



a community plan

Appendix - Existing Conditions

EXISTING CONDITIONS ASSESSMENT

Who uses Cambridge Street?

How can all street users be accommodated?

How can Cambridge Street support climate action and resilience?

Where are the development pressures?

WHO USES CAMBRIDGE STREET?

It's one of the densest and liveliest places in the city and serves residents, business owners, workers, visitors, and commuters



STUDY AREA AND CONTEXT

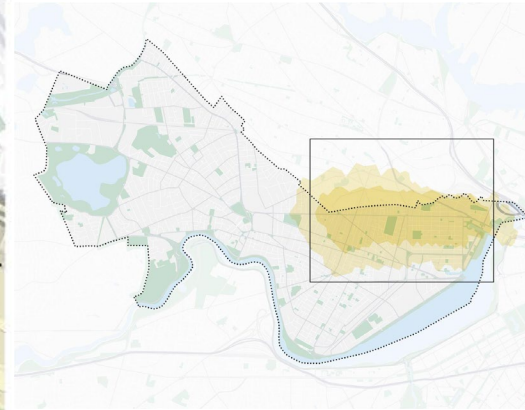
For the purposes of defining Cambridge Street residents, we used a 0.25-mile walkshed (5 minute). We also looked at a 0.5-mile walkshed (10-minute) as indicative of where people could conceivably walk to as part of their neighborhood experience.

Within a 0.25-mile walk of Cambridge St:

Total population: 21,799

Total number of households: 10,519

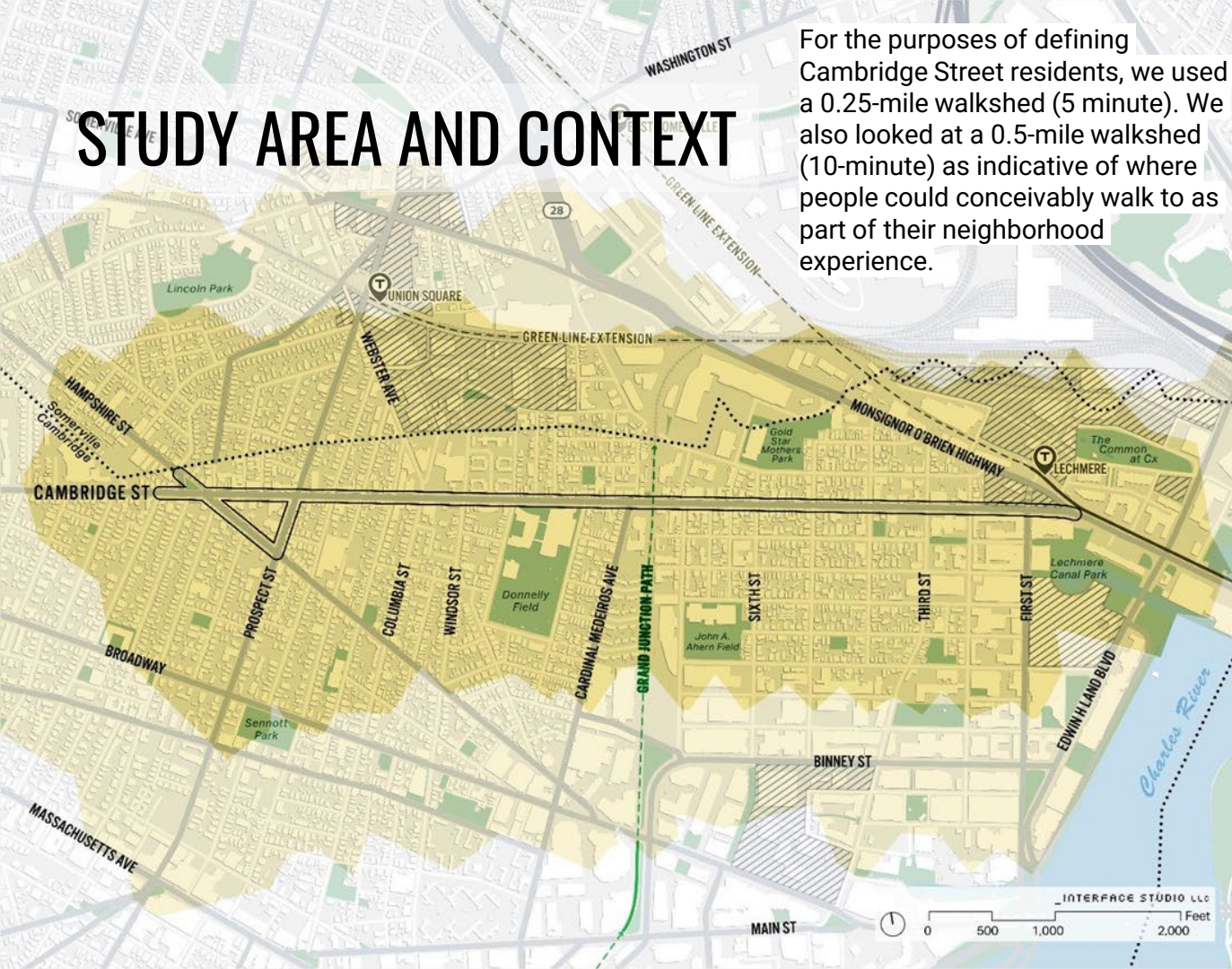
Average Household Size: 2



0.25-MILE AND 0.5-MILE CAMBRIDGE STREET WALKSHED

Interface Studio, October 2021

- 0.25-Mile Walkshed
- 0.5-Mile Walkshed
- Parks/Open Space
- Water
- Green Line
- Green Line Extension
- Multi-Use Path
- Multi-Use Path Extension
- High Impact Development
- City Boundary



Cambridge Street tracks closely with the city in age and income

RESIDENTS (21,799)



2,735 [13%]
SENIORS OVER 65



2,532 [12%]
YOUTH UNDER 19



34
MEDIAN AGE

HOUSEHOLDS (10,519)

15% [1,494 households]
HOUSEHOLDS EXPERIENCING POVERTY

4% HIGHER THAN
CITY OF CAMBRIDGE
11%

\$100,537
2021 MEDIAN HOUSEHOLD INCOME

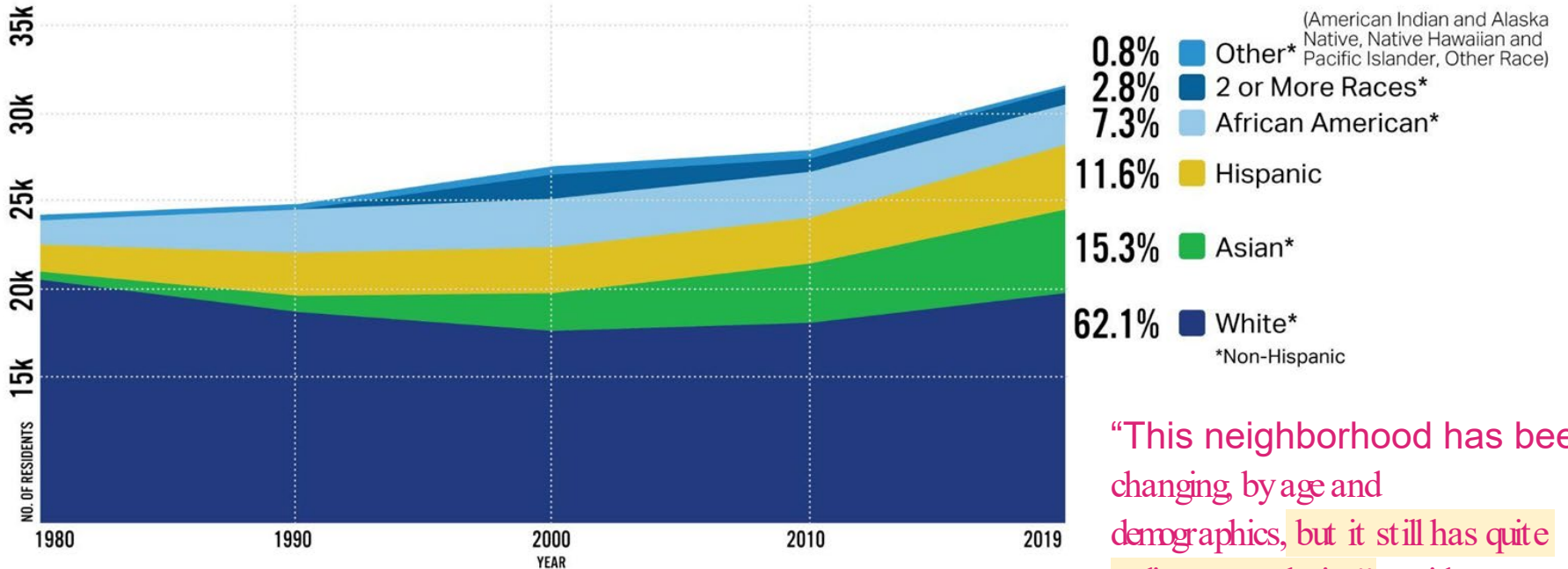
7% LESS THAN
CITY OF CAMBRIDGE
\$107,374

Between 2010-2019, incomes increased by about 37% in both Cambridge St and the city, compared to lower rates of growth (8-9%) in the two previous 10-year periods.

CHANGE OVER TIME

Like the City, the population of Cambridge Street has grown over the last few decades.

POPULATION CHANGE BY RACE & ETHNICITY (1980-2019 by Census Tracts)



“This neighborhood has been changing by age and demographics, but it still has quite a diverse population” -resident

CHANGE OVER TIME

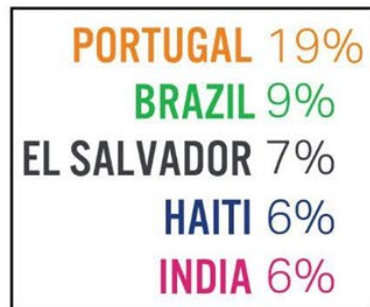
The country of origin of new immigrants has shifted but it has always been a diverse community and a place that provides opportunity for immigrant business owners. The foreign born percent of the population is on par with city; historically Cambridge Street neighborhoods had a slightly larger share but the city has been increasing.

PLACES OF BIRTH FOR FOREIGN-BORN POPULATION (% of Foreign-Born Population by Census Tracts)

28-30% OF THE POPULATION HAS
CONSISTENTLY BEEN FOREIGN-BORN

Among this group, the top 5 countries have changed over time.

2000



2010



2019



WORKERS

14,000+

people work within 5 minutes of Cambridge Street

But a total of 26,000 people travel to or from Cambridge Street for work

WHERE WORKERS LIVE

LEHD Onthemap Distance/Direction Analysis, 2019

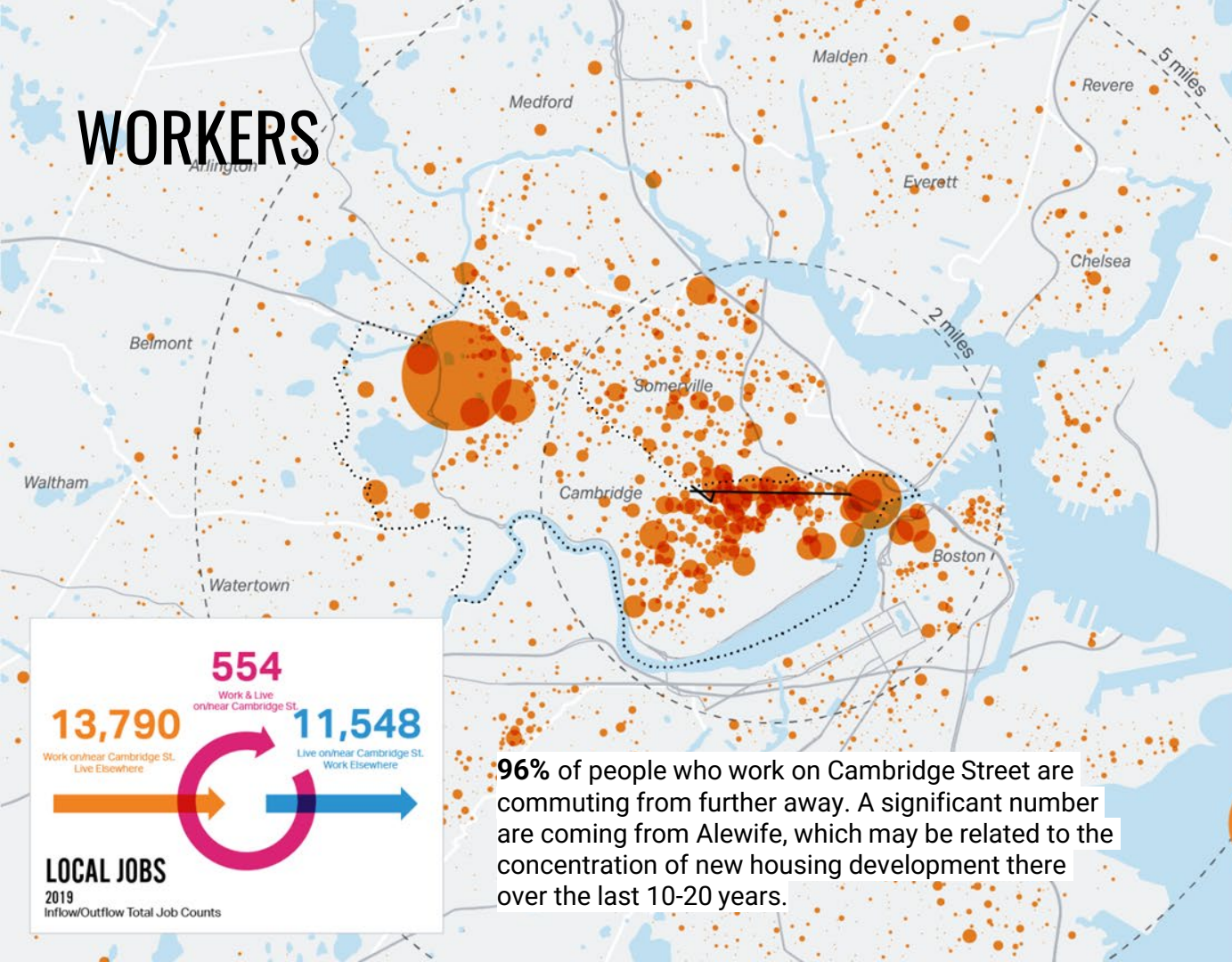
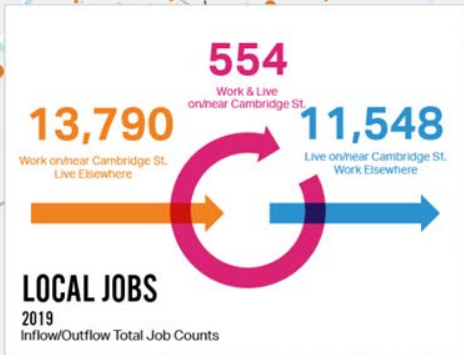
Number of Workers



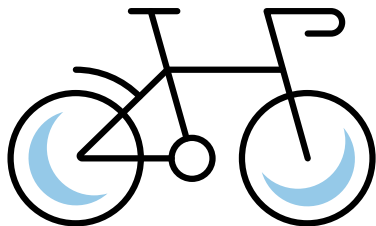
■ Cambridge Street Study Area

... City Boundary

96% of people who work on Cambridge Street are commuting from further away. A significant number are coming from Alewife, which may be related to the concentration of new housing development there over the last 10-20 years.

