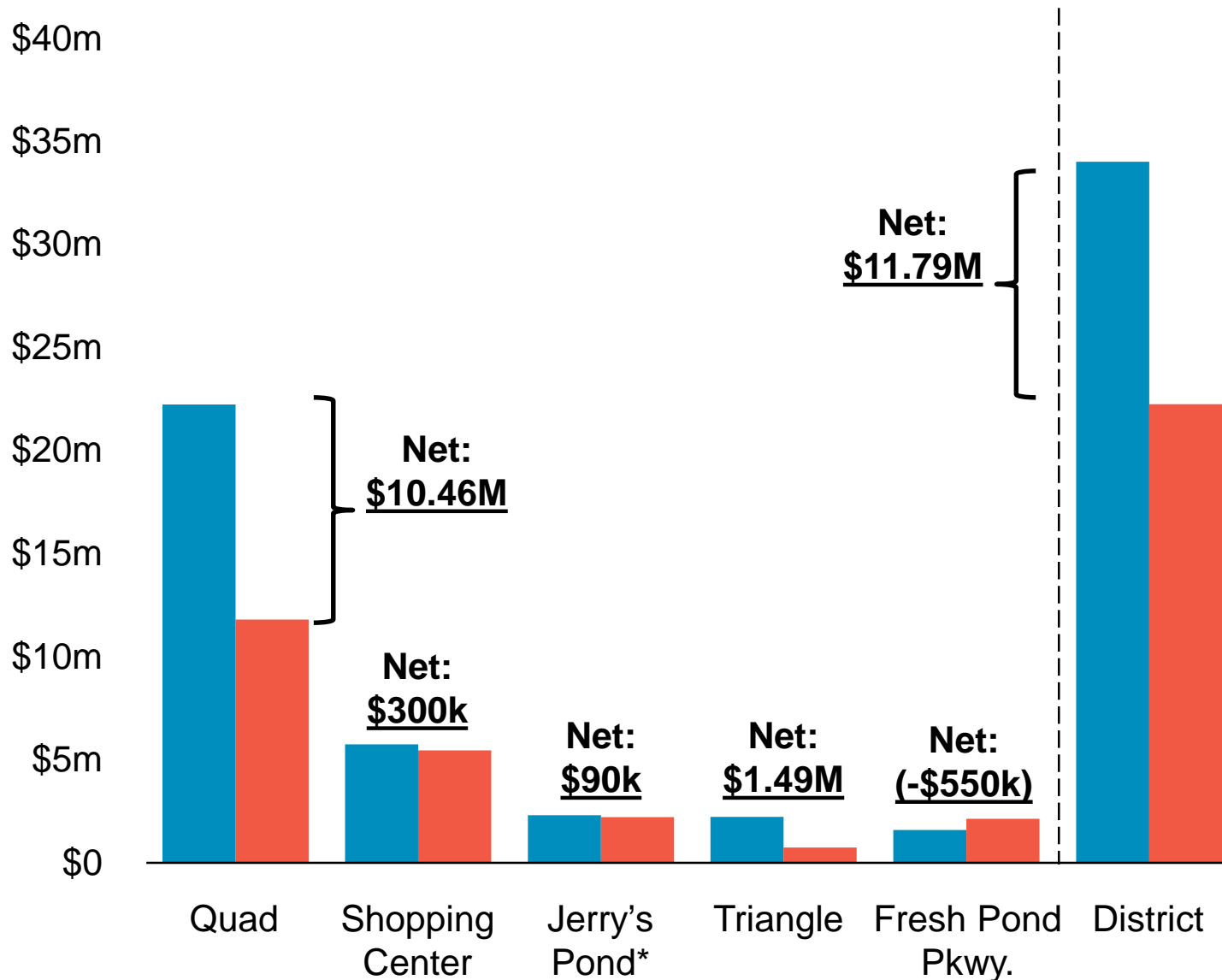
Residential jobs are building leasing, operations, and maintenance jobs.

Estimated jobs are based on the number of workers per gross floor area (GFA) of use category.

