

June 7-8, 2022  
Virtual – Zoom Meeting

# 15th Massachusetts Housing Institute

## Training for local officials



Massachusetts Housing Partnership  
[www.mhp.net](http://www.mhp.net)



Massachusetts Department of Housing and Community Development  
[www.mass.gov/dhcd](http://www.mass.gov/dhcd)



The Mel King Institute for Community Building  
[www.melkinginstitute.org](http://www.melkinginstitute.org)



Citizens' Housing and Planning Association  
[www.chapa.org](http://www.chapa.org)



Metropolitan Area Planning Council  
[www.mapc.org](http://www.mapc.org)



American Planning Association—  
Massachusetts Chapter  
[www.apa-ma.org](http://www.apa-ma.org)

## 15<sup>th</sup> Annual Housing Institute Agenda

### Complete Neighborhoods: It all starts with home

DAY ONE | Tuesday, June 7

Understanding Intersections of Housing, Health, and the Environment	
8:50 AM	<b>Welcome and Introduction to the Housing Institute by Laura Shufelt, MHP</b>
9:00 AM	<b>Why housing policy is climate policy</b> CM   1.25 Dr. Tracy Corley, Conservation Law Foundation Nate Kelly, Horsley Witten Jesse Kanson-Benanav, Abundant Housing MA  <i>Mitigating the impacts of climate change requires communities to revisit how land is used. In this session, Dr. Tracy Corley will dive into the connections between housing, climate, and transportation, and why building climate-friendly neighborhoods will be a critical strategy in meeting the biggest challenges of our time. Next, Horsley Witten's Nate Kelly will highlight arguments against housing development based on concerns for the environment and how to respond to them. Jesse Kanson-Benanav from Abundant Housing Massachusetts will facilitate a Q&amp;A session following the presentations.</i>
10:15 AM	<b>Break</b>
10:25 AM	<b>Exploring neighborhood-level density</b> Tom Hopper & Matija Jankovic, Massachusetts Housing Partnership  <i>MHP's Center for Housing Data will showcase and demonstrate the newest tool available to Massachusetts communities to explore residential density at the parcel and neighborhood levels.</i>
11:40 AM	<b>Break</b>
12:30 PM	<b>Healthy communities start with healthy homes</b> CM   1.25 Barry Keppard, Metropolitan Area Planning Council James Fuccione, MA Healthy Aging Collaborative  <i>Where you live has a powerful impact on your health. In this session, MAPC's Barry's Keppard will highlight Health Impact Assessments (HIAs) related to housing, followed by MA Healthy Aging Collaborative's James Fuccione who will share the importance of building age-friendly communities.</i>
1:45 PM	<b>Wrap-up Day One</b>

REGISTRATION | DAY ONE | June 7: <https://us02web.zoom.us/meeting/register/tZltd-2grz4uHNymOndIsuqNLpRjzn28klb6>

**DAY TWO | Wednesday, June 8**

<b>Building Homes, Infrastructure and Community Engagement</b>	
9:00 AM	<b>Welcome by Clark Ziegler, MHP &amp; Presentation of Complete Neighborhood Partnership Awards by Mike Kennealy, Secretary of Housing &amp; Economic Development</b>
9:35 AM	<b>Break</b>
9:45 AM	<b>Building a Community Engagement Strategy</b> CM I 1.25 Doris Ann Sweet and Lynn Weissberg, Engine 6 Andrew DeFranza, Harborlight Community Partners  <i>Local support is crucial to furthering affordable and fair housing. Given the common resistance to affordable and multi-family housing, building this support takes time and a concerted effort. Newton's Engine 6 will share how and why their housing advocacy group started, along with the strategies they are employing and the successes they have celebrated. From the North Shore, we will also hear about the work of Harborlight Community Partners, a regional community development corporation, to move the dial on receptiveness to diverse housing options in every community.</i>
11:00 AM	<b>Presentation of Housing Hero Awards by Rus Lodi &amp; Lisa Braxton, MHP</b>
12:00 PM	<b>Lunch Break</b>
1:00 PM	<b>Wastewater 101 for Residential Development</b> CM I 1.25 Joseph D. Peznola, PE, Hancock Engineering Maren Toohill, AICP, Town Planner Rio Sacchetti, Pennrose  <i>New multi-family or "missing middle" housing must comply with state and local regulations to meet one of our most basic needs! Learn about wastewater basics and how two communities are supporting innovative wastewater solutions to meet their housing needs.</i>
2:30 PM	<b>Multi-Family Housing for Your Community</b> CM I 1.25 Gail Sullivan, Studio G Architects Amy Dain, Dain Consulting  <i>Livable and inclusive communities provide a mix of housing types to meet the needs of all residents. An architect and housing and policy expert will discuss how communities can (and have) addressed the need for housing diversity.</i>
3:45 PM	<b>Housing Institute Adjourn</b>

**REGISTRATION | DAY TWO | June 8:** <https://us02web.zoom.us/meeting/register/tZcrcO-orDgtGtlfer6foXSJXxQh-5p8GkZ1>

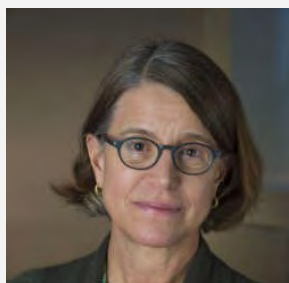
# MHP's Community Assistance Team



**Laura Shufelt**

Director of Community Assistance

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**Katy Lacy, AICP**

Senior Planner

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**Shelly Goehring**

Senior Program Manager

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**Emma McGurren**

Program Assistant

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## **MHP's 15th Housing Institute Social Media Guide**

Here are sample tweets, handles and hashtags you can use on social media before and during the MHP Housing Institute taking place June 7-8, 2022. Feel free to create your own tweets or tweet out inspiring messages you hear during the program.

### **MHP Twitter Handle:**

@mhphousing

### **MHP Center for Housing Data Twitter Handle:**

@mhpdata

### **Hashtags:**

#mhphi2022

#mhphousinginstitute

### **Sample Tweets before Housing Institute**

Looking forward to @mhphousing Housing Institute this week and its focus on creating affordable housing near transit and other amenities. #mhphi2022  
#mhphousinginstitute

@MHPhousing has a new density tool to be unveiled at the #mhphousinginstitute this week. Can't wait to learn more about @mhpdata tool Residency. #mhphi2022  
#mhphousinginstitute

1½ years in the making @mhpdata has new tool to measure rez density of any piece of land in MA. Looking forward to the unveiling at #mhphi2022 this week.

### **Sample Tweets during Housing Institute**

Taking a deep dive into the connections between housing, climate & transportation on Day 1 of @MHPhousing Housing Institute. #mhphi2022 #mhphousinginstitute.

Day 2 of @MHPhousing Housing Institute and discovering strategies on how to build support for affordable housing in the face of strong resistance. #mhphi2022  
#mhphousinginstitute

Gr8 session at @MHPhousing Housing Institute on \_\_\_\_\_. #mhphi2022  
#mhphousinginstitute

My favorite #mhphousinginstitute memory is \_\_\_\_\_. #mhphi2022  
#mhphousinginstitute

## 2022 Housing Institute Speaker Bios

### **Dr. Tracy Corley**

Director of Research & Partnerships, Conservation Law Foundation

*Dr. Tracy Corley is the Director of Research and Partnerships at CLF's Healthy and Resilient Communities program, where she supports scientific practices and partnerships across the organization. Tracy identifies areas where research and science can support active advocacy and litigation and also coordinates independent research related to climate change and environmental justice across New England. She brings experience in research, public policy, law, and conservation to her role and thrives on bringing people together to tackle the systemic issues that drive conservation and environmental justice.*

*Prior to joining CLF, Tracy served as the Transit-Oriented Development Fellow at MassINC, where she conducted research and convened stakeholders to promote equitable development in Massachusetts' Gateway and regional cities. Her time at MassINC followed her mid-career graduate studies, when she researched the economic development potential of New England cities at the Dukakis Center for Urban and Regional Policy then split her time between Boston and the German Rhineland investigating informal work in Germany's skilled trades and crafts sector. She also has lived in Seattle, Washington, where she conducted strategic planning and coordinated a participatory research program for formerly incarcerated workers at Seattle Jobs Initiative; founded two consulting firms that helped advance clean technologies, sustainable development, and energy efficiency; and advocated for inclusive economic development as Vice-Chair of Small Business for the Seattle Chamber of Commerce Board of Trustees. She has also worked as an architect and designer in Washington state and South Carolina.*

*In April of this year, Tracy was appointed to The Board of Scientific Counselors (BOSC), Social and Community Science Subcommittee, a federal advisory committee that provides advice and recommendations to EPA's Office of Research and Development on technical and management issues of its research programs. Tracy holds a B.A. in Architecture from Clemson University and both an M.S. in Public Policy and a Ph.D. in Law and Public Policy from Northeastern University. She grew up on a farm in South Carolina, enjoys being out in nature, and believes that urban places can be regenerative for people and the planet.*

### **Amy Dain**

Consultant, Dain Consulting

*Amy Dain is an independent consultant in public policy research and writing. Her focus is on urban and suburban planning and housing policy. She is a frequent presenter at conferences and events.*

*Her career has been a tour of Massachusetts-based think tanks. She has worked in-house or as a consultant on projects for: Collins Center for Public Management, Pioneer Institute for Public Policy Research, Rappaport Institute for Greater Boston, MassINC, the Massachusetts Smart Growth Alliance, the Jewish Community Relations Council of Greater Boston, and other organizations.*

*She recently wrote the State of Zoning for Multi-Family Housing in Greater Boston, a survey of zoning and plans in 100 cities and towns of Greater Boston. In 2008, she launched the StatNet initiative, a*

*community of practice for municipal managers interested in data-driven decision-making. She received her Master in Public Policy from Harvard's Kennedy School.*

### **Andrew DeFranza**

Executive Director, Harborlight Community Partners

*Andrew DeFranza has served as the Executive Director of Harborlight Community Partners since 2007. Harborlight Community Partners develops, manages, and advocates for quality, service-enriched essential worker housing. These properties are affordable and inclusive, collaborating with communities to cultivate just, equitable and sustainable housing opportunities.*

*Harborlight Community Partners is mission driven and Andrew's passionate leadership style has motivated community leaders, the HCP board and donors to understand the importance of a home. It was in New Jersey, while working the second shift in an Atlantic City men's homeless shelter, that Andrew witnessed the very real, pressing issues related to homelessness and its harsh challenges. With his conviction to social justice rooted in this experience, Andrew remains passionately dedicated to housing creation and access, while challenging the systems which stand in the way of affordable housing development. Toward that end, Andrew boldly addresses in public forums these barriers to housing creation, racial equity and access, and actively engages in dialogues with communities to address their housing needs and goals.*

*He has been in nonprofit leadership roles for over 25 years, in both New England and the Midwest. Prior to leading HCP, Andrew was the Executive Director of Guest House, an organization serving the homelessness in Milwaukee. He holds an M.A. in Theology (Social Ethics) and an M.A. in Community Economic Development.*

### **James Fuccione**

Senior Director, MA Healthy Aging Collaborative

*James Fuccione is senior director of the Massachusetts Healthy Aging Collaborative (MHAC), which is a statewide network of more than 100 organizations committed to advancing inclusive age- and dementia-friendly communities. MHAC promotes, supports, coordinates and tracks age-friendly activity throughout Massachusetts and has worked with partners to secure commitments from more than 40 cities and towns to become more age-friendly – a process overseen by AARP and the World Health Organization. With MHAC's support, Massachusetts is also one of only three states in the country designated as age-friendly. Fuccione spent the past eight years as director of legislative and public affairs for the Home Care Alliance of Massachusetts, a nonprofit trade association representing home healthcare agencies and private-pay home care companies. In this role, Fuccione led the organization's government and public affairs strategy on the state and national levels along with managing media communications, often serving as the organization's spokesperson. Fuccione also has experience as an aide for former State Senator Edward M. Augustus, Jr. and received a Master's in public affairs from UMass-Boston.*

### **Tom Hopper**

Director of Research & Analytics at MHP's Center for Housing Data

*Tom Hopper joined MHP in 2006 and worked in risk management, operations and analytical development over the next decade. In early 2017 he became Co-Director of MHP's newly created Center for Housing Data and in 2019 became Director of Research & Analytics. Hopper has developed database*

*systems, designed metrics, and created data tools and analytical reports that provide insight into project financial performance, credit quality, and risk management. He has led public policy research efforts on topics such as transit-oriented development, housing production, land use, gentrification and housing costs. Tom has a bachelor's degree in economics, a master's degree in city planning from Boston University, and a master's degree in urban informatics from Northeastern University.*

**Matija Jankovic**

Senior Research Analyst at MHP's Center for Housing Data

*Matija Janković joined MHP in 2021. His responsibilities include providing research and analytical support for the Center for Housing Data. Janković has extensive experience in housing policy, housing case management and data analytics. Most recently he was a rent relief case manager for Boston's Rental Relief Fund and a housing case manager for Housing Families Inc., of Malden, which provides temporary shelter and affordable housing to homeless and at-risk families. As a data analysis intern for the state, he developed a portfolio management dataset to assist in the Commonwealth's long-term capital planning efforts. As a research intern, he worked to improve data quality for the state's portfolio of community colleges. Janković earned his bachelor's degree in urban and regional studies from Cornell University's College of Architecture, Art, and Planning.*

**Jesse Kanson-Benanav**

Executive Director, Abundant Housing MA

Jesse Kanson-Benanav is the Executive Director of Abundant Housing MA (AHMA) where he oversees all aspects of the organization's mission to build a Massachusetts for Everyone. Jesse has nearly 20 years' experience in the affordable housing industry where he's worked as a community organizer, policy consultant, and as a developer of affordable homes at a number of nonprofits in Greater Boston including at The Community Builders, Somerville Community Corporation, and B'nai B'rith Housing. Jesse became active in the grassroots pro-housing movement in 2012 as founder of A Better Cambridge (ABC), a community-based education and advocacy group committed to creating more affordable and sustainable housing, which he served as chair until 2019. Jesse's work with ABC was recognized as a "Game Changer" in 2016 by the Boston Globe for its positive contributions to the local economy, and he was recognized as recipient of Metro Housing Boston's Champions of Housing Rising Star Award in 2019. Jesse is a graduate of Oberlin College and has a Master of City Planning Degree from MIT. He lives in Jamaica Plain, Boston, with his wife, toddler, and their two cats.

**Nathan Kelly, AICP, NCI**

Principal Planner, Horsley Witten Group

*Nathan Kelly is a Principal with HW and directs the firm's Providence, Rhode Island Office. He has 22 years of project management experience, and has provided professional planning, zoning, and facilitation services to more than 50 New England municipalities. Nate's goal for local planning work is to build community through interaction, design, capacity building, and strategic investment. He believes that the ability of a consultant team to help build communities is rooted in intensive engagement, hard listening, and critical thinking that can connect vision to implementation. Nate is a former President of*



*the Rhode Island Chapter of the American Planning Association (APA-RI) and serves on Grow Smart Rhode Island's Training Collaborative. He is one of the primary authors of several state-level guidance documents including the Massachusetts Smart Growth/Smart Energy Toolkit, the Rhode Island Low Impact Development Site Planning and Design Guidance Manual, Policy Guidance for Regulating Solar Facilities (Massachusetts), and Community Guidance to Maintain Working Farms and Forests (Rhode Island). Nate's work has received four APA Chapter Awards and he was recently recognized as a "Friend of the Network" by the Housing Network of Rhode Island for his contributions to ongoing policy reform.*

**Barry Keppard**

Director of Public Health Department, Metropolitan Area Planning Council

*Barry Keppard is the Director of the Public Health Department at the Metropolitan Area Planning Council (MAPC). Previously, he was a Senior Regional Planner with MAPC and leading work for the implementation of the MetroFuture Plan through a combination of public health, land use, environmental, and transportation planning projects. Additionally, Barry is leading MAPC's internal Health in All Policies initiative to integrate approaches, findings, and recommendations into the organization's practice areas, including Clean Energy, Housing, Transit Oriented Development, and Climate Change Adaptation.*

*Barry's background includes a Bachelor's degree in Biology and a Masters in Regional Planning, and he has over 12 years of planning experience in the public and private sectors. Barry was a City Planner for Springfield, MA, where his focus was on environmental planning projects (including stormwater management), historic design review, development of neighborhood master plans, and coordinating redevelopment of city-owned parcels. Barry's direct work on public health issues is complimented by a portfolio of projects and management record that spans other planning focus areas. He managed multiple components of MAPC's 495/MetroWest Compact project that brought together local, regional, and state partners to create a regional strategic investment plan for the corridor. He was the coordinator for the South Shore Coalition subregion of MAPC and his work helped strengthen the capacity of the group to engage and act on local and regional planning and policy issues.*

*Prior to joining MAPC, Barry was a Transportation Planner with the Greater Mercer Transportation Management Association (TMA) in New Jersey, where he worked closely with municipal, county, and state officials, as well as area businesses, to develop commuter alternatives. Following this, he was with the engineering firm Michael Baker Jr., Inc.*

**Joseph D. Peznola, PE**

Director of Engineering, Hancock Engineering

*Joeseeph Peznola has almost 35 years of experience in land development projects for Hancock's private sector development clients, non-profit organizations, and municipalities. He has extensive experience with complex, high density commercial and residential developments throughout Massachusetts and New Hampshire. At Hancock Associates, Joe is responsible for managing the 25-person engineering division across Hancock's offices, providing strategic planning and resource coordination, business development and technical quality control and assurance. He has a Bachelor of Science in Civil Engineering from the University of Massachusetts, Lowell.*

**Rio Sacchetti**

Developer, Pennrose

*Rio Sacchetti joined Pennrose in 2018 as Developer in the Boston office. Rio is responsible for managing the financing and development of real estate projects, ensuring they are completed to scope, according to schedule, and within budget. A seasoned project manager with 10 years' experience in affordable and mixed income housing throughout New England, Rio brings expertise with state agency financing programs, historic rehabilitation tax credits (HTC), and the federal low-income housing tax credit (LIHTC) program. Rio is responsible for project management of new affordable and mixed-income residential communities beginning with inception and through construction completion and lease-up. Rio has a Master of Professional Studies from Georgetown University and a Bachelor of Arts from College of the Holy Cross.*

**Gail Sullivan**

Managing Principal, Studio G Architects

*Gail Sullivan builds sustainable communities through architecture and planning by advancing social equity, environmental sustainability, and community preservation and empowerment through engagement. Establishing Studio G Architects in 1991, she leads by example to demonstrate the power and impact of public interest architecture. Gail artfully resolves complex functional, social, and programmatic concerns, particularly those that cohesively integrate the building, neighborhood, and urban scales. Her commitment to advancing environmental sustainability in housing is evident in high performance/low energy multi-family housing that contributes to resident health and well-being. She is Principal in Charge of E+ Highland in Roxbury, a 23-unity Limited Equity Co-op with 100% affordable units that will be energy positive, LEED Gold and Passive House certified, a 46-unit affordable housing development in Wellfleet which will also be Passive House certified and net zero. Each design addresses climate change head on, engages its community, and provides affordability to future residents. Gail is a member of the AIA College of Fellows, Boston Society of Architects, CREW Boston, U.S. Green Building Council, NESEA and Living Building Challenge.*

**Doris Ann Sweet**

Engine 6

*Doris Ann Sweet grew up in a small town in the White Mountains of NH, and earned an undergraduate and two graduate degrees (U.S. History and Library Science) at Columbia University. She moved with her husband and two daughters to Newton in 1978, at a time when they were able to buy a house, even with their moderate income.*

*Doris Ann worked as a reference librarian and library administrator for 46 years, at Columbia University, Boston University, Harvard University, Simmons College, and Assumption College, before retiring in 2018. Along the way, she both noticed the increasing lack of housing in Newton affordable for average families, and was stunned by vehement neighborhood opposition to a modest affordable housing project proposed, and eventually built, on her street.*

**Maren Toohill, AICP**

Town Planner, Littleton

*Maren Toohill, AICP serves as Town Planner for the Town of Littleton, MA and is a Citizen Planner Training Collaborative board member. Maren helped guide the process as Littleton successfully navigated a Master Plan (2017), Littleton Common Revitalization Roadmap (2019), Form Based Code zoning bylaw (2020), and King Street Common zoning bylaw (2021) - steps toward making Littleton Common a vibrant, walkable, sustainable Town center. Maren earned a B.S. in Engineering Science from Montana State University.*

**Lynn Weissberg**

Engine 6

*Lynn Weissberg is a member of the Engine 6 Leadership Team. She has a long history as a housing activist dating back to the late 1970's when she was a founding member of the Alliance of Cambridge Tenants. Stopping the rampant conversion of rent-controlled apartments to condominiums was their primary focus. She is a retired lawyer. For over 30 years, she was a supervising attorney at the Tenant Advocacy Project (TAP), a clinic at Harvard Law School that represents public and subsidized housing tenants in hearings at the Boston Housing Authority and other local housing authorities. In Engine 6, Lynn has organized support for mixed-use developments in Newton and lobbied city councilors to support these projects.*



A low-angle, upward-looking photograph of a wooden roof truss system. The wooden beams are light-colored and form a complex geometric pattern against a solid, clear blue sky. The perspective creates a sense of height and structural complexity.

# **Presentations & Resources for Day One**

**06/07/2022**



# The Ties that Bind Housing and Climate

Presentation for the MHP Housing Institute  
June 7, 2022

By Dr. Tracy A. Corley



Bike/Pedestrian paths and a defunct nuclear missile silo in North-Rhine/Westphalia in Germany



Photos by Tracy A. Corley



*Translation: So that life becomes affordable again.*





**\*pose  
marré®**  
das  
quartier

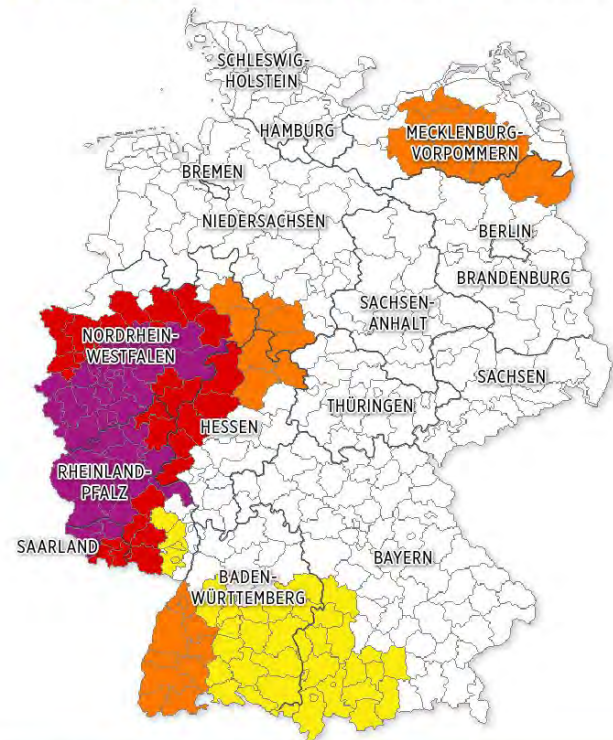
Photos by Tracy A. Corley





# Wetter-Alarm am 14. Juli 2021

Warnstufe 1 Warnstufe 2 Warnstufe 3 Warnstufe 4 UV-/Hitzewarning



## Wetterwarnungen

Extrem ergiebiger Dauerregen <b>Nordrhein-Westfalen</b> <b>Rheinland-Pfalz</b> <b>Saarland</b>	Sturm böen, Dauerregen <b>Baden-Württemberg</b>	Windböen <b>Bayern</b> <b>Nordrhein-Westfalen</b> <b>Rheinland-Pfalz</b> <b>Saarland</b>
Ergiebiger Dauerregen <b>Hessen</b>	Starke Gewitter <b>Brandenburg</b> <b>Berlin</b> <b>Mecklenburg-Vorpommern</b>	

info.BILD.de | Quelle: Wetterkontor | Stand: 14.7.2021, 10.00 Uhr



Photo from Twitter





Photo from Twitter





Deutsche Bahn Personenverkehr ✓  
@DB\_Bahn

© Deutsche Bahn AG / Wolfgang U.

© Deutsche Bahn





Photos from Twitter







Photo by Tracy A. Corley



Photo by Tracy A. Corley



Photo courtesy of Pose Marré

Normal Düssel  
River levels  
(taken at Pose  
Marre on May  
6, 2022)

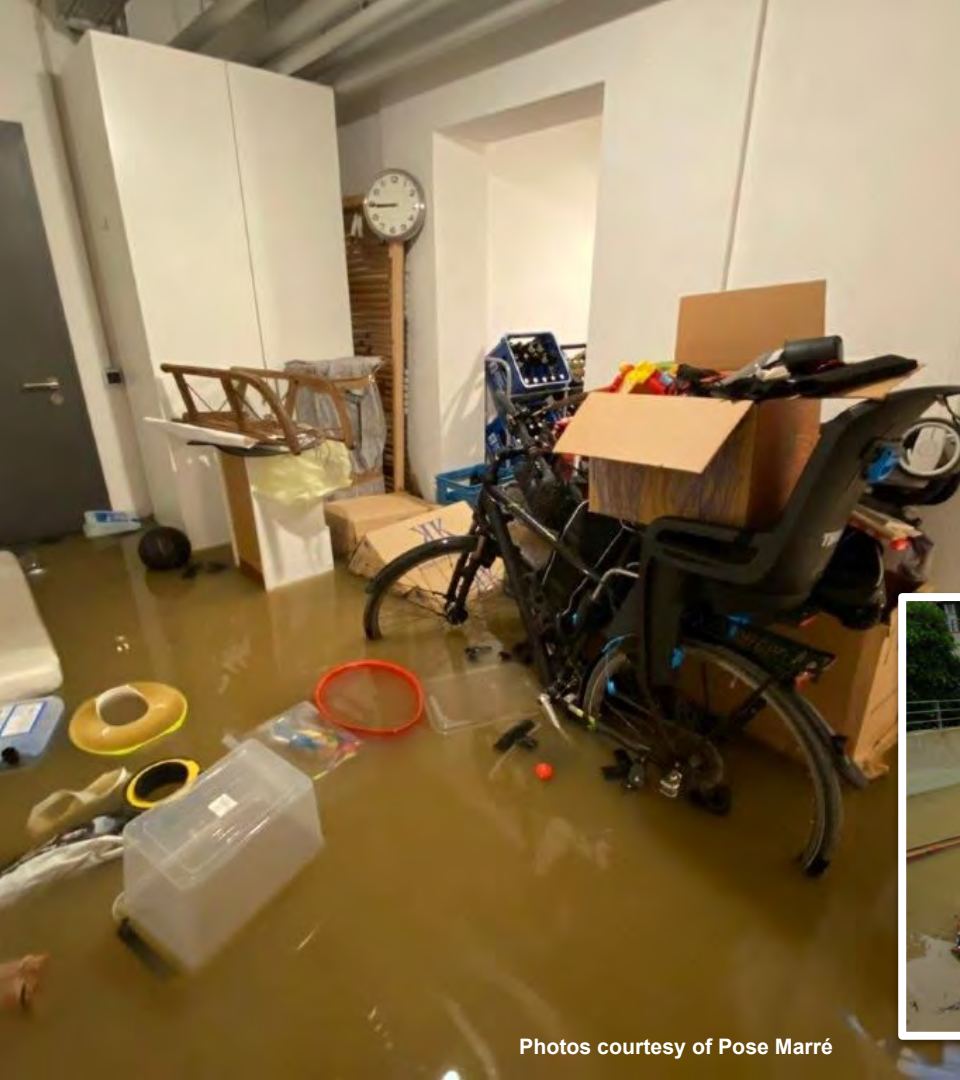
Flood level on July 13/14, 2021



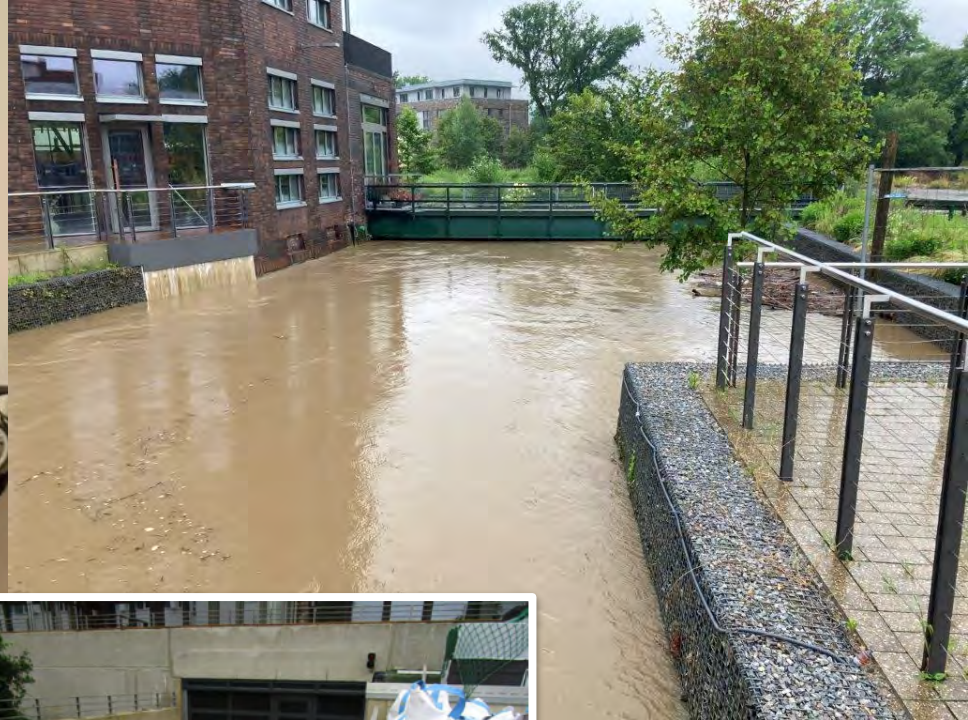


Photos courtesy of Pose Marré





Photos courtesy of Pose Marré



Post-flood level on  
July 15, 2021





Photo by Tracy A. Corley



## **Climate** — The weather or atmospheric conditions of an area

The composite or generally prevailing weather conditions of a region, as temperature, air pressure, humidity, precipitation, sunshine, cloudiness, and winds, throughout the year, averaged over a series of years.

(Dictionary.com)

## **Environment** — The physical surroundings of a living being

The complex of physical, chemical, and biotic factors (such as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival. (Merriam-Webster)

## HEALTHY NEIGHBORHOODS EQUITY FUND II LP

A \$50 million private equity fund  
investing in the building blocks of healthy communities



[www.hnefund.org](http://www.hnefund.org)

## HNEF II HealthScore Criteria

### NEIGHBORHOOD



**COMMUNITY  
VISION AND  
PRIORITIES**



**OPPORTUNITY TO  
REDUCE HEALTH  
DISPARITIES**



**TRANSPORTATION  
ACCESS AND  
UTILIZATION**



**OPPORTUNITY TO  
ADVANCE REGIONAL  
EQUITY**

### PROJECT



**NEIGHBORHOOD  
WALKABILITY**



**RESPONSIVE  
AND INCLUSIVE  
DEVELOPMENT**



**HOUSING  
CHOICE AND  
AFFORDABILITY**



**ECONOMIC  
OPPORTUNITY**



**HEALTHY FOOD  
ACCESS**



**GREEN SPACE  
ACCESS**



**LOW-CARBON  
BUILDINGS**



**SUSTAINABLE  
TRANSPORTATION**



**CLIMATE-RESILIENT  
SITES**



**OPERATIONAL  
HEALTH AND  
SAFETY**





**Energiesprong UK** @EnergiesprongUK · May 12

Replying to [@EnergiesprongUK](#)

In a rural setting exposed to the elements, these households faced high heating bills & fuel poverty.

[@ENGIE\\_UK](#) fitted homes with solar panels, energy-efficient roofs and doors & insulated shell and floors - using an innovative offsite approach to speed up installation. 2/4

ALT

“We abuse land because we regard it as a commodity belonging to us. When we see **land as a community to which we belong**, we may begin to use it with love and respect.”

— Aldo Leopold, *A Sand County Almanac* (1948)





GreenRoots  
@GreenRootsEJ

BREAKING: This is what environmental racism looks like. @MassDOT & @MassDEP are stockpiling asbestos debris in the EJ community of Chelsea, near a public housing development. EJ communities are not sacrifice zones! Read the full statement by our ED Roseann Bongiovanni ↓



The background image shows a demolition site with a large pile of rubble and debris. In the foreground, there are several orange and white striped safety barrels. A prominent warning sign is visible on the right side, which reads: "DANGER ASBESTOS MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS AUTHORIZED PERSONNEL ONLY WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA". The entire image is overlaid with a semi-transparent teal filter.

Stop social vandalism and  
use housing policy for  
humanization rather than  
modernization





Left: Demonstration unit of minimum acceptable standards at a shelter for the unhoused in Dublin, Ireland

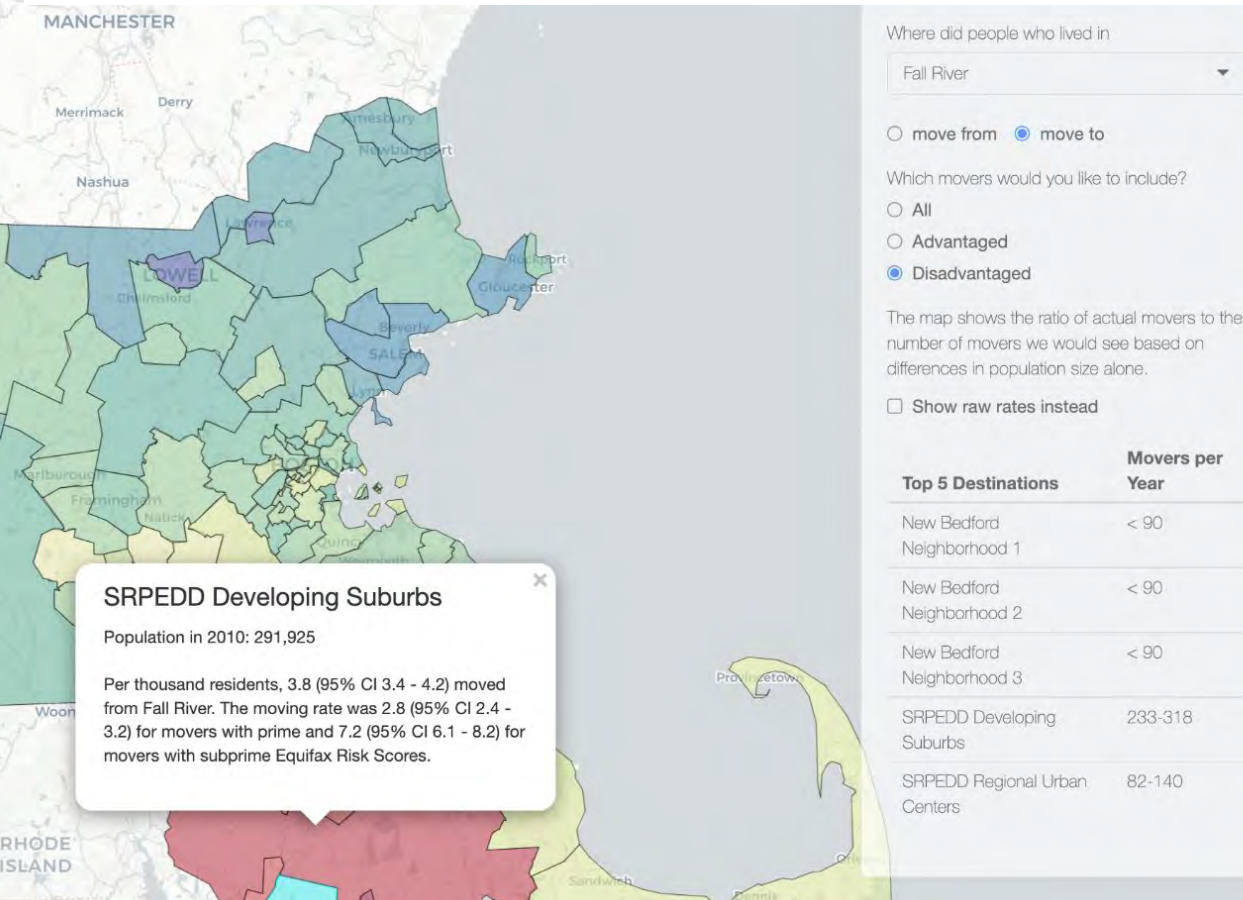
Below: Apartment buildings in Nuremberg, Germany



Photos by Tracy A. Corley

Right: Healthy Neighborhoods Study resident researchers in the field <https://hns.mit.edu>

Below: Detail of the Moving Mapper. Get the journal article at <https://www.tandfonline-com.ezproxy.neu.edu/doi/full/10.1080/01944363.2021.1957704>



Photos courtesy of the  
HNS Consortium





## **New housing strategy behind Mass. and Cass cleanup offers ‘hope, dignity’ — and may be a solution to homelessness, officials say**

State health officials say they are expanding the effort that began near the Shattuck, working with social service organizations to create hundreds of more permanent housing units across Massachusetts.

By Milton J. Valencia Globe Staff, Updated May 23, 2022, 6:53 p.m.

<https://www.bostonglobe.com/2022/05/23/metro/new-housing-strategy-behind-mass-cass-cleanup-offers-hope-dignity-may-be-solution-homelessness-officials-say/>

“When you take care of the  
people, you take care of the  
planet.”

Dr. Mustafa Santiago Ali



# Green Infrastructure

**Green infrastructure** consists of the "...interconnected network of waterways, wetlands, woodlands ... greenways, parks... working farms, ranches and forests; and ...other open spaces that support native species, maintain natural ecological processes, sustain air and water resources and contribute to the health and quality of life for America's communities and people."  
— USDA Green Infrastructure Working Group, 1999 (in Benedict and McMahon 2002)



## Natural Life Support System for People & Places





Strategies for reducing stormwater runoff: two paving alternatives for reducing impervious surfaces and a rooftop rain garden in Germany.

“Cities have the capability of  
providing something for  
everybody, only because, and  
only when, they are created by  
everybody.”

— Jane Jacobs, *The Death and Life of Great American Cities*



# ISLE OF ULVA

A Community Owned Island



Photos from Isle of Ulva website



“[T]he driving aim of the buyout, was to renovate the existing housing stock, which would not only provide improved housing for the current residents, but also will allow those properties that are currently empty, to be let out to new tenants.”

— [www.ulva.scot](http://www.ulva.scot)

# DOWNTOWN CRENSHAW

A historic effort to buy the Crenshaw Mall to redevelop it for the community, and by the community.



The project would build on some things that already exist and include retail, park space, offices, affordable housing, a boutique hotel, a cultural center and production studios.

Tara Pixley for The New York Times



The Crenshaw Mall today (Photo courtesy Downtown Crenshaw)

[www.downtowncrenshaw.com](http://www.downtowncrenshaw.com)

“We’re not asking them to give us this mall, we have raised the money to buy this mall. Speculators are buying up everything in the community already they can get their hands on...but we’re going to stop it here. Our money is green. It’s not Black like us. Our money is green.”