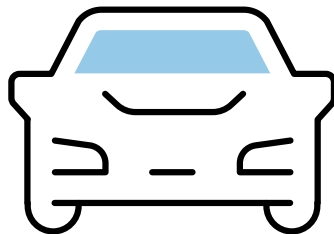


COMMUTERS



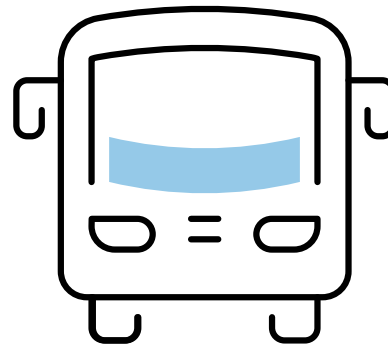
2,800+ BICYCLISTS

2019¹



12,000+ VEHICLES

Spring 2016²



3,000+ BUS RIDERS

Fall 2019 (Rt 69 bus)³

¹ [Cambridge Open Data](#) - Citywide Bicycle Counts, 2019; Location: Total Count at Cambridge St and Hampshire Street

² [Cambridge Open Data](#) - King Open/Cambridge Street Schools Traffic Study 2016; Location: Cambridge Street, west of Berkshire Street

³ Bus Ridership: MBTA Bus Ridership by Trip, Season, Route/Line, and Stop, Fall 2019. Rider on and off data locations are bus stops at and between Inman Square and Lechmere Busway.

FLORA / FAUNA

Cambridge Street is also home to plants and animals that could benefit from planting pollinator and bird-friendly habitats.

- Pollinator and bird populations are declining, threatening ecosystems and food production worldwide.
- Need for native flowers and vegetation, including a healthy tree canopy.

“We use Cambridge Street as our classroom, could be cool to expand stormwater education, watershed, adopt a drain, tree identification, stuff like that school teacher”

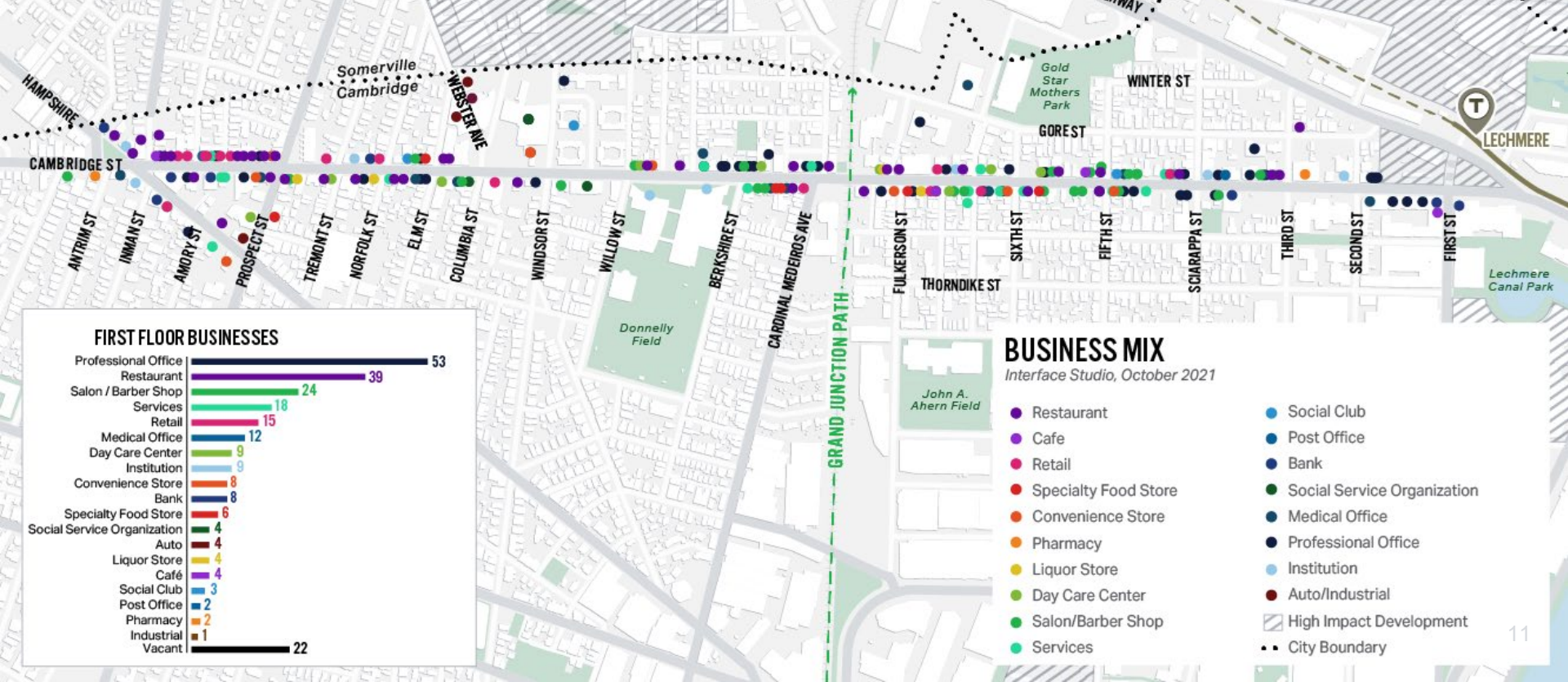


Fresh Pond Wildlife and Bike Parade

BUSINESSES

Total number of first floor businesses: 225

The planning team conducted an inventory of all ground floor businesses in October 2021 and found that professional offices were the most common business on the street, followed by restaurants, salons, and neighborhood services such as health/wellness businesses, cleaning, repair, pets, laundry.



BUSINESS MIX

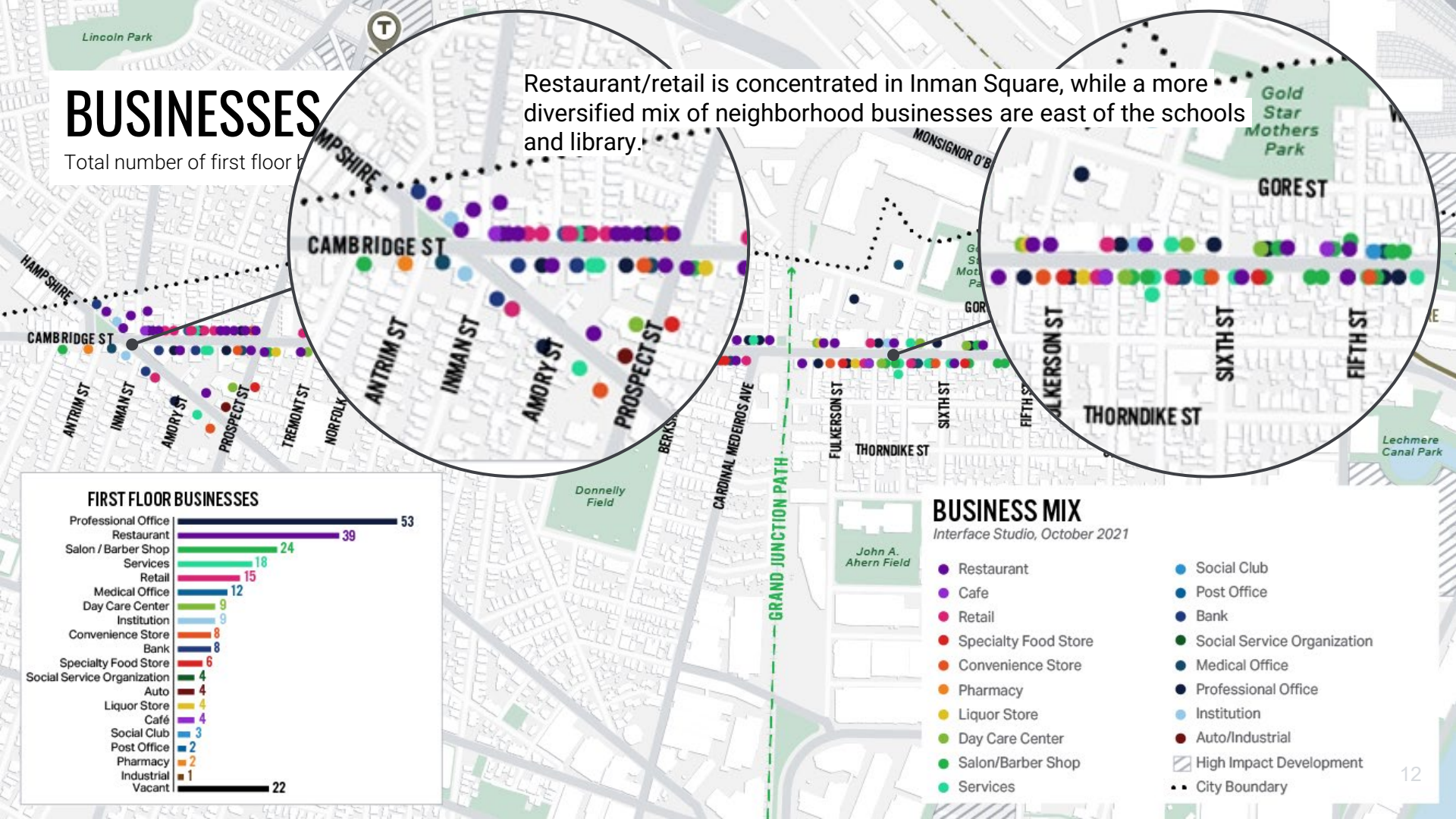
Interface Studio, October 2021

- Restaurant
- Café
- Retail
- Specialty Food Store
- Convenience Store
- Pharmacy
- Liquor Store
- Day Care Center
- Salon/Barber Shop
- Services
- Social Club
- Post Office
- Bank
- Social Service Organization
- Medical Office
- Professional Office
- Institution
- Auto/Industrial
- ▨ High Impact Development
- ⋯ City Boundary

BUSINESSES

Total number of first floor businesses

Restaurant/retail is concentrated in Inman Square, while a more diversified mix of neighborhood businesses are east of the schools and library.