Jobs Breakdown

- Office
- Lab
- Industrial
- Residential
- Retail

Annual Fiscal Revenues and Costs



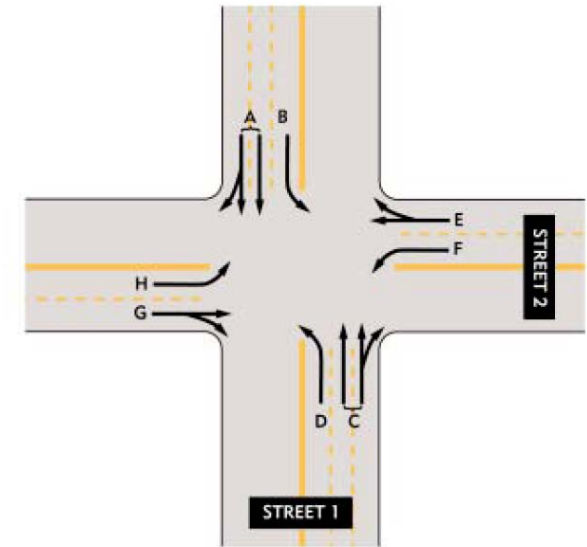
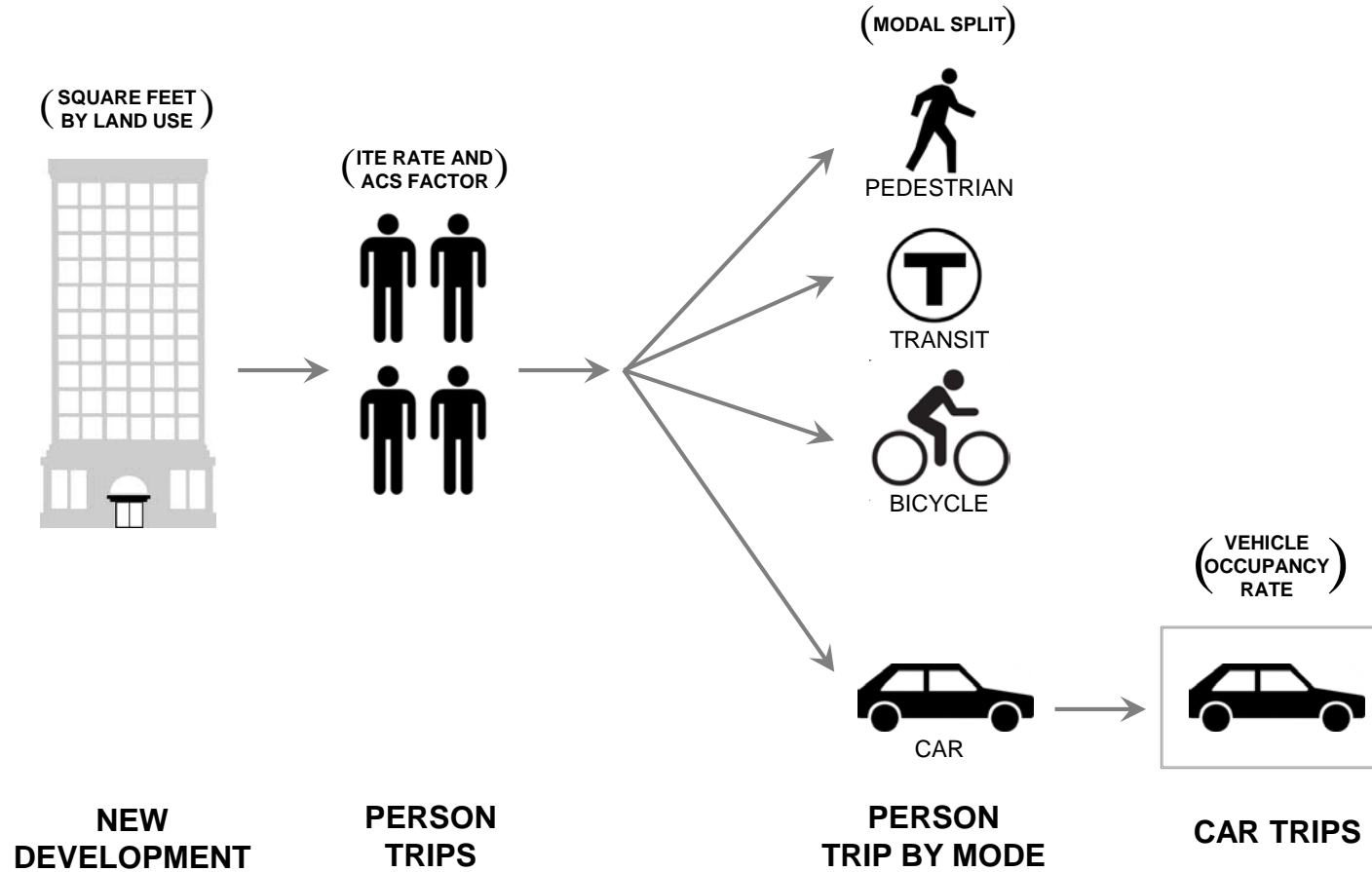
Net Fiscal Impact Per Square Foot	Fiscal Impact
– MF Rental	(\$1.93)
– Office — Class A	\$5.23
– Office — Class B	\$3.11
– Lab — Class A	\$8.63
– Lab — Class B	\$6.00
– Industrial	\$2.43
– Retail	\$4.39

*Does not include remediation costs associated with Jerry's Pond.

Estimates based on City of Cambridge property taxes, other taxes and fees, general service costs, and education costs for public school students.