— Veronica Sance, a lifelong Crenshaw resident via Next City



**“This we know: the earth does not belong to man, man belongs to the earth. All things are connected like the blood that unites us all. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web, he does to himself.”**

— Chief Sealth, on the sale of Suquamish land to the U.S, March 1854

# Thank you for your interest and attention!

Tracy A. Corley, PhD

*Director of Research and Partnerships, Conservation Law Foundation*

tcorley@clf.org | 617 850 1723 | [www.clf.org](http://www.clf.org)



# Multi-Family Housing, Infrastructure, and the Environment

## Common Questions and Misconceptions



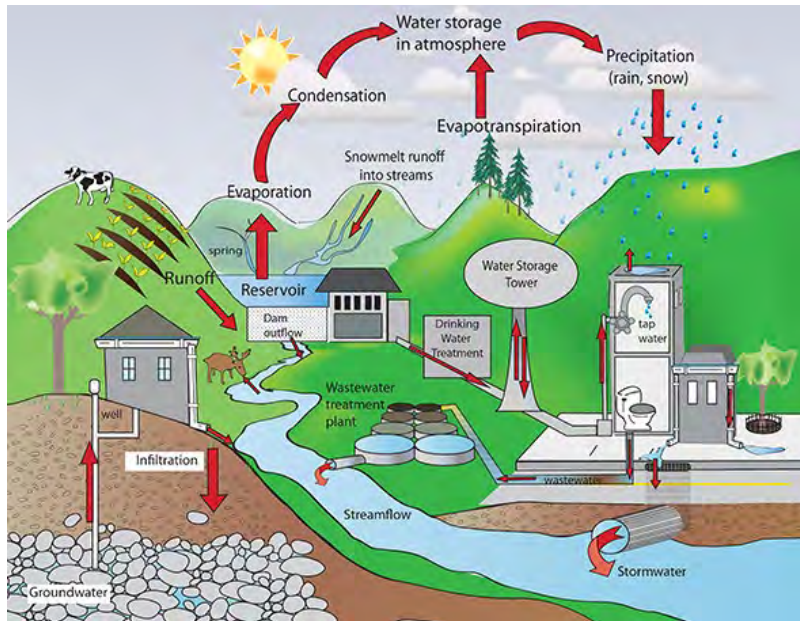
15th Annual Housing Institute

June 7, 2022

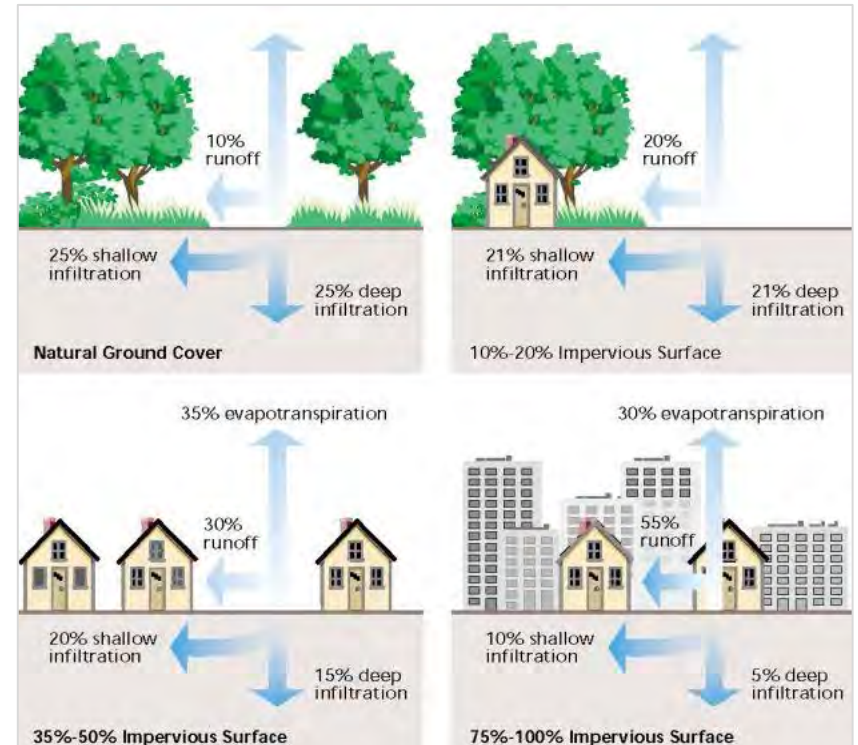
Nathan Kelly, AICP



# Our perspective...



<http://www.caryinstitute.org/educators/teaching-materials/water-watersheds>





# Our partners...



Does the development of denser neighborhoods and multi-family housing have such a negative impact on the environment, or our infrastructure, or our health that we need to say...

“NO”?



# What are we hearing?



(Photo by Jimmy Bentley/Patch Staff)

# Climate Change

## Remember “Smart Growth”?

- Benefits from compact development align with climate goals.
- Less land consumed per capita
- Efficiencies in utilities/HVAC
- Vehicle Miles Traveled (VMT)



### Growing Cooler: The Evidence on Urban Development and Climate Change

Reid Ewing, Keith Bartholomew, Steve Winkelman,  
Jerry Walters, and Don Chen

with Barbara McCann and David Goldberg





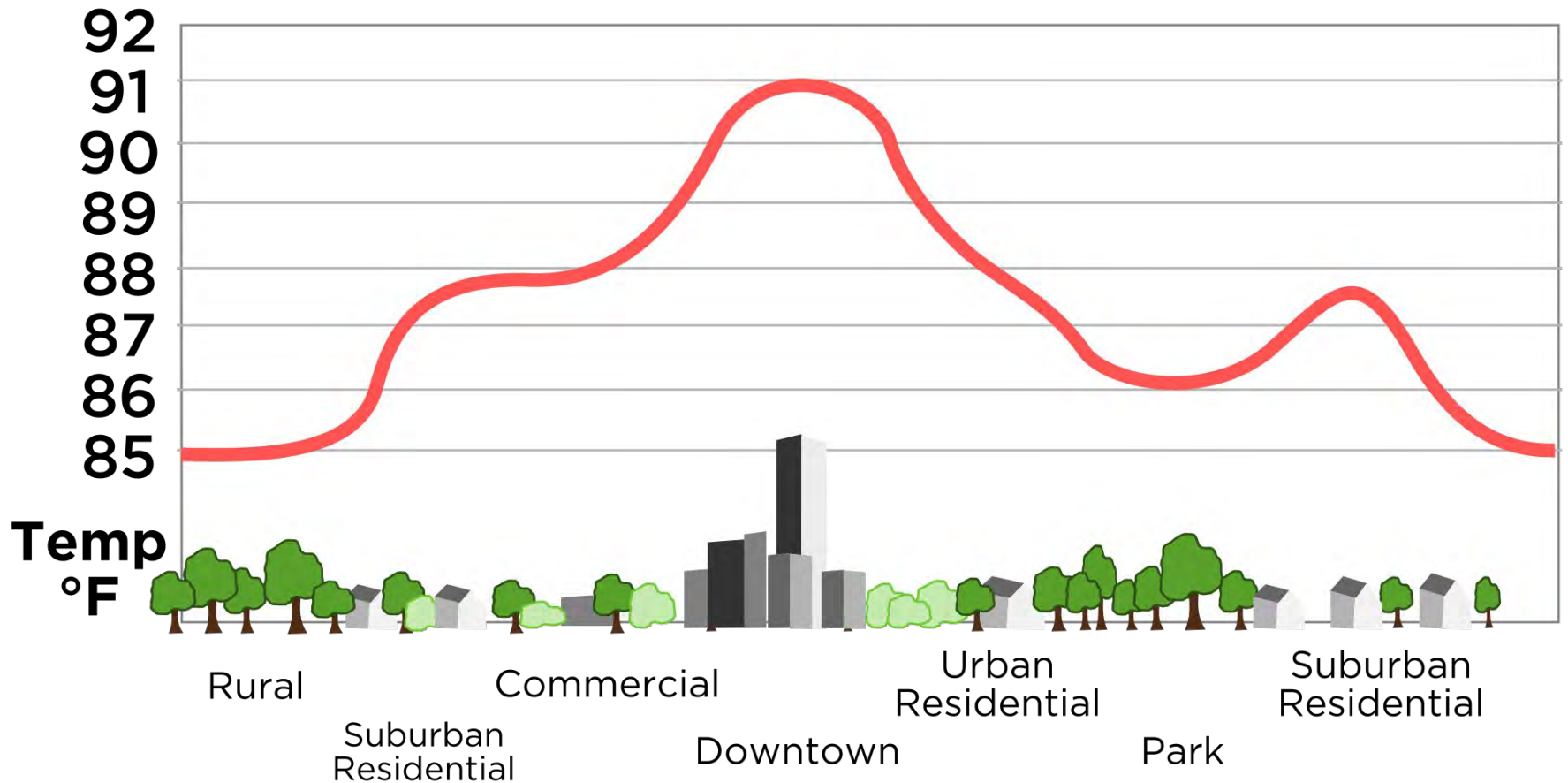
# Traffic – *Trip Generation*

- Standard estimates from the Institute of Transportation Engineers (ITE) show significant difference.
- Studies show lower trip numbers but similar difference.

**TABLE 2 Average Vehicle Trip Generation Rates by Housing Type from 21 Region Database, ITE Trip Generation Manual, and NHTS**

<i>21 regional database</i>				
	Neighborhood Compactness Index	Sample Size	Vehicle trips (per unit)	Vehicle trips (per person)
Single-family Detached	1	17,196	5.05	2.09
	2	14,702	4.97	2.15
	3	9,174	4.17	2.03
	Average	41,621	4.82	2.10
Single-family Attached	1	1,252	3.64	2.19
	2	1,808	3.38	2.14
	3	2,074	2.81	1.60
	Average	5,170	3.21	1.93
Apartment and Condo	1	932	3.10	1.98
	2	2,384	2.80	1.88
	3	3,846	2.06	1.46
	Average	7,220	2.44	1.67
<i>ITE Trip Generation Manual (weekday)</i>				
			Vehicle trips (per unit)	Vehicle trips (per person)
Single-Family Detached (210)			9.52	2.55
Condominium/Townhouse (230)			5.81	2.49
Apartment (220)			6.65	3.31
<i>2009 National Household Travel Survey (NHTS)</i>				
		Sample size	Vehicle trips (per unit)	Vehicle trips (per person)
Single-family Detached		64,855	4.45	2.23
Single-family Attached		13,994	2.87	1.90
Apartment and Condo		4,089	3.27	1.97

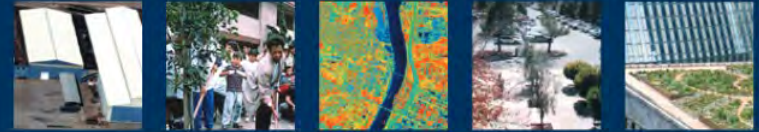
# Heat Island Effect





# Heat Island Effect

- Trees and Vegetation
- Green Roofs
- Cool Roofs
- Cool Pavements
- Smart Growth



## Reducing Urban Heat Islands: Compendium of Strategies



### Matching Urban Infill With Tree Infill

Seattle shows how new buildings and new trees can be added to a city simultaneously—in fact, neighborhoods adding new buildings are maintaining its urban tree canopy while static single-family neighborhoods are losing trees.

September 19, 2018, 9:00 AM PDT

By James Brasuell [@CasualBrasuell](#)

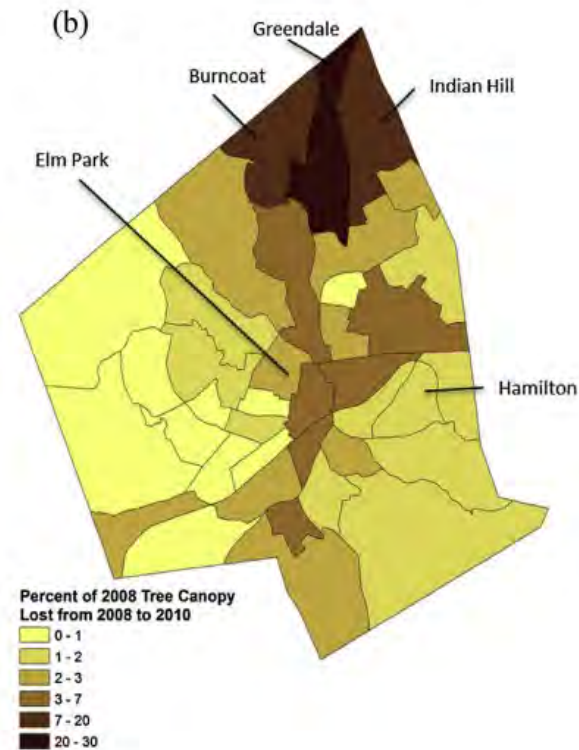
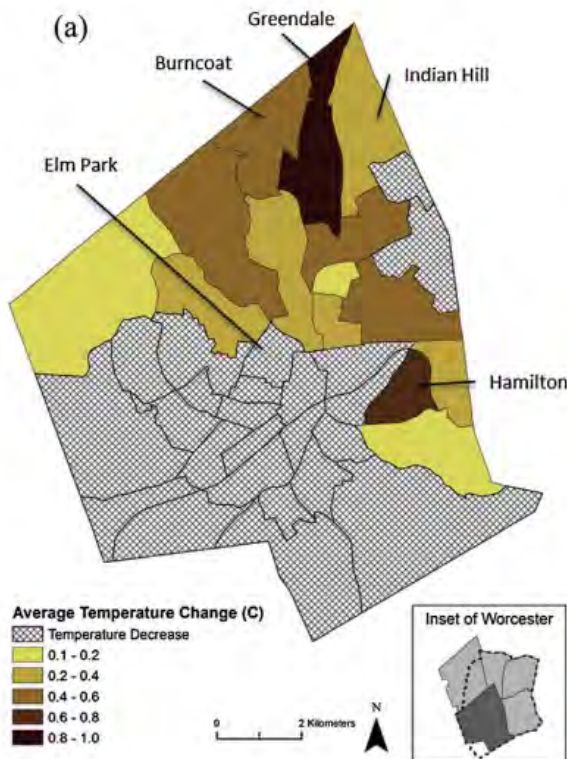


# Heat Island Effect

- Impervious Cover Reduction
- Tree Canopy
- Cool Roofs

## Urban Heat Island Technical Report

RESILIENT CAMBRIDGE





# Water Resources

## Water Supply

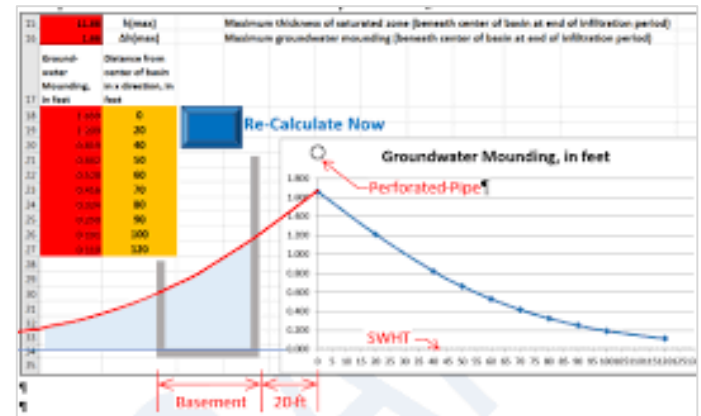
- New private wells will be highly unlikely for new supplies.
- Connecting to local water system has numerous checks and balances:
  - Permit limitations
  - Water system modeling
  - Hydrant flow test
  - Water main capacity
  - Up to a half dozen separate fees
  - Potential upgrades to municipal infrastructure at developer's expense



# Water Resources

## Wastewater Permitting

- We've been regulating this effectively for decades
- Local Board of Health for on-site systems less than 10,000 gpd
- Title 5 has numerous environmental guard rails and permit requirements
- DEP for larger systems (Groundwater Discharge Permit)
- Sewer connections administered by the sewer authority





# Water Resources

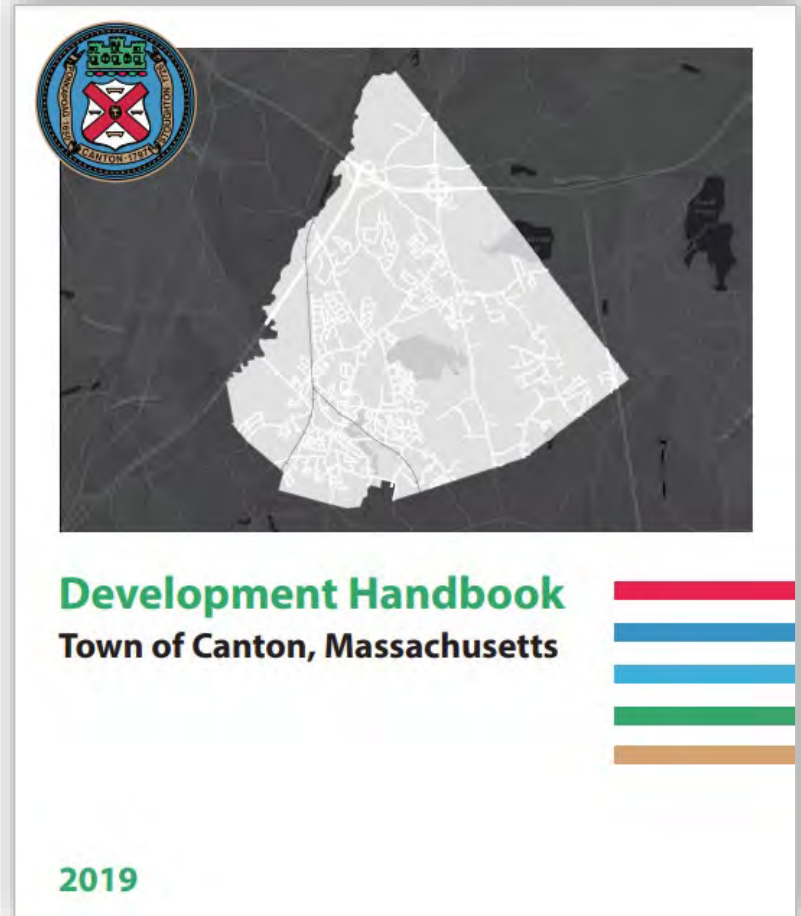
## Wastewater Considerations

- More dispersed disposal is better for local hydrology, but worse for water quality
- The more sewage that goes to a single facility, the better the pollutant removal
- All on-site systems are the responsibility of the developer/property owner
- Public sewer is run through an enterprise fund (not funded by taxes)



# Takeaways

- Try not to be dismissive.
- Many concerns can be answered by simply explaining the existing process and standards.
- Make sure your local processes and standards are up to date.
- Design of all elements is important.
- Educate!





## **Multi-Family Housing, Infrastructure, and the Environment**

### **Common Questions and Misconceptions**

Nathan Kelly, AICP

#### **Climate and Compact Development**

<https://www.epa.gov/smartgrowth/smart-growth-and-climate-change>

U.S. EPA's webpage exploring Smart Growth policies and climate change. Includes links to *Growing Cooler* and *Moving Cooler*.

#### **Air Quality and Asthma**

<https://link.springer.com/article/10.1007/s11524-021-00582-7#Tab3>

Asthma measures against neighborhood characteristics in NYC. This study is useful to read in that it discusses, in depth, some of the leading causes of asthma as they relate to housing conditions.

<https://www.latimes.com/science/sciencenow/la-sci-sn-asthma-rate-inner-city-suburban-20150121-story.html>

Researchers debunk myth about asthma rates in inner city environments compared with development outside of the inner city.

#### **Heat Island**

<https://www.epa.gov/heatislands>

EPA general web page for information related to heat islands.

<https://www.epa.gov/heatislands/heat-island-compendium>

EPA page that serves as a jump page for different approaches to dealing with heat islands. There are some useful, carefully curated statistics related to each of these approaches.

#### **Sewerage**

<https://www.mass.gov/septic-systems-title-5>

Massachusetts jump page for anything related to Title 5.

#### **Traffic**

<https://mason.gmu.edu/~mvenigal/papers/Trip%20and%20Parking%20Generation%20Rates%20for%20Different%20Housing%20Types-%20Effects%20of%20Compact%20Development%20%2818-01484%29.pdf>

*Trip and Parking Generation Rates for Different Housing Types: Effects of Compact Development*. Study examining assumptions for automobile trip generation used by the Institute of Transportation Engineers (ITE)

#### **Process Education**

<https://www.town.canton.ma.us/DocumentCenter/View/5416/Town-of-Canton-Development-Handbook-2019>

Town of Canton, MA "Development Handbook," which can be used to educate a variety of stakeholders.

# EXPLORING NEIGHBORHOOD-LEVEL DENSITY ACROSS MASSACHUSETTS

MHP Center for Housing Data  
2022 Housing Institute  
June 7, 2022

Tom Hopper  
Matija Jankovic

Director of Research & Analytics  
Senior Research Analyst



**Residency**



What images does the word **DENSITY** evoke?





# Rebuilding our relationship with density



- A good mix of residential densities has many benefits
  - Variety of housing options
  - more opportunities for affordability/less constrained housing markets
  - More diverse community, more access to families
  - Walkability, transit accessibility, & lower climate impact
- Density shapes places that we love that also meet our daily needs
- Many of our transit-connected communities are lacking residential density, impacting transit outcomes
- Capitalizing on areas in our transit network is a smart next step to alleviating issues caused by our housing crisis



# Density isn't one size fits all and most of us don't have a great mental gauge for density

Visual examples and data can help us build understanding of how density shapes the form and function of a neighborhood



6 dwelling units per acre



RELATIVELY NEW SINGLE-FAMILY SUBDIVISION WITHIN THE MASTER-PLANNED SNOQUALMIE RIDGE DEVELOPMENT IN SNOQUALMIE.

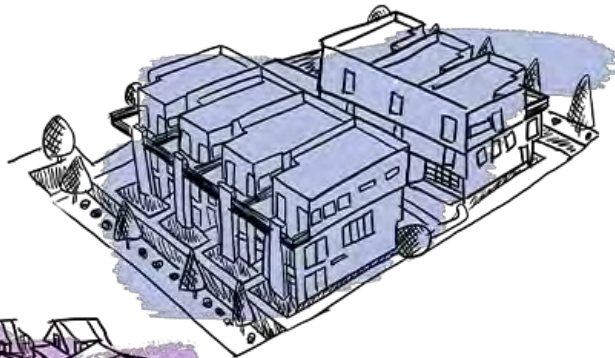


44 dwelling units per acre



LIVE-WORK AND REGULAR TOWNHOUSE UNITS IN SEATTLE'S LOWER QUEEN ANNE NEIGHBORHOOD. (LANDSCAPE PLAN COURTESY OF DAVID VANDERVORT ARCHITECTS)

# Gaps in evaluating density in Massachusetts

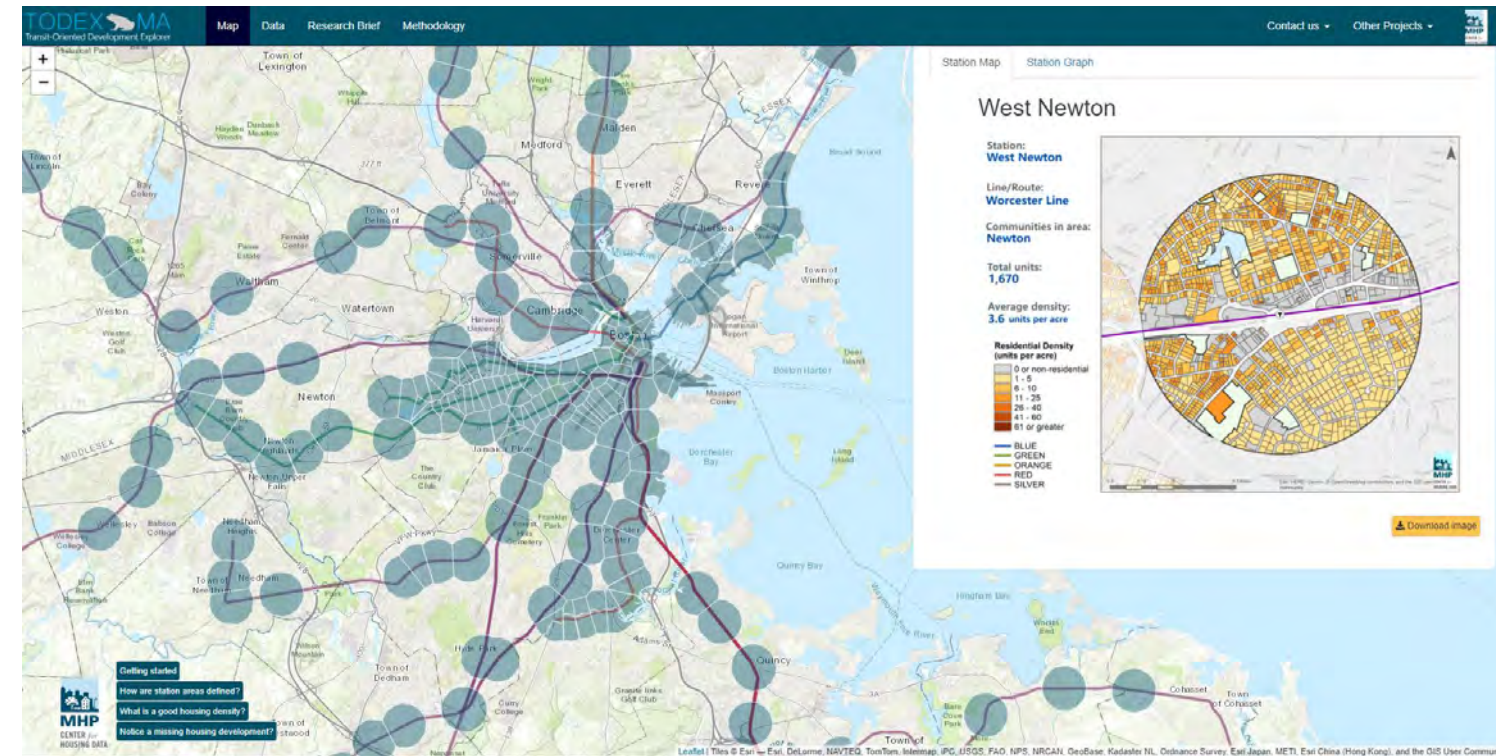


- Visual examples of other neighborhoods are great, but we want to be able to measure density in *any* neighborhood using consistent metrics.
- Understand how density shapes the neighborhood forms we see across Massachusetts
- Provide a planning tool for evaluating existing housing conditions
- Build comprehension about density as something to calibrate to achieve a desired result, not something to avoid altogether.
- Locate areas where insufficient levels of density are inhibiting neighborhoods from reaching greater potential

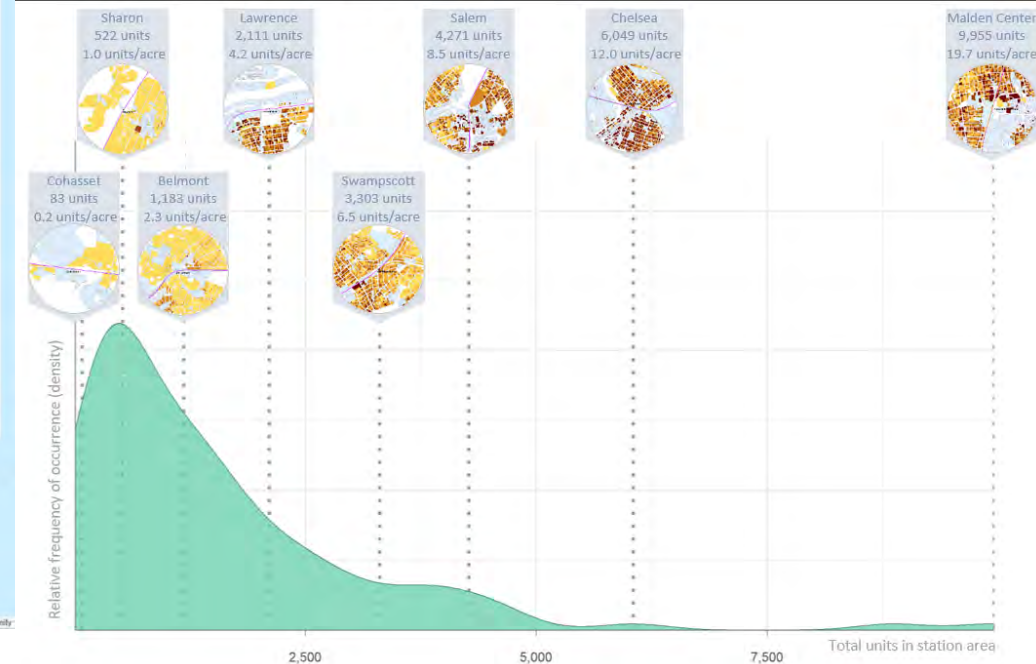


# Our previous research & data tool analyzing density

## *Transit Oriented Development Explorer – [mhp.net/TODEX](http://mhp.net/TODEX)*



### Most commuter rail station areas have low levels of residential density

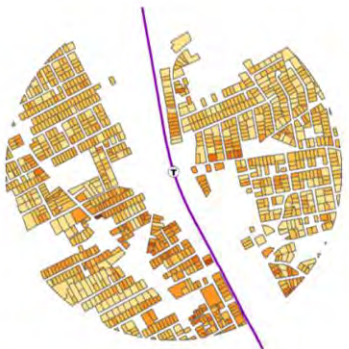


- Piloted a new methodology for estimating residential units and density on the parcel level
- Focused on a specific, small set of geographies (neighborhoods with MBTA rail service)
- Research brief with findings

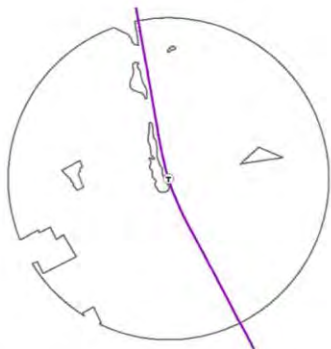
# Key terms and concepts



- Parcels
- Key source data: tax assessor records, statewide address records
- Parcel-level DUA, district-level DUA



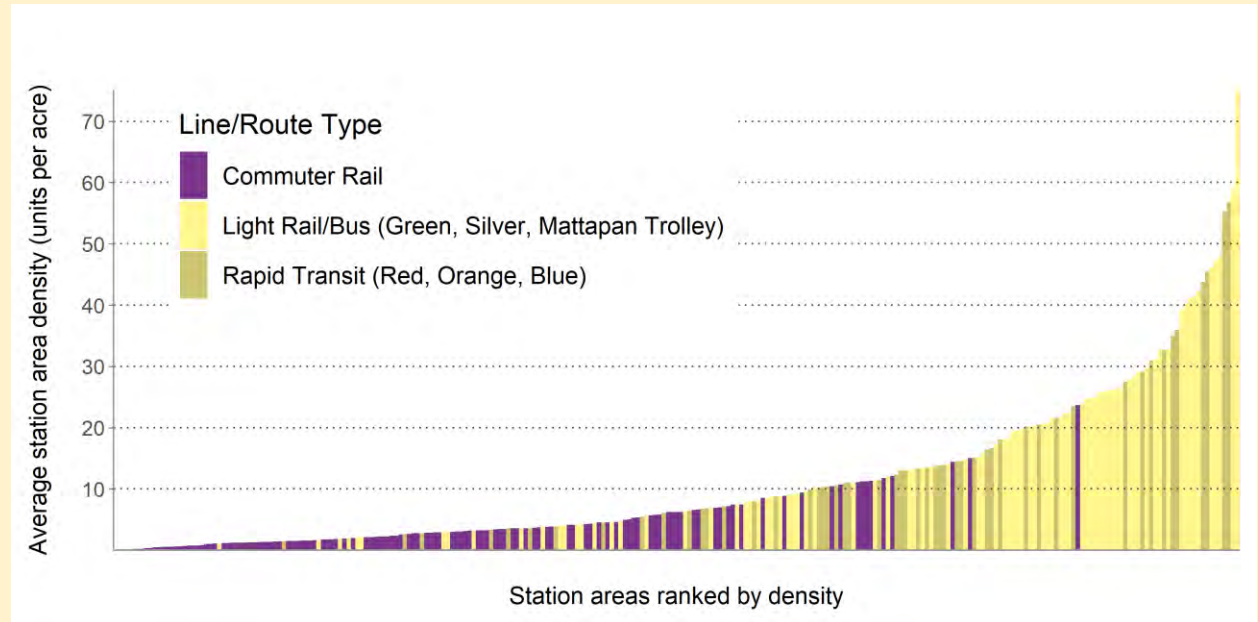
Residential units in station area:  
1,734 units



Total acres in station area:  
482.03 acres



= Average density:  
3.6 units/acre

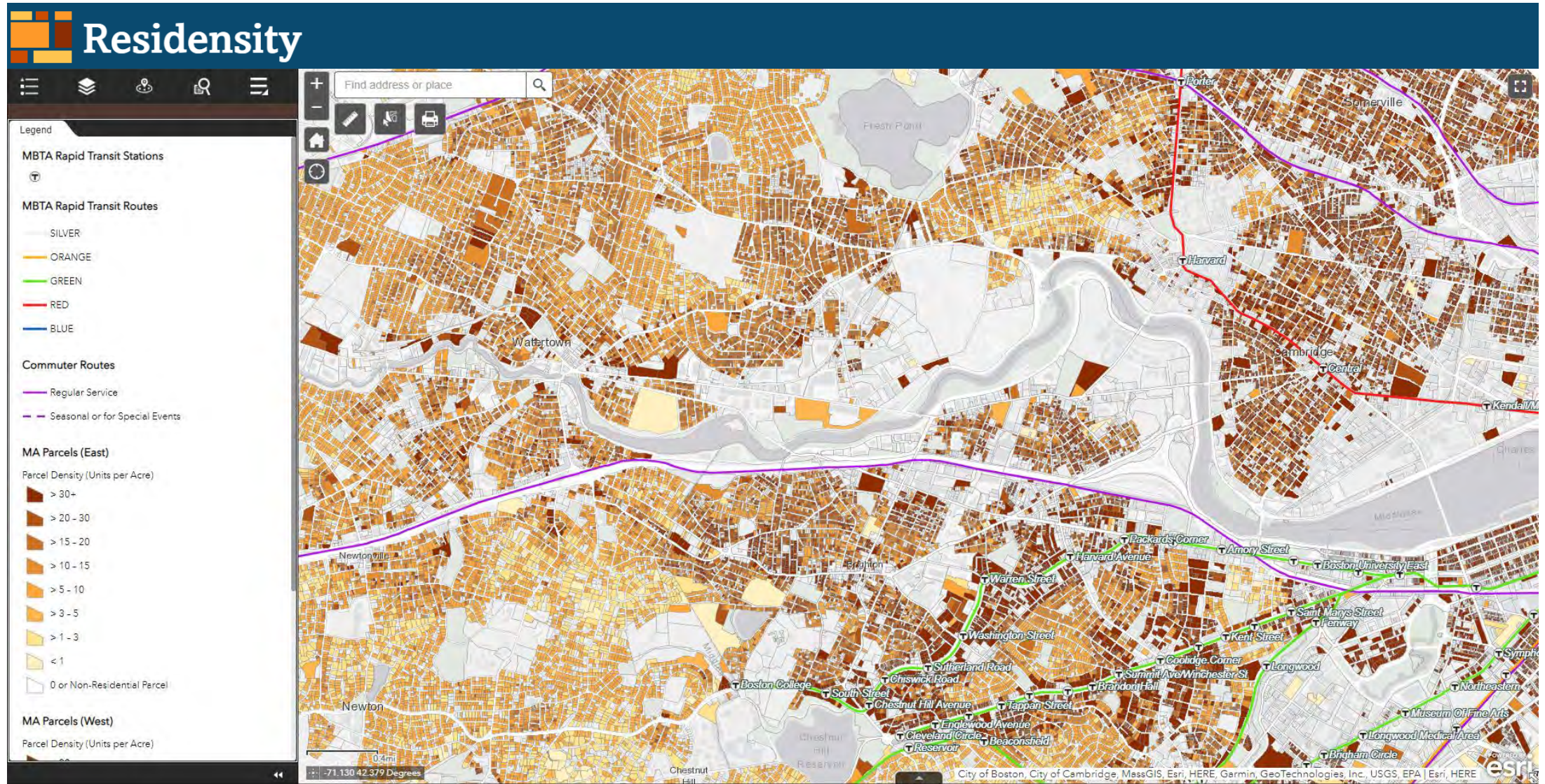


What is an “appropriate” level of density?

- Varies from place to place – context driven
- We are lagging in many places where higher density would be good
- New multifamily zoning requirement – 15 dwelling units per acre for the district



# Introducing Residency





# What does Residency do?



**Total Residential Units:** 2,383 Units  
**District Area:** 137.13 Acres  
**District Density:** 17.38 Units per Acre

- Measure housing units and residential density anywhere in Massachusetts
- Has unit estimates, density calculations, and use descriptions for every land parcel in the state
- Allows users to measure density statistics for any user-defined district (e.g. draw a district of any shape and location on the map and it will calculate the density of that district, both polygonal and circular districts)
- Export custom density maps in PDF format, export shapefiles (geospatial data), and tabular data
- Useful tool to assist communities thinking about implementing the new MBTA Zoning Guidelines for Multifamily Districts



# *SITE DEMONSTRATION*



**Residency**



**MHP**

CENTER for  
HOUSING DATA



# Density shapes places

Visualizing land-use practices across municipal borders



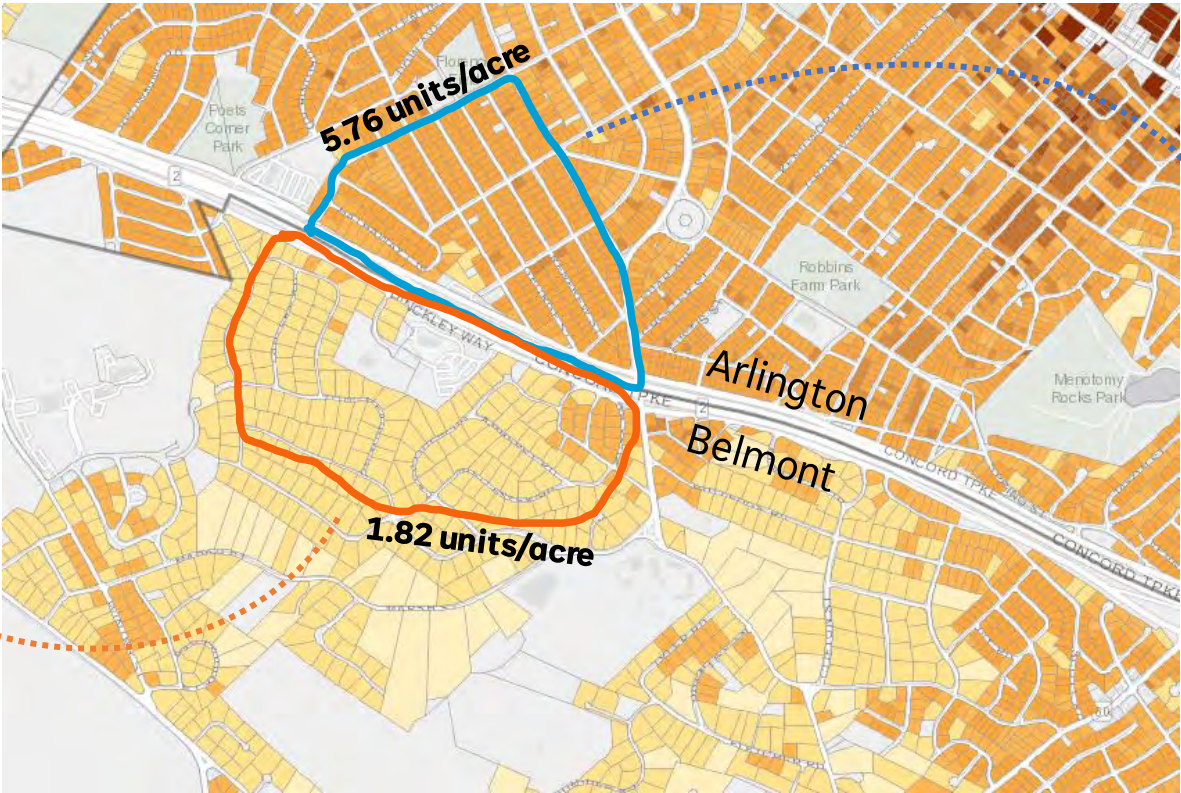
## Belmont

**Total Residential Units:** 207 Units

**District Area:** 113.50 Acres

**District Density:** 1.82 Units per Acre

Use Description	Residential Units	Parcel Acres	Avg. Parcel Density
Single Family	206	98.44	2.09
Other exempt housing	1	0.49	2.06
Tax-exempt, public, charitable, institutional	0	7.65	0.00
Undevelopable residential land	0	0.41	0.00



## Arlington

**Total Residential Units:** 387 Units

**District Area:** 67.16 Acres

**District Density:** 5.76 Units per Acre

Use Description	Residential Units	Parcel Acres	Avg. Parcel Density
Single Family	384	58.81	6.53
Two Family	2	0.14	13.81
Other exempt housing	1	0.91	1.10
Accessory Land with Improvement	0	0.14	0.00
Tax-exempt, public, charitable, institutional	0	6.78	0.00
Undevelopable residential land	0	0.37	0.00
Potentially developable residential land	0	0.16	0.00

**Land-use practices can vary greatly across community lines.** Visualizing density at the parcel level, we can see clear distinctions between neighboring communities.

Between Arlington and Belmont, highlighted areas are almost entirely made up of single-family homes, while Arlington's district is over 3 times as dense. Land parcels in Arlington are generally smaller with a tighter grid of homes while land parcels in Belmont are larger on winding streets.