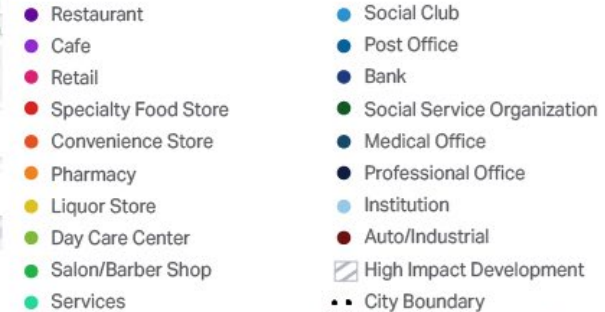


FIRST FLOOR BUSINESSES



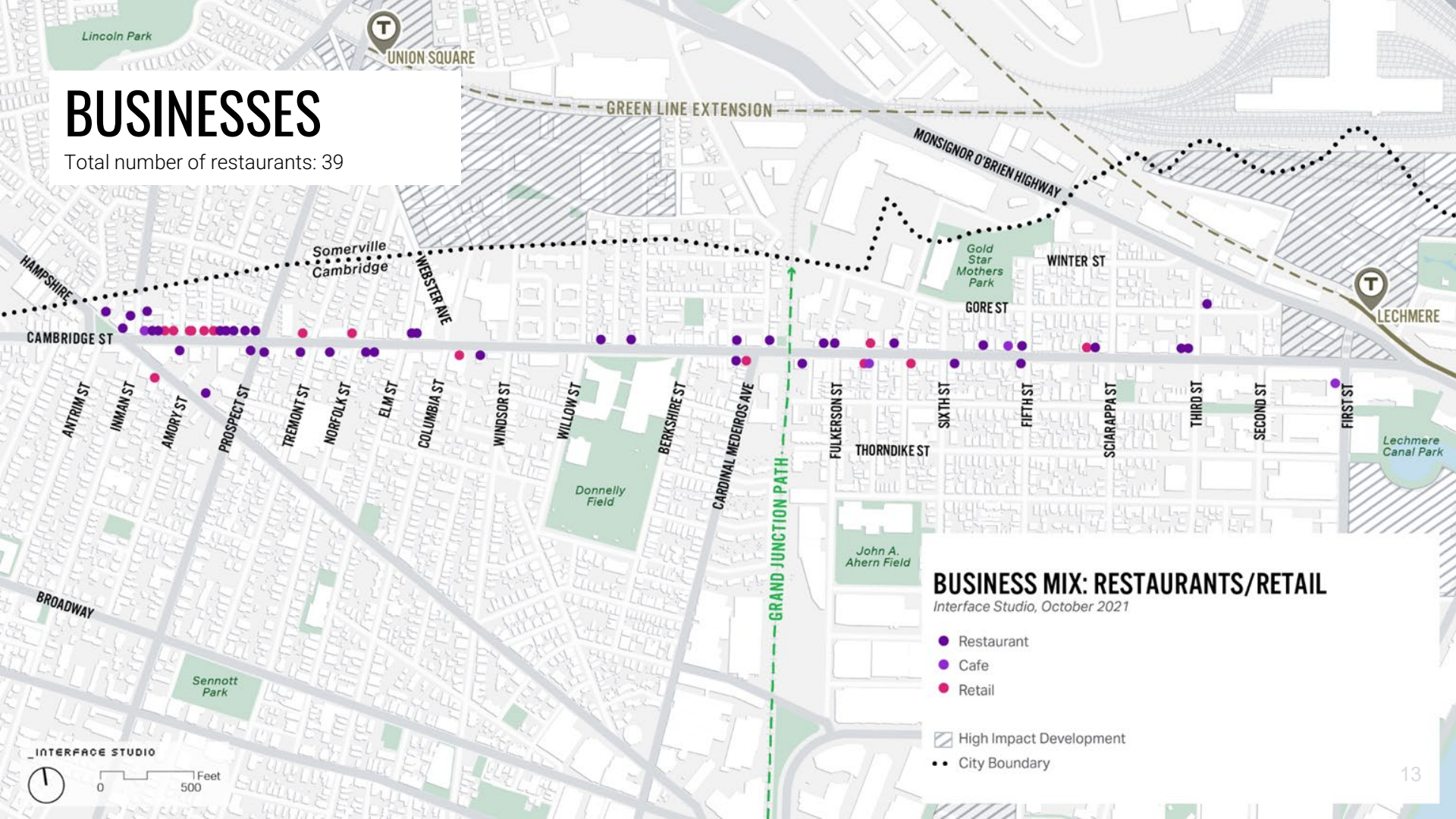
BUSINESS MIX

Interface Studio, October 2021



BUSINESSES

Total number of restaurants: 39



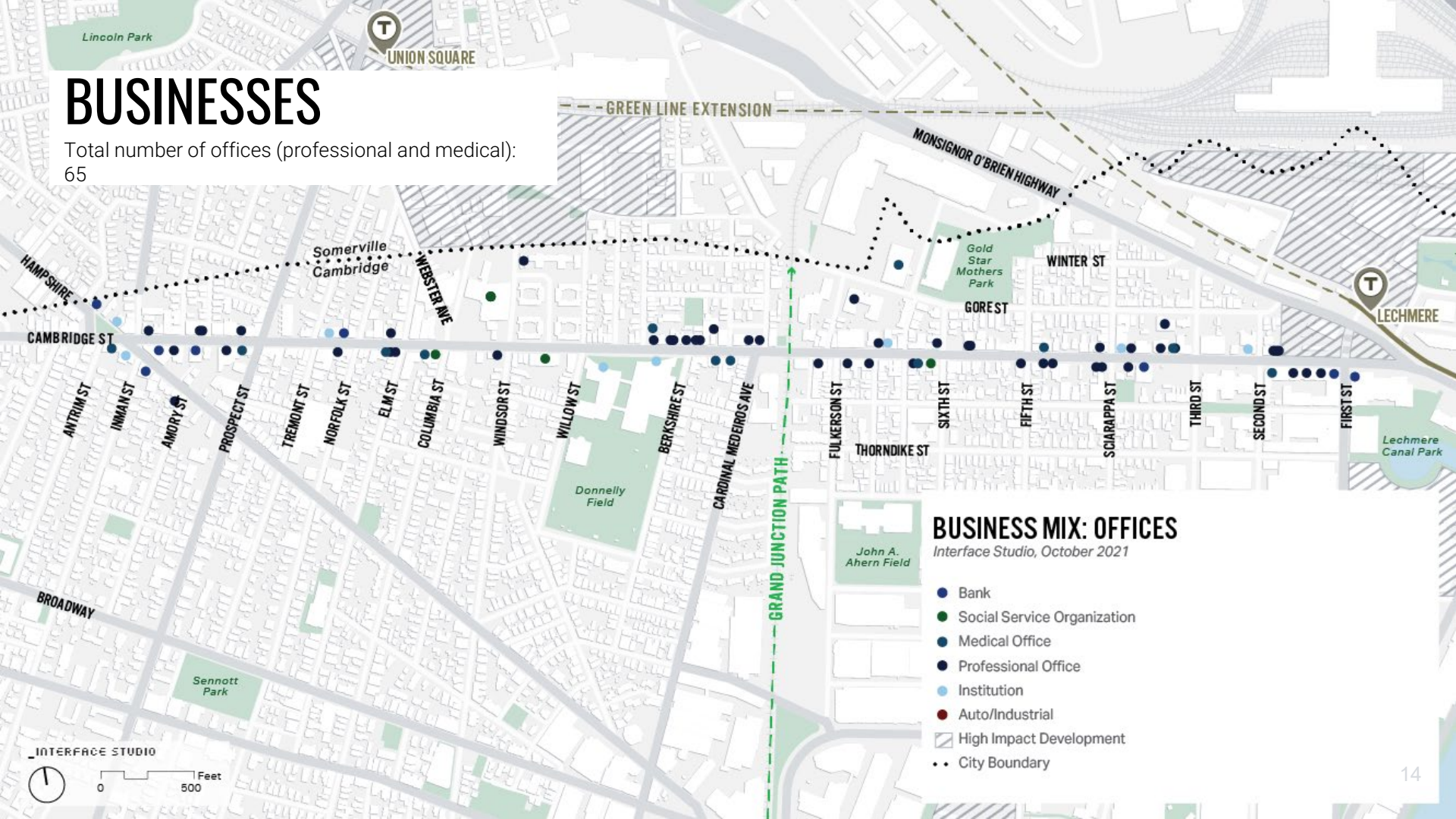
BUSINESS MIX: RESTAURANTS/RETAIL

Interface Studio, October 2021

- Restaurant
- Cafe
- Retail
- ▨ High Impact Development
- City Boundary

BUSINESSES

Total number of offices (professional and medical):
65



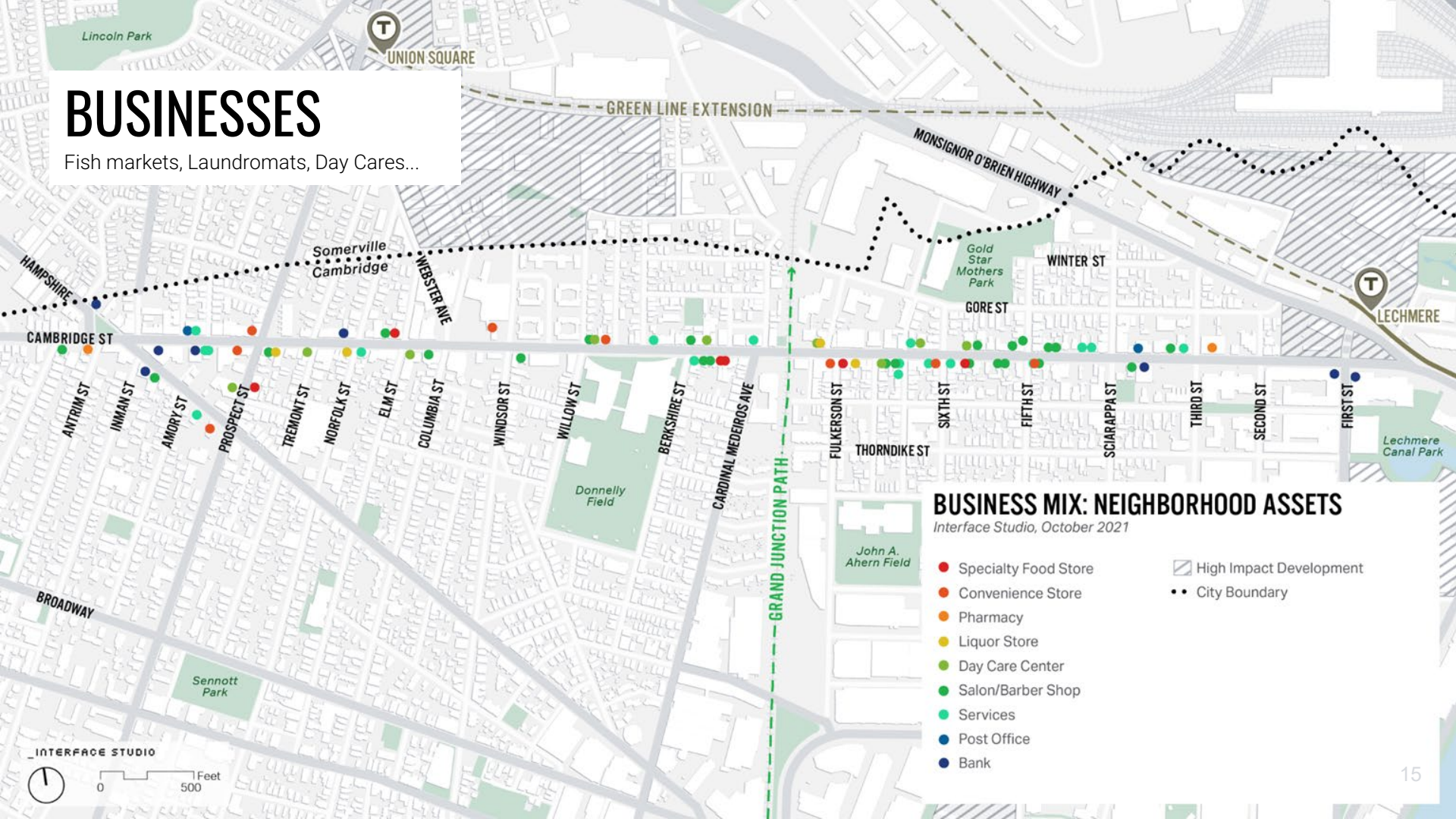
BUSINESS MIX: OFFICES

Interface Studio, October 2021

- Bank
- Social Service Organization
- Medical Office
- Professional Office
- Institution
- Auto/Industrial
- ▨ High Impact Development
- ⋯ City Boundary

BUSINESSES

Fish markets, Laundromats, Day Cares...



BUSINESS MIX: NEIGHBORHOOD ASSETS

Interface Studio, October 2021

- Specialty Food Store
- Convenience Store
- Pharmacy
- Liquor Store
- Day Care Center
- Salon/Barber Shop
- Services
- Post Office
- Bank
- ▭ High Impact Development
- ⋯ City Boundary

BUSINESSES

Cambridge Street offers a mix of services and retail/restaurant destinations, making it a more resilient neighborhood-serving commercial street. Key considerations for maintaining this mix of businesses include:

- Changing retail trends.
- Additional commercial inventory and an expanded customer base with the large amount of new retail space coming in nearby.
- Intense delivery needs of food/beverage businesses.
- Small spaces that constrain development type.
- Ownership patterns evolving over time which leads to business turnover.



We need to make a distinction between active uses and street-level presence.

Uses like professional offices and daycare centers might not be seen as active uses by some but they can have an **high street-level presence** through their signage, facades and windows. They can also generate high **spillover activity** where customers visit other businesses.

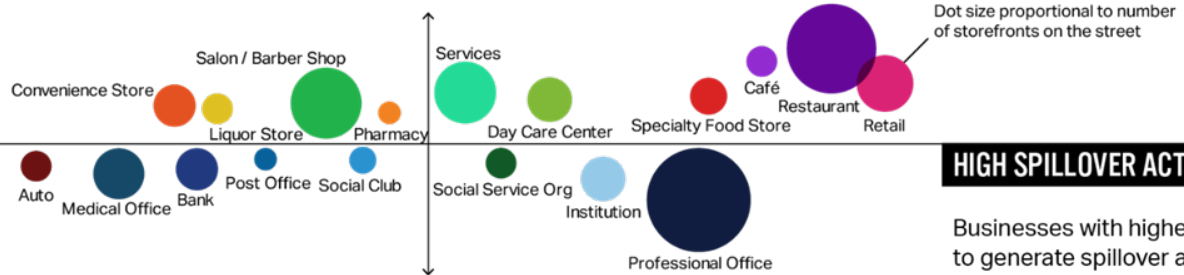
HIGH STREET-LEVEL PRESENCE

Businesses with high visibility from the street have visually permeable facades with entrances and windows, and attractive window displays, signs, and facade design. These features create interest and contribute to the activity of the street.



LOW SPILLOVER ACTIVITY

Businesses attract customers for a specific purpose and duration, with little or no spillover activity.



HIGH SPILLOVER ACTIVITY

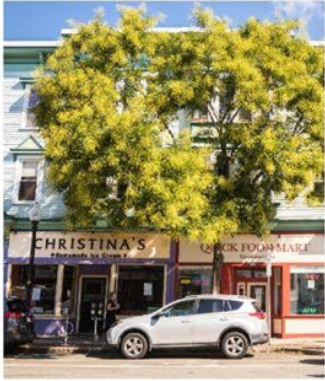
Businesses with higher potential to generate spillover activity in the area.

LOW STREET-LEVEL PRESENCE

Businesses with low visibility from the street do not allow people to see inside; entrances and windows are not visually permeable or windows may be lacking altogether. Less attention is paid to window displays, signs, or facade design.

Street Activation

Interface Studio conducted an assessment of ground floor street frontages to better understand where there are opportunities to help businesses activate the street.



EXCELLENT

Includes:

- Active storefront
- Transparent windows & doors
- Landscaping



EXCELLENT POTENTIAL

Includes:

- Unoccupied storefront
- Transparent windows & doors
- High-quality building / streetscape potential



IN-BETWEEN

Includes:

- Raised or sunken frontage
- Buffer between use and street
- Good quality occupied uses that generate little to no foot traffic



UNFAVORABLE

Includes:

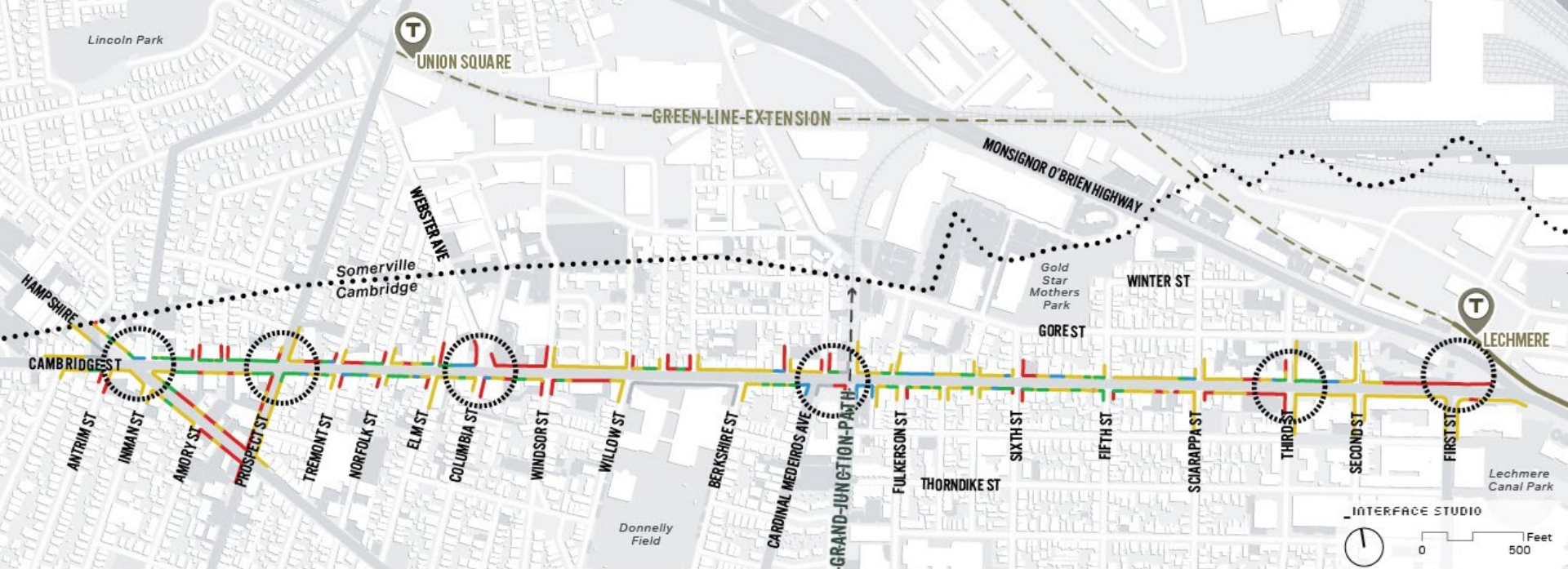
- Parking garages & lots
- Blank, windowless walls
- Long expanses of reflective glass without entrances



NOT ASSESSED

Includes:

- Parks & open spaces



% OF LINEAR FEET

Analysis of Street Activation by Interface Studio

STREET ACTIVATION

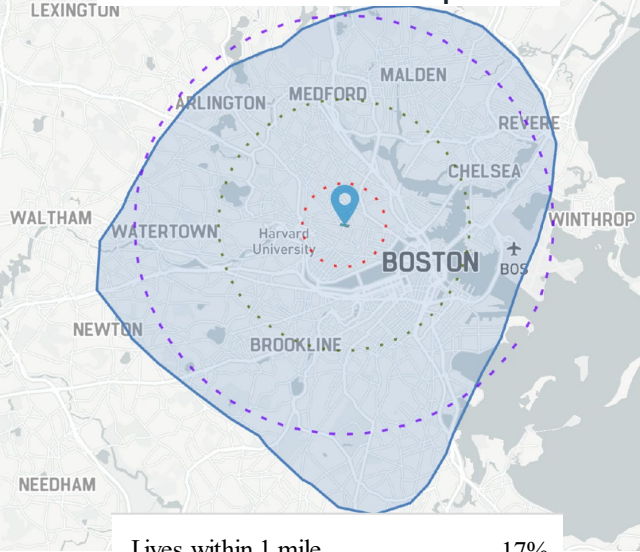
Interface Studio

- City Boundary
- Gateway to Cambridge St.
- Excellent
- Excellent Potential
- In-Between
- Unfavorable
- Not Assessed

Cambridge Street draws from a wide area, many visitors are not within walking distance.

These maps use cell phone data to show 70% of evening location for visitors, which is a proxy for where they are coming from. While some are coming from within a mile which would be considered walking distance, the remainder are beyond walking distance and likely using other forms of transportation, including driving.

Where visitors to Inman Square live

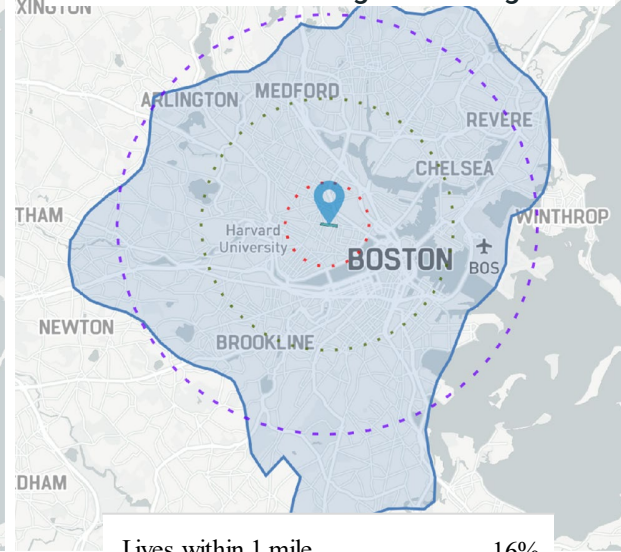


Lives within 1 mile	17%
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Lives between 1-5 miles	35%
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Lives more than 5 miles away	48%
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Where visitors to Wellington-Harrington live

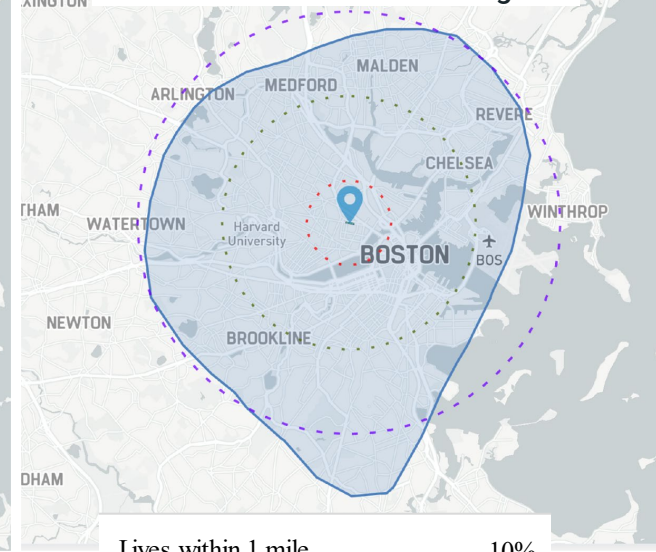


Lives within 1 mile	16%
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Lives between 1-5 miles	33%
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Lives more than 5 miles away	51%
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Where visitors to East Cambridge live



Lives within 1 mile	10%
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Lives between 1-5 miles	31%
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Lives more than 5 miles away	59%
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HOW CAN ALL STREET USERS BE ACCOMMODATED?