■ Total Revenues
■ Total Costs

Critical Sums Methodology

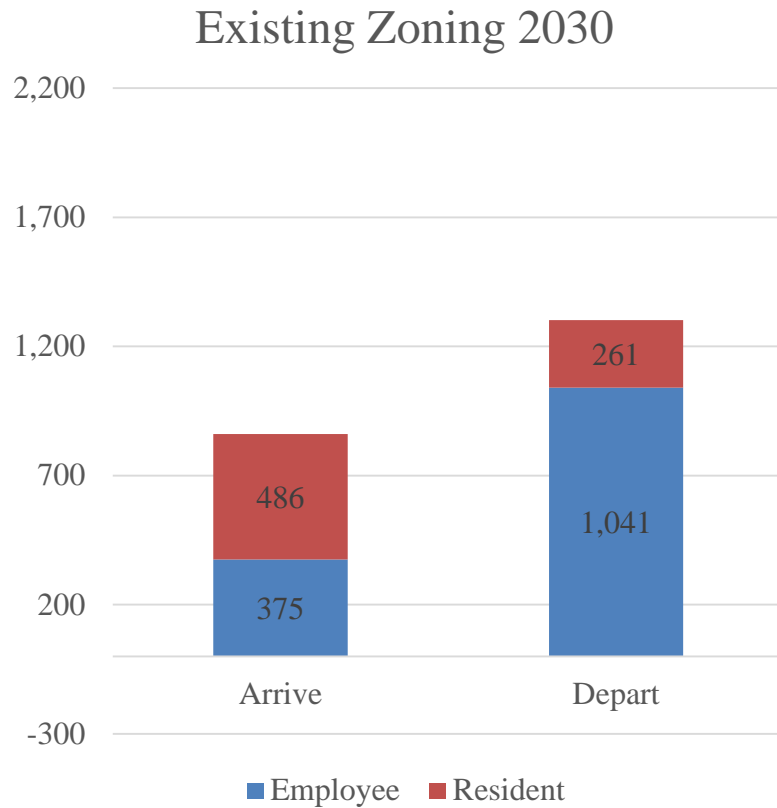


Street 1: $(A+2) + D$ or $(C+2) + B$, whichever is more

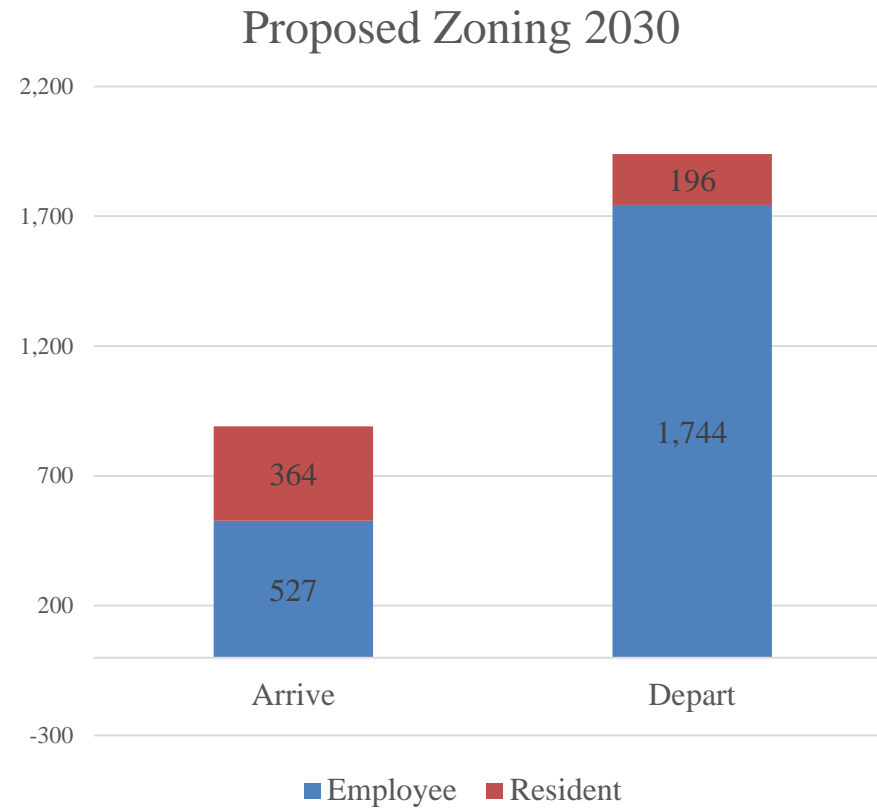
Street 2: $E + H$ or $G + F$, whichever is more

Critical Sum = Result of Street 1 + Street 2

Net New Auto Trips (PM Peak) in Study Area



2,163 Total New Auto Trips



2,831 Total New Auto Trips

Critical Sums By Intersection

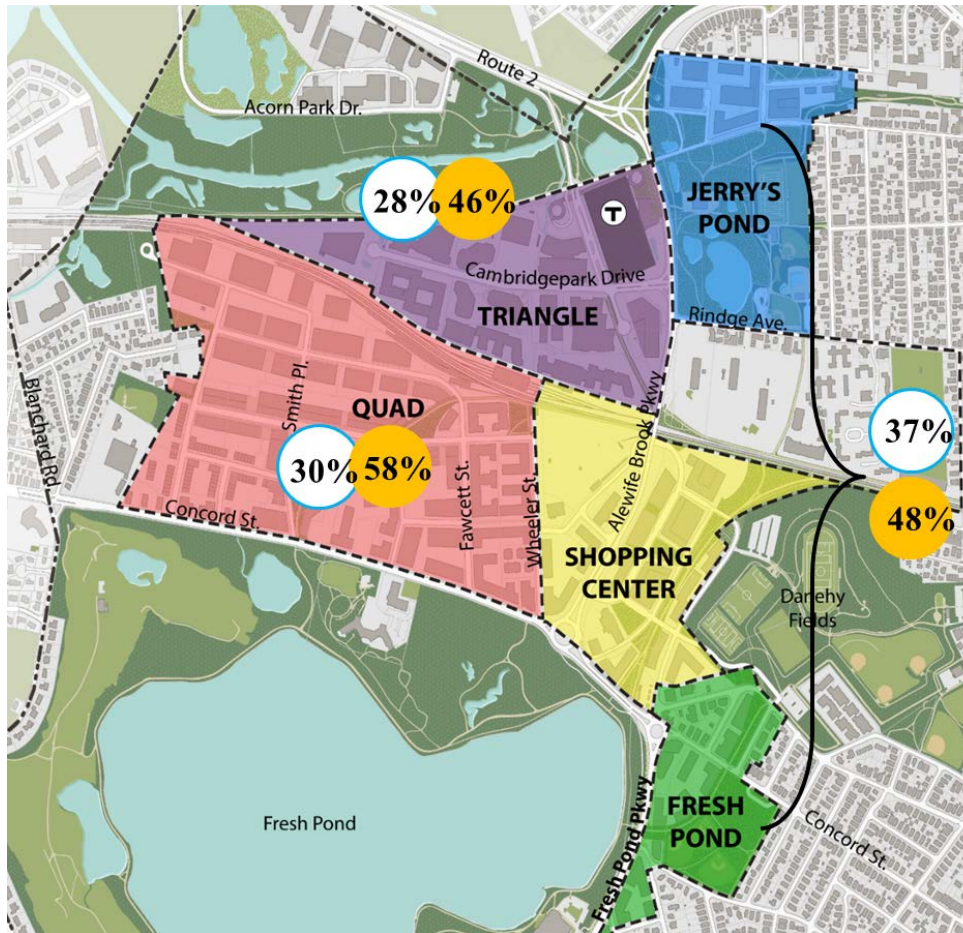
Revised from December meeting to correct calculation error, no significant change to critical sums