# Density shapes places

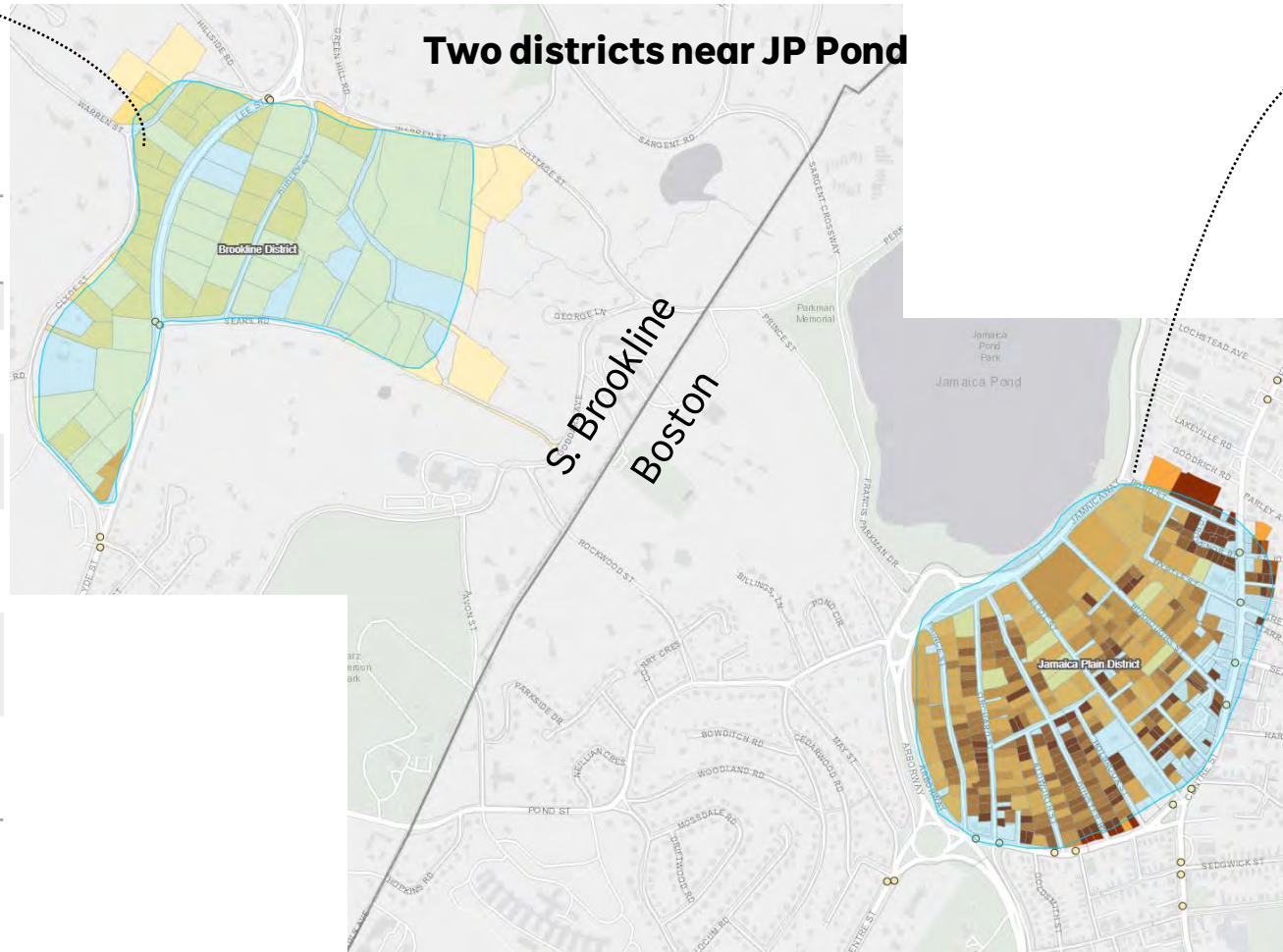
Visualizing land-use practices across municipal borders



## South Brookline

**Total Residential Units:** 66 Units  
**District Area:** 104.44 Acres  
**District Density:** 0.63 Units per Acre

Use Description	Res. Units	Parcel Acres	Avg. Parcel Density
Single Family	58	67.03	0.87
Multiple houses on parcel	7	12.00	0.58
Other exempt housing	1	11.16	0.09
Developable residential land	0	5.77	0.00
Undevelopable residential land	0	0.62	0.00
Accessory Land with Improvement	0	1.05	0.00



## Jamaica Plain

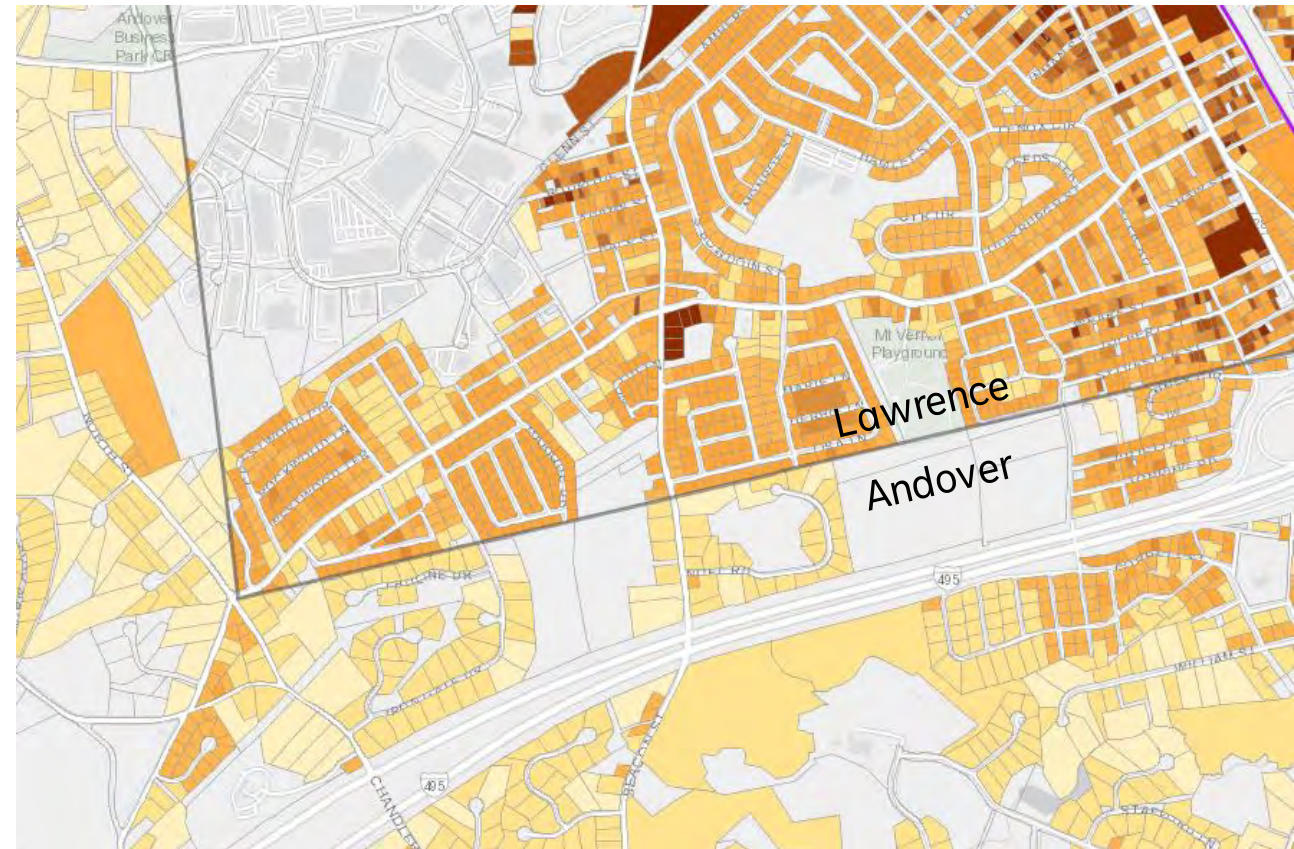
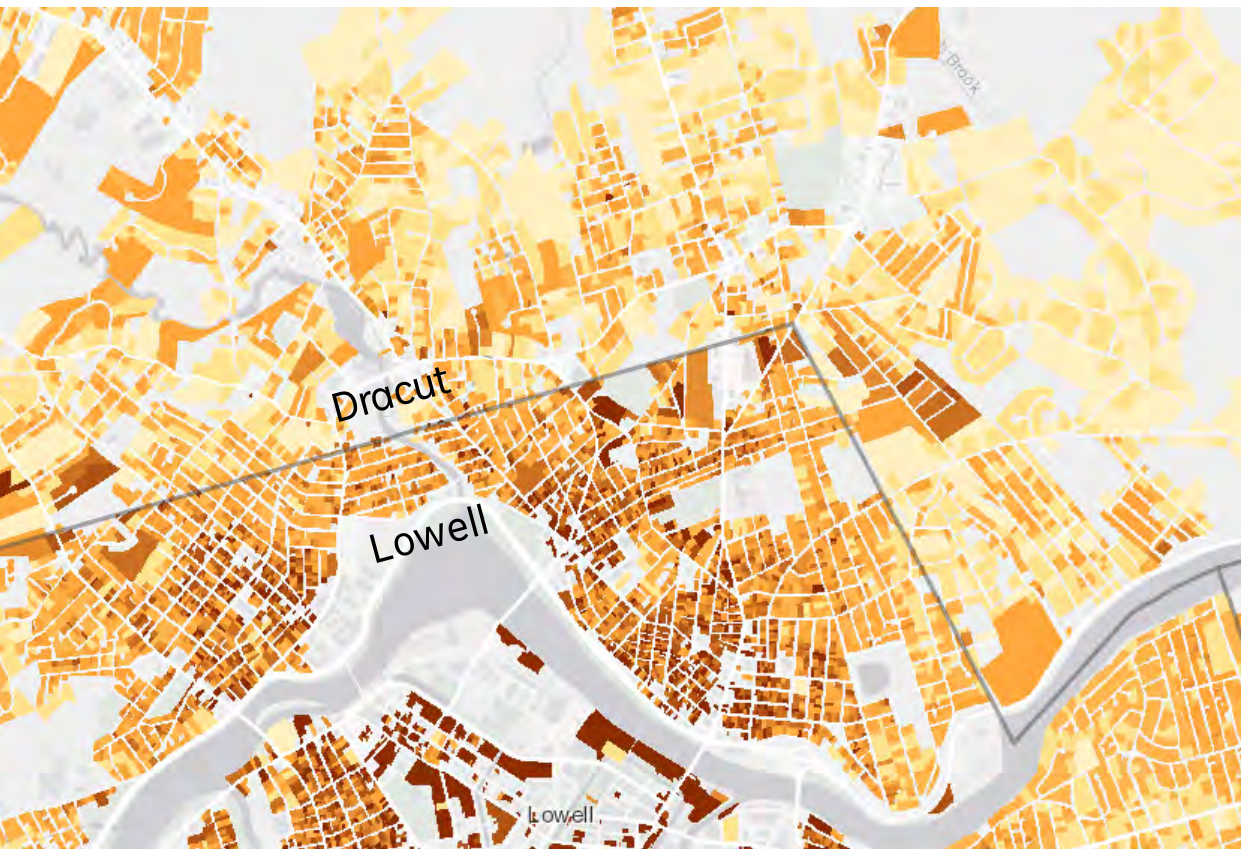
**Total Residential Units:** 1073 Units  
**District Area:** 79.29 Acres  
**District Density:** 13.53 Units per Acre

Use Description	Residential Units	Parcel Acres	Avg. Parcel Density
Condo	336	19.05	17.64
Two Family	296	16.95	17.46
Single Family	183	23.45	7.80
Housing Authority	82	1.25	65.50
Three Family	68	2.58	26.39
Apartments with four to eight units	40	0.60	66.65
Mixed Use – Residential with Commercial	17	0.24	70.88
Mixed Use – Commercial with Residential	17	0.12	138.49
Apartments over eight units	14	0.26	52.99
Unknown residential, Condo	9	1.58	5.71



# Density shapes places

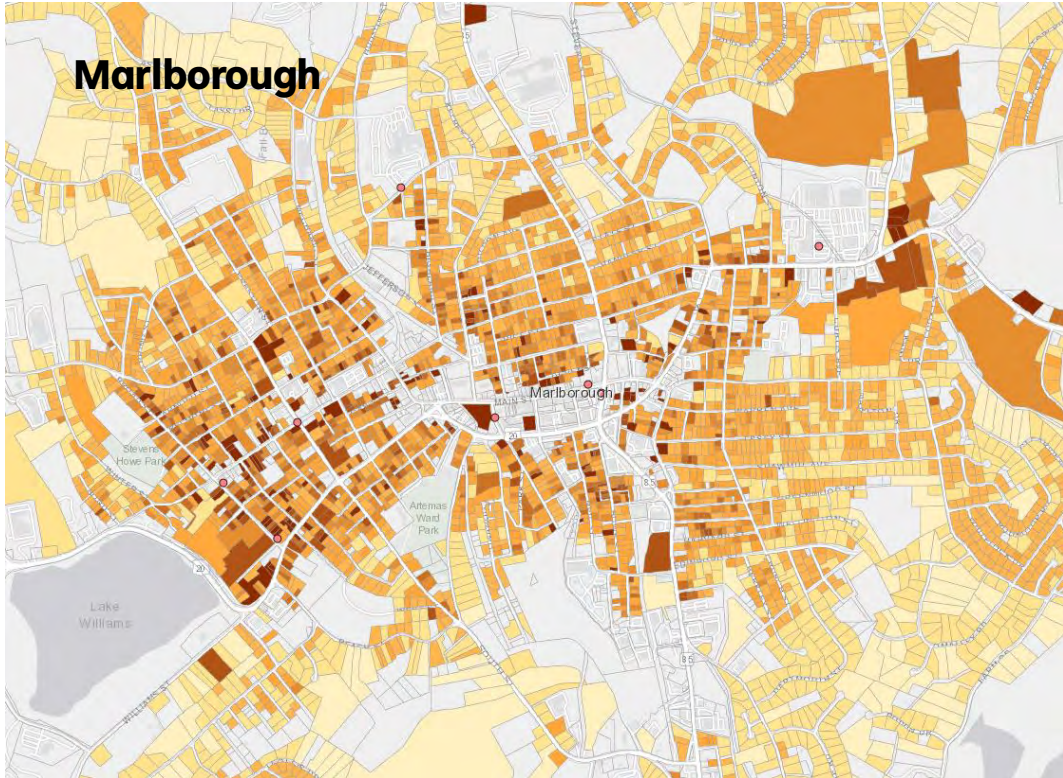
Visualizing land-use practices across municipal borders





# Density shapes village centers

*Main Street, Marlborough*



**Density and smart land-use practices help develop character in our town centers.** Mixed uses, higher density apartment buildings, and commercial businesses on smaller lots help our village centers feel welcoming, walkable, and enjoyable.



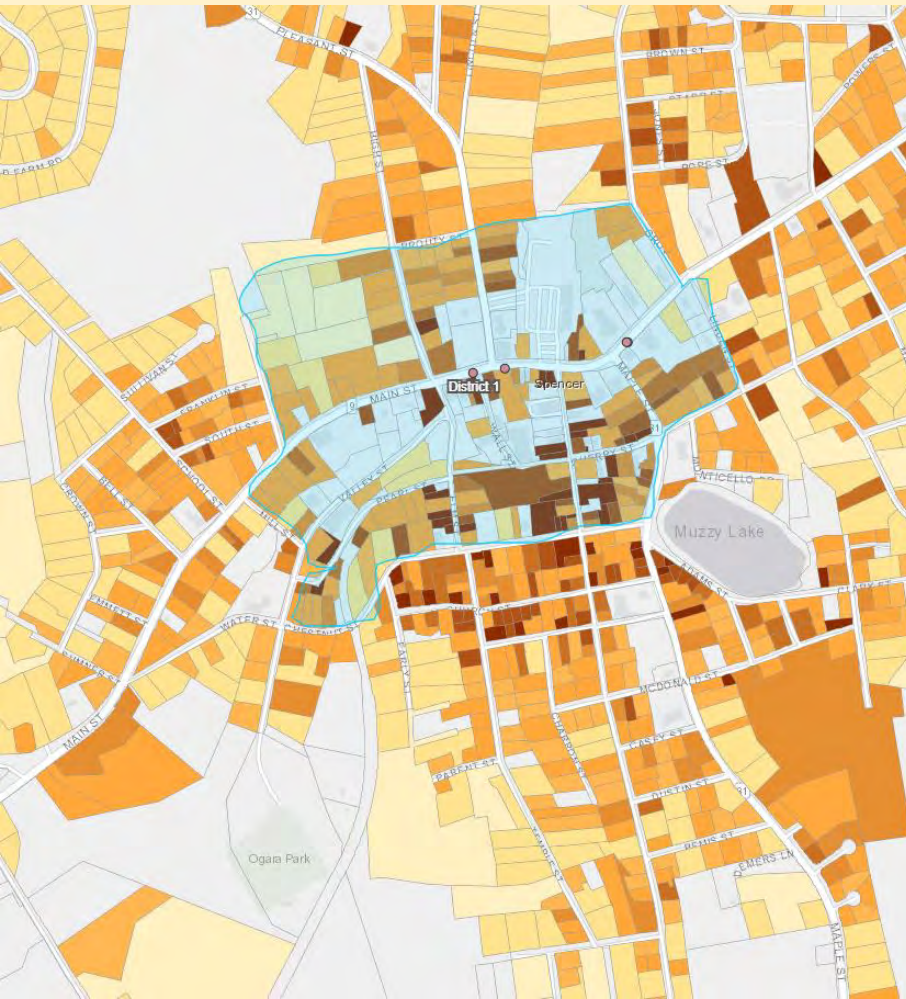


# Density shapes village centers

## Spencer, MA



Spencer town center  
custom district analysis



**Total Residential Units:** 565 Units  
**District Area:** 122 Acres  
**District Density:** 4.6 Units per Acre

UseDescription	ResidentialUnits	ParcelAcres	Avg. Parcel Density
Apartments with four to eight units	145	7.5	19.4
Two-Family	89	12.8	7.0
Three-Family	77	5.9	13.1
Mixed Use - Commercial with Residential	75	8.5	8.8
Apartments over eight units	71	2.4	29.8
Housing Authority	43	2.2	19.4
Single Family	38	10.5	3.6
Other exempt housing	19	0.1	136.6
Multiple houses on parcel	5	2.3	2.2
Mixed Use - Residential with Commercial	2	0.3	6.9
Mixed Use - Industrial with Residential	1	0.3	4.0
Tax-exempt, public, charitable, institutional	0	6.2	0.0
Commercial	0	15.9	0.0
Industrial	0	4.6	0.0
Developable residential land	0	41.5	0.0
Undevelopable residential land	0	1.0	0.0



# Density shapes village centers

## Spencer, MA

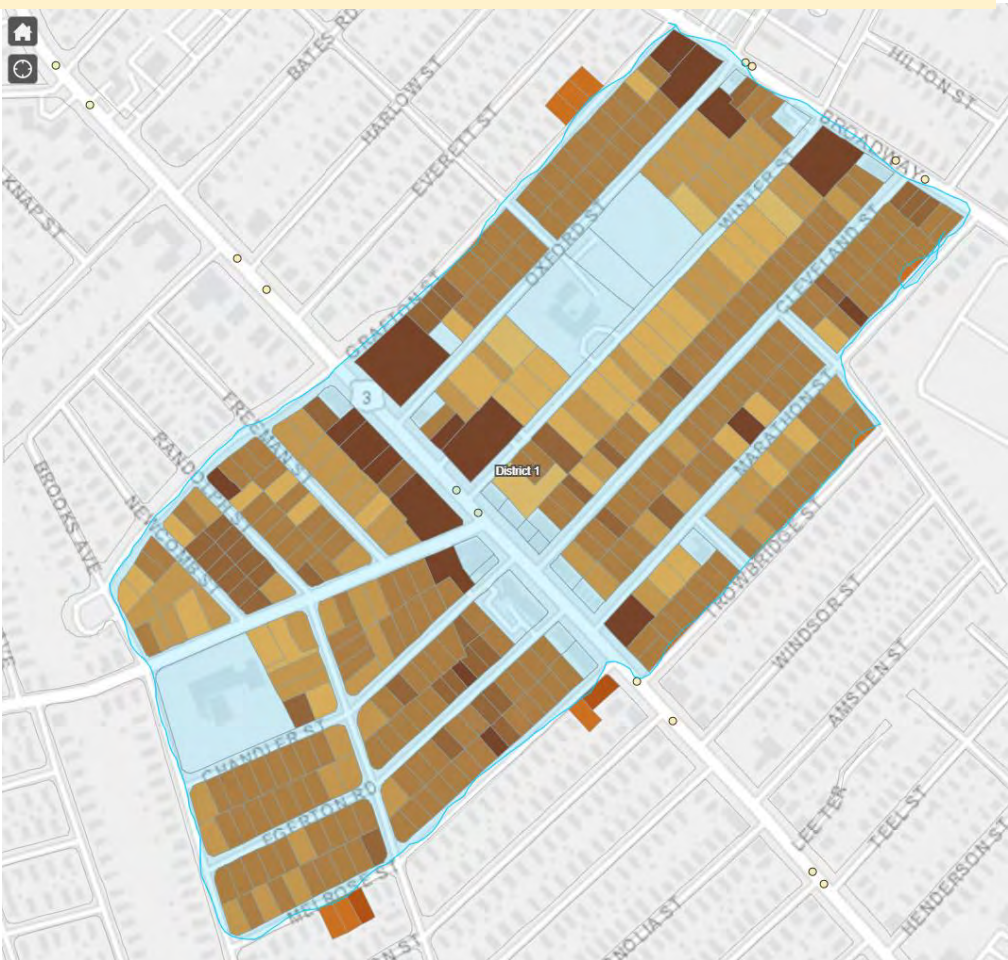




# Density shapes main streets



Massachusetts Avenue, Arlington  
custom district analysis



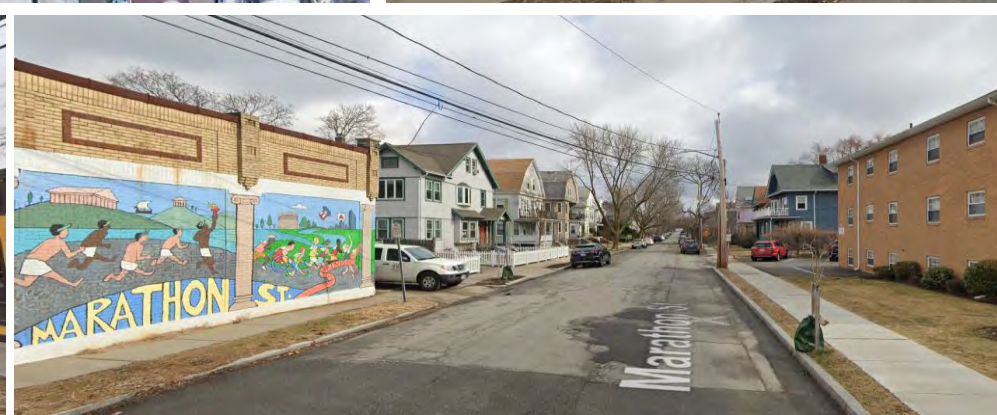
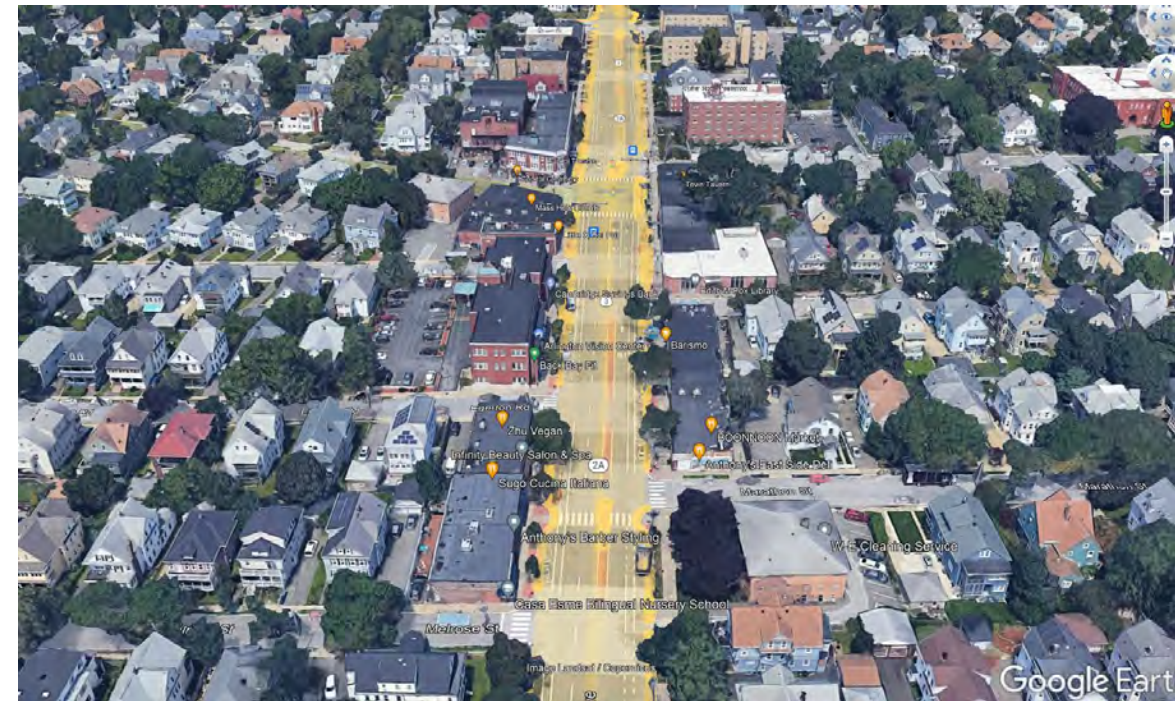
**Total Residential Units:** 1,057 Units  
**District Area:** 63.6 Acres  
**District Density:** 16.6 Units per Acre

UseDescription	Residential Units	Parcel Acres	Avg. Parcel Density
Two-Family	462	29.5	15.6
Condo	259	14.0	18.5
Apartments over eight units	192	3.2	60.0
Three-Family	51	2.1	24.2
Mixed Use-Residential with Commercial	29	0.7	40.7
Apartments with four to eight units	25	0.8	30.4
Single-Family	23	3.5	6.6
Mixed Use-Commercial with Residential	12	0.3	43.2
Multiple houses on parcel	3	0.3	11.1
Other exempt housing	1	0.1	6.9
Tax-exempt, public, charitable, institutional	0	6.7	0.0
Commercial	0	2.2	0.0
Accessory Land with Improvement	0	0.1	0.0



# Density shapes main streets

## Massachusetts Ave, Arlington

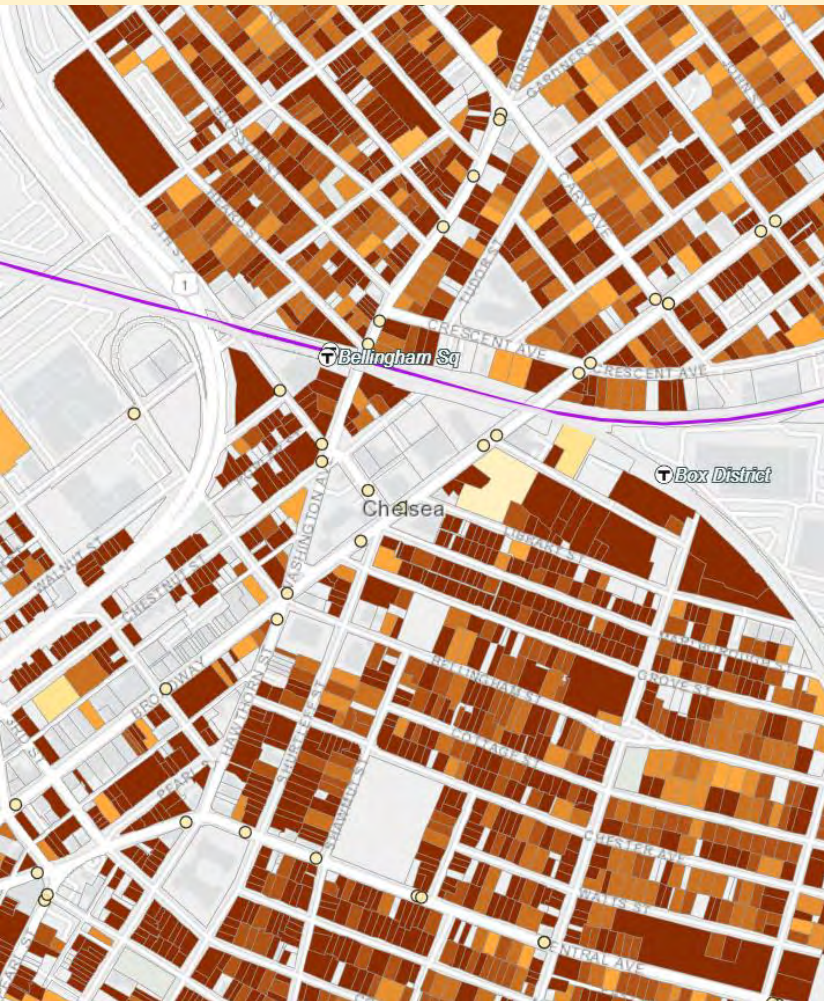




# Density shapes urban centers



## Bellingham Sq/Box District, Chelsea custom district analysis



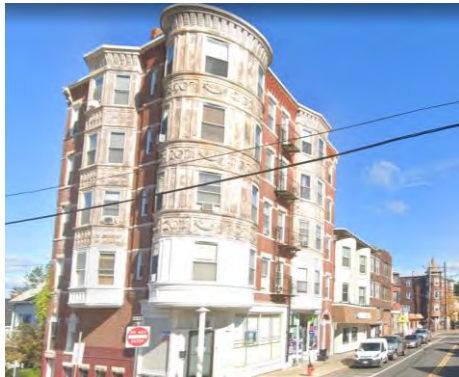
**Total Residential Units:** 6,050 Units  
**District Area:** 223 Acres  
**District Density:** 27.2 Units per Acre

Use Description	Residential Units	Parcel Acres	Avg. Parcel Density
Three-Family	1,538	37.0	41.5
Apartments over eight units	1,102	12.8	85.8
Two-Family	1,032	43.2	23.9
Apartments with four to eight units	1,026	14.4	71.3
Condo	646	16.3	39.6
Single-Family	214	15.8	13.5
Mixed Use with over 8 apartments	158	1.2	137.9
Housing Authority	131	3.5	37.2
Boarding house or other congregate housing	83	0.5	161.1
Single-family mixed use	63	2.4	25.9
Other exempt housing	18	1.5	12.3
Multiple houses on parcel	14	0.3	52.2
Mixed Use - Commercial with Residential	10	0.2	52.3
Condo, Three-Family	8	0.2	38.4
Two-family mixed use	5	0.3	17.0
Condo, Two-Family	2	0.2	8.3
Undevelopable residential land	-	3.5	0.0
Industrial	-	17.2	0.0
Commercial	-	21.9	0.0
Tax-exempt, public, charitable, institutional	-	20.5	0.0
Potentially developable residential land	-	2.2	0.0
Accessory Land with Improvement	-	3.5	0.0
Developable residential land	-	3.5	0.0
Commercial, Tax-exempt, public, charitable, institutional	-	0.2	0.0
Apartments with four to eight units, Three-Family	-	0.4	0.0



# Density shapes urban centers

## Chelsea, MA





# Who should use *Residency*?



## Members of the public

- What does density look like in my community?
- Comparing and measuring density

## Local planners and developers

- Compare existing development with zoning
- Taking stock of density in community
- MBTA guidelines planning

## Researchers

- Study the relationship between socioeconomic diversity and housing density
- Proximity analysis – how many homes are within walking distance of a transit station or bus line?



# The Future for Residency



- ***This is only the beginning for Residency***
- We're preparing to release our site to the public and are anticipating to release a beta-version by the end of this month (June 2022)
- We've built out a framework for keeping this dataset updated with the latest data
  - We're committed to maintaining this dataset as a resource for planners, researchers, and interested members of the public
- We're still refining our methodology as we prepare to launch the site
  - The datasets we use to generate our density estimates along with our methods are imperfect and we will continue to improve upon them
  - We plan to regularly incorporate user-reported corrections and expect that our site will only get better the more people use it

## Launch timeline



***In the meantime,*** follow us on twitter [@mhpdata](https://twitter.com/mhpdata) for updates on Residency and check out the landing page at <https://www.mhp.net/about-us/data/residency>

# Thank you!



## Check out some of our work:

Our website:

[www.mhp.net/data](http://www.mhp.net/data)

DataTown: Key housing and demographic data for municipalities

[www.mhp.net/DataTown](http://www.mhp.net/DataTown)

TODEX: Transit-Oriented Development Explorer

[www.mhp.net/TODEX](http://www.mhp.net/TODEX)

Greater Boston Housing Report Card, 2021

<https://www.tbf.org/news-and-insights/reports/2021/jun/greater-boston-housing-report-card-2021>

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**mhp.net/data**  
@mhphousing  
@mhpdata





# HEALTHY COMMUNITIES START WITH HEALTHY HOMES

**Complete Neighborhoods: It  
all starts with home**  
Tuesday, June 7



# Presentation Outline

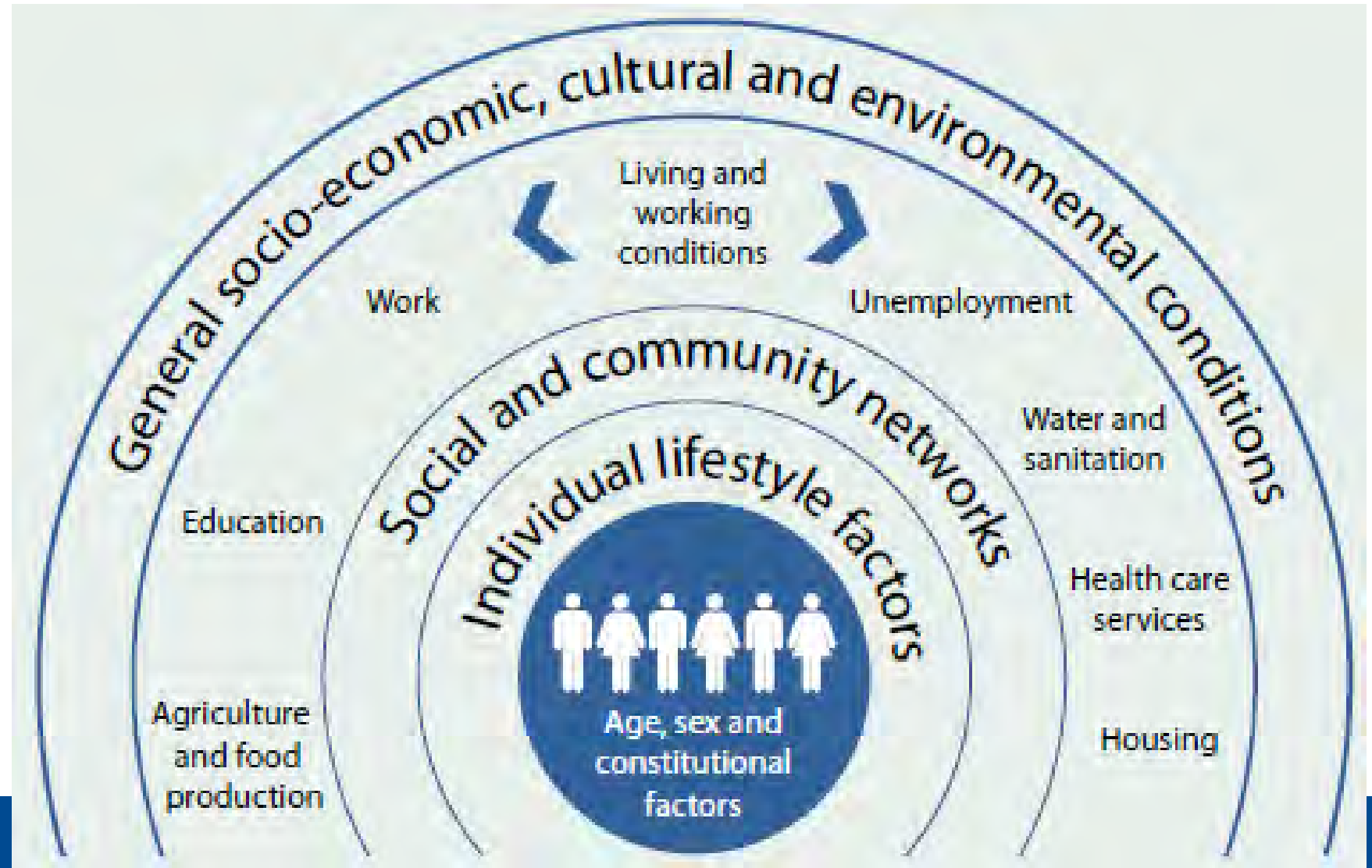
- Health and Housing Research Findings
- Healthcare and Housing Collaboration
- The Present [and Future] of Healthcare and SDoH



# Health starts long before illness – in our neighborhoods, homes, schools, and workplaces.



# Social Determinants of Health Framework



Source: Dahlgren & Whitehead 1991.



# **HEALTH AND HOUSING**

Evidence From The Research

# There is strong evidence characterizing housing's relationship to health.



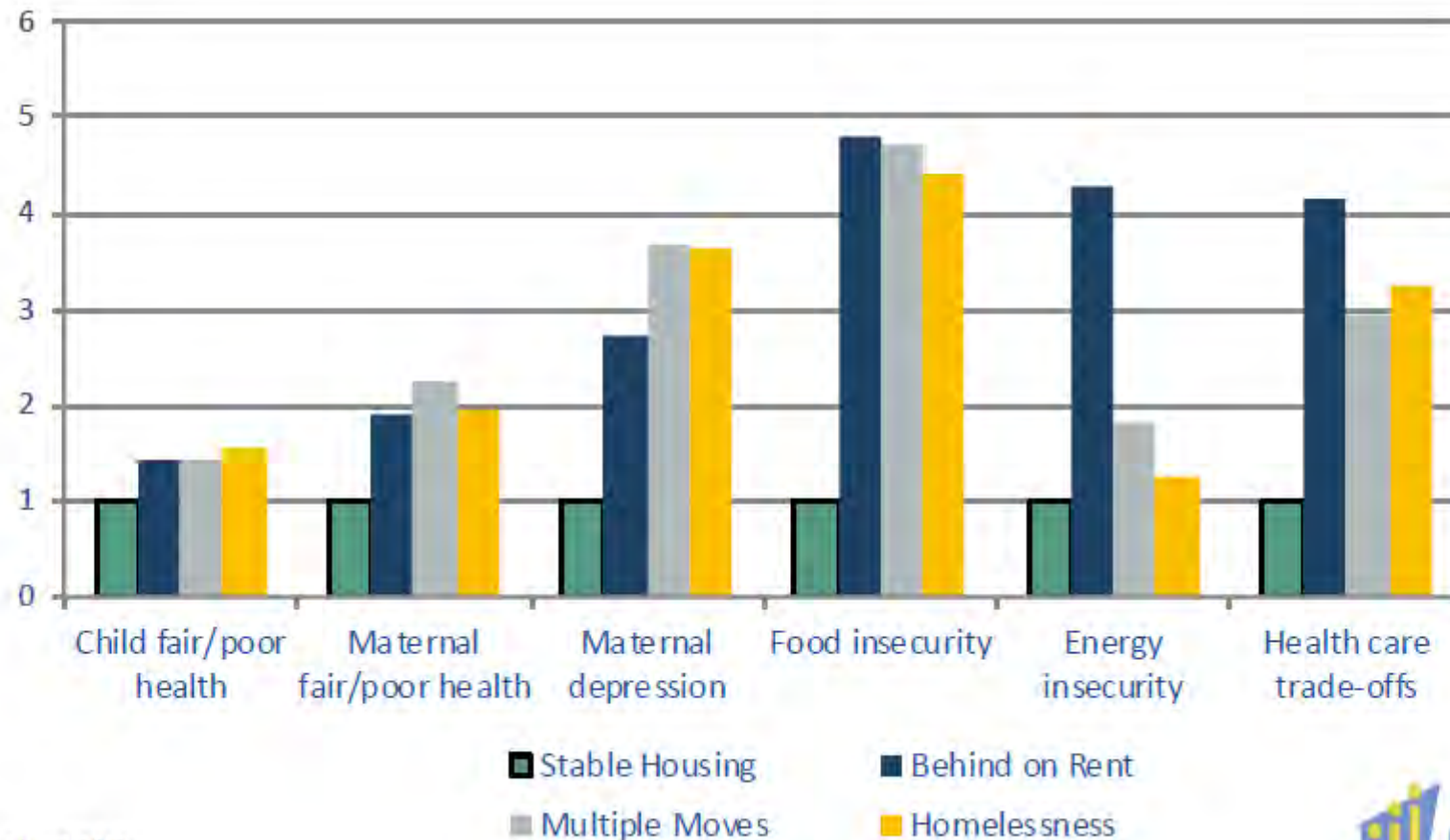
Source: Housing and Health: An Overview of the Literature (Health Affairs, 2018)



**Homelessness is just the clearest expression of a problem with extensive health impact.**



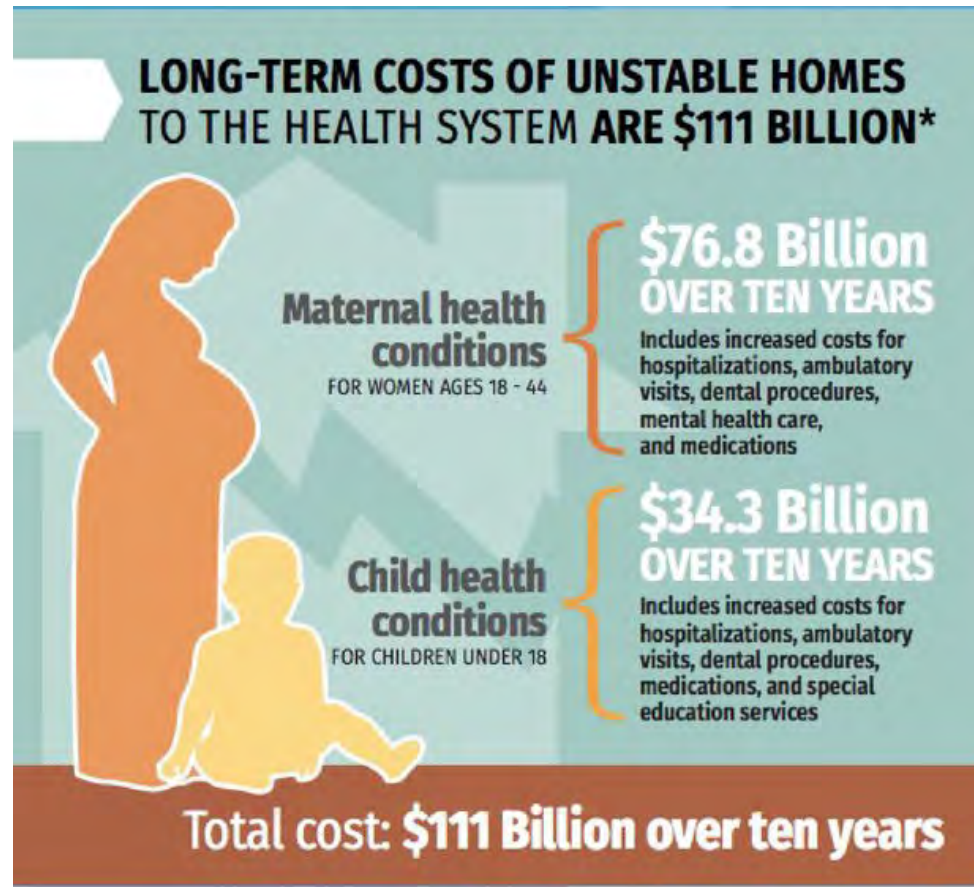
# Housing unstable families face similar health outcomes to families experiencing homelessness.