How does the current design of Cambridge Street support (or not support) its users as well as help the City meet its goals for climate, mobility, economic development and urban design?



HISTORY

Cambridge Street originally had a streetcar and was built out by the 1930s.

Today, 87% of the buildings were built before 1950.



Inman Square looking east on Cambridge Street. Source: Charles Sullivan

BUILDING TYPOLOGIES

Properties on Cambridge Street are small and most buildings are three stories or fewer.



BUILDING TYPOLOGIES

Properties on Cambridge Street are small and most buildings are three stories or fewer. **Only 10% of the parcels are over 10,000 SF and would support larger developments.**

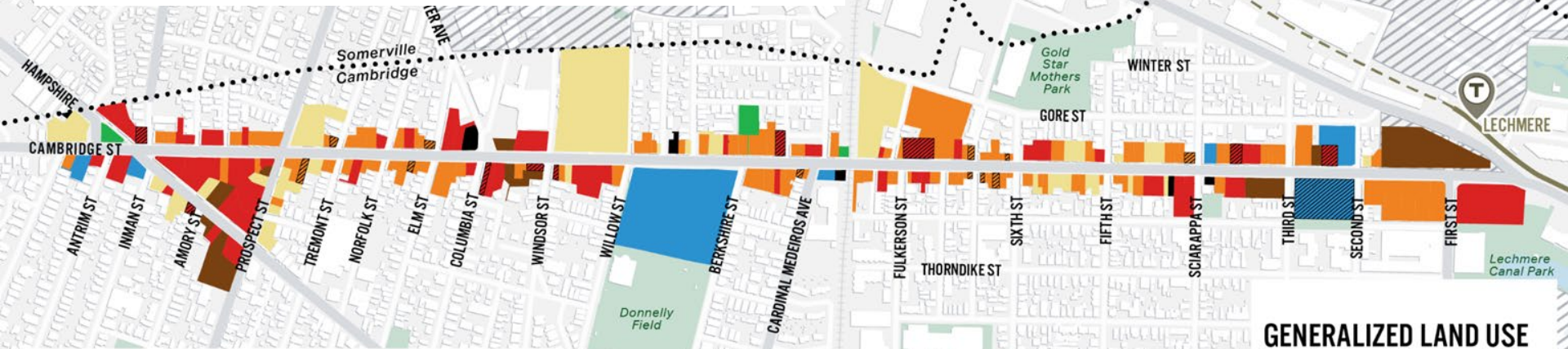
- 1.5 million SF of total building area
- Average building size: 7,900 SF
- Average parcel size: 6,200 SF
- 72% of parcels are less than 5,000 SF
- 46% of the total building SF is in parcels larger than 10,000 SF
- 93% of buildings are 3 stories or less

	Land area (SF)	Number of parcels	Land area (SF)	Building area (SF)	Percent to total building area
	Under 5,000	139	359,565	578,151	38%
	5,000 to 9,999	35	245,112	253,173	17%
	10,000 to 19,999	10	137,027	131,247	9%
	20,000 to 49,000	6	171,526	166,416	11%
	50,000 to 99,999	4	291,157	404,843	26%
	All Parcels	194	1,204,387	1,533,830	100%

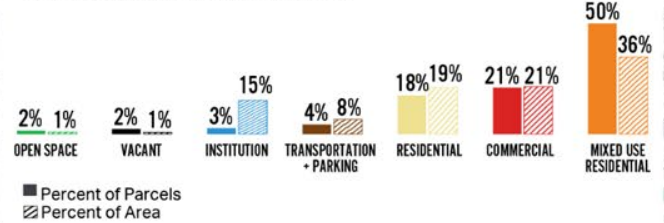
Source: Cambridge Property Records, Interface Studio, ConsultEcon, Inc.

LAND USE PATTERNS

Most of Cambridge is small scale and mixed use. Density and commercial intensity increases in Inman Square and around Lechmere.



LAND USE SUMMARY



GENERALIZED LAND USE

Cambridge Open Data, October 2021

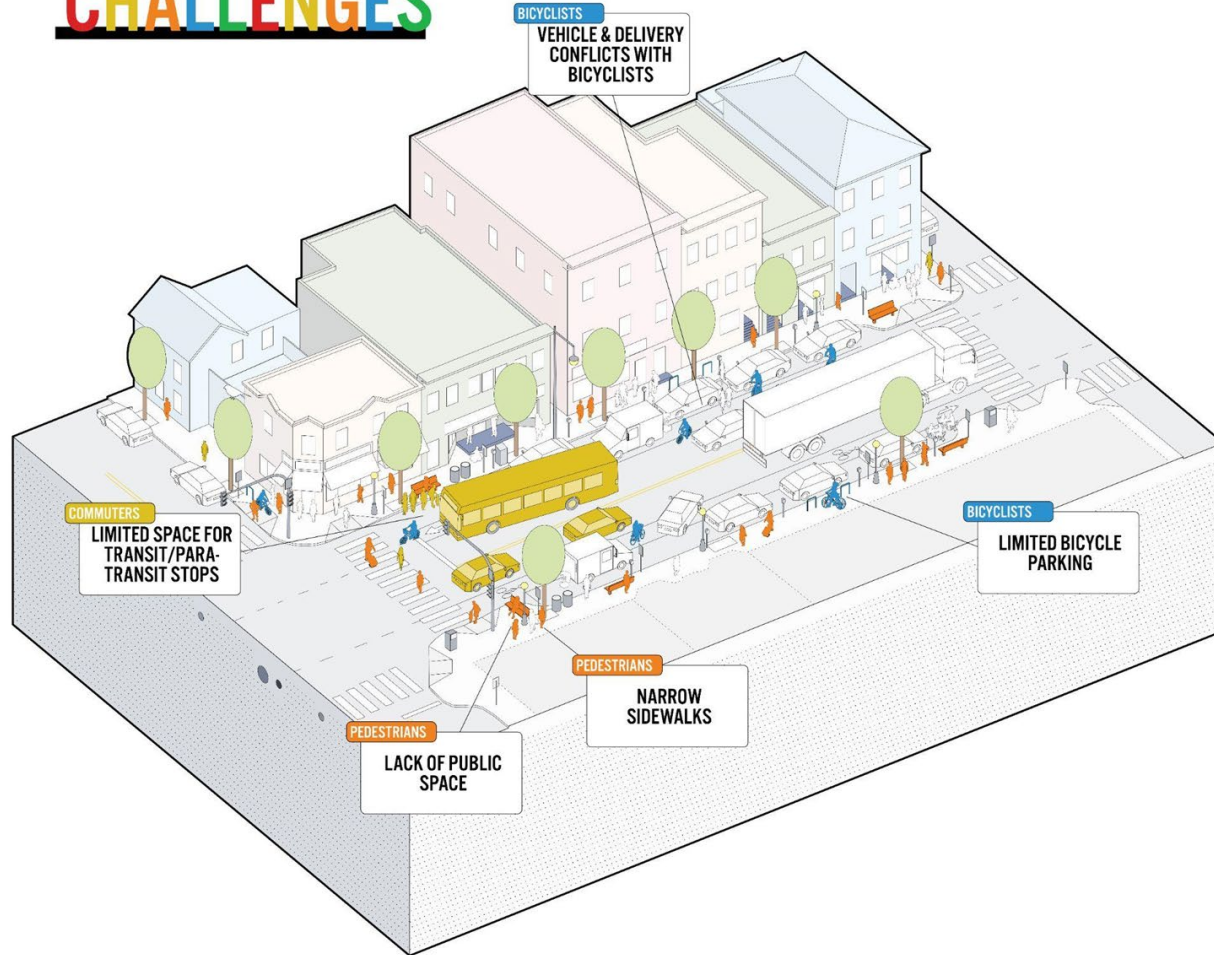
- Commercial
- Mixed Use Residential
- Residential
- Institution
- Open Space
- Transportation
- Partially Vacant
- Vacant
- High Impact Development
- City Boundary

MOBILITY PRIORITIES

Cambridge Street can get very congested with truck and car through traffic, loading/unloading, a bus route and major cross streets. How do we balance mobility with the other needs of the street?



CAMBRIDGE STREET CHALLENGES



MOBILITY

“Built environments send a message about who is welcome and who is not and it contributes to people’s functioning. If you put people in the built environment they need, they will thrive.”

- Cambridge Commission for Persons with Disabilities

SIDEWALKS

There is a lot happening in the sidewalk space

Signs, street furniture, bus shelters, bike racks, tree pits compete for space.



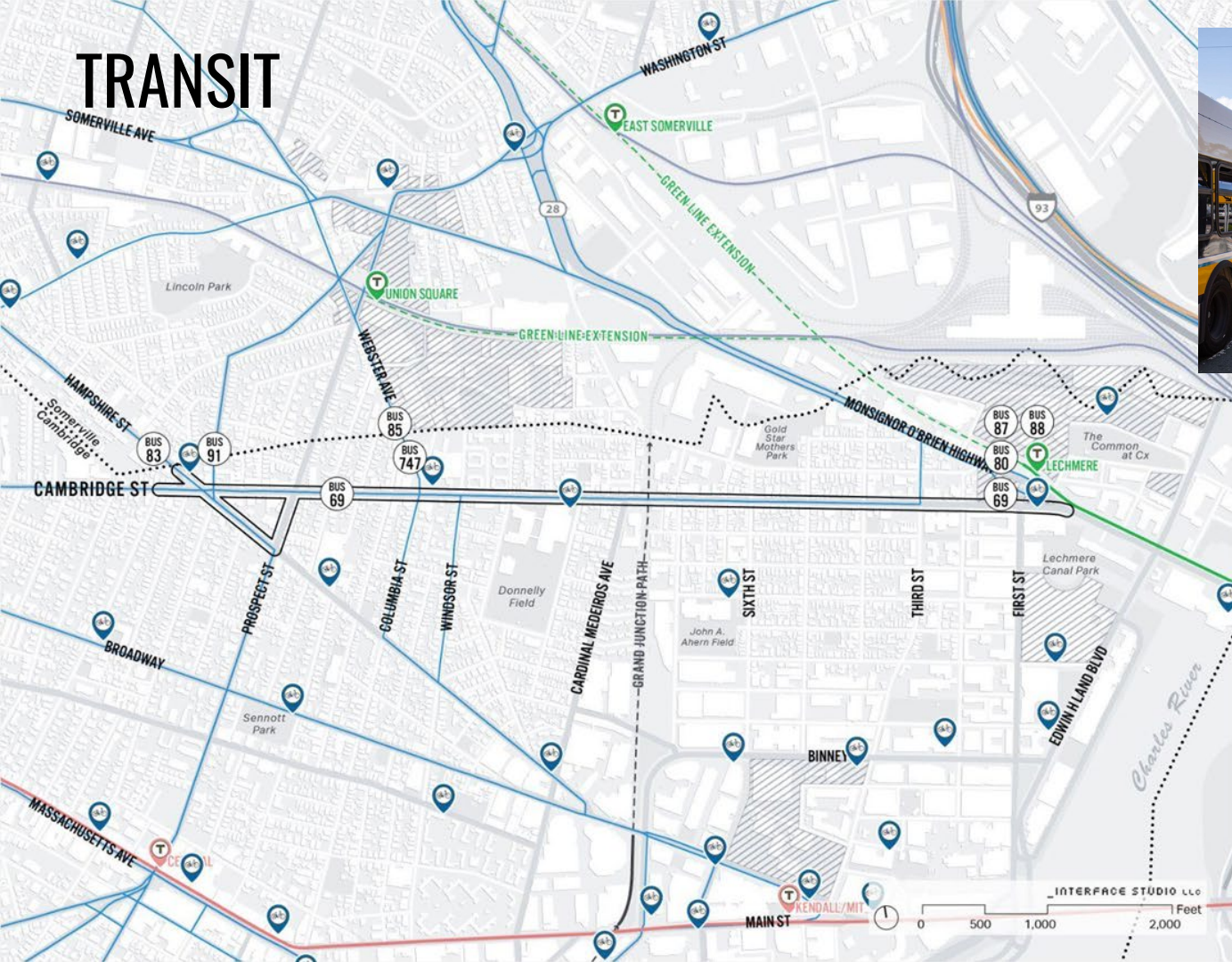
SIDEWALKS

Sidewalks are narrow along much of Cambridge Street only measuring about 7 feet wide. This doesn't leave much room for pedestrians, or strollers or wheelchairs, and ADA accessibility is a concern as many stores have a step up and there is little curb space for accessible drop offs.

But sidewalks are narrow and ADA compliance is a concern.



TRANSIT



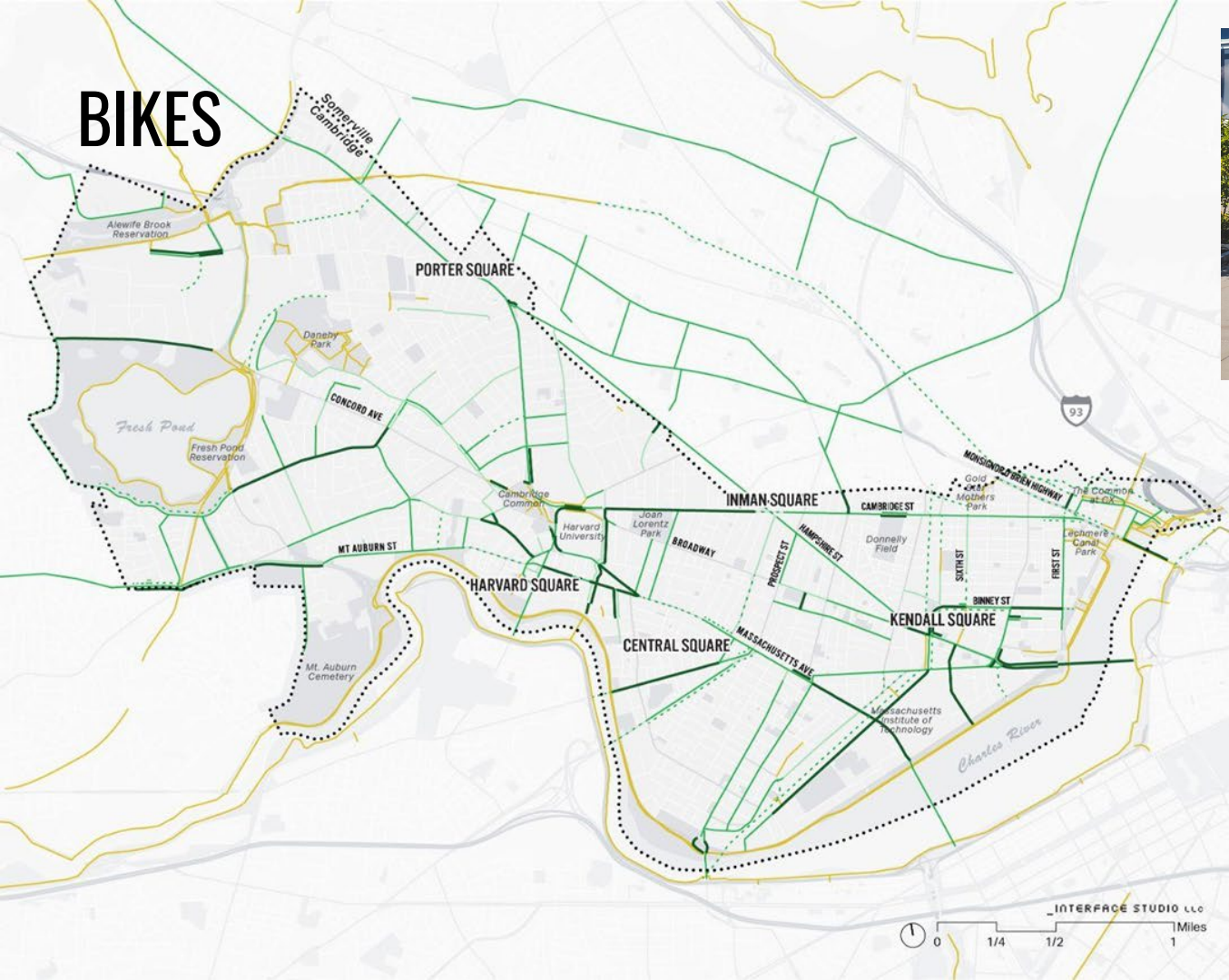
The new Green Line Station will expand access to Cambridge Street. But more needs to be done to ensure curbside access for paratransit.