Intersection	Existing (2016)		2030 Existing Zoning		2030 Proposed Zoning	
	Total Volume	Critical Sum	Total Volume	Critical Sum	Total Volume	Critical Sum
1. Alewife Brook Parkway & Route 2	5498	1699	5814	1853	5872	1863
2. Alewife Brook Parkway & Cambridge Park Drive	3844	1267	4380	1436	4441	1430
3. Alewife Brook Parkway & Rindge Ave.	3769	1305	4353	1433	4426	1427
4. Alewife Brook Parkway & Concord Ave Rotary	3388	2152	4460	2640	4781	2670
5. Concord Ave & Fresh Pond Parkway Rotary	3033	1375	3921	1786	4117	1840
6. Concord Ave & Fawcett St.	1350	708	2261	1335	2693	1687
7. Concord Ave & Blanchard Rd.	1955	1096	2702	1490	3080	1640

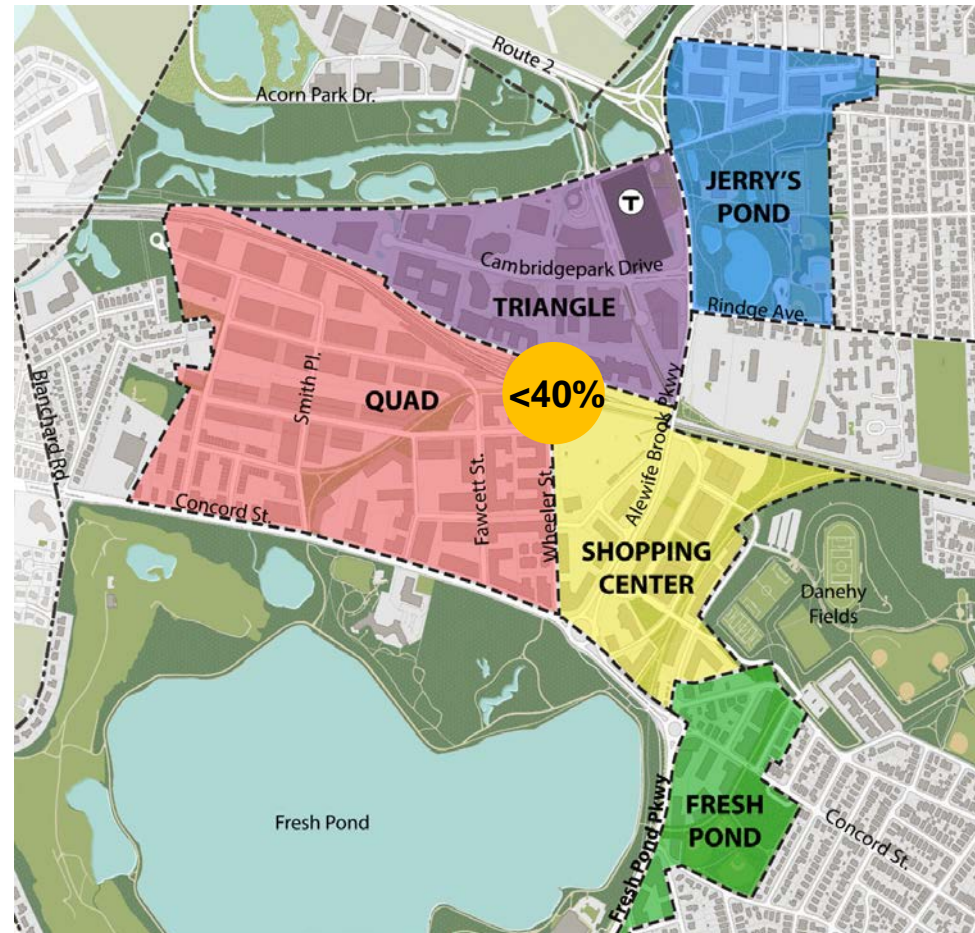
Red = over threshold

Mode Share

Mode Share w/ no infrastructure improvements, enhanced TDM
 3 new intersections exceed threshold



Mode Share achieved w/ plan recommendations
 0 new intersections exceed threshold



Percentage of trips by car (SOV and HOV)

Key

- Residential
- Employee

Alewife Mobility Strategies

Aggressive parking requirements

- Establish low maximums

Enhanced transportation demand management

Improved infrastructure connections

Near-term:

- Charge new commercial development fee to fund transportation improvements in district (\$5/sf)

Medium-term action as development proceeds:

- Bike/pedestrian bridge to connect Quad to Triangle/Alewife MBTA Station
- Planned streets and multi-use paths
- Implement recommendations from Citywide Bicycle Plan

Maximum Parking Ratios

Retail = 1.5 per 1,000-sf

Office = 1.1 per 1,000-sf

R&D = 0.8 per 1,000-sf

Industrial = 0.5 per 1,000-sf

Residential = 0.25 min - 0.75 per
dwelling unit

Bike/Ped Bridge

- City committed to bike/ped bridge connecting Quad to Triangle
- Current plan is to start construction in next 6-7 years but is contingent on development happening
- Design is a 3-yr process
- Assuming even pace of development, bridge would be constructed at approximately 40% buildout.
- Assuming no reduction in employee mode share, the first new intersection to exceed the critical sums threshold occurs sometime after 40% buildout.