Sandel et al., 2018



# Beyond the human toll, homelessness and housing instability also drive healthcare costs.



Source: Children's Health Watch

# **HEALTH AND HOUSING**

## **CROSS-SECTOR COLLABORATION**



# Healthcare reform has driven healthcare providers to better understand patients' social needs.

- + The ACA requires non-profit hospitals conduct a Community Health Needs Assessment (CHNA) every three years.
- + Public Health Departments, Federally Qualified Community Health Centers, Community Action Agencies, may also be required to develop CHNAs.



**Social needs screenings are also spreading across doctors office and health facilities.**

## **HOUSING Stability Vital Sign™**

*Since [current month] of last year,*

**1. Was there a time when you were not able to pay the mortgage or rent on time?**

*Answer is yes/no, positive screen if answer is yes*

**2. How many places have you lived?**

*Answer is # of places lived, positive screen if answer is 3 or more (i.e. multiple moves  $\geq 2$  in 12 mos.)*

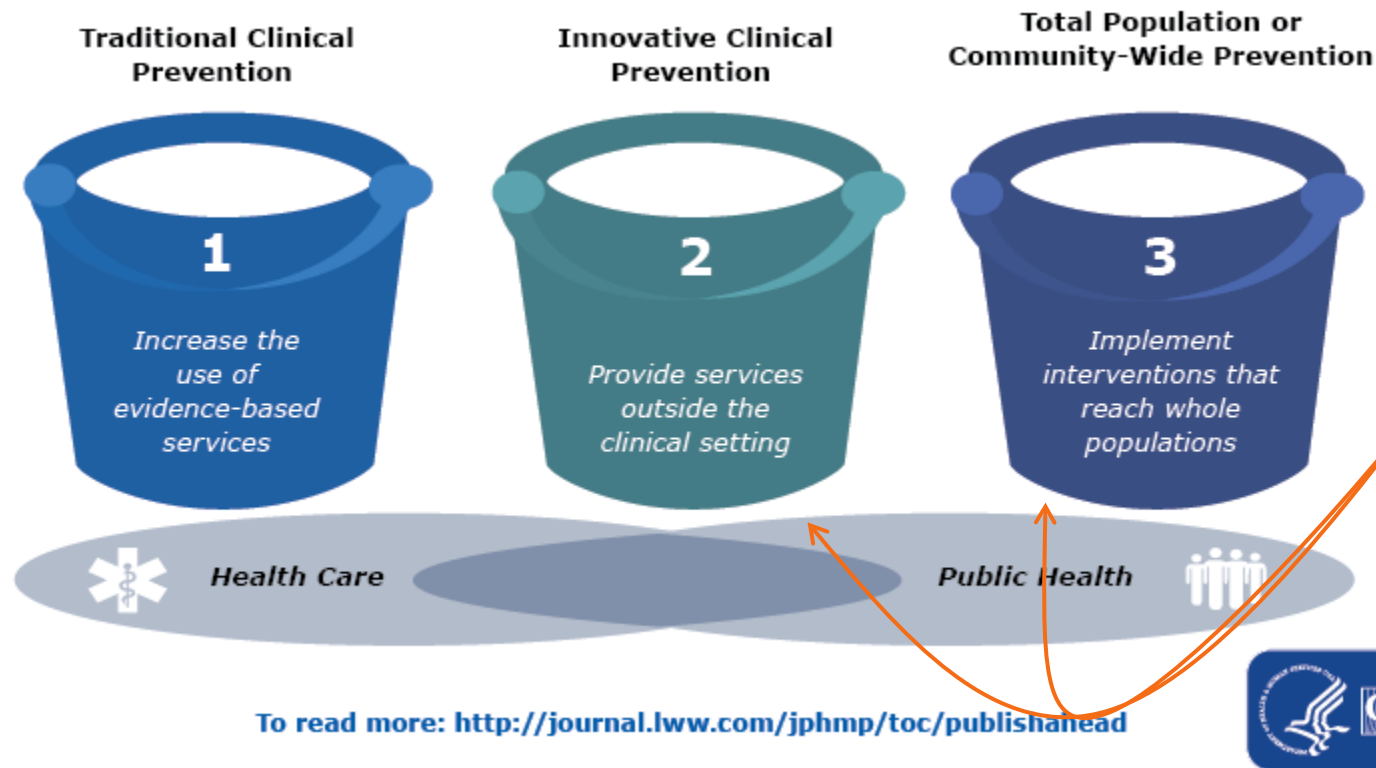
**3. At any time where you did not have a steady place to stay or stayed in shelter (including now)?**

*Answer is yes/no, positive screen if answer is yes*

*Research reported in this presentation was supported by The Blue Cross Blue Shield of Massachusetts Foundation*



At the same time, health system delivery and payment reform is driving a shift from volume of services to value-based care.



Planning  
Decisions  
Intersect with  
(and will be  
affected by)  
buckets  
2 and 3

**MassHealth is funding housing and nutrition services to address health-related social needs as part of its reforms.**





# Locally, Boston Medical Center is leading and helping to define health and housing collaboration.



Press Releases

**Boston Medical Center to Invest \$6.5 Million in Affordable Housing to Improve Community Health and Patient Outcomes, Reduce Medical Costs**

December 07, 2017

Contact Media Relations

## **3 Boston Hospitals Dedicate \$3 Million To Low-Income Housing Initiative**

August 07, 2019

By [WBUR News & Wire Services](#)



# Key Themes in Health and Housing Partnerships

- + Healthcare providers most often contribute on-site services or funding for supportive services.

- + Capital investment is more rare, but there's a lot of buzz about it.

- + Collaborations may connect to access or treatment for patients of the healthcare entity.

- + Priority populations for these partnerships are most often high utilizers of crisis systems, older adults, and other 'vulnerable' populations.

- + Healthcare is aware that they have political capital to contribute, but don't know how to wield it.



# Key Themes in Health and Housing Partnerships (Overcoming Challenges)

- + There is a literacy gap that health and housing sector actors need to overcome in order to collaborate.

- + Healthcare and housing operate on very different timelines. The economics of healthcare discourage long-term investments.

- + Competition and choice do not necessarily result in the best outcome, especially for high needs individuals.

- + Fair Housing can limit the ability of housing providers to align unit allocation with the need of healthcare providers.

- + You can't assume that these partnerships will result in lower costs across systems, even if they do result in better health outcomes.

**OPPORTUNITIES FOR HEALTH  
AND PLANNING  
COLLABORATION ON SDOH**

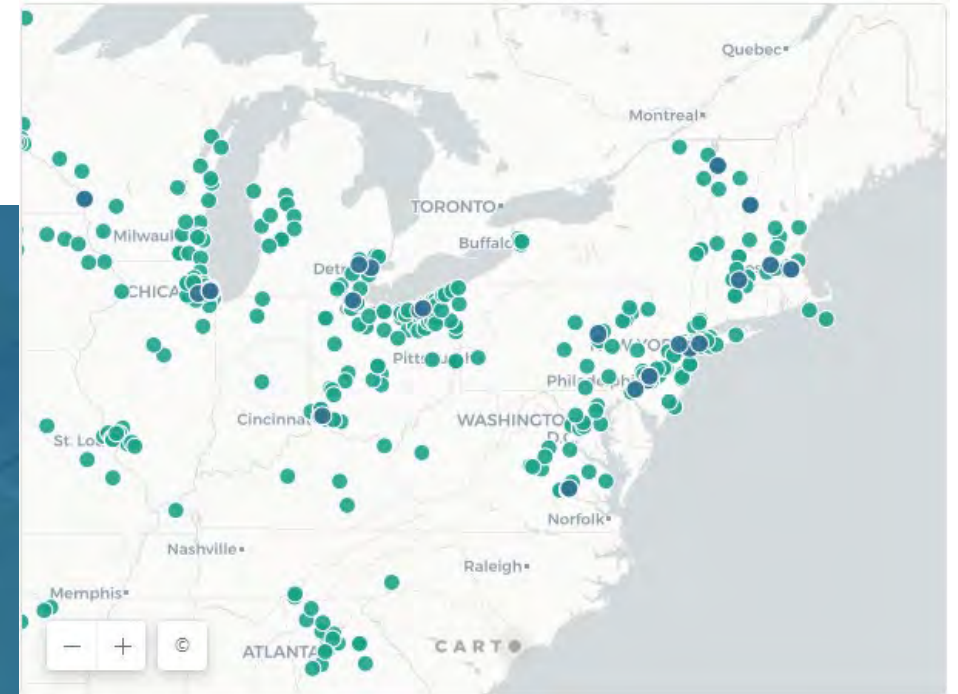


**There's a growing movement of hospitals that see themselves as anchor institutions.**



**Healthcare Anchor Network**

Join a growing national collaboration of 45 leading healthcare systems building more inclusive and sustainable local economies



# Boston Opportunity System Collaborative

Funding will go toward creating 100 new affordable housing units and preserving another 150 units. Focus on community determination and ownership of change.

Resources will also go towards workforce development and occupational support services for 1,100 people in Mattapan, Dorchester, and Roxbury, with a goal of finding living-wage jobs for at least 500 of them, including at hospitals as well as biotech and tech companies.

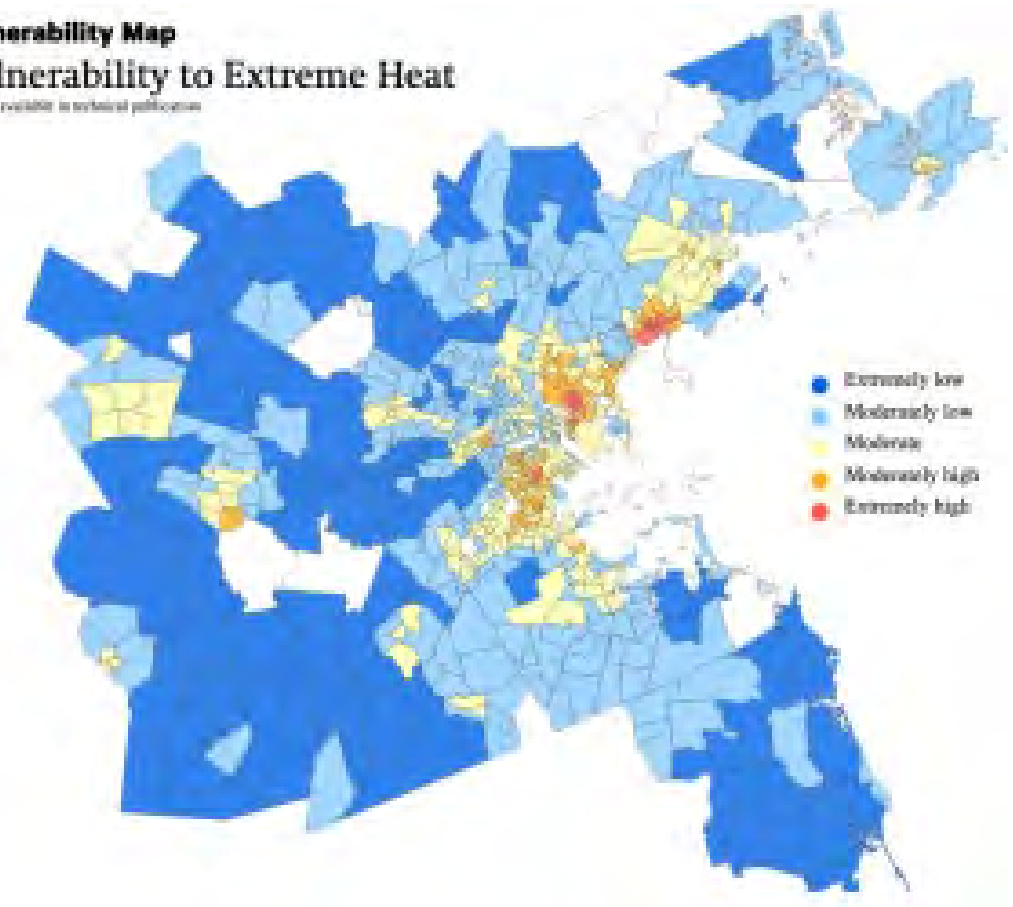




# COVID-Safe Cooling

The program provides funding and technical assistance to mitigate extreme heat impacts in seven communities most impacted by both COVID-19 and extreme heat: Boston, Brockton, Chelsea, Everett, Lawrence, Lynn, and Revere.

**Vulnerability Map**  
**Vulnerability to Extreme Heat**  
Sources available in technical publication





**Barry Keppard, AICP**

Director, Public Health Department

[bkeppard@mapc.org](mailto:bkeppard@mapc.org)





# ***MHP – 15<sup>th</sup> Annual Housing Institute***

James Fuccione – MHAC Director  
June 2022

The work of the Massachusetts Healthy  
Aging Collaborative is supported in part by:



The **Massachusetts Healthy Aging Collaborative** is a cross-sector network of leaders in community, health and wellness, government, advocacy, research, business, education, and philanthropy who have come together to advance healthy aging.



**World Health  
Organization**

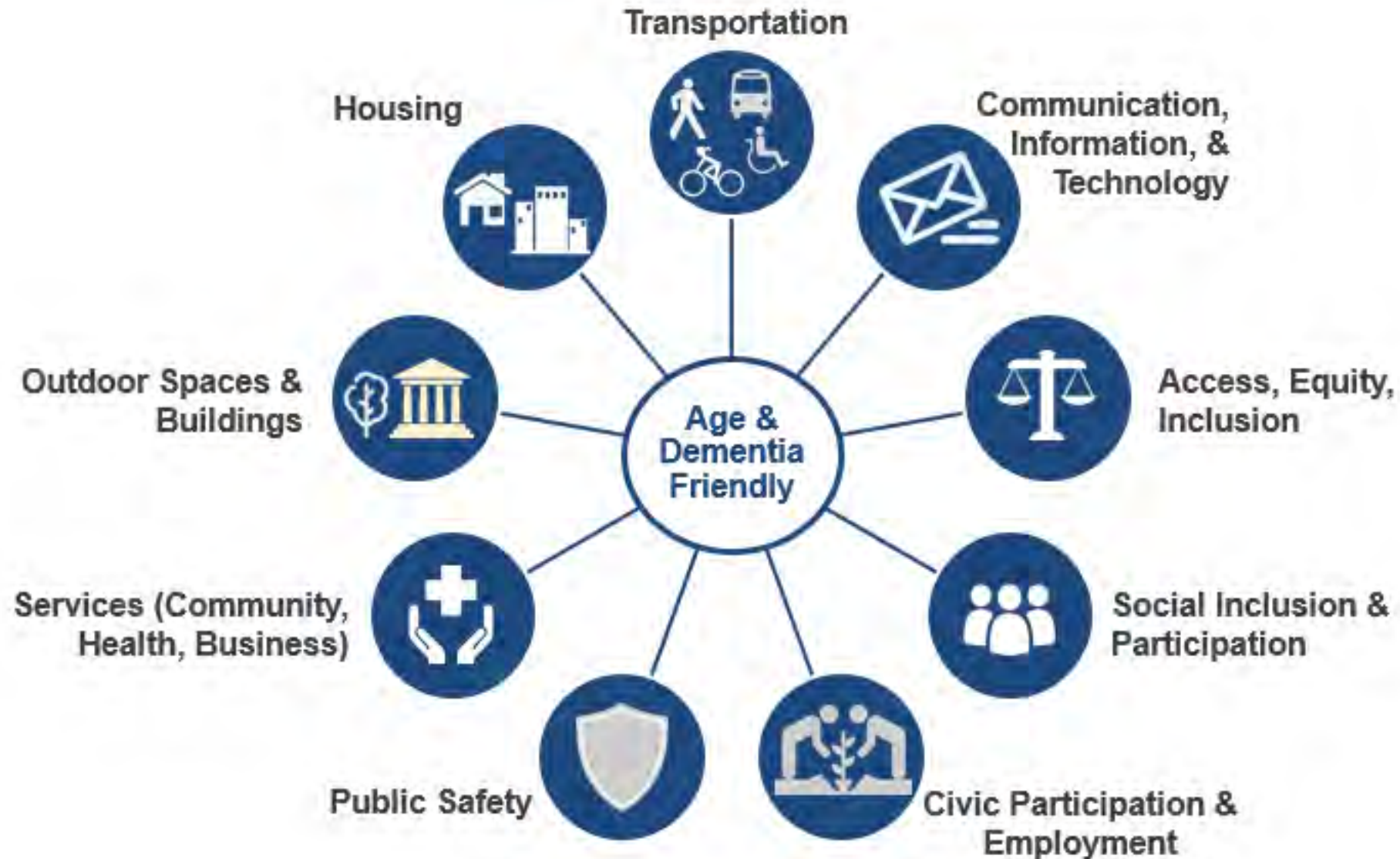


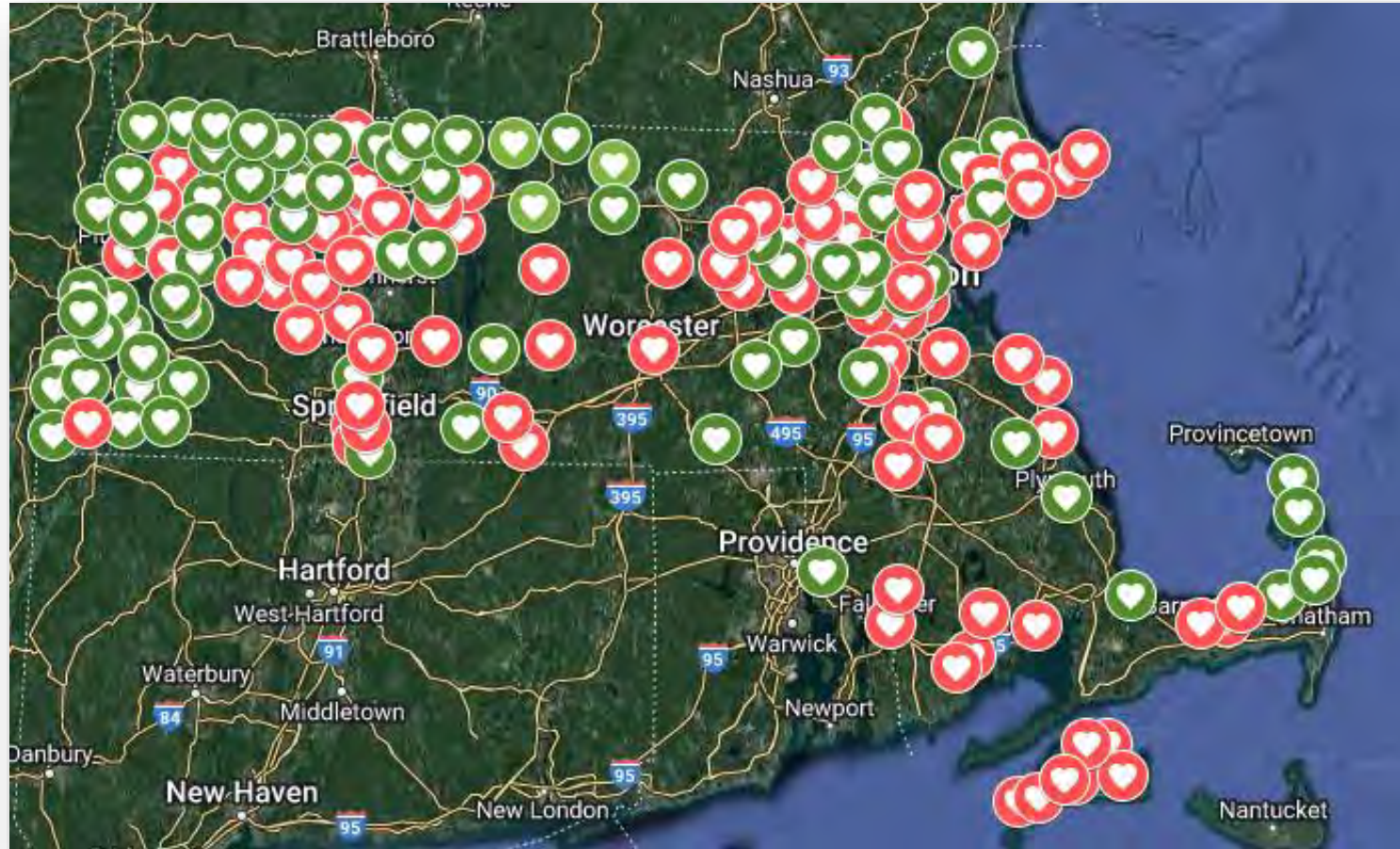
## **Age-Friendly Communities**

- ✓ Age-friendly environments foster health and well-being and the participation of people as they age. **They are accessible, equitable, inclusive, safe and secure, and supportive.**
- ✓ Creating barrier-free and affordable housing, accessible public spaces, and transportation enable people to stay independent and participate in community life.
- ✓ **Older people play a crucial role in their communities** – they engage in paid or volunteering work, transmit experience and knowledge, and help their families with caring responsibilities.
- ✓ ...These contributions can only be ensured if societies foster their health and participation.



# Age and Dementia Friendly Framework





## Statewide Activity

112 “active” age-friendly communities

142 “emerging” age-friendly communities

85 Dementia Friendly

Statewide commitment





## Salem for All Ages Leadership Council

### Chairperson

- Kim Driscoll – Mayor, City of Salem

### Leadership Council

- Margaret Brennan – Executive Director, North Shore Community Health Center
- Mary Butler – Chief, Salem Police Department
- Linda Coffill – Chair, Salem Council on Aging Board
- Jeff Cohen – Chair, Salem No Place for Hate Committee
- Tom Daniel – Director of Planning and Community Development, City of Salem
- Elizabeth Debski – Executive Director, Salem Partnership
- Rosaleen Doherty – Owner, Right at Home
- Beth Gerard – President (2018), Salem City Council
- Lynda Hartigan – Deputy Director, Peabody Essex Museum
- Judith Kane – Administrator, Brookhouse Home
- John Keenan – President, Salem State University
- Paul Lanzikos – Executive Director, North Shore Elder Services
- Sherry Leonard – Director of Community Relations, John Bertram House
- Mickey Northcutt – Executive Director, North Shore Community Development Coalition
- Rinus Oosthoek – Executive Director, Salem Chamber of Commerce
- Dr. David Roberts – President & CEO, North Shore Medical Center/Salem Hospital
- Margarita Ruiz – Superintendent, Salem Public Schools
- Joan Tobin – President (2018), SSU Explorers Lifelong Learning Institute



**Public Health**  
Prevent. Promote. Protect.

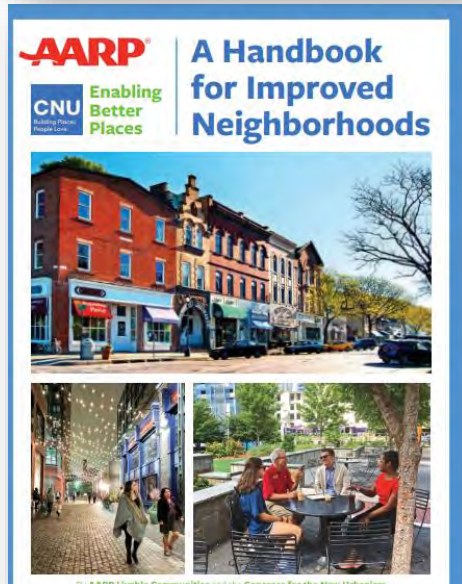
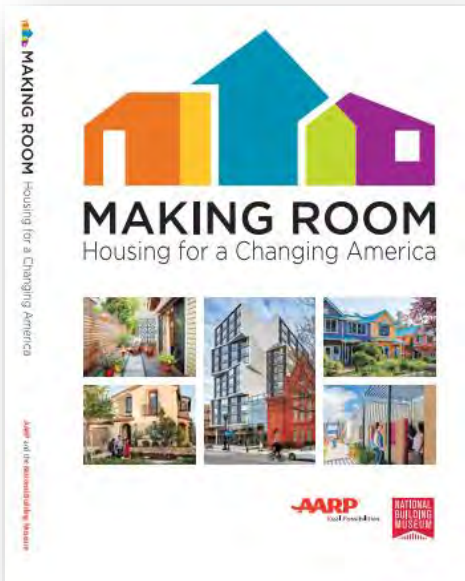
Framingham Health Department



Age Strong  
Commission



# Making Room for a Changing America Report



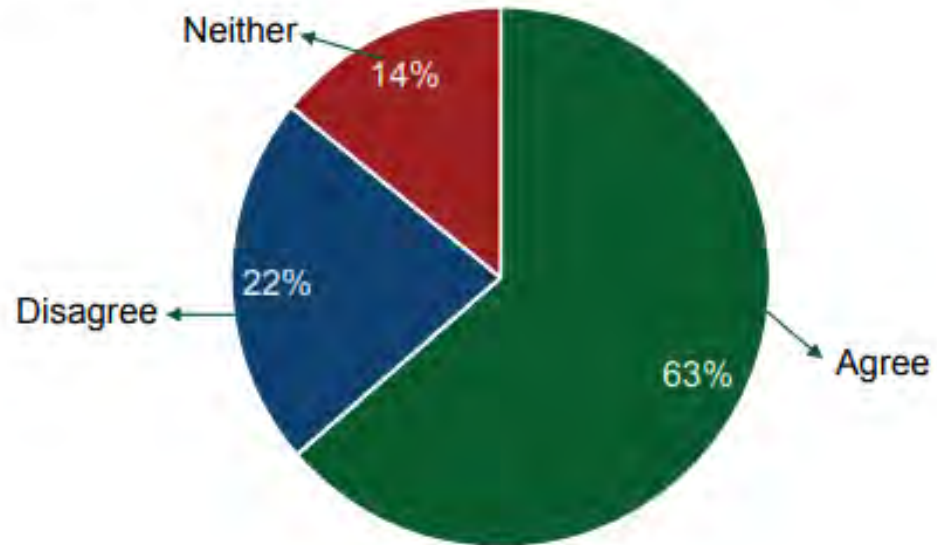
## Adjacent Neighborhoods:

The appeal of adjacent neighborhoods is that most are walkable, with local shops and restaurants frequented by community residents. And due to their proximity to Main Streets and downtowns, they also easy access to daily needs and activities, be it by foot, bike or public transit.

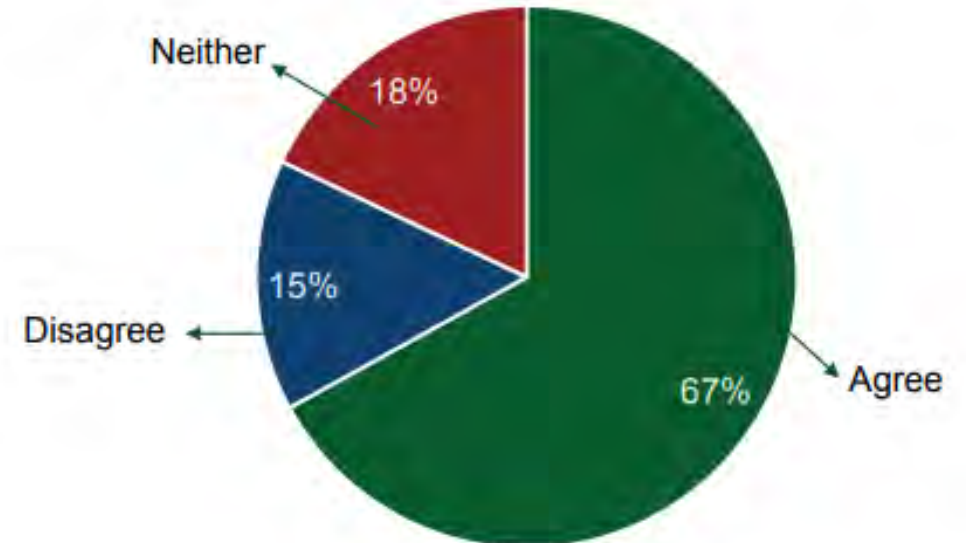


Two-thirds of adults want to stay in their current community as long as possible, and nearly as many would prefer to keep living in their current home.

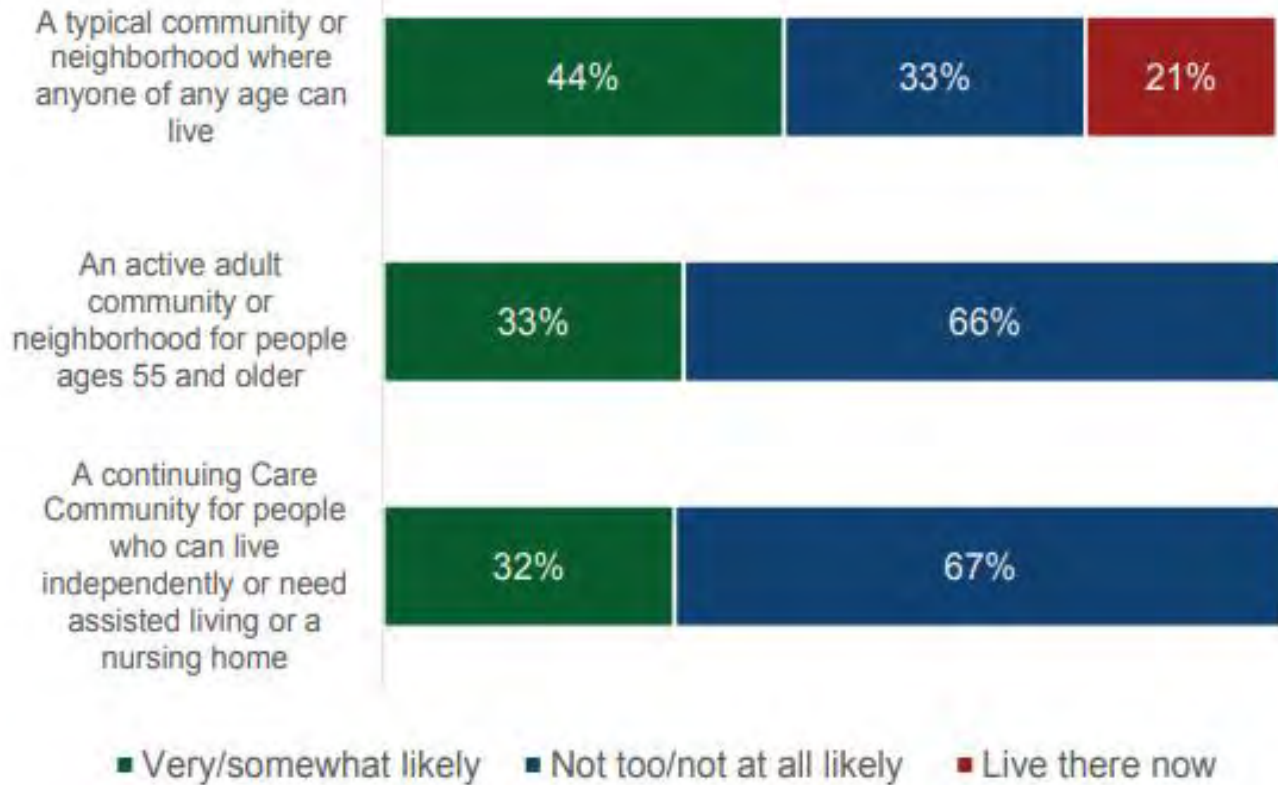
I'd really like to stay in my current residence for as long as possible.



I'd really like to remain in my community for as long as possible.



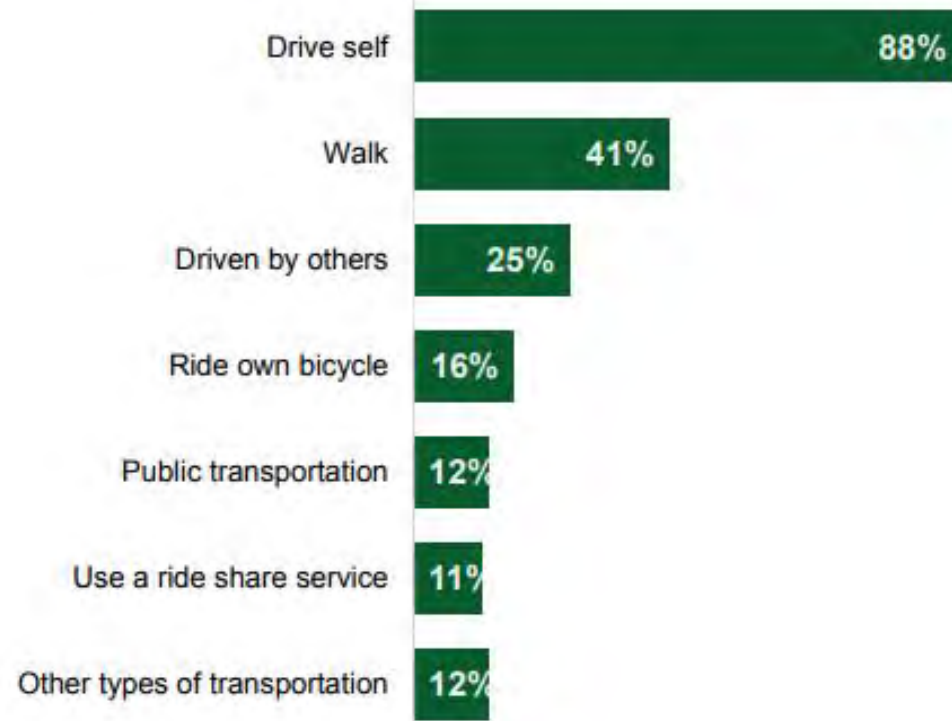
In the future, how likely do you think you will move into:





## Most Americans, regardless of age, get around by car.

A large majority of Americans drive themselves, including 70% of adults ages 85 and older. While people residing in cities are more likely to use public transportation or walk, 84% of urbanites also get around by car.





The Elder Index is a measure of the income that older adults need to meet their basic needs and age in community with dignity. The Elder Index is specific to household size, location, housing tenure, and health status.

## Massachusetts, MA

### OWNER WITH MORTGAGE

The Elder Index is:  
**\$41,868** / year  
*This is 123% of the national  
average of \$34,104*



Miscellaneous (Single) **\$389**



Transportation (Single) **\$325**



Housing (Owner, mortgage) **\$1,998**



Food (Single) **\$275**



Good health **\$502**

Monthly Total **\$3,489**

## National Average, United States (USA)

### OWNER WITH MORTGAGE

The Elder Index is:  
**\$34,104** / year  
*This is 100% of the national  
average of \$34,104*



Miscellaneous (Single) **\$312**



Transportation (Single) **\$292**



Housing (Owner, mortgage) **\$1,546**



Food (Single) **\$275**



Good health **\$417**

Monthly Total **\$2,842**





## Relevant Housing and Transportation Needs:

- Affordable Housing
- Diverse Housing Options
- Convenient and Accessible Transportation Service

## Relevant Housing and Transportation Strategies

- Expand housing choice and affordability so that older adults can remain in their community as housing needs and preferences change.
- Expand the access and range of transit services for older adults that are convenient, equitable, and affordable and meet daily life, employment, health and socialization needs of older adults.
- Improve older adults' knowledge of and access to transit services

# Age Friendly Housing in Action

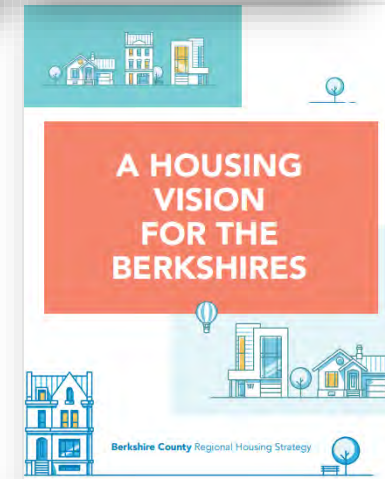
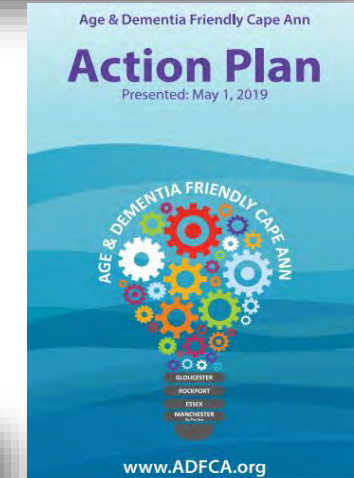
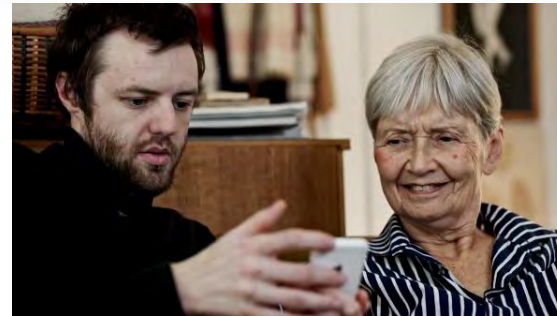
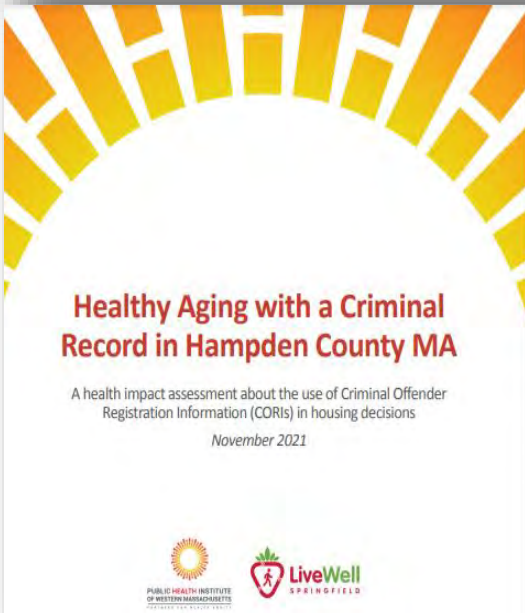


## Salem councilors OK new in-law apartment rules

**FASTCOMPANY**

## The Airbnb For Affordable Housing Is Here

Nesterly, a new platform that pairs older homeowners with young renters, is riding a wave of interest in multigenerational living.



ARLINGTON ADVOCATE

## Accessory dwelling article approved by Town Meeting, survives thunderstorm

## Berkshire County Residential Aging in Place Workbook

A guide to plan for residential renovations to allow you to age independently, safely, and comfortably in your own home



# Thank you!

## Contact:

James Fuccione – Mass. Healthy Aging Collaborative (MHAC)

[James.Fuccione@mahealthyaging.org](mailto:James.Fuccione@mahealthyaging.org)

617-717-9493

## Our Supporters:

Point32Health  
Foundation



Harvard Pilgrim  
Health Care



TUFTS  
Health Plan



Massachusetts  
Councils On Aging



Executive Office  
Of Elder Affairs

AgeSpan  
Choices for Life's Journey

A low-angle, upward-looking photograph of a wooden roof truss system. The wooden beams are light-colored and form a complex geometric pattern of triangles and lines against a solid, clear blue sky. The perspective creates a sense of height and structural complexity.