TRANSIT

MBTA, 2019

- Red Line
- Orange Line
- Green Line
- - - Green Line Extension
- Commuter Rail
- Bus Lines
- High Impact Development
- - - City Boundary
- T T Station
- B Blue Bike Station

BIKES

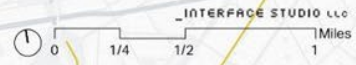


The Cambridge Street bike lane connects Harvard Square to Boston.

BIKE INFRASTRUCTURE

MassGIS, Cambridge GIS Data Dictionary, 2021

- Parks and Open Space
- Water
- Existing Sharrow
- Existing Bike Lane
- Existing Buffered or Separated Bike Lane
- Existing Multi-Use Path
- ... Proposed Bike Infrastructure



CRASHES

284
Total crashes
2017-Sept. 2021

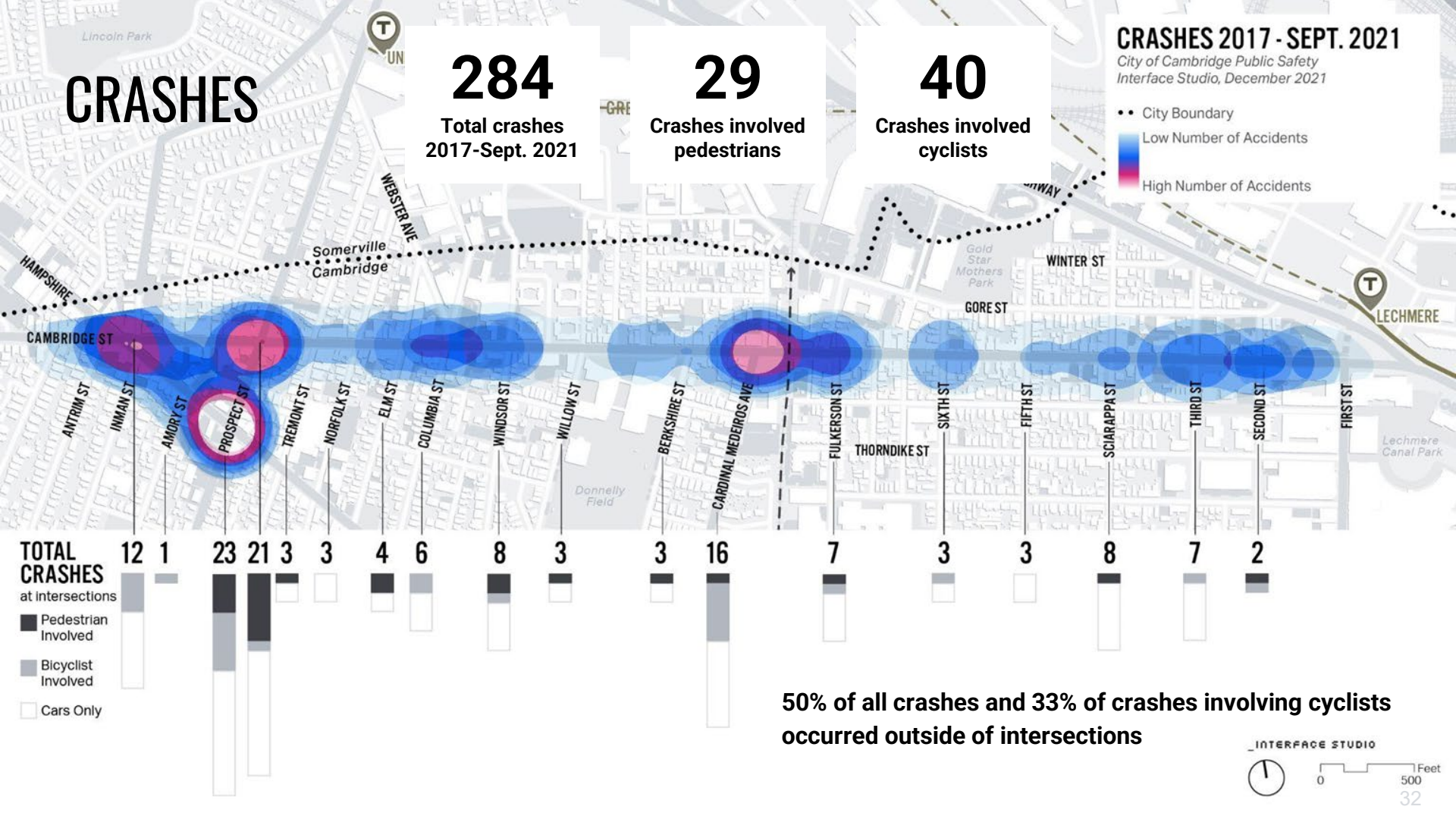
29
Crashes involved
pedestrians

40
Crashes involved
cyclists

CRASHES 2017 - SEPT. 2021

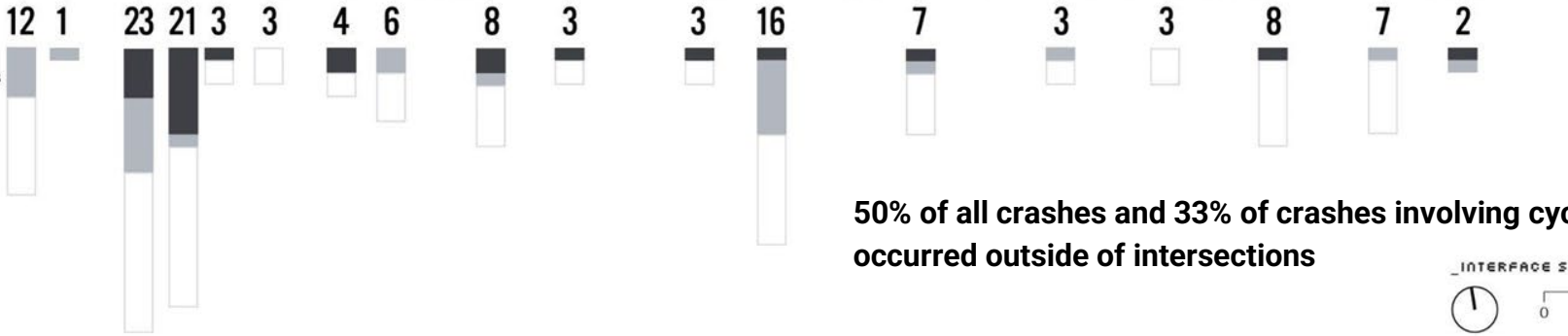
City of Cambridge Public Safety
Interface Studio, December 2021

- City Boundary
- Low Number of Accidents
- High Number of Accidents



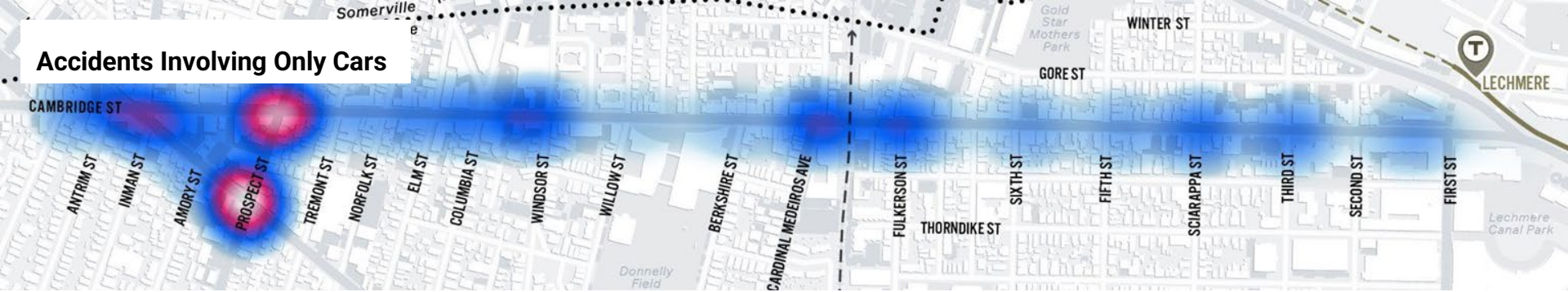
TOTAL CRASHES
at intersections

Pedestrian Involved
 Bicyclist Involved
 Cars Only



50% of all crashes and 33% of crashes involving cyclists occurred outside of intersections

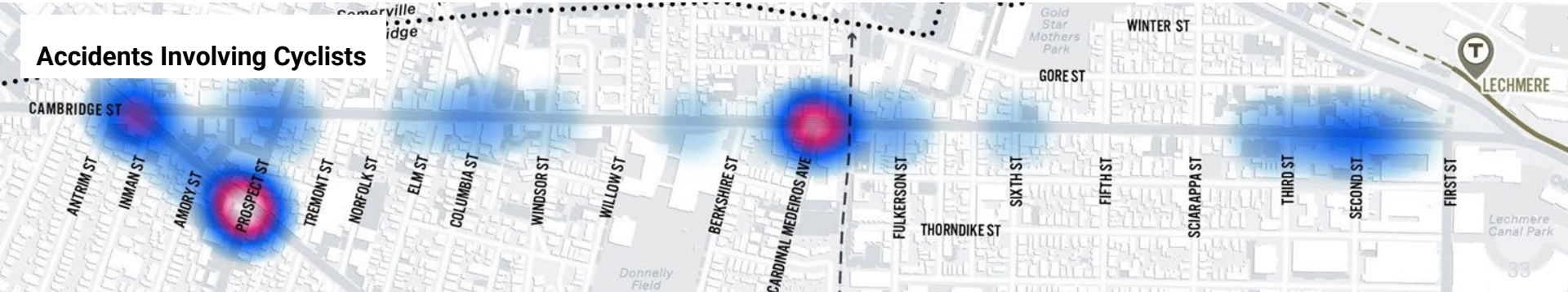
Accidents Involving Only Cars



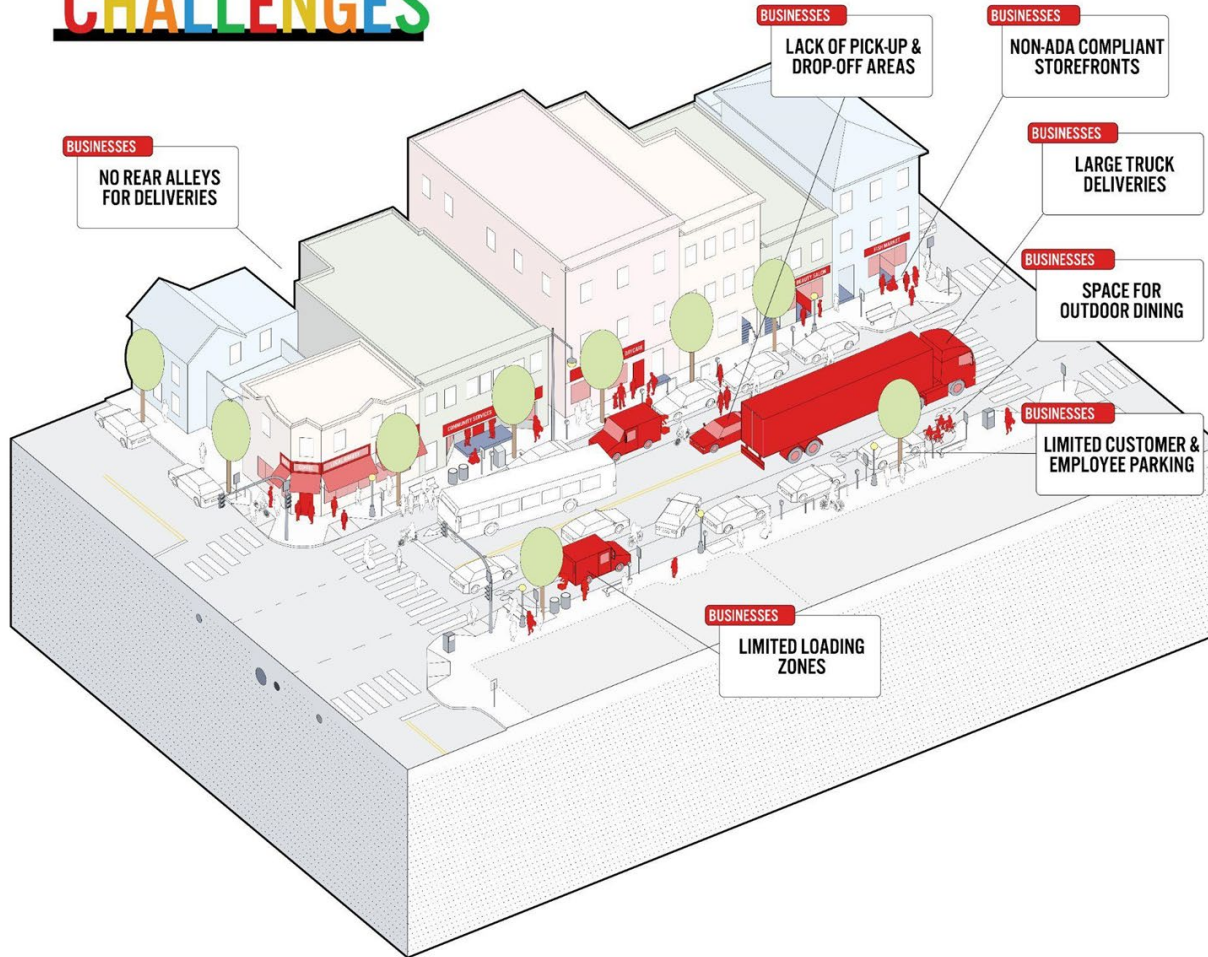
Accidents Involving Pedestrians



Accidents Involving Cyclists



CAMBRIDGE STREET CHALLENGES



BUSINESSES

“The challenges facing retail and restaurants are the biggest threats right now, streets and open space are the biggest opportunities.”

- Cambridge Street business owner

TRUCKS & LOADING

Trucks, especially heavy goods vehicles, have a big impact on Cambridge Street.

Some heavy goods trucks use Cambridge Street for through traffic. Impacts include adding to traffic congestion, noise, road wear and tear, and potential conflicts with other vehicle and bikes.