Alewife Mobility Strategies

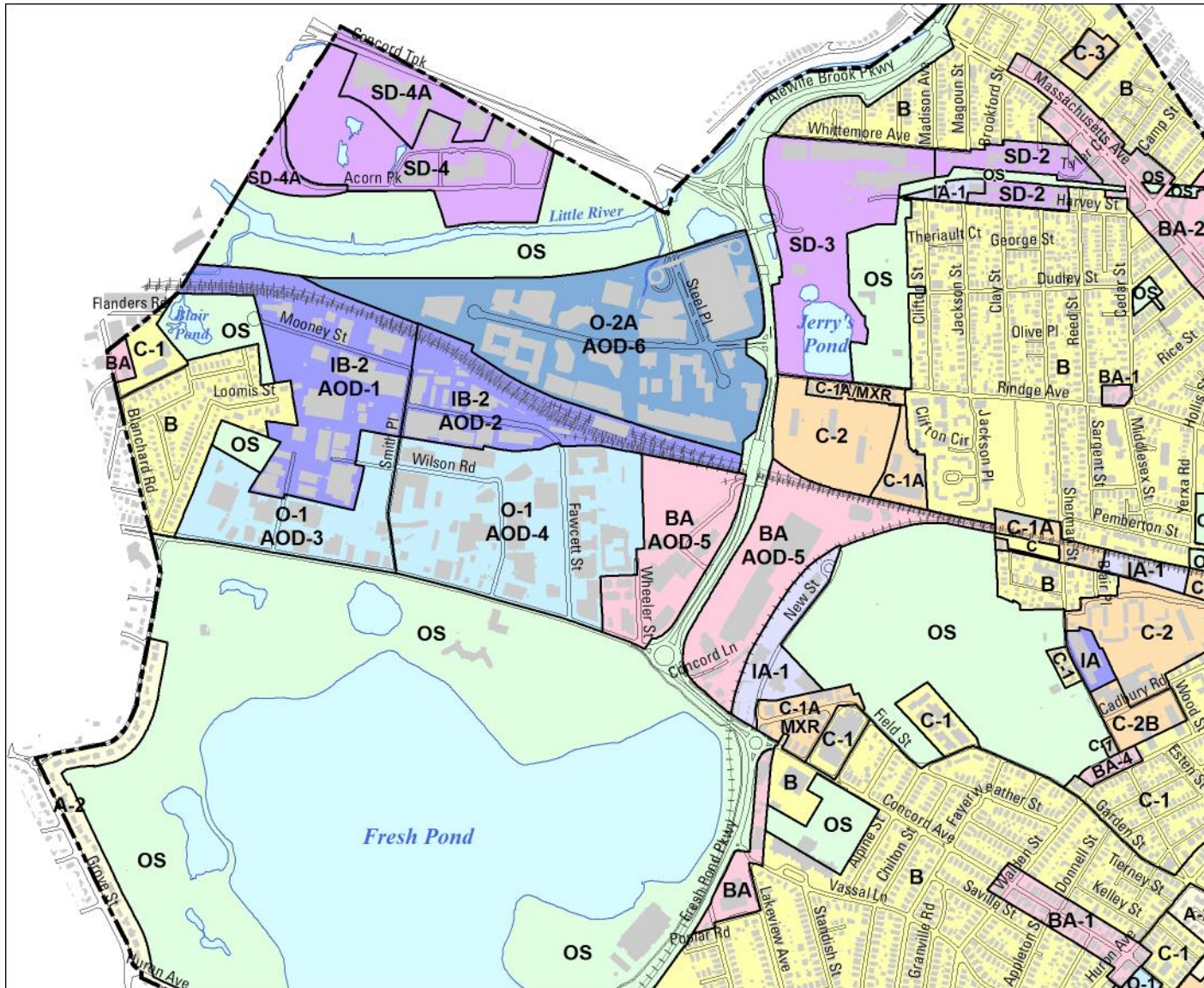
Improved bus service and shuttles

- Add signal priority on Concord Avenue
- Advocate for increased bus frequency on Concord Ave
- Work with the MBTA to implement recommendations of bus signal priority feasibility study for buses exiting Alewife station so that they can make a left onto Cambridgepark Drive and make a left from Steel Place into Alewife Station
- Work with MassDot to create bus/shuttle-only lanes on Alewife Station Access Road into Alewife Station from Route 2 and out of Alewife Station under Alewife Brook Parkway back to Route 2.
- Work with Alewife TMA to study how to improve headways and routing, provide shuttle access to residents for free or small membership fee, etc.

Additional actions

- Add Blue Bikes stations within 2.5 min walk to buildings in pace with development.
- Install wayfinding signage that includes walk/bike travel time to key destinations and centralized parking locations

Alewife Zoning Strategies



What's the zoning now?