# Presentations & Resources for Day Two

06/08/2022





**Newton Housing Activists**

## Engine 6

# Origins, Strategies, and Successes

Doris Ann Sweet

Lynn Weissberg

Leadership Team Members

## How we got started

Proposal in 2013 for housing  
formerly unhoused people at  
the former Engine 6 fire  
house

Project withdrawn!

Loss motivated us to work on  
other affordable housing  
opportunities and local and  
state housing policies



HUD discrimination complaint

<https://www.enginesix.org/>



Newton Housing Activists



## How we Operate

- Unincorporated volunteer organization
- Leadership team of five
- Zoning and social media teams
- Monthly meetings
- Regular newsletters
- Calls to action
- 400+ subscribers to our newsletter



# Engagement



## **Building coalitions/relationships with:**

- Community organizations
- Elected officials
- Faith-based organizations
- Regional and state organizations
- Developers



# Engagement



Newton Housing Activists

## **Actions:**

- Attend and speak at Council meetings
- Write letters/op-eds
- Active on social media
- Research
- Outreach to Mayor, Councilors, and State Senators/Representatives
- Candidate endorsements
- Contribute to Newton Housing Partnership meetings

YES TO PEOPLE



YES TO HOUSING

Advocates for fair, affordable, diverse, and abundant housing in Newton, MA, since 2013

Engine 6 has been instrumental in getting these mixed-use, mixed-income housing developments permitted:

## Project Advocacy

Project	Year	Total Units	Affordable	Examples of Sustainability Features
28 Austin St	2015	68	23	LEED Platinum
Turtle Lane/ 283 Melrose	2016	16	2	Reduced Parking
Trio	2017	140	35	LEED Gold Certifiable
Northland	2019	800	140	Residential Passive House
Riverdale	2020	204	51	Green Roof Areas
Dunstan East	2020	292	73	Reduce Embodied Carbon
1149-1151 Walnut St.	2021	25	5	Smaller Units
Riverside	2021	550	110	Rainwater Reuse
1114 Beacon St.	2021	34	6	Solar Panels
50 Jackson St.	2021	12	2	All Electric
<b>TOTAL</b>		2,141	447	



## 28 Austin Street

Mixed Use Project  
68 rental units  
23 affordable units  
LEED Platinum  
Permitted 2015





## Northland

Mixed use project

800 rental units, 140 affordable  
Passive house construction for at  
least 2 bldgs.

40% open space

Stringent traffic management plan  
Free shuttle to T-stop every 15  
minutes, 16 hours/day





# Advocacy



## **Policies:**

- City Charter reform
- Inclusionary Zoning
- Housing Choice
- Reducing Local Preference percentage
- Facilitating ADUs
- MBTA Communities law
- Zoning Redesign



**SAVE THE PLANET  
BUILD MORE HOMES**

**SUSTAINABLE  
AFFORDABLE  
ACCESSIBLE  
ABUNDANT**



Newton Housing Advocates

**350  
MASS  
NEWTON**



## Resources from Engine 6

1. Northland Project: <https://www.enginesix.org/northlandproject>
2. Boston Globe Endorsement of Yes Vote on Northland Ballot Question:  
<https://www.bostonglobe.com/2020/02/21/opinion/with-yes-vote-march-3-newton-can-pave-way-fairer-future/?p1=Article Inline Related Link>
3. Zoning and Newton's History <https://www.enginesix.org/all-about-zoning>
4. Engine 6 Press Release — City Council Endorsements Sept. 24, 2021  
<https://www.dropbox.com/s/k1qmiyvm73yvg47/Engine%206%202021%20CC%20endorsements%20press%20release.pdf?dl=0>
5. Engine 6 HUD Complaint. [Linked here](#).
6. Engine 6 Press Release re: HUD Complaint Conciliation Agreement. [Linked here](#).
7. Political Science research on participation in housing permitting processes:  
Neighborhood Defenders: Participatory Politics and America's Housing Crisis (Katherine Einstein with David Glick and Maxwell Palmer). 2019. Cambridge University Press.  
[Linked here](#). *Description: Individuals who participate in public meetings regarding housing permitting hold overwhelmingly negative views of new housing—far more negative than their broader communities—and are socioeconomically advantaged on a variety of dimensions.*
8. “Still Muted: The Limited Participatory Democracy of Public Zoom Meetings.” (Katherine Einstein with David Glick, Luisa Godinez Puig, and Maxwell Palmer). 2022. [Download here](#).

# Advocacy & Education: North Shore

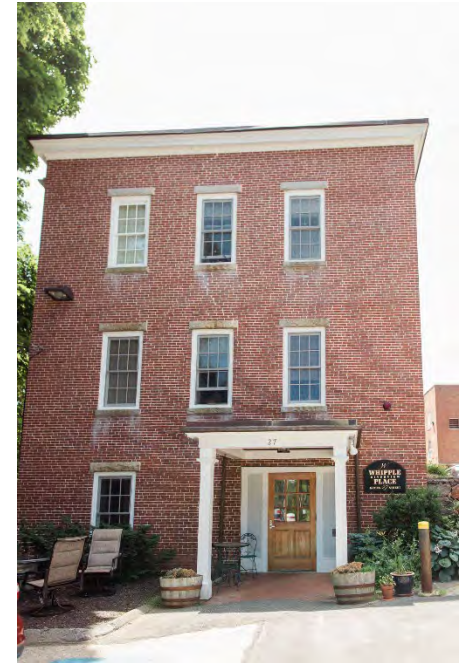
Andrew DeFranza, Executive Director  
Harborlight Community Partners  
Beverly, MA



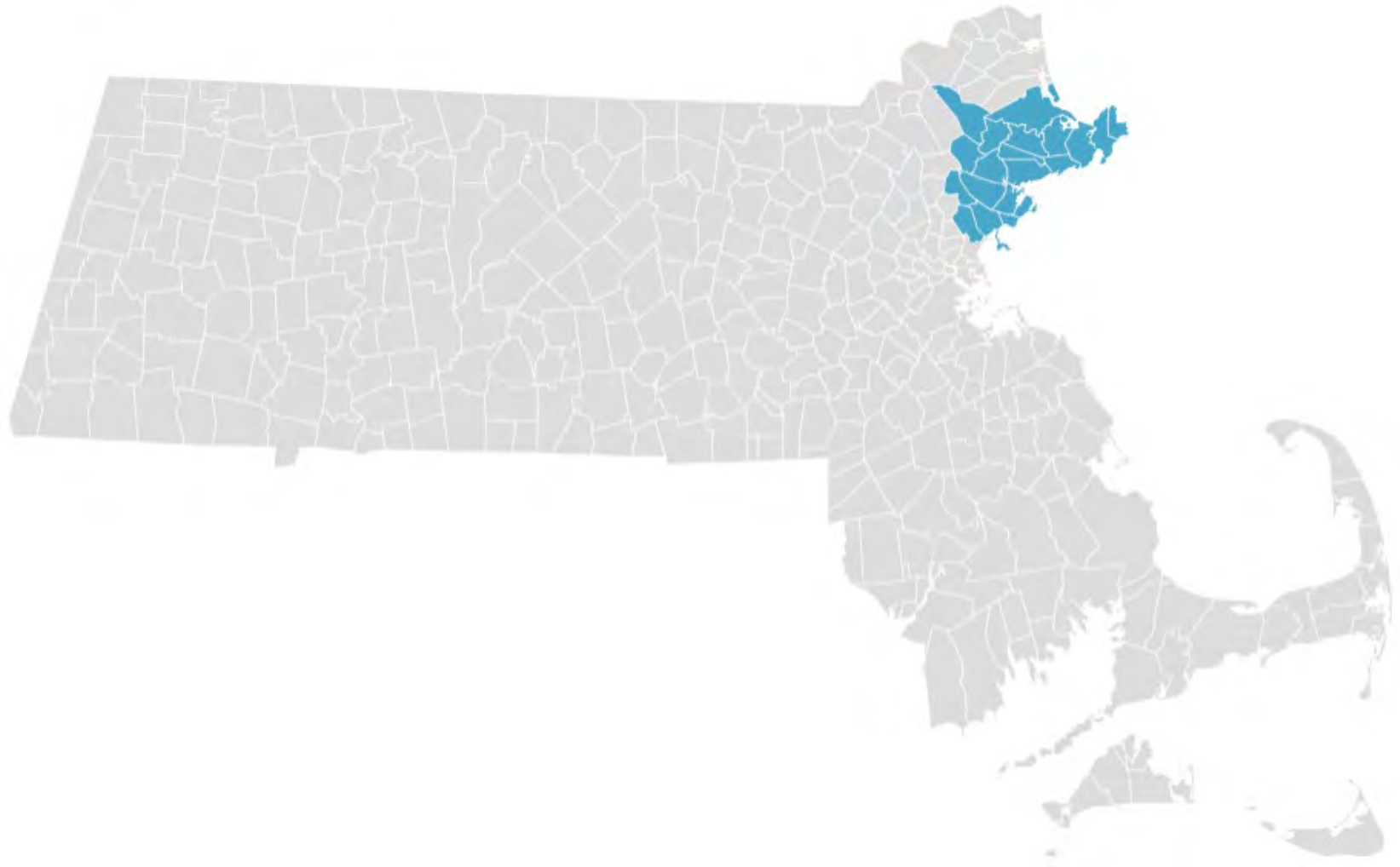
# About HCP



Harborlight Community Partners (HCP) is a non-profit Community Development Corporation. We build and manage affordable housing for seniors, family, disabled, and homeless populations throughout Essex County and advocate for just, equitable communities.



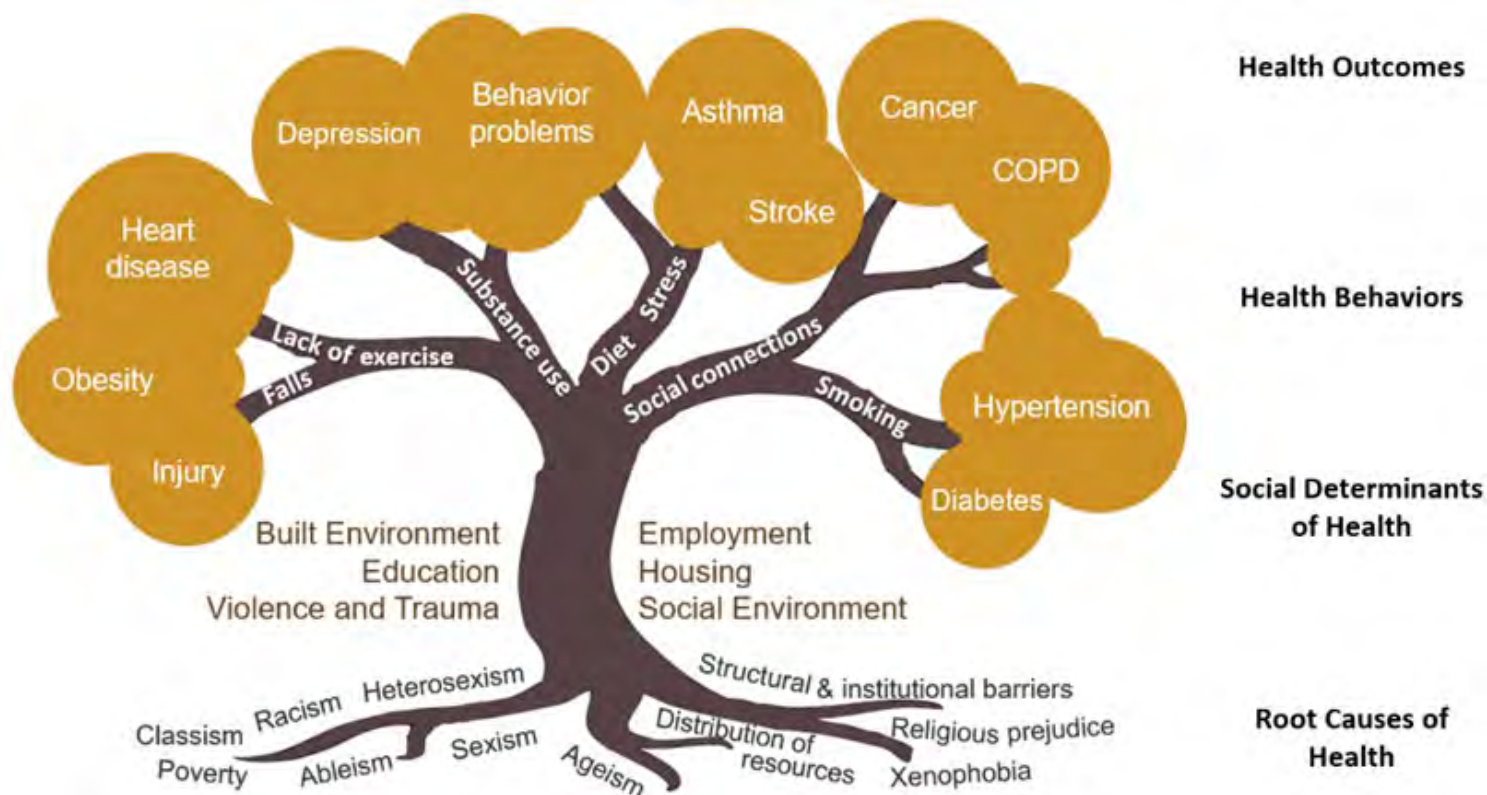
# 20 North Shore Communities





# About Our Grant Work

HCP was awarded a 5-year grant by Health Resources in Action (HRiA) to increase support for and building of affordable housing through Policy, Systems, and Environment change



# It Takes a Village

## Building Local Coalitions

- Resident Advisory Council
  - For residents living in affordable housing wanting to get involved in advocacy efforts
- Housing Steward Program
  - For community members wanting to strengthen technical understanding of affordable housing, and help HCP create pockets of advocates throughout Essex County

## Educational Outreach

- Community Forums
  - For the general public: housing basics, MBTA Guidelines, ARPA, housing friendly policies
- Housing Institute & Legislative Coffees
  - For elected officials, city board and committee members, and housing professionals wanting more technical training



# ... a Big One

## Board of Advisors

- Increase and strengthen corporate, sector, and community relationships to create a connection between affordable home creation and the broader community. The BOA reinforces the belief that safer, more affordable homes benefit businesses and communities. Members may be called to increase philanthropy efforts, share personal or sector expertise and/or advisement in support of HCP programs, projects, and operations.



# Resident Advisory Council



- HCP resident led advocacy group designed to build support for affordable housing
- Offers an overview of affordable housing development, the role of policy and the history of housing, and support to engage in local and state politics
- Goal: Grow support for affordable housing across the North Shore and support resident led initiatives



# Housing Steward Program

- A leadership opportunity for community members to learn about affordable housing and increase support in their neighborhoods and through local and state level government
- Basic financing, who lives in affordable housing, local housing data, and the history of housing policy and zoning covered
- Goal: Grow affordable housing support and housing policy amongst general community members across the North Shore; create pockets of advocates and HCP's impact
- Coming Fall 2022

# Housing Institute

- An overview on the many pieces of affordable housing for elected officials, committee members, and board members who are often tasked with making housing related decisions
- Will provide an overview on affordable housing finance and examples of local developments
- The Institute will also provide trainings throughout the year on prevalent housing policies in the region and additional focused trainings (Chapter 40B, CPA, etc.)
- Coming Fall 2022





# Annual Legislative Coffees

- Annually since 2017, HCP has hosted local and state elected officials and members of boards and commissions from the North Shore in coffee and conversation to outline policy priorities for the year, highlights HCP's work, and upcoming pipeline
  - Offers policy review and Q&A session



# Advocacy Impact: Years 1 & 2

## FY21

- Inclusion of seniors living in affordable housing as part of Phase 2 of MA's Covid Vaccination Plan
- ADU Ordinance adopted in Salem and Gloucester
- Racial Covenants Project- Essex County
- Three local AHT/Housing board presentations
- Relaunch of the RAC with advocacy focus, completion of 8-week housing training
- Beginning planning stages for Housing Institute 101 and Housing Stewards programs
- Housing Institute survey launched, 185 recipients

## FY22

- Housing Production Plan adopted in Lynn
- MBTA Guidelines released, requiring multi-family housing by right as part of Housing Choice Legislation
- ADU Ordinance Update in Beverly
- ADU Ordinance in Rockport
- To date, 9 community conversations and 14 meetings with elected officials/boards on MBTA Guidelines
- To date, 13 meetings with elected officials and 3 community conversations on local ARPA funds
- To date, 10 public comments and 4 OpEds
- Eight local presentations on housing related topics
- Formation of 2 new advocacy groups



# Ultimate Impact, 2023: MORE AFFORDABLE HOUSING!

## ANCHOR POINT BEVERLY

Phase 1 Almost  
Complete!



### PROJECT HIGHLIGHTS

Anchor Point, located on Sahler Road Beverly, will have 77 affordable two and three bedroom apartments. 20% of the units will be set aside for homeless families, in response to needs identified by the Mayors' Regional Homelessness Task Force. The City of Beverly designated this site as a "40R district" which allows for multi-family housing and provides help from the State to benefit the City.

On a 5-acre lot, this will be built phases: Phase 1 (38 units) and Phase 2 (39 units). There will be 40 two-bedrooms and 37 three-bedrooms. There will also be a community education building called "The Lighthouse Center (TLC)". TLC will provide spaces for on-site day care, after-school programming, adult education, play spaces, community gardens and more.

Phase 1 Occupancy: July 2022  
Phase 2 Projected Construction: 2023

## MAPLE WOODS WENHAM



### PROJECT HIGHLIGHTS

HCP plans to build 45 units of affordable, supportive-service enriched, senior housing for people over the age of 62. The project is set on beautiful tranquil 3.5 acres. Maple Woods is targeting Leadership in Energy and Environmental Design (LEED), which is a green building rating program.

## BEVERLY VILLAGE FOR LIVING & THE ARTS (BVLA) BEVERLY

Breaking  
Ground 2022!



*A Collaboration with Beacon Communities*

### PROJECT HIGHLIGHTS

HCP will be working with Development Partner Beacon Communities to create Beverly Village for Living and the Arts (BVLA).

BVLA will have 85 affordable supportive senior apartments and six market-rate live/work artist residences, with shared areas and on-site property manager, maintenance supervisor, and resident services coordinator. Spaces to be shared with the broader Beverly Community include the turfball, grass fields, and the restored theater. Artist spaces will also be available. This will be a historically sensitive, state-of-the-art, and LEED Silver Certified building.

Projected Construction Start: Fall 2022  
Projected Occupancy: Late 2023

## ASBURY COMMON HAMILTON



### PROJECT HIGHLIGHTS

New construction of 45 family apartment homes; a mix of 1-, 2-, and 3-bedroom units, 100% affordable. At this time, HCP has site control via Option Agreement and permits have been filed with the Town of Hamilton.

The local Planning Board has recommended project; robust community outreach and listening has resulted in modifications such

## AGAWAM VILLAGE IPSWICH



*A Collaboration with Ipswich Housing Authority*

### PROJECT HIGHLIGHTS

HCP, in partnership with the Ipswich Housing Authority (IHA) will be completing substantial renovations and capital improvements to 94 units of existing IHA units for seniors and families. 4% LHFC equity and a HUD 221(d)(4) loan will finance the work.

SV Design will be the architect, HCP will lead schedule, budget, financing, relocation (on-site). Colantonio, Inc. will be the general contractor.

Projected Construction Start: October 2022  
Projected Occupancy: 2024

## GRANITE STREET CROSSING ROCKPORT



Breaking  
Ground 2022!

### PROJECT HIGHLIGHTS

HCP proposes to transform 5 Granite Street, the site of a former greenhouse, into 23 units of affordable senior and family housing, (17 supportive senior units in one building and 6 family townhouses). This is HCP's first inter-generational project.

Granite Street Crossing will be vibrant new housing, within walking distance to the commuter rail, shops and parks. The project has been

## WINDWARD CROSSING ROWLEY

HCP Partnership  
with  
The Cusack Family



### PROJECT HIGHLIGHTS

New construction and mixed use: Integrated housing including 20 affordable senior supportive units, 5 home units with the Department of Developmental Services (DDS) and 3 private ownership condos (owned and funded by supporting families). The site will also include a Community Center.

The land for this project will be donated, and zoning for mixed use approved by town. Next steps include schematic site plan, civil engineering, permitting. Funding for group home via DDS, funding for senior supportive units via DHCD supportive housing. Condos and community center funded privately.

Projected Construction Start: 2024  
Projected Occupancy: 2025

## CATALYST HOUSING LYNN

*A Collaboration with The Haven Project*



### PROJECT HIGHLIGHTS

HCP is working with The Haven Project to create 24 studio units for homeless youth, ages 18-24, some of whom are aging out of foster care. It will include a supportive service model with The

**Community  
Partners**



Building Homes. Strengthening Communities. Changing Lives.

# Questions?

If you'd like us to meet with a group, or more general information or notification of any of HCP's Programs, please email:

Marven Hyppolite  
[mhyppolite@harborlightcp.org](mailto:mhyppolite@harborlightcp.org)



# HANCOCK

---

## ASSOCIATES



June 2022

### Housing Density Considering Onsite Subsurface Sewage Disposal

Joseph D. Peznola, P.E.  
Director of Engineering

# Outline

- Title 5 Overview
- Density Defined
- What Impacts Density
- Building Types
- Real World Examples
- Wastewater Treatment Option
- Questions?





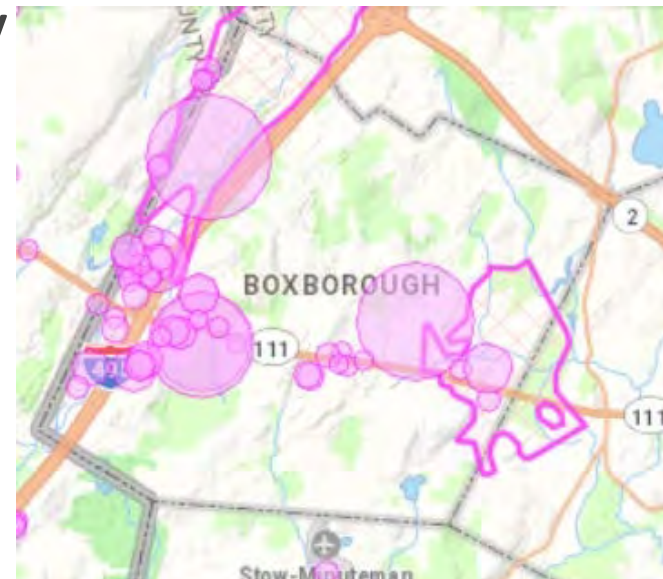
## Massachusetts Sanitary Code

- Title 5 requires the proper siting, construction, and maintenance of all on-site wastewater disposal systems.
- Towns may impose stricter local septic regulations.
- 110 gallons per day
- Soil based sizing of soil absorption system (SAS) Long-term Acceptance Rates.
- Maximum 10,000 gallons per day.



## Density Restrictions

- The only density restriction within Title 5 is within nitrogen sensitive areas where a limitation of 440 gallons per day per acre is imposed. In accordance with 310 CMR 15.215.
- Wellhead Protection Areas
- Nitrogen Sensitive Embayments
- These are not suitable for higher density housing.





## Units Per Acre

- Density is the number of residential units per acre.
- Defining what portions of a tract of land are used in the density calculation can dramatically impact the calculation.
- Density per usable acre subtracts areas of a tract that cannot be developed such as wetlands, areas of steep topography or areas encumbered by easements.



# What Impacts Density

## Building Type

Type	Density with Septic	Density with Sewer
Single Family Home	6 units/usable ac.	10 units/usable ac.
Duplex	8 units/usable ac.	12 units/usable ac.
Townhouse	12 units/usable ac.	18 units/usable ac.
Garden Style (3 story surface parking)	20 units/usable ac.	28 units/usable ac.
Mid Rise (w/structured parking)	Not Applicable as would likely exceed 10,000 GPD	Up to 100 units/usable acre



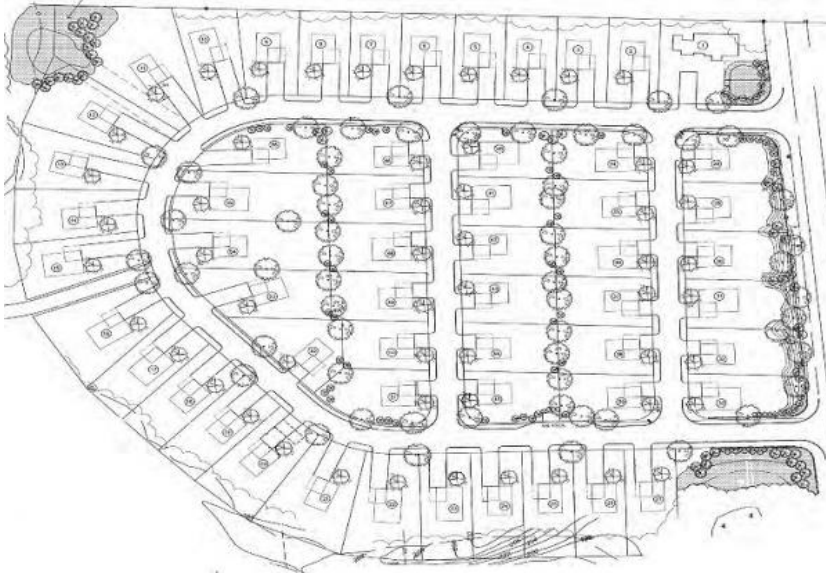


## Gap in Project Size

- Title 5 limits septic system to no more than 10,000 gallons per day. This equates to 90 bedrooms at 110 gallons per day/bedroom
- Beyond 10,000 gallons per day, a project would have to implement wastewater treatment at a significant cost to build and operate.
- Developers therefore have to increase project size and type to absorb the costs of such a system to more than 150 units.
- These results in a gap in project sizes between 90 bedrooms and 300-to-400-bedroom rental apartment projects.
- The commonwealth has considered something between a Title 5 septic system and a wastewater treatment facility that would fill the gap in project size while providing the necessary oversight, monitoring and environmental control but has yet to advance the regulatory changes required.

## Emerson Village Pepperell

- 56 single family homes with on individual site septic systems. Lots as small at 7,000 square feet.
- Large wetland open space lot donated for municipal well. Open space used to meet 440 gallons per day per acre.
- No HOA. Roadways turned over to town as public roads.



## Coolidge at Sudbury

- 120 units of age restricted rental housing built in two phases by B'nai B'rith Housing on two lots totaling 5.5 acres (22 units/ac.)
- Each lot has a Title 5 septic system. Lots are held in separate ownership.
- Town water supply.





## Graniteville Woods

- 72-unit condominium project combination of townhouses and detached single family homes.
- Wastewater Treatment Facility
- Large tract of open space donated to the town.
- Town water supply.



## Greater Than 10,000 gallons per day

- Can be cost prohibitive at minimum \$2M in initial construction and start up costs.
- Annual operation, monitoring, testing, reporting and maintenance costs can approach \$100,000.
- Effluent Fields can be 1/3 size of a comparable Title 5 system, leaving more land to develop units.
- As discussed earlier, developers believe project size needs to be 300-400 bedroom to absorb these costs.
- The permitting for these systems and the Groundwater Discharge Permit is through Mass DEP and can take upwards of a year.

## Any Questions?





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# THANK YOU!

**HANCOCK**  
ASSOCIATES

# Wastewater Solutions for Housing Choice: Littleton Common Case Study



2022 Housing Institute

June 8, 2022

Maren Toohill, AICP



# Maren Toohill, AICP

## Littleton Town Planner/ Assistant Director of Land Use and Building Department



- BS in Engineering Science from Montana State University
- U.S. Department of Interior in MT, ND; Civil Engineer in planning department of engineering company in Houston TX and Bedford, MA; ran for local Planning Board to “give back” to my community
- Entering 25<sup>th</sup> year working for Town of Littleton
- “Crossroads”



# Problem/Solution

- Identify the **Problem(s)**:
  - High Nitrate levels in groundwater in Littleton Common area
  - Limited Economic Development in Littleton Common
  - Littleton Common needs revitalization – we want a walkable downtown
  - Municipal Facilities need wastewater utility
  - Limited Housing Choice in Littleton
    - People who work here can't afford to live here
    - Seniors can't afford to stay
    - Our adult children cannot afford to live in Littleton
- Comprehensive **Solution**: TOWN SEWER



# Start with Planning

## The Littleton Master Plan (2015 - 2017)

### Littleton Common Revitalization

Ideas for Improving Littleton's Town Center

The revitalization of Littleton Common was consistently among the most popular topics of discussion throughout the Master Plan process. It is also a topic that will require actions that touch on every element of the Master Plan with strategies that specifically integrate infrastructure, circulation, land use/zoning, and economic development policies.

The Town is currently embarking on an important study to determine possible solutions for bringing wastewater treatment to this area. This is an important step as it may be challenging to facilitate the type of mixed-use, town center development residents are looking for absent a way to deal with additional wastewater. Future use of land and buildings in this area should be considered in the context of the infrastructure needed to support it, and whether current zoning regulations allow for redevelopment and reuse consistent with the community's vision.



#### Caught at the Crossroads

Littleton Common is bisected by two major state routes which generate a lot of through traffic during peak travel times. This creates challenges for pedestrians and cyclists, as well as patrons of local businesses. The Town should continue to work closely with MassDOT to implement transportation improvements consistent with the future vision for the area.



Littleton Master Plan

cultivating the future

April 20, 2017

Prepared for:  
Littleton Planning Board  
Master Plan Update Steering Committee



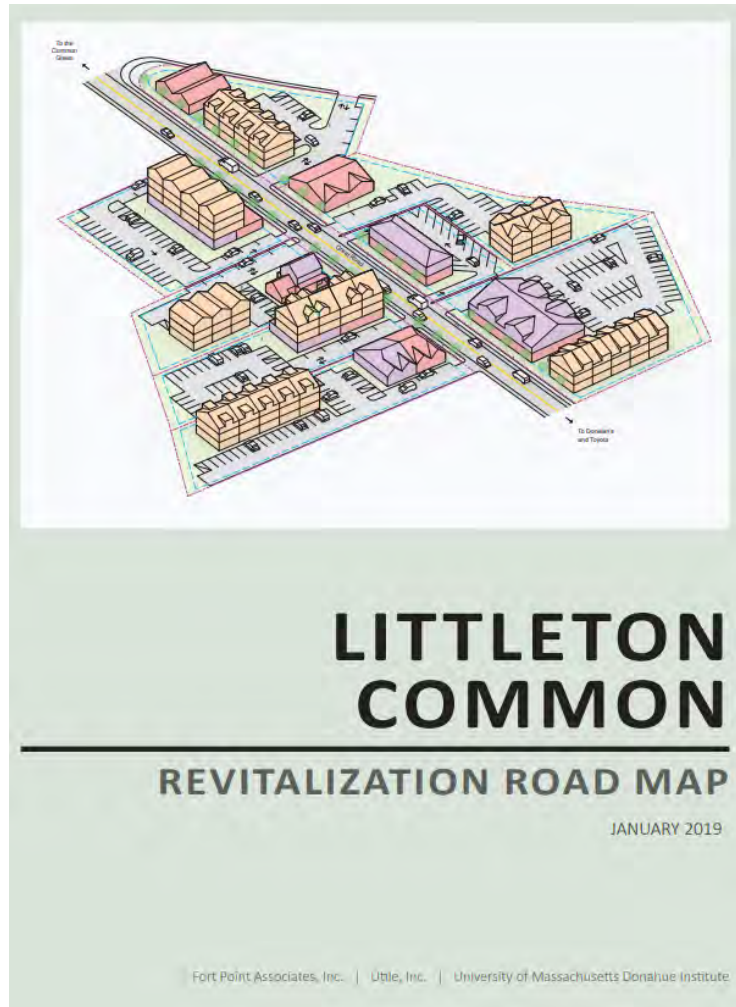
**RKG**

in association with:  
Dodson & Flinker  
Community Circle  
Community Opportunities Group, Inc.



# Continue Planning

## Littleton Common Revitalization Road Map (2019)



## New Zoning for Littleton Village Common - Form Based Code (2021)



Learning from the farmhouse type as an inspiration for the FBC

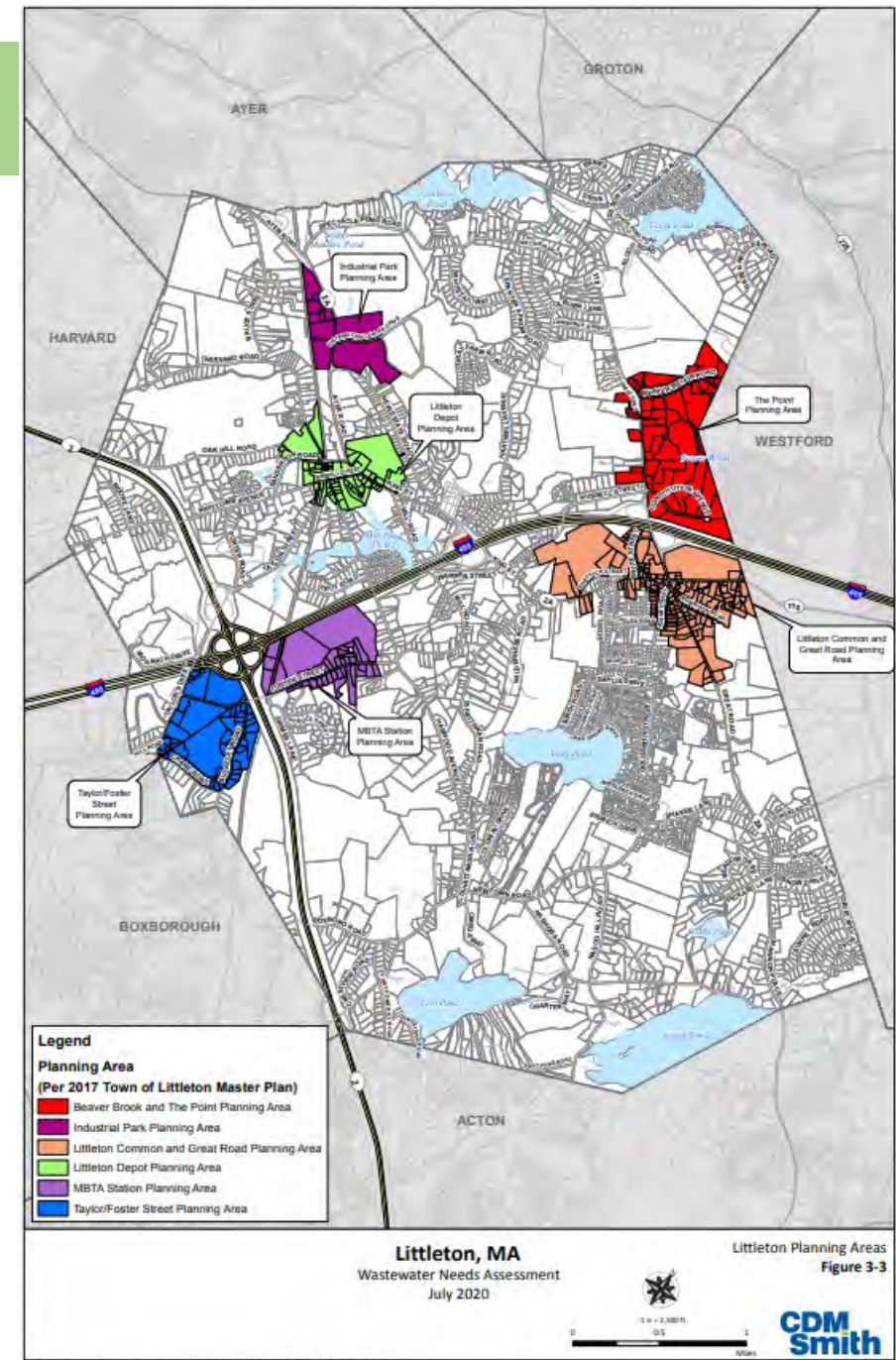


# Then More Planning

- “SMART SEWER” Feasibility Study conducted early 2010’s

**Project Scope.** The scope of this preliminary analysis would include estimating current and future capacity needs; estimating sizing needs for leaching area and treatment system; identifying feasible disposal sites; summarizing potential types of systems, based upon pollutant removal requirements or needs; analyzing permitting options (such as a public sewer versus a privately-owned package treatment plant); and estimating approximate costs for design, construction, permitting, and operation & maintenance.

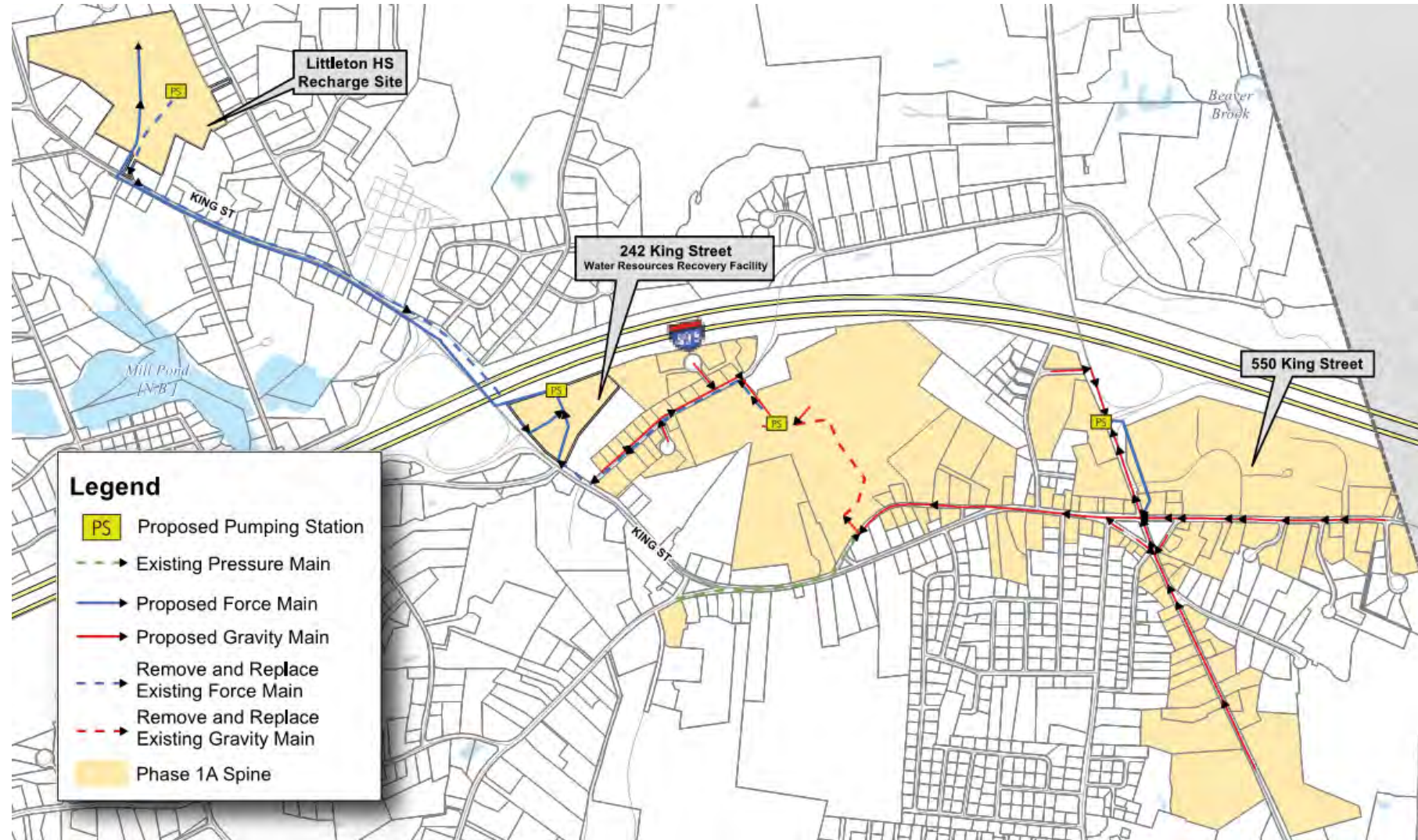
- Establish a Sewer Feasibility Study Committee/Process
- Keep Town Meeting Informed
  - TM Votes needed to fund feasibility study; to establish sewer district, to fund design, and to fund construction
  - What if something changes?