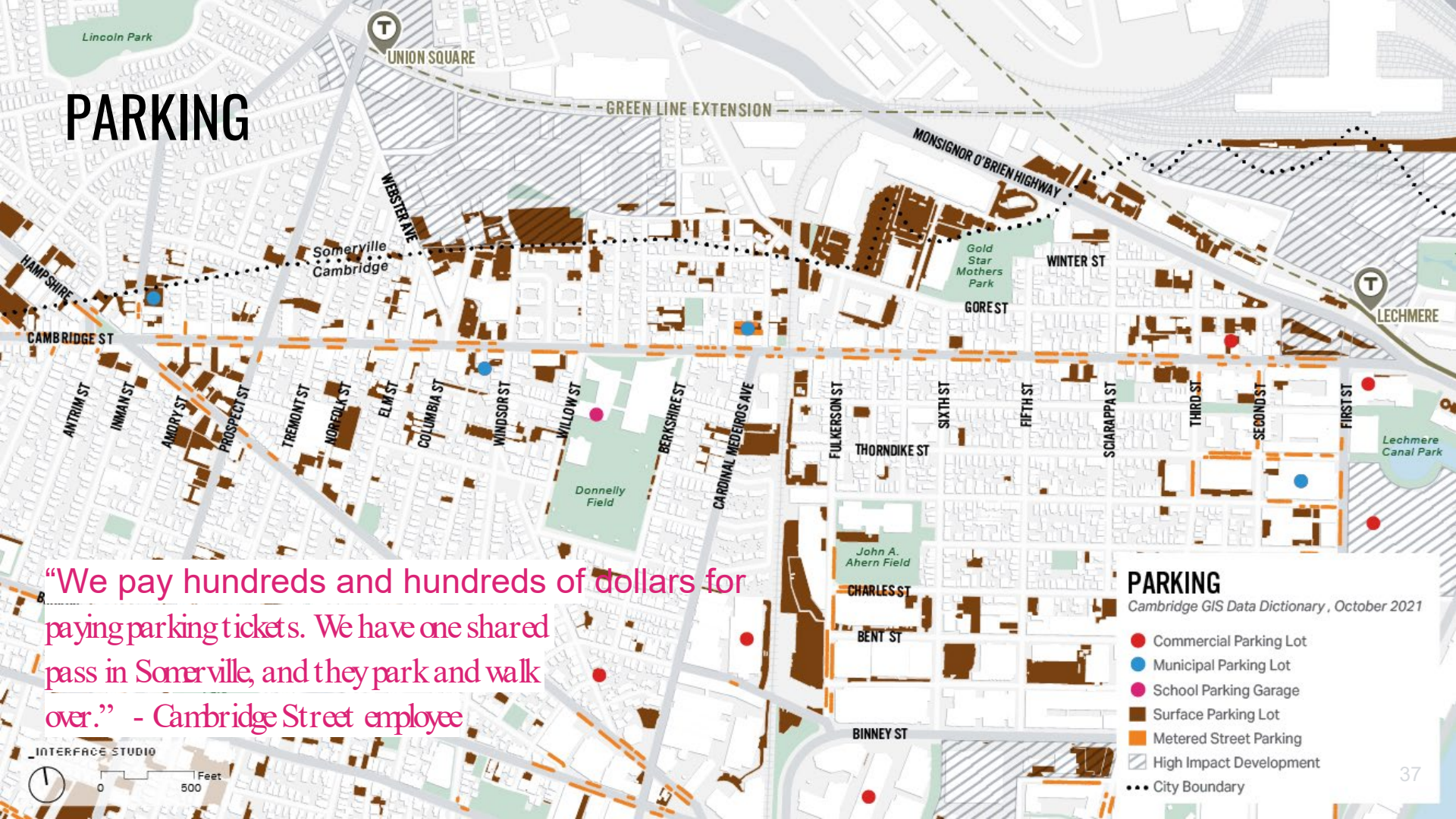
TRUCKS & LOADING

Different businesses have different loading and delivery needs so a diverse mix will be important.

Different businesses have different loading and delivery needs so a diverse business mix will be important. Some businesses, such as food and beverage businesses, get 5-6 deliveries a day from a variety of van and truck types. Beverage deliveries for example come on an 18-wheeler.



PARKING



“We pay hundreds and hundreds of dollars for paying parking tickets. We have one shared pass in Somerville, and they park and walk over.” - Cambridge Street employee

PARKING

Cambridge GIS Data Dictionary, October 2021

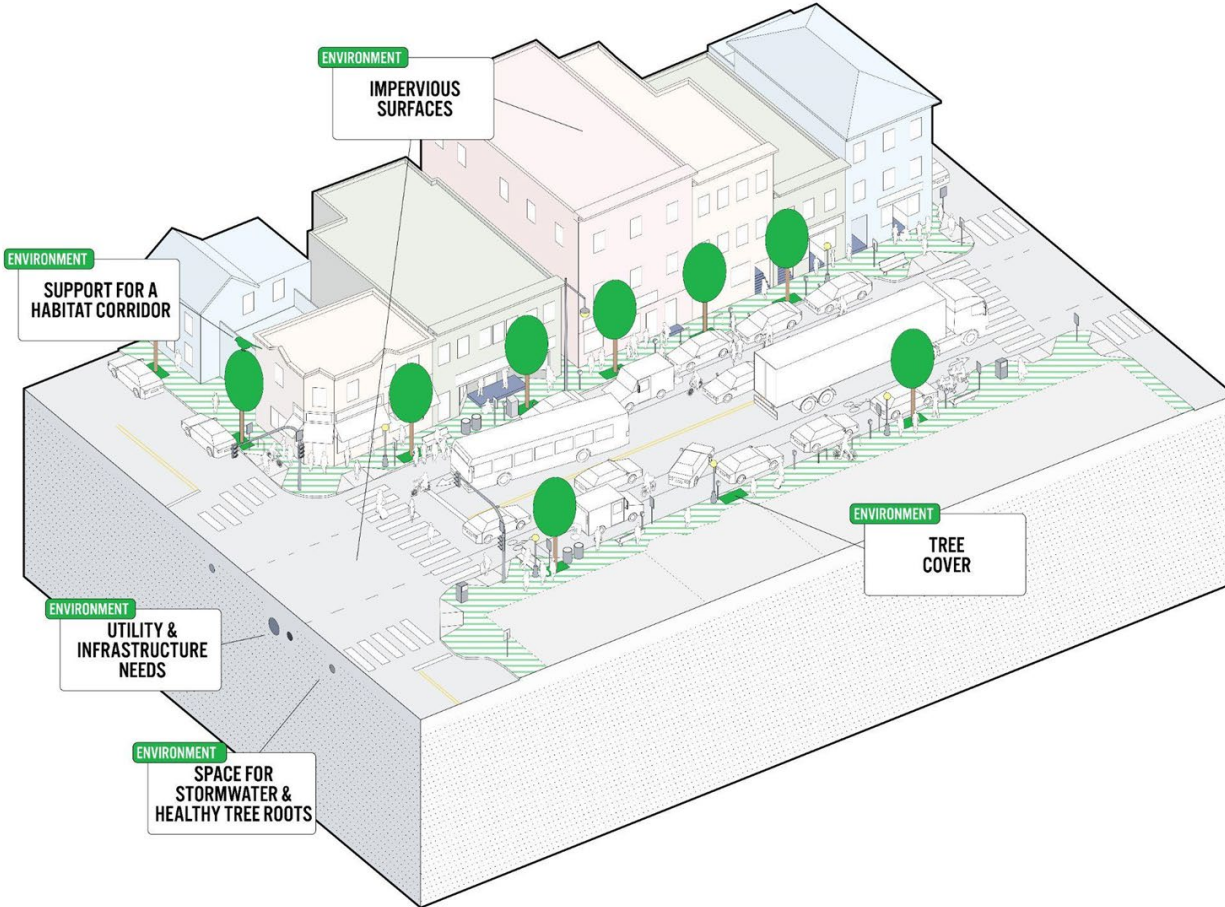
- Commercial Parking Lot
- Municipal Parking Lot
- School Parking Garage
- Surface Parking Lot
- Metered Street Parking
- High Impact Development
- City Boundary

Outdoor space has been a lifeline to restaurants and could continue to be critical to their survival.



“What makes Inman Square alive is healthy restaurants and retail - having outdoor space changes the proposition in a meaningful way that could make it easier to withstand the pressure of redevelopment.”

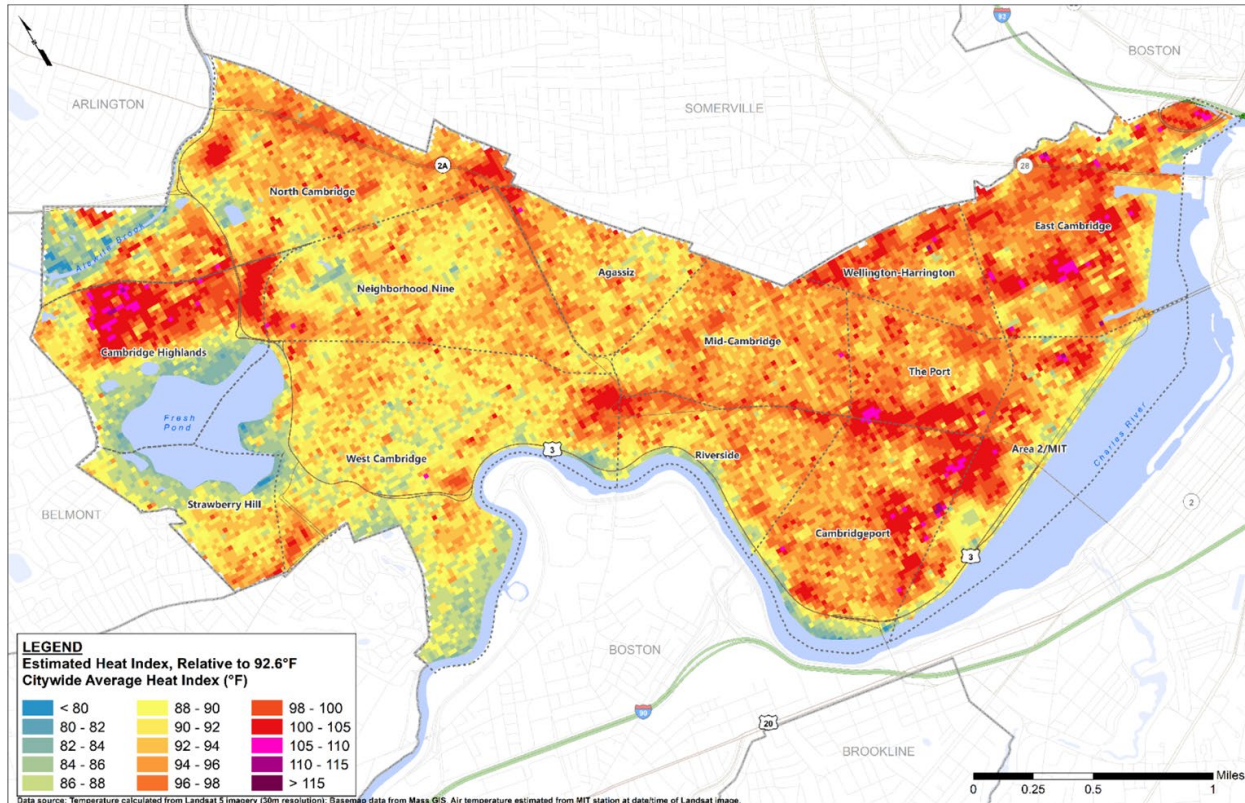
- business owner



ENVIRONMENT

Cambridge Street has the potential to help the City of Cambridge mitigate future climate change impacts of projected flooding, heat and energy.

HEAT IMPACT



Cambridge Street and the neighborhoods adjoining it are vulnerable to heat

Urban heat impacts are felt on the street and in buildings. Lack of shade and non-reflective surfaces increase the ambient temperature, making it uncomfortable for people to spend time on Cambridge Street. This impacts street life and businesses. Additionally, residents and businesses face higher utility costs to cool their buildings. High ambient air temperature combined with high humidity can be a lethal mix, especially for those with health conditions.

Source: Urban Heat Island Technical Report

TREE COVER

Cambridge St. is identified as a 'primary canopy corridor' in the Urban Forest Master Plan to increase comfort in summer, reduce heat island effects, and promote public transit/biking/walking. However there are constraints to how much canopy can be realistically grown on Cambridge Street. Utilities under the street and sidewalks may impact the potential soil volume available to support room for roots to grow.

Tree canopy in Wellington-Harrington and East Cambridge is low compared to the city