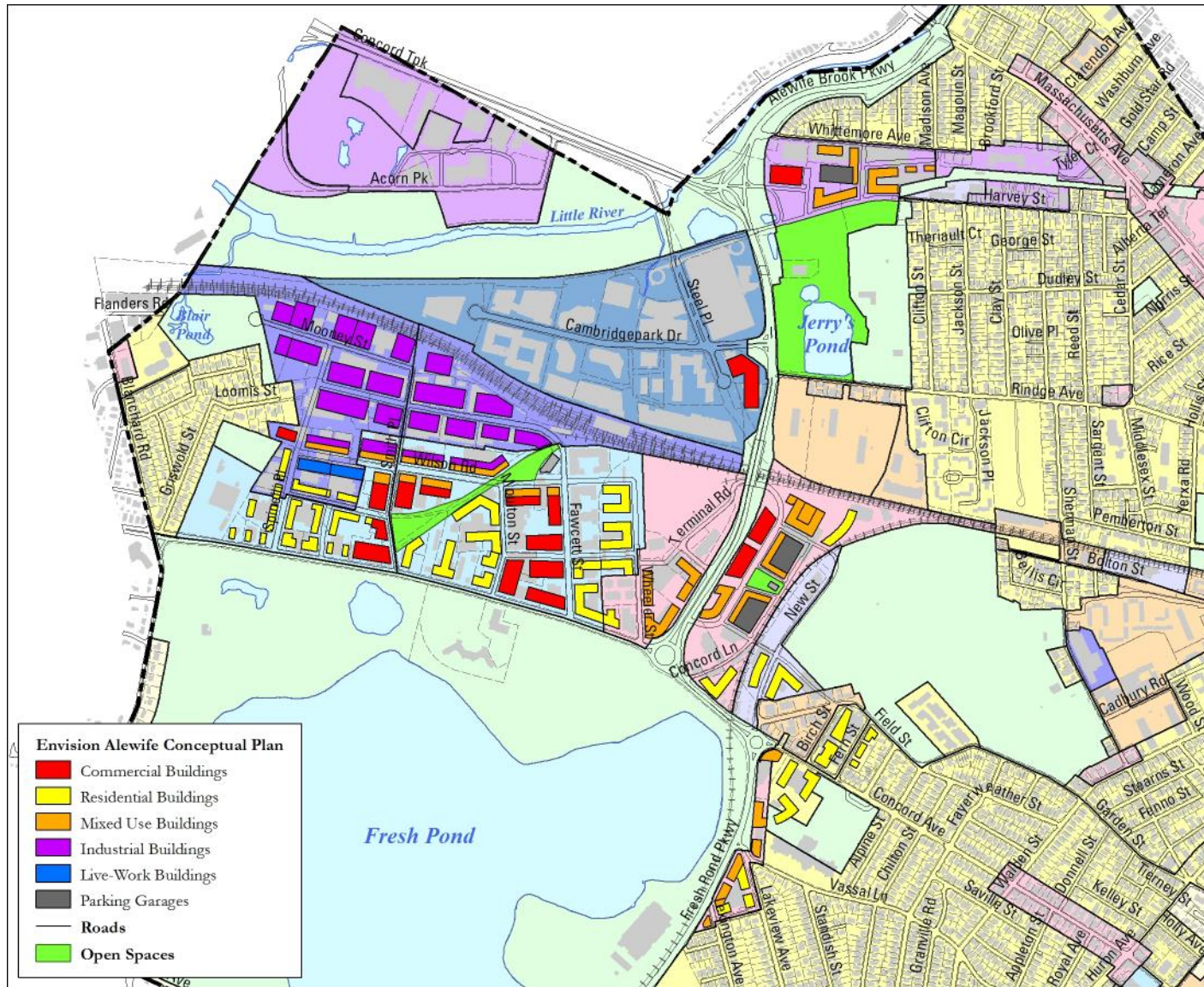
Base Districts

- Residence (C-2, C-1A, C-1, B)
- Office (O-2A, O-1)
- Business (BA)
- Industry (IA-1, IB-2)
- Special District 3

Overlay Districts

- Alewife Overlay Districts (AODs) – created following Concord-Alewife Plan (2006)
- Mixed Use Residential (MXR)

Alewife Zoning Strategies



How does the new plan align with current zoning?

- Similar in overall use and scale
- Shift use mix in new development to include more commercial
- Revised development standards to address built form goals, climate change resiliency
- Retain incentives for public infrastructure (updated to reflect Envision Alewife plan)
- Incentivize public amenity space (libraries, public bathrooms, &c.)

Alewife Zoning Strategies

What zoning strategies should be modified to support the new plan?

Flood Protection

- Protect to 10% SLR/SS elevation based on CCPR Plan (i.e., first floors at or above this level)
- Recover from 1% SLR/SS elevation based on CCPR Plan (i.e., elevate or floodproof residential units, critical building equipment)
- Protect to 1% SLR/SS elevation based on CCPR Plan in Quadrangle by elevating to 4 feet uniformly

Urban Heat Island Resiliency

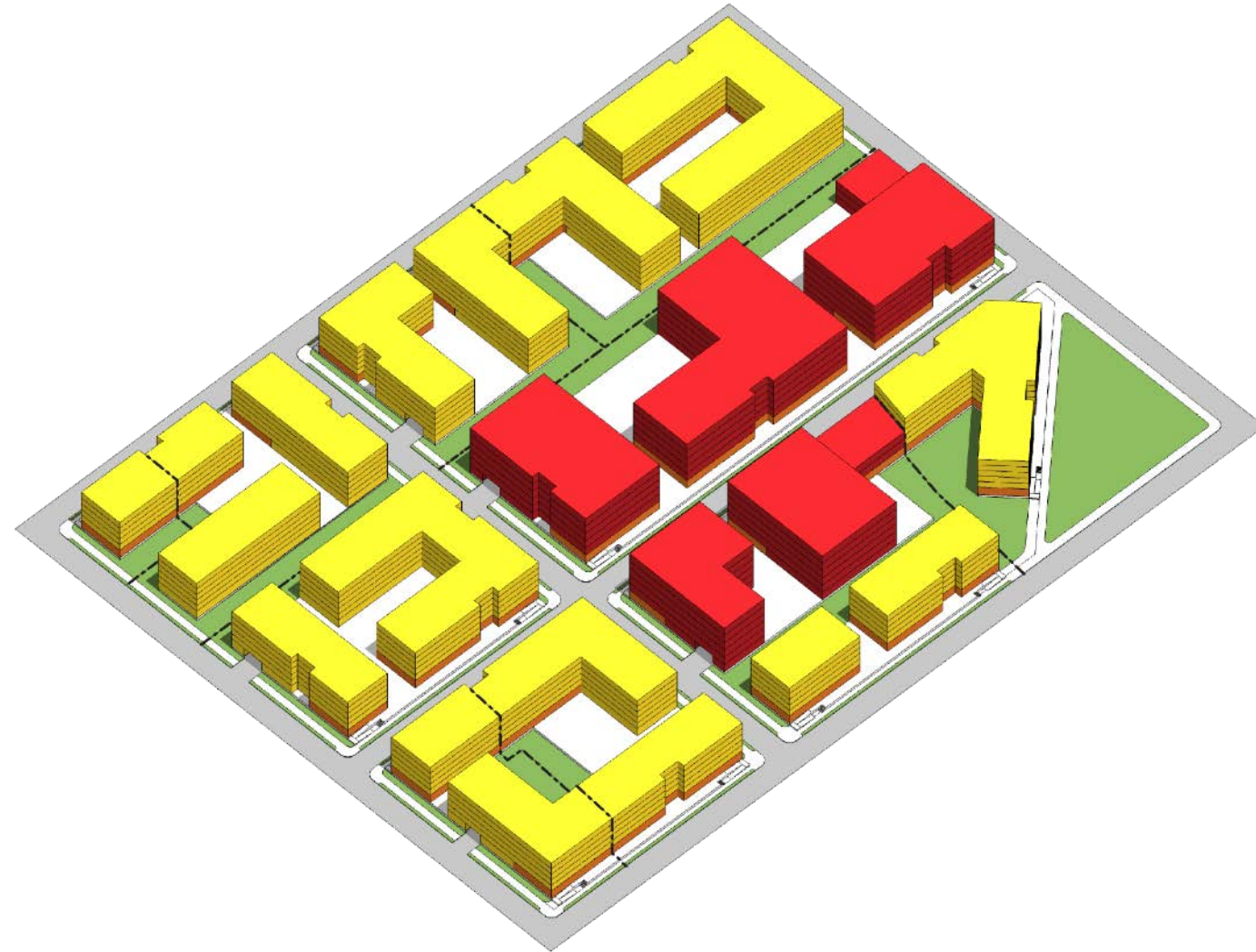
- Require green or white roofs
- Tree plantings
- *Other measures to be considered through CCPR planning process*