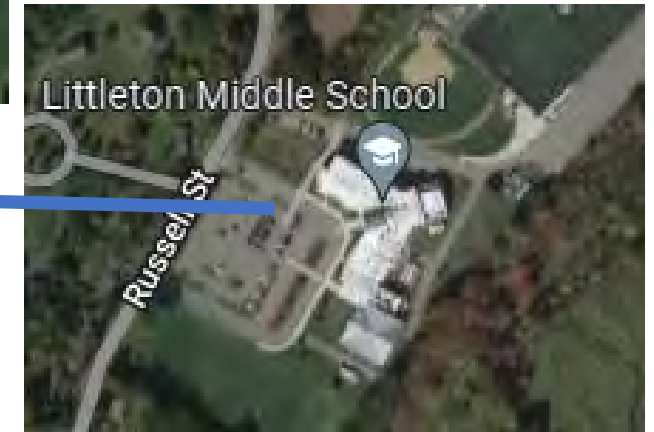
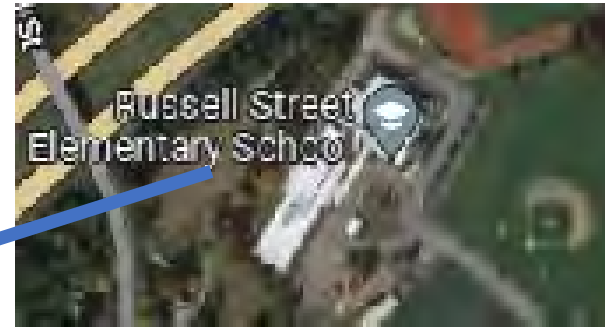


# Sewer Department

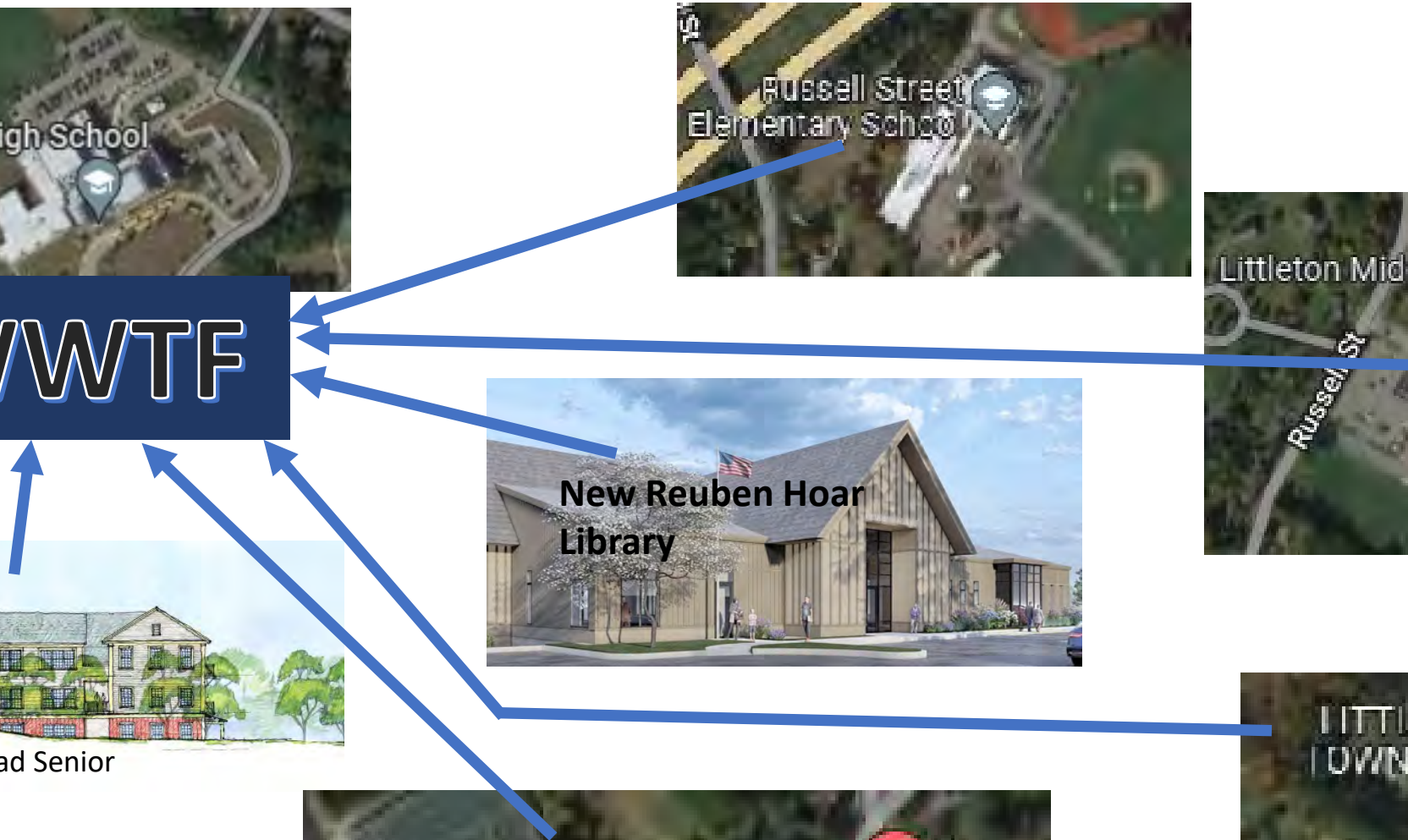
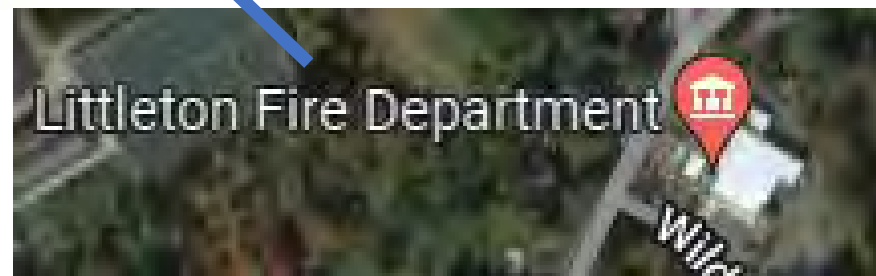
- Create a Sewer Department:
  - Put engineers in charge of the process of siting, designing, constructing, and operating a sewer system.
  - Give the Sewer Department the **responsibility** and the **authority** to make it happen.



# Municipal Sewer Connections



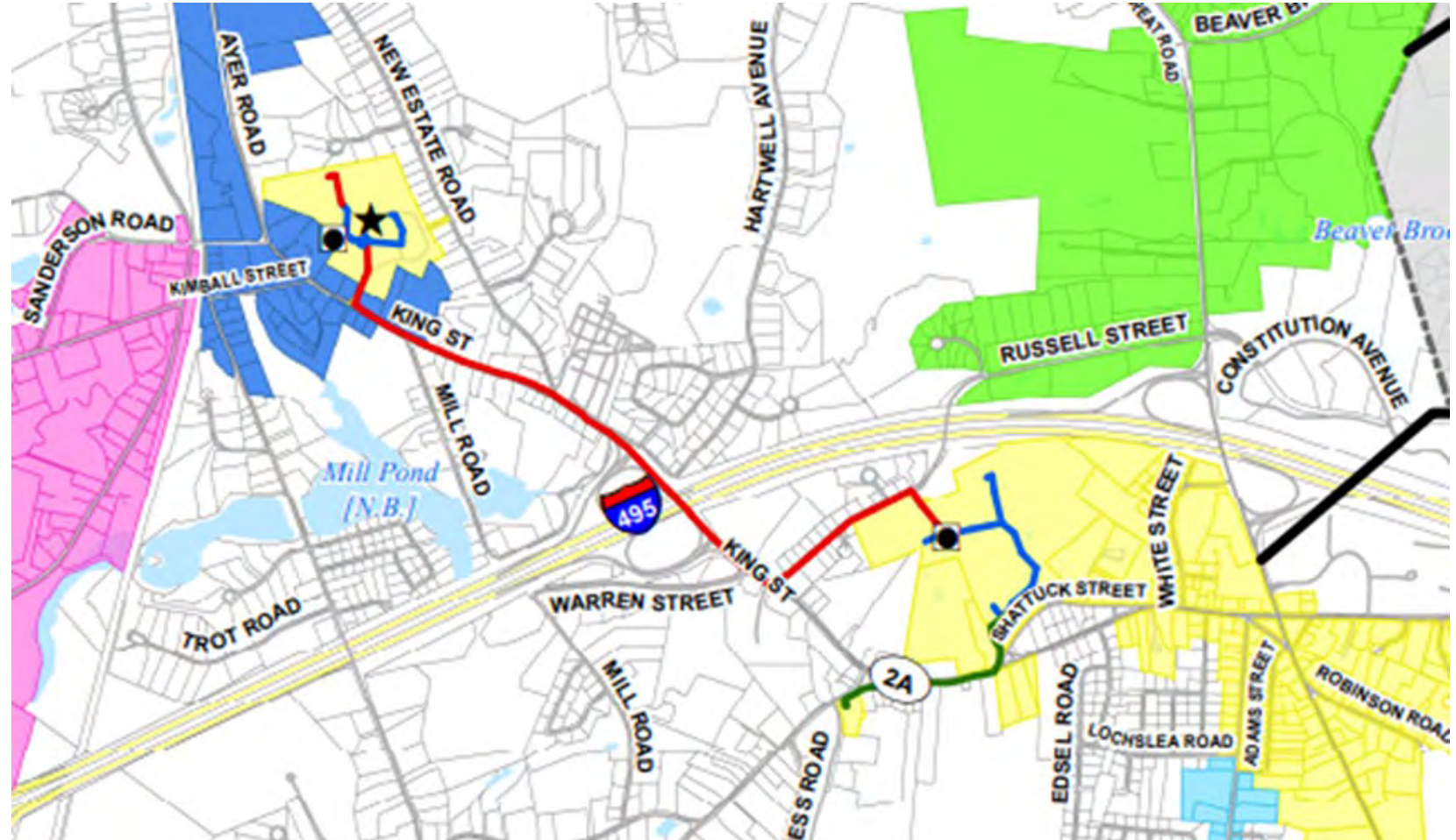
**WWTF**





# Municipal Sewer System

- Municipal Facilities need Wastewater Treatment
- Municipal Sewer System would need significant rehabilitation – or connect to Town Sewer
  - 100% of rehab cost on Town; \$7M
- New Town Sewer costs paid by those who connect to sewer – includes Town as the largest user
  - Estimated \$13M



# Change of Plans – Oh No!

- COVID-19 fundamentally changes the landscape for office uses, the need for 1980's era office buildings, and office campuses
- Forecast loss of \$760,000 tax revenue
- Site used to be zoned for warehouse/industrial uses



Now what do we do??



# Change of Plans – Oh Yes!

- Site rezoned to allow mixed-use, multifamily
- Developer well-versed in multifamily and mixed-use development purchased the site
- Redevelopment of the 40-acre IBM campus next to Littleton Common, just off Route 495 as multifamily/mixed-use made Town Sewer affordable

**This is what we do!!**





# Town Sewer – with King Street Common

- Municipal Facilities are no longer the largest user of a new Town Sewer
- Redeveloped site at 550 King Street needs Wastewater Treatment
- Responsibility shifts as follows, based on estimated gallons per day:
  - 60% - Proposed redeveloped 550 King Street
  - 20% Municipal buildings
  - 20% Other Users located in the sewer district



# How does the funding work??

- Town initially funds study, design, and construction costs. These initial costs are reimbursed by the users of the Town Sewer through *betterments* and *user fees*.
- Construction of the system will be paid by *betterments* on the properties tied into the sewer system.
- Maintenance will be paid by *user fees* of those connected to the sewer system.

\$\$??

# Other Sources of Funding

- State Revolving Fund Loan Fund 1.5%
- MassWorks Grants – significant infrastructure funding for multifamily housing and economic development
- ARPA Funding
- Additional New Federal Infrastructure Funding
- Public/Private Partnership
- Future Growth – new ratepayers based on new development and redevelopment of underutilized sites

**\$ \$ ! !**



# Recommendations

- **Stick with it.** Yes, meeting groundwater quality, economic development and housing choice goals is difficult – it's a heavy lift for any community.....but many communities do it.
- **Be prepared to answer the questions.** Why, Where, How much with it cost, what will it mean for our community.
- **Keep communication lines open** between “engineering” and “planning”. Solutions come through working together.
- **Build on the foundational planning work of your community** – Master Plan, Business District Area Plan, Economic Development Plan, Housing Production Plan, Water Supply Plan

# Questions?

Maren Toohill, AICP

Town of Littleton

978/540-2425 office

978/501-4143 cell

[Mtoohill@littletonma.org](mailto:Mtoohill@littletonma.org)

[www.LittletonMA.org/planning-board](http://www.LittletonMA.org/planning-board)

[www.lclwd.com/sewer-division/](http://www.lclwd.com/sewer-division/)

**Thank you!**

**PENNROSE**

Bricks & Mortar | Heart & Soul

# Wastewater Solutions for Multi-Family Housing

## Case Study of Affordable Housing





## Village at Nauset Green

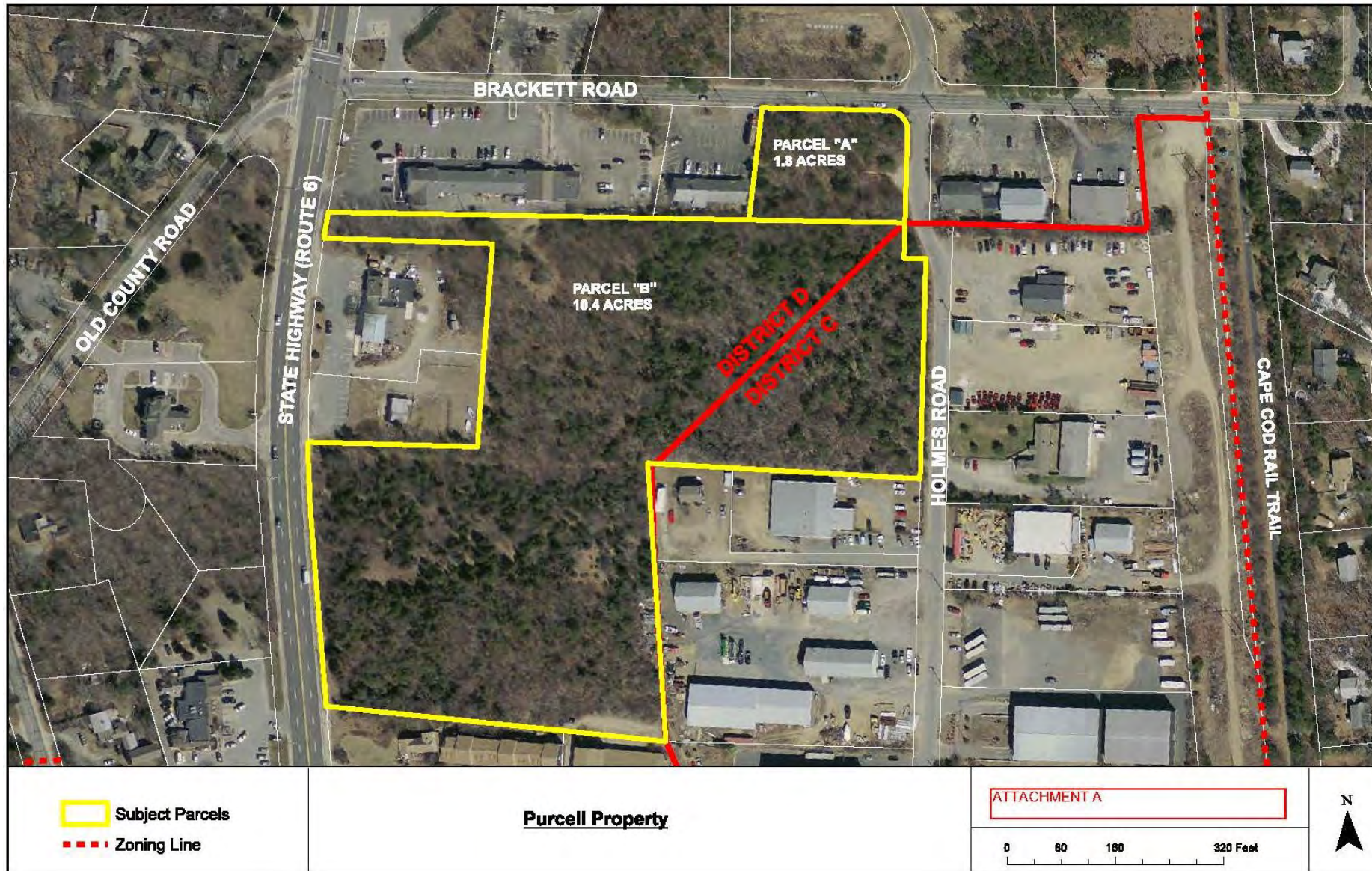
- 11-acre site located in the Town of Eastham
- Acquired by the Town and designated for use as affordable housing in 2001
- Town issued competitive RFP for affordable housing developers and selected Pennrose in 2016





## Site Details

- Wooded parcel with no structures
- Access to Route 6
- Abuts residential, commercial, retail, and industrial uses (what I call the "superfecta" of neighbors)
- NO TOWN SEWER = will need to include private wastewater treatment





## Site Feasibility

- What can be built if private sewer is required?
- Pennrose wanted to build in the goldilocks zone of 60 to 80 units
- Need for private sewer determines the development plan including amount of units and buildable area of the site
- 60-80 units would exceed 10,000 gal a day so no septic under Title V – which meant the development needed a much higher level of wastewater treatment





## **Could a sufficient Wastewater Treatment Plant be built onsite?**

- **Hydrogeological study to determine groundwater flows**
- **Area constraints on the size of a leaching field will determine maximum amount of units. Is there enough area on the site to set aside for a wastewater treatment plant and leaching field and still be able to build the proposed units?**
- **Limits on uses above leaching fields – no building structures, parking options limited for venting, no big trees**
- **Soils affect leaching field size; this site has well draining sandy soils (tighter soil needs bigger fields)**
- **Setbacks are required to Wetland areas, but there were no wetland area onsite here**
- **Are there any neighboring wells in use, including irrigation wells? There was one identified by DEP but it was determined to be out of use and was decommissioned.**
- **Nitrogen sensitive areas require additional nitrogen treatment components**

## Site Design

- Final design is for 65 units in 18 townhome buildings and 1 management office arranged in a fisherman's village style around 2 village central greens
- Southern green to double as both a park amenity and as a leaching field
- Separate free standing wastewater treatment plant facility nestled away from residential units in less visible area of site
- Amphidrome Plus system with filter to reduce nitrogen discharge





## WWTP Building Exterior





## WWTP Building Interior





## Cost Feasibility

- How much will the wastewater treatment plant cost and are the costs feasible?
- No sewer hookup fees but the developer now has to determine the costs to design, permit, install, the wastewater treatment equipment and facility
- A licensed 3<sup>rd</sup> party operator must be engaged to provide the O&M services once built



Development Costs

Use	Total Amount	WWTP Amount	Description of WWTP Amount
Land Acquisition	\$10,000		
Hard Construction	\$17,250,000	\$900,000	Sitework, concrete, equipment, WWTP building
Architecture & Engineering	\$1,025,000	\$135,000	WWTP Design, Hydrogeo Studies, and Engineering
Survey & Permits	\$180,000	\$20,000	GWD Permit Application preparation and Fees
Construction Management	\$200,000		
Legal	\$200,000		
Marketing & Lease-Up	\$200,000		
Insurance	\$170,000		
Finance Costs	\$480,000		
Capitalized Reserves	\$560,000	\$165,000	DEP Required Reserve specific to WWTP
Utility Connections	\$140,000		
Developer Fee	\$2,060,000		
Other Soft Costs	\$600,000		
Total	\$23,075,000	\$1,220,000	



## Operating Costs

Expense	Annual Amount	Annual Amount / Unit	Description
Operations & Maintenance	\$50,000	\$770	3 <sup>rd</sup> party licensed operator
Emergency Responses	\$5,000	\$77	Blockages (baby wipes!) and breaks
Lab Analyses	\$4,000	\$61	
Pumping Services	\$4,000	\$61	Once annually
Supplies	\$6,500	\$100	
Annual Permit Fees	\$8,500	\$131	DEP annual fee
<b>Total</b>	<b>\$78,000</b>	<b>\$1,200</b>	

- **Significantly higher annual costs at \$1,200 per unit than typical town sewer costs at other projects which are around \$350 per unit – about \$50,000 difference for this project**
- **\$50,000 more in operating expenses means \$775,000 less debt that the property can borrow**

## Takeaways

- **Feasibility of Private WWTP is very Site Specific**
  - Factors include number of units, site area, soils, wetlands, neighboring uses, nitrogen sensitive areas
- **Permitting requires significant amount of work and time**
  - Hydrogeological study, engineering
- **Costs can be prohibitive**
  - No sewer hookup fees but the developer now has to determine the costs to design, permit, install, operate, and maintain a wastewater treatment facility
  - Costs can be prohibitive. This development incurred \$1,220,000 in development costs and \$775,000 less in loan proceeds to finance the development,

## DESIGN AND OPERATING TEAM

**Civil Engineer**

**HORSLEY WITTEN GROUP**

**Operator**

**BENNETT ENVIRONMENTAL ASSOCIATES, LLC**





**PENNROSE**  
Bricks & Mortar | Heart & Soul

**THANK YOU!**







# COMMUNITIES BY DESIGN

## MASS HOUSING PARTNERSHIP - HOUSING INSTITUTE

JUNE 8, 2022



studio **g** architects  
building **sustainable** communities







**STUDIO G ARCHITECTS**  
*BUILDING SUSTAINABLE COMMUNITIES*



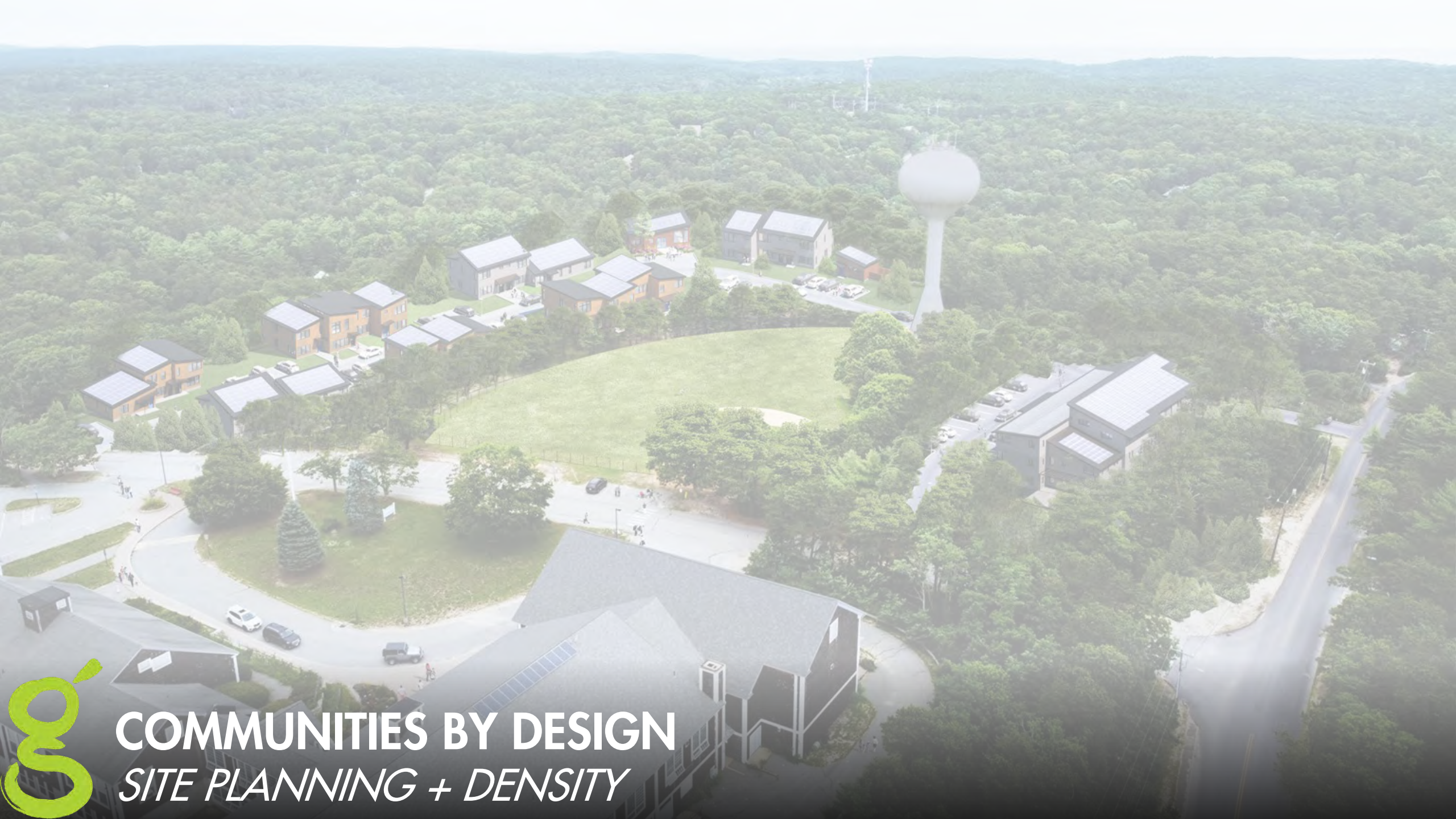


# COMMUNITY BY DESIGN ELEMENTS:

- **SITE PLANNING**
- **BUILDING FORM + RELATIONSHIPS**
- **INTEGRATED LANDSCAPE DESIGN**
- **AMENITIES + RESOURCES**
- **SUSTAINABLE DESIGN + CLIMATE RESILIENCE**



**COMMUNITIES BY DESIGN**



**COMMUNITIES BY DESIGN**  
*SITE PLANNING + DENSITY*





- Build on already disturbed land
- Minimize development area
- Design to preserve open space
- Limit tree clearing
- Avoid density
- Denser development is more cost effective for site development, utilities, roads, etc.
- Solution will vary by community!



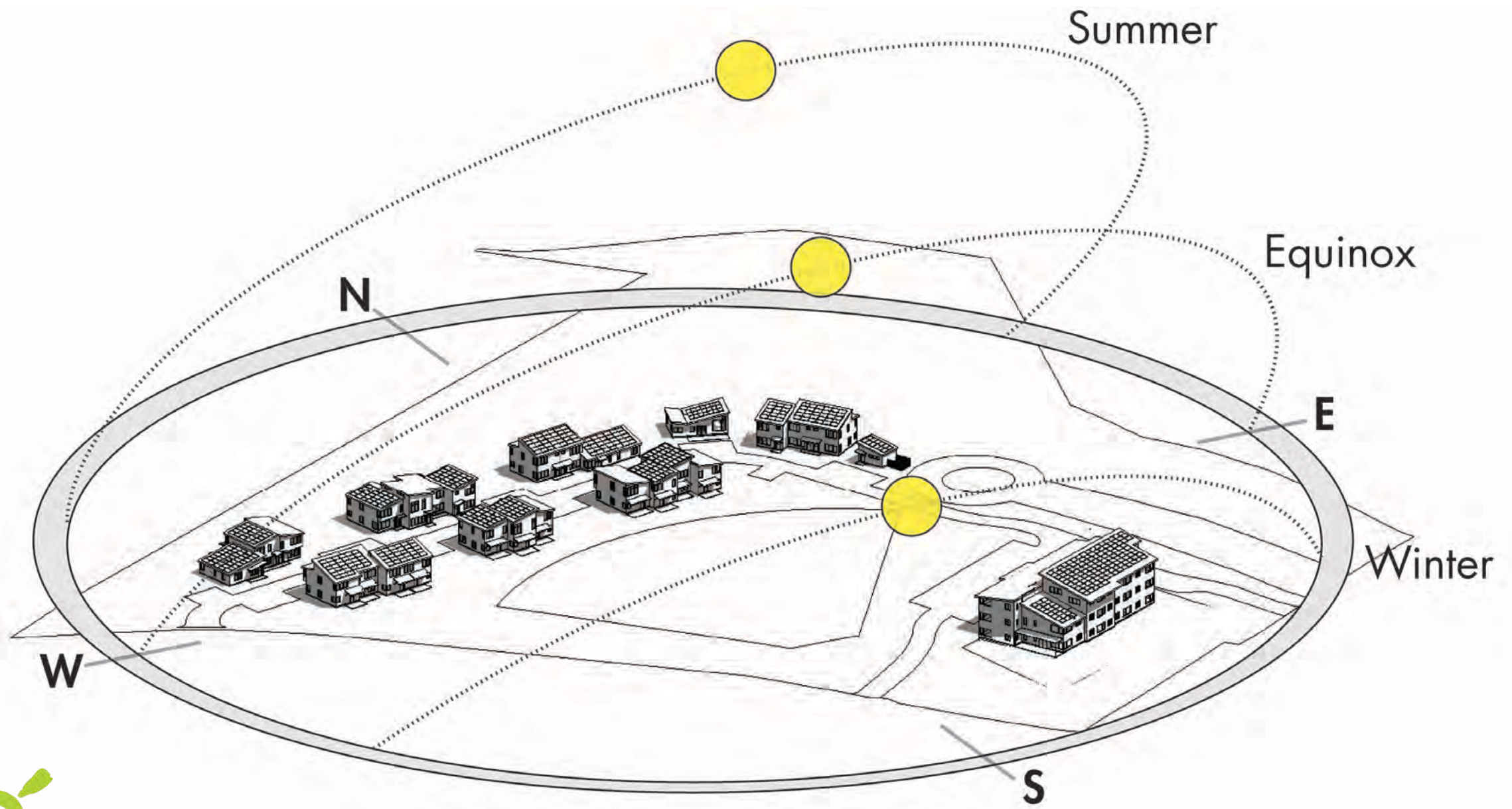
An aerial architectural rendering of a proposed residential development. The scene shows several multi-story houses with dark roofs and light-colored siding, some with solar panels. A large, open green field, likely a baseball field, is centrally located. A tall, white water tower stands prominently in the background. The development is surrounded by dense green trees and a road is visible on the right side. The overall atmosphere is one of a planned, integrated community.

*Create a community  
within the development  
+ ALSO with the  
broader community*



**SITE PLANNING & DENSITY**  
*CREATING A NEIGHBORHOOD*





# **SITE PLANNING & DENSITY**

## *PASSIVE SOLAR ORIENTATION*



# SITE PLANNING & DENSITY

## PRESERVING OPEN SPACE





Pioneer Valley Co-Housing | Fitch Architecture & Community Design  
*Image Credits to Pioneer Valley Cohousing Community*



Varied house forms + porch forms  
with open front yards:

- invite visitors
- allow residents opportunity to personalize



## **SITE PLANNING & DENSITY** *DESIGN TO SUPPORT COMMUNITY*





8.34 Acre Site

## **Siting + Location**

- Encourage community
- Ensure privacy

## **Building Form**

- Identity of each dwelling
- Arriving 'home'
- Design for daylighting + ventilation

## **Integrated Landscape**

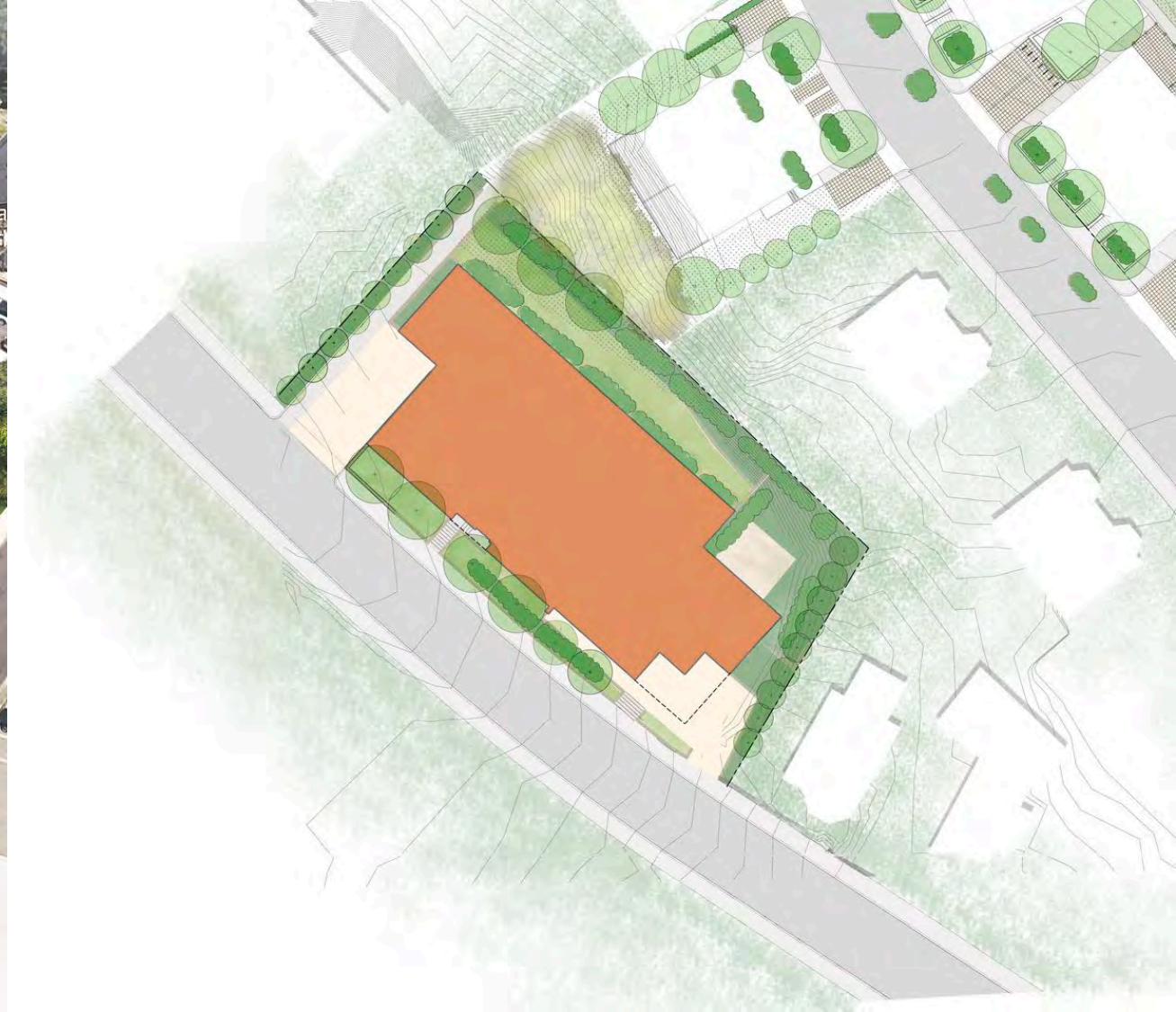
- Views from interiors
- Defensible outdoor space per unit
- Common landscape with active + passive uses



# **SITE PLANNING & DENSITY**

*DESIGN TO SUPPORT COMMUNITY*





# **SITE PLANNING & DENSITY**

*DESIGN TO SUPPORT COMMUNITY*



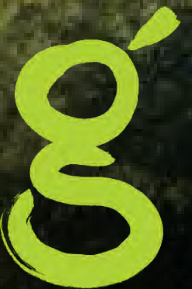


**COMMUNITIES BY DESIGN**

*BUILDING MASSING, FORM + VARIETY*



***Vary building form + massing to create  
community; avoid cookie cutter development***



**BUILDING MASSING, FORM + VARIETY**





- Individual entries + sitting porches
- Pedestrian path + landscape tie buildings together



**BUILDING MASSING, FORM + VARIETY**





Meadow Road | Community Housing Resource, Inc. | Spring Hill Design



Old Anne Page Way  
Community Housing Resource, Inc. | Spring Hill Design



Mosaic Commons | Fitch Architecture & Community Design

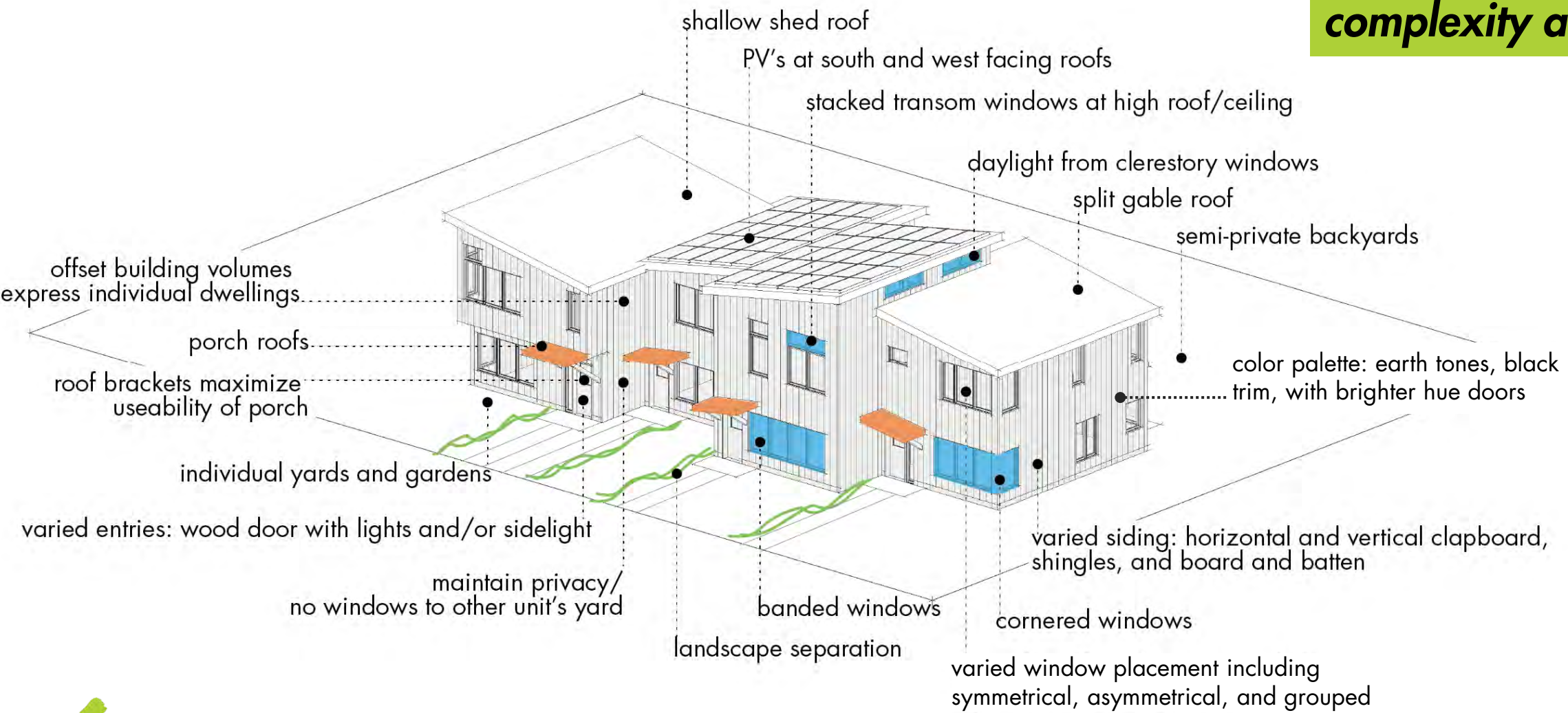
- Variety in porches, windows, how buildings face each other + the road
- Building massing is varied, buildings step in + out, varied rooflines and details create order and variety



## BUILDING MASSING, FORM + VARIETY



**Order, variety + complexity are key**



# **BUILDING MASSING, FORM + VARIETY**

## *ELEMENTS FOR A HOLISTIC APPROACH*





**BUILDING MASSING, FORM + VARIETY**





GROW Community, Bainbridge Island, WA | David Studio Architecture & Design | David Cohen Photography



**BUILDING MASSING, FORM + VARIETY**

*ORDER, VARIETY IN MASSING + MATERIALS AT ALL SCALES*





- Single building envelope, more energy efficient
- Achieve Passive House requirements
- Net zero energy



**BUILDING MASSING, FORM + VARIETY**

*ORDER, VARIETY IN MASSING + MATERIALS AT ALL SCALES*





Alberta Kerr, Gresham, OR | Ankrom Moisan | Elden & Co.