15% 15% 13%

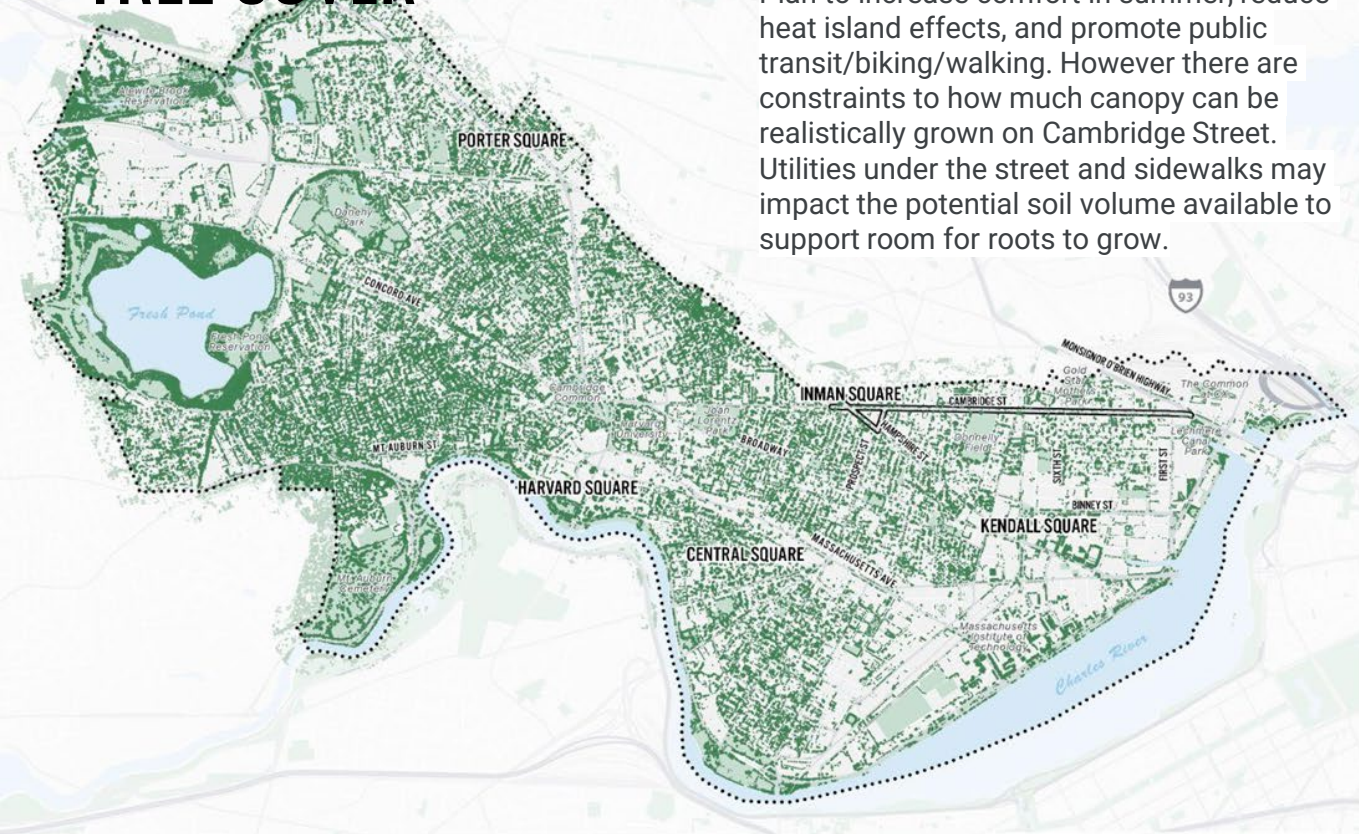
5-Minute Walkshed

Wellington-Harrington

East Cambridge

26%

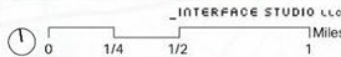
Citywide Tree Canopy Coverage



TREE CANOPY

Cambridge GIS Data Dictionary 2019, 2021

- Parks and Open Space
- Water
- Tree Canopy

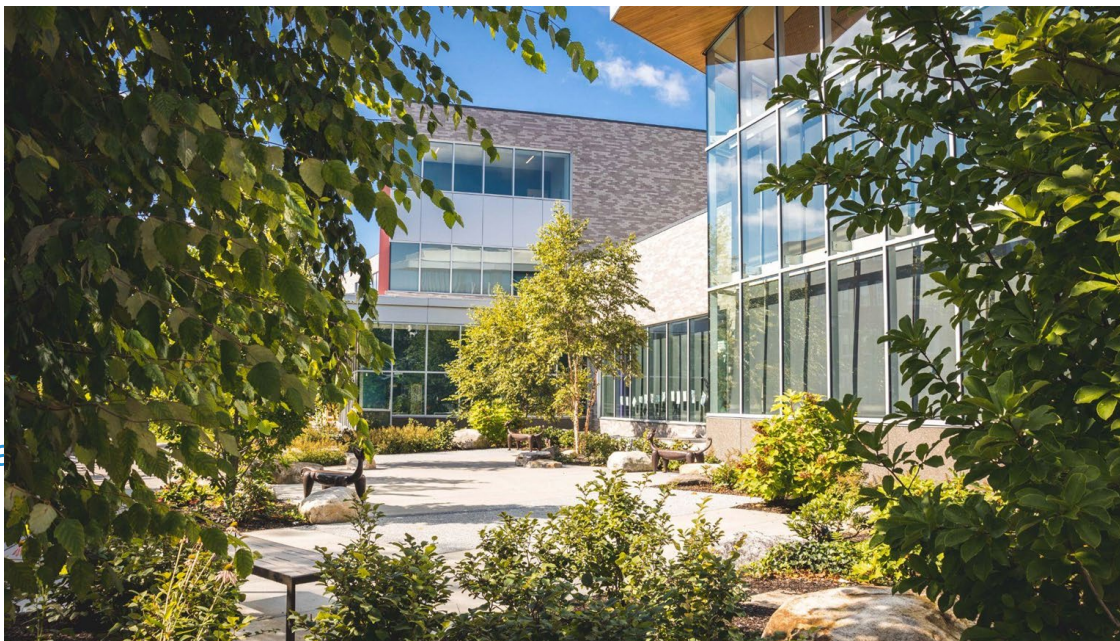


PUBLIC SPACE

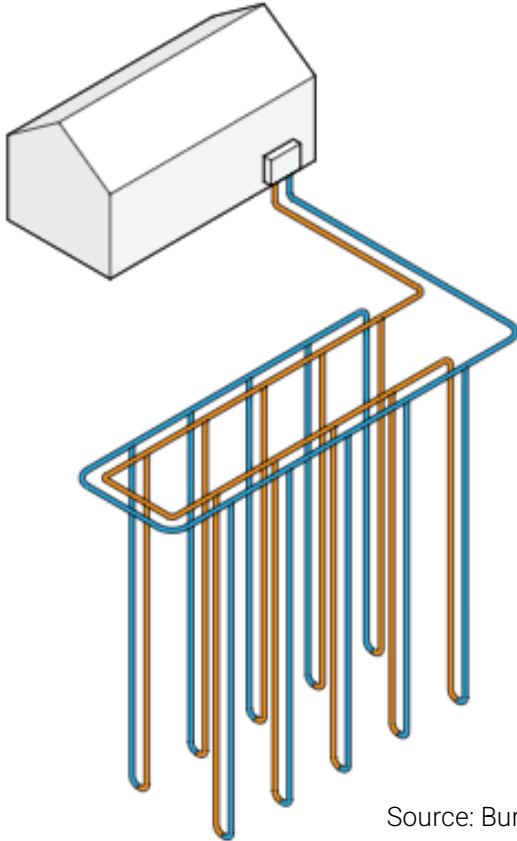
There is very little public space on Cambridge Street and a narrow right-of-way with many competing needs will mean making the most of the small spaces that exist and finding opportunities to incorporate new public patios along the street.

Increasing vegetated spaces is also important to help reduce the impact of heat and absorb water, and providing habitat for urban wildlife.

“Create something unique for each of these neighborhoods along the way; not a place, a series of places.”- resident



SHARED ENERGY OPPORTUNITIES / MICRO DISTRICTS

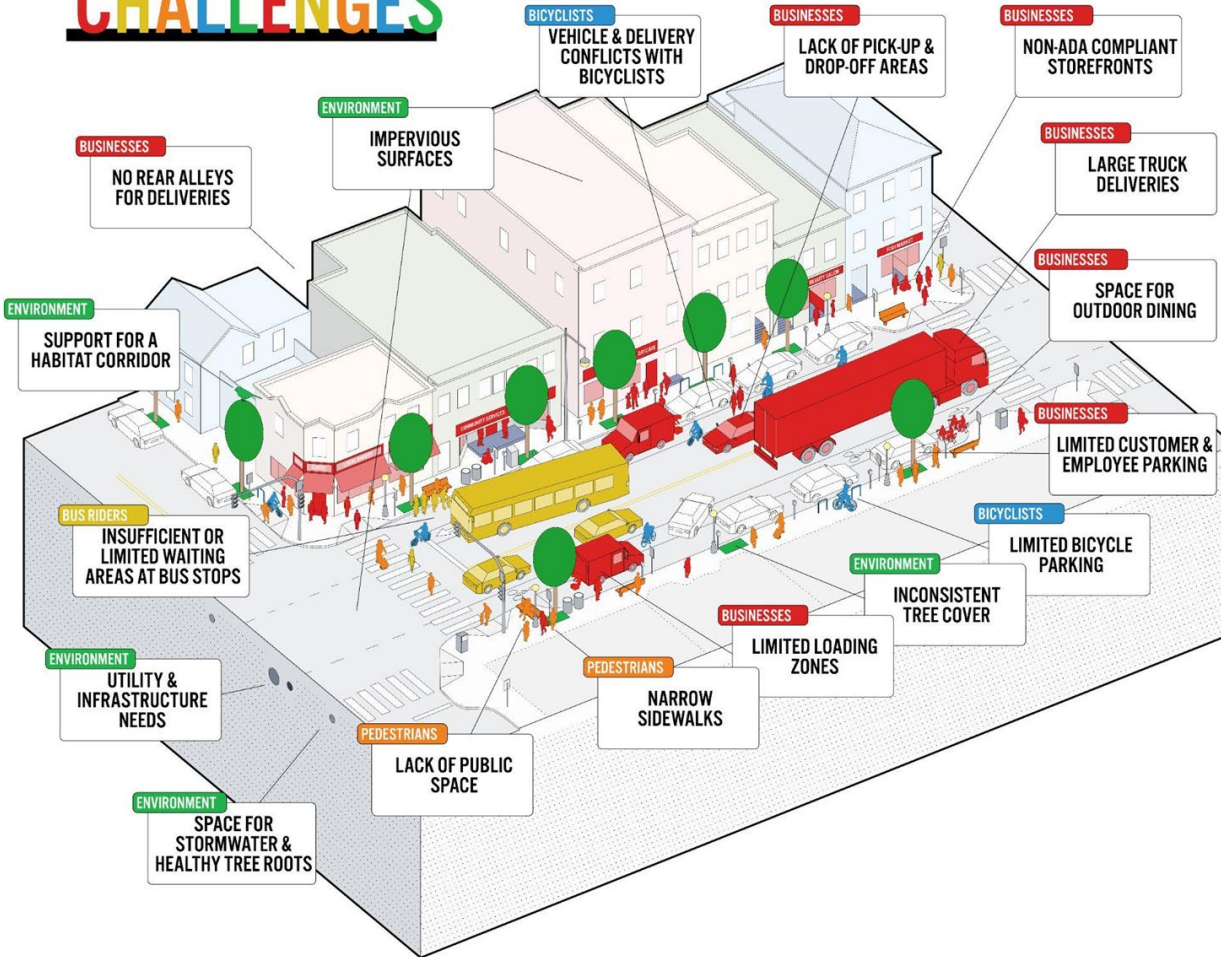


Will Cambridge Street illustrate the next generation of shared infrastructure?

- GeoMicroDistrict using right-of-way [[HEET](#)]
- Sewer heat exchange
- Solar PV with battery storage
- Solar street lighting / black-out phone charging
- Digital accessibility

Source: Buro Happold

CAMBRIDGE STREET CHALLENGES



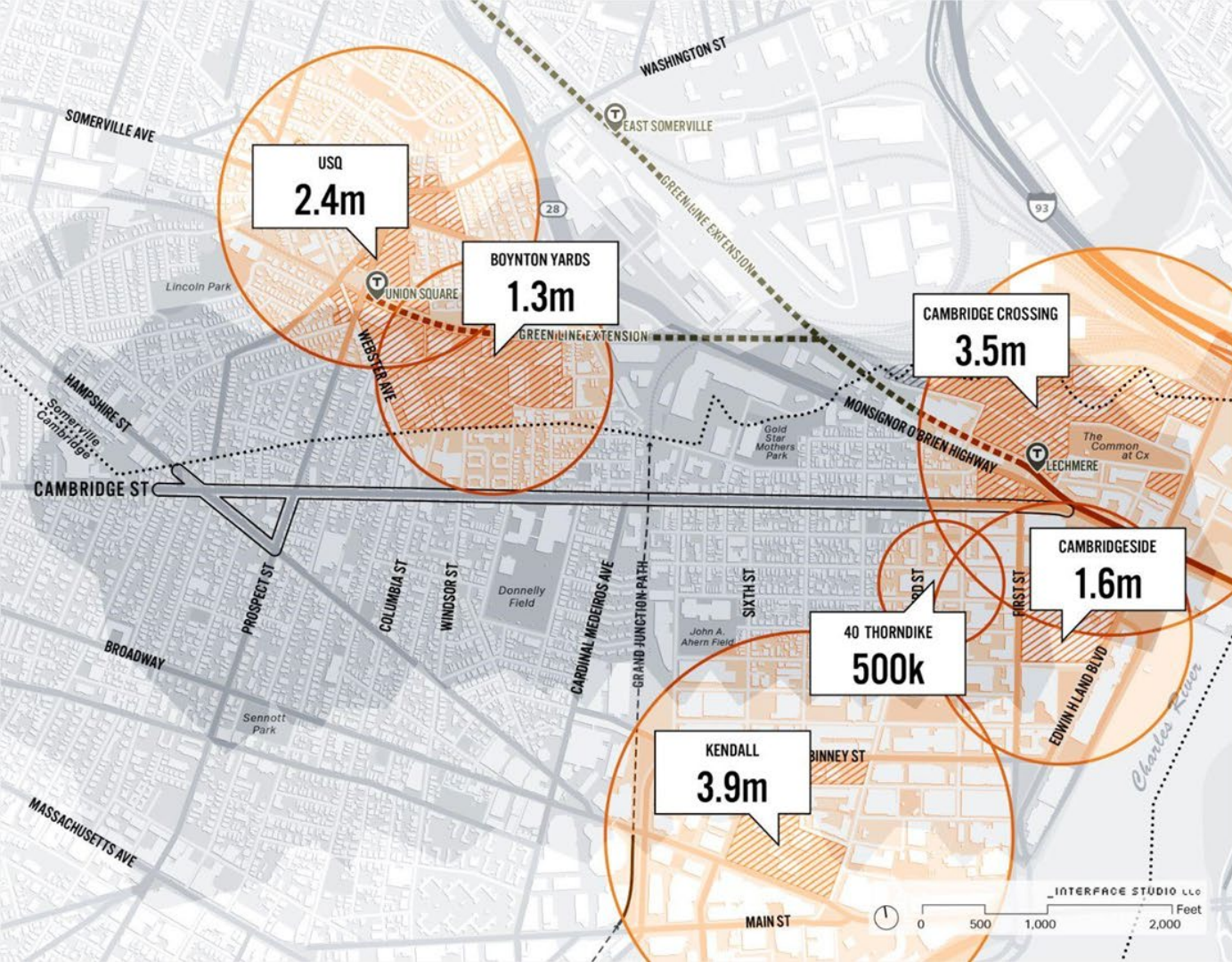
A lot is expected on this street:

- support small businesses
- create new affordable housing
- manage loading
- encourage walking
- improve ADA accessibility
- integrate separated bike lanes
- plant more trees
- manage stormwater...

WHERE ARE THE DEVELOPMENT PRESSURES?

Cambridge Street is surrounded by major development projects that will influence how it changes.





13m+

square feet of development including

3,313

new residential units are recently constructed, under construction or planned within a 10-minute walk of Cambridge Street in Cambridge.

Additional units are planned in Somerville.

PLANNED DEVELOPMENT SITES

City of Cambridge Development Log, October 2021

- 5-Minute Walkshed
- 10-Minute Walkshed
- Light Rail
- - Light Rail Extension
- Multi-Use Path
- - Multi-Use Path Extension
- ▨ High Impact Development
- Total Development in Square Feet (SF)

LARGE DEVELOPMENTS

A substantial amount of new development has occurred near Cambridge Street (in East Cambridge / Kendall Square) over the past 10 years. Proposed large developments are projected to continue adding new employment and residents in affordable and market rate housing.

- 5,000 new housing units planned citywide, with 77% or 4,100 in East Cambridge alone
 - Other nearby Cambridge neighborhoods have only 145 housing units planned (other neighborhoods = MIT/Area 2, Wellington-Harrington, Mid-Cambridge and the Port)
- 8.8 million SF of planned commercial space in East Cambridge alone
 - 8.1 million SF in Office/R&D space
 - 586,000 SF in Retail space
- Other nearby neighborhoods have another 1.9 million SF of planned commercial space

HOUSING

There is an acute need for affordable housing but residential development faces several impediments, such as:

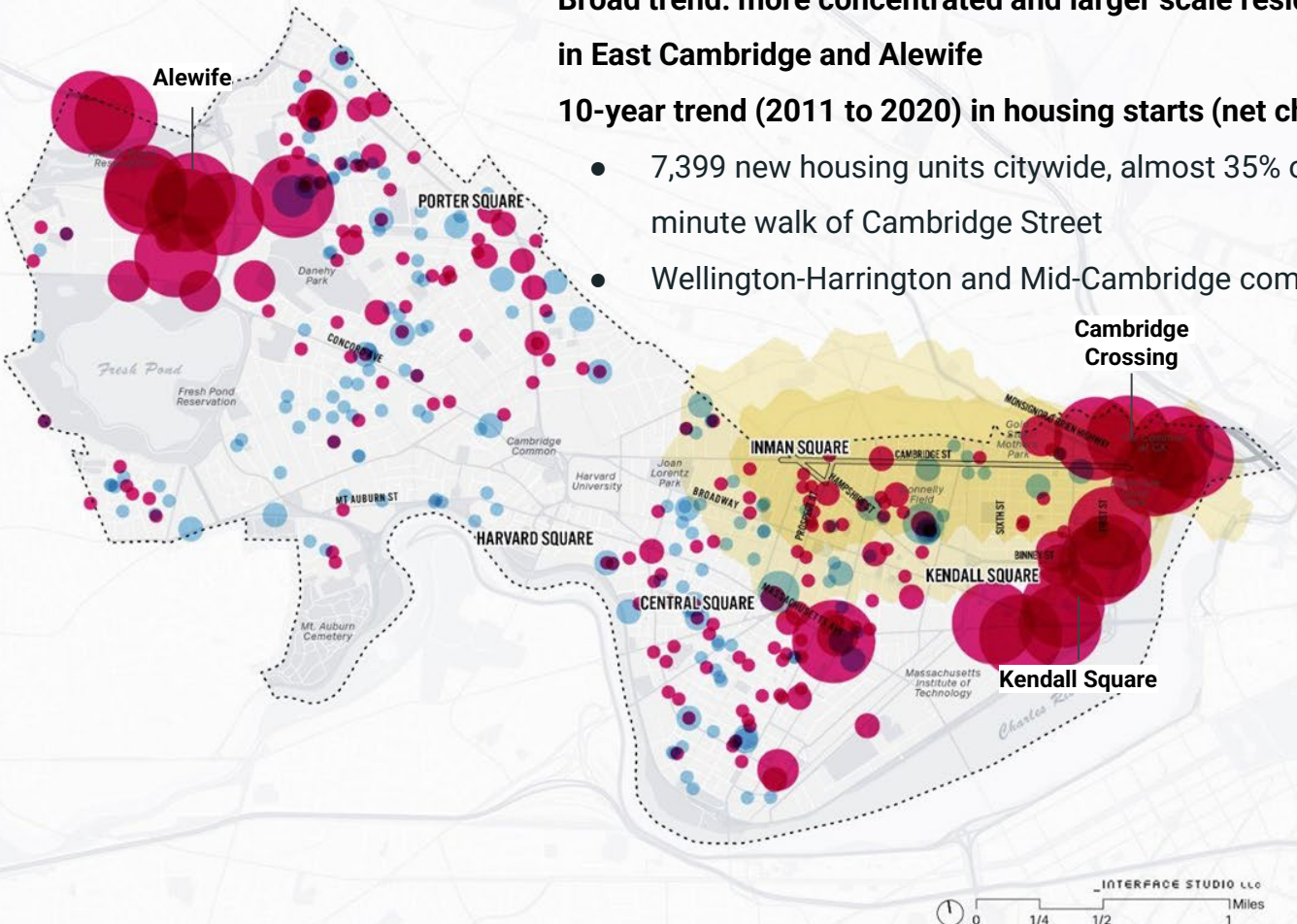
- High cost of land and construction drives up housing prices,
- Suitable sites are limited and small size of properties results in lower density construction and a higher construction price per unit,
- Competition from lab/tech which can pay higher prices,
- Zoning limits the amount of units able to be added to offset costs and requires formula setbacks which limits development potential.