Alewife Zoning Strategies

What zoning strategies should be modified to support the new plan?

Built Form – Building Massing

Current Zoning	Envision Alewife
Building step-backs for bulk control (varies by district)	Break up building massing - 200' max. linear dimension unless broken by 40'x40' courtyards

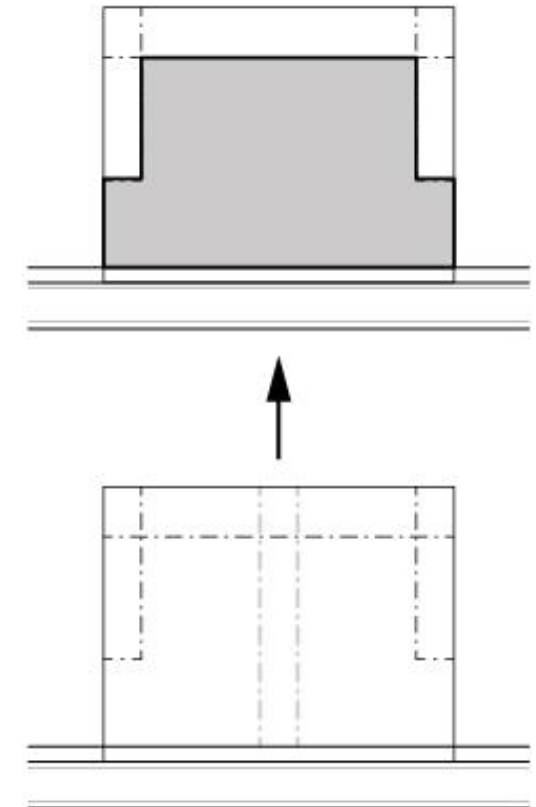


Alewife Zoning Strategies

What zoning strategies should be modified to support the new plan?

Built Form – Yard Setbacks and Orientation

Current Zoning	Envision Alewife
<ul style="list-style-type: none"> • 15' or 25' green area front yards (in AODs) • Waivable side and rear yards (in AODs) • 25' green area rear yard abutting Highlands residential and open space districts 	<ul style="list-style-type: none"> • Front “build-to” lines to form streetscape • Sloped front yards or raised “plinths” to elevate ground floors • No side yards along streets where continuous frontage desired • 30' open space yard toward the rear of parcels