**BUILDING MASSING, FORM + VARIETY**

*ORDER, VARIETY IN MASSING + MATERIALS AT ALL SCALES*





- In urban context, pedestrian-friendly first floor critical whether commercial or residential
- On long facades, repeating elements help break scale
- Contemporary design can relate to historic context with new take on old elements like bays



## **BUILDING MASSING, FORM + VARIETY**

*ORDER, VARIETY IN MASSING + MATERIALS AT ALL SCALES*





- Boston's Energy Positive Housing Program - generates more energy than it uses
- Passive House certified + LEED Platinum
- Homeownership for residents at 30-60% AMI with Limited Equity Coop – residents develop equity over time



**BUILDING MASSING, FORM + VARIETY**





**INTEGRATED LANDSCAPE DESIGN**





- Landscape is often the prime shared amenity; connect to lobby, interior shared space
- Extend living space into landscape with semi-private space: patios, yards, balconies
- Walking paths build community among residents, support healthy living
- Canopy trees for shade, reduction of heat island



## INTEGRATED LANDSCAPE DESIGN





GROW Community, Bainbridge Island | David Studio Architecture & Design | Anthony Rich Photography

Stable Path | Community Housing Resource, Inc. |  
Spring Hill Design



**INTEGRATED LANDSCAPE FOR COMMUNITY**  
*LANDSCAPE CREATES SEMI-PRIVATE + COMMON SPACE*





Mosaic Commons | Fitch Architecture & Community Design

**g** **INTEGRATED LANDSCAPE FOR COMMUNITY**  
*COMMUNITY SPACES IN LANDSCAPE*





# COMMUNITIES BY DESIGN

*COMMUNITY RESOURCES + AMENITIES*





- Combine shared outdoor resources with a community building
- Shared amenities generate more opportunities for resident engagement



## COMMUNITY RESOURCES + AMENITIES





**g** **COMMUNITIES BY DESIGN**  
*HEALTHY, SUSTAINABLE + RESILIENT COMMUNITIES*





- Excellent indoor air quality with operable windows, continuous mechanical ventilation + pressurization prevents odors traveling between units
- Use healthy materials
- Design for daylight and views

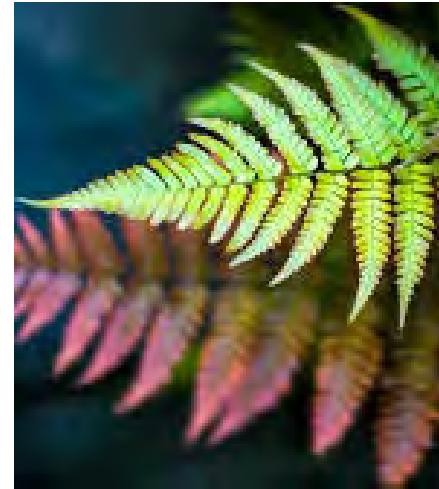


**HEALTHY, SUSTAINABLE + RESILIENT COMMUNITIES**  
*HEALTHY LIVING UNITS*



## BIOPHILIC DESIGN

INCORPORATES NATURAL ELEMENTS + MATERIALS THAT REFERENCE NATURE  
+ VIEWS OF NATURE WHICH CAN REDUCE STRESS + CRIME, EXPEDITE  
HEALING AND IMPROVE COGNITIVE FUNCTION, CREATIVITY + WELL BEING



**HEALTHY, SUSTAINABLE + RESILIENT COMMUNITIES**  
*DESIGN + CONNECTION TO NATURE*





Solar  
Shading



Energy Star  
Appliances



Watersense  
Plumbing



Triple Pane  
Windows



Energy  
Recovery  
Ventilation



Solar  
Electric  
Panels



Variable  
Refrigerant  
Flow (VRF)  
HVAC



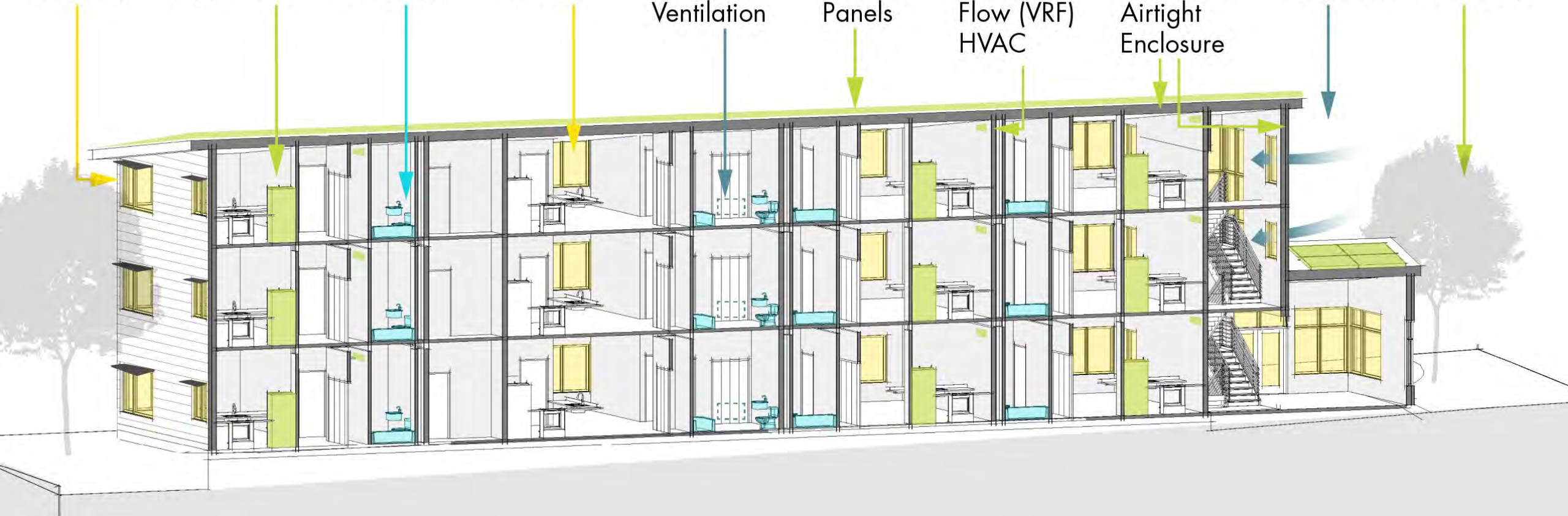
Continuous  
Insulation/  
Airtight  
Enclosure



Natural  
Ventilation



Sustainable  
Landscape



**HEALTHY, SUSTAINABLE + RESILIENT COMMUNITIES**  
*HOLISTIC, INTEGRATED STRATEGIES*



## ARCHITECTURE

- Proper Insulation
- Informed Massing
- Air Tightness
- Solar Orientation
- Direct Solar Gain
- Natural Ventilation
- Daylight Harvesting

## SYSTEMS

- Geothermal or GSHP
- Manage Plug Loads
- Efficient Lighting Design
- Efficient HVAC Design

## RENEWABLES

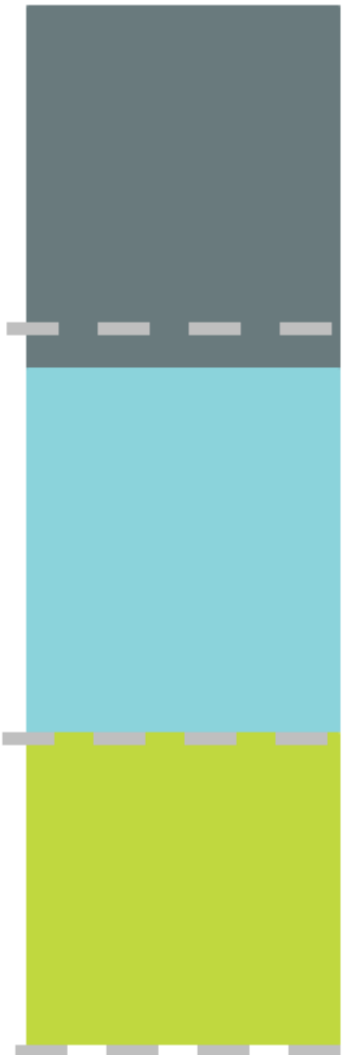
- Solar/Photovoltaics
  - 3<sup>rd</sup> Party Ownership - PPA
  - Community solar
- RECs/ offsets
- Wind Power
- Demand Control

60 EUI MA Multifamily

IECC 2018  
43 EUI

Passive  
House  
20 EUI

Net Zero

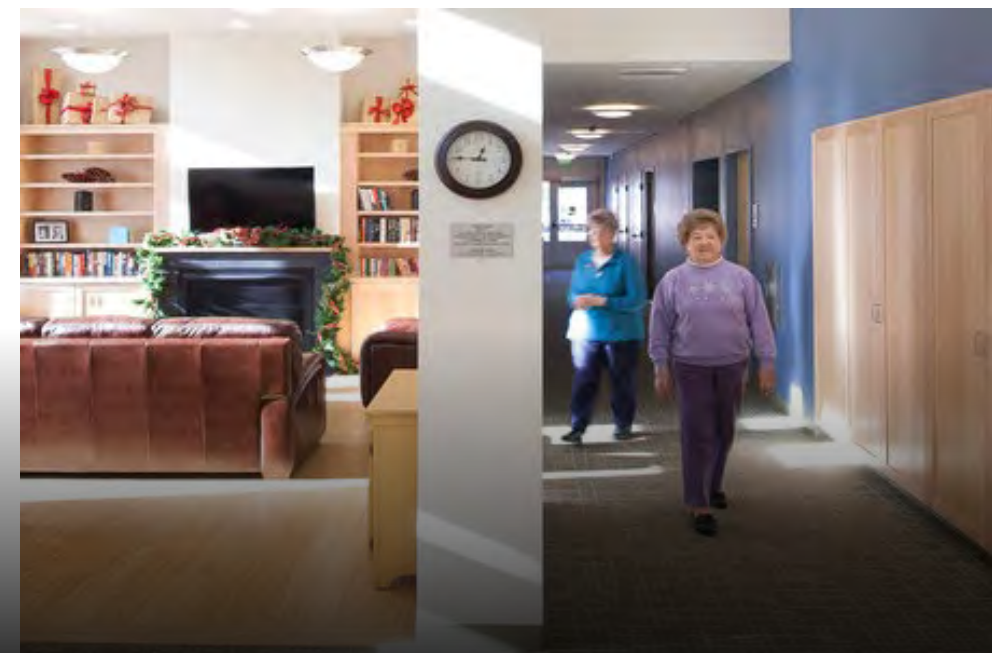


# HEALTHY, SUSTAINABLE + RESILIENT COMMUNITIES

## PASSIVE HOUSE + NET ZERO ENERGY



# COMMUNITY BY DESIGN



studio **g** architects  
building sustainable communities



# LET'S STAY IN TOUCH



*studio**g**architects.com*



*617.524.5558*



*info@studio**g**architects.com*



# Zoning for the MBTA Communities Zoning Law

**Amy Dain**

**June 2022**





# The Law

Municipalities served by MBTA shall...

- Zone at least one MF district “of reasonable size”
- As of right
- Without age restrictions, suitable for families
- At a minimum gross density of 15 units per acre
- Within .5 mile of station, if applicable

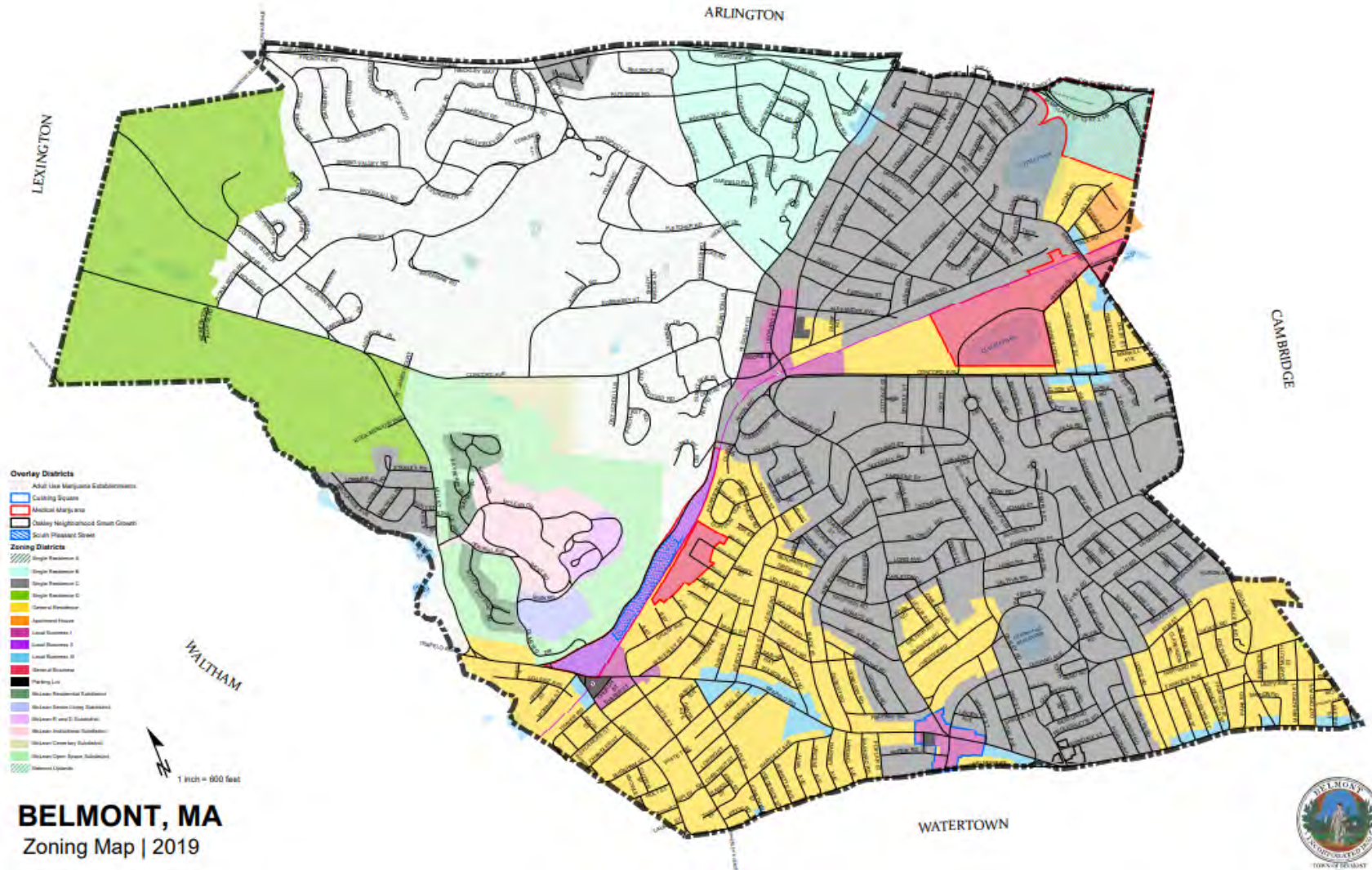
# Some basic concepts of the law

1. Zone a district, not just individual parcels, for MF (“a reasonable size”)
2. Make it predictable, for builders and landowners (as-of-right)
3. Allow infill (near transit in Greater Boston is largely developed, not greenfields)
4. Allow “missing middle” housing (at a “gross density” of 15 units per acre)
5. Allow it as transit-oriented development (near stations)
6. Without zoning restrictions against young people and families

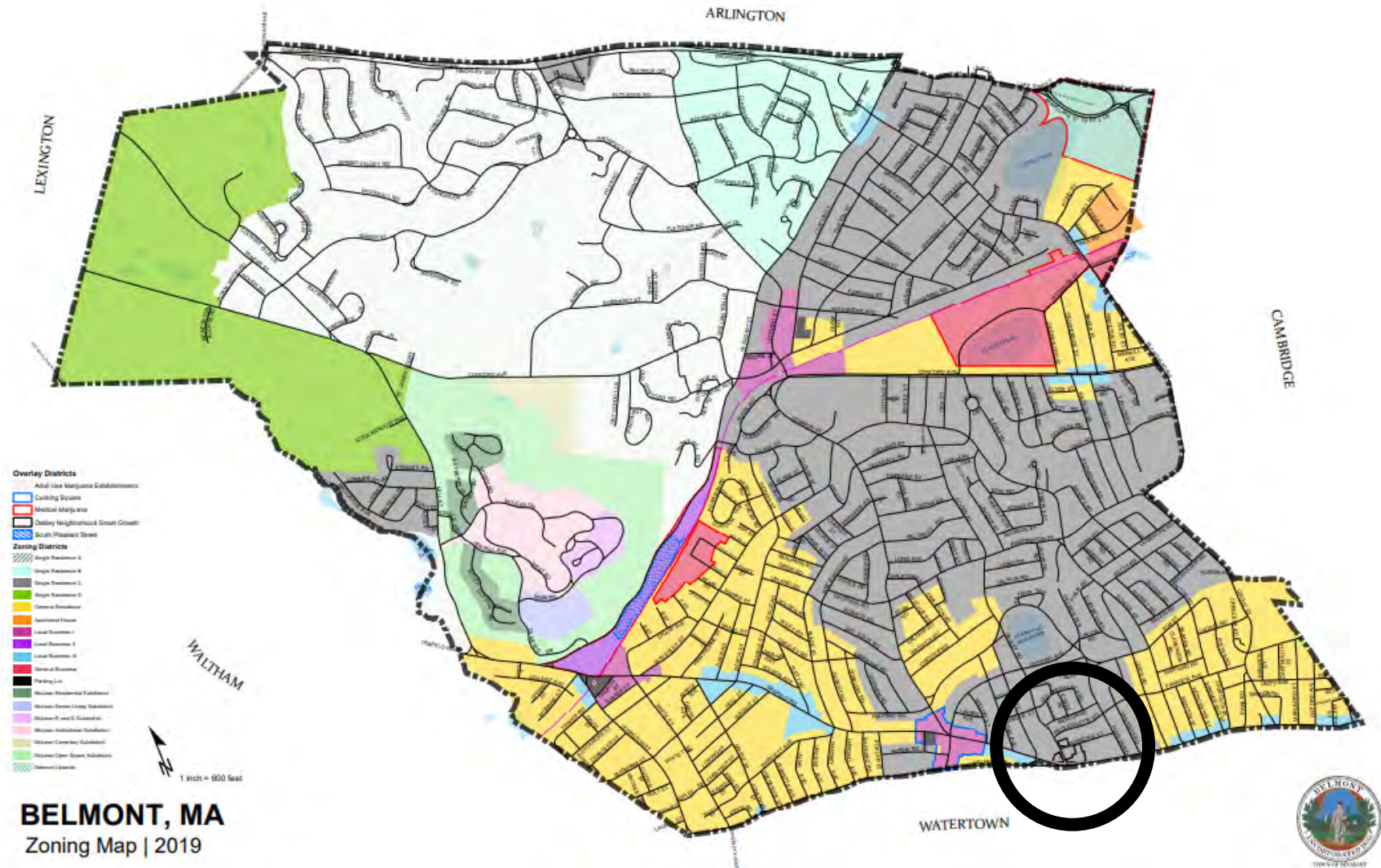




# 1. Zone a district (not just parcels)



# 1. Zone a district (not just parcels)





# 1. Zone a district (not just parcels)

## Overlay Districts

- Adult Use Marijuana Establishments
- Cushing Square
- Medical Marijuana
- Oakley Neighborhood Smart Growth
- South Pleasant Street

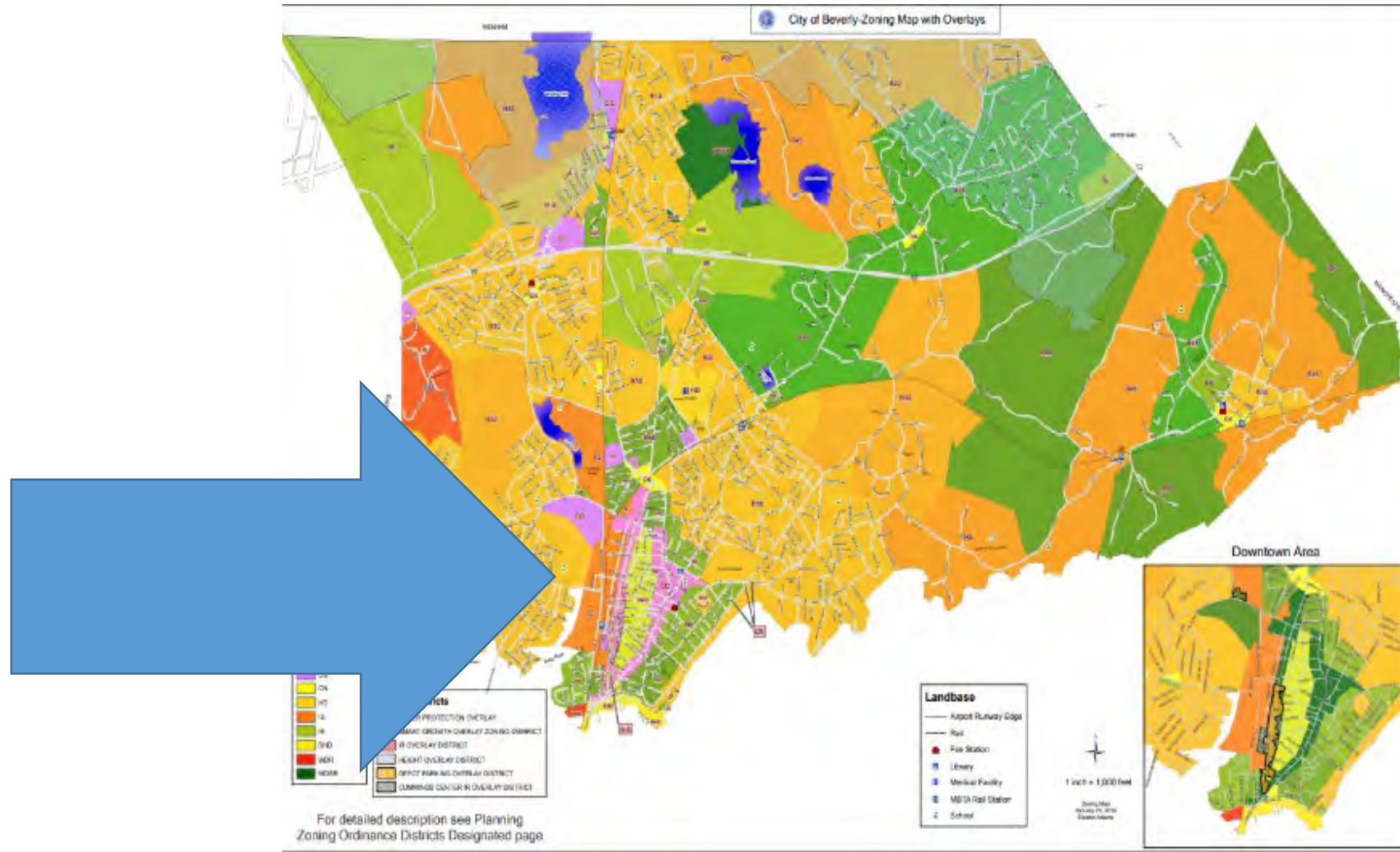


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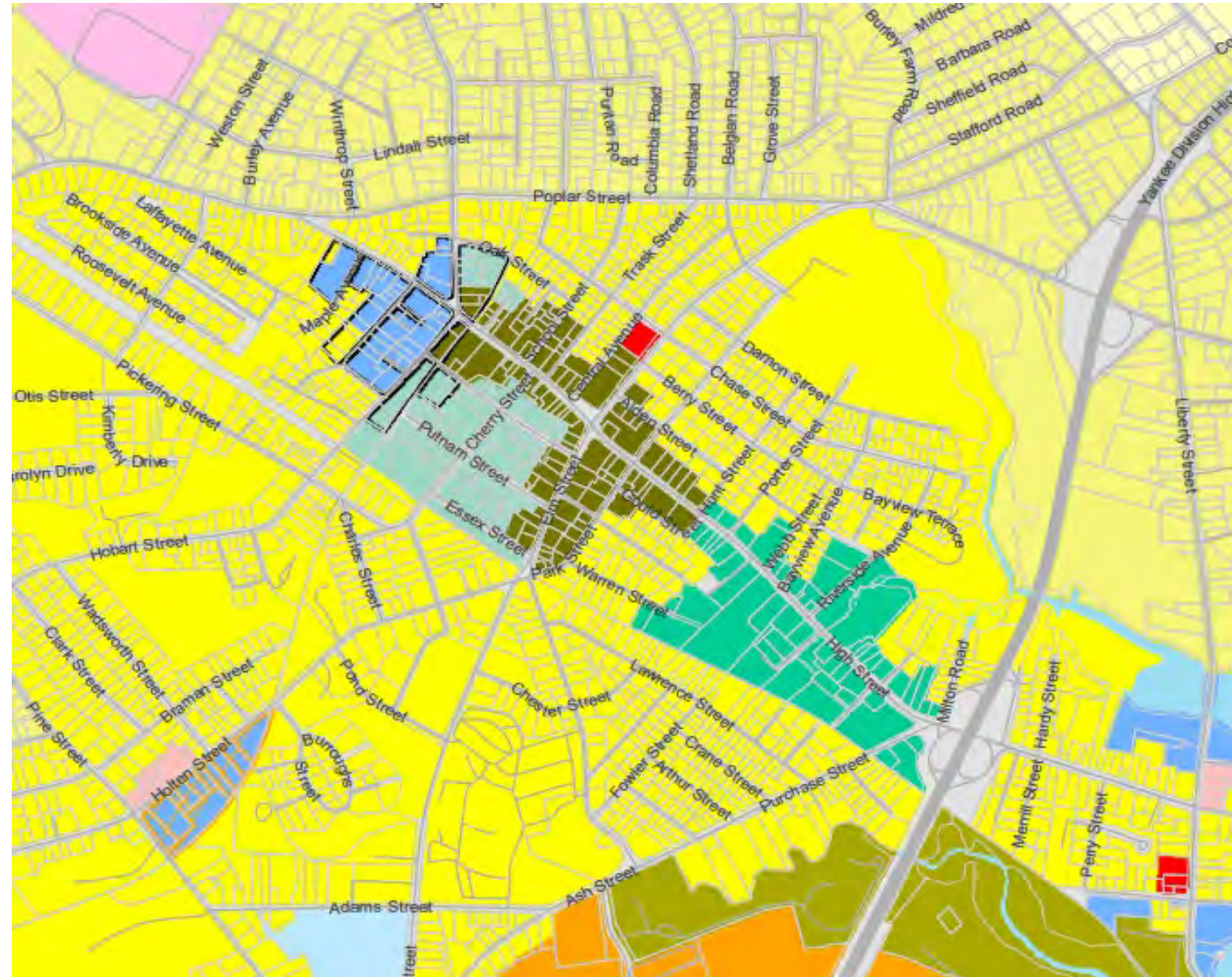


# 1. Zone a district (not just parcels)

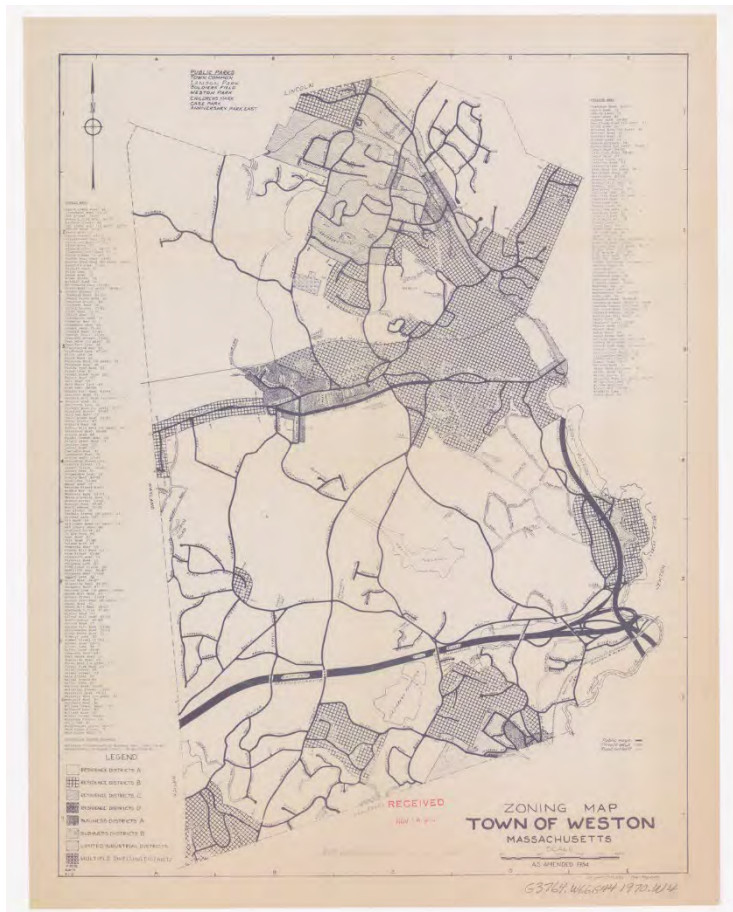




# 1. Zone a district (not just parcels)



## 2. Make it predictable





## 2. Make it predictable

- As-of-right
- Special permit
- Legislative approval of specific projects

## 2. Make it predictable

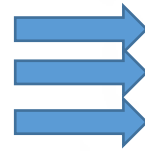


### 5.4.3. Use Regulations for Residential Districts

Class of Use	R0	R1	R2	R3	R4	R5	R6	R7
<b>Residential</b>								
Single-family detached dwelling	Y	Y	Y	Y	Y	Y	Y	Y
Six or more single family dwellings on one or more contiguous lots	SP	SP	SP	SP	SP	SP	SP	SP
Two-family dwelling, duplex			Y	Y	Y	Y	Y	Y
Six or more units in two-family dwellings or duplex dwelling on one or more contiguous lots			SP	SP	SP	SP	SP	SP
Three-family dwelling				SP	SP	SP	SP	SP
Townhouse				SP	SP	SP	SP	SP
Apartment building						SP	SP	SP
Conversion to apartments, up to 18 units per acre, with no alteration to the exterior of the building					SP	SP		
Single-room occupancy building				SP	SP	SP	SP	SP
Group home	Y	Y	Y	Y	Y	Y	Y	Y
Conversion of one- or two-family dwelling to bed and breakfast	SP	SP	SP	SP	SP	SP	SP	SP
Assisted living residence							SP	
Dormitory (Note: See Section 3.5 if use is for educational or religious purposes)			SP	SP	SP	SP	SP	SP
<b>Institutional, Educational</b>								
Community center, youth club, adult education center, or similar facility operated by a non-profit institution (Note: See Section 3.5 if use is for educational or religious purposes.)	SP	SP	SP	SP	SP	SP	SP	SP
Nonprofit, members-only private club or lodge				SP		SP	SP	SP
Nursing home, rest home, convalescent home	SP	SP	SP	SP	SP	SP	SP	SP
Town or nonprofit cemetery, mausoleum, or crematorium	SP	SP						
Library, museum, or art gallery open to the public and not conducted as a private gainful business. (Note: See Section 3.5 if use is for educational or religious purposes.)	SP	SP	SP	SP	SP	SP	SP	SP
<b>Agricultural</b>								
Farm on less than 5 acres unless	Y	Y	Y	Y	Y	Y	Y	Y



## 2. Make it predictable



### 5.4.3. Use Regulations for Residential Districts

Class of Use	R0	R1	R2	R3	R4	R5	R6	R7
<b>Residential</b>								
Single-family detached dwelling	Y	Y	Y	Y	Y	Y	Y	Y
Six or more single family dwellings on one or more contiguous lots	SP	SP	SP	SP	SP	SP	SP	SP
Two-family dwelling, duplex			Y	Y	Y	Y	Y	Y
Six or more units in two-family dwellings or duplex dwelling on one or more contiguous lots			SP	SP	SP	SP	SP	SP
Three-family dwelling				SP	SP	SP	SP	SP
Townhouse				SP	SP	SP	SP	SP
Apartment building						SP	SP	SP
Conversion to apartments, up to 18 units per acre, with no alteration to the exterior of the building					SP	SP		
Single-room occupancy building				SP	SP	SP	SP	SP
Group home	Y	Y	Y	Y	Y	Y	Y	Y
Conversion of one- or two-family dwelling to bed and breakfast	SP	SP	SP	SP	SP	SP	SP	SP
Assisted living residence							SP	
Dormitory (Note: See Section 3.5 if use is for educational or religious purposes)			SP	SP	SP	SP	SP	SP
<b>Institutional, Educational</b>								
Community center, youth club, adult education center, or similar facility operated by a non-profit institution (Note: See Section 3.5 if use is for educational or religious purposes.)	SP	SP	SP	SP	SP	SP	SP	SP
Nonprofit, members-only private club or lodge				SP		SP	SP	SP
Nursing home, rest home, convalescent home	SP	SP	SP	SP	SP	SP	SP	SP
Town or nonprofit cemetery, mausoleum, or crematorium	SP	SP						
Library, museum, or art gallery open to the public and not conducted as a private gainful business. (Note: See Section 3.5 if use is for educational or religious purposes.)	SP	SP	SP	SP	SP	SP	SP	SP
<b>Agricultural</b>								
Farm on less than 5 acres unless	Y	Y	Y	Y	Y	Y	Y	Y

## 2. Make it predictable

**Most multi-family projects require special permits**

**From 2015-2017, percent of multifamily units permitted...**

By Special Permit: 57%

40B: 15%

By Right: 14%

Friendly 40B: 7%

By Use Variance: 7%



# Survivor of Two Town Meetings

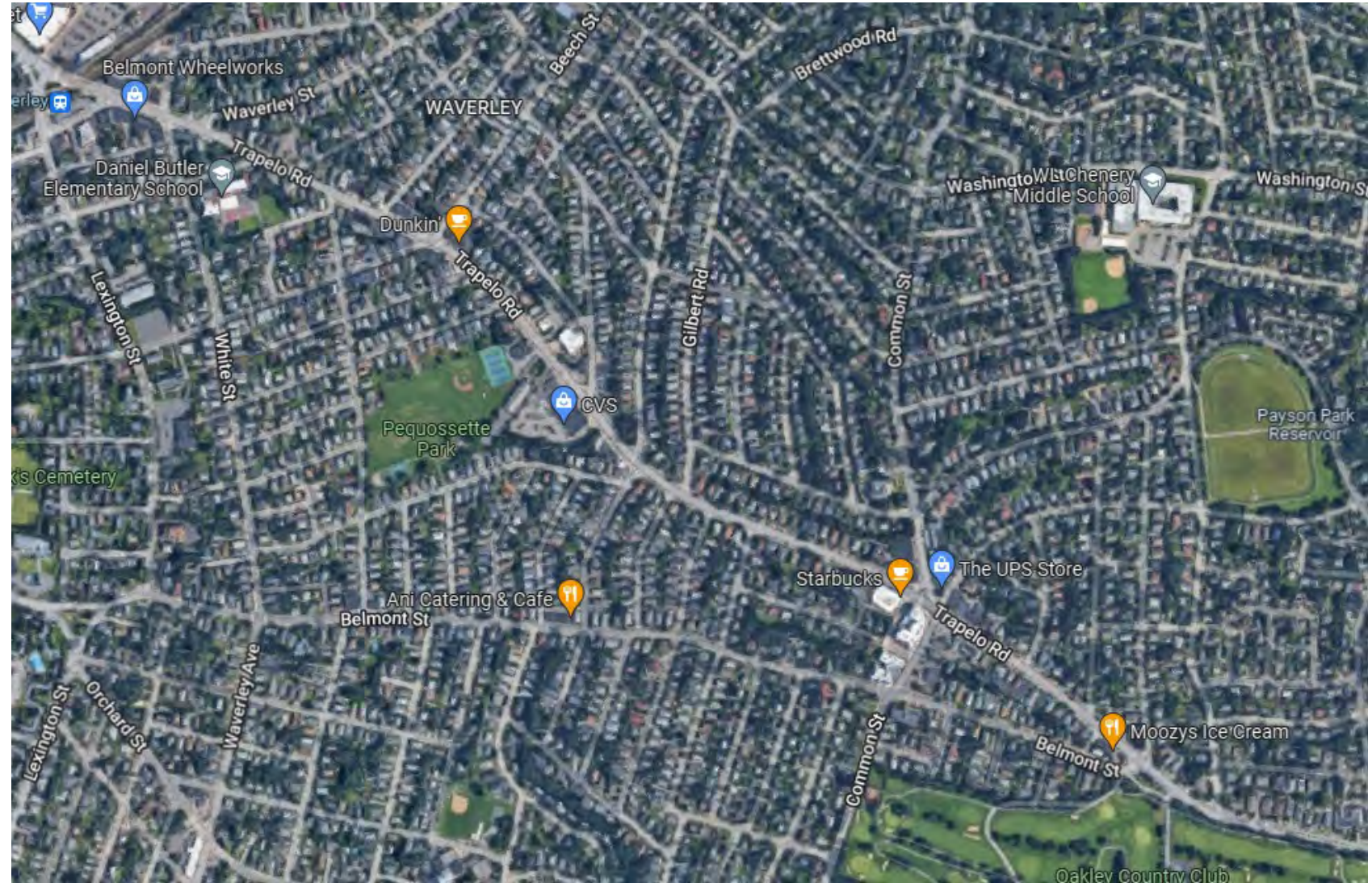


*Lexington*

2. Make it predictable



### 3. Allow in-fill





### 3. Allow in-fill



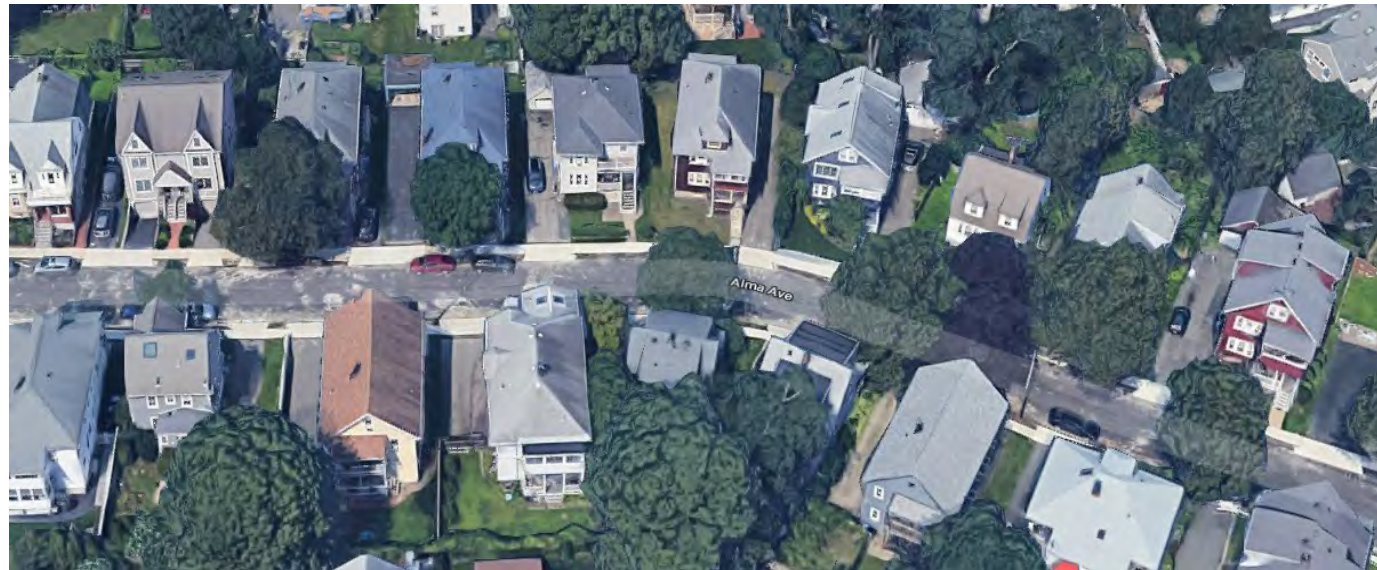
#### **Belmont's General Residence District**

Single family houses allowed by right,  
two-family houses by special permit

For single family: minimum lot must be  
5,000 square feet

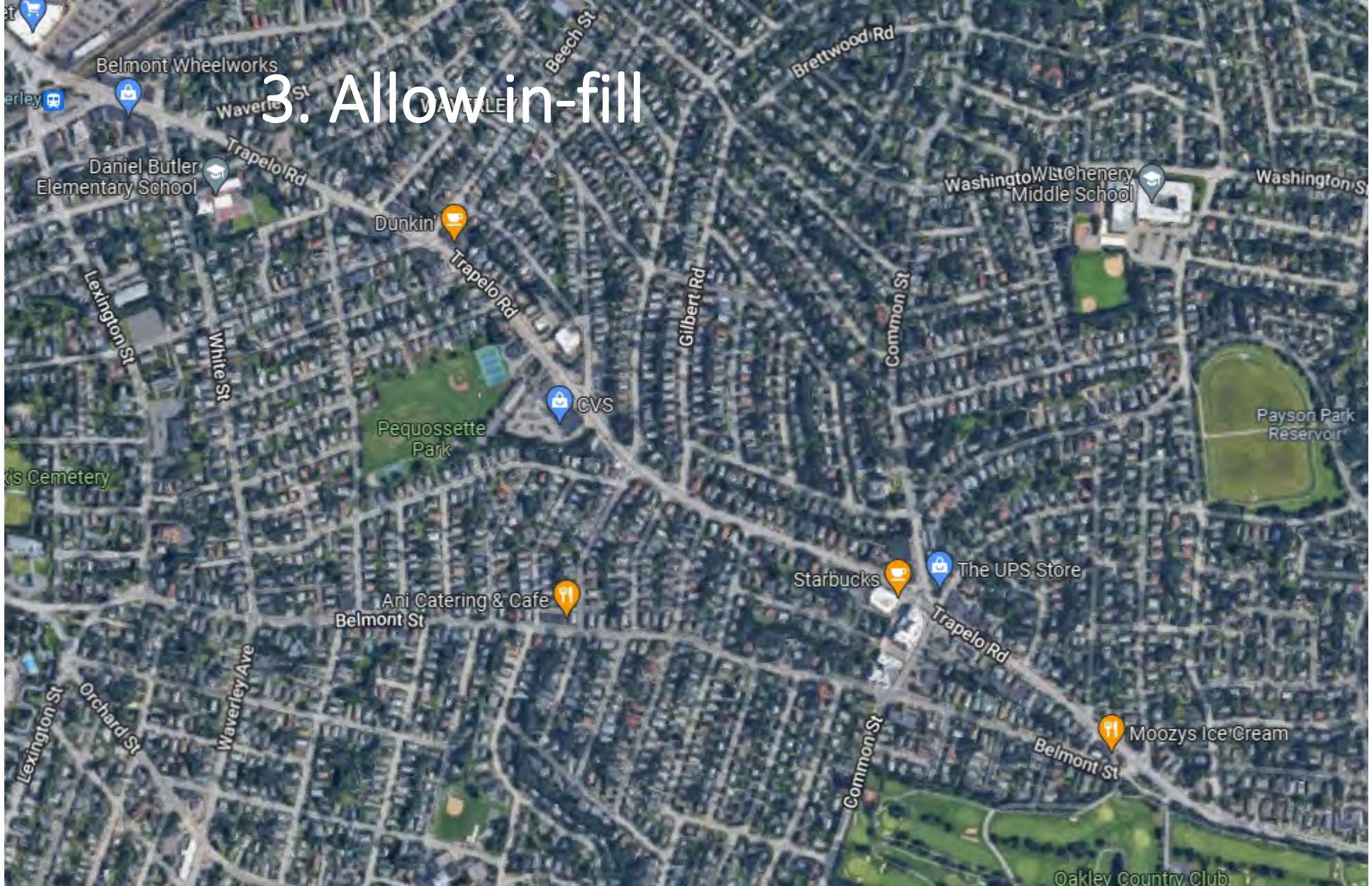
For two-family: minimum lot must be  
7,000 square feet lot