Broad trend: more concentrated and larger scale residential developments concentrated in East Cambridge and Alewife

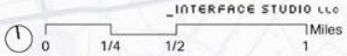
10-year trend (2011 to 2020) in housing starts (net change in housing units)

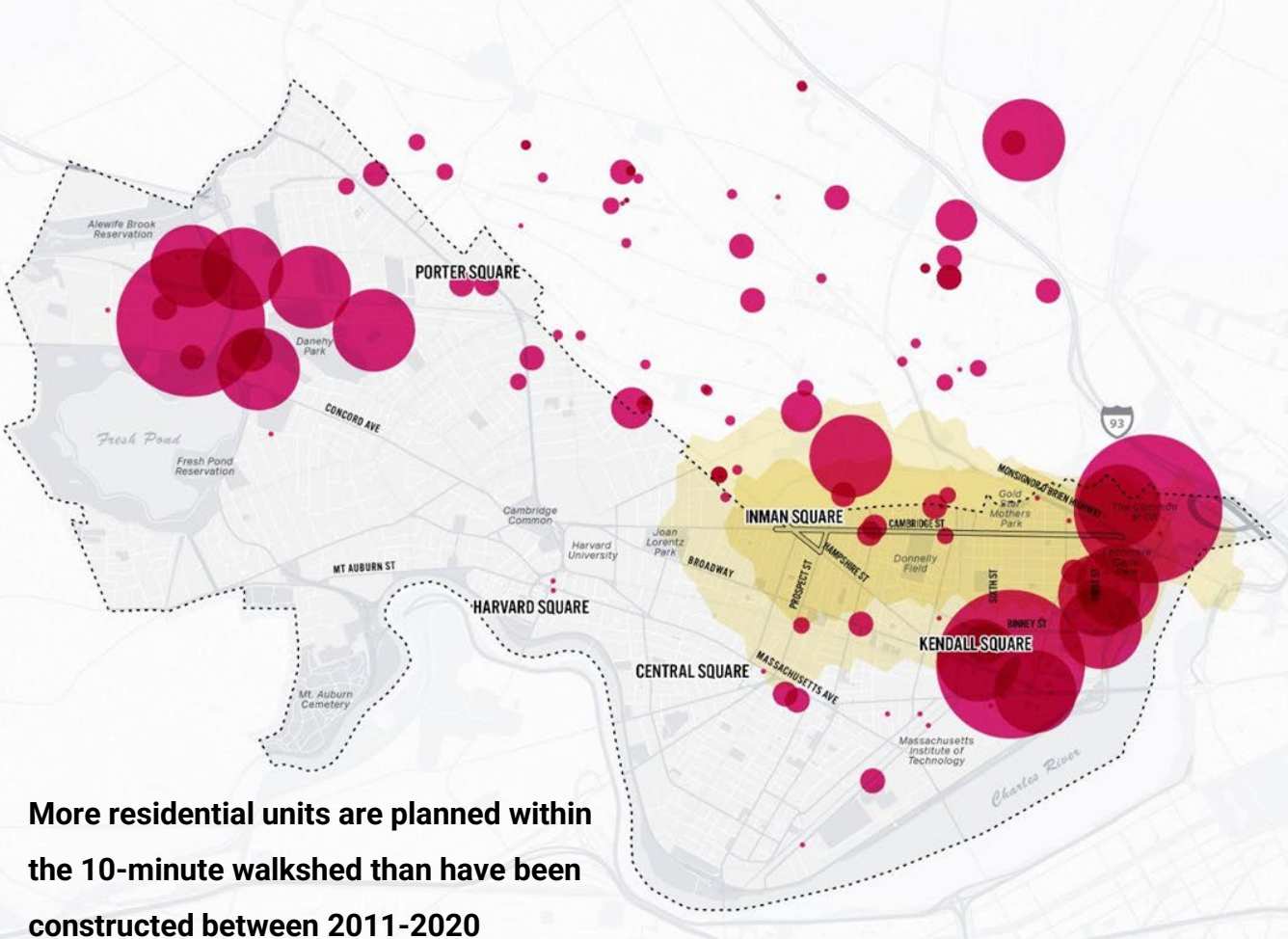
- 7,399 new housing units citywide, almost 35% or 2,573 units were within a 10-minute walk of Cambridge Street
- Wellington-Harrington and Mid-Cambridge combined had 104 new units



HOUSING STARTS 2011-2020 BY NUMBER OF UNITS

Cambridge Open Data, 2021





More residential units are planned within the 10-minute walkshed than have been constructed between 2011-2020

PLANNED RESIDENTIAL UNITS

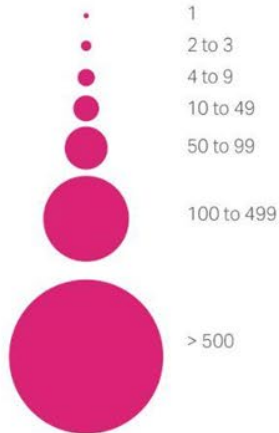
975 within a 5-min walk

2,763 within a 10-min walk

NEW CONSTRUCTION RESIDENTIAL PERMITS BY NUMBER OF UNITS

Cambridge Open Data and Somerville Data Catalog 2019-2021

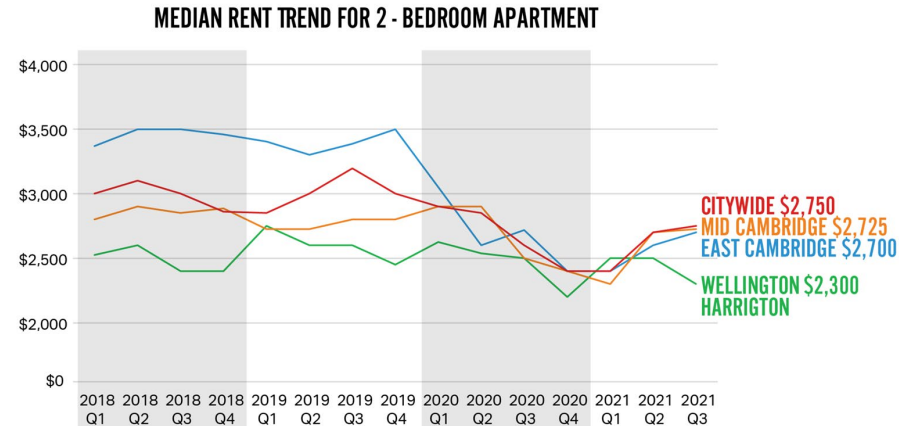
- 5-Minute Walkshed
- 10-Minute Walkshed



NEW WORKERS AND RESIDENT COMPOSITION

New workers and residents will be more affluent than existing residents given commercial and residential market rate rents and sales prices. This will create new market opportunity for business development as well as more upward pressure on rents and prices.

- Median asking rents in Cambridge decreased due to the pandemic with recent indication of a rebound
- Median asking rents in Cambridge Street neighborhoods are similar to those citywide; slightly lower in Wellington-Harrington.



Source: MAPC Rental Housing Data Collaborative, ConsultEcon

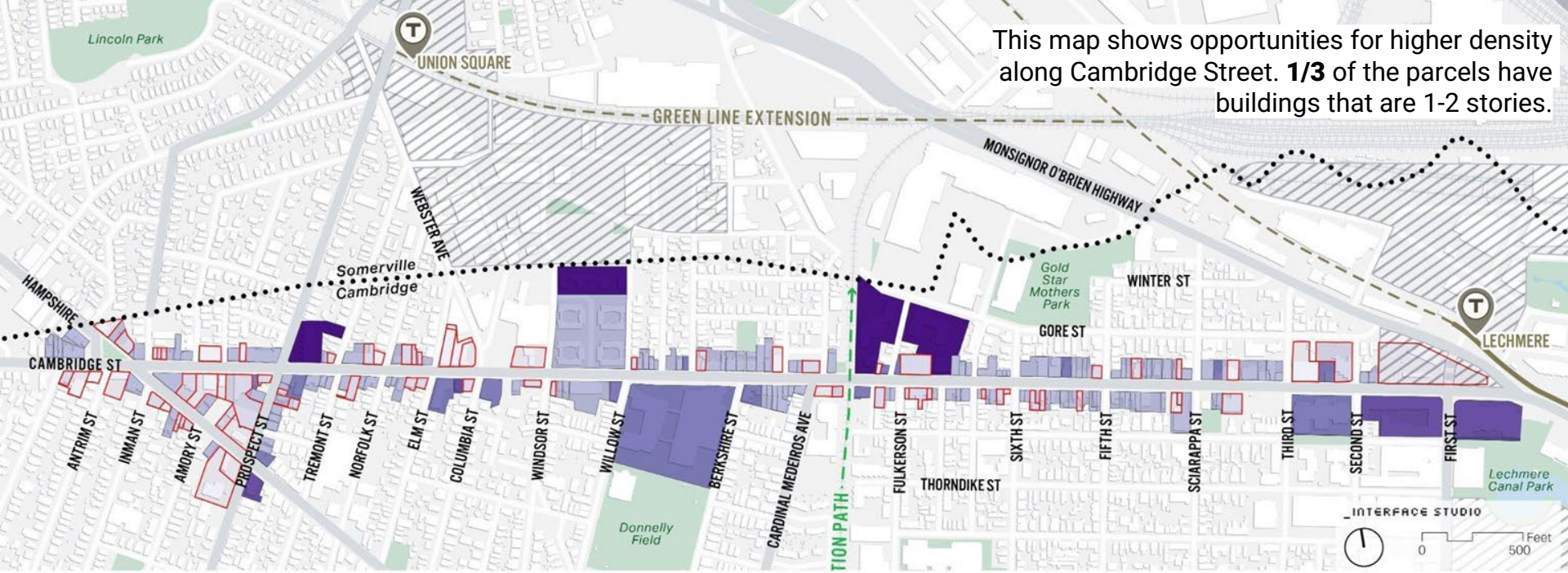
HIGH COST OF LAND / PROPERTY VALUES

The high cost of land, combined with the high cost of construction, are impediments to renovation and reinvestment in older properties, especially those in poor condition.

- Construction costs: \$360-\$500 / SF
- Average assessed parcel value: \$2.9 million
- Average assessed residential, commercial and mixed use value / SF: \$551

Use type (property class)	Number of parcels	Land area (SF)	Assessed Value	Value per SF
Residential	34	143,751	\$79,353,500	\$552
Mixed Use	110	363,113	\$198,570,080	\$547
Commercial	45	499,930	\$276,728,700	\$554
All Parcels	189	1,006,794	\$554,652,280	\$551

“for the health of the business district, we need more housing nearby.”
-resident



% OF PARCELS

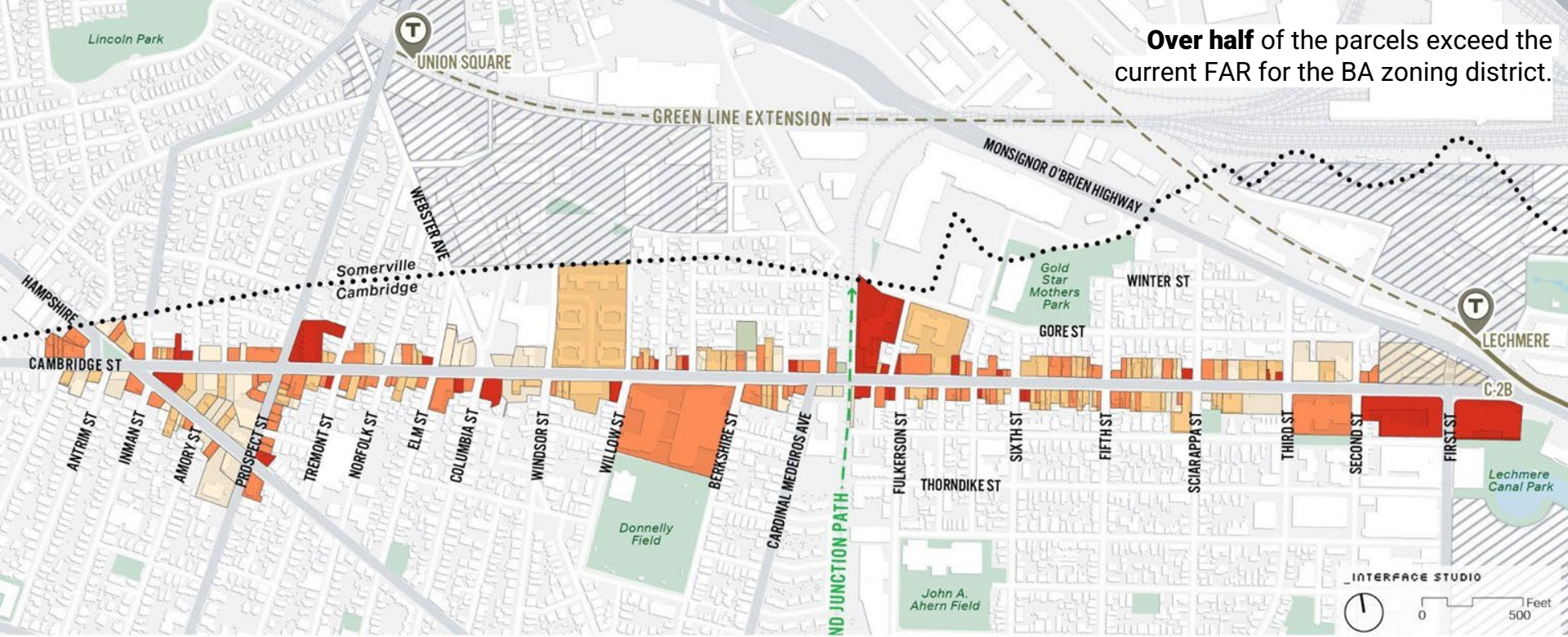


NUMBER OF STORIES

Cambridge Open Data

- 1 story
- 2 stories
- 3 stories
- 4 stories
- 5 stories
- Over 5 stories

Over half of the parcels exceed the current FAR for the BA zoning district.



19.6%

<1.0

27.6%

1.0-1.75

40.0%

1.75-3.0

12.8%

3.0<

% OF PARCELS

52.8% of parcels along Cambridge Street are larger than the current FAR for the BA zoning district.

EXISTING FLOOR AREA RATIO

Cambridge Open Data