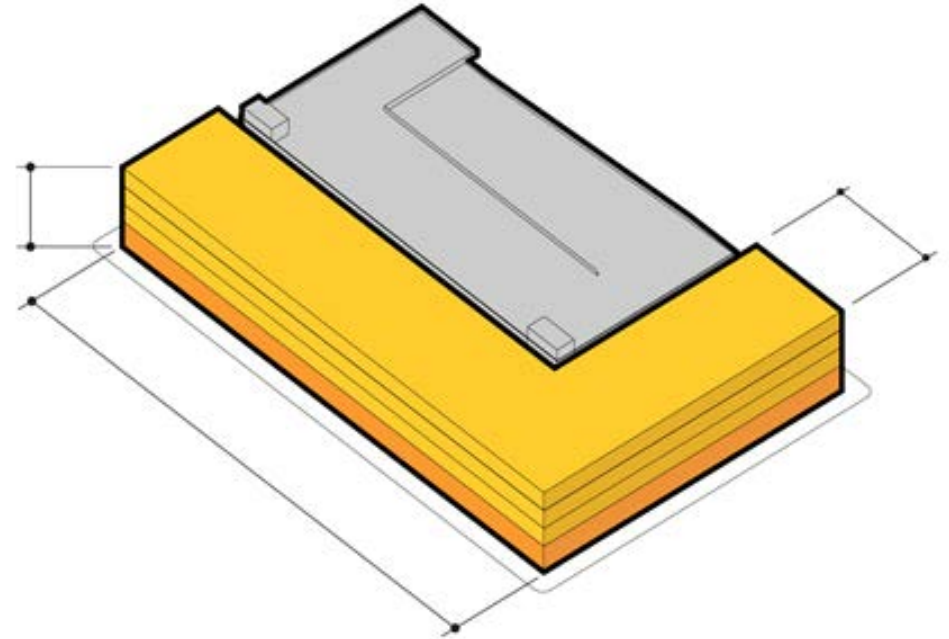


Alewife Zoning Strategies

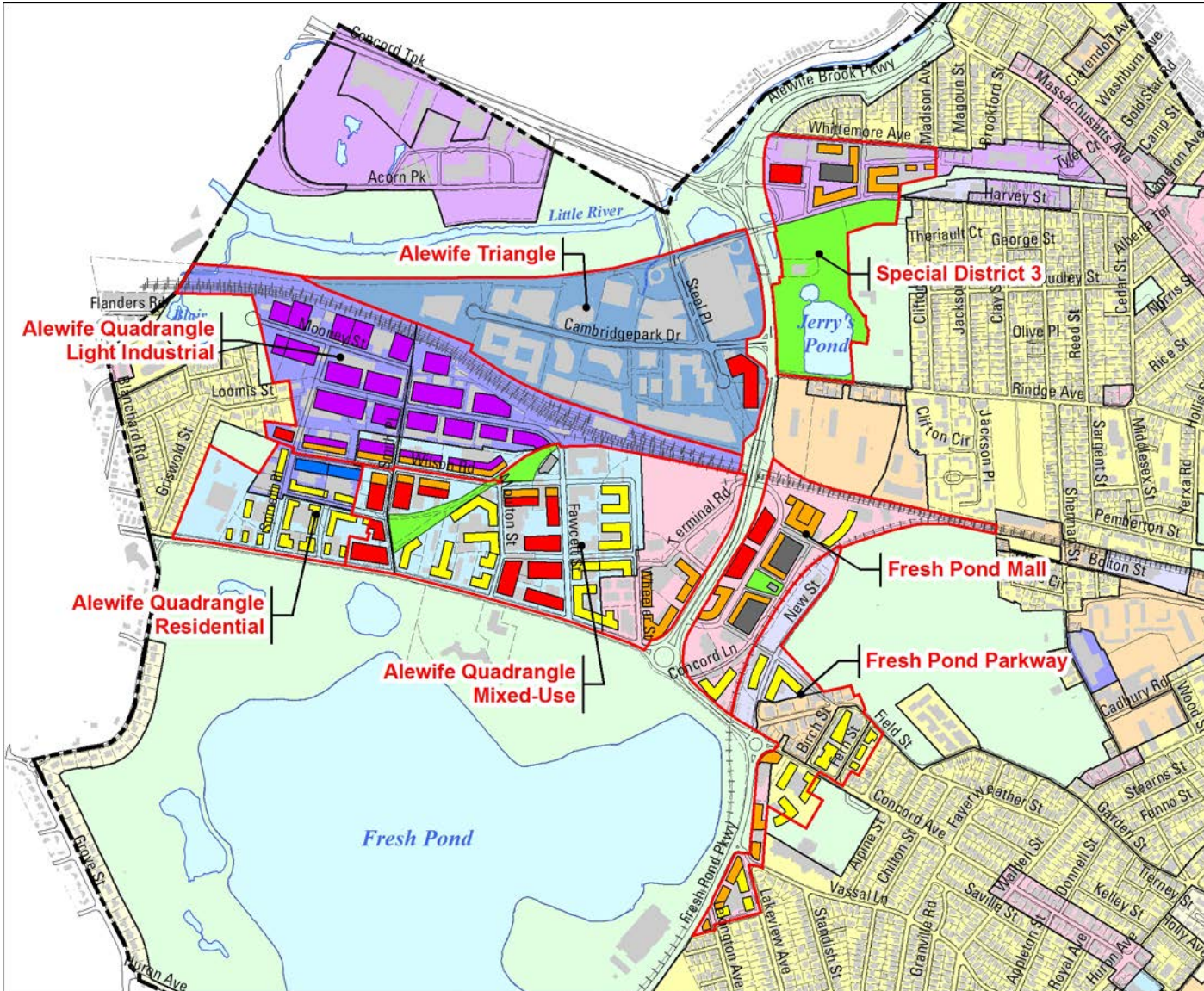
What zoning strategies should be modified to support the new plan?

Built Form – Parking Location

Current Zoning	Envision Alewife
Above-grade parking can be exempt by special permit from FAR (is counted elsewhere in City)	Retain exemption if parking is screened from streets and public open space (on up to 2 sides) by 40'-depth residential or commercial space



Alewife Zoning Strategies



Subdistricts

1. Triangle (current AOD)
2. Quadrangle Mixed-Use (modified AOD)
3. Quadrangle Light Industrial (modified AOD)
4. Quadrangle Residential (modified AOD)
5. Fresh Pond Mall (modified AOD)
6. Special District 3 (current SD-3)
7. Fresh Pond Parkway (new overlay district)

Key Zoning Changes

Triangle	<ul style="list-style-type: none"> • Allow mixed-use development at current maximum density • Promote retail along Cambridgepark Drive
Quadrangle Mixed-Use	<ul style="list-style-type: none"> • Allow mixed-use development at current maximum density • Require 4' ground floor elevation with publicly accessible plinths on key streets • Create active use corridors on ground floors per plan
Quadrangle Light Industrial	<ul style="list-style-type: none"> • Prohibit residential uses • Require ground-level light manufacturing/retail in new commercial development • Require 4' ground floor elevation with publicly accessible plinths on key streets
Quadrangle Residential	<ul style="list-style-type: none"> • Allow residential and institutional uses at current maximum density • Promote variety in housing types including townhouse and live/work units
Fresh Pond Mall	<ul style="list-style-type: none"> • Allow mixed-use redevelopment at current maximum density according to a master plan • Allow flexibility in height and setbacks through master plan review • Central public plaza and grocery store included in master plan
Special District 3	<ul style="list-style-type: none"> • Allow mixed-use redevelopment at current maximum density according to a master plan • Allow flexibility in height and setbacks through master plan review • Restore “Jerry’s Pond” as part of master plan
Fresh Pond Parkway	<ul style="list-style-type: none"> • Retain base zoning density • Adjust height and setbacks along Fresh Pond Parkway to enable housing-above-retail • Allow height and density bonuses in exchange for public open space connections from Fresh Pond to Danehy Park via Tobin School

Discussion