These two families are on lots of  
approximately 4,500 square feet  
Street built out 1915-1925... pre-zoning





# 3. Allow in-fill

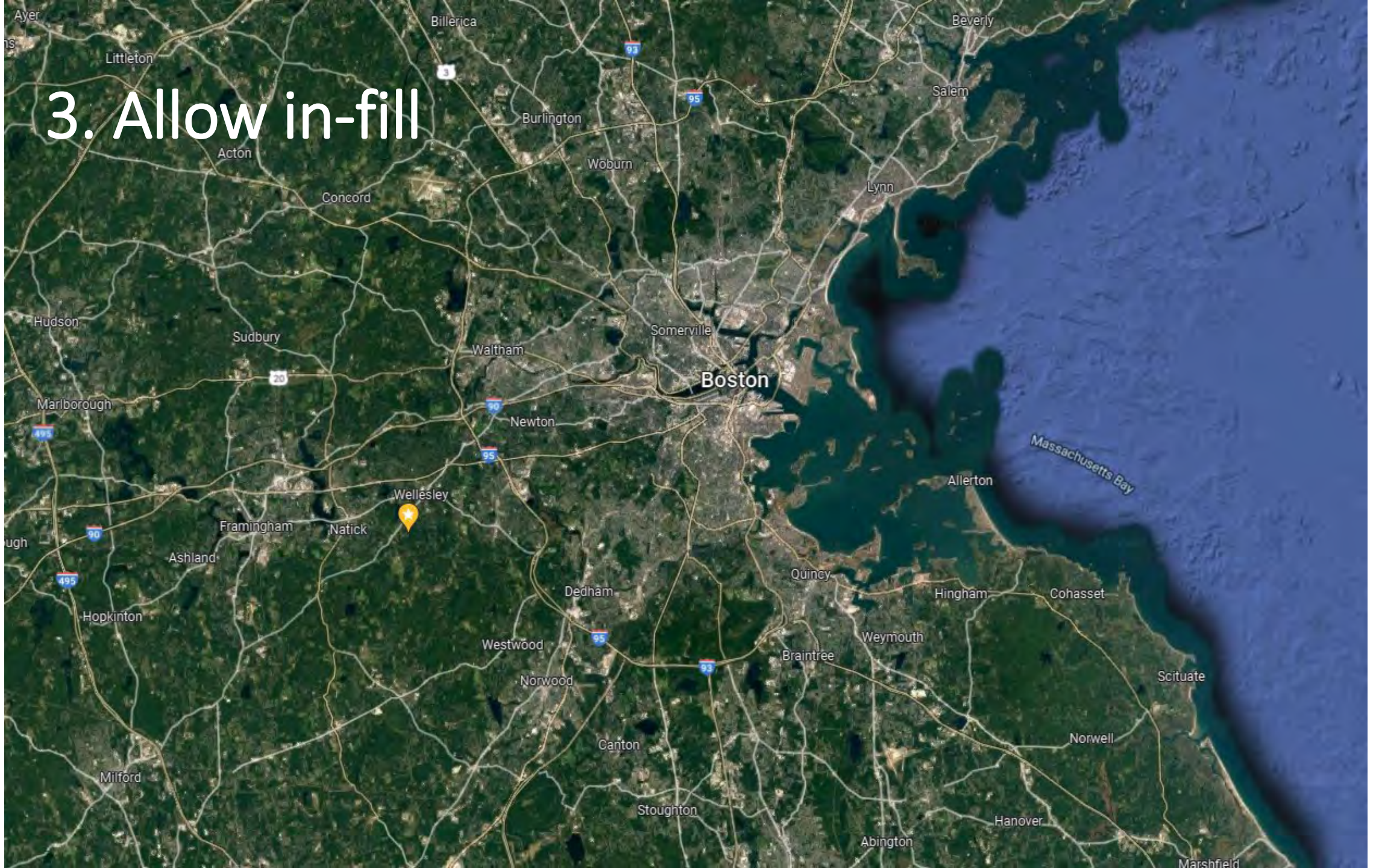








### 3. Allow in-fill





### 3. Allow in-fill

{New apartments here}



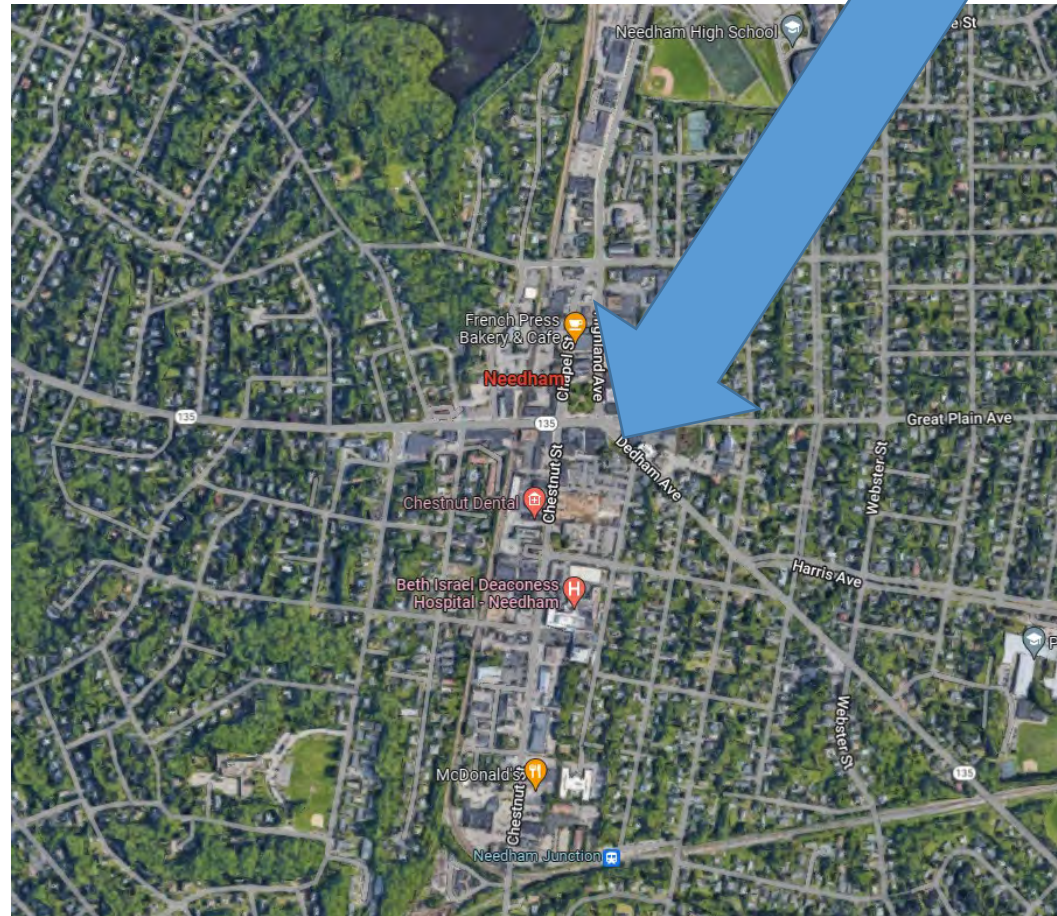
Wellesley



### 3. Allow in-fill

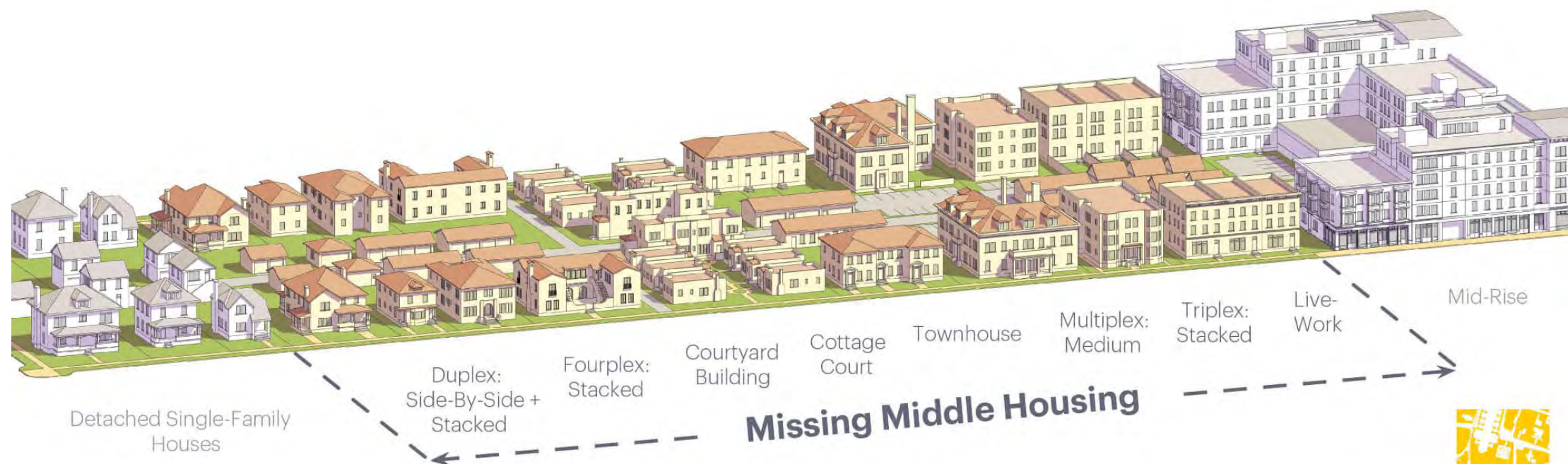


*Needham*



{New apartments here}

## 4. Allow “missing middle”





## 4. Allow “missing middle”

In general, 15 units per acre minimum, means:

- A three-family house on 8,700 square foot (or bigger) lot
- A fourplex on a 11,400 (or bigger) lot
- Fifteen units on an acre (or more land)
- Thirty units on two acres (or more land)

# 36 Central Avenue, Milton

- 18 units
- ~34 units per acre
- permitted via special permit





## 4. Allow “missing middle”

“minimum *gross* density of 15 units per acre”

# 16 Dalby St, Newton

\*Before and after

- 6 condos
- Built 2018
- Special permit





# 115 Beacon Street, Somerville

\*Before and after

- From 1 to 4 units
- Special permit



# The Crossing at Bedford, 54 Loomis St, Bedford

- Built 2015 on site of former industrial building
- 19 dwelling units and retail/café
- 1 acre site
- Special permit





# 429 Cherry St, Newton

- 13 apartments
- Built 2019
- Lot size .31
- 42 units per acre



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## 5. Allow TOD





## 6. Zone without age and bedroom restrictions

- 55/100 cities and towns have zoning for age-restricted housing
- 28/100 cities and towns have zoning restrictions on the number of bedrooms in multi-family developments
- Example: in Duxbury's "planned developments," multi-family dwelling units can have no more than two bedrooms



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@amydain*

Amy Dain  
[www.dainresearch.com](http://www.dainresearch.com)



# MHP Resources

## Housing Toolbox

The Housing Toolbox website is designed to be a one-stop resource for local boards, committees, planners, municipal staff and volunteers. Developed by MHP and the Citizens' Housing and Planning Association, the website explains how to create and execute an effective affordable housing strategy. The website has a section on each step of the housing development process from beginning to end. The site also has a resource section and users can find recording to past workshops and conferences.

[www.housingtoolbox.org](http://www.housingtoolbox.org)

## Datatown

DataTown is the Center for Housing Data's new interactive website. DataTown compiles community-level information for all 351 Massachusetts cities and towns, and visualizes that data in graphics and charts that are easy to understand, print out and bring to a community discussion. DataTown allows users to download the underlying data as well. Center for Housing Data also added a new feature recently - the ability to create graphics that compare communities!

[www.mhp.net/data](http://www.mhp.net/data)

## TODex

MHP's Center for Housing Data has developed a new methodology for estimating the number of homes at the parcel/lot level. This new method employs multiple data sets in order to create a consistent, accurate, and comparable metric that can be used to compare housing patterns across municipal borders. It's short for Transit-Oriented Development Explorer and a user-friendly tool that allows you to review densities at all 261 Greater Boston transit stations and picture the great opportunity we have to build more housing and reduce traffic congestion.

[www.mhp.net/todex](http://www.mhp.net/todex)



## **GLOSSARY OF AFFORDABLE HOUSING TERMS**

### **Accessory Dwelling Unit (ADU)**

A secondary dwelling unit created within or as an extension of an existing dwelling that contains separate bath and kitchen facilities.

**ACS** US Census Bureau's American Community Survey

### **Adaptive Reuse**

The conversion of nonresidential properties such as mills, schools, hospitals, military bases, motels, warehouses, office buildings, etc. into residential or mixed uses.

### **AFHMP (Affirmative Fair Housing Marketing Plan)**

A plan for the marketing of SHI Eligible Housing, including provisions for a lottery or other resident selection process, consistent with guidelines adopted by the Department, and providing effective outreach to protected groups underrepresented in the municipality.

### **Area Median Income (AMI)**

The estimated median income, adjusted for family size, by metropolitan area (or county, in non-metropolitan areas). AMI is updated annually by the US Department of Housing and Urban Development (HUD) and used as the basis of eligibility for most housing assistance programs. See: [www.huduser.org](http://www.huduser.org)

### **Acquisition – Land and Building**

Costs associated with purchasing the development site.

### **Baby Boomers**

The demographic cohort born between 1947 and 1964. (Harvard Joint Center for Housing Studies (JCHS). *America's Rental Housing: Expanding Options for Diverse and Growing Demand*. 2015.)

### **CHAPA (Citizens' Housing & Planning Association)**

Established in 1967, CHAPA is a statewide non-profit umbrella organization for affordable housing and community development activities. CHAPA's mission is to encourage the production and preservation of housing affordable to low-income families and individuals. [www.CHAPA.org](http://www.CHAPA.org)

### **Chapter 30B**

Chapter 30B of the Massachusetts General Laws, the Uniform Procurement Act, establishes uniform procedures for local governments to use when buying or disposing of supplies, services or real property.



### **Chapter 40B**

The state's Comprehensive Permit law, enacted in 1969, established an affordable housing goal of 10% for every community. In communities below the 10% goal, developers of low and moderate income housing can seek an expedited local review under the comprehensive permit process and can request a limited waiver of local zoning and other restrictions which hamper construction of affordable housing. Developers can appeal to the state if their application is denied or approved with conditions that render it uneconomic and the state can overturn the local decision if it finds it unreasonable in light of the need for affordable housing. (Chapter 774 of the Acts of 1969; M.G.L.c.40B§20-23).

[www.mass.gov/hed/community/40b-plan](http://www.mass.gov/hed/community/40b-plan)

### **Chapter 40R**

The Smart Growth Zoning Overlay District Act, Chapter 149 of the Acts of 2004, codified as M.G.L. chapter 40R (the Act), encourages communities to create dense residential or mixed-use smart growth zoning districts, including a high percentage of affordable housing units, to be located near transit stations, in areas of concentrated development such as existing city and town centers, and in other highly suitable locations. <https://www.mass.gov/service-details/chapter-40r>

### **Community Development Block Grant (CDBG)**

The Community Development Block Grant (CDBG) program is a federal program that provides communities with resources to address a wide range of unique community development needs. The Department of Housing and Urban Development (HUD) provides funding either directly to larger municipalities designated as entitlement communities or through the Massachusetts Department of Housing and Community Development's CDBG program. [www.mass.gov/hed/community/funding/community-development-block-grant](http://www.mass.gov/hed/community/funding/community-development-block-grant)

**Community Economic Development Assistance Corporation (CEDAC)** A quasi-public agency created by the Legislature in 1978 to provide development assistance to nonprofit developers in order to increase the supply of affordable housing and help revitalize chronically distressed areas. By statute, it can only provide services to nonprofit corporations. CEDAC maintains a database on their website of over 1,400 properties statewide at risk of losing their affordability.

[www.cedac.org](http://www.cedac.org)

### **Community Preservation Act (CPA)/ Chapter 44B**

The Community Preservation Act Enabling Legislation (Chapter 267 of the Acts of 2000). Allows communities, at local option, to establish a Community Preservation Fund to preserve open space, historic resources and community housing, by imposing a surcharge of up to 3% on local property taxes. The state provides matching funds from its own Community Preservation Trust Fund, generated from an increase in certain Registry of Deed's fees. The Community Preservation Coalition (CPC) works with communities, and advocates and supports the passage of CPA.

[www.communitypreservation.org](http://www.communitypreservation.org)

**Conservation Easement**

A legal agreement, often used to preserve rural areas or greenfields, in which a government or nonprofit can purchase a property in return for the guarantee of preserving it from development.

**Contingency**

This is generally figured as a percentage – often 5 to 10 percent – of the construction (hard) costs and/or other costs associated with development (soft costs). The contingency accounts for uncertainty at various stages of development and construction.

**Cost Burdened** Households who pay more than 30 percent of their income for housing.

**DataTown**

An interactive web site compiles community-level information from various available data sources for all 351 Massachusetts cities and towns, and visualizes that data in graphics and charts so it's easy to understand, print out and bring to a community discussion. [www.mhp.net/datatown](http://www.mhp.net/datatown).

**Debt**

Money owed. Under debt financing the lender is generally secured by the property and is reimbursed according to a payment schedule determined by the amount of net income generated by the property and the interest rate set at the time the loan is made.

Debt = Loans

- Hard debt*: require payment over time, with interest

- Soft debt*: terms for repayment are lenient

**Deferred loan (a.k.a. deferred payment second mortgage or soft debt)**

Debt (borrowed money), often from a public or charitable source, repayment of which may be postponed for a specified period of time, indefinitely, or forgiven entirely, if the property maintains

certain levels of affordability for a defined time period. Most deeply affordable housing needs some

type of deferred loan in order to be feasible.

**Department of Housing and Community Development (DHCD)**

Massachusetts DHCD is the state's lead agency for housing and community development programs and

policy. It oversees the state-funded public housing, administers rental assistance programs, including tax

credits, provides funds for municipal assistance, and funds a variety of programs to stimulate the development of affordable housing.

[www.mass.gov/hed](http://www.mass.gov/hed)



**Department of Housing and Urban Development (HUD)**

The U.S. Department of Housing and Urban Development's mission is to create strong, sustainable communities and quality affordable homes. HUD administers hundreds of programs targeting communities from urban to rural. [www.hud.gov](http://www.hud.gov)

**Disability**

The American Community Survey defines disability as including difficulties with hearing, vision, cognition, ambulation, self-care, and independent living.

**Extremely Low Income (ELI)** A family whose income does not exceed 30% AMI.

**Entitlement Community** A city or urban county of at least 50,000 in population making it eligible for Community Development Block Grant (CDBG) funds directly from HUD.

**Expiring Use Restrictions**

Refers to affordable housing where the restrictions on rents and/or incomes of occupants could or will expire in the near future if owners prepay their publicly assisted mortgages and convert the units to market rate housing. The units were built with federal and/or state subsidies (such as low cost mortgages, interest subsidies, rent subsidies and loan guarantees). While mortgages and other assistance often had terms as long as 30-40 years, many gave owners the option to prepay the mortgage after 20 years and thus remove use restrictions on the property. *Also see CEDAC.*

**Equity**

Cash investment in a project. Under equity financing, the investor obtains an ownership interest in the property and can participate in the property's cash flow, as well as in its appreciation at the time of sale. Equity investors take the risk that they will get a return on their equity contributions, and will look for ways to mitigate that risk, including through ensuring adequate asset management systems are in place for the project.

**Exclusionary Zoning** The practice of using zoning ordinances to exclude certain types of land uses from a given community. When this practice excludes apartments and other forms of multi-family housing, this can create a disparate impact on protected classes of people.

**Extremely Low income (ELI)**

Typically refers to families whose income is less than 30% of the Area Median Income. (AMI)

**Fair Housing Act/MA Fair Housing Act**

Federal legislation, first enacted in 1968 and expanded by amendments in 1974 and 1988, that provides the Secretary of HUD with investigation and enforcement responsibilities for fair housing practices. The law prohibits discrimination in housing and lending based on race, color, religion, sex, national origin, handicap, of familial status. There is also a Massachusetts Fair Housing Act, which extends the prohibition against discrimination to sexual orientation, marital status, ancestry, veteran status, children, and age. The state law also prohibits discrimination against families receiving public assistance or rental subsidies, or because of any requirement of these programs.

**Fair Market Rents (FMRs)**

FMRs are established by HUD and used to determine **rental** voucher amounts for government assistance housing programs such as Section 8 (Housing Choice Voucher Program).

**Family**

A family is a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related subfamily members) are considered as members of one family.

**Federal Home Loan Bank of Boston (FHLBB)**

One of the 12 district banks, the FHLBB covers the 6 New England states and is owned by more than 460 New England financial institutions. A wholesale bank (a bank for banks), it provides access to credit for its members and administers several grant and loan programs to promote community development and expand affordable housing.

**Federal Home Loan Mortgage Corporation (FHLMC) or Freddie Mac**

Congressionally chartered agency established in 1970 (and privatized in 1989) to buy qualifying residential mortgages from originating lenders. The loans are either kept in portfolio or packaged and sold as securities. Freddie Mac also offers programs with more flexible underwriting guidelines for lower income homebuyers. With Fannie Mae, the corporation's activity has helped to create an enormous secondary mortgage market.

**Federal National Mortgage Association (FNMA of Fannie Mae)**

Created in 1938 to purchase FHA, and later VA and conventional mortgages, Fannie Mae is now privately owned and managed, federally chartered corporation, the largest source of home mortgage funds in the United States. It buys qualifying residential mortgages from originating lenders and either keeps them in portfolio or packages and sells them as securities. Fannie Mae also offers programs with more flexible underwriting guidelines for lower income homebuyers.

**Grant** While a grant can feel like equity, the grantor does not have an "interest" in property, and does not expect a financial return, but does expect that the purpose for making the grant is met (i.e.: the project serves a certain population, helps achieve identified outcomes, or other purpose). Sometimes soft secondary financing is structured into a project as a grant.



**HOME Investment Partnership Program (HOME)**

A federal program run by HUD which provides annual grants on an entitlement basis to states, large cities and consortia of smaller communities for affordable housing activities, including homeownership, rent subsidies, housing development and rehabilitation. Similar to CDBG funds, some communities are part of a consortium and receive HOME funds directly from HUD and distribute in their communities. DHCD administers HOME funds at the state level.

**Housing Appeals Committee (HAC)**

A quasi-judicial body within DHCD, which hears appeals by developers, local zoning boards on comprehensive permit (Chapter 40B) decisions by local Zoning Boards of Appeal.

**Housing Choice Initiative**

In 2017 the Baker-Polito Administration developed the Housing Choice Initiative to offer a combination of incentives, legislation, technical assistance and new capital grant funding to facilitate community-led housing production across the Commonwealth. A key component of the HCI entails legislation currently proposed by the Governor (*An Act to Promote Housing Choices*) that will enable cities and towns to adopt certain zoning best practices related to housing development by a simple majority vote, rather than the current two-thirds supermajority.

**Housing Production Plan** An affordable housing plan adopted by a Municipality and approved by DHCD, defining certain annual increases in its number of SHI-eligible Housing Units as described in the 40B Guidelines.

**Housing Stabilization Fund (HSF)**

The Housing Stabilization Fund (HSF) is a program available through DHCD to support comprehensive neighborhood redevelopment efforts and to help developers and municipalities acquire, preserve and rehabilitate affordable housing. The state legislature placed a special emphasis on reusing foreclosed and distressed properties and on creating affordable homeownership opportunities.

**Housing Toolbox**

An on-line resource developed by MHP including strategies and best practices for the creation and preservation of affordable housing, with guides, tools and resources for local boards & committees, planners, municipal staff, developers, and volunteers.

<https://www.housingtoolbox.org/>

**Housing Unit**

A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms, or a single room that is occupied, or, if vacant, is intended for occupancy as separate living quarters.

**HUD** The U.S. Department of Housing and Urban Development

**Inclusionary Zoning**

A local zoning ordinance that either requires or encourages a developer to include affordable housing as part of a development, or contribute to a fund for such housing. The bylaw may provide incentives such as increased density, reduced parking requirements, or expedited permitting in exchange for the affordable housing.

**Infill Development**

The practice of building on vacant or undeveloped parcels in dense areas, especially urban and inner suburban neighborhoods. Promotes compact development.

**Limited Equity Homeownership**

Ownership housing where resale values are restricted in order to maintain the long-term affordability of the units. A technique often used for housing developed with public assistance in order to reduce development costs (e.g. funding, relaxed zoning regulations, discounted sale of public land). Can take the form of a cooperative, a condominium or fee simple ownership.

**Loan to Value (LTV)**

The ratio of the loan amount to the value of the completed property per an appraisal. Lenders will only loan up to a certain percentage of the property value.

**Local and Regional Housing Authorities (LHAs)**

A housing authority set up by a city or town, or group of towns, in accordance with state law, M.G.L. Ch. 149 to provide low-income family or elderly housing.

**Local Action Units (LAUs)**

Local Action Units (LAUs) are affordable housing units created as a result of an intentional action taken by a community, such as the adoption of Inclusionary Zoning or the use of municipal funds or property, without a comprehensive permit, and which meet the requirements for inclusion on the Subsidized Housing Inventory (SHI).

**Local Initiative Program (LIP)**

A state program under which communities may use local resources and DHCD technical assistance to develop affordable housing that is eligible for inclusion on the State Housing Inventory (SHI). LIP is not a financing program, but the DHCD technical assistance qualifies as a subsidy and enables locally supported developments, that do not require other financial subsidies, to qualify for inclusion on the Subsidized Housing Inventory. The LIP Program administers both LIP 40B developments (sometimes referred to as “Friendly 40Bs) and Local Action Units (LAUs).

**Low Income Housing Tax Credit (LIHTC)**

The LIHTC program, which is based on Section 42 of the Internal Revenue Code, was enacted by Congress in 1986 to provide the private market with an incentive to invest in affordable rental housing. Federal housing tax credits are awarded to developers of qualified projects. Developers then sell these credits to investors to raise **equity** for their projects, which reduces the debt that the developer would otherwise have to borrow. Because the debt is lower, a tax credit property can in turn offer lower, more affordable rents. The state’s Department of Housing and Community Development oversees the competitive allocation of tax credits.



**Median Age**

The age which divides the population into two numerically equal groups; that is, half the people are younger than this age and half are older.

**Median Income**

Median income is the amount which divides the income distribution into two equal groups, half having incomes above the median, half having incomes below the median. The medians for households, families, and unrelated individuals are based on all households, families, and unrelated individuals, respectively. The medians for people are based on people 15 years old and over with income.

**Millennials** The demographic cohort following Generation X born between 1985 and 2004. (JCHS)

**Mortgage**

**1<sup>st</sup> Mortgage** This is usually, though not always, a commercial loan requiring monthly payments of principle and interest during the operating life of the project. The amount of the mortgage is limited by the value of the property and the net operating income of the project (income less operating expenses).

**2<sup>nd</sup> Mortgage, 3<sup>rd</sup> Mortgage, etc** Affordable housing developments often include grant or low-interest or no-interest loan financing, including local and state public funds, as well as private funds. Repayment requirements vary ranging from payment of principle and interest, through whole or partial interest payments, to deferral of principal and interest payments for a number of years or no repayment as long as the property serves the population the money was committed to support.

**Municipal Affordable Housing Trust (MAHT)**

A locally created municipal board, enabled by M.G.L. Chapter 44, Section 55c, to provide for the creation and preservation of affordable housing for the benefit of low and moderate income households.

**Regional Planning Agency (RPA)**

RPAs are public organizations established by the state legislature that encompass a multi-jurisdictional regional area serving local governments and citizens in the region by dealing with issues and needs that cross city, town, county and even state boundaries through communication, planning, policymaking, coordination, advocacy and technical assistance. There are thirteen RPAs in Massachusetts-for more information see <http://www.massmarpa.org/>

**Reserves; Lease-Up and Operating**

Accounts established from sources of financing to cover possible shortfalls during the operation of the project. A lease-up reserve is intended to cover operating losses during the earliest phase of operations while initially renting up the project, while an operating reserve is meant to cover longer-term contingencies.

**Poverty**

Following the Office of Management and Budget's (OMB's) Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. The poverty thresholds do not vary geographically, but they are updated annually for inflation with the Consumer Price Index (CPI-U). The official poverty definition counts money income before taxes and excludes capital gains and noncash benefits (such as public housing, Medicaid, and food stamps). Thresholds by year and households size are found at this link:

<https://www.census.gov/hhes/www/poverty/data/threshld/>.

**Section 8 (Also known as Housing the Choice Voucher (HCV) Program)**

Section 8 of the Housing Act of 1937 (42 U.S.C. § 1437f) is the federal government's major program for assisting very low-income families, elders, and people with disabilities to afford housing in the private market. The voucher provides rental assistance to households with low income, elders, and persons with disabilities. The voucher holder is free to choose any housing that meets the requirements of the program and is not limited to units located in subsidized housing projects. HCVs are administered locally by Public Housing Authorities (PHAs).

**Subsidized Housing Inventory (SHI)** – means the list compiled by DHCD containing the count of Low or Moderate Income Housing units by city or town.

**Subsidizing Agency** – means any agency of state or federal government that provides for, or acts on behalf of a provider for, a Subsidy for the construction or substantial rehabilitation of Low or Moderate Income Housing. Massachusetts Subsidizing Agencies include DHCD, MassHousing, MassDevelopment, and MHP.

**Total Development Costs (TDC)** The total cost of construction including land or property acquisition, soft costs (permitting, legal, etc.), site work, materials, and labor.

**Use Restriction** – means a deed restriction, regulatory agreement or other legally binding instrument which runs with the land and is recorded with the registry of deeds or land court registry district, and which effectively restricts the occupancy of a Low or Moderate Income Housing unit to Income Eligible Households during the term of affordability.

**Zoning**

Ordinances and by-laws adopted by cities and towns to regulate the use of land, buildings and structures to the full extent of the independent constitutional powers of cities and towns



## **GLOSSARY OF COMMON ACRONYMS AND TERMS**

### **ACRONYMS**

<b>ACS</b>	US Census Bureau's American Community Survey
<b>AMI</b>	Area Median Income
<b>CHAS</b>	Comprehensive Housing Affordability Strategy
<b>DHCD</b>	MA Department of Housing and Community Development
<b>ELI</b>	Extremely Low Income
<b>GIS</b>	Geographic Information System
<b>MOE</b>	Margins of Error

### **DEFINITIONS**

#### **Baby Boomers**

The demographic cohort born between 1947 and 1964. (Harvard Joint Center for Housing Studies (JCHS). *America's Rental Housing: Expanding Options for Diverse and Growing Demand*. 2015.)

#### **Cost Burdened**

Households who pay more than 30 percent of their income for housing.

#### **Disability**

The American Community Survey defines disability as including difficulties with hearing, vision, cognition, ambulation, self-care, and independent living.

#### **Extremely Low Income**

A family whose income does not exceed 30% AMI. (Mass Housing, Piltch Associates)

#### **Family**

A family is a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related subfamily members) are considered as members of one family.

#### **Household**

A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of the households excludes group quarters.

#### **Median Age**

The age which divides the population into two numerically equal groups; that is, half the people are younger than this age and half are older.

#### **Median Income**

Median income is the amount which divides the income distribution into two equal groups, half having incomes above the median, half having incomes below the median. The medians for households, families, and unrelated individuals are based on all households, families, and unrelated individuals, respectively. The medians for people are based on people 15 years old and over with income.

#### **Millennials**

The demographic cohort following Generation X born between 1985 and 2004. (JCHS)

**Housing Unit**

A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms, or a single room that is occupied, or, if vacant, is intended for occupancy as separate living quarters.

**Protected Classes**

Demographic groups that it is unlawful to discriminate against. In Massachusetts Fair Housing law, the protected classes are race, color, national origin, religion, sex, familial status (i.e. children), disability, source of income (i.e. section 8 voucher), sexual orientation, gender identify, age, marital status, veteran or active military status, and genetic information.

**Poverty**

Following the Office of Management and Budget's (OMB's) Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If a family's total income is less than that family's threshold, then that family, and every individual in it, is considered poor. The poverty thresholds do not vary geographically, but they are updated annually for inflation with the Consumer Price Index (CPI-U). The official poverty definition counts money income before taxes and excludes capital gains and noncash benefits (such as public housing, Medicaid, and food stamps). Thresholds by year and households size are found at this link: <https://www.census.gov/hhes/www/poverty/data/threshld/>.



# GLOSSARY OF FINANCE TERMS

## Sources of funds

### **Debt**

Money owed. Under debt financing the lender is generally secured by the property and is reimbursed according to a payment schedule determined by the amount of net income generated by the property and the interest rate set at the time the loan is made.

Debt = Loans

-*Hard debt*: require payment over time, with interest

-*Soft debt*: terms for repayment are lenient

### **Equity**

Cash investment in a project. Under equity financing, the investor obtains an ownership interest in the property and can participate in the property's cash flow, as well as in its appreciation at the time of sale. Equity investors take the risk that they will get a return on their equity contributions, and will look for ways to mitigate that risk, including through ensuring adequate asset management systems are in place for the project.

### **Low Income Housing Tax Credit (LIHTC)**

The LIHTC program, which is based on Section 42 of the Internal Revenue Code, was enacted by Congress in 1986 to provide the private market with an incentive to invest in affordable rental housing. Federal housing tax credits are awarded to developers of qualified projects. Developers then sell these credits to investors to raise **equity** for their projects, which reduces the debt that the developer would otherwise have to borrow. Because the debt is lower, a tax credit property can in turn offer lower, more affordable rents. The state's Department of Housing and Community Development oversees the competitive allocation of tax credits.

### **Grant**

While a grant can feel like equity, the grantor does not have an "interest" in property, and does not expect a financial return, but does expect that the purpose for making the grant is met (i.e.: the project serves a certain population, helps achieve identified outcomes, or other purpose). Sometimes soft secondary financing is structured into a project as a grant.

### **1<sup>st</sup> Mortgage**

This is usually, though not always, a commercial loan requiring monthly payments of principal and interest during the operating life of the project. The amount of the mortgage is limited by the value of the property and the net operating income of the project (income less operating expenses).

### **2<sup>nd</sup> Mortgage, 3<sup>rd</sup> Mortgage, etc**

Affordable housing developments often include grant or low-interest or no-interest loan financing, including local and state public funds, as well as private funds. Repayment requirements vary ranging from payment of principal and interest, through whole or partial interest payments, to deferral of principal and interest payments for a number of years or no repayment as long as the property serves the population the money was committed to support.

## **Uses of funds**

### **Acquisition – Land and Building**

Costs associated with purchasing the development site.

### **Site Work**

On-site development costs such as grading, running utility lines, storm water management, water, sewer/septic, entry roads, etc. Costs associated with making the site ready for building construction.

### **Construction Costs**

The direct cost of building construction, including foundation work. State agencies expect to see contractor profit and overhead broken out separately as well as the contractor's general conditions, which include the contractor's costs for such items as setting up an on-site office, winter conditions, and police details.

### **Contingency**

This is generally figured as a percentage – often 5 to 10 percent – of the construction (hard) costs and/or other costs associated with development (soft costs). The contingency accounts for uncertainty at various stages of development and construction.

### **Architect/Engineer, Environmental Study, Appraisal, Survey & Soil Tests, Title & Recording, Sponsor & Local Legal Costs, Lender's Legal, Audit, Cost Certification, Market Study**

These reflect the costs of contracts with various professionals essential to the completion of the development.

### **Developer Fee and Overhead**

Maximum developer fees are established by DHCD.

### **Real Estate Taxes, Insurance, Construction Loan Interest, Bridge and/or Acquisition Loan Interest**

These are the primary costs of holding land during the development and construction processes. The longer the development process the higher the cost.

### **Construction Loan Costs, Permanent Loan Costs, Bridge Loan Fees**

Fees, beyond interest, charged by lenders for various loans on the project.

### **Consultant Fee**

Developers may engage various types of consultants to assist them in the project.

### **Reserves; Lease-Up and Operating**

Accounts established from sources of financing to cover possible shortfalls during the operation of the project. A lease-up reserve is intended to cover operating losses during the earliest phase of operations while initially renting up the project, while an operating reserve is meant to cover longer-term contingencies.



## **Explanation of Operating Budgets**

A project's operating budget consists of three main parts: operating income, operating expenses and debt service and reserve payments.

### **Net Operating Income**

Operating income less operating expenses

### **Net Cash Flow**

Net operating income less debt and reserve payments

## **Operating Income**

### **Gross Rental Income**

This is the income potential of the project, before deducting an assumed vacancy percentage. It increases annually by the income inflation assumption allowed by the lender.

### **Laundry Income**

In projects with a coin laundry, the anticipated income is entered here.

### **Vacancy**

This is the percentage of rents that the project will not receive, because of either vacancy or nonpayment by tenants of occupied units. Typically, the percentage is higher in the first year of operation because of a lag between units coming online and tenants taking occupancy. Lenders have requirements for what this number should be.

## **Operating expenses**

### **Operating Expenses**

Shows the actual anticipated expense for that year that the project will be in operation. Expenses are increased each year thereafter according to the expense inflation assumption often dictated by the lender.

### **Real Estate Taxes**

Taxes vary widely between localities. Often municipalities will offer a PILOT program 'Payment In Lieu of Taxes' for affordable housing which is a fixed annual amount.

### **Insurance**

The cost of property and liability insurance. Lenders and investors will usually require minimum coverage amounts.

### **Utilities – Common Area**

This includes the cost of lighting and heating unleased areas, such as hallways and parking lots. In cases where the owner of the project is paying utilities they will be included in a separate line item.

### **Water/Sewer**

In many projects the owner pays for water and sewer service. These costs can be substantial, especially if the project includes water-using amenities, such as in-unit washers or hookups and dishwashers.

### **Maintenance/Repairs/Decorating**

This line item includes the costs of all repairs including 'turning over' a unit when vacated. It does not include replacement of major capital items (such as roofs and furnaces) which is funded from the replacement reserve.

**Administration**

This item generally includes the cost of management staff and the direct expenses of property manager on the project.

**Legal**

Legal costs during operations to cover evictions or other management issues.

**Snow Removal/Landscaping**

These may be third-party contracts or the cost of staff and equipment and materials.

**Trash Removal**

Usually a third-party contract

**Management Fee**

Usually property managers are paid a percentage of collected rents, in addition to allowable pass-through expenses. (Because LIHTC rents are often lower than market rents, this percentage may be higher for these types of projects). In some cases, owners and managers have negotiated per-unit fees rather than a percentage of rents. In either case, the payment should be based on actual payments (collected rents on occupied and paying units).

**Audit & Tax Return**

Tax credit partnerships must file an annual tax return. Investors require an annual audit, as well.

**Asset Management**

This fee may be paid either to the general partner or to a party designated by the limited-partner investors to pay for the extra costs of record-keeping and reporting to investors on the performance of an LIHTC project.

**Debt service****Debt Coverage Ratio**

This shows, year by year, the projected ratio of net operating income to the required debt service on the first mortgage loan. Lenders set minimum debt coverage ratios they expect to see in projections once the project has reached full occupancy, generally in the second calendar year of operations.

**Replacement/Equipment Reserve**

Lenders and investors will require that the project make minimum contributions to a reserve for replacement of major capital items. This amount is based on the number of dwelling units.

**Net Cash Flow**

This is the amount remaining from operating income after all operating costs, debt service payments, and replacement reserve contributions have been paid.



**Reserves**

These are lender required contributions to a capital reserve to fund operating deficits or investor perceived risks.

**Loan to Value**

The ratio of the loan amount to the value of the completed property per an appraisal. Lenders will only loan up to a certain percentage of the property value.